

Public Works and Government Services Canada

Remediation Completion Report Johnson Point, Northwest Territories

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Project Number:

2977-371-00.

Date:

December 21, 2009

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December 21, 2009

Michael Bernardin
Northern Contaminated Sites Program, Western Region
Public Works and Government Services Canada
TELUS Plaza North
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Edmonton, AB T5J 1S6

Dear Mr. Bernardin:

Project No: 2977-371-00

Regarding: Remediation Completion Report

We are pleased to submit to you a copy of the above mentioned report. This report represents the results of the remediation program completed at Johnson Point, NWT. We trust that the information presented herein is consistent with your expectations. Please contact me at 780-930-0031 if you have any questions.

Sincerely,
AECOM Canada Ltd.



Barry Fedorak, P.Eng
Project Manager
barry.fedorak@aecom.com

BN:slm

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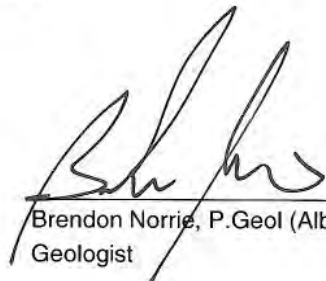
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AECOM Signatures

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PERMIT TO PRACTICE AECOM Canada Ltd.	
Signature	
Date	DEC-23/09
PERMIT NUMBER: P639 NWT/NU Association of Professional Engineers and Geoscientists	

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1. Introduction

AECOM was retained by Public Works and Government Services Canada (PWGSC) on behalf of Indian and Northern Affairs Canada (INAC) Contaminants and Remediation Directorate (CARD) to provide site resident services, construction contract administration, geotechnical, and environmental inspection services for the remediation of the former oil and gas staging site at Johnson Point, NWT.

This report summarizes the remediation activities, Water Licence, Quarry and Land Use Permit reporting requirements and quality assurance work performed at Johnson Point during the 2008 and 2009 construction seasons. Remediation activities at Johnson Point were completed in September 2009. Final demobilization is planned for August 2010.

1.1 Background

The Johnson Point site is a deltaic promontory that juts into the Prince of Wales Strait on the eastern shore of Banks Island, Northwest Territories. Site facilities, prior to remediation, included a large Petroleum, Oil, Lubricants (POL) storage tank farm, roads, an airstrip, ATCO and Nodwell camp trailers and other facilities.

Site facilities were constructed between 1972 and 1982 and the site was used during that time period as a staging point for oil and gas exploration of Banks Island. Occupation of the site since 1982 has been sporadic though the airstrip is regularly used as an interim fuel cache for flight operations in the area. A diamond exploration team (Diamonds North) used the site in early summer 2008 and left behind tent camp structures.

1.2 Previous Site Remediation Efforts

The site has been the subject of several previous site investigations and remediation programs (IEG 2005, EBA 2007a, 2007b, 2007c, and 2007d). In 2006, POL products from the large POL fuel tanks in the tank farm and smaller auxiliary fuel tanks were drained and the POL products incinerated on-site (AES 2006, EBA 2007a). A detailed explanation of previous site investigations is provided in the Remedial Action Plan (RAP) (EBA 2007b).

1.3 Remediation Team

Key personnel involved in the remediation of the Johnson Point site were:

Owner

INAC Project Manager
PWGSC Project Manager

Indian and Northern Affairs Canada (INAC)

Emma Pike, Joel Gowman, Katherine Silcock, Bill Coedy
Brad Thompson, Michael Bernardin

Departmental Representative (DR)

Project Manager
Site Departmental Representative (DR)
Site Environmental Inspector
Site Geotechnical Inspector

AECOM

Barry Fedorak
Brendon Norrie, Greg Wright
Dara Schmidt, Priya Handa, Katie Scott
Chris Kjarsgaard, Kairi Pawlick

Prime Contractor

Project Manager
Site Superintendent
Remediation Sub-Consultant
Surveyor

E. Gruben's Transport Ltd.

Russell Newmark
Jim Stevens
IEG Consultants Ltd.
Inukshuk Geomatics Ltd.

2. Inuvialuit Involvement

2.1 Community Consultation / Involvement

CARD has worked closely with the Inuvialuit Regional Corporation (IRC) to identify groups or individuals within the Inuvialuit Settlement Region (ISR) that may be affected by remediation activities at Johnson Point.

At the recommendation of IRC, CARD has consulted with the Sachs Harbour Hunters and Trappers Committee (HTC) and the Inuvialuit Game Council (IGC) and informed IRC of the intention to commence consultation activities with the affected groups within the ISR.

In December 2005, at the invitation of the IGC, CARD attended the IGC quarterly meeting in Inuvik. CARD presented information on the Contaminated Sites Program, reviewed the assessment activities that had been completed at Johnson Point during 2005, and summarized the activities that were proposed for 2006.

In April 2006, CARD initiated a Traditional Knowledge/Community survey in Sachs Harbour regarding Johnson Point and the surrounding area. The survey was contracted to the Sachs Harbour HTC and was conducted by Joey Carpenter, an elder from Sachs Harbour. CARD and the Sachs Harbour HTC prepared the survey to collect information about how Johnson Point is used by the community of Sachs Harbour (both past and present); how the site was used by industry; and what animals are found at the site at different times in the year.

In addition to the survey, CARD visited Sachs Harbour from April 24 - 27, 2006. CARD attended an HTC Special Members Meeting at the invitation of the Sachs Harbour HTC on April 25, 2006 to present an update on Johnson Point. During this presentation, information was provided about the process of evaluation and selection of sites for the Contaminated Sites Program; the tasks completed at Johnson Point in 2005; and a summary of the work to be completed in 2006. Following the presentation, CARD held a question and answer period to gather information about community concerns.

CARD also visited the Inualthuyak School in Sachs Harbour on April 26, 2006 and gave a short demonstration about how contaminants travel in the environment and why we need to be concerned about cleaning up sites and protecting the environment. The students participated in two short science experiments led by CARD.

CARD conducted a site visit to Johnson Point with elders and some members of the Sachs Harbour HTC on August 13, 2006. Comments from elders and HTC members during the tour of the site were used by CARD to direct further testing for contamination at Johnson Point and to help avoid sites of cultural importance.

In the spring of 2007, following the 2006 environmental site assessment, CARD and PWGSC visited Sachs Harbour. A Remedial Options Evaluation Meeting, held on April 17, 2007, was attended by delegates of the Sachs Harbour Hunters and Trappers Committee, Community Corporation and Elders Committee. The various technically feasible options for each site component were discussed. Options were selected based on traditional knowledge; anticipated future community use of the area and the technical benefits and weaknesses of each approach.

CARD also hosted a Community Information Session and dinner (open to the public) in Sachs Harbour on the evening of April 17, 2007 and Ulukhaktok on the evening of April 19, 2007. The remedial options selected and the selection process that was used was discussed. CARD and PWGSC representatives were in attendance to answer questions about the proposed activities at Johnson Point and to provide information about CARD activities throughout the Inuvialuit Settlement Region. These Community Information Sessions were well attended with a positive atmosphere as both communities were excited to see that remedial action would soon be conducted at this site in their traditional territory.

On June 18, 2008, INAC, PWGSC, and the successful remediation contractor, E. Gruben's Transport (EGT), hosted a community information session and supper in the Sachs Harbour school gym to discuss the upcoming activities at Johnson Point and what opportunities there were for community members in the remediation project. This meeting was attended by 12-15 persons including elders and representatives from the Community Corporation and Hunters and Trappers Committee.

The following day, on June 19, 2008, INAC, PWGSC, and EGT hosted a similar community information session and supper in the hamlet of Ulukhaktok at the Community Centre. This meeting was very well attended with approximately 50 individuals (20 children and 30 adults) including many elders and representatives from the Olokhaktomiuk Hunters and Trappers Committee. The atmosphere at both meetings was very positive as both communities were very excited to hear that the Site at Johnson Point was about to be cleaned up. Both communities were also very interested in any potential employment opportunities during the project.

On June 15, 2009, INAC and E. Gruben's Transport (EGT) hosted a community information session and supper in Sachs Harbour to discuss the upcoming season activities at Johnson Point and opportunities for community members in the remediation project.

Six community representatives from Sachs Harbour attended a Community Site Tour hosted by CARD and EGT on September 8, 2009. Feedback was positive and no community concerns were expressed during the visit. A brief update on the status of the project was provided to approximately 30 people during the Victoria Island Community Information Session in Ulukhaktok on November 17, 2009.

CARD has funded a community liaison position for the duration of the remediation program to enhance community feedback and assist with community consultation efforts.

2.2 Inuvialuit Content

Based on the performance measures reported to INAC by EGT, this project has created a total of 20,976 hours of employment, 18,422 of which were northern employment and 16,084 of which were northern aboriginal employment.

2.3 Training

In association with the remediation contract, a total of 749 hours of training was provided by EGT to 20 people, 18 of which were northern aboriginal (660 hours). Training included a 40 hour HAZWOPER training course in addition to the site orientation activities.

The 2008/2009 training program was coordinated by CARD through the IRC with a total of 23 participants from 6 Inuvialuit communities over 7 days. Total training in 2008/2009 was as follows: Total training = 55 persons (1494 hours), Northern Training = 50 persons (1478 hours) and Northern Aboriginal Training = 49 persons (1448 hours).

3. Regulatory Compliance

3.1 Health and Safety

Health and safety was a key consideration by all project team members and taken seriously by all staff and visitors to the site.

Prior to construction, the contractor submitted a detailed, site-specific health and safety plan to INAC. The plan outlined the policies and safe working practices that all personnel working on the site were to follow as well as the personnel protective equipment to be used by workers. A medic was on-site at all times during the field season. The medic, supervisor, and foreman closely monitored worker safety and all workers were strongly encouraged to report any situations they believed could be unsafe. Each day on-site began with a job briefing which included a review of potential safety issues associated with current work activities.

2008 season activities were completed without a significant or lost time injury. Workers reported minor cuts and abrasions and three persons required eye wash bottles to remove small foreign particles from their eyes. One incident involved Environmental Inspector photographing and sampling contents of a barrel that, when opened, caused a release of fine dust. Although PPE was being utilized, some of the dust came into contact with the inspector's eyes as the PPE was removed. Immediate first aid attention was sought, and the product was flushed out of the eyes with an eye wash station. No further medical attention was required and there was no time lost due to the incident.

During the 2009 season, there were no significant or lost time injuries. One incident was reported, which involved an EGT worker grazing his ear/side of head as he was using a sledge hammer during tank demolition activities. No first aid was required (i.e. no bleeding or swelling) and the incident did not result in lost time.

All vehicles on-site were equipped with small first aid kits, fire extinguishers and spill kits. A list of Material Safety Data Sheets (MSDS) was posted in the Site Superintendent's office.

3.2 Health and Safety Training

Orientation was given by the site medic to all site personnel as they arrived on-site. This orientation familiarized the workers with the history of the site, objectives of the project, relevant INAC, NWT, and contractor health and safety policies as well as camp operation and evacuation information. As part of the orientation, all workers were shown videos provided by Environment Canada on working safely in polar bear habitat.

Asbestos abatement work conducted on-site was minimal and involved removal and bagging of an asbestos wall panel from one trailer. Prior to the commencement of this asbestos abatement work, full and half-mask respirator fit testing was performed for asbestos crew members.

3.3 Environmental Protection

Work and camp activities on-site were governed by environmental protection protocols outlined in the design specifications; INAC protocols; Contractor work practices; and the conditions of the Land Use Permit; Quarry Permit; and Water License.

One marine container full of environmental protection supplies, such as oil absorbent booms and pads was on-site and readily accessible throughout remediation activities. Silt curtains were deployed during airstrip repair work to prevent migration of sediment to the ocean. Oil drip trays were placed beneath parked equipment overnight and during breaks.

Silt fencing was erected when work activities or climatic conditions had the potential to introduce silt to the adjacent water bodies. Specific locations when silt fencing was deployed include:

- Along portions of the Apron Area excavation on the Ocean side of the airstrip,
- Where washout channels cross the airstrip toward the Ocean.
- At the interface between the River and flooded excavations.

3.4 Camp

The Johnson Point remediation construction camp consisted of 6.1 m modular trailers arranged into one main block with shower, kitchen, and dining facilities connected to an additional single 6.1 m modular accommodation trailer.

In addition to the main camp, five separate 6.1 m well site trailers were arranged around the south and east side of the main camp. These five trailers provided accommodation for the Site Superintendent, Departmental Representative (DR), Environmental Inspector and Geotechnical Inspector as well as geotechnical and environmental laboratory facilities. A smaller trailer was also established as a crew smoking area.

Wooden, ground-level walkways connected the main camp buildings and Site Superintendent and AECOM personnel accommodation trailers.

Power was supplied using a diesel generator and propane was used to heat the camp buildings. All camp garbage was collected and incinerated daily in a dedicated fuel fired incinerator.

3.5 Regulatory Requirements

INAC CARD was granted a Land Use Permit, Quarry permit and a Water Licence to authorize remediation work and camp operations at Johnson Point. Conditions outlined in these permits governed the method of operation for several key remediation and camp processes. The details of the permits and the efforts undertaken to comply with them are described in the following sections.

Weekly Departmental Representative reports to INAC/PWGSC were forwarded to water and land use inspectors.

Environmental site inspections were conducted by INAC Resource Management Officers (RMO) or Department of Fisheries and Oceans habitat specialists on August 27, 2008, August 11, 2009, August 21, 2009, and September 8, 2009. Copies of the inspection reports are provided in Appendix C.

3.6 Land Use Permit

Land Use Permit #N2008X0011 was issued to INAC CARD by the INAC North Mackenzie District on May 22, 2008. A copy of the permit is included in Appendix C.

The general intent of the permit is to minimize disturbance to the sensitive arctic tundra and prevent any significant damage. To this end, heavy equipment was operated only on established site access roads as much as possible. ATVs and trailers were used to gather scattered debris from soft tundra areas.

All bulk petroleum products brought to site for use in the remediation activities, including diesel, gasoline and lubricating/hydrolytic oils, were stored in steel containers. All containers greater than 205 L in volume consisted of a primary containment vessel within a secondary steel tub that had a volume of at least 110% of the stored volume. All vessels were marked with the contractor's name and labelled with appropriate identifier placards.

Small volumes of chemicals were required on-site, generally as camp cleaning products. A list of these products was generated by EGT and posted on-site.

3.6.1 Wildlife

At least one, and generally two, wildlife monitors were on duty during site remediation activities. Each wildlife monitor used an ATV to patrol areas where workers were active and made regular patrols of the general area. Each wildlife monitor carried a firearm and bear deterrents (bangers and screamers).

Muskoxen were often observed in and around the site area until early September 2008, generally in groups of up to ten. Arctic foxes and arctic wolves were also seen near and on-site, observed both alone and in pairs. Polar bears and numerous bear tracks were observed along the shore and off-shore of the site beginning on August 22, 2008. Bear sightings and fresh tracks coincided with the arrival of ice bergs in the Prince of Wales Strait. Bears were most commonly noted on icebergs in the Strait.

Wildlife observed during the 2009 season included muskox, migrating birds (loons, king eider ducks, Canada geese, etc), seals, bowhead whales and polar bears. There were no reports of wildlife within the work area; however, there were cases where polar bears were on sea ice within 500 m of the site.

3.6.2 Archaeological Sites

Workers on-site did not report finding any archaeological or cultural artefacts during the remediation project.

3.7 Water License

Water License #N7L1-1824 was granted to INAC CARD by the Northwest Territories Water Board on May 21, 2008. A copy of the license is included in Appendix C.

The Water License governs the rate and manner which water could be extracted from natural water bodies and provides discharge criteria for waste water. An appropriate site for the discharge of treated greywater was chosen in consultation with the Water Resource Officer during the 2008 visit. This location is shown on accompanying As-built drawings.

The Water License allowed up to 20 m³ of fresh water to be taken daily from the water bodies surrounding the camp. Water taken from the Unnamed River was use as non-potable camp water. Bottled water was provided as potable water.

Authorized greywater discharges and dewatering of excavations was completed using a pump with a 25 mm or 50 mm hose. Water was discharged on top of plywood sheet to reduce erosion at the authorized discharge location. An oil absorbent boom was deployed around the pump intake when pumping from hydrocarbon excavations.

A summary of water taken and discharged is provided in Table 1.

Table 1: Camp Water Intake and Discharge Volumes

Date	Quantity of Fresh Water Obtained from all Sources (m ³)	Quantity of all Camp Waste Water Discharged On-site (m ³)
9 August 08	7.8	-
13 August 08	8.8	-
16 August 08	8.8	-
18 August 08	17.6	-
22 August 08	15.8	-
25 August 08	17.2	-
28 August 08	17.2	-
31 August 08	16.0	-
3 September 08	15.1	-
4 September 08	6.5	-
6 September 08	8.9	-
8 September 08	13.2	-
10 September 08	13.2	-
2008 Total	166.1	-
17 June 09	17.6	-
18 June 09	8.8	-
21 June 09	15.1	-
25 June 09	13.2	-
28 June 09	15.8	-
1 July 09	15.1	-
4 July 09	15.8	-
7 July 09	14.1	-
10 July 09	10.6	-
June 30 - July 9	-	95
13 July 09	10.6	-
15 July 09	14.1	-
17 July 09	12.3	-
21 July 09	10.6	-
23 July 09	13.2	-
July 24 - 29	-	115.0
27 July 09	10.6	-
30 July 09	8.8	-
02 August 09	10.6	-

Date	Quantity of Fresh Water Obtained from all Sources (m ³)	Quantity of all Camp Waste Water Discharged On-site (m ³)
05 August 09	12.3	-
08 August 09	12.3	-
10 August 09	12.3	-
13 August 09	14.1	-
15 August 09	10.6	-
19 August 09	14.1	-
August 19 - 21	-	40.0
21 August 09	10.6	-
23 August 09	8.8	-
27 August 09	10.6	-
29 August 09	8.8	-
August 23-29	-	60.0
31 August 09	8.8	-
3 September 09	10.6	-
Aug 30 – Sept 5	-	35
19 September 09	-	12
2009 Total	350.8	357
Total	516.9	357

3.7.1 Sewage System

“Pacto” waterless toilets were used throughout the Johnson Point camp. Waste from these toilets was collected and incinerated along with camp garbage, thus removing the need for a traditional sewage treatment pond.

3.7.2 Waste Water (Greywater) System

Camp operations wastewater generated on-site consisted solely of greywater. The Water License included the condition that greywater could only be discharged to land at the approved location following receipt of an Inspectors approval to discharge. Applicable discharge criteria presented in the Water License are shown in Table 2.

Table 2: Water License Waste Water (Greywater) Discharge Criteria

Sample Parameter	Maximum Average Concentration
Mineral Oil and Grease	5.0 mg/L
Total Suspended Solids (TSS)	100.0 mg/L
Residual Chlorine	0.1 mg/L

The greywater treatment system at Johnson Point consisted of a series of aeration and UV treatment stations and open cell ponds located immediately east of the camp. In an attempt to prevent exceedances in total residual chlorine, camp cleaning staff were supplied with non-chlorine cleaning products and the total volume of chlorine available on-site was strictly controlled.

An initial settling pond, with a capacity of 28,700 L (10.3 m x 6.2 m x 0.45 m), was constructed using timbers and borrow material to create berms. The pond was lined with Enviroliner 4030 and a layer of protective geotextile was placed below the liner. From this initial settling pond, greywater was pumped into the aeration and UV treatment plant. A post-treatment holding pond, with a capacity of 95,000 L (13.0 m x 21.0 m x 0.35 m), was constructed with berms created from imported borrow material. The pond was lined with Enviroliner 4030 with a layer of protective geotextile placed below the liner.

Partway through the 2008 season, the EGT mechanic constructed an additional aerator unit to further aerate greywater entering the treated greywater holding pond in an effort to reduce the total residual chlorine content.

During 2008 CARD requested and obtained a change to the Water Licence to enable EGT to attempt chemical neutralization of chlorine with sodium thiosulphate. Sodium Tiosulphate was added to the post treatment pond at the end of the 2008 season, but appeared to have a negligible effect, likely due the cold temperatures at the time.

The pre and post-treatment greywater pond were decommissioned by September 6, 2009. The used liner was placed in a Marine shipping container for removal from site as non-hazardous waste. Greywater generated and aerated/treated after September 6, 2009 was stored within the treatment system holding tank with the intent of removing it by barge using the Gator and white aeration tank. Freezing temperatures and high winds between September 17 and 19, 2009 made it increasingly difficult to keep this greywater from freezing in the tank. That, along with the likelihood that a barge would not land, prompted EGT to discharge the greywater on September 19, 2009. Leaving the greywater in the tank over winter would have resulted in an uncontrolled spill in the spring and damaged to the tanks. Greywater was discharged over 12 hours period to the approved discharge location. This release has been reported to the NWT Spill Line as an unauthorized discharge (Spill Report # 2009514).

All plumbing and grey water system piping was disconnected and the camp entirely drained out on September 17, 2009 when the barge was just off-shore and appeared likely to land.

Details of the camp water supply and greywater treatment/storage system are shown in Appendix D and the photographs are shown in Appendix I.

3.7.2.1 Greywater Sample Results

Greywater sampling was generally conducted by IEG staff under direction of the contractor or by the contractor directly. Greywater samples were sent to Maxxam Analytics in Edmonton for analysis. Samples were generally taken and flown out when connecting commercial flights would minimize the time between sampling and analysis. A summary of greywater test results taken during the remediation work is provided in Table 3.

The greywater system proved to be capable of treating water to meet mineral oil and grease and TSS criteria. Meeting the required chlorine criteria, however, was more problematic. Some greywater samples met the chlorine discharge criteria while other samples did not. As no chlorine was used during camp operations, naturally elevated chlorine levels in the source river water is considered the most likely source. Chlorine results from samples of the river water were variably above or below discharge criteria, likely because of changes in tidal action and river flows.

Samples of both the greywater and river collected on the same day (June 18, 2009) show residual chlorine levels in post-treatment lagoon to be lower than both Water license criteria and river.

Table 3: Waste Water (Greywater) Test Results

Lab Sample #	Reference #	Sampling Date	Sampled By	Sampling Location	Water Licence Criteria			Dissolved Chlorine	Total Dissolved Chlorine	Comment
					Mineral Oil and Grease (mg/L)	Total Suspended Solids (TSS) (mg/L)	Residual Chlorine (mg/L) (free chlorine in lab reports)			
L29460	JPGW-01	August 24, 2008	EGT	Post-treatment Holding pond	<2	14		0.10		
L29472	JPGW-02	August 24, 2008	EGT	Post-treatment Holding pond	<2	14		0.07		
L29473	JPGW-03	August 24, 2008	EGT	Post-treatment Holding pond	<2	22		0.09		
L29474	JPGW-04	August 24, 2008	EGT	Post-treatment Holding pond	<2	15		0.12		

L46967	JPGW-05	Sept 6, 2008	EGT	Post-treatment Holding pond	<2	10		0.17	<0.02	PHT
L46982	JPGW-06	Sept 6, 2008	EGT	Post-treatment Holding pond	<2	12		0.16	<0.02	PHT
	JPGW-07	Sept 13, 2008	EGT	Post-treatment Holding pond					<0.02	
	JPGW-08	Sept 13, 2008	EGT	Intake of aeration tank				0.19	<0.02	PHT
	JPGW-09	Sept 13, 2008	EGT	Outlet of Aeration tank				0.21	<0.02	
	JPGW-10	Sept 16, 2008	EGT	Post-treatment Holding pond				1.5	<0.02	
P39545	JPGW-10	June 18, 2009	EGT	River			0.16			PHT
P39691	JPGW-11	June 18, 2009	EGT	River					0.1	PHT
P39692	JPGW-12	June 18, 2009	EGT	Post-treatment Holding pond			0.05			PHT
P39693	JPGW-13	June 18, 2009	EGT	Post-treatment Holding pond					<0.02	PHT
P73945	09-434	July 9, 2009	AECOM	River upstream (by DN camp)			0.05			PHT
P74120	09-435	July 9, 2009	AECOM	Field Blank			0.02			PHT
P74121	09-436	July 9, 2009	AECOM	River at intake source			0.03			PHT
P74122	09-437	July 9, 2009	AECOM	Post-treatment Holding pond			0.1			PHT
	JPGW-14	July 17, 2009	EGT	Post-treatment Holding pond	<2					
	JPGW-16	July 17, 2009	EGT	Post-treatment Holding pond		20				
Q71139	JPGW-19	September 10, 2009	EGT	Post-treatment Holding pond	<2	22	0.23			PHT

Note: The sample number JPGW-10 was used twice, once at the end of the 2008 season and once at the beginning of the 2009 season.

PHT = Sample received past laboratory hold time

3.7.2.2 Ponded Water

Precipitation and groundwater that collected in buried debris or hydrocarbon excavations during remediation activities was sampled and tested against the following Water license criteria:

Table 4: Johnson Point Soil Treatment and Tank Cleaning Discharge Criteria

Sample Parameter	Maximum Average Concentration
Volatile Hydrocarbons (VH) (W5-10)	15 mg/L
Extractable hydrocarbons (EH) (W10-19)	5 mg/L
Non-aqueous Phase Liquids	Non visible sheen
pH	6 - 9

Water that passed the discharge criteria was pumped from the excavation and discharged at the approved discharge location, on a plywood board to minimise erosion. Results from ponded water samples taken during remediation operations are summarized in Table 5.

Table 5: Ponded Water Test Results

Sample ID	Sampling Location	Date Collected	Parameters		
			pH	Volatile Hydrocarbons VH (W5-10) (mg/L)	Extractable Hydrocarbons EH (W10-19) (mg/L)
Water Discharge Criteria			6 - 9	15 mg/L	5 mg/L
09-430	NE Plume - Lobe L	7-Jul-09	7.87	0.374	1.70
09-431 ¹	SW Plume - Lobe Y/J	7-Jul-09	7.67	6.480	19.3
09-520	SW Plume - Lobe Y	16-Jul-09	8.16	0.724	1.18
09-521	SW Plume - Lobe X	16-Jul-09	7.44	1.580	4.14
09-597	NE Plume - Lobe P	21-Jul-09	7.64	<0.300	0.15
09-598	SW Plume - Part 6	21-Jul-09	8.25	1.100	3.39
09-599	SW Plume - Lobe Y/J	21-Jul-09	7.61	0.995	3.86
09-600 ²	Main Station	21-Jul-09	8.14	1.400	6.09
09-601(d)	Main Station	21-Jul-09	8.12	1.050	6.40
09-729	NE Plume	07-Aug-09	7.84	<0.300	0.4
09-774	NE Plume	09-Aug-09	7.92	<0.300	<0.08
09-775	NE Plume - Part 1	09-Aug-09	7.85	<0.300	0.31
09-806	SW Plume - Part 4	11-Aug-09	8.30	0.736	0.79
09-807	NE Plume - Lobe L	11-Aug-09	8.22	3.890	1.80

Notes:

1. Water was held in excavation and re-sampled on July 21, 2009 (Sample ID 09-599). Heavy rain fell during intervening period.

2. Period of heavy rain over night, which occurred between sampling and return of result, caused erosion channel to develop through excavation wall and held water to be released. Refer to **Section 3.7.3.1**

(d) = duplicate sample

3.7.3 Spills and Non-Compliances

Spills and unauthorized discharges that occurred during remediation operations are summarized in Table 6. Spill report forms are presented in Appendix C.

Table 6: Johnson Point Remediation Spill and Unauthorized Discharge Summary

Date of Spill	Work Activity	Product Spilt	Volume (L)	Affected Area (m ²)	Action Taken
August 16, 2008	Establishing greywater system	Untreated greywater	25 - 30 L	1 m ²	Leaking from hose fitting into adjacent depression. Seal was replaced.
August 17, 2008	Debris collection	Waste oil	1 - 5 L	<1 m ²	Free product retrieved with absorbents. Spill within existing hydrocarbon excavation.
June 30, 2009	Kitchen waste	Grease/fat	20 L	N/A	Problem corrected by cutting side of sump to reinstate positive drainage. The spilled liquid ponded in a small depression and the fat was collected (once hardened) and disposed of in the camp incinerator.
July/ August, 2009	Fuel dispenser	Diesel	Unknown	1 m ²	Leaking from hose fitting on refuel line to generator shack. Impacted soil was excavated and packaged for removal. fittings replaced.
July 25, 2009	Hydrocarbon impacted soil excavation	Hydrocarbon Contact Water	Unknown	150m ²	Excavation filled and breached down slope excavation wall during overnight heavy rain. Spill report number # 2009513.
August 6, 2009	Excavation adjacent to river	NA	NA	NA	Details below.
Sept 11, 2009	Camp greywater system	Untreated greywater	100L	1m ²	Overtopping of greywater camp sump because small diameter outlet hose needed could not keep up with inflow rates. Small hose needed because of freezing temperatures which would freeze larger diameter (slower) flows.
Sept 19, 2009	Camp greywater system	Untreated greywater	12,000 L		At end of 2009 season, remaining greywater discharged to approved location from holding tank. Greywater exceeded chlorine criteria. Spill report number # 2009514

3.7.3.1 Main Station Excavation Discharge

The Main Station excavation was completed to design limits by July 16, 2009. The excavation was on the sloping ground to the north of the Station Area. The base of the excavation sloped to the north and the northern excavation wall was approximately 0.5 m high. The ground to the north of the excavation sloped away so the northern excavation perimeter wall was effectively a small berm. Melting permafrost and a minor rainfall event formed an area of ponded water against the north berm of approximately 5000 L. This volume of water was sampled July 21, 2009.

Following three days of rain, heavy overnight rain on July 25 (prior to sample results coming back) caused a channel to develop in the northern excavation perimeter wall and the ponded water (and additional water from the heavy precipitation) to escape from the excavation.

The volume of ponded water that was released from the excavation is unknown, but it was likely significantly more than the volume sampled due to the heavy rain.

3.7.3.2 River- Excavation Interaction

During the night shift of August 5- 6, excavations were undertaken in the portion of the Apron Area hydrocarbon contaminated soil area near the river. Excavations began between 1 and 5 meters from the river edge and progressed away from the river. At about 7 am on August 6, the high tide cause the river level to rise between 5 and 10 cm, overtop the narrowest portion of the buffer berm and spill into the excavation. This portion of the buffer berm was quickly eroded and within 10 minutes the excavation was filled with flow from the river.

A silt fence was erected at the river inlet to the excavation to control potential sediment transport in or out. When the water level in the river (and excavation) dropped with low tide in the afternoon, a higher berm was constructed to isolate the excavation from further river level fluctuations. The berm was stabilized with sandbags and covered with plastic sheeting to minimize rain erosion. DFO visited the site to inspect the remedial measures.

A sample of the river water impounded in the excavation was tested (09-729) and the water shown to be below discharge criteria. EGT then discharge the excavation water to the approved greywater discharge location via pumping. Confirmatory samples taken from of the flooded excavation walls and base (09-755 to 09-769) returned results below Apron Area hydrocarbon criteria. Additional details regarding excavation and backfilling in the vicinity of the River is provided in Section 5.15.

3.8 Quarry Permit

Quarry Permit #2008QP0077 was issued to INAC CARD by the INAC North Mackenzie District on August 11, 2008. This permit was amended based on conditions encountered during 2008 and a new permit (2009QP0089) was issued to INAC CARD. Monthly quarry permit returns were filed with INAC North Mackenzie District for the months of August, 2008, September 2008, June 2009, July 2009, August 2009 and September 2009. Volumes of borrow materials quarried are outlined in Table 7.

As requested by INAC Land Use Inspector, approximately 2764 m³ of additional borrow material was placed on the Apron Area PHC excavation area. This material was quarried from the existing road between the Station Area and ridgeline. This borrow source was not identified on the 2009 Quarry Permit.

Table 7: Johnson Point Borrow Material Extraction Summary

Month	Volume of Material Extracted (m3)				Total
	Borrow Area B	Borrow Area 6	Borrow Area D	Ridge Road Borrow	
August 2008	1207				1207
September 2008	2622				2622
June 2009	22				22
July 2009	1146		480		1626
August 2009	17977	8976	840		27793
September 2009	1144	1356		2981	5481

3.9 Diamonds North Agreement

During early summer 2008, portions of the Johnson Point site was used by Diamonds North Ltd. as a base camp for exploring the diamond potential of mineral claims in northern Banks Island. The Diamonds North team has constructed a wood-sided tent camp 200 m northwest of the tank farm.

Anticipating that portions of the site would be in use by Diamonds North during remediation activities in 2008 and possibly 2009, a site use agreement was developed between INAC, CARD/PWGSC, and Diamonds North. The agreement (presented in Appendix H) coordinated operations and essential functions such as emergency response, flights and work site hazard assessment.

Diamonds North completed their 2008 sampling program and completely demobilized prior to the arrival of the NTCL barge carrying the Contractor's crew and equipment. Diamonds North was not on-site during 2009.

4. Summary of Remedial Action Plan

Remediation activities undertaken at Johnson Point were conducted to meet the requirements of the Tender and Construction Drawings and Specifications and as well as regulatory requirements. Tender and construction designs and Specifications were developed to meet remediation outcomes and recommendations given in the Remedial Action Plan (RAP) (EBA, 2007d) and accompanying Phase III Site Investigations report (EBA 2007b). The hydrocarbon soil areas and inventories of hazardous and non-hazardous waste were taken from the RAP and applied to the tender design and Specifications.

The main remediation decisions and recommendations provided in the RAP are summarized below.

4.1 Hydrocarbon Contamination

- The site contains two areas of hydrocarbon contaminated soils; the Apron Area and the POL Tank Farm Area (Main Station).
- The Main Station Area is impacted primarily by semi-volatile F2 hydrocarbons, with some F1 and F3 hydrocarbons. This area is sufficiently far from water bodies for the CCME protection of Aquatic Life criteria to not apply. There was approximately 500 m³ of impacted soil delineated in this location that exceeded the applicable Site Specific Target Level (SSTL) for risk to ecological receptors (4,570 ppm). The SSTL was provided by INAC, based on work by Jacques Whitford Limited (2007). A 1.0 m depth of excavation was developed and document in the Phase III Assessment completed for the site.
- Hydrocarbon impacts in the Apron Area are primarily volatile and semi-volatile F1 and F2 hydrocarbons. Due to the proximity of these impacted areas to surface water bodies (Ocean and River), the CCME criteria for protection of Aquatic Life (F1 = 230 ppm and F2 = 150 ppm) is applied to the entire Apron Area, rather than the typical 10 m radius adjacent to the water body.
- Approximately 25,000 m³ of soil in the Apron Area exceeds the applicable CCME protection of Aquatic Life criteria (F1 = 230 ppm and F2 = 150 ppm). Depth of excavation provided in the Phase III Assessment (EBA 2007b) was 1.0 m.
- Hydrocarbon concentrations within the majority of the delineated Apron Area hydrocarbon excavations are below the SSTL of 4570 ppm.
- Johnson Point hydrocarbon contaminated soil can be best remediated through excavation and treatment by alluving and/or land farming.
- Additional soil delineation samples were collected by Golder (2007) and analyzed for hydrocarbon impacts.

4.2 Demolition and Debris

- The majority of demolition and debris waste on-site is classified as hazardous due to presence of lead/PCB based paints and asbestos.
- The quantity of non-hazardous demolition and debris material is too small to warrant construction of an on-site landfill.
- Asbestos-containing-linoleum in the trailers at the airstrip was identified in the Phase III assessment.
- All hazardous and non-hazardous materials are to be removed from site for disposal at a licensed facility.
- The leachability of lead paint could be evaluated to further determine the class of waste facility that painted material can be disposed of in.
- Demolition and debris waste item dimensions and uncrushed volumes, considering total length, width and height, are presented in RAP appendix tables.
- Additional paint samples were taken from demolition and debris items by Golder in summer 2007, after the RAP was produced (Golder 2007). Golder noted that the paint from the majority of painted facilities and equipment exceeded the NWT guidelines for total lead and the paint from the orange Nodwells and greenish-white maintenance building exceeded leachable lead guidelines.

4.3 Landfill Remediation

- Existing Landfills A, B, C and D were delineated using geophysics.
- Ten test pits were excavated in Landfill A, six of which encountered buried debris of various compositions.
- Three test pits were excavated in Landfill B, all of which encountered buried debris at approximately 0.3 m depth.
- Five test pits excavated in Landfill C encountered various buried debris at between 0.5 to 1.0 m depth.
- Five test pits were excavated in Landfill D, one of which encountered buried debris (metal) at 1.0 m depth.
- Existing Landfills A, B, C and D are to be covered with a layer of sand to at least 0.7 m thickness to minimize risk of future debris exposure. Existing Landfill A and the lower half of Existing Landfill C require an additional layer of erosion protection consisting of cobbles and gravels to be placed over the sand. The cobble and gravel material will have to be imported to site as there is no suitable source of this material available near the site.

- Debris within the existing Apron Area Landfill is to be excavated along with Apron Area hydrocarbon impacted soil excavations.
- Slopes on landfill regrades are to be a maximum of 4H:1V.
- None of the soil samples taken from test pits in geophysics areas across the site identified levels of metals or PCBs that exceeded the relevant criteria.
- In addition to geophysics lobes and existing landfills A, B, C and D, there were other lobes identified by geophysics in the Main Station Area. Some (Lobe B) are due to buried pipelines and should be left in place and others are due to surface debris (Lobes C, D, E and F) which should be collected. Lobes M, N and O are delineated but no remedial action was provided.
- Nine Borrow Areas are shown around the site, based on geotechnical work conducted by EBA (2006).

5. Remediation Activities

5.1 Contractor Selection

The process employed by PWGSC for the selection of the remediation contractor started with communication between PWGSC and the IRC to confirm that the Crown's procurement strategy met the spirit and intent of the Inuvialuit Final Agreement.

Once the Request for Proposal (RFP) document, including evaluation criteria, was finalized the Notice of Proposed Procurement for the work was posted on MERX on December 3, 2007. MERX is the on-line tendering service for the Government of Canada.

Prior to posting the RFP on MERX, a bidder's site visit was conducted on August 2, 2007 to allow potential bidders to inspect the site conditions relative to the proposed work activities to be completed. Representatives from six companies participated in the site visit. A bidder's conference in Inuvik was held on December 13, 2007 for the Crown to review the remediation specification and bidding process with potential bidders. Eight firms sent representatives to this meeting.

The tender closed on January 22, 2008 with four proposals submitted for the remediation project. Each proposal was evaluated for its overall merit which included technical understanding of the project, management team experience, Inuvialuit benefit plan and cost as detailed in the RFP document. The successful contractor was selected based on Assessed Best Value (Merit 60% + Cost 40%). The proposal which represented the best value to the Crown was provided by E. Gruben's Transport Limited (EGT). On March 18, 2008, the Johnson Point Site Remediation Contract was issued to EGT.

A project kick-off meeting between EGT, INAC, PWGSC and AECOM (the consultant retained as the Crown's on-site representative) was conducted in Inuvik on July 8, 2008, where all parties reviewed and discussed work items included in the specifications.

5.2 Environmental Sampling Guidelines

The methods for environmental sampling of hazardous material, barrel contents and confirmatory sampling of soil excavations are governed both by industry best practice and protocols developed specifically for northern military site remediation work. Protocols that governed the Johnson Point remediation work include:

- Indian and Northern Affairs Abandoned Military Site Remediation Protocol March 2005.
- Canadian Council of Ministers of the Environment (CCME) Canada Wide Standards for Petroleum Hydrocarbons - Hydrocarbon Contaminated Soil.

Samples collected by AECOM were submitted for analysis to Maxxam Analytics in Edmonton, Alberta. This laboratory is accredited with the Canadian Association of Environmental Analytical Laboratories (CAEAL). One specific specialized analysis for contents of one barrel found onsite was subcontracted to GR Petrology Consultants in Calgary, Alberta.

5.3 Remediation Operations Summary

Remediation operations at Johnson Point were undertaken during the summer field seasons of 2008 and 2009.

In early August 2008, the contractor (EGT) mobilized to site by barge with equipment and crew. The construction camp and greywater treatment system was established and remediation operations commenced. Initial operations focussed on transporting non-hazardous debris and mobile demolition items to a staging area alongside the airstrip. On August 11, 2008, waste in the staging area was removed from site by barge to Tuktoyaktuk. From Tuktoyaktuk, the waste was taken by barge to British Columbia for disposal.

Remediation operations in the 2008 season involved debris consolidation, borrow pit development, placement of fill on existing landfill regrades and demolition of large bolt-together POL tanks.

Environmental staff from AECOM and the contractor's sub-consultant (IEG) conducted sampling operations within existing delineated hydrocarbon impacted soil areas. Operations at the site finished for the season on September 16, 2008.

The 2009 work season started on June 17, 2009. In addition to snow clearing and camp set-up, initial work activities included resuming tank demolition, constructing a contaminated soil treatment cell and surveying areas for future excavation and/or regrading. Once the remainder of the site had sufficiently thawed and dried, soil excavation activities began, starting with the buried debris lobes and continuing with adjacent contaminated soil plumes. Simultaneously, the contractor initiated the regrading of the Existing Landfills A, B, C and D. This involved hauling, placing and compacting Type 2 material, then covering part or all of the regrade areas with Type 1 material, which arrived on August 18, 2009 by barge.

Progression of excavation activities during the 2009 season were impeded, at times (in a couple of instances for periods of 3 or more days) by continuous and heavy rain. All remaining remediation operations were completed during the 2009 season and included contaminated soil excavation and backfilling, contaminated soil treatment and disposal, tank demolition, hazardous materials collection, non-hazardous debris collection, landfill regrading, barrel processing, and borrow pit development. Operations at the site finished on September 22, 2009.

Further details on the remediation operations are provided in the following sections.

5.4 Mobilization

Mobilization of remediation equipment, crew and camp facilities to the Johnson Point site was conducted using the NTCL-owned tug "Jock McNiven" and three 1500 series ocean barges. Information provided by Diamonds North helped determine when the Prince of Strait was sufficiently ice-free to allow passage of the barges. The tug and barges landed at Johnson Point on August 5, 2008 and unloading of all equipment, crew and camp facilities was completed in approximately 30 hours. The tug and barges then departed for Ulukhaktok (formerly Holman) to deliver equipment (Finley Type 590 screener, a JCB rock truck, a Hitachi EX350 excavator and CAT 966C loader). This machinery was used, in conjunction with Hamlet of Ulukhaktok equipment, to produce Type 1 material. After the machinery was offloaded in Ulukhaktok, and prior to returning to Tuktoyaktuk, the tug and barges returned to Johnson Point (August 11, 2008) to load demolition debris and excess equipment. The equipment remained in Ulukhaktok to facilitate loading of the Type 1 material in the Spring/Summer of 2009 for transport to Johnson Point.

Mobilization of the Type 1 material and equipment from Ulukhaktok to Johnson Point occurred on August 17, 2009, using the NTCL-owned tug "Kelly Ovayuak". Offloading of the Type 1 material was completed in approximately 15 hours.

5.5 Construction Season durations

In conjunction with barge mobilization, EGT personnel arrived on site on August 5, 2008 to open the camp and begin onsite construction activities. The 2008 construction season lasted six weeks (43 days), with the last EGT personnel leaving site on September 16, 2008. A Departmental Representative was on-site from August 9 to September 14.

The 2009 construction season commenced on June 15 and lasted fourteen weeks (98 days) until the last EGT personnel left site on September 22, 2009. The Departmental Representative was onsite from June 24 to September 15, 2009.

During the 2009 season, in addition to the regular 8 am to 8 pm workday, night shift crews worked on tank demolition, excavation and hauling of hydrocarbon contaminated soil to the soil disposal site and hauling of borrow material to regrade areas and excavations. The night crew, working on tank demolition, started on June 29, 2009 and continued until July 21, 2009. Night crew operators initiated remediation operations at the soil excavations, borrow areas and regrade areas starting on July 18, 2009 and continued until August 25, 2009. As was the case for all other activities during the 2009 work season, the ability for the night crew to haul or excavate was determined by the weather conditions.

5.6 Demobilization

Preliminary demobilization events occurred in August 2008 and August 2009. After mobilizing equipment and personnel to Johnson Point, then equipment to Ulukhaktok for Type 1 processing, the barge returned to Johnson Point on August 11, 2008 to remove excess equipment and easily transportable demolition debris, such as the Nodwell Camp units, "ATCO" type trailers, small storage tanks (<300,000 L), etc. An additional demobilization event occurred on August 18, 2009, on the barge that brought Type 1 material and equipment from Ulukhaktok. Items removed from site included idle/excess equipment, demolition debris, some Seacans with contaminated soil and 2 ISO barge containers with leachable lead painted items.

Final demobilization of equipment and demolition debris was scheduled to occur the third week of September 2009. The NTCL-owned tug and barges traveled to within 1.5 km of the site on September 17, but had to turn back due to unfavourable ice conditions. The tug and barges went to Dean Dundas Bay, 30 km south down the strait on the west coast of Victoria Island, to seek shelter. Over the course of September 18 and 19, extreme winds (50-70 km/h) were prevalent down the strait, which kept the barge anchored in Dean Dundas Bay and eliminated any possibility of travelling to the site. Three additional attempts to reach the site on September 20 and 21 were unsuccessful due to ice in the strait and the tug and barges returned to Tuktoyaktuk. NTCL and EGT personnel returned to Johnson Point in late September 2009 after reviewing satellite imagery that indicated the strait was free of ice. It was discovered that a thick band of ice lined the shoreline eliminated the possibility of landing barges at the site. It is anticipated that final demobilization will occur in the summer/ fall of 2010.

5.7 Site Equipment

All heavy construction equipment and supplies were brought to site during barge mobilization. Heavy construction equipment brought to site included:

- One JCB 722 rock truck;
- One CAT 322C excavator;
- One Hitachi EX200 excavator (with removable allu bucket);
- One CAT 14G grader;
- One Komatsu D31PX dozer;
- One CAT D6 dozer
- One CAT 966 loader;
- One CAT 950 loader;
- One CAT TL1055 telehandler;
- One Delta Commander (demobilized to Tuktoyaktuk August 11, 2008);
- One Autocar truck with HL30TC70 crane (demobilized to Tuktoyaktuk August 11, 2008);
- Two Kenworth gravel trucks (demobilized to Tuktoyaktuk August 18, 2009);
- One Terra Gator water truck;
- One Kenworth flat bed, roll off truck with winch (demobilized to Tuktoyaktuk August 18, 2009);
- Two Ford 350 crew cab trucks;
- One Kubota RTV 900 4x4;
- Two John Deere UXV 4x4 Gators;
- Four Honda ATVs;
- Two ATV trailers;
- One 17 foot aluminum boat with outboard motor;
- One Hyster C200-220 tow-behind smooth drum vibratory packer;
- One Finley Type 590 screener (used in Ulukhaktok operations);
- One JCB rock truck (used in Ulukhaktok operations);
- One Hitachi EX350 excavator (used in Ulukhaktok operations); and
- One CAT 966C loader (used in Ulukhaktok operations).

5.8 Borrow Materials

5.8.1 Type 1 Material

The site, surrounding area and Banks Island in general is devoid of coarse granular material deposits. To meet RAP recommendations and design specifications, erosion resistant granular material between 20 mm and 400 mm diameter had to be provided from off-site sources. Following discussions between INAC, PWGSC, AECOM, EGT, and local communities, it was agreed that Type 1 material could be sourced from an existing granular material operation located at the community of Ulukhaktok on Victoria Island.

The Ulukhaktok material source consists of piles of sub-angular platy clasts, eroded through frost-shattering of the surrounding limestone outcrops. Due to the combination of source rock type (bedded metasediments) and erosion process (frost-shattering) the resultant granular material contained an excess of gravels (less than 150 mm) and a lack of cobbles and boulders (above 150 mm) relative to the specified Type 1 material. The specified gradation for Type 1 material at Johnson Point was:

Sieve Designation (mm)	% passing by Weight
400	100
200	65 - 85
75	40 - 65
20	0 - 10

Inspection by the Geotechnical Inspector determined there was little benefit in selectively excavating coarse grained areas. Instead, EGT processed more material than the specified amount and removed the finer proportions to meet the specifications.

To process the in situ granular material to the required gradation, the contractor screened the material through a Finley Type 590 screener with 150 mm and 25 mm screens. Prior to feeding the in-situ material into the screener, the excavator manually removed oversize materials. Material passing the 25 mm screen was also discarded. A 100 mm screen was later added to separate the finer material out of the processed material.

The resulting piles of material (25 mm to 100/150 mm and 100/150 mm to 400/500 mm) were then mixed in a ratio of approximately 2:1 to achieve the desired bulk material gradation. A Geotechnical Inspector was on-site during most of the processing operations and conducted oversize estimations and sieve tests on the processed material. Test results showed the material to meet the gradation requirements (Appendix B).

The final mixed Type 1 material was transported by truck to the Ulukhaktok dock area for subsequent transport by barge to Johnson Point. Unfavourable ice conditions and barge availability at the end of the season prevented the processed Type 1 material from being barged to the site during 2008. Barging of Type 1 material was completed on August 17, 2009. The Type 1 material was off-loaded and stockpiled at the beach at Johnson Point and subsequently hauled to the regrade areas were suitably prepared. A survey of the stockpile on the beach showed a volume of Type 1 material to be 2,067 m³.

5.8.2 Type 2 Material

The specified gradation for Type 2 erosion resistant cover material at Johnson Point was:

Sieve Designation (mm)	% passing by Weight
200	100
50	60 - 100
5	40 - 75
0.425	10 - 30
0.08	5 - 20

5.8.2.1 2008 AECOM Type 2 Material Investigation

Assessment of the site borrow areas by the contractor and Departmental Representative early in the 2008 season identified a general lack of available Type 2 material.

To better define the accessibility, location, and potential quantities of Type 2 granular material available at the site, geotechnical investigations were conducted by the DR, with EGT assistance. The investigations were conducted between September 4 and 6, 2008 and included subsurface investigations and accompanying grain size analysis. EGT excavated a number of shallow test pits across the ridge top and southwest of the airstrip. Samples were collected from these pits for analysis. A report detailing the investigation results is presented in Appendix B.

As expected from visual observation, grain size analysis showed that material available from ridge and Upper Site borrow areas consists of mainly of sand and was unsuitable as Type 2.

Four areas were identified as containing material with a gradation approximating that specified for Type 2. While only one sample lay within the Type 2 gradation limits, samples from these four areas were relatively well graded and could meet the design intent. Outside these four locations, material is too sand and silt-rich, and gravel-poor to meet the design intent.

One of these areas was developed as main borrow extraction pit (Borrow Area B) and another (a portion of the Apron Area excavation) was used as a supplementary gravel source.

5.8.2.2 2008 Type 2 Material Extraction

Beginning on August 12, 2008, EGT developed a Type 2 material borrow source at the SW end of the airstrip (Borrow Area B). The Komatsu dozer was used to push material into a stockpile. This stockpiled material was then loaded into the rock truck using an excavator and used for regrade and road/airstrip maintenance operations.

5.8.2.3 2009 Type 2 Material Extraction

Development of the existing borrow pit (Borrow B) recommenced on June 28, 2009. This involved blading the surface to promote thawing, stockpiling material in preparation for loading and hauling, and installing a culvert to facilitate access while maintaining pit drainage.

Starting on July 19, 2009, EGT hauled Type 2 material from Borrow B with the rock truck and/ or Kenworth trucks. Wet conditions temporarily halted hauling on July 23 and the pit became inaccessible on July 25 as the culvert was removed to limit damage to the airstrip surface from surface runoff across the airstrip. Hauling recommenced on July 28 and continued, with minor delays at times due to inclement weather, until September 5, 2009. The maximum depth of excavation within the borrow area approached 1.2m.

Reclamation of the Borrow B began as the final loads were being taken from the borrow area. Reclamation involved cutting the side slopes to mimic natural terrain and dragging the area to promote drainage and minimize ponding. Reclamation activities were completed by September 22, 2009.

Standard Proctor Tests and Sieve Analyses completed on Type 2 material excavated and used across the site are provided in Appendix B. Sieve results show all material to be relatively well graded and acceptable for use as compactable fill material but none of the materials met the specified Type 2 gradation due to the lack of clast sizes between 50 and 200 mm.

5.8.3 Type 3 Material

Type 3 (ungraded sand) material, required for general excavation backfill, was obtained from Borrow Area 6 on the upper site ridge near the Diamonds North Camp.

In addition to Borrow Area 6, the access road between the Main Station and ridge was used as a source for Type 3 material. This material was excavated at the completion of the 2009 field season, and used as additional fill at the Apron Area.

Following extraction, Borrow Area 6 was reshaped to match surrounding terrain and promote natural drainage. Reclamation of the road involved smoothing dragging the shoulders to blend in with the surrounding terrain. Reclamation of Borrow Area 6 and the former road to the ridge was completed by September 22, 2009.

5.9 Site Infrastructure Improvement Activities

5.9.1 Air Strip

The Johnson Point site is serviced by a granular airstrip that runs approximately northeast-southwest along a beach spit adjacent to the Prince of Wales Strait. The airstrip surface is composed of fine gravelly sand with minimal fines. The airstrip length, when originally constructed in the 1970's, was approximately 5500 ft (1700 m). Concentrated surface water flow since abandonment of the site caused erosion and the development of two washouts across the airstrip. These washouts limited the effective length of the airstrip to less than 3300 ft (1000 m) at the commencement of the site remediation activities.

Due to typical wet spring conditions and the limited length of usable airstrip available, initial flights to the site during the start of each construction season was made using De Havilland Twin Otter Aircraft equipped with large tundra tires. During the remainder of each season (generally drier conditions), the repair of airstrip washouts and airstrip maintenance allowed for landing of Twin Otter aircraft with standard tires and eventually for landing of the Embraer Bandeirante DC-3 and Beech 99 aircraft.

The contractor maintained and improved the airstrip using the CAT grader, Komatsu dozer and loaders with metal frame surface drags.

Type 2 material from Borrow Pit B was placed and track packed in the two large wash out areas during August 2008. Repairing these two wash outs increased the effective length of the airstrip to approximately 5000 ft (1500 m). Silt fences were erected during placing and compacting materials in these two washout channels.

In June 2009, when site activities recommenced, the airstrip was dry and in relatively good condition. Small irregularities in the strip were eliminated by grading and dragging using the loader and metal drag posts. The one issue was the washout near the southern end of the airstrip that had reoccurred due to spring melt. EGT modified the washout into a ditch to drain the large volume of melt water accumulating along the west side of the runway. Silt curtains were erected to filter sediment from washout drainage flowing toward the ocean.

The airstrip remained in good condition, until significant precipitation fell on the area from July 13 - 18, 2009. Ponding and otherwise poor surface conditions rendered the airstrip unsuitable to land any fixed-wing aircrafts for certain intervals. Additional precipitation events from July 18 - 21 and 23 - 25, lead to excessive ponding and even sheet flow drainage (>50 mm deep) across the strip itself. To preserve the airstrip, and help drain the water around the strip rather than across the strip, a ditch was excavated adjacent to the 300 mm culvert at the south end of the airstrip. As a result, the ponded water along the west side of the airstrip began to recede and sheet drainage across the strip ceased. Ongoing maintenance and repairs were completed on the airstrip as successive weather systems produced significant amount of precipitation on the site. Despite the abnormally high volume of precipitation in 2009, resupply and shift change flights generally occurred twice a week, with the Bandit and Twin Otter used the majority of the time.

Backfilling of the hydrocarbon soil excavation within airstrip area (SW plume) commenced on August 23, 2009. First, saturated soil within the excavation was bladed to the side. The area was then brought to grade with Type 2 material from Borrow B, in lifts of 200 mm or less. The material from Borrow B was extracted from the road portion of the pit, and consisted of fine sandy gravels overlain by 0.4 m of clayey silt. The material was slightly different than the Type 2 taken from the pit; however it was closer in composition to the original airstrip material. The material was shaped/compacted using the D3, Loader and vibrating roller. Compaction tests were performed between each lift. With the exception of the final lift, which was placed on September 3, 2009, each lift met the specified compaction of 100% SPMDD. Density tests performed on the final layer on September 5, 2009 showed it to be significantly less dense than preceding layers, but approximately the same density as the undisturbed, in-situ airstrip surface. The final lift was approximately 5% wet of the optimum due to continuous rain and therefore required drying and further compaction to achieve a density greater than the in-situ airstrip surface. It was determined that rejection and replacement of the final lift was impractical due to no better material being available without developing a new borrow area further from the airstrip. Developing a new borrow area with the saturated ground conditions would have posed major logistical and reclamation challenges. As a result, grading and compacting of the airstrip surface continued. Additional density tests were performed on September 8, 2009, which showed densities to be less than SPMDD but equal to or greater than surrounding in-situ, original airstrip material. Additional drying and further compaction continued to the completion of the 2009 season.

5.9.2 Access Roads

The site access road at Johnson Point is approximately 1.3 km in length and was constructed of native sand material. The road begins at the Apron Area adjacent to the Airstrip and ends at the Upper Camp area on the ridge crest. To facilitate placement of fill material on Existing Landfill B, a short access haul road was constructed from the tank farm area.

With the exception of two areas, the existing road required only dragging and minor repair work with the Komatsu dozer to bring it back to operational standard. One exception was the small section of road adjacent to Apron Area where a 200 mm diameter culvert crosses beneath the road. This area required constant regrading and placement of fill during 2008 due to the soft subgrade at this location.

The other exception was the Apron Area. The Apron Area tends to collect run off from the airstrip and natural ground in this area contains enough silt to impede quick drainage or percolation. This area was also heavily trafficked by equipment moving demolition items which caused heavy rutting. Following removal of the demolition items, traffic was restricted to low ground pressure equipment to prevent further rutting. A defined access route was then established between the two hydrocarbon soil excavation lobes in the Apron Area. Roads remained functional and passable to all vehicles for the duration of the 2008 construction season.

Snow clearing efforts began in June 2009, with the majority of the work areas, roads and airstrip clear (by removal or melting) by June 28. A shallow ditch was installed along the roadway that passes between the hydrocarbon soil excavation lobes to facilitate drainage. A 300 mm culvert was installed in a portion of the washout/ditch at the south end of the airstrip to allow drainage in this area, while facilitating access to the borrow pit.

Due to heavy rainfall during 2009, there were several periods when vehicle traffic was limited to pick-up trucks and small off-road vehicles. Hauling of contaminated soil or borrow material was halted to preserve the main road base. Heavy precipitation occurred between July 13 to 26, during which time a ditch was excavated through the road to the borrow area south of the airstrip to assist drainage of the overloaded 300 mm culvert. As a result the borrow area became temporarily inaccessible. The culvert crossing was reinstalled and repaired several times throughout the season, as a result of both inclement weather but also due to increased vehicle traffic hauling borrow material. To repair rutting and surficial damage to the roadways from continued use by pick-up trucks, the site roads were maintained regularly using a loader and drag posts. At the conclusion of the 2009 work season, all culverts were removed and roadways were reshaped to allow future vehicle movement. The road to the upper ridge was excavated and the material was used as additional fill on the Apron Area.

5.10 Demolition and Debris Remediation Activities

5.10.1 Hazardous Material Classification

Debris, building components or soil with an overall concentration of Polychlorinated Biphenyl (PCBs) greater than 50 ppm are classified as hazardous under legislation. At the time of project initiation and design, the concentration of 50 ppm applies to the piece of debris in its entirety and thus the PCB concentrations in the paint; the paint thickness, paint coverage and the substrate thickness are all taken into account when calculating total PCB concentration. PCBs were detected in concentrations up to 21.6 mg/kg in paint samples from various demolition items at Johnson Point (EBA 2007b). Once substrate was factored in; however, no items on-site exceeded CEPA criteria as hazardous PCB materials.

Material containing greater than 1% by weight asbestos is classified as hazardous under Northwest Territory legislation (GNWT, 1998). Hazardous debris collected at Johnson Point included a small amount of asbestos wall board and asbestos-containing linoleum flooring.

Painted material that leaches lead in a concentration equal to or greater than 5 mg/L when subjected to the Toxic Characteristic Leaching Procedure (TCLP) test is deemed hazardous through Transportation of Dangerous Goods Act (TDGA) legislation. The TCLP test for leachable lead seeks to reproduce the worst conditions that could be encountered in a landfill where the painted debris is subjected to full immersion in highly acidic conditions. Samples collected and subjected to the test include both paint and substrate.

Lead amended paint that passes the leachate test is classed as non-hazardous in TDGA legislation and on other northern site remediation projects would typically be land-filled in an on-site engineered landfill. The lack of an on-site landfill at Johnson Point meant all waste was organized for off-site transport and disposal. Under the Northwest Territories Guidelines for Waste Lead and Lead Paint (2001), painted materials with total lead concentrations of greater than 600 mg/kg (in paint only, not including substrate) are considered 'hazardous' and cannot be landfilled in the NWT. The on-site testing showed that nearly all painted materials from Johnson Point exceeded the leachable criteria of 600 pm and as a result, non-leachable lead painted material was scheduled to be disposed of outside the NWT.

The authors of the RAP classified materials as hazardous if the material met the definition of 'hazardous' given in the Northwest Territories 'Guideline for the Management of Waste Lead and Lead Paint'. This definition applies only to waste disposed of within the Northwest Territories and is not the same as the definition of 'Hazardous' given in the Canadian Environmental Protection Act (CEPA) and Transportation of Dangerous Goods (TDG) legislation.

Prior to removal of the remaining demolition and debris waste from site, AECOM reviewed the paint results from orange Nodwell units, previously classified as hazardous in both the RAP and Golder (2007). The samples showed Leachable lead results of 4.2 and 4.8 mg/kg, below the applicable criteria of 5 mg/kg. These Nodwells were thus reclassified on-site as Non-hazardous, significantly reducing the total mass of hazardous waste generated during the remediation activities.

5.10.2 Non-hazardous Demolition and Debris Remediation

With the exception of the POL tanks, larger demolition items were on tracks, wheels or skids (Nodwells, well site trailers) and were easily hauled to the staging area adjacent to the airstrip by loader or Delta commander. Eighteen of the POL tanks with volumes less than 5,000 L were stacked and secured to one of the skid units with the excavator prior to being hauled to the staging area. Old compressed gas cylinders were similarly stacked and banded to an old skid trailer with the valves open to vent remaining gas. Barrels that were processed and crushed during previous remediation efforts at Johnson Point were loaded on an old sled for off-site transport. Tall, narrow POL tanks (approx 91,000 L volume) were pushed over with the dozer and dragged to the staging area.

Unpainted and untreated timbers including 250 mm x 250 mm, 300 mm x 300 mm, and 75 mm x 250 mm planks were reused by EGT rather than being incinerated as waste. The waiver of liability for these salvaged timbers is provided in Appendix G.

Wooden tent frames on the south side of the access road, across from the remediation camp were demolished and materials sorted and stockpiled. Unpainted plywood was either used as marine shipping container dunnage or incinerated on-site.

Surface debris was scattered across the Apron Area, Main and Upper sites. Large pieces such as the loading ramps were retrieved by loader and small pieces by worker crews using ATVs and trailers.

The circular NAVAID structure located off the southern end of airstrip was demolished. Timber foundations were pulled from the ground and the steel structure was unbolted and the sheets palletized for removal. Samples of both white and orange paint were taken for analysis during 2008 and the results were below leachable lead criteria. The palletized painted steel sections were removed for disposal as non-hazardous waste during 2009.

For burning of unpainted and untreated wood debris, EGT mobilized to site an old gravel skid bin with an internal volume of approximately 10 m³. Throughout debris collection and demolition operations suitable unpainted and untreated wood debris was stacked in the burn bin and full loads were burned when weather conditions were favourable for safe burning. A total of 210 m³ of wood was burned during remedial operations.

The largest demolition items on-site were the twelve bolt-together POL storage tanks, which were located at the tank farm and ranged in size between 300,000 and 1,662,000 L. Demolition of the bolt-together tanks commenced the week of August 23, 2008 and work continued until September 13, 2008, when high winds and icy surfaces prevented safe demolition work and the tank demolition crew vacated the site for the winter. Tank demolition activities resumed on June 25, 2009 and continued until the final tank was disassembled on July 23, 2009.

The general method for demolition of the bolt-together tanks entailed two crew members in full body harnesses being lowered to the roof and high walls of each tank using a man basket on the end of the Telehandler. The crew removed bolts using an air impact wrench, hammer, a grinder and cut-off saw. The demolition was initiated with the roof sections and the three largest tanks had two rings of pie-shaped pieces on the top, as opposed to the one ring found on smaller tanks. The three larger tanks also have different arrangements of bolts, which were more difficult to remove. Compared with the smaller tanks, the tops of the larger tanks (and Tank 14 in particular) required more frequent use of the grinders/cut-off saws to remove the bolts. Once unbolted, plate sections were removed using the 966 loader with a 'stinger' pole attachment. Removed sheets were stacked and banded on pallets located between the tank farm and Hazmat Storage Area. Bolts, nuts and washers obtained from tank demolition activities were placed in two smaller POL tanks (Tanks 37 and 64) and the liners and gaskets were containerized for off-site disposal.

AECOM's Environmental Inspector inspected all tanks prior to demolition. Tank 14 appeared clean and dry, however, a small (less than 0.5 m³) pile of white substance, that appeared to be an absorbent, was noted immediately inside the tank door. A sample (08-103) was taken and submitted for analysis. The results of the analysis indicated that the material was likely an absorbent that had been used for tank cleaning. Due to PHC exceedances, the absorbent material was packaged for disposal at a suitable off-site location.

Tank 15 had approximately one cubic meter of domestic non-hazardous waste items including plastic bags, plastic rolls, tarps, rubber boots, plastic pails, tire tube and pop cans. The 2007 EBA Site Supervision for Remediation and Clean-up Report identified this non-hazardous material as non-compatible with the waste incinerator being utilized onsite in 2007. This material was placed within the tank bladder and disposed of as non-hazardous waste.

Six tanks with bladders (Tanks 14 to 19) were identified in the 2007 EBA site supervision report. The bladders did not contain any liquid sludge. It appeared that the tanks had been cleaned during previous remediation efforts on site. The plastic/rubberized bladders were sampled and analyzed for leachable organics. Test results indicate that the total combined hydrocarbon concentrations for the liner were less than 150 ppm (refer to Table A5, Appendix A) and hence the bladders were disposed of as non-hazardous waste.

As demolition of the large tanks progressed, it was discovered that a layer of bedding sand was located between the fuel bladder and the tank base in Tanks 14 to 19. Once the tank walls and bladder were removed, the bedding sand was collected using an excavator equipped with a squeegee-like attachment to separate the bedding sand from the tank base. Bedding sand was stockpiled adjacent to each tank location and samples were collected and submitted for laboratory analysis so that disposal requirements could be determined. Analytical results indicated that bedding sand from Tanks 14 and 15 (approximately 41 m³) required off-site disposal due to total petroleum hydrocarbon concentrations exceeding the SSTL. The bedding sand from Tanks 16 to 19 did not exceed the SSTL and therefore the material was disposed of at the soil disposal location on the upper ridge. Time considerations and the presence of numerous bolts in the sand precluded treatment with the allu bucket and therefore, the sand bedding material exceeding SSTL was placed in twenty-seven (27) SeaCans for shipment to a suitable off-site disposal site. Twenty of the Sea-cans were sent on the barge that left the site on August 19, 2009 and the seven remaining Sea-cans will be sent on the final demobilization barge in 2010. Refer to Table A4 in Appendix A for a summary of analytical results.

5.10.3 Hazardous Demolition and Debris Remediation

Fourteen marine shipping containers were mobilized to site by EGT, including six that has been certificated as structurally sound and suitable for use as hazardous waste transport vessels. Preparation of these six containers for loading of hazardous materials (construction of internal bracing and containment) was undertaken during the 2009 season.

Following consultation with the DR, EGT designated a hazardous waste material processing area east of the tank farm. The location was chosen to minimize the distances of transport of hazardous materials, to provide adequate room for the handling of hazardous materials and to minimize the potential traffic contact between other operations on-site, including camp operations. This area was also selected to provide adequate distance from water bodies, ease of access, and minimal requirement for significant ground disturbance by levelling equipment and material handling equipment. The area consisted of lined swamp mats with sandbag berms. At the end of the 2008 season, all materials in the Hazmat Storage Area were covered with plastic to minimize the ingress of snow and snow melt.

Prior to transportation of debris and demolition items to the staging area for removal in 2008, the DR and EGT Site Superintendent identified items with hazardous levels of leachable lead paint. These items packaged as hazardous waste in 2009.

Hazardous demolition material at Johnson Point included painted portions (whitish green paint) of the main site maintenance building. Demolition of the maintenance building was originally planned for the week of July 11, 2009, however, it was discovered that Snow Buntings were nesting within the building. The demolition of the maintenance building was put on hold until the nest was vacated, however the young birds did not survive the cold temperatures and extreme winds that occurred from July 12-14, 2009. Demolition of the building took place on July 15, 2009. Once on the ground, the wall panels were further dismantled to minimize the volume of materials requiring specialized packaging and transportation. This involved taking apart the panels manually and removing the insulation, so that only the painted materials were placed in the disposal container. The dismantled material was placed, secured and sealed in a marine shipping container, which was sent on the barge that departed from site on August 19, 2009. Leachable lead painted materials were placed, secured and sealed in two Marine Shipping Containers.

Painted items with total lead concentrations greater than 600 ppm were not segregated from those with total concentrations less than 600 ppm as both types of materials were scheduled for disposal outside the Northwest Territories.

In addition to the PCB and leachable lead painted demolition items, hazardous debris collected at Johnson Point included batteries and battery fragments, suspected PCB-oil containing electrical transformers from the NAVAID structure and a small amount of asbestos wall board. The asbestos wall board was removed from one of the trailers and packaged by an asbestos abatement crew member wearing appropriate PPE. Batteries, transformers and asbestos were placed in plastic bags and consolidated in lined SeaCans.

The INAC Representative (Joel Gowman) retrieved 17 barrels from the unnamed island in the Straight NE of site by helicopter on August 17, 2009. Barrels were then brought to site for processing. Barrel contents were sampled and processed in the same manner as the on-site barrels and in accordance with the barrel processing criteria

In 2008, the Environmental Inspector collected soil baseline samples at the soil disposal area prior to placement of a PHC contaminated soils. The samples were analyzed and one sample showed elevated levels of PHC F1 & F2, however, the results were below the SSTL and based on the location, did not require excavation. At the completion of the 2009 season, there were no stains or spills evident in the storage area. Soil sampling was not considered warranted.

5.10.4 Barrel Processing

All barrels in the immediate vicinity of the site and airstrip, including barrels on the tundra to the north of Unnamed River, barrels collected as part of INAC helicopter-assisted barrel collection and intact barrels of expired fuel at the airstrip were collected, inspected, labelled, tested and processed in accordance with the INAC barrel protocol (2005). Hazardous, damaged, leaking or corroded barrels were transported and processed inside salvage overpack drums.

After barrel consolidation, all barrel contents of suspect origin or composition were sampled and sent to Maxxam Analytics in Edmonton for analysis. Laboratory results were assessed in accordance with barrel processing criteria presented in Table 8.

Table 8: Barrel Processing Criteria

Parameter	Criteria (Exceedances in any Parameter)				
	Aqueous		Organic		Aqueous or Organic
pH	6 to 9	-	-	-	-
Volatile Hydrocarbons (C6-C10)	<15 mg/L	-	-	-	-
Extractable Hydrocarbons (W10-19)	<5 mg/L	-	-	-	-
Arsenic (As) Total	<0.1 mg/L	-	-	-	-
Cadmium (Cd) Dissolved	<0.01 mg/L	<2 mg/L	<2 mg/L	>2 mg/L	-
Chromium (Cr) Total	<0.1 mg/L	<10 mg/L	<10 mg/L	>10 mg/L	-
Total Organic Extractible Halogen (EOX) mg/kg (Chlorine)	-	<1000 mg/L	<1000 mg/L	>1000 mg/L	-
Cobalt (Co) Dissolved	<0.05 mg/L	-	-	-	-
Copper (Cu) Dissolved	<0.5 mg/L	-	-	-	-
Lead (Pb) Dissolved	<0.05 mg/L	-	-	-	-
Lead (Pb) Total		<100 mg/L	<100 mg/L	>100 mg/L	-
Mercury (Hg) Total	<0.0006 mg/L	-	-	-	-
Nickel (Ni) Dissolved	<0.2 mg/L	-	-	-	-
Zinc (Zn) Total	<1 mg/L	-	-	-	-
PCBs Total	>0.05 ppm	<2 ppm	<2 ppm	>2 ppm	>50 ppm
Glycols Total	-	<2%	<2%	>2%	
Disposal Method	Disposal to land in accordance with Water License	Evaporation in on-site evaporator	On-site Incineration in dedicated fuel incinerator	Packaged as hazardous material for off-site disposal at appropriate facility	Packaged for off-site disposal as CEPA material

A summary of the analytical results from the barrel sampling program is presented in Appendix A, Table A6.

Four barrels collected and taken to the Hazmat Storage Area contained similar collections of hydrocarbon soaked sawdust and absorbent material, soil, and rusted metal fragments (contents thought to be left behind from the tank cleaning operation in 2007). These barrels were labelled as JPB-01 through to JPB-04 and their contents were sampled and submitted for analysis of PHCs, PCBs and heavy metals. The results showed exceedances for zinc with concentrations ranging between 3 and 7 mg/L. Based on this testing these four barrels were designated for disposal at an appropriate Class II Landfill.

During debris collection activities, a barrel filled with an unknown fine blue/green copper coloured powder was discovered. The barrel itself had no discernable markings and was fitted with a removable lid that was held closed with a metal band around the rim. The barrel was transported to the Hazmat Storage Area, labelled as JPB-05 and the contents were sampled and submitted for analysis. X-ray diffraction analysis identified the crystalline components of the sample to consist mainly of crystallized organic carbon bearing compounds including polyacrylonitrile, brilliant green, sulfamethazine and tricromyl. It is believed that this product was used as a dye for marking the airstrip during the winter months. The powder was also tested for lead (270 ppm) and leachable lead (2.1 mg/L). Based on this testing, the powder was designated for disposal at an appropriate Class II Landfill.

In 2009, barrels JPB-01 through to JPB-05 were consolidated into one lined SeaCan for off-site disposed at an appropriate Class II Landfill.

Full barrels of fuel (expired), including diesel drums from the Diamonds North camp and government department, were identified near the airstrip. These barrels were collected and processed with other barrel; however, they did not require sampling for analysis as they were clearly identifiable.

All organic liquid barrel contents, showing analytical results below the incineration criteria, were pumped into EGT tanks for use in the camp generator. Aqueous barrel contents, showing analytical results below criteria and barrel rinsate water was evaporated in an on-site evaporator. Empty barrels were either crushed for disposal or returned intact for recycling.

5.11 Off-site Transport and Disposal of Waste

5.11.1 Non-Hazardous Waste

5.11.1.1 2008 Waste Removal Barge

To make the most efficient use of barge resources during 2008, EGT arranged to have the tug and three barges return to Johnson Point after dropping equipment off at Ulukhaktok. The EGT crew spent four days consolidating and transporting the non-hazardous material to the Apron Area and on August 11, 2008, the tug and barges returned to Johnson Point to transport this material off-site.

All available non-hazardous waste and surplus equipment was loaded on the three barges by 6:00 pm on August 11 and the tug and barges left site at 7:30 pm that evening. The Delta Commander and Autocar truck were also loaded on to the barges. The tug and barges proceeded to Tuktoyaktuk where the waste was transferred to a salvage barge that was in Tuktoyaktuk as part of a northern community salvage voyage.

The salvage barge was operated by AMIX Salvage and Sales Ltd. of Surrey, British Columbia (BC). AMIX accepted the waste, including all materials painted with lead paint, for transport to and disposal or recycling in the BC lower mainland. Materials coated with lead paint (total lead concentrations exceeding 600 ppm, which is designated as hazardous in the Northwest Territories) is not similarly designated as hazardous in BC. The three Nodwell camp trailers containing asbestos containing linoleum were also accepted for transport on the AMIX barge. The AMIX Barge left Tuktoyaktuk on October 2, 2008 with a total of 407 tonnes of waste and arrived in Surrey, BC on October 24, 2008.

An inventory of waste removed from site and accepted by AMIX is provided in Appendix G.

5.11.1.2 2009 Waste Removal Barge

The barge that delivered Type 1 material from Uluhaktok to site was utilised to remove debris and demolition waste from site on August 18 2009.

A total of 571 tonnes of non-hazardous debris and demolition material was removed from site by barge (on August 18, 2009). This waste was loaded on to the AMIX salvage barge in Tuktoyaktuk and was taken to Surrey, BC for disposal/salvage.

An inventory of waste removed from site and accepted by AMIX is provided in Appendix G.

Non-hazardous waste remaining on site and scheduled for removal in 2010 is limited to seven SeaCans of hydrocarbon-impacted tank bedding sand and small volumes of miscellaneous debris.

5.11.2 Hazardous Waste

Three of the Nodwell camp trailers (one orange and two pale yellow) removed from site by barge on August 11, 2008 contained linoleum floors with an Asbestos Containing Material (ACM) backing. The asbestos containing linoleum had a pattern (random squares pattern) that differentiated it from non-asbestos containing linoleum found in other camp trailers. This asbestos containing linoleum is designated as Hazardous for disposal and demolition purposes, but was able to be transported intact as it was not classified as a dangerous good. Specifically, the material was not classified as hazardous waste according to Schedule 1 (free asbestos) or the toxic substance Class 6.1 criteria ("included if dust or mist is likely to be produced in a transport accident and it's LC50 (inhalation) is less than or equal to 4 mg/L or SOR/2008-34"). To further secure these trailer during transport, all openings in the camp trailers were sealed up with boards and/or plastic sheeting.

EGT made arrangements for asbestos containing floor linoleum to be removed from the three Nodwell camp trailers by Western Thermal and Demolition at the AMIX Heavy Lift facility in Surrey, B.C. The work was completed by early November 2008 and removed asbestos material was disposed of in the Vancouver Landfill in Burns Bog, Delta, B.C.

Containerised Leachable Lead painted waste was removed from site on barge which departed from site on August 18 2009 and was transported to Surrey, B.C for disposal. Disposal receipts and details of the disposal location are given in Appendix G.

Hazardous waste remaining on site at the end of 2009 consists of lined SeaCans with batteries, oil filters and light ballasts. These materials will be removed during demobilization in 2010.

5.12 Buried Debris Excavations

Several geophysical anomalies were identified in the RAP with no remedial recommendations provided. The remedial design that was applied consisted of:

- Removal of surface debris from delineated areas covered by surface debris, and
- Excavation of delineated areas where surface debris was absent.

5.12.1.1 Apron Area (Lobe J)

On July 4, 2009, buried debris Lobe J was excavated to frozen soil between 0.5 and 0.7 m depth. Two pieces of rebar, approximately 20 m of wire and a few 100 mm x 100 mm wood timbers were encountered in the excavation. Strong hydrocarbon odour and staining was noted in the excavation as a result of the location of Lobe J being within the Apron Area PHC excavation perimeter. No hazardous materials were observed during excavation. Soils excavated from Lobe J were within the portion of the SW plume identified as exceeding the SSTL and thus, were taken to the hydrocarbon soil treatment cell. Testing of the excavated soil for other parameters such as metals and PCBs was not undertaken because of the extremely limited volume of non-hazardous debris excavated.

5.12.1.2 Apron Area (Lobe K)

Buried debris Lobe K was excavated to frozen soil at 0.75m depth on July 4, 2009. Approximately six minor items of metal debris were removed from the excavation. No hazardous materials, hydrocarbon staining or odour was observed. Sampling of the excavated soil for other parameters such as metals and PCBs was not undertaken because of the extremely limited volume of non-hazardous debris excavated.

The excavation was backfilled on July 5, 2009.

5.12.1.3 Apron Area (Lobe L)

Excavation of the portion of buried debris comprising Lobe L, outside of the delineated PHC excavation, commenced on July 4, 2009. Debris found in this portion of the excavation consisted only of one empty, dry, steel pipe (10 cm in diameter), buried approximately 0.3 m below surface grade that appeared to extend horizontally below the airstrip. To avoid compromising the integrity of the airstrip, the pipe was cut-off and the remaining portion of the pipe, that extended under the runway, was left in place. Sampling of the excavated soil for other parameters such as metals and PCBs was not undertaken because of the extremely limited volume of non-hazardous debris excavated. The portion of the excavation outside the area of hydrocarbon impacted soil was backfilled on July 4, 2009.

On July 5, 2009 the remaining portion of Lobe L (within the NE Plume) was excavated to permafrost (0.75 m depth). Since no debris was encountered, stockpile sampling was not conducted. In accordance with the results of the 2008 IEG sampling, soils excavated from Lobe L were removed and taken to the soil disposal locations.

5.12.1.4 Apron Area (Lobe P)

Buried debris excavation of Lobe P began on July 2, 2009 and progressed to frozen soil at 0.70 m depth. Excavated soil was stockpiled in windrows on the PHC contaminated soil area to the east. Initial debris recovered was limited to minor amount of sheet metal and domestic garbage (cans, pans, kitchen utensils, plates, etc). Further excavation of Lobe P was conducted after July 9, 2009 (and continued through July 18, 2009) in the pockets where debris was still visible, which included two main debris pits and several other shallow pits. The main debris pits were located approximately 3.0 m northwest of BH-117 and in the direct vicinity of BH-116. Debris included bed frames, a compressed gas cylinder (previously punctured), burnt timbers and plywood, partial barrels, oil filters, damaged batteries, pipe, wire, tarpaulin, scrap metal and other domestic waste. Sorting of the debris was initially done within the excavation, then further sorted and placed in a wooden shipping container located on the south side of the excavation. Soil excavated from additional debris pits was stockpiled north of the Lobe P.

Discrete and composite soil samples were collected from the Lobe P stockpiles between July 5 and July 12, 2009. Samples were analyzed for PHCs, PCBs and heavy metals. Analytical results from the Lobe P stockpiles showed only one exceedance (Stockpile 42) of the SSSL. Soils from stockpile 42 were removed and taken to the Treatment Cell while all other soils from the remaining stockpiles were disposed of in Soil Disposal Area 1. A summary of the analytical results from the stockpile sampling program are located in Table A7, Appendix A.

5.12.1.5 Main Station (Lobes M and N)

Buried debris Recon Lobe M was excavated on July 5, 2009 to frozen soil at a depth of 0.7 m. No debris or staining was encountered in the excavation. Following a survey of the excavation for payment, the excavated soil was backfilled into the excavation on July 9, 2009. No soil samples were taken.

Buried debris Recon Lobe N was excavated on July 5, 2009 to frozen soil at a 0.7 m depth. One plastic bag containing domestic garbage was uncovered. No hazardous materials were observed and no staining was evident. Soil excavated from the area with the plastic bag was stockpiled while soil from the rest of the excavation was replaced (after surveying of the excavation). The stockpiled soil was sampled for PHCs, PCBs and metals; no exceedances were reported. Recon Lobe N was backfilled with the stockpiled soil on August 29, 2009. A summary of the analytical results from the stockpile sampling program are provided in Table A7, Appendix A.

5.13 Hydrocarbon Contaminated Soil Remediation Activities

5.13.1 Modifications to RAP

During remedial design, one hydrocarbon exceedance location at the Main Station, reported in the RAP, was removed as the delineation was based on a misreading of sample result data.

Design excavation volumes and depths were taken from the RAP which in turn presented depths and volumes given in the Site Investigation as either 0.5 m or 1.0 m, depending on the excavation (EBA 2007). The RAP noted the active layer thickness (i.e. depth to permafrost) to be between 0.9 to 1.1 m. As discussed below, these contamination depths proved to be insufficient to capture the full extent of the hydrocarbon contaminant plume in the Apron Area.

5.13.2 IEG Sampling Program

The contractor based their treatment methodology for the Apron Area hydrocarbon impacted soil on the idea that soil below 4570 ppm could be 'treated' by excavation and removal for disposal at a location where the protection of Aquatic Life Criteria did not apply.

To avoid testing every 20 m³ of soil excavated to determine the level of contamination, as called for in the Specifications, EGT/IEG proposed an in-situ testing program that would determine concentrations prior to excavation. Following discussion with PWGSC/INAC/AECOM, changes to the initial methodology were made and the revised methodology was presented in the IEG document "Updated Contaminated Soil Remediation Plan" submitted by IEG and dated July 9, 2008(IEG 2008a). PWGSC/INAC/AECOM agreed to the methods and outcomes presented in this updated plan.

The goal of the IEG soil characterization program was to collect a representative sample for each 100 m³ volume of contaminated soil. As the specified design depth of excavation in the Apron Area was 1.0 m, 100 m³ equated to a 10 m by 10 m grid square. An on-site Photo-Ionization Detector (PID) was used to determine which of five samples collected per grid square (the sample with the highest PID reading) would be submitted as representative. Samples were collected using an 8 inch auger on the end of an excavator. The Environmental Inspector observed, but did not direct the IEG characterization sampling program.

IEG conducted the characterization program in late August and submitted samples for analysis. Upon review of August sampling locations, IEG was found to have deviated from the sampling methodology outlined in the approved characterization methodology plan. To provide valid sample results for the entire Apron Area, IEG returned to site in September to re-drill and re-sample areas initially drilled to depths greater than 1.0 m below ground surface.

Following both the August and September 2008 sampling, IEG submitted to the DR, a list of samples they proposed to submit for analysis so the Environmental Inspector could prepare the required 20% duplicates. Duplicates provided to the Environmental Inspector by IEG were analyzed. The correlation of duplicates with the corresponding IEG samples indicate that of 44 duplicates, eleven (11) of the samples were noted to exceed the recommended "Alert Criteria", which represents the maximum percent difference between the results for the original and duplicate samples allowable under the QA/QC parameters. The QA/QC program is discussed further in Section 6. The elevated number of Alerts between IEG and DR sample results is most likely due to the volatility of the samples and the timelines in which the sample sets arrived at the laboratories. Nine of the duplicate sets have the IEG sample result with a higher concentration of Total Petroleum Hydrocarbons (TPH) than the duplicate; most likely a result of the duplicate arriving at the laboratory after the initial sample.

The "Soil Characterization Interim Report" submitted by IEG on November 18, 2008 (IEG 2008b), outlines the work completed during the 2008 summer field season, along with their remediation recommendations for 2009. The report focuses on the nature of the contaminated areas as well as the quantities of soil requiring treatment in these areas. This report has been included in Appendix F.

The results of the 2008 IEG field program showed that approximately 1,900 m³ of impacted soil within the Apron Area to be above the SSTL and required treatment to below SSTL levels prior to disposal in areas away from water bodies.

Refer to Table A12 in Appendix A for a summary of the relative percent differences for IEG duplicate samples collected during the 2009 field season.

5.13.3 Environmental Inspector 2008 Delineation Activities

At the request of PWGSC, test pitting was completed by the Environmental Inspector within and surrounding hydrocarbon contaminated soils of the Apron Area and Main Station Area during 2008. The purpose of the additional testing in both areas was to better delineate the depth and areal extent of the hydrocarbon impacts. Test pits were excavated or augured with an attachment to the backhoe to frozen soils and samples were taken at discrete depths. The depth of frost was found to vary and in some cases was found as shallow as 0.6 m or as deep as 2 m. Test pits advanced along the west edge of the airstrip noted large groundwater inflow into the test pit (up to 100 L/min). The results of the 2008 investigations were integrated into existing data and revised PHC excavation extents provided in the "Issued for Construction Drawings", date June 2009".

The results of the 2008 delineation program are discussed in greater detail in the 2008 Johnson Point Season Remediation report (AECOM 2008).

5.14 Main Station Hydrocarbon Excavation

Excavation of the PHC impacted soils at the Main Station commenced on July 16, 2009. The area was excavated to the specification limits and depth of 0.50 m. Soils removed from the Main Station were taken to the Treatment Cell and aerated with an allu bucket as described in Section 5.16. The Environmental Inspector conducted confirmatory sampling activities in the area of the Main Station on July 20, 2009 using a 6 m x 6 m grid. Analytical results indicated that five (5) samples exceeded the site SSTL and, thus, the excavation was extended to a final depth of 0.80 m in the area of G7 and an expansion to the southwest in the area of G5 was excavated to a final depth of 0.50 m. A second round of confirmatory sampling was conducted on August 11, 2009 and no exceedances to the SSTL were reported. Backfilling of the area was completed on August 29, 2009. A summary of the analytical results from the Main Station are presented in Table A3, Appendix A.

5.15 Apron Area Hydrocarbon Excavation

5.15.1 Excavation

Since the depth to frozen soils in areas away from the river was typically less than 1.0 meter, the Apron Area excavation was conducted in phases. In most cases the specified excavation depth could not be reached in a single scraping and required several attempts at excavation, waiting each time until the ground thawed further. Once the excavation depth was reached, the Environmental Inspector collected confirmatory samples. Soil removed from the Apron Area excavation was treated and/or disposed of at one of two approved soil disposal locations that were deemed a sufficient distance away to prevent hydrocarbon impacts to existing bodies of water.

5.15.1.1 NE Plume

Confirmatory sampling of the NE Plume was conducted between July 13, 2009 and August 26, 2009. The pre-determined area was excavated to the specified depth of 1.0 m. Samples were arranged in either a 6 x 6 m or 12 x 12 m grid. Perimeter samples were collected at two discrete depths (0.5 m and the base of the scheduled excavation). The NE Plume is separated into three portions, identified as Part 1, Part 2 and Lobe P, Lobe L and Lobe Z. A summary of the confirmatory sample results from the NE Plume are presented in Table A1, Appendix A.

In 2008 it was determined through the IEG sampling program that one area within the NE Plume (Lobe Z) exceeded the SSTL for risk to ecological receptors (4,570 ppm). Soils removed from Lobe Z were taken to the Treatment Cell and aerated with an allu bucket. Backfilling of the area was completed by September 22, 2009.

Part 1

Confirmatory sampling of the NE Plume (Part 1) began on July 13, 2009, subsequent to the excavation of buried debris Lobes P and L discussed in Section 5.12. Upon receipt of the analytical results it was determined that there were 15 samples that exceeded the CCME criteria for the Protection of Aquatic Life (F1 = 230 ppm and F2 = 150 ppm) and these areas were subsequently excavated to a deeper depth. The excavation depth was increased in the area of the Lobe P footprint (to a final depth of 1.3 m) and an expansion outside of the original specified area was excavated along the N10/N11 limit in the NE direction toward the runway. In all cases the contamination extended to a depth significantly deeper than any other contaminated areas previously identified onsite (up to a maximum excavated depth of 2.65 m). At depths below approximately 1.2 m, the contamination was located in a water-saturated gravel layer. After consultation with PWGSC and INAC further excavation at depth was halted and a delineation program was established which is described in detail in Section 5.15.2.

Part 2

Since site investigations and plume delineation, the Unnamed River has altered course and encroached into the north eastern most boundary of Part 2. Excavation of the NE Plume (Part 2) commenced on August 5, 2009. The excavation was completed to the required 0.5 m depth; though operating the excavator and rock trucks on the soft, silty river flats was not without difficulties. On August 6, 2009 the high tide caused the river level to rise and overtop the narrowest portion of the buffer berm and spill into the excavation. The flooding of the NE Plume – Part 2 is further described in Section 3.7.3.2.

Following reinstatement of the river berm and pumping impounded water from the excavation, the Environmental Inspector conducted confirmatory sampling activities on August 8, 2009. Analytical results showed no exceedances of the CCME criteria for the Protection of Aquatic Life (F1 = 230 ppm and F2 = 150 ppm).

5.15.1.2 SW Plume

The SW Plume is separated into portions, identified as Parts 1 to 6, Lobe X, Lobe Y and Lobe J. Excavation of the SW Plume to the specified depth of either 1.0 m or 1.3 m began following excavation of buried debris Lobes J and K. Confirmatory sampling of the SW Plume using either a 6 x 6 m or 12 x 12 m grid began on July 15, 2009. Perimeter samples were collected at two discrete depths (0.5 m and the base of the scheduled excavation).

In 2008 it was determined through the IEG sampling program that there were two areas within the SW Plume (Lobe X and Lobe Y) that exceeded the SSTL. Soils removed from Lobe X and Y were taken to the Treatment Cell. Other soil removed from the SW plume was removed for disposal in Soil Disposal Area 1 or 2. A summary of the analytical results from the SW Plume are presented in Table A2, Appendix A.

Lobe X

Excavation of the SW Plume (Part 1 & Part 2) commenced on July 5, 2009. Confirmatory sampling of Part 1 and Part 2 began on July 27, 2009 and July 15, 2009, respectively. Analytical results showed further excavation was required and the excavation was both deepened and expanded along the M3/M4 design limit to the northeast. Hydrocarbon contamination extended to a depth of at least 1.3 m. During the excavation, a box labelled as "EXPLOSIVES" was encountered. Due to safety concerns, further excavation was halted. Approximate residual hydrocarbon impacted intervals are shown on As-built Drawings C12.

Part 1 & Part 2

Excavation of the SW Plume (Part 1 & Part 2) commenced on July 5, 2009. Confirmatory sampling of Part 1 and Part 2 began on July 27, 2009 and July 15, 2009 respectively. Analytical results showed further excavation was required and the excavation was both deepened and expanded along the M3/M4 design limit to the northeast. Hydrocarbon contamination extended to a depth of at least 1.3 m. During the excavation, a box labelled as "EXPLOSIVES" was encountered, though no explosive material was found. After consultation with PWGSC and INAC, further excavation was halted. Residual contamination is shown in accompanying As-built Drawing C12.

Part 3

Confirmatory sampling of Part 3 began on August 3, 2009. Analytical showed two areas required further excavation. An expansion to the original specified area was excavated along the M16/M17 limit towards the SW. Contamination in the center of the Part 3 area was located in water-saturated gravels underlying the upper silty sand material which posed significant challenges to further excavation. After consultation with PWGSC and INAC, further excavation was halted. Approximate residual hydrocarbon impacted intervals are shown on As-built Drawing C12.

Part 4

Confirmatory sampling of Part 4 began on August 3, 2009. Analytical results from confirmatory samples of the design excavation limits showed exceedances, and subsequently further excavation was conducted along the beach in both directions. Exceedances found in the base of the excavation adjacent to the Ocean were not excavated due to environmental concerns and safety risks. After consultation with PWGSC and INAC, further excavation was halted. Approximate residual hydrocarbon impacted intervals are shown on As-built Drawing C12.

Part 5

Confirmatory sampling of Part 5 was completed on August 23, 2009. The design depth of 1.3 m was not reached in Part 5 because of frozen soil encountered at approximately 1.0 m and because of the revised excavation approach for this area. Analytical results show two exceedances of the CCME criteria for the Protection of Aquatic Life (F1 and F2) have been left in-situ. After consultation with PWGSC and INAC, further excavation was halted. Approximate residual hydrocarbon impacted intervals are shown on As-built Drawing C12.

Part 6

Confirmatory sampling of Part 6 began on July 20, 2009. Analytical results from confirmatory samples of the design excavation limits showed exceedances, and subsequently further excavation was conducted. An expansion outside of the original spec area was excavated along the M5/M6 limit in the N direction and along the M7/M8 limit in the NE direction towards the NE Plume. The contaminated area was located in water-saturated gravels underlying the upper silty sand material which posed significant challenges to further excavation. After consultation with PWGSC and INAC, further excavation was halted. Approximate residual hydrocarbon impacted intervals are shown on As-built Drawing C12.

5.15.2 Environmental Inspector Apron Area 2009 Additional Delineation

5.15.2.1 Test Pit Program

During the Apron Area hydrocarbon excavation activities, Hydrocarbon contaminated soil was identified at depths significantly deeper than those shown on drawings and in some places beyond the design excavation limit. Subsequently, a test-pitting program was performed by the Environmental inspector to further delineate the lateral and vertical extents of hydrocarbon impacted soil. As described in the following paragraphs, the main areas with soil contamination at depth included Part 1 of the NE Plume, Part 3 of the SW Plume and Part 4 of the SW Plume along the beach.

On August 14 and 15, 2009, 18 test-pits were excavated at various locations in the Apron Area. The program commenced at the N10/N11 limit of the NE Plume (Part 1). To delineate the lateral and vertical extents of hydrocarbon impacted soil, test-pits TP09-01 through TP09-09 were excavated in the NE direction toward the windsock using an excavator. The test pits were generally constrained by frozen soils at approximately 1.0 m and reached a maximum depth of investigation at 2.0 m. Samples were collected at depths between 0.30 m to 2.15 m below surface grade. Exceedances of the CCME criteria for the Protection of Aquatic Life (F1 = 230 ppm, F2 = 150 ppm) were identified at a depth of 2.15 m in TP09-04, 1.65 m in TP09-08 and at 0.90 m and 1.60 m in TP09-09. Concentrations of F1 hydrocarbon fraction exceedances ranged from 300 to 1000 ppm; F2 hydrocarbon fraction concentrations ranged from 180 to 840 ppm.

Four test pits (TP09-10 through TP09-13) were advanced using an excavator near the M16/M17 limit of the SW Plume (Part 3). The test-pits were generally constrained by frozen soil at approximately 1.0 m and reached a maximum depth of excavation at 1.20 m. Two gravel seams were encountered during the excavation of the test pits; the first at 0.60 m and the second seam at a depth of 1.20 m. Groundwater infiltrate via gravel seams was encountered in two of the four test-pits and therefore deeper investigation was halted and the excavations were backfilled. Samples were collected based on olfactory methods and ranged from 0.60 m to 1.20 m below surface grade. Exceedances of the CCME guidelines were identified at a depth of 0.60 m in TP09-12 (F1 = 2200 ppm), and at 0.70 m in TP09-13 (F1 = 630 ppm).

Test-pits TP09-14 through TP09-18 were advanced along the beach using an excavator, extending in a NE direction from the SW Plume (Part 4). The test pits were generally constrained by frozen soil at approximately 1.0 m and reached a maximum depth of excavation at 1.30 m. Samples were collected based on olfactory methods and generally at the base of each test pit. Exceedances of the CCME guidelines were identified in each test-pit at depths ranging from 1.0 to 1.30 m. Concentrations of F1 hydrocarbon fraction exceedances ranged from 370 to 1500 ppm; F2 hydrocarbon fraction concentrations ranged from 230 to 640 ppm. The highest concentration of both F1 and F2 hydrocarbon fractions were identified in TP09-16. Sample locations are shown on Accompanying As-built Drawing C10 and C11. A summary of the analytical data reported from the test-pitting delineation program is included in Table A8, Appendix A.

5.15.2.2 Delineation Program

By August 15, 2009 approximately 95% of the Apron Area design plumes had been excavated to design depth and confirmatory samples taken. However, significant hydrocarbon contamination was identified outside of the original spec areas, as described above. Also, the contamination was found to be located within saturated gravel layers of undefined lateral or vertical extent. Based on a discussion between representatives from INAC, PWGSC, EGT and AECOM during the on-site August 21 progress meeting, it was concluded that the most suitable approach was to halt further excavation at depth and excavate only where the top 30 cm exceeds the near shore criteria.

In excavated areas where contamination remained at depth (i.e. confirmatory samples of the base and/or walls were above the criteria), the perimeter walls were sampled to confirm that the top 30 cm was below the F1 and F2 guidelines. This was the case for the following excavations: northeast of N9/N10, south of N15, northwest of Lobe X, two points along the south perimeter of the SW Plume, east of M10, and north and south of Part 4 along the beach. Delineation samples, of the upper 30 cm were also taken in locations out from these wall areas to cover the possibility that perimeter wall samples exceed criteria. Samples were also collected from the base of the walls in the locations to indicate the concentration of hydrocarbon impacts left in place.

A total of 46 delineation samples were collected between August 23 and August 26, 2009. Twelve surface exceedances were identified in the Apron Area. A summary of the analytical data reported from the delineation program is presented in Table A8, Appendix A.

NE Plume

Three exceedances were measured in surface samples along the south perimeter of the NE Plume; two of which were near N14 (sample ID 992 and 994) and one was near N16 (sample ID 728). The exceedances were located in areas entirely rutted and disturbed by vehicle traffic and rain, therefore there was no remaining, contaminated in-situ soil (at surface) to excavate. There was however contaminated soil that remained at depth, which was left in-place under the directive from the August 21, 2009 site meeting. Soil that exceeds the near shore criteria remains in-place within Part 1, Part 1 Extension, and the Lobe L footprint. Maximum concentrations in these areas are F1 = 2900 ppm and F2 = 630 ppm. A complete summary of the analytical results from locations with contamination left in-place is provided in Table A8, Appendix A. The estimated depth and approximate extent of residual hydrocarbon impacts are shown on As-built Drawing C12.

SW Plume

Delineation results showed five surface exceedances in the area of Lobe X (sample IDs 964, 965, 968, 974 and 1002). The affected soil around samples 974 and 1002 was excavated on September 2, 2009. The affected soil around samples 965, 968 and 974 were not excavated as they were located adjacent to the freshwater lake, which had risen since sampling due to the rain and as a result these sampling locations were under water.

Two surface exceedances were also identified near Part 2 (samples 952 and 956). The affected soil was excavated on September 2, 2009.

Two exceedances were also measured in delineation sampling along the beach near Part 4 (samples 1037 and 1049). The affected soil in these areas (one on the SW wall and one 6 m NE of the NE wall) was excavated on September 2, 2009. Clean sample results out from the wall constrained the lateral extent of these excavations.

As was the case with the NE Plume, there was contaminated soil that remained at depth in the SW Plume, which was left in-place under the directive from the August 21, 2009 site meeting. Soil exceeding the near shore criteria for hydrocarbons remains in-place within Lobe X, Lobe Y, Extension of Part 1, Part 2, Part 3, Extension of Part 3, Extension of Part 4, Part 5, Part 6 and Extension of Part 6. Maximum concentrations in these areas are F1 = 2400 ppm and F2 = 7800 ppm. A complete summary of the analytical results from locations where hydrocarbon-impacted soils are left in-place is provided in Table A8, Appendix A. The estimated depth and approximate extent of residual hydrocarbon impacted intervals are shown on As-built Drawing C12.

5.16 Apron Area Residual Contamination

Excavations in the Apron Area did not remove all soil with hydrocarbon levels above the near shore criteria. As-built Drawings C10 and C11 show the distribution of confirmatory or delineation soil samples for soil that was not excavated. Most of the samples shown within the bounds of the final (maximum) excavation are confirmatory samples taken along the base of the excavation at depths of generally between 1.0 and 1.3 m below original ground level. Sample locations outside (and some within) the maximum excavation boundary are samples collected from the delineation test pits. Samples exceeding the near shore criteria are shown in red.

Except for samples 964 and 965, which could not be excavated as heavy rain lead to the sample location being under water, all samples showing exceedances correspond to soil that was originally more than 0.5m below original ground level and has been since backfilled to a higher elevation.

The estimated distribution of residual impacted soil intervals are shown in Drawing C12 reflects, for the most part, the distribution of sandy gravel at the base of the excavation. In the northern portion of the NE Plume (Lobe P and river flood plain portions) the base of the hydrocarbon impacted excavations were in silt material. Gravel was encountered at the base of the excavations in the SW Plume and the southern portion of the NE plume. It is clear that the distribution of residual hydrocarbon impacts in the Apron Area are controlled by the vertical and horizontal distribution of sandy gravel material. The high permeability of the gravel material means that hydrocarbon product entering the gravel layers would have been (and likely continues to be) relatively quickly distributed when thawed.

The estimated vertical distribution of residual hydrocarbon impacted soil is shown on the cross sections on As-built Drawing C12. The orientation of dipping gravel layers indicates that hydrocarbon contamination may occur within gravel layer beneath the uncontaminated silt in the Unnamed River floodplains.

It is important to note that, with the exception of sample 980/ 981, all exceedances shown on As-built Drawing C10, C11 and C12 are relatively low concentrations and would be below criteria if compared against the 2008 INAC Hydrocarbon contaminated soil criteria.

5.17 Hydrocarbon Contaminated Soil Treatment

5.17.1 Allu Treatment Operations

On-site remediation of soil excavated from hydrocarbon contamination areas with concentrations above SSTL criteria was conducted by EGT using an allu bucket attached to the Hitachi excavator. The allu bucket consisted of a group of rotating shafts and blades that sift, aerate and volatilise the hydrocarbons from the soil.

On June 26 and 27, 2009, an approximately 28 m x 24 m soil treatment area was established within the upper site ridge. Using the Komatsu bulldozer, material from within the treatment area footprint was pushed up to form berms approximately 0.4 m high.

A hydrocarbon resistant liner was unrolled and placed within the bermed treatment area on July 5. Excavated soil, requiring treatment, was placed within the cell and allu operations commenced that day. To reduce the potential for damage, the initial soil placed in the cell was spread as a protective layer approximately 0.3 m thick across the whole cell. Soil placed subsequently was allued into windrows lengthwise within the cell. The volume of soil within each windrow varied between 250 and 350 m³.

IEG personnel conducted on-site screening of the soil undergoing treatment using a PetroFLAG™ field test kit. Once the results of the field testing indicated petroleum hydrocarbon concentrations below the SSTL (4570 mg/ kg) remediation criteria, a 10 point composite sample was taken for each 100 m³ of soil and the samples submitted to Maxxam Laboratories in Edmonton. Duplicate samples were also submitted by AECOM. Hydrocarbon treatment reports, produce by IEG, are provided in Appendix F.

Windrowed soil, that met the treatment criteria, was removed from the treatment cell to the soil disposal location and new soil brought in for treatment. Treated soil was removed from the cell on six occasions; July 14 and 29, August 15, 22, 26 and 31, 2009. The layer of soil placed to protect the liner was tested and removed last.

Following decommissioning of the cell, the liner and natural ground beneath the liner was checked and showed no sign of damage or contamination respectively. Baseline samples of soil beneath the liner were collected, tested and showed no hydrocarbon exceedances (see Appendix F)

5.17.2 Treated Soil Disposal

Excavated hydrocarbon soil and allu treated soil with concentrations below the SSTL criteria were hauled and placed in one of two disposal location on the west side of the ridge road. Soil disposal locations are shown on accompanying As-built Drawing C04. Material placed in the disposal areas was spread and track packed by the D6 dozer. Following placement of the last of the soil, the soil disposal areas were sloped and contoured to blend in with natural terrain, promote natural drainage and minimize ponding.

5.18 Groundwater Remediation

Site investigations (EBA 2007) noted that BTEX in groundwater samples extracted from in the Apron Area exceeded Freshwater and marine Aquatic criteria. Collection, treatment and confirmatory testing of groundwater from the Apron Area was thus included as a work item in the Specifications.

5.18.1 2008 Groundwater Sampling

EGT/IEG submitted the "Johnson Point Groundwater Treatment Plan" dated April 18, 2008) which outlined the procedures and methods that EGT and their sub-contractor IEG would take to treat hydrocarbon contaminated groundwater within the Apron Area. An integral part of the groundwater treatment plan was to collect additional measurements, conduct slug tests and take samples from the existing groundwater monitoring wells during the 2008 season.

On September 6, 2008, IEG personnel conducted groundwater sampling at one monitoring well in the vicinity of the northeast and southwest Apron Area hydrocarbon excavations (MW-74) Results indicated that the petroleum hydrocarbon parameters analyzed did not exceed the guidelines set forth in the water license (see Appendix F).

The Environmental Inspector inspected the monitoring wells in Main Station Area. The wells were determined to be dry or contained a level of water that was insufficient to obtain representative samples from. An attempt was made to gather partial samples from two wells (MW-16 and MW-18); however, there was insufficient volume to purge the wells prior to taking a partial sample. The partial results gathered in 2008 did not provide a sufficient level of information for assessment.

5.18.2 Groundwater Remediation Activities

Contaminated soil excavations were excavated with attempts to minimize the volumes of groundwater generated, however the heavy rain encountered during the season made this very difficult. Samples of groundwater taken during excavation (Table A9, Appendix A) generally returned results that did not exceed water licence discharge criteria and thus groundwater treatment as specified in the contract documents was not undertaken.

Contaminated soil excavations conducted 2009 are likely to have removed most of the contaminate source. Monitoring wells installed in the Apron Area during 2009 will enable on-going monitoring of potential hydrocarbon-impacted groundwater at the site. Groundwater sample results from Apron Area wells installed in 2009 are presented in Table A9 of Appendix A.

5.19 Earthwork Activities

5.19.1 Existing Landfill Regrades

Site investigations delineated several areas of buried debris across the lower and upper portions of the site. The RAP recommendations (carried through to remediation design) called for the four largest areas (Existing Landfill A, Lobe A, Existing Landfill B, Existing Landfill C and Existing Landfill D) to be regraded with a cap of Type 2 and Type 1 Granular Fill. Smaller areas were excavated and processed as buried debris areas according to the INAC (2005) protocol.

5.19.2 Modifications to Tender Regrade Designs

Regrade Design Revisions

Following discussions between INAC/PWGSC and AECOM, minor changes were made to the Johnson Point landfill regrade designs prior to the 2009 season. The reasons for these design revisions included: the difficulty in obtaining specification-conforming Type 2 material, the limited volume of Type 1 material available to the project, more accurate survey information gathered during 2008 and an in depth review of the dominant geotechnical issues as presented in the existing information and as observed on site. The finalized design for each of the existing landfill regrades is discussed below.

Existing Landfill A Lobe A

This is the largest landfill regrade on the site and is located on the edge of a plateau of flat ground adjacent to the tank farm.

A 1.0 m thick cover of material for this regrade was considered prudent. Due to the large size of this regrade and the limited volume of material that meets the Type 2 specification, the lower 0.7 m of placed material was to be taken from Borrow Areas with the assumption that the material will be close to but may not necessarily meet Type 2 gradation specifications. The final 0.3 m of material placed on this regrade was to pass the Type 2 specification gradation.

Rather than place a 0.4 m cap of Type 1 material (as called for in the original Tender Design), only the southwest, southeast, and northeast slopes of this regrade were to be armored with Type 1 material. The northwest slope was to be flattened to blend with the natural ground as much as possible.

Existing Landfill B

Site observations during 2008 indicated this landfill regrade to be vulnerable to overland stream flows coming from the ridge to the northwest, scouring the perimeter of the regrade. At least two existing erosion channels funnel concentrated water flows (from rain, melting snow and/or melting permafrost) towards Existing Landfill regrade B.

To counter potential water erosion of the regrade perimeter, the perimeter 5H:1V slopes were to be armored with Type 1 Material to a thickness of 0.4 m. The requirement to place 0.7 m cap of Type 2 material as an initial cover remained.

Existing Landfill C

Visual inspection of the material placed on this regrade during 2008 (approximately 0.5 m in thickness) indicated it was close to, but did not meet, the specified gradation for Type 2 material. It did, however, meet the design intent and was considered acceptable. The final lift of Type 2 material placed on Existing Landfill C was to meet the Type 2 specifications as given in the Tender Documents.

On the high (northwest) side of the regrade, it was recommended that the slope be flattened from 5H: 1V to match the existing slope angles and a shallow swale be constructed two meters from the toe of the northwest slope. These measures were proposed to prevent surface water pooling and/or concentration against the regrade perimeter and potentially causing erosive flows

Of the four landfill regrades, the final cover slope angle of Landfill regrade C is the steepest. The risk of surface water (rain and/or snow melt) flowing and concentrating with erosive velocities is therefore the greatest on this regrade. To counter the higher erosion potential on the surface of this regrade the entire regrade was to be capped with a final 0.4 m thick cover of Type 1 material.

Existing Landfill D

Approximately 0.7 m of material was placed on this regrade during 2008, as called for in the tender/construction design. A grain size analysis performed on material from this first lift parallels, but falls outside the upper limit of Type 2 material, due to a general lack of granular material above 50 mm in size. This material, however, meets the design intent.

To improve the erosion resistance of the already placed 0.7 m of cover material on landfill regrade D, perimeter slopes were to be armored with 0.4 m of Type 1 material. The 5H: 1V slopes were to be flattened to blend with natural ground in locations where nominal additional fill was required.

5.19.3 Regrade Construction

5.19.3.1 Landfill Regrade A

Due to surface debris and proximity to demolition items, no regrading of Landfill Area A had been completed during the 2008 field season. Regrading of Landfill A commenced on July 17, 2009. In an effort to conserve the limited Type 2 material available in the borrow areas, material used for initial regrading of Landfill A was material excavated from the first excavation pass of the airstrip contaminated soil excavation (SW Plume, Part 6). The material placed on the landfill was insufficient to qualify as a lift; therefore no density testing was performed. A coincident period of intense and prolonged rainfall led to saturation of the placed material. To drain and dry the placed material EGT created ditches on July 21, 2009. By August 2, 2009 the placed material had dried sufficiently and additional material was placed. This additional material consisted of Type 2 material from Borrow Area B and excavated clean gravels from the SW plume mixed in a ratio of approximately 2:1. A sieve of the mixture showed material to be approximately parallel to, but outside of, the specified Type 2 gradation limits (Appendix B).

As regrade material progressed, it was noted that drainage from two pre-existing ditches/channel locations continued to flow and it became difficult to sustain proper saturation in the placed material. Consequently, it was determined during the August 21, 2009 progress meeting that engineered drains were to be installed in the pre-existing ditches/channels. The drain design and installation involved first removing the saturated material from the ditch, laying out geotextile fabric along the length of the ditch, placing approximately 450 mm of Type 1 material, folding the geotextile over the top of the Type 1 and covering with Type 2 material to the specified elevation. At the completion of regrading activities, the drains within base layer of the regrade continued to drain water from the base of the regrade as intended.

Type 2 material placement and compaction on landfill Regrade A was completed on August 29, 2009. Compared with final design elevations, some areas were high and some low by up to 300mm but DR approved final surface based on sufficient cover and ability of surface to shed water. Simply replicating natural ground surface with 1 m of fill as designed would have created mounds and depressions with potential for ponding or erosion. Compaction tests all lifts, met the specified compaction standard of 95% SPDD. Placement of Type 1 material around the SW, SE and NE slopes of the regrade commenced the afternoon of August 29, 2009 and was completed by September 9, 2009.

A swale was not constructed due to the assessment that channelizing water flow in the loose sand soil around the regrade could lead to increased erosion.

Final regrade and drains grades and dimensions are shown on the accompanying As-built Drawings C07.

5.19.3.2 *Landfill Regrade B*

Two lifts were placed and compacted on Landfill Regrade B during the 2008 field season. At the beginning of the 2009 work season, an inspection of the landfill regrade progress showed no signs of significant erosion. With the exception of the toe along the north (pond) side, compacted material was firm and dry. Density tests were performed on the first two lifts; however, the results (91-92%) did not meet the 95% density criteria. Consequently the surface was compacted using the vibratory roller prior to placing further lifts.

After completing additional grading and compacting on Landfill Regrade B, with the exception of the wet area along the pond densities met the specified compaction standard of 95% SPDD. To complete the placement of Type 2 material to specified thicknesses, EGT pumped water from the pond north of the regrade. This allowed the material adjacent to the pond to dry. Once the north toe was sufficient dry, Type 2 material was placed and compacted across the entire regrade area. After achieving specified cap thickness and density, Type 1 material was placed on Landfill Regrade B. Sufficient Type 1 material was available to completely cover the area, rather than armouring only the side slopes.

Final regrade grades and dimensions are shown on the accompanying As-built Drawings C06.

5.19.3.3 *Landfill Regrade C*

Between August 28 and September 12, 2008, EGT hauled material from the Borrow Area B and placed it in lifts on Landfill Regrade C. Initial lifts were compacted in place until compaction operations were suspended on September 12, 2008 due to unsuitable temperatures and conditions. In total, two lifts were placed and compacted, each lift being subjected to at least one pass with the vibratory roller.

At the beginning of the 2009 work season, an inspection of the partially completed landfill regrade showed no signs of significant erosion and the material was relatively dry and firm. Density tests were performed on July 12, 2009, which demonstrated that the placed material during 2008 met the 95% density criteria.

Type 2 material was hauled and placed between July 18 and August 2, 2009. During this period there were frequent and prolonged precipitation events, which not only delayed hauling and placement, but saturated the placed material. On July 30, 2009, one pass was made on the third lift with the vibratory roller. It was discovered that a compacted crust was forming and the material was too wet to be able to be compacted to the required density. After sufficient scarification and time to dry, the regrade area was re-compacted and density tests were performed on August 18, 2009 showing the lift met the 95% density criteria and the material was at a suitable moisture content. A final lift (<100 mm) was placed and compacted on August 24, 2009.

Hauling and placing of Type 1 material was completed on August 25 and 26, 2009. A swale was not constructed due to the assessment that channelizing water flow in the loose sand soil around the regrade could lead to increased erosion.

Final regrade grades and dimensions are shown on the accompanying As-built Drawings C05.

5.19.3.4 *Landfill Regrade D*

Three lifts were placed on Existing Landfill D between August 28 and September 12, 2008. Each lift was subjected to at least one pass with the vibratory roller prior to placing additional lifts. A preliminary inspection in 2009 of the partially completed landfill regrade showed no signs of significant erosion and the material was relatively dry and firm. Density tests of the material placed during the 2008 season were found to meet the 95% density criteria. A survey of the regrade area indicated that one lift (approximately 100 to 200 mm) of Type 2 material was required to achieve the specified cover thickness. The area was reassessed at the beginning of August, 2009, following an extended period of precipitation. As was the case with other regrades following the precipitation events, the placed material was relatively saturated, with minor erosion limited to the toe of the placed material. Consequently, the area was given sufficient time to dry prior to placing the final lift.

By August 15, 2009, the final lift of Type 2 material was placed and compacted. Compaction tests performed on the final lift of Type 2 material on August 18 met specification requirements. The regrade was completed on August 27 and 28, 2009, by placing Type 1 material on the perimeter slopes using the excavator with the aid of grade stakes.

Final regrade grades and dimensions are shown on the As-built Drawings C03.

5.19.4 Backfilling

5.19.4.1 *Buried Debris Excavations*

Buried debris areas were backfilled with excavated soil tested and shown to at or below the appropriate contamination criteria. In locations where excavated soil had been removed for treatment, Type 3 material from Borrow Areas B and 6 was used to fill the excavations to grade.

5.19.4.2 *Station Area Sumps*

Water within the two existing dugouts/sumps area scheduled for backfilling within the main station was tested by the Environmental inspector and found to be below discharge criteria. The two dugouts/sumps were progressively breached on August 2 to allow water to gradually flow out. Minor volumes of debris was exposed and collected. Following debris collection, the two dugouts/sumps were backfilled and recontoured on August 29 with Type 3 material from the surrounding ground and Borrow Area 6. All backfilled excavations were track packed and recontoured.

5.19.4.3 *Main Station Hydrocarbon Excavations*

The main Station hydrocarbon excavation was backfilled and track packed using surrounding soil including portions of the former tank farm berm.

5.19.4.4 *Apron Area Excavations*

Apron Area excavations outside of the airstrip, were backfilled with Type 3 (general sand) fill material sourced from Borrow Areas B and 6. The initial lift placed in most areas of the excavations was thicker than the 250 mm thick lifts specified due to wet and soft conditions on excavation bases. The thicker lift enabled equipment to move on the lift and create a stable base for following compacted lifts. Subsequent lifts were approximately 250mm thick and track packed.

Excavations, within the boundaries of the Airstrip, were backfilled with the best available Type 2 material selected from Borrow Area B. Excavation backfill within the airstrip commenced on August 23 using thin lifts (200 mm or less). The first three lifts placed were tested and met the specified compaction of 100% SPMDD. Following placement and nominal compaction of the final lift of material, the site was subject to several days of rain which saturated the top layer of backfill material. The contractor removed the most saturated material and the final airstrip surface was completed using a combination of blading, drying, addition of dry material and track or wheel packing.

Density tests performed on September 8, 2009 on the final airstrip backfill layer showed it to be at a similar density as the surrounding undisturbed in-situ airstrip surface. Along the edge of the strip (beach and Apron side), the density was 2-5% less than natural airstrip density. Moisture contents of the airstrip surface soils were measured at approximately 2-3% wet of optimum. Additional drying and further compaction after the Departmental Representative left site likely resulted in a density equal to or greater than the in-situ airstrip surface. Inspection during 2010 site visit will be necessary to access final density.

To address regulatory concerns brought up at September 8 site meeting, 271 additional loads of material were placed on areas of the backfilled Apron Area excavation containing residual contamination at depth.

5.19.4.5 *Future performance of Apron Area backfill*

Overall, the backfill material placed in the non-airstrip portions of the Apron Area excavations was wetter and less compacted than would generally be acceptable under ideal or even normal site conditions. The final backfill surface was, however, the best that could be achieved considering the site conditions (flat, non-draining site, large volume of rain, only non-compactable borrow material available) and the design intent (bulk backfilling to restore permafrost levels). Backfilling operations exhausted all available sources of borrow material. Obtaining additional material would have required excavation and development of an additional borrow source.

It is anticipated that settlement of non-airstrip backfilled areas will occur and, given the extremely flat nature of the Apron Area, may lead to isolated areas of ponding. The magnitude of the potential settlement is currently unknown and will need to be observed and assessed during demobilisation and future monitoring events. It is likely that potential settlements will occur within the first two years following operations. Backfilling operations in the NE plume of the Apron Area have restored the ground to an elevation equal to or higher than the ground elevation prior to remediation operations.

Backfilling of the Apron Area excavations is not designed to provide long term protection against river migration and associated erosion. As noted in the INAC water officer inspection report (September 8, 2009), the Apron area excavation "is in a potentially dynamic environment and as such will be prone to change". The long term geotechnical and geomorphic stability of the Apron Area and the potential environmental impacts of residual contamination in this will require further assessment. Monitoring of the site and installed instrumentation will provide information on which to base further decisions.

5.19.5 Reshaping

In late August 2008, EGT flattened the earth berms around the tank farm using the dozers and a loader with drag. The reshaping of this area provided easier access to the POL tanks for tank demolition crews and allowed for improved drainage of the area.

In the closing stages of the 2009 season EGT dragged the entire site to remove equipment ruts and to blend work areas with the surrounding terrain.

5.20 Landfill Monitoring Plan Baseline Sampling Program

Discrete depth soil samples were collected from test pits excavated around each of landfills A, C and D on August 30, 2009, and around Landfill B on September 2, 2009. Except for two samples adjacent to 09-1075 and 1076) all samples returned non-detect results for Hydrocarbons and PCBs and metal results far below applicable criteria. Samples 09-1075 and 09-1076 showed elevated hydrocarbon concentrations in one location upstream of Landfill Regrade A. These samples will be amended to the Landfill Monitoring Proposal for the site and serve as baseline results should contaminant migration from the regraded landfills be suspected in future monitoring events.

5.21 Surveying

EGT subcontracted Inukshuk Geomatics to conduct survey tasks during the 2008 and 2009 seasons. Tasks completed by the surveyor during remediation operations included:

- Installation of survey benchmarks in the Upper site and Apron Areas.
- Detailed existing ground contour surveys of Existing Landfills and contaminated Soil/ buried debris excavation areas prior to regrading or excavation.
- Installation of grade stakes during placement of fill materials on Existing Landfills.
- Surface surveys of Existing Landfills at the completion of Type 2 and at the completion of Type 1 material placement.
- Laying out and staking 10 m x 10 m grid cells within the Apron Area hydrocarbon excavations for the 2008 IEG delineation program.
- Locating and staking perimeter extents of hydrocarbon excavations and buried Debris excavations.
- Completed post excavation ground contour surveys of Contaminated Soil Excavations and Buried Debris Excavations.
- Completed pre and post-demolition surveys of the main station area.
- Completed a detailed survey of the Type 1 material stockpile to determine a volume estimate.
- Perimeter surveys of all borrow areas and soil disposal areas.
- Survey of confirmatory sampling points within excavations.
- Survey of Type 1 materials during installation of drains in Landfill Regrade A.

5.22 Apron Area Instrumentation

As hydrocarbon soil excavation in the Apron Area progressed and it was realised that removal of all hydrocarbon impacted soil to the Protection of Aquatic Life criteria could not be feasibly achieved, a monitoring program was developed to enable on going monitoring of the Apron Area. The monitoring program involved installation of thermistors and water quality monitoring wells in and around the backfilled Apron Area hydrocarbon excavation.

The objective of the program, as understood by AECOM, was to:

- Enable monitoring of the freeze-back of the active layer as the upper permafrost surface rises through the backfill material. The assumption is that rising permafrost will encapsulate residual hydrocarbon contamination.
- Enable collection and analysis of groundwater in unexcavated areas between the backfilled hydrocarbon excavation and receptors of concern (River and Ocean). Groundwater in these areas consists of the percolating precipitation and melting permafrost flowing along the upper permafrost surface.

Two thermistors were installed in the deeper portions of the Apron Area excavation (T09-01 and T09-02). Each thermistor consists of a cable string of temperature sensitive resistor 'beads' spaced at 0.3 m intervals. The string was installed vertically and the depth of each 'bead' measured. Discrete resistance readings and the corresponding temperatures for each 'bead' were taken three times during the 2009 season and results are given in Appendix E. The discrete readings were taken using a switchbox and multimeter; however, dataloggers are to be installed to provide continuous data recording.

Groundwater quality monitoring wells were installed in seven locations in and around the excavation. Two wells (MW09-01 and MW09-02) were installed adjacent to the thermistor installations to approximately the same depths. Monitoring Wells MW09-03 and MW09-04 were installed between areas of known residual hydrocarbon impacts and the river. Monitoring Wells MW09-05, MW09-06 and MW09-07 were installed along the ocean-side edge of the airstrip. Installation of monitoring Wells was conducted using an excavator and the depth of installation was constrained by the depth to permafrost. The wells themselves were constructed from solid and slotted 50 mm diameter PVC. Logs of monitoring well installations are presented in Appendix B.

Hydrocarbon water quality sample results collected from the monitoring wells are presented in Table A15, Appendix A, compared to CCME criteria for the protection of Marine and Freshwater Aquatic life. Samples 09-1089, 09-1090, 09-1091 and 09-1092 were collected from the MW09-01 installation excavation and comprised ice lens fragments with hydrocarbon product frozen within it.

Samples collected from within the excavation area (MW09-01 and MW09-02) show levels of Toluene and Ethylbenzene (and benzene in MW09-01) above both marine and freshwater criteria. Samples from wells adjacent to the River (MW09-03 and MW09-04), show results below the appropriate (freshwater) criteria. Of the three wells installed between the excavation and Ocean, the one closest to the excavation (MW09-07) shows levels above Marine criteria.

6. Quality Assurance Review

6.1 QA/QC Procedures and Evaluation

In order to confirm that the sampling and analytical data collected were interpretable, defensible, and comparable, a Quality Assurance and Quality Control (QA/QC) program was implemented for the project. QA/QC measures were taken in both the collection and analysis of the environmental sampling program. The following sections outlines the QA/QC program completed during the remediation program.

6.1.1 AECOM QA/QC Program

Quality Control (QC) measures used in the collection, preservation, shipment, and analysis of samples included the following:

- Sampling techniques were performed in accordance with standard written AECOM protocols;
- Field notes were recorded during the investigation;
- All samples were kept cool prior to shipment to the laboratory;
- Samples were assigned unique sample control numbers and transported under chain of custody procedures; and
- The analytical laboratory has proficiency certification issued by the Canadian Association for Laboratory Accreditation inc. (CALA) for the specific analyses conducted.

Quality Assurance (QA) measures established for the investigation included collection of duplicate field samples at a rate of approximately 10%. A blind duplicate sample consists of a second aliquot of an individual sample that is submitted to the analytical laboratory under a separate label such that the analytical laboratory has no prior knowledge that it is a duplicate. Duplicate samples from numerous locations were submitted to the laboratory for analysis.

The relative percent difference (RPD) between duplicate results was used to assess overall sampling precision. The RPD is a measure of the variability between two duplicate analyses and is calculated by the following equation:

$$RPD = 100 \times ((2 \times (x_1 - x_2)) / (x_1 + x_2))$$

Where x_1 is the primary result and x_2 is the blind duplicate result.

Tables A10 and A11, Appendix A compare sample analysis between the original samples and their duplicates. Acceptable RPD values vary on the analytical parameters, the sample matrix and the concentrations of analytes in the sample. For metals in soils acceptable RPD values are 35% or less and for organics in soils (PHCs and PCBs), the acceptable RPD values are 50% or less. Only when concentrations are at least ten times the method detection limit are RPD calculations considered valid.

6.2 Summary of QA/QC Results

6.2.1 Field Duplicate Samples

During the 2009 remediation program, 62 field duplicates for soil and water samples were collected. Forty-eight field duplicates for soil and three (3) field duplicates for water were analyzed to provide an indication of the overall sampling and analytical precision. The blind field duplicates were analyzed for various parameters based on their location and expected contaminant(s) present. Relative percent differences (RDPs) were calculated for all parameters analyzed in each sample. For the majority of the parameter results the RDP values were below 50% for PHCs in soil and 40% for PHCs in water. The results of these calculations are summarized in Tables A10 and A11 in Appendix A.

Five (5) of the 48 soil duplicates were found to have exceedances relative to the Alert Criteria, which is defined as the RPD level at which the QA/QC results should be further review. The set of duplicate samples with sample ID 770 and 771 exceeded the recommended Alert Criteria for both the F1 and F2 petroleum hydrocarbon parameters. The resulting RDPs were 92% for F1 and 56% for F2. The sample IDs 990 and 991 also exceeded the recommended Alert Criteria for both the F1 and F2, resulting in RDPs that were 145% and 106% respectively. These samples were located in the SW Plume.

Three other sets of duplicate samples (ID numbers 800 & 801, 810 & 811 and 1040 & 1041) exceeded the recommended Alert Criteria for F1 petroleum hydrocarbons. The resulting RDPs were 79%, 146% and 57% respectively. These samples were located in both the NE and SW plumes.

Based on the field notes the material type in this area was typically sand, gravels and silts. The variations in the nature of this material with the mixture of coarse gravels with sands and silts may provide an explanation as to why it may have been difficult at times to obtain a homogeneous sample. The increased RDP values in some of the duplicate sample sets in the NE and SW plumes was caused by heterogeneity of the sample duplicates, which was likely the result of the nature of the materials found in the on-site.

Nine other duplicate sets did have calculated RDPs that were above the recommended Alert Criteria, however, the concentrations of one or both samples in the duplicate set were less than ten times the detection limit. The RDP is therefore not considered to be strictly valid. All other parameters within the duplicated sets had acceptable values for RDPs.

One of the two water samples collected on the site had a calculated RDP that was above the recommended Alert Criteria (sample set 1110 and 1111); however, the concentrations of both samples in the duplicate set were less than ten times the detection limit. The RDP is therefore not considered to be strictly valid. All of the other parameters within the water sample duplicate sets had acceptable values for RDPs. There was one ice sample taken on the site, the RDPs for this duplicate set exceed the recommended Alert Criteria for ethylbenzene, xylene, and F2. This sample set is not considered to be strictly valid and there is potential for variation in an ice sample. Soil particles trapped in an ice sample would cause the samples sets to be heterogeneous in nature. The results of the QA/QC program completed for duplicate water samples in 2009 has been summarized in Table A11, Appendix A.

6.2.2 Laboratory QA/QC

Maxxam Analytics (Maxxam) was the analytical laboratory used to analyse samples collected by AECOM during both the 2008 and 2009 field seasons. Maxxam ran calibration check samples, matrix spike samples, surrogate spike analysis, and standard reference material analysis to determine analytical accuracy. All results were within acceptable limits or were acceptably qualified. The laboratory also ran laboratory duplicate samples to ascertain analytical precision. All results obtained were within acceptable limits or were qualified. Method blank samples were run to confirm that there was no carry-over from analysis to analysis, and that analytes were not introduced due to the reagents or methods used. Most blank analyses were observed to be less than MDL. For the samples with associated blanks that were greater than the MDL, the blank concentration was subtracted from the sample concentration. The results of laboratory analysis completed in 2009 have been included in Appendix J.

7. References

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Appendix A

Summaries of Environmental Results

Table A1 - Analytical Summary of Confirmatory Sampling at NE Plume

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	
Remediation Criteria					230	150	-	-	
Lobe Z									
09 -	629	100	31-Jul-09	A941528	Q13837	<12	29	47	11
09 -	630	100	31-Jul-09	A941528	Q13838	<12	<10	23	<10
09 -	631(d)	100	31-Jul-09	A941528	Q13839	<12	<10	28	<10
Part 1									
09 -	460	100	13-Jul-09	A936987	P82968	<12	<10	13	21
09 -	461(d)	100	13-Jul-09	A936987	P82969	<12	<10	<10	<10
09 -	462	100	13-Jul-09	A936987	P82970	<12	<10	<10	<10
09 -	463	100	13-Jul-09	A936987	P82971	<12	<10	<10	<10
09 -	466 ^a	100	13-Jul-09	A936987	P82974	1000	330	20	<10
09 -	467	100	13-Jul-09	A936987	P82975	<12	11	20	<10
09 -	468	100	13-Jul-09	A936987	P82976	<12	<10	<10	<10
09 -	470	100	13-Jul-09	A936987	P82978	<12	<10	<10	<10
09 -	471(d)	100	13-Jul-09	A936987	P82979	<12	<10	<10	<10
09 -	474	100	13-Jul-09	A936987	P82982	<12	<10	17	<10
09 -	475 ^a	100	13-Jul-09	A936987	P82983	340	14	11	<10
09 -	476	100	13-Jul-09	A936987	P82984	<12	<10	14	<10
09 -	477	100	13-Jul-09	A936987	P82985	<12	<10	24	<10
09 -	480 ^a	100	13-Jul-09	A936987	P82988	3200	250	28	<10
09 -	481(d) ^a	100	13-Jul-09	A936987	P82989	3400	220	27	<10
09 -	485 ^a	100	20-Jul-09	A938629	P94135	1300	950	280	38
09 -	487	100	13-Jul-09	A936987	P82994	48	13	29	<10
09 -	490	100	20-Jul-09	A938629	P94138	<12	25	85	40
09 -	491(d)	100	20-Jul-09	A938629	P94139	<12	19	110	62
09 -	493	100	20-Jul-09	A938629	P94141	<12	<10	16	<10
09 -	632	100	31-Jul-09	A941528	Q13840	<12	<10	24	<10
09 -	633	100	31-Jul-09	A941528	Q13841	<12	16	56	13
09 -	634	0-100	31-Jul-09	A941528	Q13842	<12	45	33	<10
09 -	635	0-100	31-Jul-09	A941528	Q13843	20	99	47	<10
09 -	636	0-100	31-Jul-09	A941528	Q13844	15	59	42	<10
09 -	637	0-100	31-Jul-09	A941528	Q13845	21	12	19	14
09 -	638	0-100	31-Jul-09	A941528	Q13849	86	<10	20	<10
09 -	715	130	6-Aug-09	A942080	Q18122	<12	<10	<10	<10
09 -	716	130	6-Aug-09	A942080	Q18123	<12	<10	<10	<10
09 -	717	130	6-Aug-09	A942080	Q18124	<12	<10	<10	<10
09 -	719	100	6-Aug-09	A942080	Q18126	<12	<10	<10	<10
09 -	720	100	6-Aug-09	A942080	Q18127	<12	<10	<10	<10
09 -	721(d)	100	6-Aug-09	A942080	Q18128	<12	<10	<10	<10
09 -	723	100	6-Aug-09	A942080	Q18130	<12	100	94	<10
09 -	725	100	6-Aug-09	A942080	Q18132	<12	<10	<10	<10
09 -	727	100	6-Aug-09	A942080	Q18134	<12	38	<10	<10
09 -	728 ^b	0-100	6-Aug-09	A942080	Q18135	650	230	<10	<10
09 -	730	100	7-Aug-09	A942080	Q18137	<12	<10	<10	<10
09 -	731(d)	100	7-Aug-09	A942080	Q18138	<12	<10	<10	<10
09 -	732	100	7-Aug-09	A942080	Q18139	<12	<10	<10	<10
09 -	733	100	7-Aug-09	A942080	Q18140	<12	<10	<10	<10
09 -	734	100	7-Aug-09	A942080	Q18141	<12	<10	<10	<10
09 -	738	0-100	8-Aug-09	A942080	Q18145	<12	<10	<10	<10
09 -	740	100	8-Aug-09	A942080	Q18147	<12	<10	<10	<10

Table A1 - Analytical Summary of Confirmatory Sampling at NE Plume

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	
09 - 741(d)	100	8-Aug-09	A942080	Q18148	<12	<10	<10	<10	
09 - 743 ^b	100	8-Aug-09	A942080	Q18150	<12	450	250	<10	
09 - 747	100	8-Aug-09	A942080	Q18154	<12	<10	<10	<10	
09 - 750	100	8-Aug-09	A942080	Q18157	<12	<10	<10	<10	
09 - 751(d)	100	8-Aug-09	A942080	Q18158	<12	<10	<10	<10	
09 - 754	0-100	8-Aug-09	A942080	Q18161	<12	120	18	<10	
09 - 776	0-100	9-Aug-09	A942080	Q18183	<12	<10	<10	<10	
09 - 778	100	9-Aug-09	A942080	Q18185	<12	<10	<10	<10	
09 - 780 ^b	100	9-Aug-09	A942080	Q18187	97	210	11	<10	
09 - 781(d) ^b	100	9-Aug-09	A942080	Q18188	230	290	22	<10	
09 - 784 ^b	100	9-Aug-09	A942080	Q18191	360	210	<10	<10	
09 - 786	0-100	9-Aug-09	A942080	Q18193	<12	<10	<10	<10	
09 - 793	130	11-Aug-09	A942959	Q23977	180	93	41	<10	
09 - 795 ^b	130	11-Aug-09	A942959	Q23982	1300	420	72	<10	
09 - 800 ^b	130	11-Aug-09	A942959	Q23987	440	180	54	<10	
09 - 801(d)	130	11-Aug-09	A942959	Q23990	190	84	44	<10	
09 - 802 ^b	130	11-Aug-09	A942959	Q23991	1600	540	110	<10	
09 - 805	130	11-Aug-09	A942959	Q23994	17	19	33	<10	
09 - 808	130	11-Aug-09	A942959	Q24003	<12	25	53	<10	
09 - 809 ^b	130	11-Aug-09	A942959	Q24004	2900	630	130	15	
09 - 810	130	11-Aug-09	A942959	Q24005	140	14	41	14	
09 - 811(d) ^b	130	11-Aug-09	A942959	Q24006	900	260	71	12	
09 - 812 ^b	130	11-Aug-09	A942959	Q24015	2400	460	110	11	
09 - 813 ^a	0-130	11-Aug-09	A942959	Q24020	700	330	86	12	
09 - 814	0-130	11-Aug-09	A942959	Q24021	<12	29	56	16	
09 - 815	0-130	11-Aug-09	A942959	Q24022	<12	22	69	17	
09 - 816	0-130	11-Aug-09	A942959	Q24023	<12	<10	39	11	
09 - 817	0-130	11-Aug-09	A942959	Q24024	<12	<10	49	12	
09 - 998 ^a	10-30	25-Aug-09	A946687	Q49462	53	240	77	16	
Extension of Part 1									
09 - 820	0-100	13-Aug-09	A943260	Q25983	<12	<10	10	<10	
09 - 821(d)	0-100	13-Aug-09	A943260	Q25984	<12	<10	12	<10	
09 - 1004	10-30	26-Aug-09	A946687	Q49468	<12	<10	40	18	
09 - 1005	110	26-Aug-09	A946687	Q49469	<12	13	44	18	
09 - 1006	10-30	26-Aug-09	A946687	Q49470	<12	<10	<10	<10	
09 - 1007 ^b	130	26-Aug-09	A946687	Q49471	450	73	38	<10	
09 - 1008	10-30	26-Aug-09	A946687	Q49472	<12	<10	89	56	
09 - 1009	70	26-Aug-09	A946687	Q49473	<12	<10	22	<10	
09 - 1010	10-30	26-Aug-09	A946687	Q49474	<12	<10	32	24	
09 - 1011(d)	10-30	26-Aug-09	A946687	Q49475	<12	<10	56	38	
09 - 1012	130	26-Aug-09	A946687	Q49476	<12	<10	19	10	
09 - 1013	10-30	26-Aug-09	A946687	Q49477	<12	13	120	63	
09 - 1014	80	26-Aug-09	A946687	Q49478	<12	67	230	110	
09 - 1015	10-30	26-Aug-09	A946687	Q49479	<12	<10	24	<10	
09 - 1016	80	26-Aug-09	A946687	Q49480	<12	37	130	42	
09 - 1017	10-30	26-Aug-09	A946687	Q49481	<12	<10	21	120	
09 - 1018	70	26-Aug-09	A946687	Q49482	<12	<10	28	12	
09 - 1019	10-30	26-Aug-09	A946687	Q49483	<12	<10	15	<10	
09 - 1020	130	26-Aug-09	A946687	Q49484	<12	<10	44	10	
09 - 1021(d)	130	26-Aug-09	A946687	Q49485	<12	10	41	<10	

Table A1 - Analytical Summary of Confirmatory Sampling at NE Plume

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	
09 - 1022	10-30	26-Aug-09	A946687	Q49486	47	28	15	<10	
09 - 1023 ^b	130	26-Aug-09	A946687	Q49487	220	200	57	<10	
Part 2									
09 - 755	0-50	8-Aug-09	A942080	Q18162	<12	<10	<10	<10	
09 - 757	50	8-Aug-09	A942080	Q18164	<12	<10	<10	<10	
09 - 760	50	8-Aug-09	A942080	Q18167	<12	<10	<10	<10	
09 - 761(d)	50	8-Aug-09	A942080	Q18168	<12	<10	<10	<10	
09 - 763	50	8-Aug-09	A942080	Q18170	<12	<10	<10	<10	
09 - 766	50	8-Aug-09	A942080	Q18173	<12	<10	<10	<10	
09 - 769	0-50	8-Aug-09	A942080	Q18176	<12	<10	<10	<10	

Notes:

a-soils excavated

b-soils left in place

(d) - duplicate sample

Remediation Criteria - Abandoned Military Site Remediation Protocol, March 2005, INAC

Table A2 - Analytical Summary of Confirmatory Sampling at SW Plume

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	
Remediation Criteria					230	150	-	-	
Lobe X									
09 -	624 ^a	0-50	31-Jul-09	A941528	Q13831	1000	5300	280	23
09 -	625 ^a	50-100	31-Jul-09	A941528	Q13833	3100	5500	250	20
09 -	626 ^a	100	31-Jul-09	A941528	Q13834	280	82	58	28
09 -	627 ^a	0-30	31-Jul-09	A941528	Q13835	2100	3800	190	17
09 -	628 ^a	0-30	31-Jul-09	A941528	Q13836	410	19	73	29
Extension of Lobe X									
09 -	963	10-30	25-Aug-09	A946687	Q49427	31	110	49	<10
09 -	964 ^b	10-30	25-Aug-09	A946687	Q49428	1500	770	85	<10
09 -	965 ^b	10-30	25-Aug-09	A946687	Q49429	1200	29	42	<10
09 -	966	100	25-Aug-09	A946687	Q49430	75	17	62	13
09 -	967	10-30	25-Aug-09	A946687	Q49431	<12	32	77	12
09 -	968 ^a	10-30	25-Aug-09	A946687	Q49432	1700	6600	360	12
09 -	969	10-30	25-Aug-09	A946687	Q49433	<12	31	69	10
09 -	970	100	25-Aug-09	A946687	Q49434	<12	20	46	<10
09 -	971(d)	100	25-Aug-09	A946687	Q49435	<12	20	44	11
09 -	972	10-30	25-Aug-09	A946687	Q49436	<12	52	93	12
09 -	973	100	25-Aug-09	A946687	Q49437	<12	26	44	<10
09 -	974 ^a	10-30	25-Aug-09	A946687	Q49438	34	1900	230	29
09 -	975	120	25-Aug-09	A946687	Q49439	<12	21	58	21
09 -	976	10-30	25-Aug-09	A946687	Q49440	<12	15	44	<10
09 -	977	10-30	25-Aug-09	A946687	Q49441	<12	24	58	<10
09 -	978	10-30	25-Aug-09	A946687	Q49442	<12	13	49	<10
09 -	979	100	25-Aug-09	A946687	Q49443	<12	<10	49	<10
09 -	980 ^b	100	25-Aug-09	A946687	Q49444	2400	7000	260	15
09 -	981(d) ^b	100	25-Aug-09	A946687	Q49445	2000	7800	250	14
09 -	982	130	25-Aug-09	A946687	Q49446	<12	29	46	<10
09 -	983	130	25-Aug-09	A946687	Q49447	<12	16	44	<10
09 -	984	100	25-Aug-09	A946687	Q49448	37	25	52	<10
09 -	985	100	25-Aug-09	A946687	Q49449	<12	15	60	<10
Lobe Y									
09 -	494	50	15-Jul-09	A936987	P83015	<12	15	<10	<10
09 -	495 ^b	100	15-Jul-09	A936987	P83016	610	320	73	<10
09 -	497	100	15-Jul-09	A936987	P83018	230	140	60	<10
09 -	499	100	15-Jul-09	A936987	P83020	<12	19	38	<10
09 -	502	100	15-Jul-09	A936987	P83023	<12	16	47	<10
09 -	503	100	15-Jul-09	A936987	P83024	<12	18	190	23
09 -	680	0-100	5-Aug-09	A942080	Q18086	<12	<10	150	63
09 -	681(d)	0-100	5-Aug-09	A942080	Q18087	<12	<10	150	48
09 -	688	100	5-Aug-09	A942080	Q18094	14	15	30	<10
09 -	702 ^b	100	5-Aug-09	A942080	Q18108	1100	1800	290	11
09 -	706	100	5-Aug-09	A942080	Q18112	<12	22	39	<10
09 -	707 ^b	100	5-Aug-09	A942080	Q18113	650	240	52	<10
09 -	709	100	5-Aug-09	A942080	Q18116	110	<10	<10	<10
09 -	710	100	5-Aug-09	A942080	Q18117	22	<10	<10	<10
09 -	711(d)	100	5-Aug-09	A942080	Q18118	22	<10	<10	<10
09 -	712 ^b	100	6-Aug-09	A942080	Q18119	540	550	45	<10
09 -	713	100	6-Aug-09	A942080	Q18120	<12	<10	<10	<10

Table A2 - Analytical Summary of Confirmatory Sampling at SW Plume

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	
Part 1									
09 -	615 ^a	50	27-Jul-09	A939346	P98682	590	2800	270	<10
09 -	618 ^a	50	27-Jul-09	A939346	P98685	870	850	81	<10
09 -	619	100	27-Jul-09	A939346	P98686	130	120	37	<10
09 -	620	100	27-Jul-09	A939346	P98687	<12	<10	19	<10
09 -	621(d)	100	27-Jul-09	A939346	P98688	<12	<10	25	<10
09 -	622	50	27-Jul-09	A939346	P98689	100	16	52	10
09 -	683	0-100	5-Aug-09	A942080	Q18089	<12	<10	150	64
09 -	686	100	5-Aug-09	A942080	Q18092	14	<10	310	110
09 -	687	100	5-Aug-09	A942080	Q18093	<12	<10	230	66
09 -	695	100	5-Aug-09	A942080	Q18101	<12	<10	25	<10
09 -	696	0-100	5-Aug-09	A942080	Q18102	<12	<10	<10	<10
09 -	697 ^a	0-100	5-Aug-09	A942080	Q18103	68	390	120	<10
09 -	698	100	5-Aug-09	A942080	Q18104	140	95	39	<10
09 -	699	100	5-Aug-09	A942080	Q18105	160	<10	18	<10
09 -	714	100	6-Aug-09	A942080	Q18121	230	14	32	<10
Extension of Part 1									
09 -	770 ^a	0-100	9-Aug-09	A942080	Q18177	730	370	32	<10
09 -	771(d) ^a	0-100	9-Aug-09	A942080	Q18178	270	660	36	<10
09 -	772 ^b	0-100	9-Aug-09	A942080	Q18179	2900	170	<10	<10
09 -	773 ^a	100	9-Aug-09	A942080	Q18180	4000	730	180	<10
09 -	912 ^b	0-130	20-Aug-09	A945095	Q37841	1500	280	110	<10
09 -	914 ^b	0-130	20-Aug-09	A945095	Q37843	250	130	110	<10
09 -	916 ^b	0-130	20-Aug-09	A945095	Q37845	400	540	300	14
09 -	919 ^b	130	20-Aug-09	A945095	Q37848	1300	490	92	<10
09 -	922 ^b	0-130	20-Aug-09	A945095	Q37851	310	250	120	27
09 -	924 ^b	130	20-Aug-09	A945095	Q37853	1700	220	64	<10
09 -	945	10-30	24-Aug-09	A946687	Q49409	<12	<10	52	<10
09 -	946 ^b	100	24-Aug-09	A946687	Q49410	540	65	30	<10
09 -	947	10-30	24-Aug-09	A946687	Q49411	21	32	37	<10
09 -	948 ^b	100	24-Aug-09	A946687	Q49412	1200	1600	180	<10
09 -	949	10-30	24-Aug-09	A946687	Q49413	170	140	100	<10
09 -	950 ^b	100	24-Aug-09	A946687	Q49414	880	150	110	<10
09 -	951(d) ^b	100	24-Aug-09	A946687	Q49415	910	120	77	<10
09 -	952 ^a	10-30	24-Aug-09	A946687	Q49416	250	1500	210	<10
09 -	953 ^b	130	24-Aug-09	A946687	Q49417	980	1000	140	<10
09 -	954	10-30	24-Aug-09	A946687	Q49418	<12	<10	33	<10
09 -	955	130	24-Aug-09	A946687	Q49419	61	30	44	<10
09 -	956 ^a	10-30	24-Aug-09	A946687	Q49420	20	210	180	14
09 -	957 ^b	110	24-Aug-09	A946687	Q49421	1400	180	64	<10
Part 2									
09 -	505	100	15-Jul-09	A936987	P83026	55	19	36	<10
09 -	509	50	15-Jul-09	A936987	P83031	<12	12	24	<10
09 -	510	100	15-Jul-09	A936987	P83032	<12	21	61	<10
09 -	511(d)	100	15-Jul-09	A936987	P83033	<12	15	40	<10
09 -	515	100	15-Jul-09	A936987	P83044	<12	10	43	13
09 -	516	50	15-Jul-09	A936987	P83045	<12	130	120	11
09 -	517	100	15-Jul-09	A936987	P83047	68	90	85	14
09 -	518	100	15-Jul-09	A936987	P83013	<12	<10	35	<10
09 -	609	130	27-Jul-09	A939346	P98676	<12	<10	41	<10
09 -	610 ^b	130	27-Jul-09	A939346	P98677	1000	78	33	<10

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Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	
09 - 611(d) ^b	130	27-Jul-09	A939346	P98678	1100	180	40	<10	
09 - 612 ^b	130	27-Jul-09	A939346	P98679	580	72	41	12	
09 - 613	60	27-Jul-09	A939346	P98680	<12	20	54	<10	
09 - 614	130	27-Jul-09	A939346	P98681	110	34	64	<10	
Part 3									
09 - 644	100	3-Aug-09	A941528	Q13852	51	54	97	12	
09 - 645	100	3-Aug-09	A941528	Q13853	<12	<10	26	<10	
09 - 646	0-100	3-Aug-09	A941528	Q13854	<12	<10	15	<10	
09 - 647	0-100	3-Aug-09	A941528	Q13855	<12	11	29	<10	
09 - 648	100	3-Aug-09	A941528	Q13856	<12	21	50	<10	
09 - 649	100	3-Aug-09	A941528	Q13857	30	28	36	<10	
09 - 650	0-100	3-Aug-09	A941528	Q13858	<12	<10	31	<10	
09 - 651(d)	0-100	3-Aug-09	A941528	Q13859	<12	12	32	<10	
09 - 652	0-100	3-Aug-09	A941528	Q13860	15	13	22	<10	
09 - 653 ^a	0-100	3-Aug-09	A941528	Q13861	43	860	69	<10	
09 - 654 ^b	100	3-Aug-09	A941528	Q13862	1100	1100	180	<10	
09 - 655 ^b	100	3-Aug-09	A941528	Q13863	750	540	80	<10	
09 - 656	100	3-Aug-09	A941528	Q13864	38	20	33	<10	
09 - 657	100	3-Aug-09	A941528	Q13865	<12	<10	<10	<10	
09 - 658	0-100	3-Aug-09	A941528	Q13866	<12	<10	11	<10	
09 - 659	0-100	3-Aug-09	A941528	Q13867	<12	13	33	<10	
09 - 660	100	3-Aug-09	A941528	Q13868	63	49	37	<10	
09 - 661(d)	100	3-Aug-09	A941528	Q13869	91	48	25	<10	
09 - 662 ^b	100	3-Aug-09	A941528	Q13870	210	160	40	<10	
09 - 663 ^b	100	3-Aug-09	A941528	Q13871	490	620	110	<10	
09 - 664	0-130	3-Aug-09	A941528	Q13872	17	<10	38	<10	
09 - 690	100	5-Aug-09	A942080	Q18096	17	<10	<10	<10	
09 - 691(d)	100	5-Aug-09	A942080	Q18097	<12	<10	<10	<10	
09 - 703	100	5-Aug-09	A942080	Q18109	35	39	39	<10	
09 - 704 ^b	100	5-Aug-09	A942080	Q18110	1700	3200	380	10	
09 - 705 ^b	100	5-Aug-09	A942080	Q18111	1000	310	21	<10	
09 - 823 ^b	0-100	13-Aug-09	A943260	Q25986	790	110	60	<10	
09 - 906	100	20-Aug-09	A945095	Q37835	20	23	50	<10	
09 - 908 ^b	100	20-Aug-09	A945095	Q37837	390	410	110	12	
09 - 910	100	20-Aug-09	A945095	Q37839	25	47	79	11	
09 - 911(d)	100	20-Aug-09	A945095	Q37840	18	36	71	<10	
09 - 940	0-30	23-Aug-09	A946687	Q49404	29	100	96	<10	
09 - 941(d)	0-30	23-Aug-09	A946687	Q49405	61	130	100	<10	
09 - 942	100	23-Aug-09	A946687	Q49406	<12	51	59	<10	
Extension of Part 3									
09 - 899	0-100	18-Aug-09	A944474	Q33579	45	51	81	<10	
09 - 900 ^b	0-100	18-Aug-09	A944474	Q33590	560	63	58	<10	
09 - 901(d) ^b	0-100	18-Aug-09	A944474	Q33591	740	57	52	<10	
09 - 902 ^b	0-100	18-Aug-09	A944474	Q33592	930	200	87	<10	
09 - 903 ^b	0-100	18-Aug-09	A944474	Q33593	990	340	75	<10	
09 - 904	100	18-Aug-09	A944474	Q33594	62	<10	<10	<10	
09 - 905	100	18-Aug-09	A944474	Q33595	27	22	26	<10	
09 - 936	0-30	23-Aug-09	A946687	Q49400	<12	<10	38	<10	
09 - 937	70	23-Aug-09	A946687	Q49401	<12	20	61	<10	

Table A2 - Analytical Summary of Confirmatory Sampling at SW Plume

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	
Part 4									
09 -	665	130	3-Aug-09	A941528	Q13873	<12	19	38	<10
09 -	666	130	3-Aug-09	A941528	Q13874	<12	38	100	14
09 -	667	0-130	3-Aug-09	A941528	Q13875	<12	16	75	15
09 -	668	0-130	3-Aug-09	A941528	Q13876	36	100	93	17
09 -	669	130	3-Aug-09	A941528	Q13877	<12	25	83	12
09 -	670	130	3-Aug-09	A941528	Q13878	<12	26	100	17
09 -	671(d)	130	3-Aug-09	A941528	Q13879	<12	42	130	23
Extension of Part 4									
09 -	672 ^a	0-130	3-Aug-09	A941528	Q13880	1000	520	110	15
09 -	673 ^a	0-130	3-Aug-09	A941528	Q13881	1700	920	140	20
09 -	674 ^a	0-130	3-Aug-09	A941528	Q13882	1200	1100	240	34
09 -	675 ^a	0-130	3-Aug-09	A941528	Q13883	1800	620	88	<10
09 -	676 ^a	0-130	3-Aug-09	A941528	Q13884	3700	1700	150	<10
09 -	824	0-100	13-Aug-09	A943260	Q25987	23	53	52	<10
09 -	825	0-100	13-Aug-09	A943260	Q25988	15	41	58	<10
09 -	826	0-100	13-Aug-09	A943260	Q25989	<12	36	42	<10
09 -	827 ^b	0-100	13-Aug-09	A943260	Q25990	360	120	48	<10
09 -	828 ^a	100	13-Aug-09	A943260	Q25991	300	110	63	<10
09 -	829 ^a	100	13-Aug-09	A943260	Q25992	390	89	48	<10
09 -	1049 ^a	10-30	26-Aug-09	A946687	Q49513	540	570	180	27
09 -	1050	10-30	26-Aug-09	A946687	Q49514	<12	26	49	<10
09 -	1051(d)	10-30	26-Aug-09	A946687	Q49515	37	49	87	14
Part 5									
09 -	926	100	23-Aug-09	A946687	Q49390	47	65	63	<10
09 -	927 ^b	100	23-Aug-09	A946687	Q49391	640	560	120	<10
09 -	928	100	23-Aug-09	A946687	Q49392	<12	12	40	<10
09 -	929	0-30	23-Aug-09	A946687	Q49393	<12	<10	30	<10
09 -	930	50	23-Aug-09	A946687	Q49394	<12	14	55	<10
09 -	931(d)	50	23-Aug-09	A946687	Q49395	<12	37	84	11
09 -	932	0-30	23-Aug-09	A946687	Q49396	<12	11	44	<10
09 -	933	80	23-Aug-09	A946687	Q49397	<12	13	45	<10
09 -	934 ^a	0-30	23-Aug-09	A946687	Q49398	54	1000	430	21
09 -	935 ^b	100	23-Aug-09	A946687	Q49399	990	920	140	<10
Part 6									
09 -	566 ^a	50	20-Jul-09	A938629	P94184	320	420	100	<10
09 -	567	100	20-Jul-09	A938629	P94185	<12	15	79	<10
09 -	570	100	20-Jul-09	A938629	P94188	<12	15	79	<10
09 -	571(d)	100	20-Jul-09	A938629	P94189	<12	15	39	<10
09 -	572 ^a	50	21-Jul-09	A938629	P94190	68	1600	320	<10
09 -	573 ^a	100	21-Jul-09	A938629	P94191	32	350	92	<10
09 -	579	50	20-Jul-09	A938629	P94197	28	120	81	<10
09 -	580	100	20-Jul-09	A938629	P94198	14	25	61	<10
09 -	581(d)	100	20-Jul-09	A938629	P94199	13	20	45	<10
09 -	583	100	21-Jul-09	A938629	P94201	29	13	43	<10
09 -	584 ^a	50	21-Jul-09	A938629	P94202	2400	3100	470	<10
09 -	585 ^a	100	21-Jul-09	A938629	P94203	91	180	70	<10
09 -	586 ^a	50	21-Jul-09	A938629	P94204	580	1300	210	<10
09 -	587 ^a	100	21-Jul-09	A938629	P94205	600	960	170	<10
09 -	589	100	21-Jul-09	A938629	P94207	51	46	96	<10
09 -	594	100	21-Jul-09	A938629	P94212	59	27	40	<10

Table A2 - Analytical Summary of Confirmatory Sampling at SW Plume

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	
09 - 882	100	16-Aug-09	A944474	Q33480	<12	14	34	<10	
09 - 883	0-100	16-Aug-09	A944474	Q33481	19	14	36	<10	
09 - 885	100	16-Aug-09	A944474	Q33483	<12	<10	18	<10	
09 - 887 ^b	0-100	16-Aug-09	A944474	Q33485	1400	710	110	<10	
09 - 889	0-100	16-Aug-09	A944474	Q33487	<12	<10	28	<10	
09 - 890	0-100	16-Aug-09	A944474	Q33488	25	<10	52	<10	
09 - 891(d)	0-100	16-Aug-09	A944474	Q33489	<12	<10	38	<10	
09 - 892 ^b	100	16-Aug-09	A944474	Q33490	1200	500	79	<10	
09 - 893 ^b	0-100	16-Aug-09	A944474	Q33491	1700	1100	160	<10	
Extension of Part 6									
09 - 735	0-100	8-Aug-09	A942080	Q18142	<12	<10	<10	<10	
09 - 736 ^b	0-100	8-Aug-09	A942080	Q18143	420	500	55	<10	
09 - 822	0-100	13-Aug-09	A943260	Q25985	14	<10	32	<10	
09 - 989	10-30	25-Aug-09	A946687	Q49453	25	28	71	14	
09 - 990 ^b	100	25-Aug-09	A946687	Q49454	690	520	110	11	
09 - 991(d) ^b	100	25-Aug-09	A946687	Q49455	110	160	57	<10	
09 - 992 ^a	10-30	25-Aug-09	A946687	Q49456	290	1300	280	22	
09 - 993 ^b	100	25-Aug-09	A946687	Q49457	710	780	160	18	

Notes:

a-soils excavated

(d) - duplicate sample

b-soils left in place

Remediation Criteria - Abandoned Military Site Remediation Protocol, March 2005, INAC

Table A3 - Analytical Summary of Confirmatory Sampling at Main Station

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	Total Petroleum Hydrocarbons C5-C30 (ppm)
Site Specific Target Level (SSTL)					-	-	-	-	4570
09 - 524	50	20-Jul-09	A938629	P94142	<12	15	17	<10	30
09 - 525	50	20-Jul-09	A938629	P94143	150	950	240	<10	1340
09 - 526	50	20-Jul-09	A938629	P94144	1500	3200	430	<10	3760
09 - 527 ^a	50	20-Jul-09	A938629	P94145	680	3700	270	<10	4650
09 - 533	50	20-Jul-09	A938629	P94151	<12	21	19	<10	38
09 - 536	50	20-Jul-09	A938629	P94154	<12	18	25	<10	40
09 - 539	50	20-Jul-09	A938629	P94157	270	790	170	<10	970
09 - 540	50	20-Jul-09	A938629	P94158	<12	120	36	<10	158
09 - 541(d)	50	20-Jul-09	A938629	P94159	<12	83	30	<10	153
09 - 543	50	20-Jul-09	A938629	P94161	220	1600	430	<10	2040
09 - 544 ^a	50	20-Jul-09	A938629	P94162	16000	5700	820	<10	6660
09 - 545 ^a	50	20-Jul-09	A938629	P94163	950	5500	920	<10	7370
09 - 546	50	20-Jul-09	A938629	P94164	540	3100	590	<10	3870
09 - 548	50	20-Jul-09	A938629	P94166	<12	12	17	<10	28
09 - 550	50	20-Jul-09	A938629	P94168	<12	<10	13	<10	20
09 - 551(d)	50	20-Jul-09	A938629	P94169	<12	<10	11	<10	16
09 - 553 ^a	50	20-Jul-09	A938629	P94170	1200	5300	870	<10	7370
09 - 554 ^a	50	20-Jul-09	A938629	P94172	2300	2800	440	<10	5540
09 - 558	50	20-Jul-09	A938629	P94176	38	51	25	<10	76
09 - 560	50	20-Jul-09	A938629	P94178	510	2100	360	<10	2530
09 - 561(d)	50	20-Jul-09	A938629	P94179	550	2900	470	<10	3500
09 - 562	50	20-Jul-09	A938629	P94180	<12	<10	11	<10	10
09 - 788	0-80	11-Aug-09	A942959	Q23958	720	3200	670	13	3180
09 - 789	80	11-Aug-09	A942959	Q23959	1300	970	160	<10	2460
09 - 790	80	11-Aug-09	A942959	Q23960	37	<10	40	15	77
09 - 791(d)	80	11-Aug-09	A942959	Q23961	19	15	34	13	68
09 - 792	80	11-Aug-09	A942959	Q23962	430	670	130	<10	1230
09 - 818	0-50	13-Aug-09	A943260	Q25972	1600	2200	190	<10	3990
09 - 819	0-50	13-Aug-09	A943260	Q25982	500	2100	320	<10	2920

Notes:

a-soils excavated

(d) - duplicate sample

Table A4 - Analytical Summary of Tank Bedding Sand

Sample ID	Area	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons									PCBs	Inorganic Elements								
					Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylene (ppm)	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	Total Petroleum Hydrocarbons (C5-C30)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Nickel (ppm)	Zinc (ppm)	
DCC Soil Tier II					-	-	-	-	260	900	800	5600	-	5-50	30	5	250	50	100	500	100	500	
DCC Soil Tier I					-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	200	-	-	
Site Specific Target Level (SSTL)					-	-	-	-	-	-	-	-	4570	-	-	-	-	-	-	-	-	-	
Remediation Criteria					-	-	-	-	230	150	-	-	-	-	-	-	-	-	-	-	-	-	
09 -	425	Tank 14	7-Jul-09	A934996	P70110	<0.0050	0.060	0.045	0.74	110	13000	710	<10	14300	<0.01	3	<0.1	5	2	8	2	6	21
09 -	440	Tank 16	11-Jul-09	A936987	P82924	<0.0050	<0.020	<0.010	5.7	720	660	200	41	1600	<0.01	3	0.1	9	3	11	8	10	39
09 -	604	Tank 15	26-Jul-09	A939346	P98671	<0.0050	<0.020	<0.010	6.8	-	-	-	-	5200	-	-	-	-	-	-	4	-	-
09 -	605	Tank 17	26-Jul-09	A939346	P98672	<0.0050	<0.020	<0.010	6.6	-	-	-	-	944	-	-	-	-	-	-	4	-	-
09 -	606	Tank 18	26-Jul-09	A939346	P98673	<0.0050	0.16	<0.010	14	-	-	-	-	2290	-	-	-	-	-	-	4	-	-
09 -	607	Tank 19	26-Jul-09	A939346	P98674	<0.0050	0.19	0.16	3.7	-	-	-	-	4550	-	-	-	-	-	-	6	-	-

Notes:
Remediation Criteria - Abandoned Military Site Remediation Protocol, March 2005, INAC

Table A5 - Paint, Debris and Barrels

Sample ID	Excavation / Location / Soil Origin	Maxxam Job No.	Maxxam Sample ID	Inorganic Elements																			
				Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)	Boron (B)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Tin (Sn)	Vanadium (V)	Zinc (Zn)	Leachable Lead (Pb)	Leachable Zinc (Zn)		
Remediation Guideline				-	30	-	-	-	-	5	250	50	100	200-500	2	-	100	-	-	500	5	-	
CEPA 'haz' or TDGA 'dangerous good'				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
08 - 170	Orange painted wood	A848148	L60690																		0.1		
08 - 171	NAVID Orange	A848148	L60694																			0.6	
08 - 172	NODWELL Black	A848148	L60695																			<0.1	
08 - 173	NODWELL White	A848148	L60696																			0.2	
08 - 103	Tank 14 - unknown substance	A846145	L45165	<1	<1	19	<0.4	2.4	<0.1	1	<1	<5	<1	<0.05	<0.4	<1	<1	5	14				
08 - 139	JPB-01	A846145	L45168	1	15	54	<0.4	0.7	1.3	63	7	75	99	<0.05	11	38	10	3	520*	<0.5	3		
08 - 141	JPB-02	A846145	L45170	<1	14	28	<0.4	1.7	1.3	51	7	64	100	<0.05	10	31	8	6	640*		7		
08 - 142	JPB-03	A846145	L45171	4	10	150	<0.4	3.1	0.8	59	7	89	130	<0.05	10	33	24	5	380				
08 - 143	JPB-05	A846145	L45172	<1	<1	<10	<0.4	0.2	0.2	10	<1	87	270	<0.05	<0.4	6	1	<1	15		2.1		
08 - 104	Bladder 18	A846145	L45166																				
08 - 139	JPB-01	A846145	L45168																				

Sample ID	Excavation / Location / Soil Origin	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons												PCBs		
				F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylene (ppm)	Leachable Benzene	Leachable Toluene	Leachable Ethylbenzene	Leachable Xylene	Total PCBs (ppm)		
Remediation Guideline				230	150	-	-	-	-	-	-	-	-	-	-	-	-	1
CEPA 'haz' or TDGA 'dangerous good'				-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
08 - 170	Orange painted wood	A848148	L60690															
08 - 171	NAVID Orange	A848148	L60694															
08 - 172	NODWELL Black	A848148	L60695															
08 - 173	NODWELL White	A848148	L60696															
08 - 103	Tank 16 - unknown substance	A846145	L45165	40	170000	17000	160	<0.0050	0.18	<0.010	0.61						<0.01	
08 - 139	JPB-01	A846145	L45168	150	41000	4800	170	0.21	0.31	0.039	0.26						<0.01	
08 - 141	JPB-02	A846145	L45170	390	57000	2700	80	0.22	0.32	0.073	1.5							
08 - 142	JPB-03	A846145	L45171	89	29000	1900	200	0.23	0.34	0.16	1.2							
08 - 143	JPB-05	A846145	L45172															
08 - 104	Bladder 18	A846145	L45166										<10	60	<10	72		
08 - 139	JPB-01	A846145	L45168										<10	<10	<10	<20		

Notes:

* Soils containing one or more substrates in excess of DCC II must be containerized - i.e. removed in a manner which precludes contact with the arctic ecosystem

Remediation Criteria - Abandoned Military Site Remediation Protocol, March 2005, INAC

Table A6 - Barrel Classification Summary

Barrel ID	Contents/Phase	No. of Barrels (Volume)	Sample ID	Organic Phase						Aqueous Phase					
				Cadmium Total	Chromium Total	Chlorine	Lead Total	PCBs Total	Glycols Total	Cadmium Total	Chromium Total	Chlorine	Lead Total	PCBs Total	Glycols Total
Remediation Criteria				<2 mg/L	<10 mg/L	<1000 mg/L	<100 mg/L	<2 ppm	<2 %	<2 mg/L	<10 mg/L	<1000 mg/L	<100 mg/L	<2 ppm	<2 %
JPB 09-06	organic	1 (1/2 full)	09-200	0.014	0.071	0.5	9.2	<1	-	-	-	-	-	-	-
JPB 09-07	aqueous	1 (full)	09-201	-	-	-	-	-	-	0.0001	0.013	1.5	0.015	-	0.067
Tank 14	absorbent	-	09-204	-	-	-	-	-	-	-	-	-	-	-	-
09-639	aqueous	1 (full)	09-639	-	-	-	-	-	-	0.00001	<0.001	0.6	0.0016	<0.00005	0.005
09-640	organic	1 (full)	09-640	<0.3	<1	0.6	<1	<1	-	-	-	-	-	-	-
09-894	organic	-	09-894	<1	<1	<2	2	<1	-	-	-	-	-	-	-
09-895	organic	-	09-895	<1	<1	<2	2	<1	-	-	-	-	-	-	-
09-896	organic	-	09-896	<1	<1	<2	2	<1	-	-	-	-	-	-	-
09-897	aqueous	-	09-897	-	-	-	-	-	-	0.000011	0.029	0.2	0.0018	<1	-
09-898	aqueous	-	09-898	-	-	-	-	-	-	0.000025	0.006	0.1	0.0064	<1	-

Barrel ID	Contents/Phase	No. of Barrels (Volume)	Sample ID	Hydrocarbons			Inorganic Elements								PCBs	
				F1 (C6-C10)	F2 (>C10-C16)	Arsenic Total	Cadmium Total	Chromium Total	Cobalt Total	Copper Total	Lead Total	Mercury Total	Nickel Total	Zinc Total	PCBs Total	
Remediation Criteria				230	150	-	-	-	-	-	-	-	-	-	-	-
Tier I Soil (DCC)				-	-	-	-	-	-	-	200 ppm	-	-	-	1.0 ppm	
Tier II Soil (DCC)				-	-	30 ppm	5.0 ppm	250 ppm	50 ppm	100 ppm	500 ppm	2.0 ppm	100 ppm	500 ppm	5.0 ppm	
JPB-01	sawdust, soil, rusted metal fragments	4 (full)	08-139	150	41,000	15	1.3	63	7	75	99	<0.05	38	520	<0.1	
JPB-02			08-140/ 08-141/ 09-203	390	57,000	14	1.3	51	7	64	100	<0.05	31	640	-	
JPB-03			08-142	89	29,000	10	0.8	59	7	89	130	<0.05	33	380	-	
JPB-04			Not Sampled	-	-	-	-	-	-	-	-	-	-	-	-	-
JPB-05	fine blue/green copper colour powder	1 (full)	08-143/ 09-202	-	-	<1	0.2	10	<1	87	270	<0.05	6	15	<0.1	

Notes:
 Samples 894-898 were taken from barrels brought to site by INAC representative toward the end of the 2009 construction season.
 Remediation Criteria - Abandoned Military Site Remediation Protocol, March 2005, INAC

Table A7 - Analytical Summary of Buried Debris Stockpile Sampling

Sample ID	Location	Sample Type	Date Collected	Maxxam Job No.	Maxxam Sample ID	PHCs		PCBs		Inorganic Elements															
						Total Petroleum Hydrocarbons TEH (C5-C30)	95 % UCL	Total PCBs	95 % UCL	Arsenic (As)	95 % UCL	Cadmium (Cd)	95 % UCL	Chromium (Cr)	95 % UCL	Cobalt (Co)	95 % UCL	Copper (Cu)	95 % UCL	Lead (Pb)	95 % UCL	Nickel (Ni)	95 % UCL	Zinc (Zn)	95 % UCL
Soil Tier II						-	-	5-50	-	30	-	5	-	250	-	50	-	100	-	500	-	100	-	500	
Site Specific Target Level						4570	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lobe P																									
09 - 270	Stockpile 1	D	5-Jul-09	A934996	P69850	1520	1060	<0.01	0	2	3	<0.1	0	6	7	3	3	7	8	4	8	7	7	13	15
09 - 271		D	5-Jul-09	A934996	P69851	748		<0.01		2		<0.1		6		6		4		7		13			
09 - 272		D	5-Jul-09	A934996	P69852	1130		<0.01		2		<0.1		6		3		6		7		13			
09 - 273		D	5-Jul-09	A934996	P69853	1010		<0.01		2		<0.1		6		3		4		7		15			
09 - 274		D	5-Jul-09	A934996	P69854	2100		<0.01		2		<0.1		6		3		4		7		13			
09 - 275		C	5-Jul-09	A934996	P69855	683		<0.01		2		<0.1		6		3		4		6		13			
09 - 276	Stockpile 2	D	5-Jul-09	A934996	P69856	1030	1022	<0.01	0	2	3	<0.1	0	6	7	3	3	7	8	26	8	7	7	14	15
09 - 277		D	5-Jul-09	A934996	P69857	1030		<0.01		2		<0.1		5		3		6		4		12			
09 - 278		D	5-Jul-09	A934996	P69858	281		<0.01		2		<0.1		5		2		4		5		10			
09 - 279		D	5-Jul-09	A934996	P69859	477		<0.01		2		<0.1		7		3		4		7		15			
09 - 280		D	5-Jul-09	A934996	P69860	732		<0.01		3		<0.1		6		3		4		7		13			
09 - 281	C	5-Jul-09	A934996	P69861	645	<0.01	2	<0.1	6	3	4	6	13												
09 - 282	Stockpile 3	D	5-Jul-09	A934996	P69862	1260	728	<0.01	0	2	3	<0.1	0	6	7	3	3	6	8	7	7	7	8	13	13
09 - 283		D	5-Jul-09	A934996	P69863	1260		<0.01		2		<0.1		6		3		4		7		12			
09 - 284		D	5-Jul-09	A934996	P69864	639		<0.01		2		<0.1		6		3		5		6		12			
09 - 285		D	5-Jul-09	A934996	P69865	629		<0.01		2		<0.1		7		3		4		7		12			
09 - 286		D	5-Jul-09	A934996	P69866	281		<0.01		2		<0.1		6		3		3		7		12			
09 - 287	C	5-Jul-09	A934996	P69867	351	<0.01	2	<0.1	6	3	3	7	11												
09 - 288	Stockpile 4	D	5-Jul-09	A934996	P69868	413	938	<0.01	0	2	3	<0.1	0	7	7	3	3	7	8	4	8	7	8	12	15
09 - 289		D	5-Jul-09	A934996	P69869	1460		<0.01		2		<0.1		7		3		7		7		14			
09 - 290		D	5-Jul-09	A934996	P69870	555		<0.01		2		<0.1		6		3		8		5		13			
09 - 291		D	5-Jul-09	A934996	P69871	263		<0.01		2		<0.1		6		3		7		4		12			
09 - 292		D	5-Jul-09	A934996	P69872	520		<0.01		2		<0.1		6		3		6		9		13			
09 - 293	C	5-Jul-09	A934996	P69873	561	<0.01	2	<0.1	6	3	6	4	13												
09 - 294	Stockpile 5	D	6-Jul-09	A934996	P69874	621	1251	<0.01	0	2	3	<0.1	0	6	7	3	3	6	8	3	10	6	8	12	14
09 - 295		D	6-Jul-09	A934996	P69875	1820		-		3		<0.1		7		3		4		8		15			
09 - 296		D	6-Jul-09	A934996	P69876	1160		<0.01		2		<0.1		6		3		7		4		14			
09 - 297		D	6-Jul-09	A934996	P69877	587		<0.01		2		<0.1		6		3		7		24		13			
09 - 298		D	6-Jul-09	A934996	P69878	451		<0.01		3		<0.1		7		3		7		7		14			
09 - 299		C	6-Jul-09	A934996	P69918	874		<0.01		2		<0.1		6		3		6		7		12			
09 - 300	Stockpile 6	D	6-Jul-09	A934996	P69928	618	663	<0.01	0	3	3	<0.1	0	7	7	4	3	7	9	9	8	8	8	15	15
09 - 301		D	6-Jul-09	A934996	P69929	507		<0.01		2		<0.1		6		3		6		4		13			
09 - 302		D	6-Jul-09	A934996	P69930	454		<0.01		2		<0.1		6		3		7		5		13			
09 - 303		D	6-Jul-09	A934996	P69931	335		<0.01		2		<0.1		7		3		6		5		12			
09 - 304		D	6-Jul-09	A934996	P69932	388		<0.01		3		<0.1		6		3		7		4		15			
09 - 305	C	6-Jul-09	A934996	P69933	286	<0.01	2	<0.1	6	3	7	4	13												
09 - 306	Stockpile 7	D	6-Jul-09	A934996	P69934	491	1065	<0.01	0	2	3	<0.1	0	6	14	3	3	6	9	21	8	7	11	12	15
09 - 307		D	6-Jul-09	A934996	P69935	613		<0.01		2		<0.1		7		3		4		7		12			
09 - 308		D	6-Jul-09	A934996	P69936	924		<0.01		3		<0.1		7		3		5		8		14			
09 - 309		D	6-Jul-09	A934996	P69937	323		<0.01		3		<0.1		7		3		4		7		13			
09 - 310		D	6-Jul-09	A934996	P69938	1170		<0.01		2		<0.1		6		3		6		4		12			
09 - 311	C	6-Jul-09	A934996	P69939	688	<0.01	2	<0.1	13	3	7	10	13												
09 - 312	Stockpile 8	D	6-Jul-09	A934996	P69940	471	869	<0.01	0	5	3	<0.1	0	8	7	4	3	8	10	5	8	9	8	15	15
09 - 313		D	6-Jul-09	A934996	P69941	567		<0.01		2		<0.1		6		3		6		4		12			
09 - 314		D	6-Jul-09	A934996	P69942	503		<0.01		2		<0.1		6		3		6		4		13			
09 - 315		D	6-Jul-09	A934996	P69943	326		<0.01		2		<0.1		6		3		6		4		12			
09 - 316		D	6-Jul-09	A934996	P69944	430		<0.01		2		<0.1		5		3		6		4		13			
09 - 317	C	6-Jul-09	A934996	P69945	492	<0.01	2	<0.1	6	3	8	4	13												
09 - 318	Stockpile 9	D	6-Jul-09	A934996	P69946	568	1027	<0.01	0	2	3	<0.1	0	7	7	3	3	7	8	4	8	7	8	13	14
09 - 319		D	6-Jul-09	A934996	P69947	376		<0.01		2		<0.1		6		3		6		5		12			
09 - 320		D	6-Jul-09	A934996	P69948	836		<0.01		2		<0.1		7		3		6		7		13			
09 - 321		D	6-Jul-09	A934996	P69949	744		<0.01		2		<0.1		6		3		6		4		13			
09 - 322		D	6-Jul-09	A934996	P69950	403		<0.01		2		<0.1		6		3		7		4		12			
09 - 323		C	6-Jul-09	A934996	P69951	650		<0.01		2		<0.1		6		3		6		4		12			
09 - 324	Stockpile 10	D	6-Jul-09	A934996	P69952	528	781	<0.01	0	3	4	<0.1	0	7	4	3	4	6	4	4	8	8	8	14	16
09 - 325		D	6-Jul-09	A934996	P69953	524		<0.01		3		<0.1		9		4		7		20		15			
09 - 326		D	6-Jul-09	A934996	P69954	374		<0.01		3		<0.1		7		4		8		5		14			

Table A8 - Analytical Summary of Delineation Samples

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)
Remediation Criteria						230	150	-	-
NE Plume, Part 1									
09 -	832	30	14-Aug-09	A944474	Q33430	<12	<10	29	<10
09 -	836	100	14-Aug-09	A944474	Q33434	<12	15	44	<10
09 -	838	85	14-Aug-09	A944474	Q33436	<12	<10	23	<10
09 -	840	65	14-Aug-09	A944474	Q33438	16	43	140	33
09 -	841(d)	65	14-Aug-09	A944474	Q33439	13	15	73	<10
09 -	842	215	14-Aug-09	A944474	Q33440	1000	150	29	<10
09 -	843	120	14-Aug-09	A944474	Q33441	<12	<10	<10	<10
09 -	846	70	14-Aug-09	A944474	Q33444	<12	<10	13	<10
09 -	849	120	14-Aug-09	A944474	Q33447	<12	<10	21	<10
09 -	852	90	14-Aug-09	A944474	Q33450	<12	14	25	<10
09 -	853	165	14-Aug-09	A944474	Q33451	<12	840	160	110
09 -	854	90	14-Aug-09	A944474	Q33452	580	180	50	<10
09 -	856	160	14-Aug-09	A944474	Q33454	300	140	64	<10
09 -	877	265	16-Aug-09	A944474	Q33475	720	190	35	<10
09 -	878	245	16-Aug-09	A944474	Q33476	3700	650	96	<10
09 -	879	185	16-Aug-09	A944474	Q33477	1200	200	53	<10
09 -	999	10-30	25-Aug-09	A946687	Q49463	<12	<10	43	11
09 -	1024	10-30	26-Aug-09	A946687	Q49488	13	<10	35	<10
09 -	1025	10-30	26-Aug-09	A946687	Q49489	<12	12	49	11
09 -	1026	10-30	26-Aug-09	A946687	Q49490	<12	<10	39	<10
09 -	1027	10-30	26-Aug-09	A946687	Q49491	<12	<10	24	<10
09 -	1028	10-30	26-Aug-09	A946687	Q49492	<12	<10	59	21
09 -	1029	10-30	26-Aug-09	A946687	Q49493	<12	<10	23	<10
09 -	1030	10-30	26-Aug-09	A946687	Q49494	<12	<10	39	22
09 -	1031(d)	10-30	26-Aug-09	A946687	Q49495	<12	<10	30	<10
09 -	1032	10-30	26-Aug-09	A946687	Q49496	<12	27	63	<10
09 -	1033	10-30	26-Aug-09	A946687	Q49497	<12	<10	36	12
09 -	1034	10-30	26-Aug-09	A946687	Q49498	<12	<10	24	<10
09 -	1035	10-30	26-Aug-09	A946687	Q49499	<12	10	58	10
09 -	1036	10-30	26-Aug-09	A946687	Q49500	<12	<10	<10	<10
SW Plume, Lobe X									
09 -	986	0-30	25-Aug-09	A946687	Q49450	<12	12	83	17
09 -	987	0-30	25-Aug-09	A946687	Q49451	24	53	180	28
09 -	988	0-30	25-Aug-09	A946687	Q49452	<20	<10	96	18
09 -	1000	10-30	25-Aug-09	A946687	Q49464	<12	74	140	26
09 -	1001(d)	10-30	25-Aug-09	A946687	Q49465	<12	78	140	26
09 -	1002 a	10-30	25-Aug-09	A946687	Q49466	17	620	220	19
09 -	1003	10-30	25-Aug-09	A946687	Q49467	<12	14	110	27
SW Plume, Part 1									
09 -	958	10-30	24-Aug-09	A946687	Q49422	<12	20	48	<10
09 -	959	10-30	24-Aug-09	A946687	Q49423	<12	14	30	<10
09 -	960	10-30	24-Aug-09	A946687	Q49424	<12	11	23	<10
09 -	961(d)	10-30	24-Aug-09	A946687	Q49425	<12	<10	18	<10
09 -	962	10-30	24-Aug-09	A946687	Q49426	<12	42	130	10

Table A8 - Analytical Summary of Delineation Samples

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	
SW Plume, Part 3									
09 -	858	120	15-Aug-09	A944474	Q33456	14	24	73	12
09 -	860	100	15-Aug-09	A944474	Q33458	<12	11	43	<10
09 -	861(d)	100	15-Aug-09	A944474	Q33459	13	<10	37	<10
09 -	862	60	15-Aug-09	A944474	Q33460	2200	18	38	95
09 -	864	70	15-Aug-09	A944474	Q33462	630	54	83	12
09 -	938	0-30	23-Aug-09	A946687	Q49402	<12	22	62	<10
09 -	939	0-30	23-Aug-09	A946687	Q49403	<12	<10	33	<10
09 -	943	0-30	23-Aug-09	A946687	Q49407	<12	45	140	<10
09 -	944	0-30	23-Aug-09	A946687	Q49408	<12	<10	50	<10
09 -	1046	10-30	26-Aug-09	A946687	Q49510	<12	32	70	<10
09 -	1047	10-30	26-Aug-09	A946687	Q49511	65	11	52	<10
09 -	1048	10-30	26-Aug-09	A946687	Q49512	<12	21	69	11
SW Plume, Part 4									
09 -	866	100	15-Aug-09	A944474	Q33464	810	230	91	11
09 -	869	130	15-Aug-09	A944474	Q33467	590	330	96	12
09 -	872	120	15-Aug-09	A944474	Q33470	1500	640	150	35
09 -	874	110	15-Aug-09	A944474	Q33472	370	390	120	18
09 -	876	120	15-Aug-09	A944474	Q33474	890	440	140	16
09 -	1037	10-30	26-Aug-09	A946687	Q49501	830	280	100	<10
09 -	1038	10-30	26-Aug-09	A946687	Q49502	14	<10	29	<10
09 -	1039	10-30	26-Aug-09	A946687	Q49503	<12	<10	17	<10
09 -	1040	10-30	26-Aug-09	A946687	Q49504	100	72	86	11
09 -	1041(d)	10-30	26-Aug-09	A946687	Q49505	180	57	74	<10
09 -	1042	10-30	26-Aug-09	A946687	Q49506	16	26	62	<10
09 -	1043	10-30	26-Aug-09	A946687	Q49507	16	21	72	<10
09 -	1044	10-30	26-Aug-09	A946687	Q49508	<12	17	47	14
09 -	1045	10-30	26-Aug-09	A946687	Q49509	<12	45	74	31
SW Plume, Part 6									
09 -	994	10-30	25-Aug-09	A946687	Q49458	32	1200	540	73
09 -	995	10-30	25-Aug-09	A946687	Q49459	<12	18	77	23
09 -	996	10-30	25-Aug-09	A946687	Q49460	18	60	51	13
09 -	997	10-30	25-Aug-09	A946687	Q49461	<12	12	59	14

Notes:

Samples collected on August 14 and 15, 2009 were done so by advancing testpits using an excavator. All other delineation samples were collected using hand sampling methods (i.e. shovel and/or hand auger).

(d)-duplicate sample

Remediation Criteria - Abandoned Military Site Remediation Protocol, March 2005, INAC

a-soils excavated

Table A9 - Analytical Summary of Apron Area Monitoring Wells installed in 2009

Sample ID		Sampling Location	Date Collected	Maxxam Job No.	Maxxam Sample ID	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylene (ug/L)	F1 C6-C10, less BTEX (ug/L)	F2 C10-C16 (ug/L)
CCME Protection of Freshwater Aquatic Life						370	2	90	-	-	-
CCME Protection of Marine Life						110	215	25	-	-	-
09 -	1089	Ice collected from the installation of MW09-01	29-Aug-09	A947638	Q56110	21	590	220	1200	3500	40.1
09 -	1090	Ice collected from the installation of MW09-01	29-Aug-09	A947638	Q56111	130	2600	1500	9600	620	178
09 -	1091(d)	Ice collected from the installation of MW09-01	29-Aug-09	A947638	Q56112	190	2400	980	6000	48000	106
09 -	1092	Ice collected from the installation of MW09-01	29-Aug-09	A947638	Q56113	9.4	190	41	260	1500	65.8
09 -	1106	MW09-06	3-Sep-09	A948623	Q62282	<0.4	<0.4	<0.4	<0.8	<100	<0.1
09 -	1107	MW09-07	3-Sep-09	A948623	Q62283	27	340	200	2100	3000	1.6
09 -	1108	MW09-05	3-Sep-09	A948623	Q62284	<0.4	0.8	0.6	7.1	<100	<0.1
09 -	1109	MW09-02	3-Sep-09	A948623	Q62285	6.4	3200	640	3300	7500	1.7
09 -	1110	MW09-04	3-Sep-09	A948623	Q62286	<0.4	0.6	<0.4	<0.8	<100	<0.1
09 -	1111(d)	MW09-04	3-Sep-09	A948623	Q62287	<0.4	1.8	0.5	3.1	<100	<0.1
09 -	1112	MW09-03	3-Sep-09	A948623	Q62288	<0.4	0.6	<0.4	1.5	<100	<0.1
09 -	1113	MW09-01	3-Sep-09	A948623	Q62289	1400	12000	1100	5900	2200	0.4

Notes:

(d) - duplicate sample

Table A10 - QA/QC - Summary of Relative Percent Difference (RPD) of Duplicate Soil Samples

Sample ID	Location	Area	Depth (cm)	Date Collected	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	Total Petroleum Hydrocarbons C5-C30 (ppm)
Reported Detection Limit					12	10	10	10	10
09 - 460	NE Plume	Lobe P	100	13-Jul-09	<12	<10	13	21	-
09 - 461					<12	<10	<10	<10	-
RPD					0	0	0	0	-
09 - 470	NE Plume	Lobe P	100	13-Jul-09	<12	<10	<10	<10	-
09 - 471					<12	<10	<10	<10	-
RPD					0	0	0	0	-
09 - 480	NE Plume	Lobe P	100	13-Jul-09	3200	250	28	<10	-
09 - 481					3400	220	27	<10	-
RPD					6	13	4	0	-
09 - 490	NE Plume	Lobe P	100	20-Jul-09	<12	25	85	40	-
09 - 491					<12	19	110	62	-
RPD					0	27	26	43	-
09 - 510	SW Plume	Part 2	100	15-Jul-09	<12	21	61	<10	-
09 - 511					<12	15	40	<10	-
RPD					0	33	42	0	-
09 - 540	Main Station	-	50	20-Jul-09	<12	120	36	<10	158
09 - 541					<12	83	30	<10	153
RPD					0	36	18	0	3
09 - 550	Main Station	-	50	20-Jul-09	<12	<10	13	<10	20
09 - 551					<12	<10	11	<10	16
RPD					0	0	17	0	22
09 - 560	Main Station	-	50	20-Jul-09	510	2100	360	<10	2530
09 - 561					550	2900	470	<10	3500
RPD					8	32	27	0	32
09 - 570	SW Plume	Part 6	100	20-Jul-09	<12	15	79	<10	-
09 - 571					<12	15	39	<10	-
RPD					0	0	68*	0	-
09 - 580	SW Plume	Part 6	100	20-Jul-09	14	25	61	<10	-
09 - 581					13	20	45	<10	-
RPD					7	22	30	0	-
09 - 610	SW Plume	Part 2	130	27-Jul-09	1000	78	33	<10	-
09 - 611					1100	180	40	<10	-
RPD					10	79	19	0	-
09 - 620	SW Plume	Part 1	100	27-Jul-09	<12	<10	19	<10	-
09 - 621					<12	<10	25	<10	-
RPD					0	0	27	0	-
09 - 630	NE Plume	Lobe Z	100	31-Jul-09	<12	<10	23	<10	-
09 - 631					<12	<10	28	<10	-
RPD					0	0	20	0	-
09 - 650	SW Plume	Part 3	0-100	3-Aug-09	<12	<10	31	<10	-
09 - 651					<12	12	32	<10	-
RPD					0	0	3	0	-
09 - 660	SW Plume	Part 3	100	3-Aug-09	63	49	37	<10	-
09 - 661					91	48	25	<10	-
RPD					36	2	39	0	-
09 - 670	SW Plume	Part 3	130	3-Aug-09	<12	26	100	17	-
09 - 671					<12	42	130	23	-
RPD					0	47	26	30	-
09 - 680	SW Plume	Lobe Y	0-100	5-Aug-09	<12	<10	150	63	-
09 - 681					<12	<10	150	48	-
RPD					0	0	0	27	-
09 - 690	SW Plume	Part 3	100	5-Aug-09	17	<10	<10	<10	-
09 - 691					<12	<10	<10	<10	-
RPD					0	0	0	0	-
09 - 710	SW Plume	Lobe Y	100	5-Aug-09	22	<10	<10	<10	-

Table A10 - QA/QC - Summary of Relative Percent Difference (RPD) of Duplicate Soil Samples

Sample ID	Location	Area	Depth (cm)	Date Collected	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	Total Petroleum Hydrocarbons C5-C30 (ppm)
09 - 711	SW Plume	Lobe L	100	6-Aug-09	22	<10	<10	<10	-
RPD					0	0	0	0	-
09 - 720	NE Plume	Part 1	100	6-Aug-09	<12	<10	<10	<10	-
09 - 721					<12	<10	<10	<10	-
RPD					0	0	0	0	-
09 - 730	NE Plume	Part 1	100	7-Aug-09	<12	<10	<10	<10	-
09 - 731					<12	<10	<10	<10	-
RPD					0	0	0	0	-
09 - 740	NE Plume	Part 1	100	8-Aug-09	<12	<10	<10	<10	-
09 - 741					<12	<10	<10	<10	-
RPD					0	0	0	0	-
09 - 750	NE Plume	Part 1	100	8-Aug-09	<12	<10	<10	<10	-
09 - 751					<12	<10	<10	<10	-
RPD					0	0	0	0	-
09 - 760	NE Plume	Part 2	50	8-Aug-09	<12	<10	<10	<10	-
09 - 761					<12	<10	<10	<10	-
RPD					0	0	0	0	-
09 - 770	SW Plume	Extension of Part 1	0-100	9-Aug-09	730	370	32	<10	-
09 - 771					270	660	36	<10	-
RPD					92	56	12	0	-
09 - 780	NE Plume	Part 1	100	9-Aug-09	97	210	11	<10	-
09 - 781					230	290	22	<10	-
RPD					81*	32	67*	0	-
09 - 790	Main Station	-	80	11-Aug-09	37	<10	40	15	55
09 - 791					19	15	34	13	47
RPD					64*	0	16	14	16
09 - 800	NE Plume	Lobe L	130	11-Aug-09	440	180	54	<10	-
09 - 801					190	84	44	<10	-
RPD					79	73*	20	0	-
09 - 810	NE Plume	Part 1	130	11-Aug-09	140	14	41	14	-
09 - 811					900	260	71	12	-
RPD					146	180*	54*	15	-
09 - 820	NE Plume	Extension of Part 1	0-100	13-Aug-09	<12	<10	10	<10	-
09 - 821					<12	<10	12	<10	-
RPD					0	0	18	0	-
09 - 840	NE Plume	TP09-04	65	14-Aug-09	16	43	140	33	-
09 - 841					13	15	73	<10	-
RPD					21	97*	63*	107*	-
09 - 860	SW Plume	TP09-13	100	15-Aug-09	<12	11	43	<10	-
09 - 861					13	<10	37	<10	-
RPD					10	10	15	0	-
09 - 890	SW Plume	Part 6	0-100	16-Aug-09	25	<10	52	<10	-
09 - 891					<12	<10	38	<10	-
RPD					70*	0	31	0	-
09 - 900	SW Plume	Part 3	0-100	18-Aug-09	560	63	58	<10	-
09 - 901					740	57	52	<10	-
RPD					28	10	11	0	-
09 - 910	SW Plume	Part 3	100	20-Aug-09	25	47	79	11	-
09 - 911					18	36	71	<10	-
RPD					33	27	11	10	-
09 - 930	SW Plume	Part 5	50	23-Aug-09	<12	14	55	<10	-
09 - 931					<12	37	84	11	-
RPD					0	90*	42	10	-

Table A10 - QA/QC - Summary of Relative Percent Difference (RPD) of Duplicate Soil Samples

Sample ID	Location	Area	Depth (cm)	Date Collected	F1 C6-C10, less BTEX (ppm)	F2 C10-C16 (ppm)	F3 C16-C34 (ppm)	F4 C34-C50 (ppm)	Total Petroleum Hydrocarbons C5-C30 (ppm)
09 - 940	SW Plume	Part 3	0-30	23-Aug-09	29	100	96	<10	-
09 - 941					61	130	100	<10	-
RPD					71*	26	4	0	-
09 - 950	SW Plume	Extension of Part 1	100	24-Aug-09	880	150	110	<10	-
09 - 951					910	120	77	<10	-
RPD					3	22	35	0	-
09 - 960	SW Plume	Delineation - Part 1	10-30	24-Aug-09	<12	11	23	<10	-
09 - 961					<12	<10	18	<10	-
RPD					0	10	24	0	-
09 - 970	SW Plume	Extension of Lobe X	100	25-Aug-09	<12	20	46	<10	-
09 - 971					<12	20	44	11	-
RPD					0	0	4	10	-
09 - 980	SW Plume	Extension of Lobe X	100	25-Aug-09	2400	7000	260	15	-
09 - 981					2000	7800	250	14	-
RPD					18	11	4	7	-
09 - 990	SW Plume	Extension of Part 6	100	25-Aug-09	690	520	110	11	-
09 - 991					110	160	57	<10	-
RPD					145	106	63*	10	-
09 - 1000	SW Plume	Delineation - Lobe X	10-30	25-Aug-09	<12	74	140	26	-
09 - 1001					<12	78	140	26	-
RPD					0	5	0	0	-
09 - 1010	NE Plume	Extension of Part 1	10-30	26-Aug-09	<12	<10	32	24	-
09 - 1011					<12	<10	56	38	-
RPD					0	0	55	45	-
09 - 1020	NE Plume	Extension of Part 1	130	26-Aug-09	<12	<10	44	10	-
09 - 1021					<12	10	41	<10	-
RPD					0	0	7	0	-
09 - 1030	NE Plume	Delineation - Part 1	10-30	26-Aug-09	<12	<10	39	22	-
09 - 1031					<12	<10	30	<10	-
RPD					0	0	26	75*	-
09 - 1040	SW Plume	Delineation - Part 4	10-30	26-Aug-09	100	72	86	11	-
09 - 1041					180	57	74	<10	-
RPD					57	23	15	10	-
09 - 1050	SW Plume	Delineation - Part 4	10-30	26-Aug-09	<12	26	49	<10	-
09 - 1051					37	49	87	14	-
RPD					102*	61*	56*	33	-

Notes:

* RPD calculation is valid only when both samples are >10 times the Reported Detection Limit

BOLD indicates RPD exceeds recommended alert criteria (for PHCs in soil, the acceptable RPD value is 50 %)

BOLD* indicates that concentrations are <10 times the detection limit, therefore the calculated RPD value is not strictly valid.

Table A11 - Summary of Relative Percent Difference (RPD) of Duplicate Water Samples

Sample ID	Location	Area	Date Collected	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	F1 C6-C10, less BTEX (ug/L)	F2 C10-C16 (mg/L)	pH	Volatile Hydrocarbons VH (W5-10) (ug/l)	Extractable Hydrocarbons EH (W10-19) (mg/L)
Reported Detection Limit				0.4	0.4	0.4	0.8	100	0.1	N/A	300	0.08
09 - 600	Main Station	Ponded water in	21-Jul-09	-	-	-	-	-	-	8.14	1400	6.09
09 - 601				-	-	-	-	-	-	-	8.12	1050
RPD				-	-	-	-	-	-	0	29	5
09 - 1090	SW Plume	Ice collected	29-Aug-09	130	2600	1500	9600	620	178	-	-	-
09 - 1091				190	2400	980	6000	48000	106	-	-	-
RPD				38	8	42	46	195*	51	-	-	-
09 - 1110	MW09-04	-	3-Sep-09	<0.4	0.6	<0.4	<0.8	<100	<0.1	-	-	-
09 - 1111				<0.4	1.8	0.5	3.1	<100	<0.1	-	-	-
RPD				NC	100*	22	118	0	0	-	-	-

Notes:

* RPD calculation is valid only when both samples are >10 times the Reported Detection Limit

BOLD indicates RPD exceeds recommended alert criteria (for PHCs in water, the acceptable RPD value is 40 %)

BOLD* indicates that concentrations are <10 times the detection limit, therefore the calculated RPD value is not strictly valid.

Table A12 - Summary of the Relative Percent Difference (RPD) of

Sample ID	Depth (cm)	Date Collected	Total Petroleum Hydrocarbons C5-C30 (ppm)
Reported Detection Limit			10
09 - 432	Composite	7-Jul-09	<20
IEG Sample TCB2			XX
RPD			#VALUE!
09 - 433	Composite	7-Jul-09	2590
IEG Sample 707-007			1720
RPD			40
09 - 523	Composite	12-Jul-09	1850
IEG Sample 712-016			XX
RPD			#VALUE!
09 - 602	Composite	21-Jul-09	5750
IEG Sample 721-018			3790
RPD			41
09 - 603	Composite	21-Jul-09	3020
IEG Sample 721-024			2441
RPD			21
09 - 642	Composite	2-Aug-09	328
IEG Sample 802-033			651
RPD			66
09 - 925	Composite	20-Aug-09	1230
IEG Sample 820-043			XX
RPD			#VALUE!
09 - 1052	Composite	26-Aug-09	1020
IEG Sample 826-048			1590
RPD			44
09 - 1114	Surface	3-Sep-09	98
IEG Sample 054			108
RPD			10
09 - 1115	Surface	3-Sep-09	74
IEG Sample 057			73
RPD			1

Notes:

* RPD calculation is valid only when both samples are >10 times the Reported

BOLD indicates RPD exceeds recommended alert criteria (for PHCs in

BOLD* indicates that concentrations are <10 times the detection limit,

Appendix B

Geotechnical Test Results

AECOM

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November 4, 2008

Project Number: 2977-371-00

VIA Email: newmark@egrubens.com
jstevens@egrubens.com

Jim Stevens / Russell Newark
E. Gruben's Transport
Box 177
Tuktoyaktuk, NT X0E 1C0

Dear Mr. Newark and Mr. Stevens:

Re: Johnson Point Type 2 Material Sources and Earthwork Redesigns

To better define the accessibility, location, and potential quantities of Type 2 granular material available at the Johnson Point site, UMA Engineering Ltd. (now operating as AECOM) conducted a reconnaissance, subsurface investigation, and accompanying grain size analysis between September 4 and 6, 2008.

Based on the results of these investigations and a review of existing Johnson Point Documents, INAC/ PWGSC/ AECOM have agreed that minor changes to the design and construction of Existing Landfill regrades should be made to optimize the use of available material.

UMA Site Investigations and Analysis

In August, E Grubens Transport (EGT) excavated a number of shallow test pits across the ridge top (including Borrow Areas 4, 6, and 7) and throughout the southeast portion of Borrow Area 3. UMA inspected each of these pits and collected samples GTP-1 through GTP-8 for analysis. In addition to the existing EGT test pits, an additional five test pits were excavated at locations chosen by AECOM and samples GTP-9, GTP-10, and GTP-11 were collected for analysis. All grain size analyses are attached.

As expected from visual observation, and as noted in existing geotechnical information, grain size analysis confirms that material available within the ridge borrow areas (Borrow Areas 2, 4, 6, and 7) consists of sand with less than 6% silt and virtually no gravel. This material is highly erodible and unsuitable as Type 2.

Figure 1 shows the only four locations within the project area identified by AECOM, as containing material with a gradation approximating that specified for Type 2 material. Of the seven grain size analyses completed on granular samples from these four areas, only one sample (GTP-5) lay within the Type 2 gradation limits specified in the Johnson Point construction documents. The other six samples (GTP-4, 6, 8, 9, 10, and 11) lacked a sufficient percentage of gravel sizes relative to the Type 2 specification but are relatively well graded and could meet the design intent. Inspection of testpits and additional surface reconnaissance found that areas outside these four locations are too sand and silt-rich and gravel-poor to meet the design intent.

Materials in Borrow Areas A and B consist of a 1 metre (m) or greater thick deposit of alluvial material overlying bedrock shale material. Gravel clasts within this deposit are of granitic/metamorphic origin indicating glacial fluvial deposition. The 2008 EGT borrow pit is located within Area B (Figure 1).

Between the 2008 borrow pit and the coastline, highly weathered shale bedrock was noted at the base of the excavated test pits. This highly weathered bedrock was sampled (sample GTP-7) and found to be greater than 40% silt and clay.

There is generally a lack of gravel and larger size materials at Johnson Point. The only physiographic feature exhibiting a relative abundance of gravel material is the beach spit on which the airstrip is located. This spit has formed from northwards long shore drift of fractured clasts, eroded from the 3 to 4 m high shale bluffs at the south end of the airstrip. The presence of the airstrip and proximity to the ocean severely limits the availability of this material for use as fill. Areas C and D are the primary portions of the gravelly spit feature that offer potential as borrow sources.

Materials in Areas C and D comprise interbedded clean sand and fine gravel with a fines (silt and clay) content of less than 5%. The limits of Area C can be visually defined based on surrounding low-lying ground. Area D encompasses portions of the Apron Area PHC soil excavations that comprise clean, loose, fine gravels. Auger sampling of the Apron Area during 2008 by IEG encountered gravel beds in approximately a third of the auger holes

Table 1 presents a summary of potential borrow sources, identified by AECOM, with well-graded fill material approximating Type 2 granular fill, and potentially suitable as regrade fill:

Table 1: Summary of Potential Borrow Source

Borrow Area	Test Pits	Volume Available			Comments
		Approximately Area (m ²)	Depth (July Permafrost Estimate)	Volume (m ³)	
A	GTP-4, 5, 6	8000	0.6	3,850	Relatively long haul. Sieves indicate material from this area may be within Type 2 Spec.
B	GTP-8	22000	0.6	10,500	2008 load counts indicate 3,600 m ³ already removed from this area.
C	GTP-9, 10	15000	0.6	7,200	Depth of excavation highly dependent on permafrost depth. May need staged excavation to remove sufficient material.
D	GTP-11	NA	NA	3,750	Volume assumes one quarter of PHC excavation will be gravel-rich and useable in Type 2
Total				25,300	Volume included 3,600 m ³ removed during 2008

The total volume of material available from these areas (25,300 m³) should be sufficient to complete required work at Johnson Point.

Type 2 Borrow Material Recommendations:

- Site investigations and a review of existing geotechnical data show only Borrow Areas A, B, C and D on Figure 1 to be viable sources of well graded material approximating Type 2 material.
- Gravel-rich material excavated from Apron Area PHC excavations should be stockpiled, drained, tested for hydrocarbons and used in Type 2 material. Specifically this gravel-rich material should be blended with Type 2 material from Borrow Areas A, B and C to improve the general gradation of material prior to placement on regrades.
- Considering that the available Type 2 material has an excess of sand, blending of Type 2 with sand from Borrow Areas 4, 6 and 7 is not recommended.
- Quarrying of the shale outcropping along the ocean is not considered feasible for environmental reasons. Bedrock shale beneath overburden in portions of Borrow Area 3 is weathered to silt and also not considered a feasible material source.
- Material designated for use as the final lifts of Existing Landfill regrades A, B and C during 2009 should be stockpiled, tested and potentially mixed prior to placement to ensure the final lifts meet the Type 2 specification.
- Initial lifts on Landfill A may be excavated from suitable borrow areas and placed based on visual observation rather than stockpiling and testing.

Regrade Design Revisions

INAC/PWGSC have concurred with the AECOM assessment that minor changes be made to the Johnson Point landfill regrade designs. The reasons for these design revisions include: the difficulty in obtaining specification-conforming Type 2 material, the limited volume of Type 1 material available to the project, more accurate survey information gathered during 2008 and an in depth review of the dominant geotechnical issues as presented in the existing information and as observed on site.

Each Existing Landfill regrade is discussed individually below and regrade plans and sections are shown on Drawings C03 through C07.

Existing Landfill A Lobe A

This is the largest landfill regrade on the site and is located on the edge of a plateau of flat ground adjacent to the tank farm.

A 1.0 m thick cover of material for this regrade is considered prudent. Due to the large size of this regrade and the limited volume of material that meets the Type 2 specification, the lower 0.7 m of placed material can be taken directly from Borrow Areas A, B, or C, with the assumption that the material will be close to but may not necessarily meet Type 2 gradation specifications. The final 0.3 m of material placed on this regrade is to pass the Type 2 specification gradation. Blending and mixing of material may be required for the final 0.3 m of placed material to meet the required specification.

Rather than place a 0.4 m cap of Type 1 material (as called for in the original Tender Design) only the southwest, southeast, and northeast slopes of this regrade are to be armored with Type 1 material. The northwest slope is to be flattened to blend with the natural ground.

A shallow swale is to be constructed two meters from the toe of the northwest slope to deflect overland water flow around the perimeter of the regrade.

Existing Landfill B

Site observations during 2008 indicate this landfill regrade to be vulnerable to overland stream flows coming from the ridge to the northwest, scouring the perimeter of the regrade. At least two existing erosion channels funnel concentrated water flows (from rain, melting snow and/or melting permafrost) towards Existing Landfill regrade B.

To counter potential water erosion of the regrade perimeter, the perimeter 5H: 1V slopes are to be armored with Type 1 Material to a thickness of 0.4 m. The requirement to place 0.7 m cap of Type 2 material as an initial cover remains.

Existing Landfill C

Visual inspection of the material placed on this regrade during 2008 (approximately 0.5 m in thickness) indicates it is close to, but does not meet, the specified gradation for Type 2 material. It does, however, meet the design intent and is acceptable. The final lift of Type 2 material placed on Existing Landfill C is to meet the Type 2 specifications as given in the Tender Documents. Stockpiling and blending of material may be required to meet this specification.

On the high (northwest) side of the regrade, it is recommended that the slope be flattened from 5H:1V to match the existing slope angles and a shallow swale be constructed two meters from the toe of the northwest slope. These measures are proposed to prevent surface water pooling and/or concentration against the regrade perimeter and potentially causing erosive flows

Of the four landfill regrades, the final cover slope angle of Landfill regrade C will be the steepest. The risk of surface water (rain and/or snow melt) flowing and concentrating with erosive velocities is therefore the greatest on this regrade. To counter the higher erosion potential on the surface of this regrade the entire regrade is to be capped with a final 0.4 m thick cover of Type 1 material.

Existing Landfill D

Approximately 0.7 m of material was placed on this regrade during 2008, as called for in the tender/construction design. A grain size analysis performed on material from this first lift parallels, but falls outside the upper limit of Type 2 material, due to a general lack of granular material above 50 mm in size. This material, however, meets the design intent.

To improve the erosion resistance of the already placed 0.7 m of cover material on landfill regrade D, perimeter slopes are to be armored with 0.4 m of Type 1 material. The 5H:1V slopes are to be flattened to blend with natural ground in locations where nominal additional fill is required.

Additional Redesign Measures

Narrow, steep-sided erosion channels occur in several locations along the southeast flank of the ridge, including down slope of Existing Landfills C and D. Fans of silt and sand accumulating where these channels meet the flat ground at the base of the ridge flank show these channels are actively eroding material from the ridge flank. Superficially these channels look much like standard erosion channels caused by direct surface water flow. Further inspection, however, indicates these channels are likely the product of melting permafrost. The base of the channel consists of a flat surface (approximate permafrost surface) up to 1 m wide with small braided water flows rather than a 'V' shaped channel typical of surface water erosion. Water flowing from the surface of the melting permafrost removes silt and sand grains at the edge of the channel base and undercuts the channel slopes. These channels will continue to advance and branch up slope as long as permafrost continues to be exposed and melted.

Where permafrost melt channels occur within 50 m of Existing Landfill regrades, the channels are to be backfilled with Type 1 material to reduce, and potentially prevent, further upslope migration of the channels.

Table 2: Summary of borrow material volumes required and available

Landfill Regrade	Type 1 Material (m ³)	Type 2 Material (i.e. Material from Borrow Areas A, B, C and D that Meets or is Acceptably Close to Spec Gradation) (m ³)
Landfill A, Lobe A	410	5,200
Landfill B	200	630
Landfill C	1,300	1,750
Landfill D	270	1,250
Permafrost melt channels	200	0
Total Redesign Volumes (including work completed during 2008)	2,380	8,830*
Approx Volumes Available	2,450	25,300

*An additional (approx) 7000 m³ is needed for other incidental site work (backfilling excavations etc)

Implementing these redesigns makes the best use of the limited material resources available and will result in a better final product.

The success of the project requires that these redesign measures are feasible within the project schedule. Comments are welcomed on the contractors ability to complete these modified earthwork designs and the implications these modifications may have on project schedule, costs and labor/equipment usage.

Sincerely,
UMA Engineering Ltd. doing business as AECOM



Brendon Norrie, M.Sc., P.Geol.
Engineering Geologist
brendon.norrie@aecom.com

BN:sm
Encl.
cc: Brad Thompson (Public Works Government Services Canada)
Barry Fedorak (AECOM)

FOR REVIEW ONLY

B SIZE 11" x 17" (279.4mm x 431.8mm)

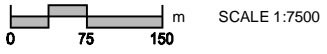
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ISS/REV: A

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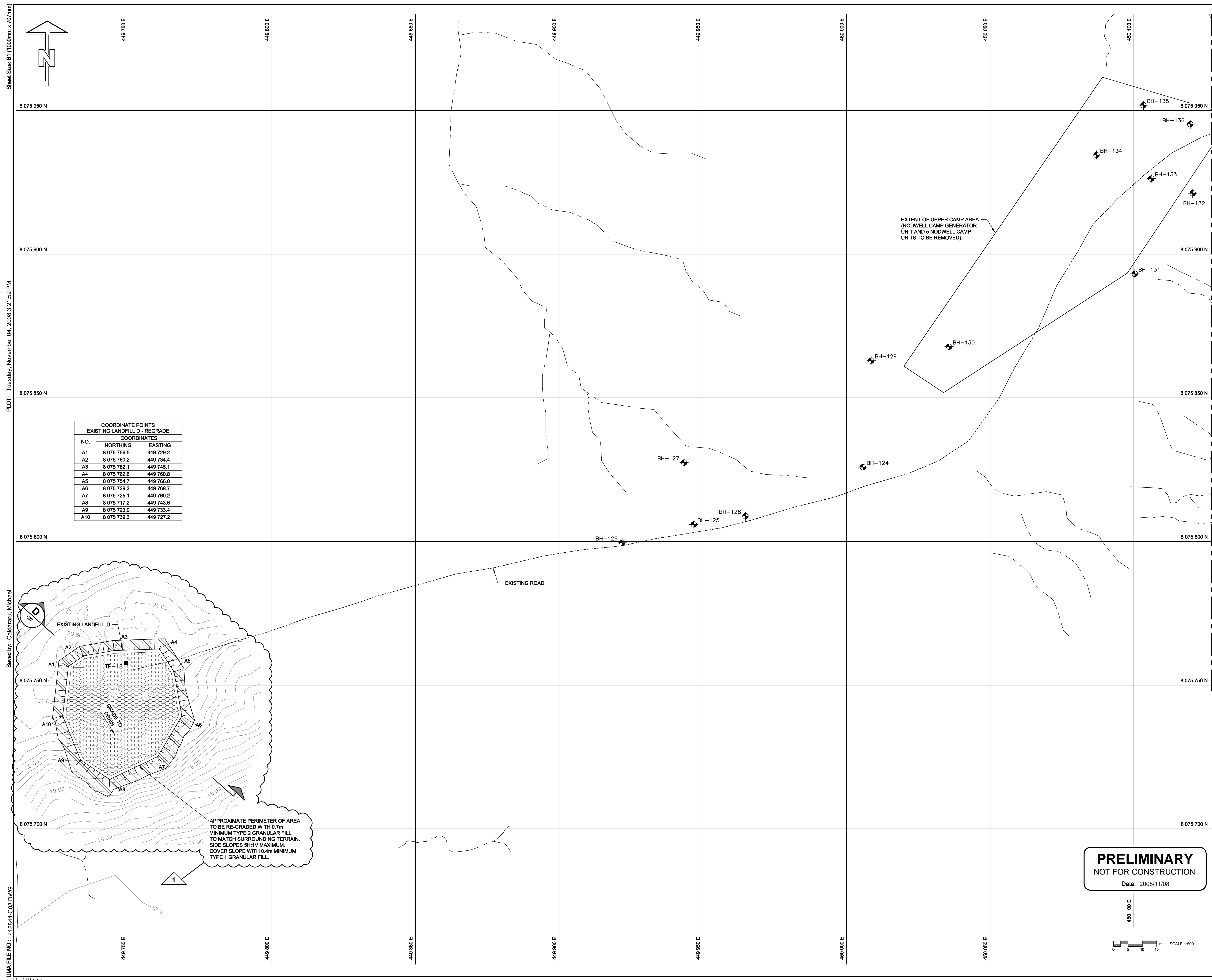
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- IDENTIFIED POTENTIAL TYPE 2 MATERIAL BORROW SOURCES
 - EXTENT OF 2008 EGT BORROW PIT
 - GRAVEL-RICH GEOMORPHIC FEATURE (SPIT)
 - GTP-1 UMA 2008 GEOTECHNICAL TESTPIT SAMPLE LOCATIONS

Public Works and Government Services Canada
Johnson Point Resident Services

Type 2 Borrow Sources

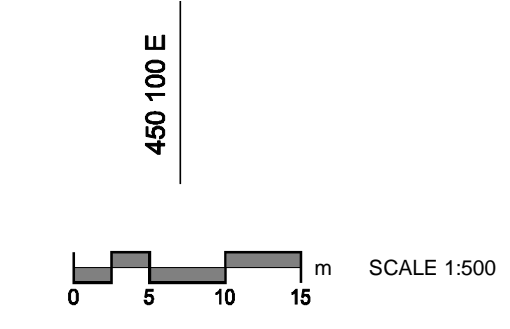
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 Drawn by: Calderaru, Michael
 PLOT: Tuesday, November 04, 2008 3:21:52 PM
 Sheet Size: B1 (100mm x 70mm)



COORDINATE POINTS EXISTING LANDFILL D - REGRADE		
NO.	NORTHING	EASTING
A1	8 075 756.5	449 729.2
A2	8 075 760.2	449 734.4
A3	8 075 762.1	449 745.1
A4	8 075 762.8	449 760.8
A5	8 075 754.7	449 768.0
A6	8 075 739.3	449 768.7
A7	8 075 725.1	449 760.2
A8	8 075 717.2	449 743.6
A9	8 075 723.9	449 733.4
A10	8 075 739.3	449 727.2

PRELIMINARY
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 Date: 2008/11/08



Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES / Services immobiliers

Western Region

Client: Indian and Northern Affairs Canada / Affaires Indiennes et du Nord Canada

Canada

CONTAMINANTS and REMEDIATION DIRECTORATE / YELLOWKNIFE, N.W.T.

GENERAL NOTES:

- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- SITE PLANS AND TOPOGRAPHIC INFORMATION ARE BASED ON AIR PHOTOS AND SURVEY PROVIDED BY EBA ENGINEERING CONSULTANTS LTD. AND SURVEY TAKEN DURING THE 2008 FIELD SEASON. CURRENT CONDITIONS MAY NOT BE EXACTLY AS SHOWN.
- ALL KNOWN DEBRIS TO BE REMOVED FROM CONTAMINATED SOIL AREAS PRIOR TO ANY EXCAVATION OR BACKFILLING TAKING PLACE.
- REMOVE ALL DEBRIS WITHIN PLAN AREA.
- DO NOT SCALE DRAWING.

LEGEND:

- STREAM
- TEST PIT LOCATION
- BORE HOLE LOCATION
- COORDINATE POINT
- EXISTING LANDFILL AREA
- GRANULAR COVER

UMA | AECOM

1	ISSUED FOR CONTRACTOR'S COMMENTS	08/11/04
0	ISSUED FOR CONSTRUCTION	08/03/08

REVISIONS	DESCRIPTION	DATE
A	detail number	
B	source drawing no.	
C	detail on drawing no.	

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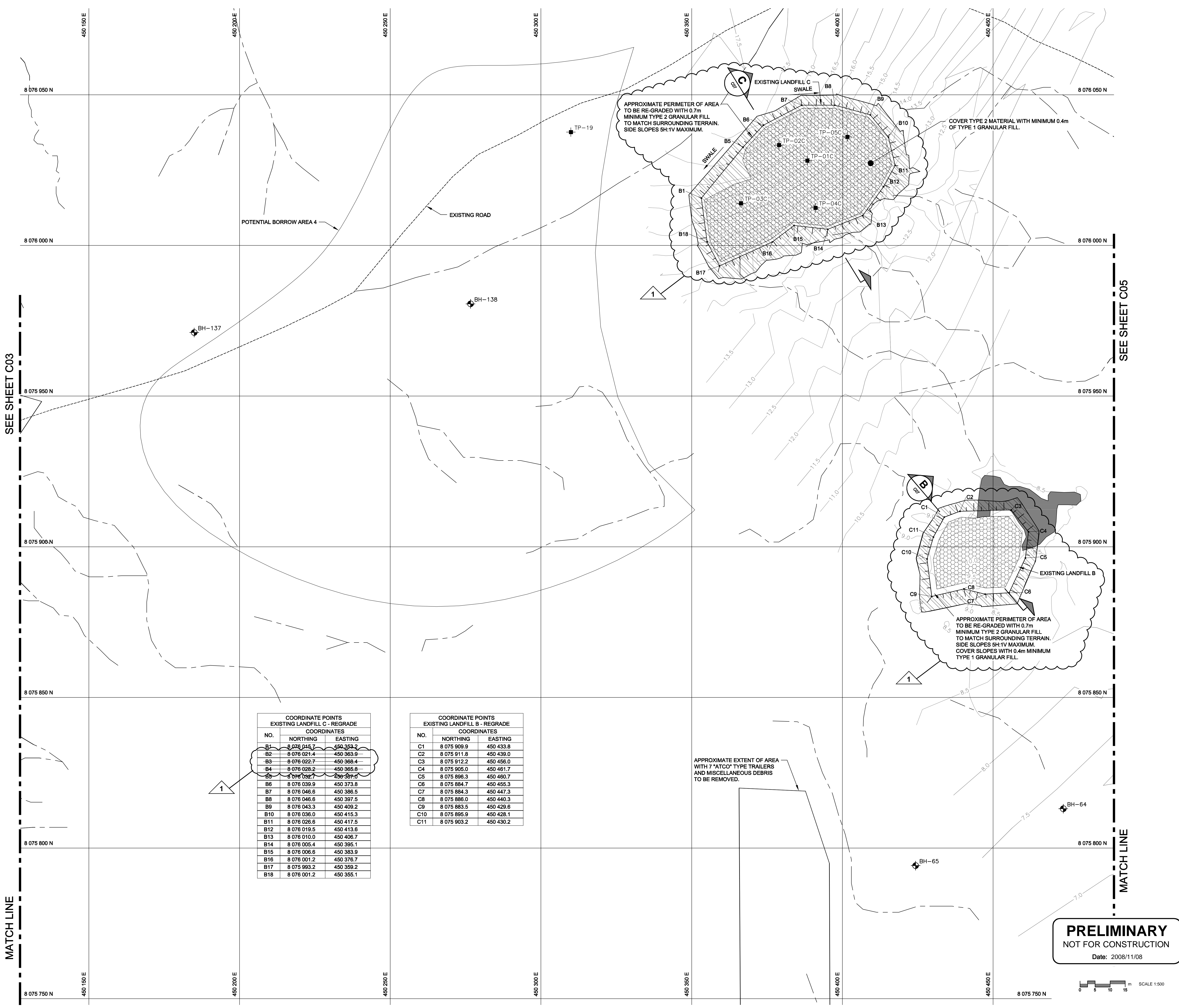
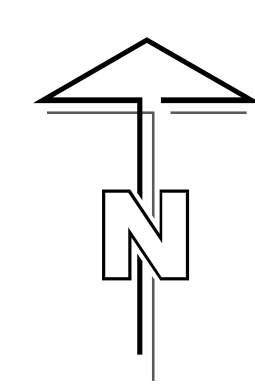
drawing title: **AREA 1 EXISTING LANDFILL D AREA**

designed by:	B. NORRIE, D. GILBERTSON	conçu par:	
drawn by:	B. HASSLER	dessiné par:	
approved by:	B. FEDORAK	approuvé par:	

PMSC Project Manager: B. THOMPSON / Administrateur de Projets TPSC

code:	1:500	échelle:		sheet:	
project no.:	418844	project no.:		sheet:	C03
date:	NOVEMBER, 2008	date:		OF	07

SHEET SIZE: B1 (100mm x 707mm)
 PLOT: Tuesday, November 04, 2008 3:22:43 PM
 Saved by: Calderaru, Michael
 UMA FILE NO.: 418844.C04.DWG
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	NORTHING	EASTING
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B2	8 076 021.4	450 363.9
B3	8 076 022.7	450 368.4
B4	8 076 028.2	450 365.8
B5	8 076 032.7	450 367.0
B6	8 076 039.9	450 373.8
B7	8 076 046.6	450 386.5
B8	8 076 046.6	450 397.5
B9	8 076 043.3	450 409.2
B10	8 076 036.0	450 415.3
B11	8 076 026.6	450 417.5
B12	8 076 019.5	450 413.6
B13	8 076 010.0	450 406.7
B14	8 076 005.4	450 395.1
B15	8 076 006.6	450 383.9
B16	8 076 001.2	450 376.7
B17	8 075 993.2	450 359.2
B18	8 076 001.2	450 355.1

COORDINATE POINTS EXISTING LANDFILL B - REGRADE		
NO.	COORDINATES	
	NORTHING	EASTING
C1	8 075 909.9	450 433.8
C2	8 075 911.8	450 439.0
C3	8 075 912.2	450 456.0
C4	8 075 905.0	450 461.7
C5	8 075 896.3	450 460.7
C6	8 075 884.7	450 465.3
C7	8 075 884.3	450 447.3
C8	8 075 888.0	450 440.3
C9	8 075 883.5	450 429.6
C10	8 075 895.9	450 428.1
C11	8 075 903.2	450 430.2

PRELIMINARY
 NOT FOR CONSTRUCTION
 Date: 2008/11/08

SCALE 1:500
0 5 10 15 m

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YELLOWKNIFE, N.W.T.

- GENERAL NOTES:**
1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 2. SITE PLANS AND TOPOGRAPHIC INFORMATION ARE BASED ON AIR PHOTOS AND SURVEY. PROVIDED BY EBA ENGINEERING CONSULTANTS LTD. AND SURVEY TAKEN DURING THE 2008 FIELD SEASON. CURRENT CONDITIONS MAY NOT BE EXACTLY AS SHOWN.
 3. ALL KNOWN DEBRIS TO BE REMOVED FROM CONTAMINATED SOIL AREAS PRIOR TO ANY EXCAVATION OR BACKFILLING TAKING PLACE.
 4. REMOVE ALL DEBRIS WITHIN PLAN AREA.
 5. DO NOT SCALE DRAWING.

- LEGEND:**
- BODY OF WATER
 - STREAM
 - TEST PIT LOCATION
 - BORE HOLE LOCATION
 - COORDINATE POINT
 - EXISTING LANDFILL AREA
 - GRANULAR COVER

UMA | AECOM

REVISIONS	DESCRIPTION	DATE
1	ISSUED FOR CONTRACTOR'S COMMENTS	08/11/04
0	ISSUED FOR CONSTRUCTION	08/03/28

project title: **JOHNSON POINT REMEDIATION PROJECT NORTHWEST TERRITORIES**
 title du projet:

drawing title: **AREA 2 EXISTING LANDFILL B AND LANDFILL C AREAS**
 titre du dessin:

designed by: B. NORRIE, D. GILBERTSON
 drawn by: B. HASSLER
 approved by: B. FEDORAK
 PWSGC Project Manager: B. THOMPSON
 project no.: 418844
 date: NOVEMBER, 2008

C04
OF 07

SHEET SIZE: B1 (100mm x 70mm)
 PLOT: Tuesday, November 04, 2008 3:23:16 PM
 Drawn by: Calderaru, Michael
 UMA FILE NO.: 418844-005.DWG
 1000 x 707

- GENERAL NOTES:**
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 - SITE PLANS AND TOPOGRAPHIC INFORMATION ARE BASED ON AIR PHOTOS AND SURVEY PROVIDED BY EBA ENGINEERING CONSULTANTS LTD. CURRENT CONDITIONS MAY NOT BE EXACTLY AS SHOWN.
 - ALL KNOWN DEBRIS TO BE REMOVED FROM CONTAMINATED SOIL AREAS PRIOR TO ANY EXCAVATION OR BACKFILLING TAKING PLACE.
 - REMOVE ALL DEBRIS WITHIN PLAN AREA.
 - DO NOT SCALE DRAWING.

- LEGEND:**
- BODY OF WATER
 - STREAM
 - TEST PIT LOCATION
 - MONITORING WELL LOCATION
 - BORE HOLE LOCATION
 - EXTENT OF KNOWN CONCENTRATED DEBRIS
 - COORDINATE POINT
 - EXISTING LANDFILL AREA
 - BURIED DEBRIS EXCAVATION AREA
 - HYDROCARBON CONTAMINATED SOIL
 - GRANULAR COVER

UMA | AECOM

REVISIONS	DESCRIPTION	DATE
1	ISSUED FOR CONTRACTOR'S COMMENTS	08/11/04
0	ISSUED FOR CONSTRUCTION	08/03/28

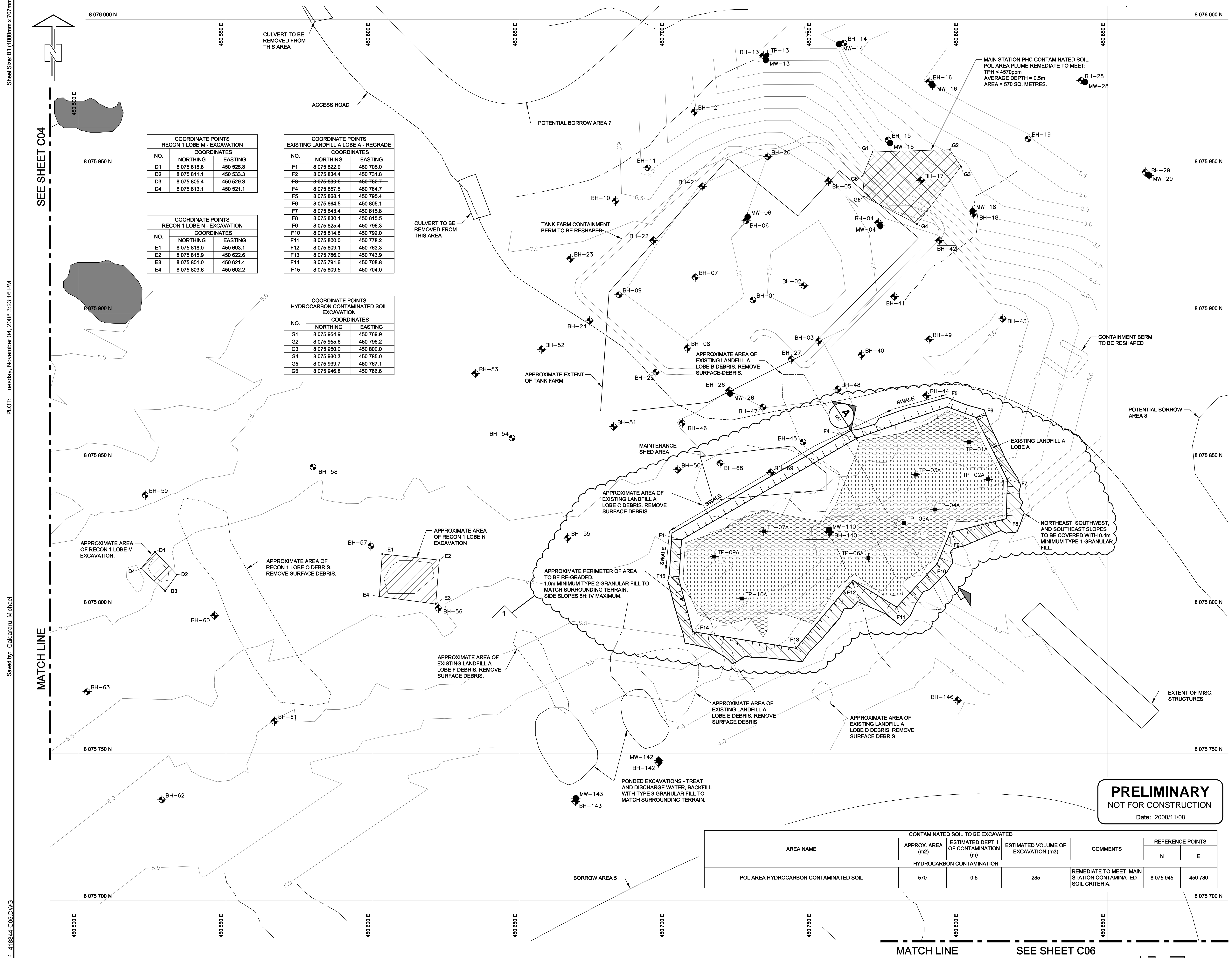
project title: **JOHNSON POINT REMEDIATION PROJECT NORTHWEST TERRITORIES**
 titre du projet:

PRELIMINARY
 NOT FOR CONSTRUCTION
 Date: 2008/11/08

AREA NAME	CONTAMINATED SOIL TO BE EXCAVATED			COMMENTS	REFERENCE POINTS	
	APPROX. AREA (m ²)	ESTIMATED DEPTH OF CONTAMINATION (m)	ESTIMATED VOLUME OF EXCAVATION (m ³)		N	E
HYDROCARBON CONTAMINATION						
POL AREA HYDROCARBON CONTAMINATED SOIL	570	0.5	285	REMEDiate TO MEET MAIN STATION CONTAMINATED SOIL CRITERIA.	8 075 945	450 780

drawing title: **AREA 3 MAIN STATION AREA**
 titre du dessin:

designed by:	B. NORRIE, D. GILBERTSON	conçu par:	
drawn by:	B. HASSLER	dessiné par:	
approved by:	B. FEDORAK	approuvé par:	
PMSC Project Manager:	B. THOMPSON	Administrateur de Projets TPSC:	
code:	1:500	échelle:	sheet: C05
project no.:	418844	projet no.:	
date:	NOVEMBER, 2008	date:	OF 07



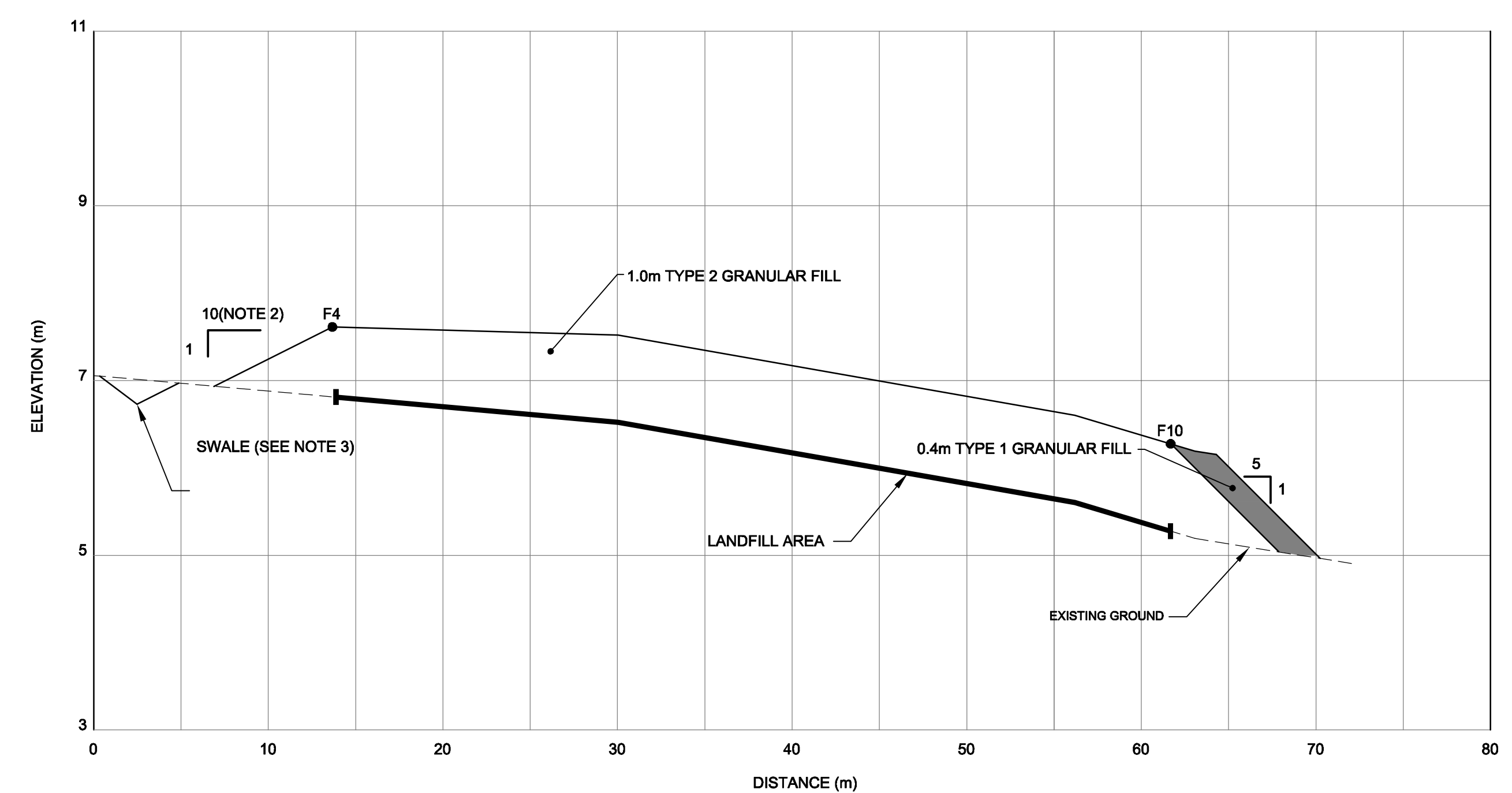
MATCH LINE
 SEE SHEET C06
 SCALE 1:500

Sheet Size: B1 (100mm x 707mm)

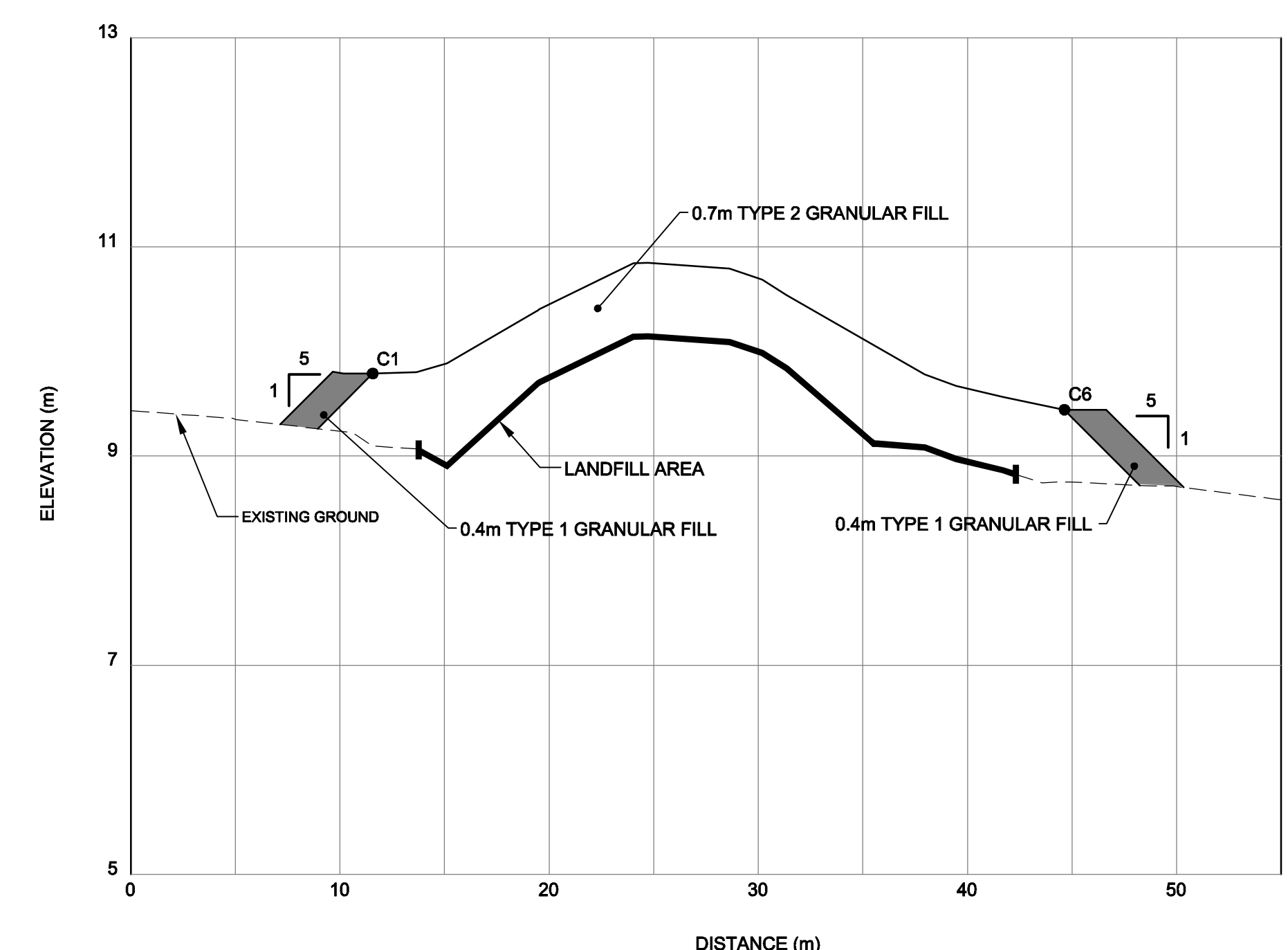
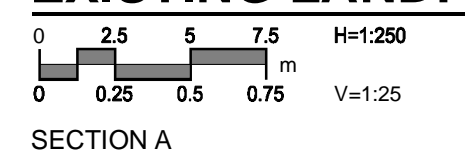
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Drawn by: Calderaru, Michael

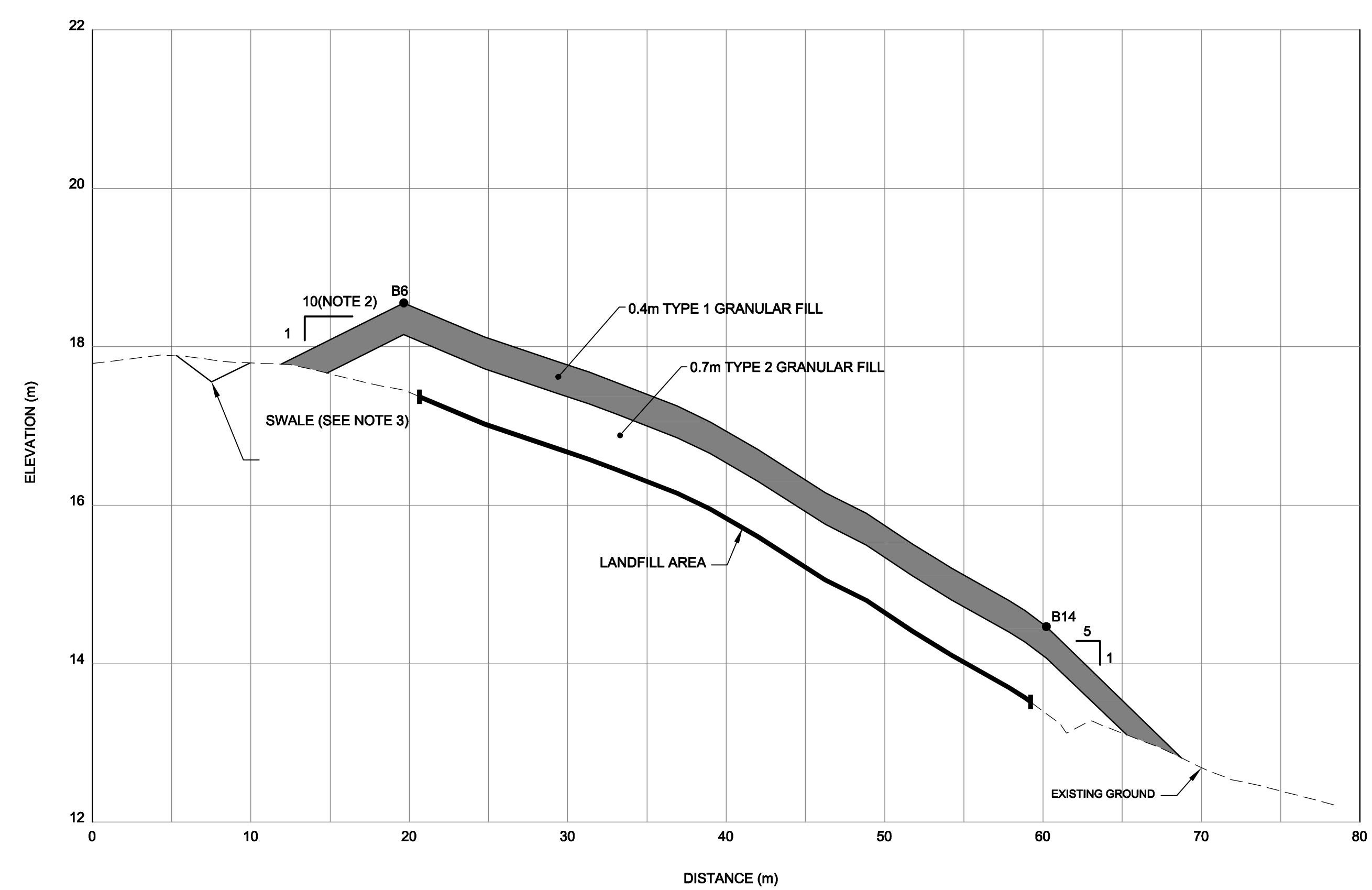
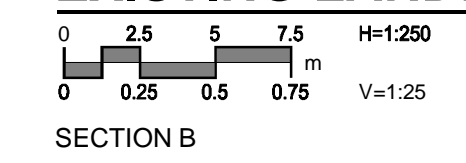
UMA FILE NO.: 418844-007.DWG



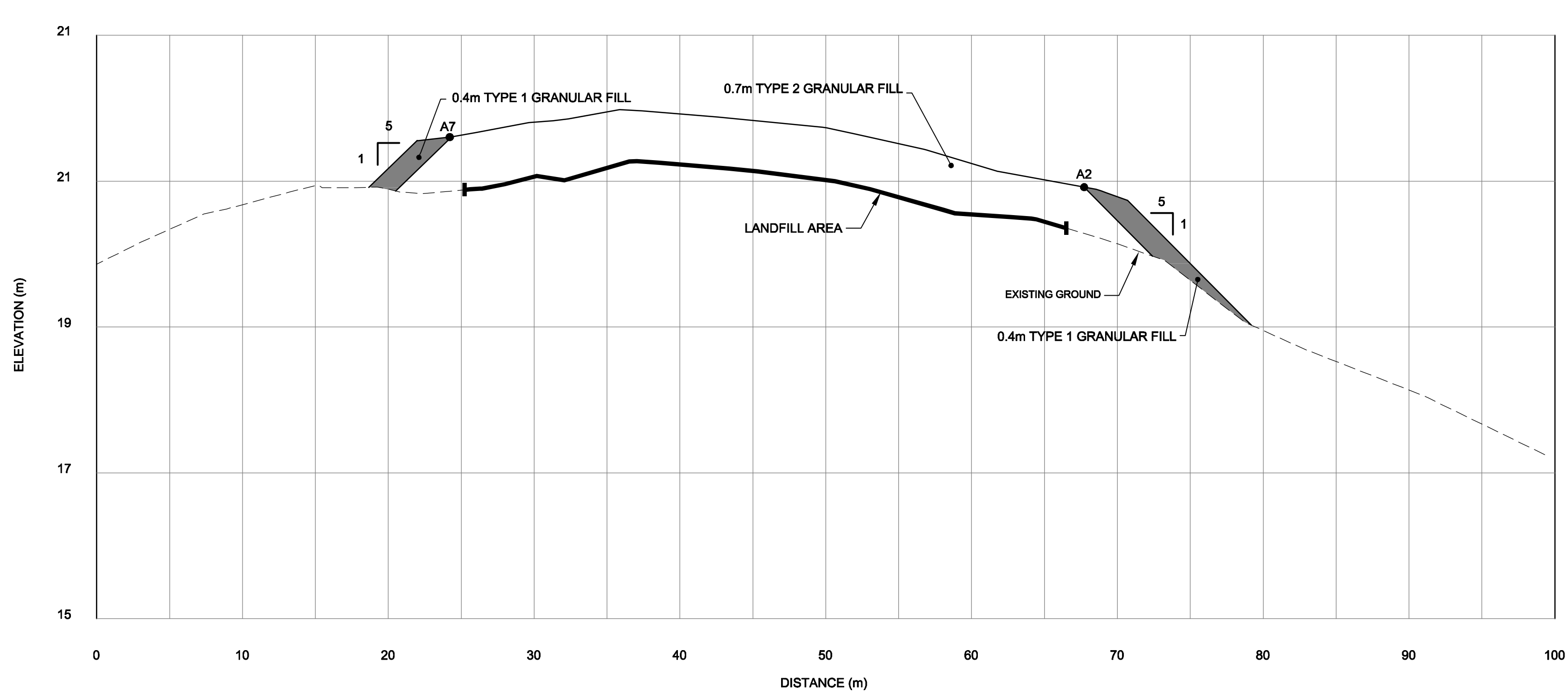
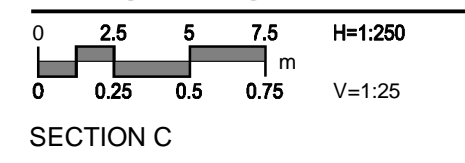
EXISTING LANDFILL A LOBE A REGRADE (TYPICAL SECTION)



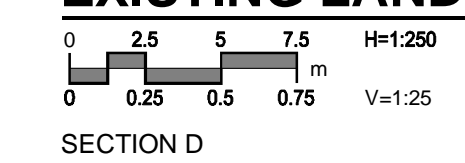
EXISTING LANDFILL B REGRADE (TYPICAL SECTION)



EXISTING LANDFILL C REGRADE (TYPICAL SECTION)



EXISTING LANDFILL D REGRADE (TYPICAL SECTION)



GENERAL NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. NORTHWEST SLOPE TO BE FLATTENED TO BLEND WITH NATURAL GROUND WHERE NOMINAL ADDITIONAL MATERIAL REQUIRED.
3. LOCATE SWALE 2.0m FROM TOE OF REGRADE SLOPE.

REVISIONS	DESCRIPTION	DATE
A	ISSUED FOR CONTRACTOR'S COMMENTS	08/11/04

A	detail number	
B	source drawing no.	
C	detail on drawing no.	

project title: **JOHNSON POINT REMEDIATION PROJECT NORTHWEST TERRITORIES**

SECTIONS

designed by	B. NORRIE, D. GILBERTSON	conçu par	
drawn by	M. CALDARARU	dessiné par	
approved by	B. FEDORAK	approuvé par	
PMSC Project Manager	B. THOMPSON	Administrateur de Projets TPSC	
code	AS SHOWN	édition	sheet
project no.	418844	project no.	C07
date	NOVEMBER, 2008	date	OF 07

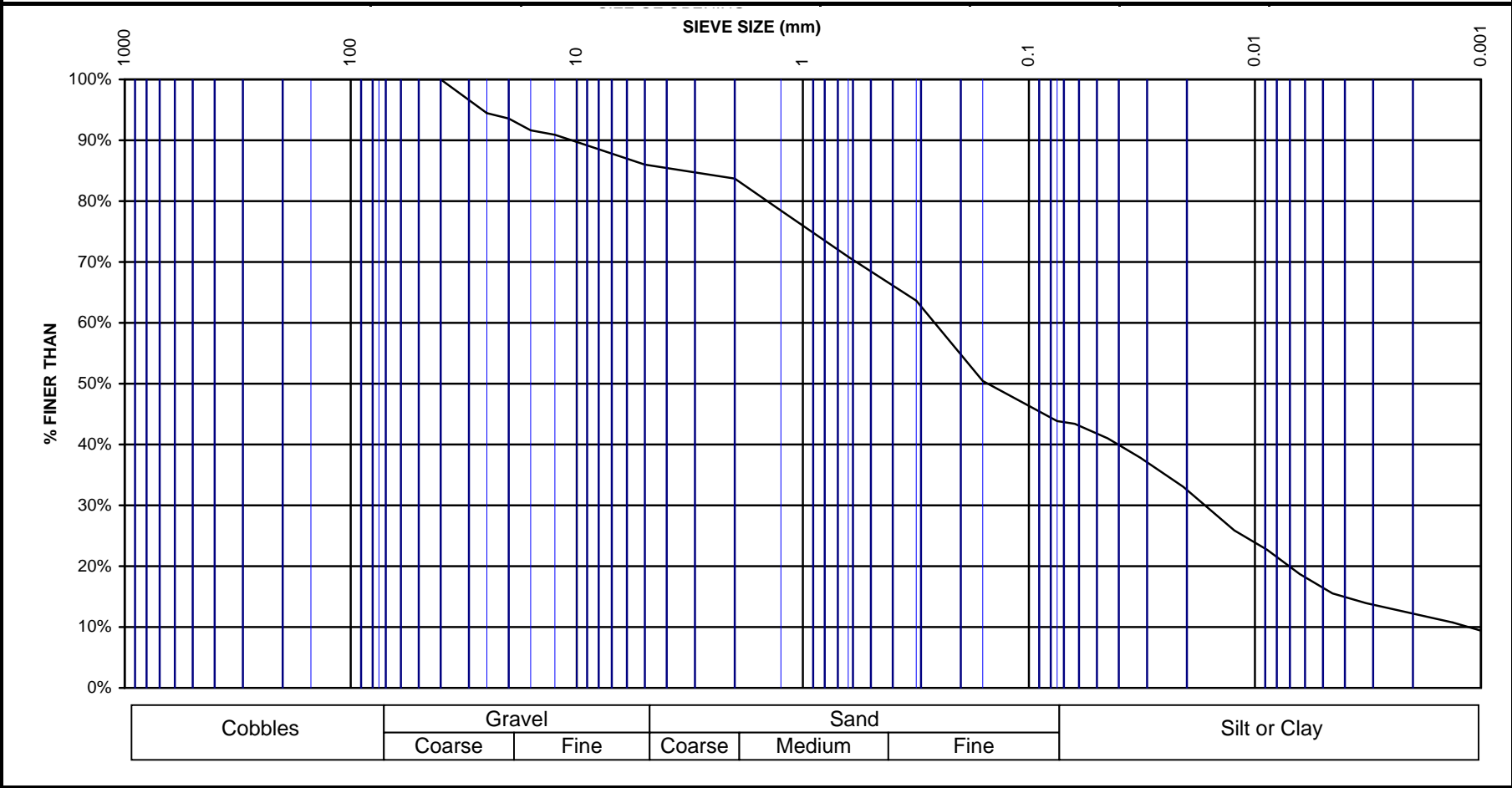
PRELIMINARY
NOT FOR CONSTRUCTION
Date: 2008/11/08

GRAIN SIZE ANALYSIS

CLIENT :		PWGSC					
PROJECT :		Johnson Point					
JOB No. :		2977-371-00					
LOCATION :						SAMPLE: 1 on Sept.5/08	
BOREHOLE: GTP-7						DEPTH :	
DATE : September 17, 2008						TECHNICIAN : CK	
TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	REMARKS
		APPROX. INCHES	mm				
<u>Before Washing</u>	150,000	6	150.0		0%	100%	
Wet + Tare	75,000	3	75.0		0%	100%	
Dry+Tare	1560.9	2	50.0		0%	100%	
Tare	100.0	1 1/2	40.0		0%	100%	
Wt. Dry	1460.9	1	25.0	81.0	6%	94.5%	
<u>Moisture Content</u>	20,000	3/4	20.0	93.9	6%	93.6%	
Wet + Tare	16,000	5/8	16.0	122.2	8%	91.6%	
Dry+Tare	12,500	1/2	12.5	132.9	9%	90.9%	
Tare	10,000	3/8	10.0	150.2	10%	89.7%	
MC (%)	5,000	0.185	5.0	204.5	14%	86.0%	
Passing	5,000						
<u>After Washing</u>	2,000	0.0937	2.0	238.1	16%	83.7%	
Wt. Dry+Tare	1,250	0.0469	1.25	314.8	22%	78.4%	
Tare	630	0.0234	0.63	425.9	29%	70.8%	
Wt. Dry	315	0.0116	0.315	531.0	36%	63.6%	
Tare No.	160	0.0059	0.160	723.9	50%	50.4%	
	75	0.0029	0.075	820.3	56%	43.8%	
	PAN						
HYDROMETER DATA	READING	TIME (min)	DIAMETER (mm)	TEMP. (°C)	CORR. READING	PERCENT FINER THAN	REMARKS
Wt Dry+Tare	32	0.5	0.063	21	27	43.4%	
Wt Tare	30	1	0.045	21	26	41.0%	
Wt Dry	28	2	0.032	21	24	37.8%	
Sample Size :	50	5	0.021	21	21	33.1%	
Wt Retained 2 mm:	285.7	15	0.012	21	16	25.9%	
% Passing 2 mm:	80.4%	30	0.009	21	14	22.7%	
Specific Gravity :	2.70	60	0.006	21	12	18.7%	
Hydrometer No.:	43-9856	120	0.005	21	10	15.5%	
Solution (g/L) :	40	240	0.003	21	9	13.9%	
		1440	0.001	21	7	10.8%	
		2880	0.001	21	6	9.2%	

GRAIN SIZE ANALYSIS

CLIENT : PWGSC
 PROJECT : Johnson Point
 JOB No. : 2977-371-00
 LOCATION :
 BOREHOLE : GTP-7
 DATE : September 17, 2008
 SAMPLE: 1 on Sept.5/08
 DEPTH :
 TECHNICIAN : CK



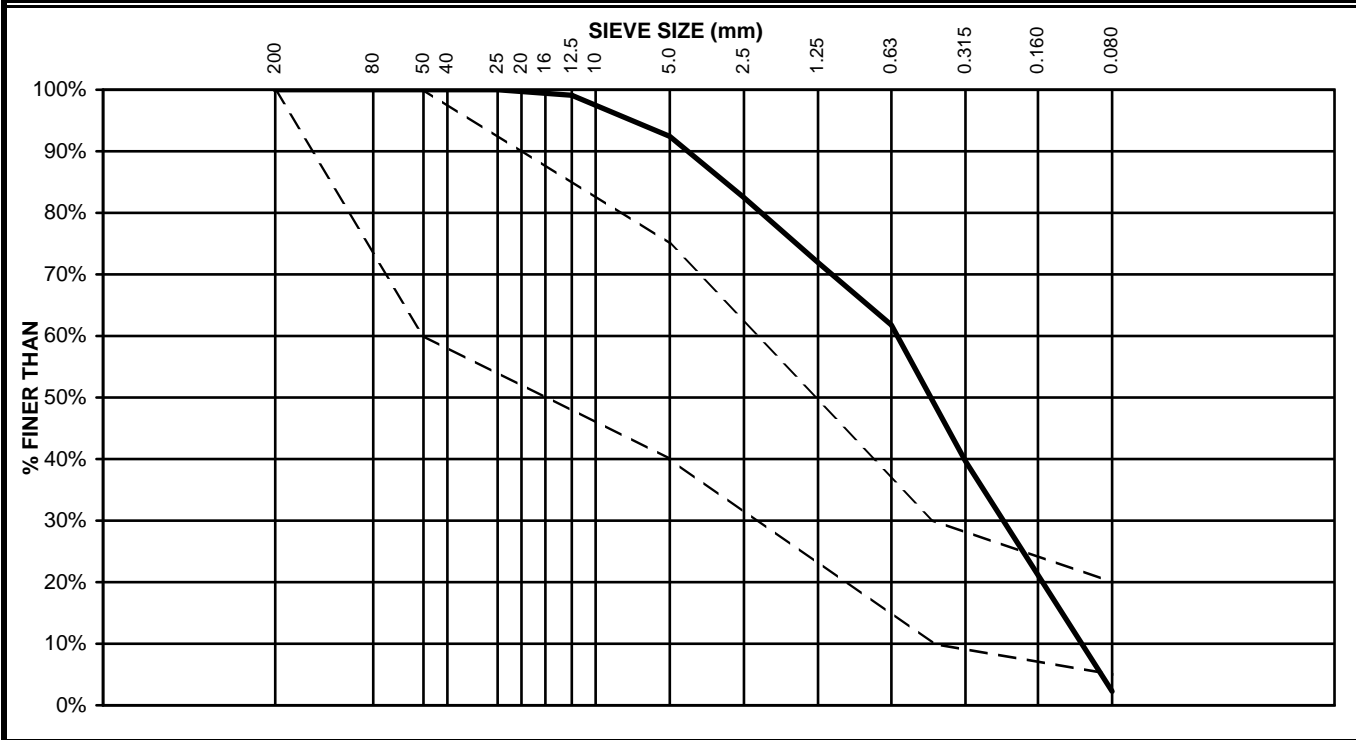
SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 1
 SAMPLE: 1 DEPTH : 0-0.3m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare 4857.6	80000	3	80.0				
Dry+Tare 4523.8	50000	2	50.0	o		100.0%	
Tare 432.6	40000	1 1/2	40.0				
Wt. Dry 4091.2	25000	1	25.0	o		100.0%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare 4857.6	16000	5/8	16.0				
Dry+Tare 4523.8	12500	1/2	12.5	36.8	0.9%	99.1%	
Tare 432.6	10000	3/8	10.0				
MC (%) 8.2%	5000	0.185	5.0	273.3	6.7%	92.4%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	406.8	9.9%	82.5%	
Wt. Dry+Tare	1250	0.0469	1.25	431.8	10.6%	71.9%	
Tare	630	0.0234	0.630	415.4	10.2%	61.8%	
Wt. Dry	315	0.01240	0.315	904.5	22.1%	39.7%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	1530.1	37.4%	2.3%	
	PAN			92.0	2.2%	0.0%	

Classification: **SP**
 d₁₀ 0.13
 C_c 0.83
 C_u 4.70

Description and Remarks: Fine-grs light grey SAND, loose, mixed/ interbedded with 2-5cm thick seams of yellowish brown SILT, trace - some fine sand, stiff.



SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 2, Borrow Area 4
 SAMPLE: 1 DEPTH : 0-0.3m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare 3486.4	80000	3	80.0				
Dry+Tare 3387.2	50000	2	50.0	o		100.0%	
Tare 459.7	40000	1 1/2	40.0				
Wt. Dry 2927.5	25000	1	25.0	o		100.0%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare 3486.4	16000	5/8	16.0				
Dry+Tare 3387.2	12500	1/2	12.5	29.8	1.0%	99.0%	
Tare 459.7	10000	3/8	10.0				
MC (%) 3.4%	5000	0.185	5.0	236.3	8.1%	90.9%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	335.6	11.5%	79.4%	
Wt. Dry+Tare 1250	1250	0.0469	1.25	583.1	19.9%	59.5%	
Tare 630	630	0.0234	0.630	577.3	19.7%	39.8%	
Wt. Dry 315	315	0.01240	0.315	704.6	24.1%	15.7%	
Tare No. 160	160	0.0059	0.160				
80	80	0.0029	0.080	419.3	14.3%	1.4%	
PAN	PAN			30.2	1.0%	0.4%	

Classification: **SP**
 Description and Remarks: Light brownish grey fine-grs SAND, loose. Pit walls show cross bedding and lag deposits indicating a glacio-fluvial origin.
 d_{10} 0.22
 C_c 0.89
 C_u 5.79

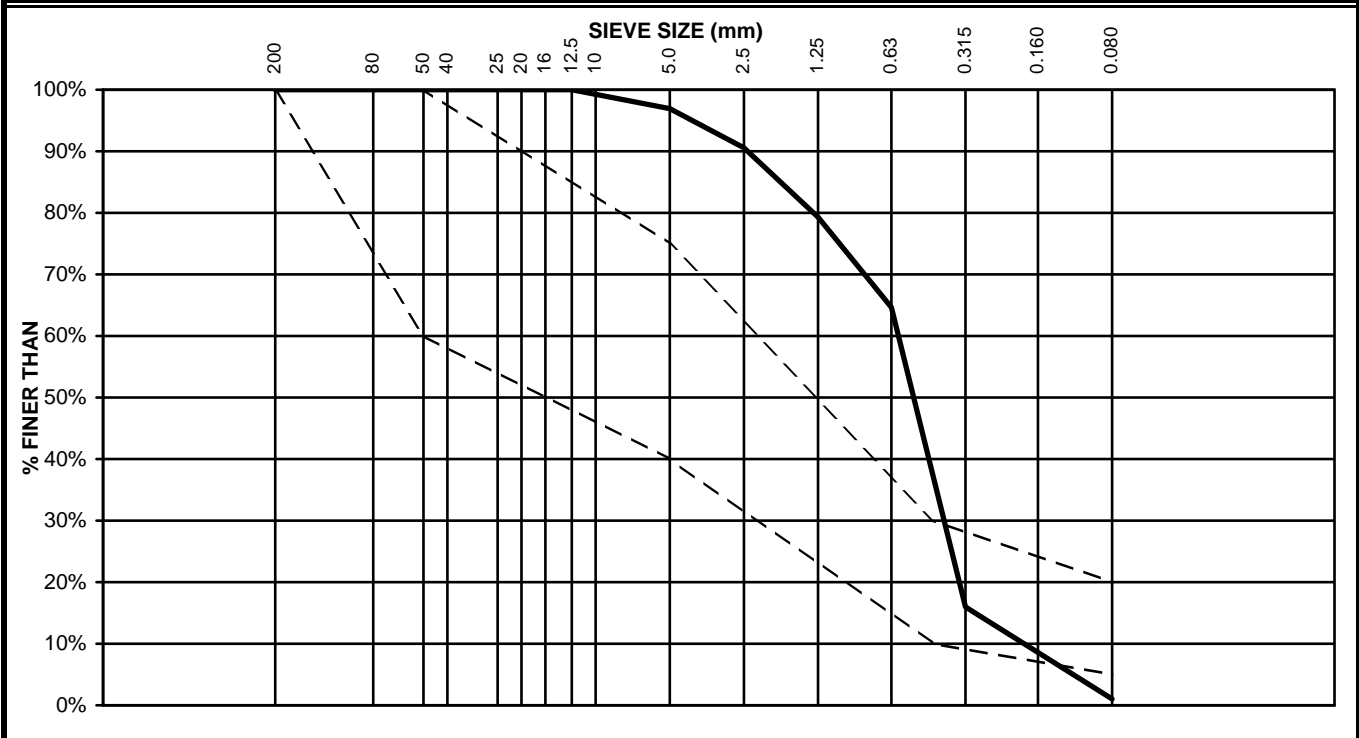


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 3, Borrow Area 6
 SAMPLE: 1 DEPTH : 0-0.3m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare 3255.8	80000	3	80.0				
Dry+Tare 3167.3	50000	2	50.0	o		100.0%	
Tare 459.2	40000	1 1/2	40.0				
Wt. Dry 2708.1	25000	1	25.0	o		100.0%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare 3255.8	16000	5/8	16.0				
Dry+Tare 3167.3	12500	1/2	12.5	o		100.0%	
Tare 459.2	10000	3/8	10.0				
MC (%) 3.3%	5000	0.185	5.0	83.1	3.1%	96.9%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	172.3	6.4%	90.6%	
Wt. Dry+Tare 1250	1250	0.0469	1.25	305.1	11.3%	79.3%	
Tare 630	630	0.0234	0.630	396.9	14.7%	64.6%	
Wt. Dry 315	315	0.01240	0.315	1318.0	48.7%	16.0%	
Tare No. 160	160	0.0059	0.160				
80	80	0.0029	0.080	404.8	14.9%	1.0%	
PAN	PAN			18.5	0.7%	0.3%	

Classification: **SP**
 Description and Remarks: Light grey to light brnsh grey interbedded/ intermixed fine SAND and fine-crs SAND, loose.
 d_{10} 0.22
 C_c 1.24
 C_u 2.71

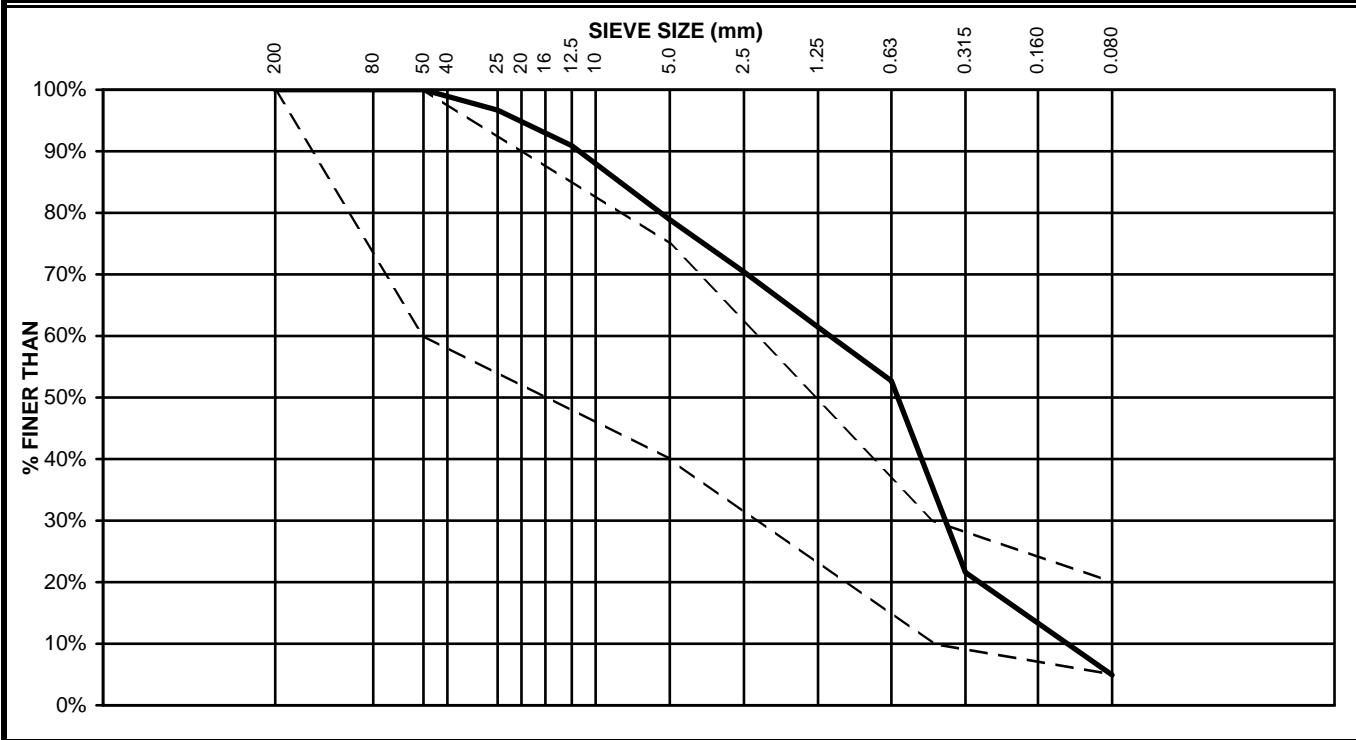


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 4, Borrow Area 3
 SAMPLE: 1 DEPTH : 0-0.5m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare	5810.5	80000	80.0				
Dry+Tare	5398.4	50000	50.0	0		100.0%	
Tare	918.9	40000	40.0				
Wt. Dry	4479.5	25000	25.0	148.5	3.3%	96.7%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	5810.5	16000	16.0				
Dry+Tare	5398.4	12500	12.5	258.2	5.8%	90.9%	
Tare	918.9	10000	10.0				
MC (%)	9.2%	5000	5.0	538.7	12.0%	78.9%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	380.1	8.5%	70.4%	
Wt. Dry+Tare	1250	0.0469	1.25	401.8	9.0%	61.4%	
Tare	630	0.0234	0.630	391.1	8.7%	52.7%	
Wt. Dry	315	0.01240	0.315	1394.6	31.1%	21.6%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	745.9	16.7%	4.9%	
	PAN			220.0	4.9%	0.0%	

Classification: **SP**
 Description and Remarks: Silty fine- crs SAND, trace fine gravel, silty organic seams
 d_{10} 0.15
 C_c 0.92
 C_u 7.57



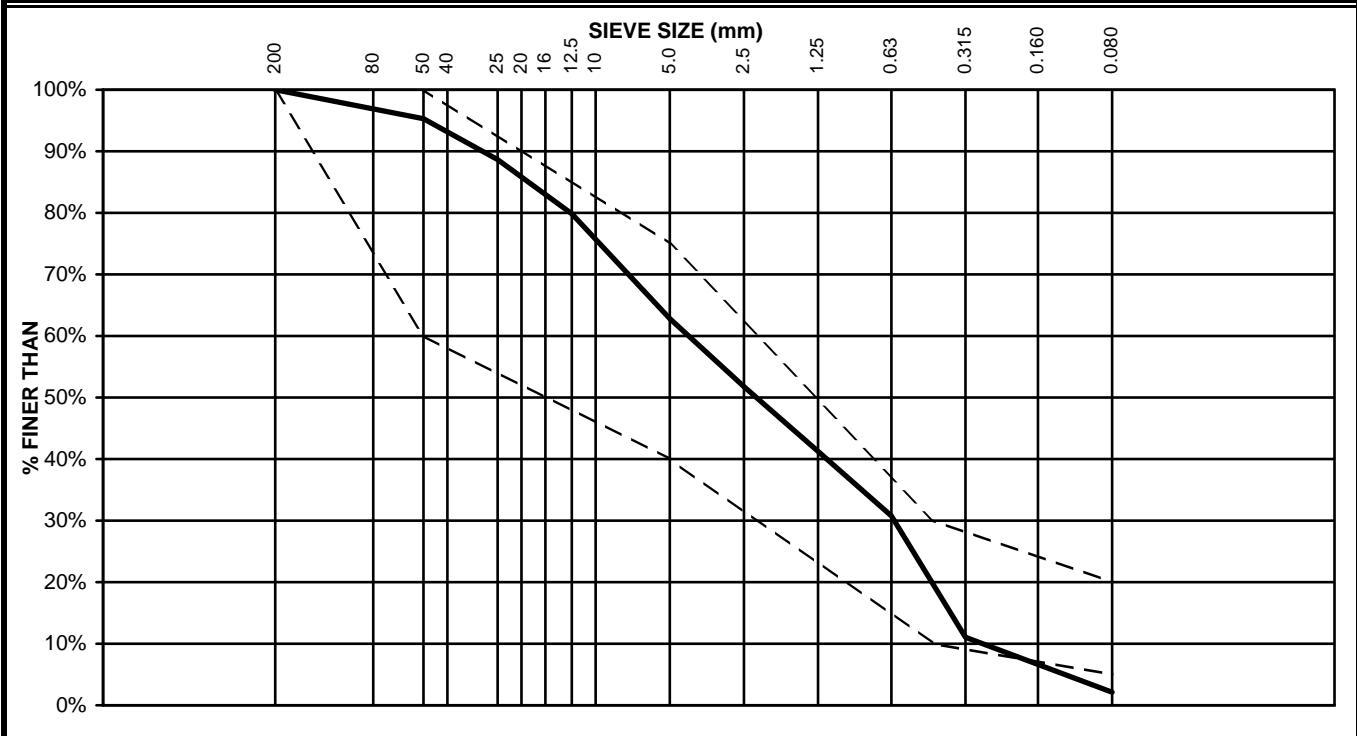
SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 5, Borrow Area 3
 SAMPLE: 1 DEPTH : 0-0.4m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0	0		100.0%	
Wet + Tare 5648.1	80000	3	80.0				
Dry+Tare 5438.6	50000	2	50.0	212.6	5%	95.3%	
Tare 918.9	40000	1 1/2	40.0				
Wt. Dry 4519.7	25000	1	25.0	300.0	6.6%	88.7%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare 5648.1	16000	5/8	16.0				
Dry+Tare 5438.6	12500	1/2	12.5	398.0	8.8%	79.9%	
Tare 918.9	10000	3/8	10.0				
MC (%) 4.6%	5000	0.185	5.0	769.9	17.0%	62.8%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	499.2	11.0%	51.8%	
Wt. Dry+Tare 1250	1250	0.0469	1.25	475.2	10.5%	41.3%	
Tare 630	630	0.0234	0.630	474.6	10.5%	30.8%	
Wt. Dry 315	315	0.01240	0.315	890.6	19.7%	11.1%	
Tare No. 160	160	0.0059	0.160				
80	80	0.0029	0.080	404.1	8.9%	2.1%	
PAN	PAN			95.0	2.1%	0.0%	

Classification: **SP**
 d₁₀ 0.29
 C_c 0.30
 C_u 15.18

Description and Remarks: Brown, silty fine GRAVELY SAND, trace-minor silt, loose. Alluvial deposit

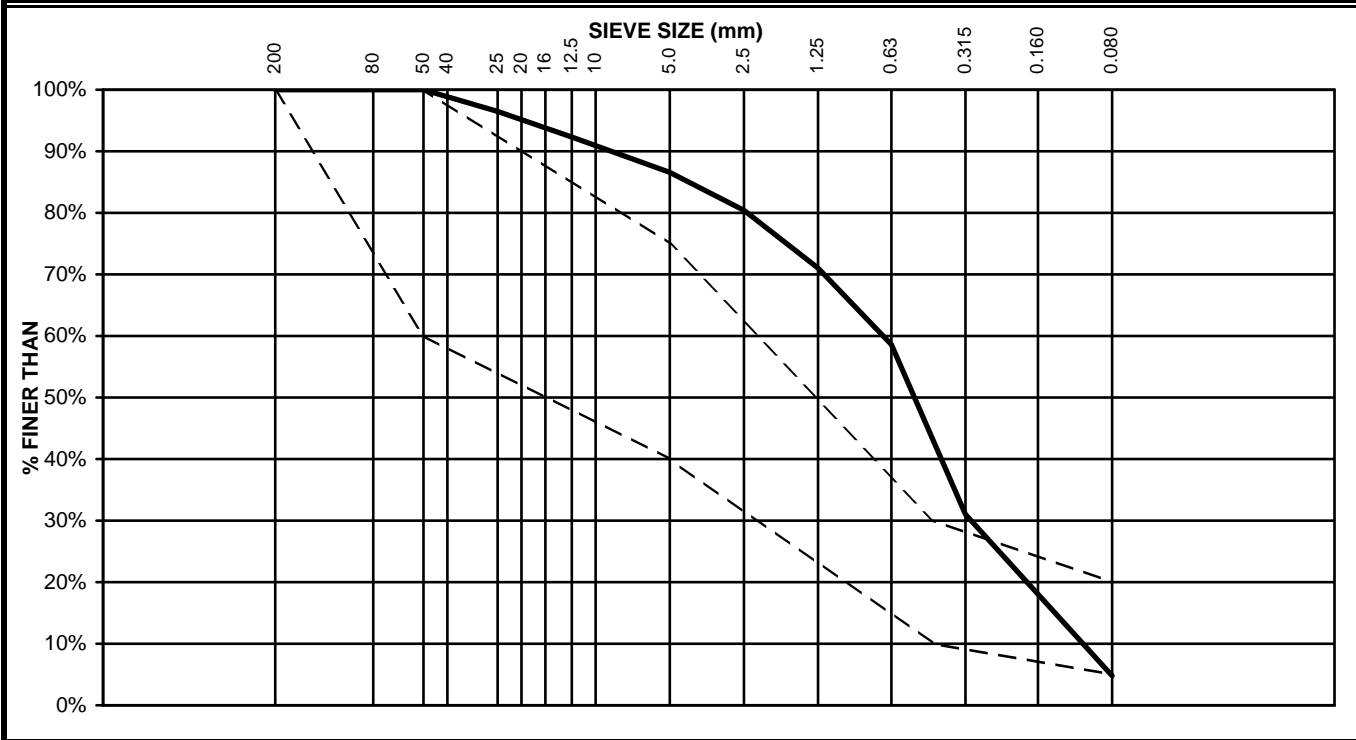


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 6, Borrow Area 3
 SAMPLE: 1 DEPTH : 0-0.3m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare 5004.3	80000	3	80.0				
Dry+Tare 4601.5	50000	2	50.0	o		100.0%	
Tare 918.9	40000	1 1/2	40.0				
Wt. Dry 3682.6	25000	1	25.0	129.8	3.5%	96.5%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare 5004.3	16000	5/8	16.0				
Dry+Tare 4601.5	12500	1/2	12.5	153.0	4.2%	92.3%	
Tare 918.8	10000	3/8	10.0				
MC (%) 10.9%	5000	0.185	5.0	211.5	5.7%	86.6%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	226.8	6.2%	80.4%	
Wt. Dry+Tare 1250	1250	0.0469	1.25	345.6	9.4%	71.0%	
Tare 630	630	0.0234	0.630	457.8	12.4%	58.6%	
Wt. Dry 315	315	0.01240	0.315	1016.0	27.6%	31.0%	
Tare No. 160	160	0.0059	0.160				
80	80	0.0029	0.080	965.5	26.2%	4.8%	
PAN	PAN			177.9	4.8%	0.0%	

Classification: **SP**
 Description and Remarks: Light - dark brown f- crs sandy SILT, trace fine gravel. Alluvial
 d_{10} 0.13
 C_c 1.06
 C_u 5.52

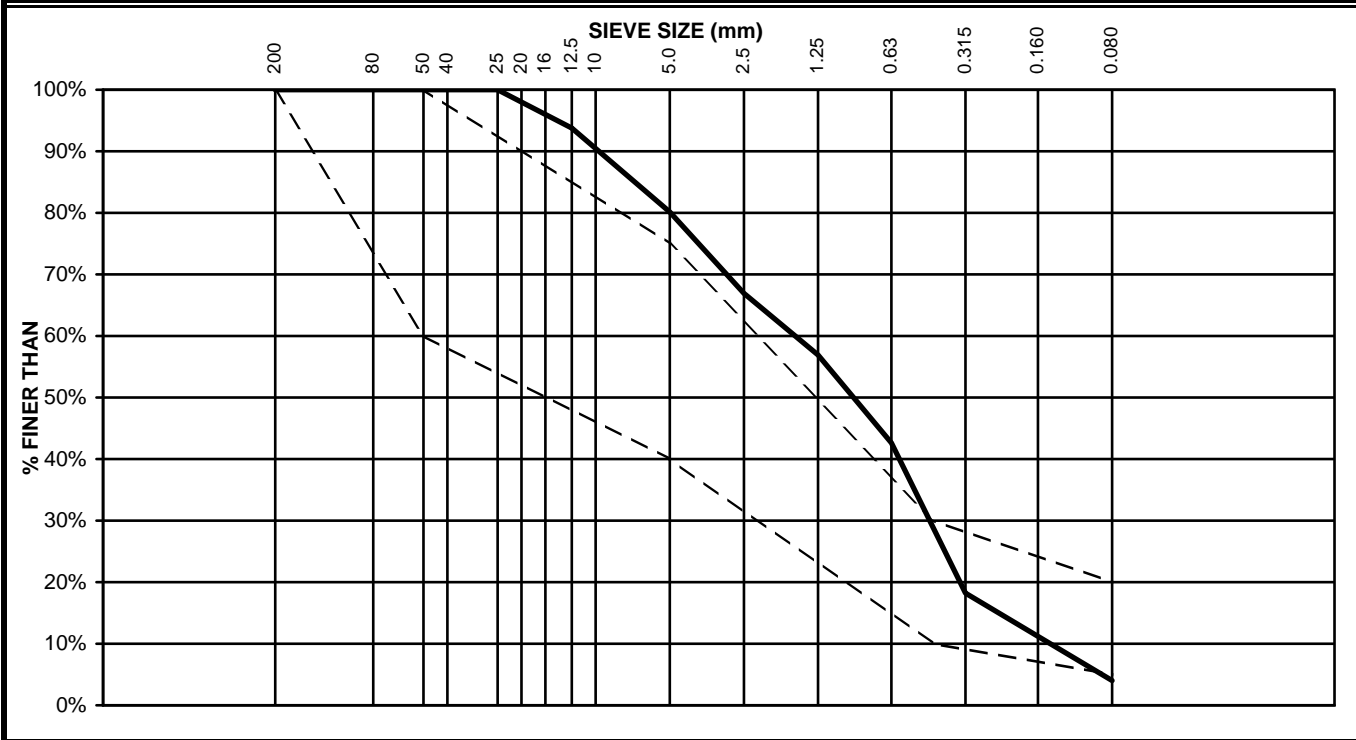


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 8, Borrow Area 3
 SAMPLE: 1 DEPTH : 0-0.3m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare 5606.3	80000	3	80.0				
Dry+Tare 5287.3	50000	2	50.0	o		100.0%	
Tare 918.9	40000	1 1/2	40.0				
Wt. Dry 4368.4	25000	1	25.0	o		100.0%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare 5606.3	16000	5/8	16.0				
Dry+Tare 5287.3	12500	1/2	12.5	271.9	6.2%	93.8%	
Tare 918.9	10000	3/8	10.0				
MC (%) 7.3%	5000	0.185	5.0	595.4	13.6%	80.1%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	577.8	13.2%	66.9%	
Wt. Dry+Tare 1250	1250	0.0469	1.25	436.8	10.0%	56.9%	
Tare 630	630	0.0234	0.630	624.4	14.3%	42.6%	
Wt. Dry 315	315	0.01240	0.315	1065.9	24.4%	18.2%	
Tare No. 160	160	0.0059	0.160				
80	80	0.0029	0.080	621.0	14.2%	4.0%	
PAN	PAN			164.9	3.8%	0.2%	

Classification: **SP**
 Description and Remarks: Greyish brown fine- crs SAND, wet at base. Alluvial
 d₁₀ 0.18
 C_c 0.75
 C_u 9.13

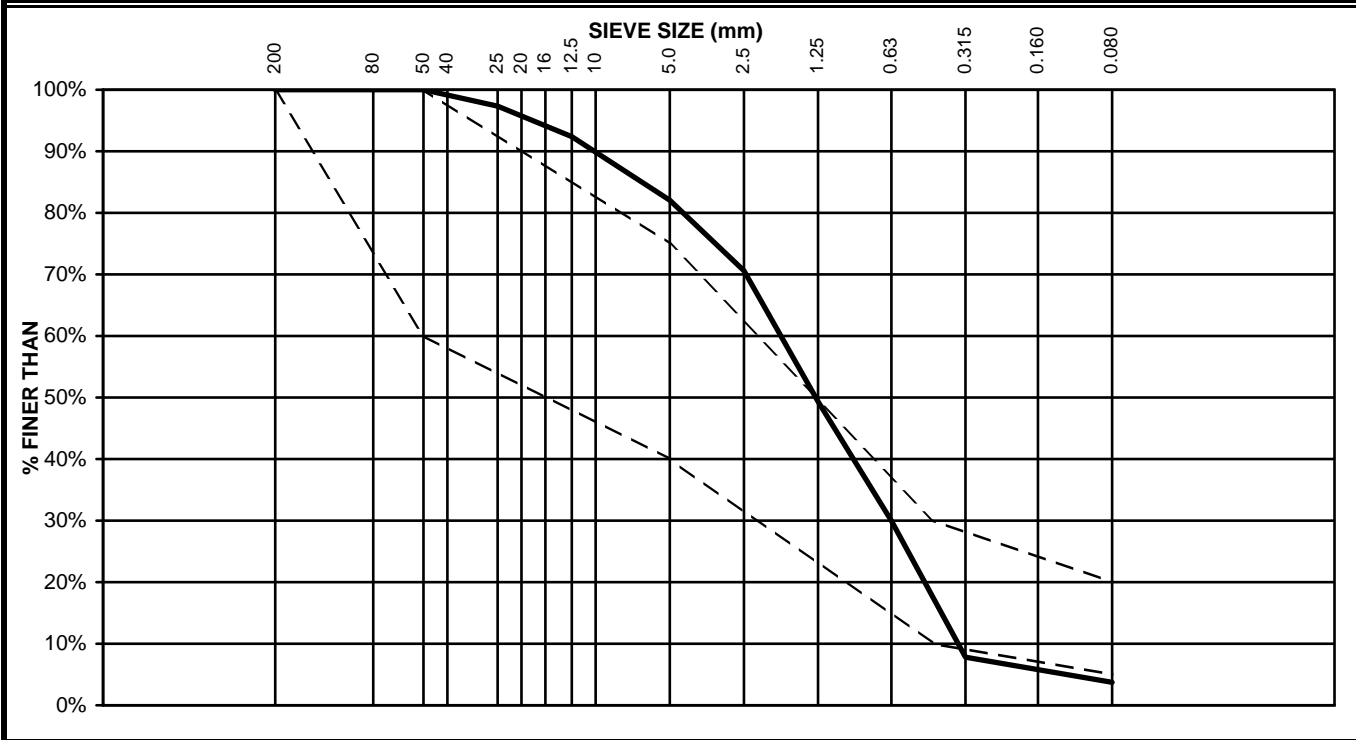


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 9, west side of Airstrip
 SAMPLE: 1 DEPTH : 0-0.8m
 DATE : September 5, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare	5701.4	80000	3	80.0			
Dry+Tare	5424.9	50000	2	50.0	0	100.0%	
Tare	918.9	40000	1 1/2	40.0			
Wt. Dry	4506.0	25000	1	25.0	120.0	2.7%	97.3%
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	5701.4	16000	5/8	16.0			
Dry+Tare	5424.9	12500	1/2	12.5	222.9	4.9%	92.4%
Tare	918.9	10000	3/8	10.0			
MC (%)	6.1%	5000	0.185	5.0	465.8	10.3%	82.1%
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	515.9	11.4%	70.6%	
Wt. Dry+Tare	1250	0.0469	1.25	957.8	21.3%	49.3%	
Tare	630	0.0234	0.630	873.3	19.4%	30.0%	
Wt. Dry	315	0.01240	0.315	998.5	22.2%	7.8%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	183.8	4.1%	3.7%	
	PAN			158.5	3.5%	0.2%	

Classification: **SP**
 Description and Remarks: Greyish brown med- crs SAND, minor fine gravel, rare silt, loose. Alluvial. Permafrost at 0.9m depth. Water on permafrost surface
 d_{10} 0.35
 C_c 0.61
 C_u 5.42

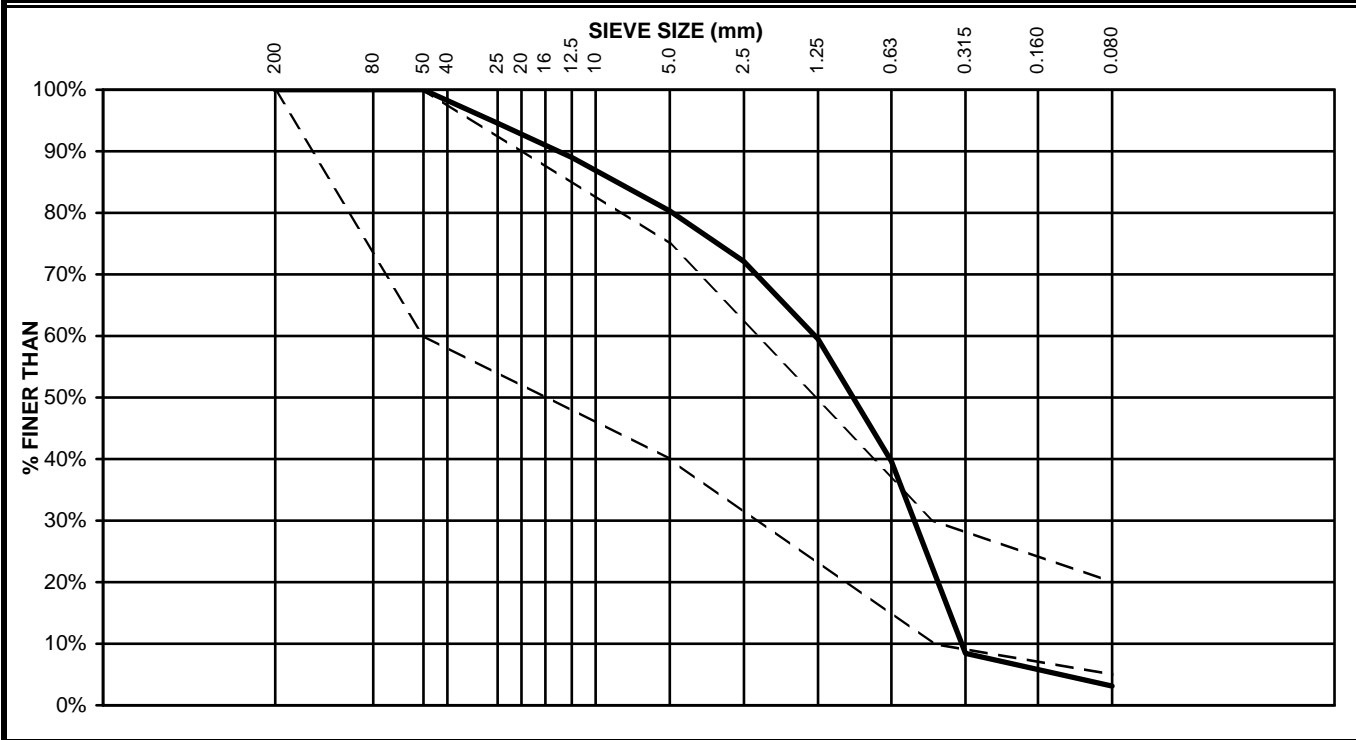


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 10, west side of Airstrip
 SAMPLE: 1 DEPTH : 0-0.8m
 DATE : September 5, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare	6668.1	80000	3	80.0			
Dry+Tare	6415.2	50000	2	50.0	0	100.0%	
Tare	918.9	40000	1 1/2	40.0			
Wt. Dry	5496.3	25000	1	25.0	298.9	5.4%	94.6%
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	6668.1	16000	5/8	16.0			
Dry+Tare	6415.2	12500	1/2	12.5	305.6	5.6%	89.0%
Tare	918.9	10000	3/8	10.0			
MC (%)	4.6%	5000	0.185	5.0	477.7	8.7%	80.3%
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	451.8	8.2%	72.1%	
Wt. Dry+Tare	1250	0.0469	1.25	691.8	12.6%	59.5%	
Tare	630	0.0234	0.630	1091.6	19.9%	39.6%	
Wt. Dry	315	0.01240	0.315	1715.4	31.2%	8.4%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	291.8	5.3%	3.1%	
	PAN			138.0	2.5%	0.6%	

Classification: **SP**
 Description and Remarks: Fine - crs SAND, trace gravel, loose. Permafrost at 0.8m depth.
 d_{10} 0.33
 C_c 0.66
 C_u 3.93

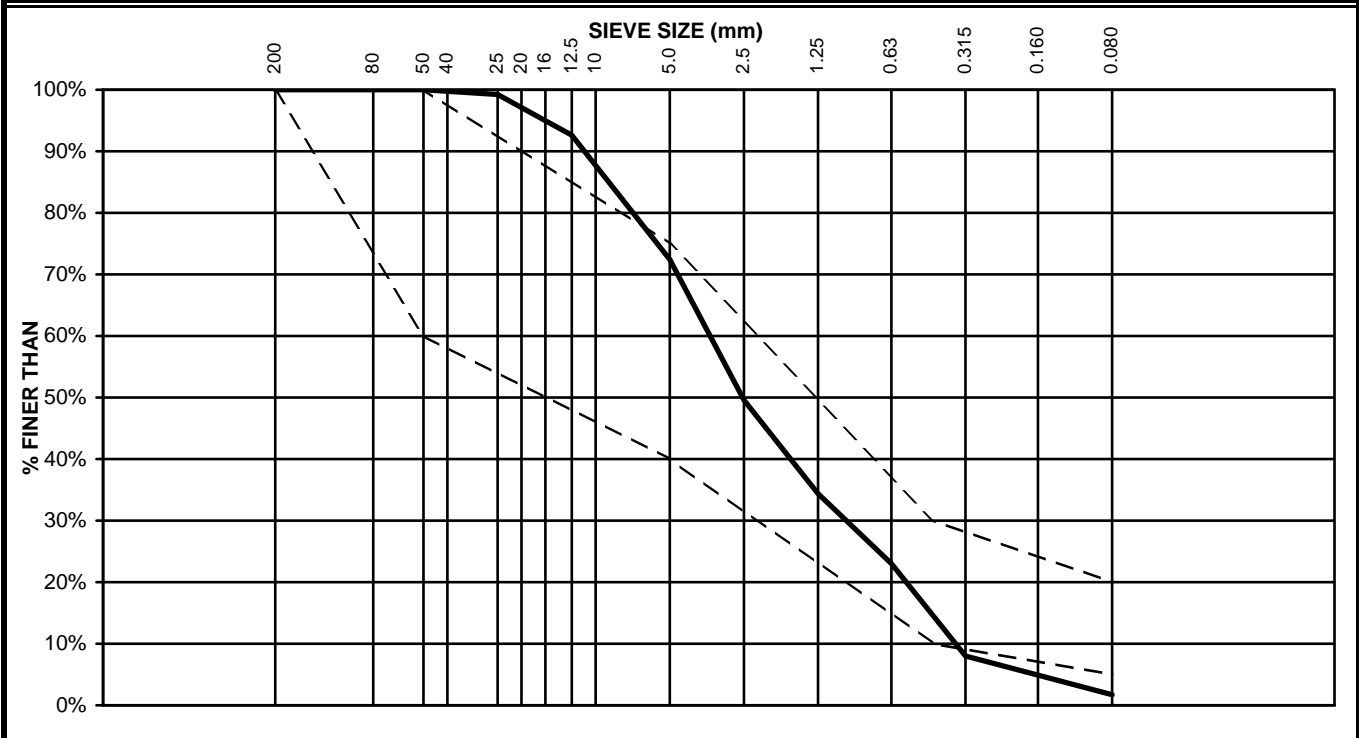


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 11, Adjacent to Apron Area excavation point N14
 SAMPLE: 1 DEPTH : 0-0.8m
 DATE : September 5, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0	o		100.0%	
Wet + Tare	9615.2	80000	80.0				
Dry+Tare	8669.8	50000	50.0	o		100.0%	
Tare	918.9	40000	40.0				
Wt. Dry	7750.9	25000	25.0	59.5	0.8%	99.2%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	9615.2	16000	5/8				
Dry+Tare	8669.8	12500	1/2	512.9	6.6%	92.6%	
Tare	918.9	10000	3/8				
MC (%)	12.2%	5000	0.185	1564.9	20.2%	72.4%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	1770.8	22.8%	49.6%	
Wt. Dry+Tare	1250	0.0469	1.25	1177.9	15.2%	34.4%	
Tare	630	0.0234	0.630	880.7	11.4%	23.0%	
Wt. Dry	315	0.01240	0.315	1164.1	15.0%	8.0%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	487.0	6.3%	1.7%	
	PAN			130.0	1.7%	0.0%	

Classification: **SP**
 Description and Remarks: Permafrost at 0.8m depth. 0- 0.4 fine-med SAND, minor gravel, brn. 0.4+ Fine-med GRAVEL, clean, water inflow at 100L/ minute
 d₁₀ 0.36
 C_c 0.79
 C_u 10.20



PROJECT: Johnson Point	CLIENT: PWGSC	TESTHOLE NO.: MW09-01
LOCATION: Apron Area		PROJECT NO.: 2977-371-00
CONTRACTOR: E. Grubens Transport	METHOD: Excavator	ELEVATION (m): 1.13
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK	<input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT	<input checked="" type="checkbox"/> CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	USC	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0			Backfill above original ground level (Brown SAND, trace silt, moist)			- top of well 0.93 m above final backfill surface	1
	FI		original ground level ↓				
			Light brown SILTY SAND, moist - thin PHC layers				0
1	SM						
2			Fine to medium grained GRAVEL, wet to saturated				-1
	GP						
			Ice lens (top of permafrost), black PHC/organics in upper 0.2 m of ice, ice surface dips to NNE				
	ICE						
3			Base of excavation at 2.9 mBGS, in permafrost.				-2
4							

LOG OF TESTHOLE 2977-371-00-JOHNSON POINT MW INSTALL GPJ UMA GDT PRINT. 09/11/18. By:

AECOM

LOGGED BY: BHN	COMPLETION DEPTH: 2.90 m
REVIEWED BY: BHN	COMPLETION DATE: 09/8/29
PROJECT ENGINEER: Brendon Norrie	Page 1 of 1

PROJECT: Johnson Point	CLIENT: PWGSC	TESTHOLE NO.: MW09-02
LOCATION: Apron Area		PROJECT NO.: 2977-371-00
CONTRACTOR: E. Grubens Transport	METHOD: Excavator	ELEVATION (m): 1.5
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK	<input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT	<input checked="" type="checkbox"/> CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	USC	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0		FI	Backfill above original ground level (Brown SAND, trace silt, moist)			- top of well 0.7 m above final backfill surface	1.5
			original ground level ↓				
		SM	Brown SILTY SAND, damp to moist - minor seepage at 1.0 mBGS, dark brown below seepage				
		GP	GRAVEL, saturated - strong seepage below 1.4 mBGS				
		GP-SF	GRAVEL with SILTY SAND lenses, top of permafrost at 2.4 mBGS, PHC staining and odour below 2.4 mBGS				
			Base of excavation at 2.9 mBGS, in permafrost.				

LOG OF TESTHOLE 2977-371-00-JOHNSON POINT MW INSTALL GPJ UMA GDT PRINT: 09/11/18 By:

ARGON

LOGGED BY: BHN	COMPLETION DEPTH: 2.90 m
REVIEWED BY: BHN	COMPLETION DATE: 09/8/29
PROJECT ENGINEER: Brendon Norrie	Page 1 of 1

PROJECT: Johnson Point	CLIENT: PWGSC	TESTHOLE NO.: MW09-03
LOCATION: River Area West		PROJECT NO.: 2977-371-00
CONTRACTOR: E. Grubens Transport	METHOD: Excavator	ELEVATION (m): 0.14
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK	<input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> GRAVEL <input type="checkbox"/> SLOUGH	<input checked="" type="checkbox"/> GROUT <input checked="" type="checkbox"/> CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	USC	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0			Brown SILT, trace sand - thin layers of PHC staining in upper 0.4 m			- top of well 1.37 m above ground level	0
1	ML						
2	GP		Brown, coarse grained SANDY GRAVEL, wet - seepage at 1.4 mBGS				-1
3			Base of excavation at 2.4 mBGS, on permafrost. No PHC odour or staining noted in gravel.				-2
4							-3

LOG OF TESTHOLE 2977-371-00-JOHNSON POINT MW/INSTALL GPJ UMA GDT PRINT: 09/11/18 By:

AECOM	LOGGED BY: BHN	COMPLETION DEPTH: 2.40 m
	REVIEWED BY: BHN	COMPLETION DATE: 09/8/30
	PROJECT ENGINEER: Brendon Norrie	Page 1 of 1

PROJECT: Johnson Point	CLIENT: PWGSC	TESTHOLE NO.: MW09-04
LOCATION: River Area East		PROJECT NO.: 2977-371-00
CONTRACTOR: E. Grubens Transport	METHOD: Excavator	ELEVATION (m): 0.33
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK	<input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> GRAVEL <input type="checkbox"/> SLOUGH	<input checked="" type="checkbox"/> GROUT <input checked="" type="checkbox"/> CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	USC	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0			Brown SANDY SILT			- top of well 1.35 m above ground level	0
	ML		Greyish-brown, coarse grained, SANDY GRAVEL, moist				
			- seepage at 0.6 mBGS				
1	GP						-1
			Base of excavation at 1.6 mBGS, on permafrost. No PHC odour or staining noted in gravel.				
2							-2
3							-3
4							

LOG OF TESTHOLE 2977-371-00-JOHNSON POINT MW/INSTALL GP J UMA GDT PRINT: 09/11/18 By:



LOGGED BY: BHN	COMPLETION DEPTH: 1.60 m
REVIEWED BY: BHN	COMPLETION DATE: 09/8/30
PROJECT ENGINEER: Brendon Norrie	Page 1 of 1

PROJECT: Johnson Point	CLIENT: PWGSC	TESTHOLE NO.: MW09-05
LOCATION: Apron Area (Beach)		PROJECT NO.: 2977-371-00
CONTRACTOR: E. Grubens Transport	METHOD: Excavator	ELEVATION (m): 0.81
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT <input checked="" type="checkbox"/> CUTTINGS <input type="checkbox"/> SAND	

DEPTH (m)	USC	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0			Greyish-brown, interbedded coarse grained SAND, SILTY SAND and fine to medium grained GRAVEL			- top of well 0.19 m above ground level	0
1			Grey, fine to medium grained, GRAVEL, dry				-1
2			Base of excavation at 1.25 mBGS, on permafrost. No PHC odour or staining noted during excavation.				-2
3							-3
4							-4

LOG OF TESTHOLE 2977-371-00-JOHNSON POINT MW/INSTALL GPJ UMA,GDT PRINT: 09/11/18 By:

AECOM	LOGGED BY: BHN	COMPLETION DEPTH: 1.25 m
	REVIEWED BY: BHN	COMPLETION DATE: 09/8/29
	PROJECT ENGINEER: Brendon Norrie	Page 1 of 1

PROJECT: Johnson Point	CLIENT: PWGSC	TESTHOLE NO.: MW09-06
LOCATION: Apron Area (Beach)		PROJECT NO.: 2977-371-00
CONTRACTOR: E. Grubens Transport	METHOD: Excavator	ELEVATION (m): 0.9
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK	<input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> GRAVEL <input type="checkbox"/> SLOUGH	<input checked="" type="checkbox"/> CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	USC	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0			Brown SILTY SAND			- top of well 0.1 m above ground level	
	SM		GRAVEL, dry, loose				
-1	GP		- seepage at 1.0 mBGS				0
			Base of excavation at 1.15 mBGS, on permafrost. No PHC odour or staining noted in excavation.				
-2							-1
-3							-2
-4							-3

LOG OF TESTHOLE 2977-371-00-JOHNSON POINT MW INSTALL GPJ UMA GDT PRINT: 09/11/18 By

	LOGGED BY: BHN	COMPLETION DEPTH: 1.15 m
	REVIEWED BY: BHN	COMPLETION DATE: 09/8/29
	PROJECT ENGINEER: Brendon Norrie	Page 1 of 1

PROJECT: Johnson Point	CLIENT: PWGSC	TESTHOLE NO.: MW09-07
LOCATION: Apron Area (Beach)		PROJECT NO.: 2977-371-00
CONTRACTOR: E. Grubens Transport	METHOD: Excavator	ELEVATION (m): 0.92
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK	<input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> GRAVEL <input type="checkbox"/> SLOUGH	<input checked="" type="checkbox"/> CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	USC	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0			Brown SANDY SILT			- top of well 0.24 m above ground level	
	ML		Brown SILTY SAND				
1		SM	Grey GRAVEL, wet, flowing				0
	GP		Base of excavation at 1.45 mBGS, on permafrost. No PHC odour or staining noted in excavation.				-1
2							-2
3							-3
4							-4

LOG OF TESTHOLE 2977-371-00-JOHNSON POINT MW INSTALL.GPJ UIMA.GDT PRINT: 09/11/18 By:

AECOM

LOGGED BY: BHN	COMPLETION DEPTH: 1.45 m
REVIEWED BY: BHN	COMPLETION DATE: 09/8/29
PROJECT ENGINEER: Brendon Norrie	Page 1 of 1

SIEVE ANALYSIS

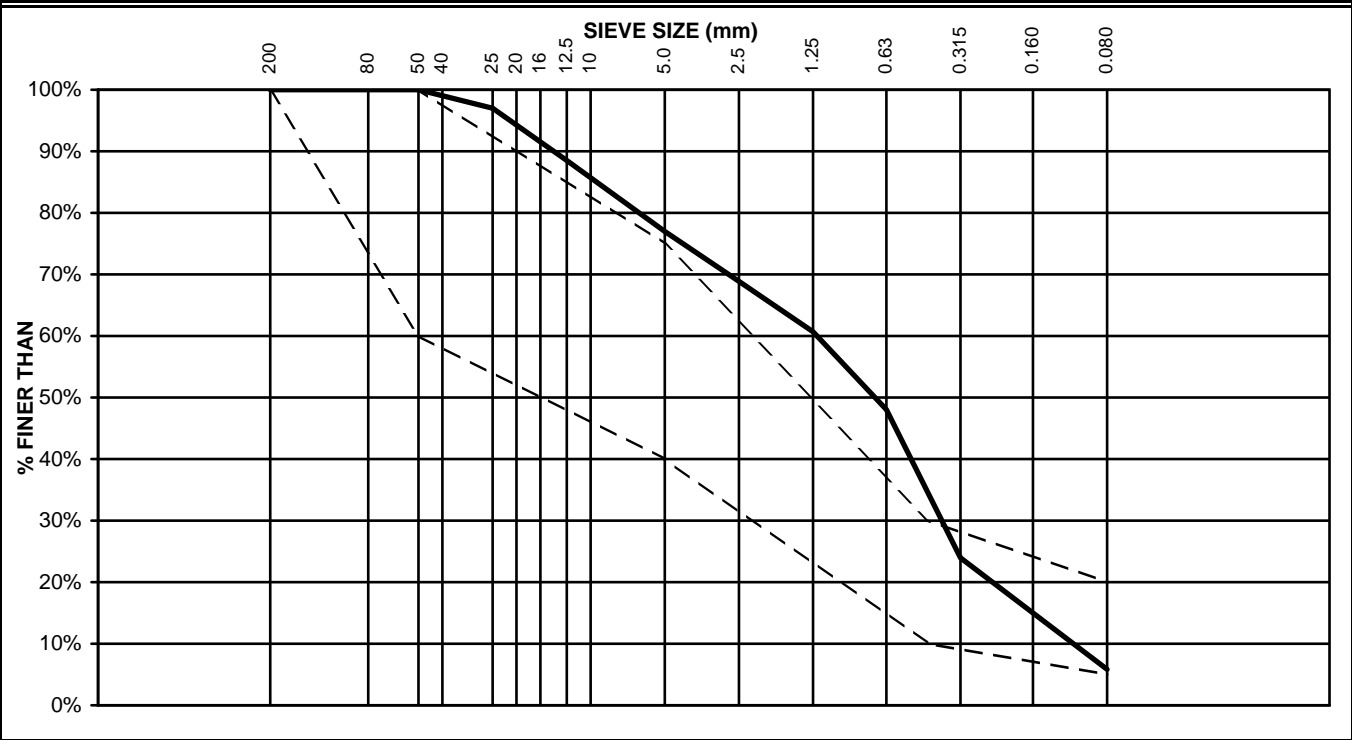
CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Landfill Lobe D. Sample of First Lift
 SAMPLE: 1
 DATE : September 5, 2008

DEPTH : 0-0.3m
 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare	5621.9	80000	80.0				
Dry+Tare	5059.3	50000	50.0	0		100.0%	
Tare	429.8	40000	40.0				
Wt. Dry	4629.5	25000	25.0	138.9	3.0%	97.0%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	5621.9	16000	5/8				
Dry+Tare	5059.3	12500	1/2	392.8	8.5%	88.5%	
Tare	429.8	10000	3/8				
MC (%)	12.2%	5000	0.185	534.1	11.5%	77.0%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	375.0	8.1%	68.9%	
Wt. Dry+Tare	1250	0.0469	1.25	379.1	8.2%	60.7%	
Tare	630	0.0234	0.630	585.6	12.6%	48.0%	
Wt. Dry	315	0.01240	0.315	1114.8	24.1%	24.0%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	838.8	18.1%	5.8%	
	PAN			265.9	5.7%	0.1%	

Classification: **SP**
 d_{10} 0.13
 C_c 0.95
 C_u 9.08

Description and Remarks: Sample of compacted first lift on landfill regrade

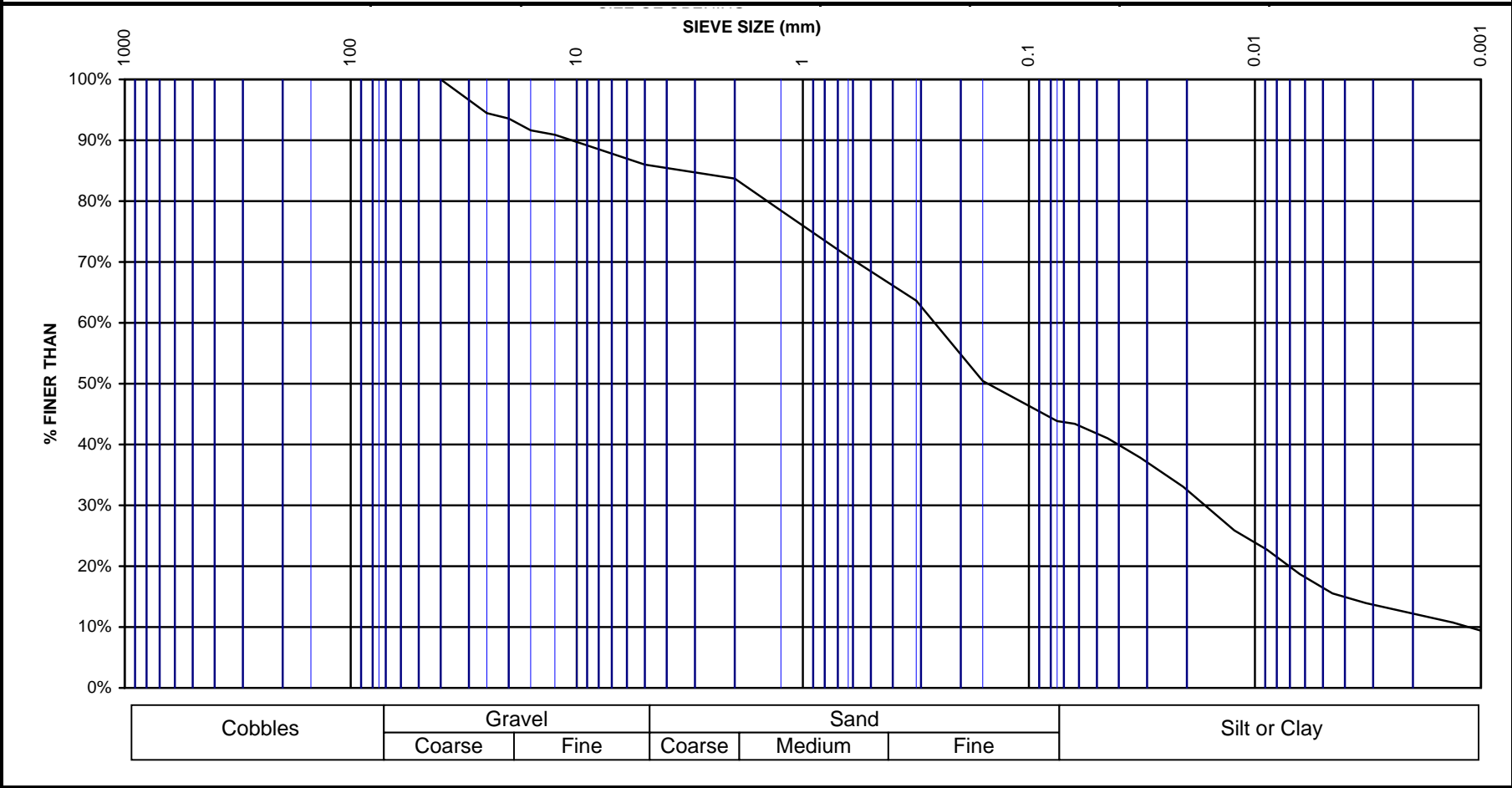


GRAIN SIZE ANALYSIS

CLIENT :		PWGSC					
PROJECT :		Johnson Point					
JOB No. :		2977-371-00					
LOCATION :						SAMPLE: 1 on Sept.5/08	
BOREHOLE: GTP-7						DEPTH :	
DATE : September 17, 2008						TECHNICIAN : CK	
TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	REMARKS
		APPROX. INCHES	mm				
<u>Before Washing</u>	150,000	6	150.0		0%	100%	
Wet + Tare	75,000	3	75.0		0%	100%	
Dry+Tare 1560.9	50,000	2	50.0		0%	100%	
Tare 100.0	40,000	1 1/2	40.0		0%	100%	
Wt. Dry 1460.9	25,000	1	25.0	81.0	6%	94.5%	
<u>Moisture Content</u>	20,000	3/4	20.0	93.9	6%	93.6%	
Wet + Tare	16,000	5/8	16.0	122.2	8%	91.6%	
Dry+Tare	12,500	1/2	12.5	132.9	9%	90.9%	
Tare	10,000	3/8	10.0	150.2	10%	89.7%	
MC (%)	5,000	0.185	5.0	204.5	14%	86.0%	
Passing	5,000						
<u>After Washing</u>	2,000	0.0937	2.0	238.1	16%	83.7%	
Wt. Dry+Tare	1,250	0.0469	1.25	314.8	22%	78.4%	
Tare	630	0.0234	0.63	425.9	29%	70.8%	
Wt. Dry	315	0.0116	0.315	531.0	36%	63.6%	
Tare No.	160	0.0059	0.160	723.9	50%	50.4%	
	75	0.0029	0.075	820.3	56%	43.8%	
	PAN						
HYDROMETER DATA	READING	TIME (min)	DIAMETER (mm)	TEMP. (°C)	CORR. READING	PERCENT FINER THAN	REMARKS
Wt Dry+Tare	32	0.5	0.063	21	27	43.4%	
Wt Tare	30	1	0.045	21	26	41.0%	
Wt Dry 1,460.9	28	2	0.032	21	24	37.8%	
Sample Size : 50	25	5	0.021	21	21	33.1%	
Wt Retained 2 mm: 285.7	21	15	0.012	21	16	25.9%	
% Passing 2 mm: 80.4%	19	30	0.009	21	14	22.7%	
Specific Gravity : 2.70	16	60	0.006	21	12	18.7%	
Hydrometer No.: 43-9856	14	120	0.005	21	10	15.5%	
Solution (g/L) : 40	13	240	0.003	21	9	13.9%	
	11	1440	0.001	21	7	10.8%	
	10	2880	0.001	21	6	9.2%	

GRAIN SIZE ANALYSIS

CLIENT : PWGSC
 PROJECT : Johnson Point
 JOB No. : 2977-371-00
 LOCATION :
 BOREHOLE : GTP-7
 DATE : September 17, 2008
 SAMPLE: 1 on Sept.5/08
 DEPTH :
 TECHNICIAN : CK



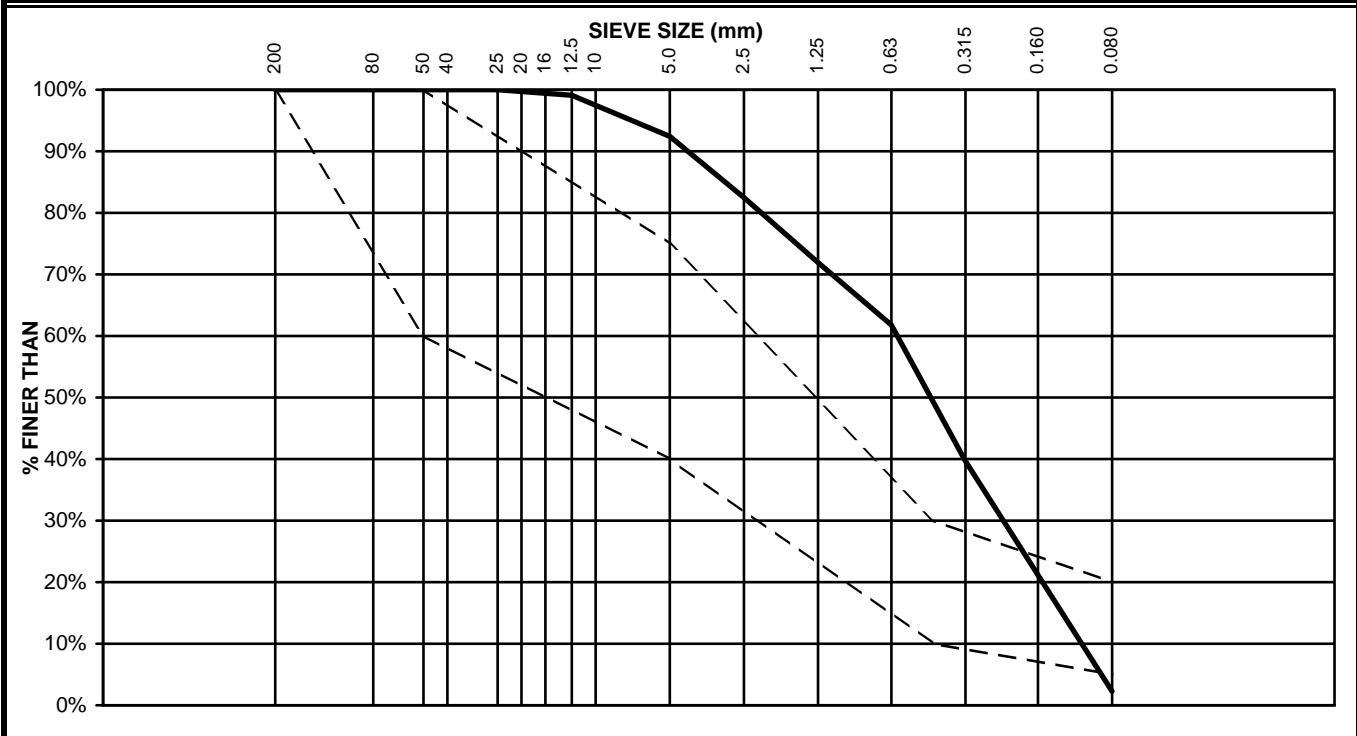
SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 1
 SAMPLE: 1 DEPTH : 0-0.3m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare 4857.6	80000	3	80.0				
Dry+Tare 4523.8	50000	2	50.0	o		100.0%	
Tare 432.6	40000	1 1/2	40.0				
Wt. Dry 4091.2	25000	1	25.0	o		100.0%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare 4857.6	16000	5/8	16.0				
Dry+Tare 4523.8	12500	1/2	12.5	36.8	0.9%	99.1%	
Tare 432.6	10000	3/8	10.0				
MC (%) 8.2%	5000	0.185	5.0	273.3	6.7%	92.4%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	406.8	9.9%	82.5%	
Wt. Dry+Tare	1250	0.0469	1.25	431.8	10.6%	71.9%	
Tare	630	0.0234	0.630	415.4	10.2%	61.8%	
Wt. Dry	315	0.01240	0.315	904.5	22.1%	39.7%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	1530.1	37.4%	2.3%	
	PAN			92.0	2.2%	0.0%	

Classification: **SP**
 d₁₀ 0.13
 C_c 0.83
 C_u 4.70

Description and Remarks: Fine-grs light grey SAND, loose, mixed/ interbedded with 2-5cm thick seams of yellowish brown SILT, trace - some fine sand, stiff.



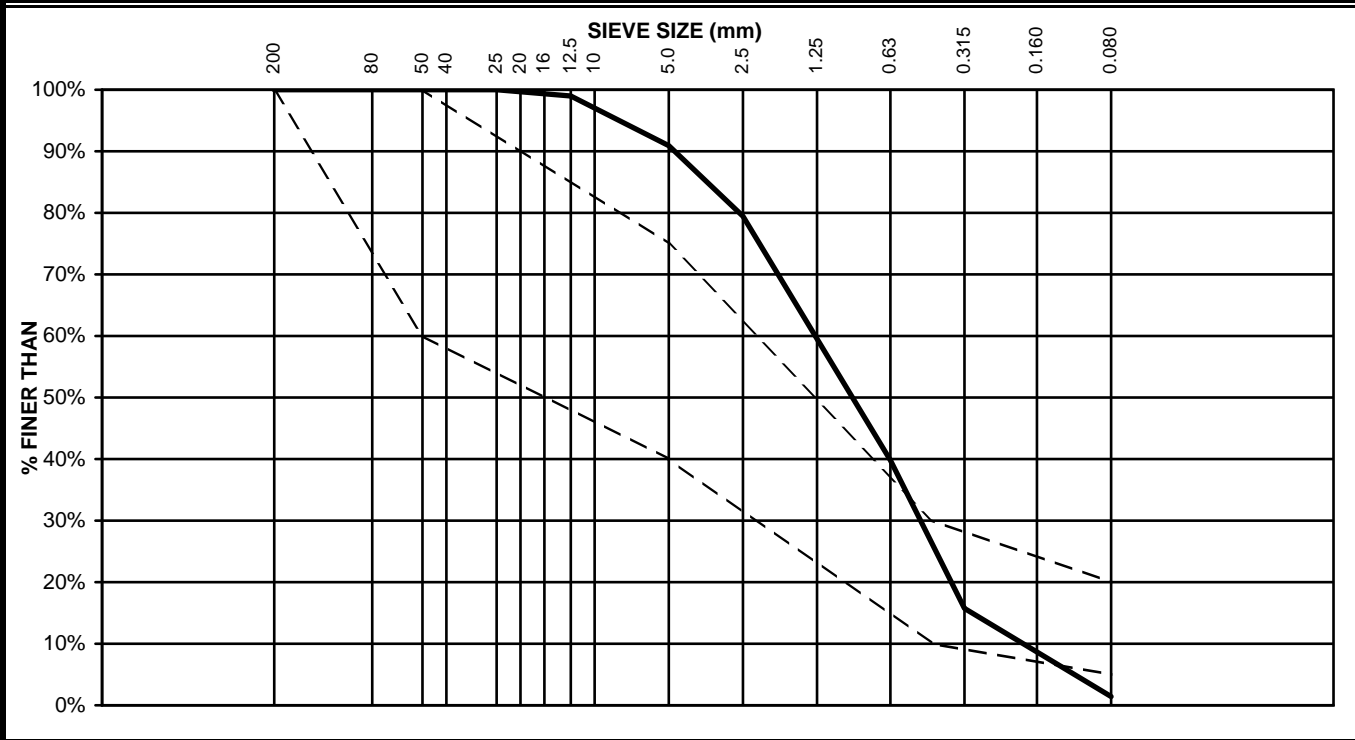
SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 2, Borrow Area 4
 SAMPLE: 1 DEPTH : 0-0.3m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare 3486.4	80000	3	80.0				
Dry+Tare 3387.2	50000	2	50.0	o		100.0%	
Tare 459.7	40000	1 1/2	40.0				
Wt. Dry 2927.5	25000	1	25.0	o		100.0%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare 3486.4	16000	5/8	16.0				
Dry+Tare 3387.2	12500	1/2	12.5	29.8	1.0%	99.0%	
Tare 459.7	10000	3/8	10.0				
MC (%) 3.4%	5000	0.185	5.0	236.3	8.1%	90.9%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	335.6	11.5%	79.4%	
Wt. Dry+Tare 1250	1250	0.0469	1.25	583.1	19.9%	59.5%	
Tare 630	630	0.0234	0.630	577.3	19.7%	39.8%	
Wt. Dry 315	315	0.01240	0.315	704.6	24.1%	15.7%	
Tare No. 160	160	0.0059	0.160				
80	80	0.0029	0.080	419.3	14.3%	1.4%	
PAN	PAN			30.2	1.0%	0.4%	

Classification: **SP**
 d₁₀ 0.22
 C_c 0.89
 C_u 5.79

Description and Remarks: Light brownish grey fine-grs SAND, loose. Pit walls show cross bedding and lag deposits indicating a glacio-fluvial origin.

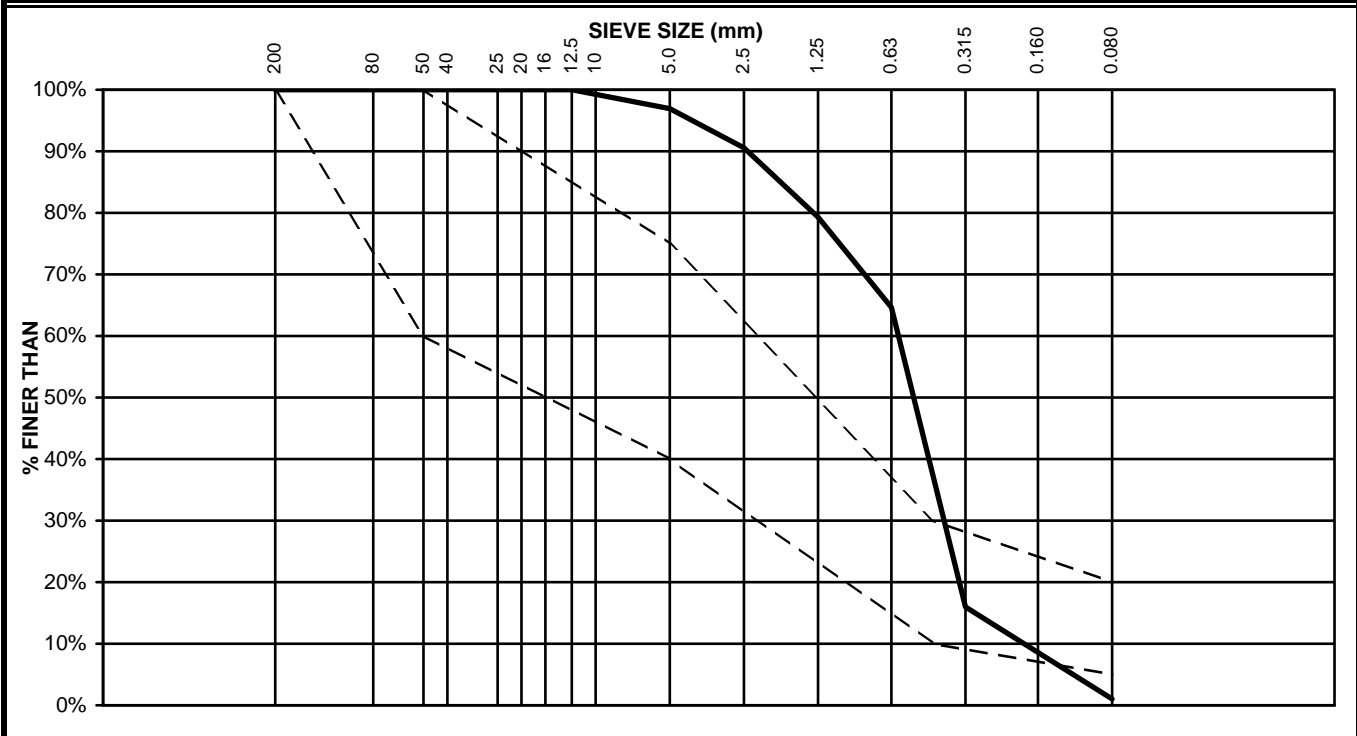


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 3, Borrow Area 6
 SAMPLE: 1 DEPTH : 0-0.3m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare	3255.8	80000	3	80.0			
Dry+Tare	3167.3	50000	2	50.0	o	100.0%	
Tare	459.2	40000	1 1/2	40.0			
Wt. Dry	2708.1	25000	1	25.0	o	100.0%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	3255.8	16000	5/8	16.0			
Dry+Tare	3167.3	12500	1/2	12.5	o	100.0%	
Tare	459.2	10000	3/8	10.0			
MC (%)	3.3%	5000	0.185	5.0	83.1	3.1%	96.9%
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	172.3	6.4%	90.6%	
Wt. Dry+Tare	1250	0.0469	1.25	305.1	11.3%	79.3%	
Tare	630	0.0234	0.630	396.9	14.7%	64.6%	
Wt. Dry	315	0.01240	0.315	1318.0	48.7%	16.0%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	404.8	14.9%	1.0%	
	PAN			18.5	0.7%	0.3%	

Classification: **SP**
 Description and Remarks: Light grey to light brnsh grey interbedded/ intermixed fine SAND and fine-crs SAND, loose.
 d₁₀ 0.22
 C_c 1.24
 C_u 2.71

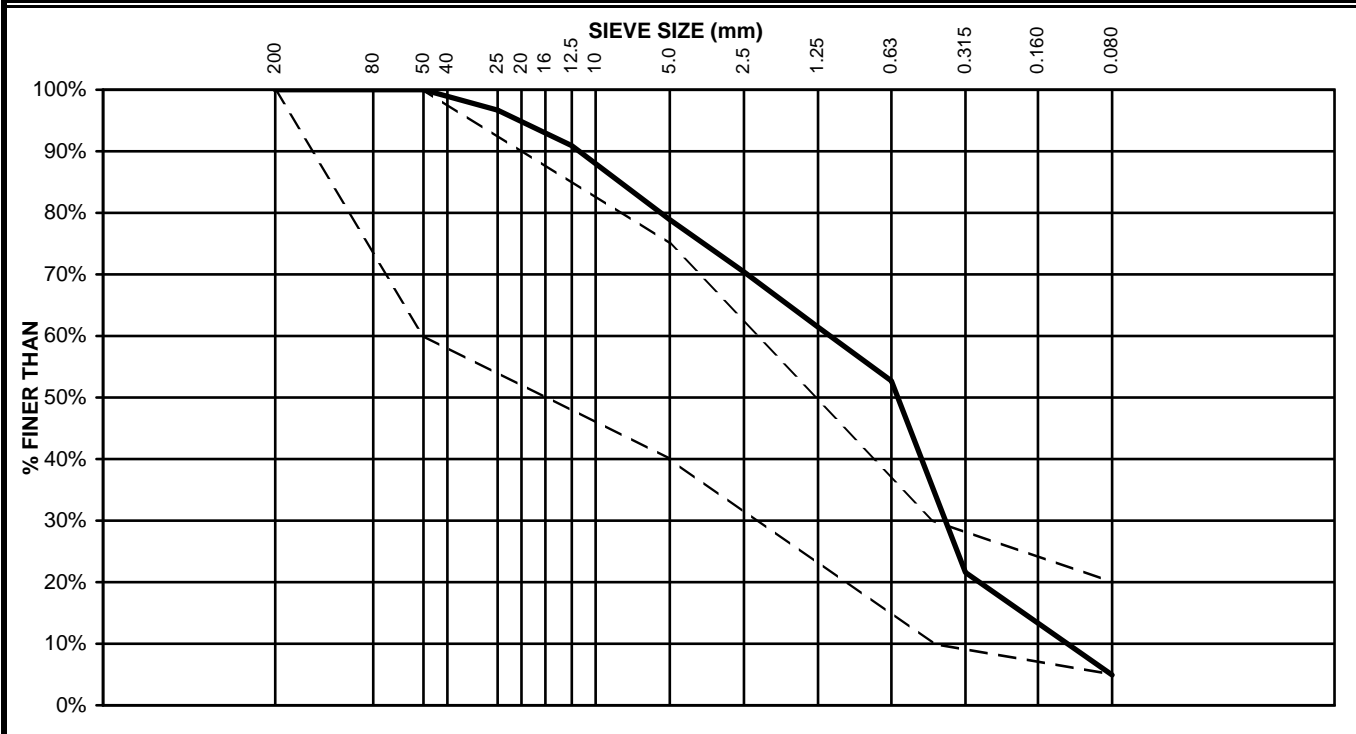


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 4, Borrow Area 3
 SAMPLE: 1 DEPTH : 0-0.5m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare	5810.5	80000	3	80.0	0	100.0%	
Dry+Tare	5398.4	50000	2	50.0			
Tare	918.9	40000	1 1/2	40.0			
Wt. Dry	4479.5	25000	1	25.0	148.5	3.3%	96.7%
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	5810.5	16000	5/8	16.0	258.2	5.8%	90.9%
Dry+Tare	5398.4	12500	1/2	12.5			
Tare	918.9	10000	3/8	10.0			
MC (%)	9.2%	5000	0.185	5.0	538.7	12.0%	78.9%
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	380.1	8.5%	70.4%	
Wt. Dry+Tare	1250	0.0469	1.25	401.8	9.0%	61.4%	
Tare	630	0.0234	0.630	391.1	8.7%	52.7%	
Wt. Dry	315	0.01240	0.315	1394.6	31.1%	21.6%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	745.9	16.7%	4.9%	
	PAN			220.0	4.9%	0.0%	

Classification: **SP**
 Description and Remarks: Silty fine- crs SAND, trace fine gravel, silty organic seams
 d₁₀ 0.15
 C_c 0.92
 C_u 7.57



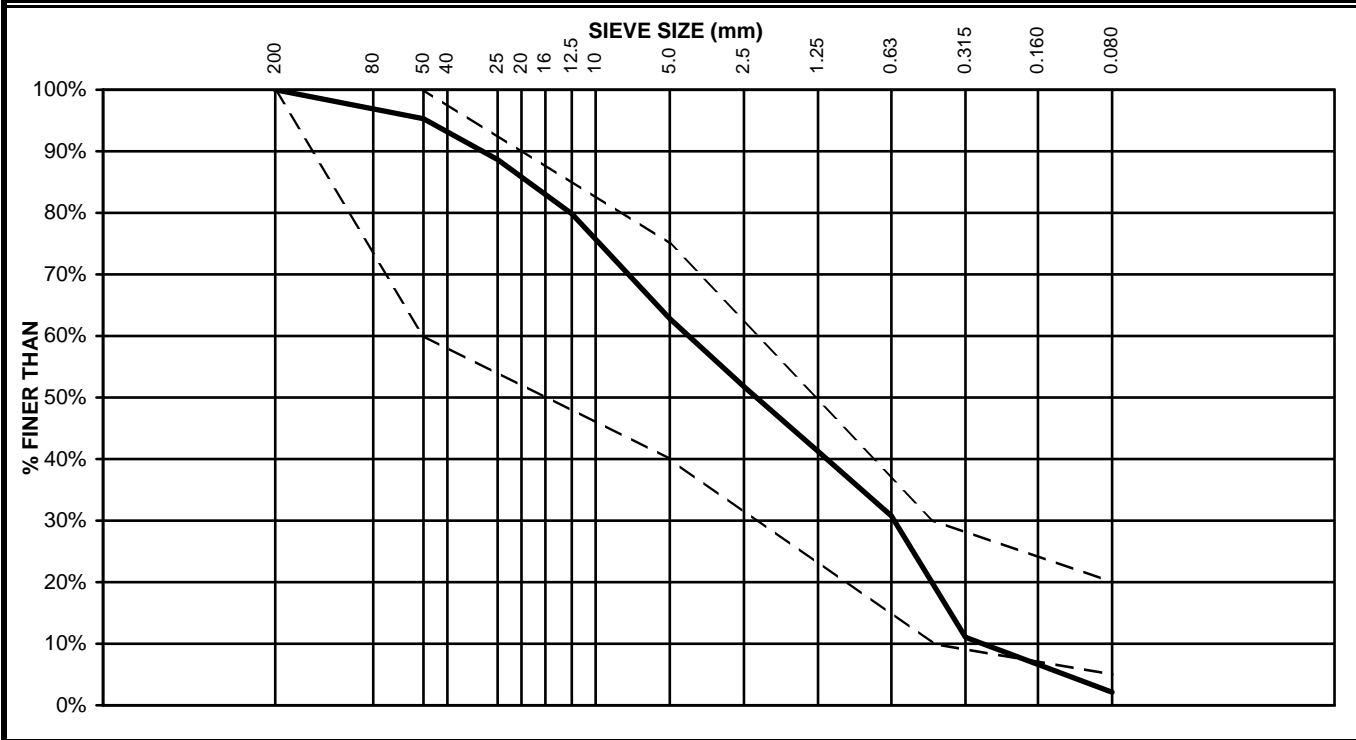
SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 5, Borrow Area 3
 SAMPLE: 1 DEPTH : 0-0.4m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0	0		100.0%	
Wet + Tare	5648.1	80000	3	80.0			
Dry+Tare	5438.6	50000	2	50.0	212.6	5%	95.3%
Tare	918.9	40000	1 1/2	40.0			
Wt. Dry	4519.7	25000	1	25.0	300.0	6.6%	88.7%
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	5648.1	16000	5/8	16.0			
Dry+Tare	5438.6	12500	1/2	12.5	398.0	8.8%	79.9%
Tare	918.9	10000	3/8	10.0			
MC (%)	4.6%	5000	0.185	5.0	769.9	17.0%	62.8%
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	499.2	11.0%	51.8%	
Wt. Dry+Tare	1250	0.0469	1.25	475.2	10.5%	41.3%	
Tare	630	0.0234	0.630	474.6	10.5%	30.8%	
Wt. Dry	315	0.01240	0.315	890.6	19.7%	11.1%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	404.1	8.9%	2.1%	
	PAN			95.0	2.1%	0.0%	

Classification: **SP**
 d₁₀ 0.29
 C_c 0.30
 C_u 15.18

Description and Remarks: Brown, silty fine GRAVELY SAND, trace-minor silt, loose. Alluvial deposit

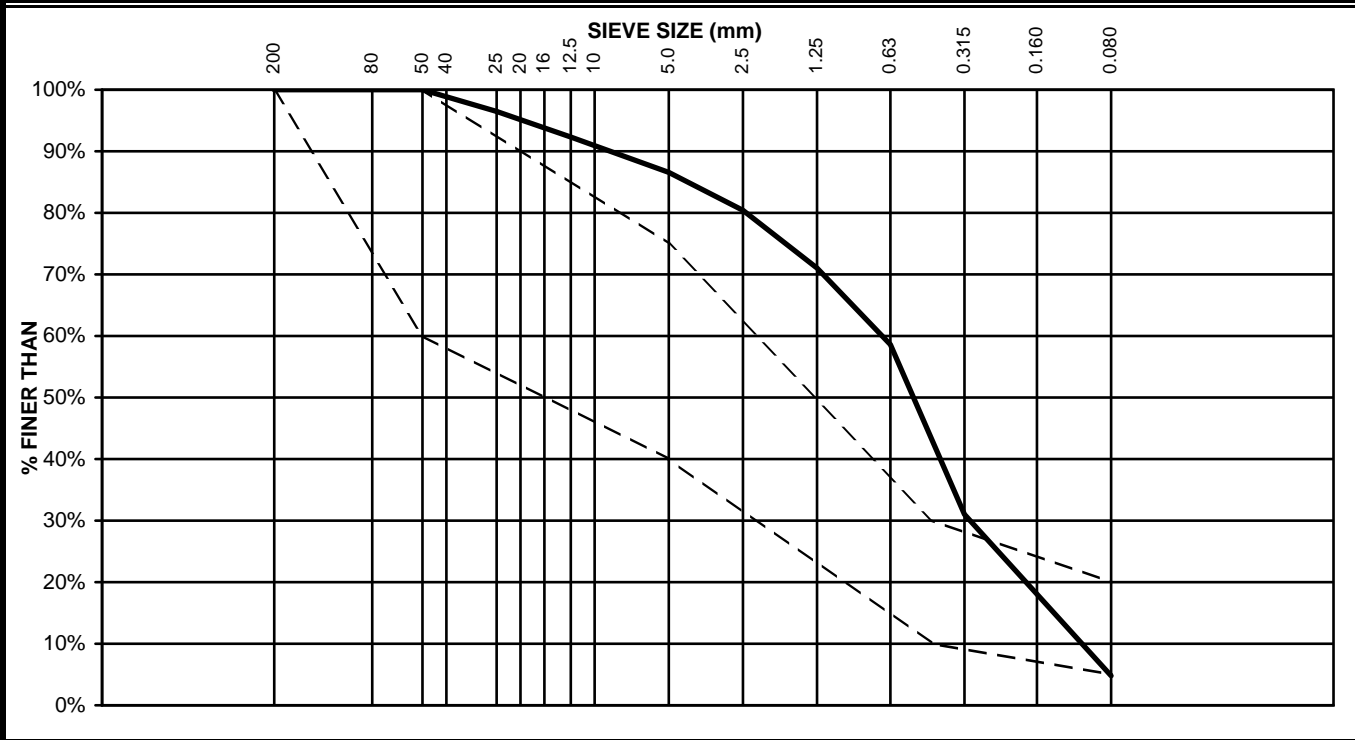


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 6, Borrow Area 3
 SAMPLE: 1 DEPTH : 0-0.3m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare	5004.3	80000	3	80.0			
Dry+Tare	4601.5	50000	2	50.0	0	100.0%	
Tare	918.9	40000	1 1/2	40.0			
Wt. Dry	3682.6	25000	1	25.0	129.8	3.5%	96.5%
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	5004.3	16000	5/8	16.0			
Dry+Tare	4601.5	12500	1/2	12.5	153.0	4.2%	92.3%
Tare	918.8	10000	3/8	10.0			
MC (%)	10.9%	5000	0.185	5.0	211.5	5.7%	86.6%
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	226.8	6.2%	80.4%	
Wt. Dry+Tare	1250	0.0469	1.25	345.6	9.4%	71.0%	
Tare	630	0.0234	0.630	457.8	12.4%	58.6%	
Wt. Dry	315	0.01240	0.315	1016.0	27.6%	31.0%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	965.5	26.2%	4.8%	
	PAN			177.9	4.8%	0.0%	

Classification: **SP**
 Description and Remarks: Light - dark brown f- crs sandy SILT, trace fine gravel. Alluvial
 d₁₀ 0.13
 C_c 1.06
 C_u 5.52

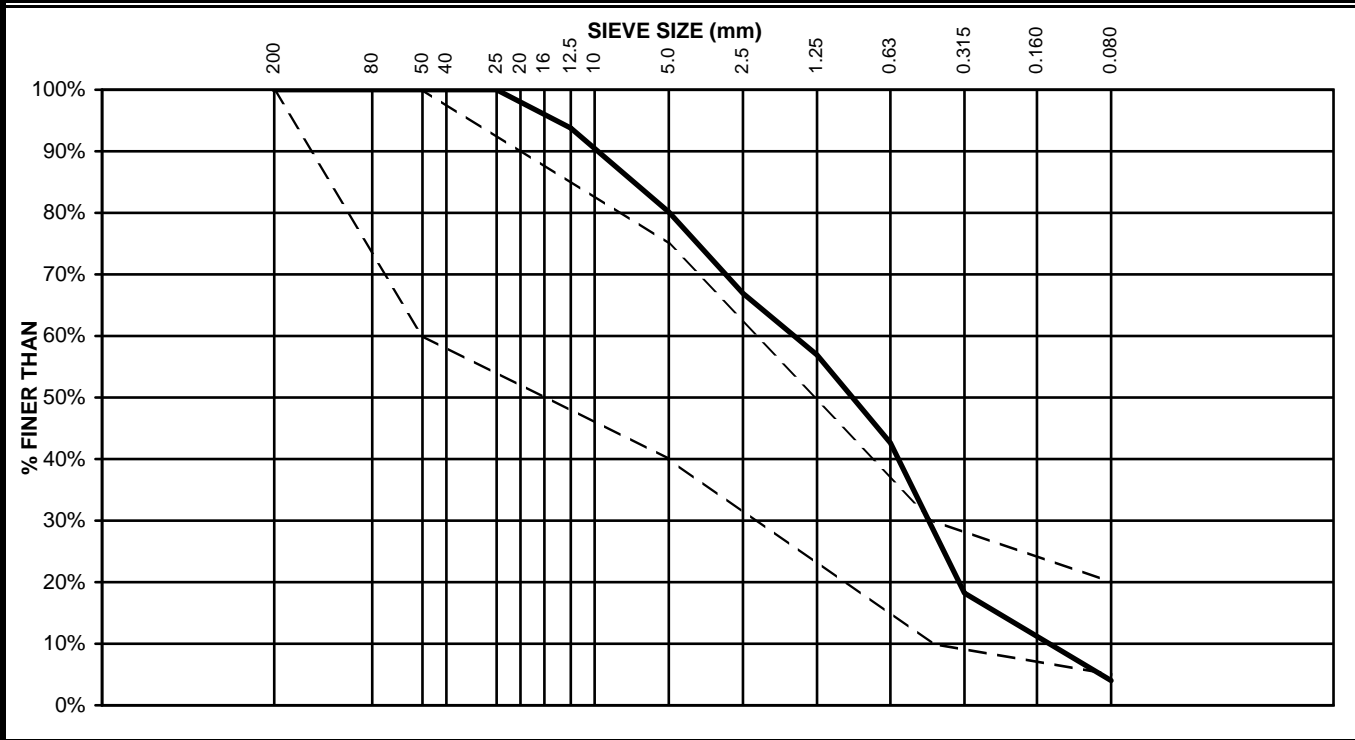


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 8, Borrow Area 3
 SAMPLE: 1 DEPTH : 0-0.3m
 DATE : September 4, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare 5606.3	80000	3	80.0				
Dry+Tare 5287.3	50000	2	50.0	o		100.0%	
Tare 918.9	40000	1 1/2	40.0				
Wt. Dry 4368.4	25000	1	25.0	o		100.0%	
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare 5606.3	16000	5/8	16.0				
Dry+Tare 5287.3	12500	1/2	12.5	271.9	6.2%	93.8%	
Tare 918.9	10000	3/8	10.0				
MC (%) 7.3%	5000	0.185	5.0	595.4	13.6%	80.1%	
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	577.8	13.2%	66.9%	
Wt. Dry+Tare 1250	1250	0.0469	1.25	436.8	10.0%	56.9%	
Tare 630	630	0.0234	0.630	624.4	14.3%	42.6%	
Wt. Dry 315	315	0.01240	0.315	1065.9	24.4%	18.2%	
Tare No. 160	160	0.0059	0.160				
80	80	0.0029	0.080	621.0	14.2%	4.0%	
PAN	PAN			164.9	3.8%	0.2%	

Classification: **SP**
 Description and Remarks: Greyish brown fine- crs SAND, wet at base. Alluvial
 d₁₀ 0.18
 C_c 0.75
 C_u 9.13



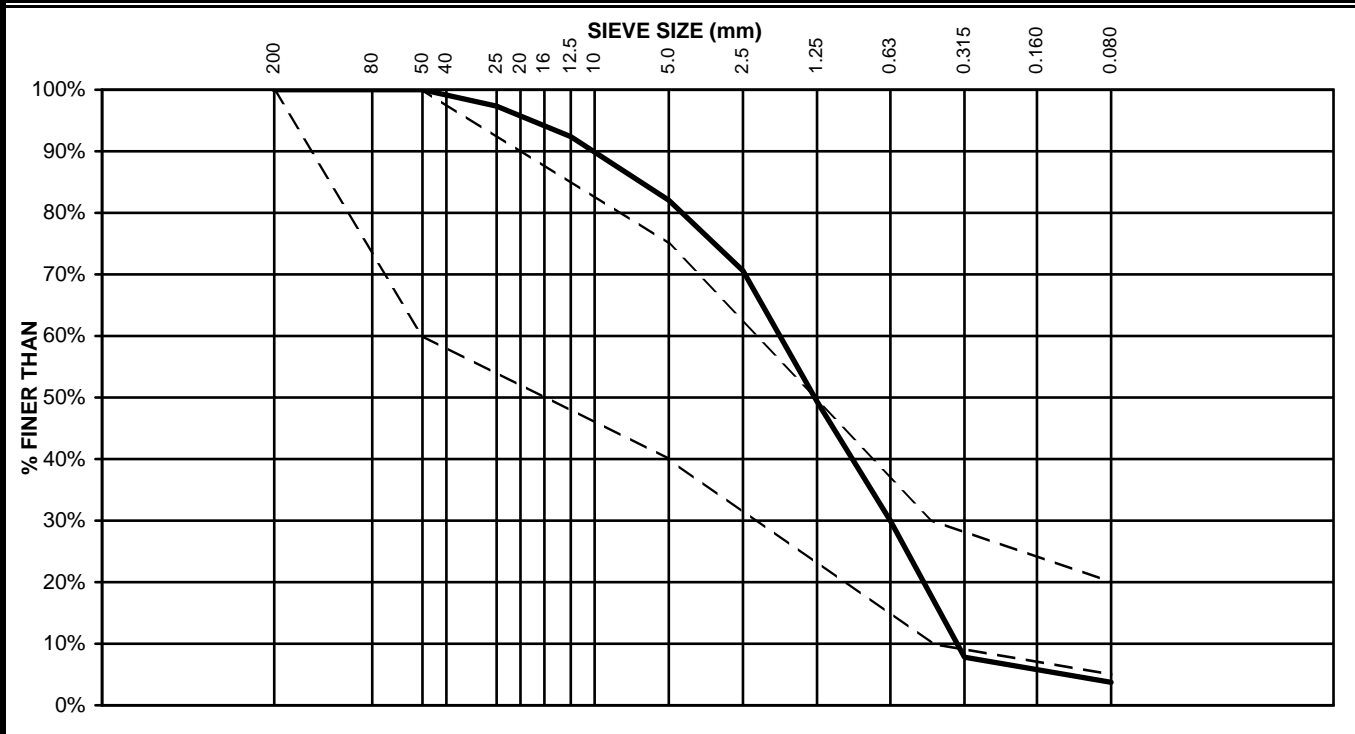
SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 9, west side of Airstrip
 SAMPLE: 1 DEPTH : 0-0.8m
 DATE : September 5, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare	5701.4	80000	3	80.0			
Dry+Tare	5424.9	50000	2	50.0	0	100.0%	
Tare	918.9	40000	1 1/2	40.0			
Wt. Dry	4506.0	25000	1	25.0	120.0	2.7%	97.3%
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	5701.4	16000	5/8	16.0			
Dry+Tare	5424.9	12500	1/2	12.5	222.9	4.9%	92.4%
Tare	918.9	10000	3/8	10.0			
MC (%)	6.1%	5000	0.185	5.0	465.8	10.3%	82.1%
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	515.9	11.4%	70.6%	
Wt. Dry+Tare	1250	0.0469	1.25	957.8	21.3%	49.3%	
Tare	630	0.0234	0.630	873.3	19.4%	30.0%	
Wt. Dry	315	0.01240	0.315	998.5	22.2%	7.8%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	183.8	4.1%	3.7%	
	PAN			158.5	3.5%	0.2%	

Classification: **SP**
 d₁₀ 0.35
 C_c 0.61
 C_u 5.42

Description and Remarks: Greyish brown med- crs SAND, minor fine gravel, rare silt, loose. Alluvial. Permafrost at 0.9m depth. Water on permafrost surface

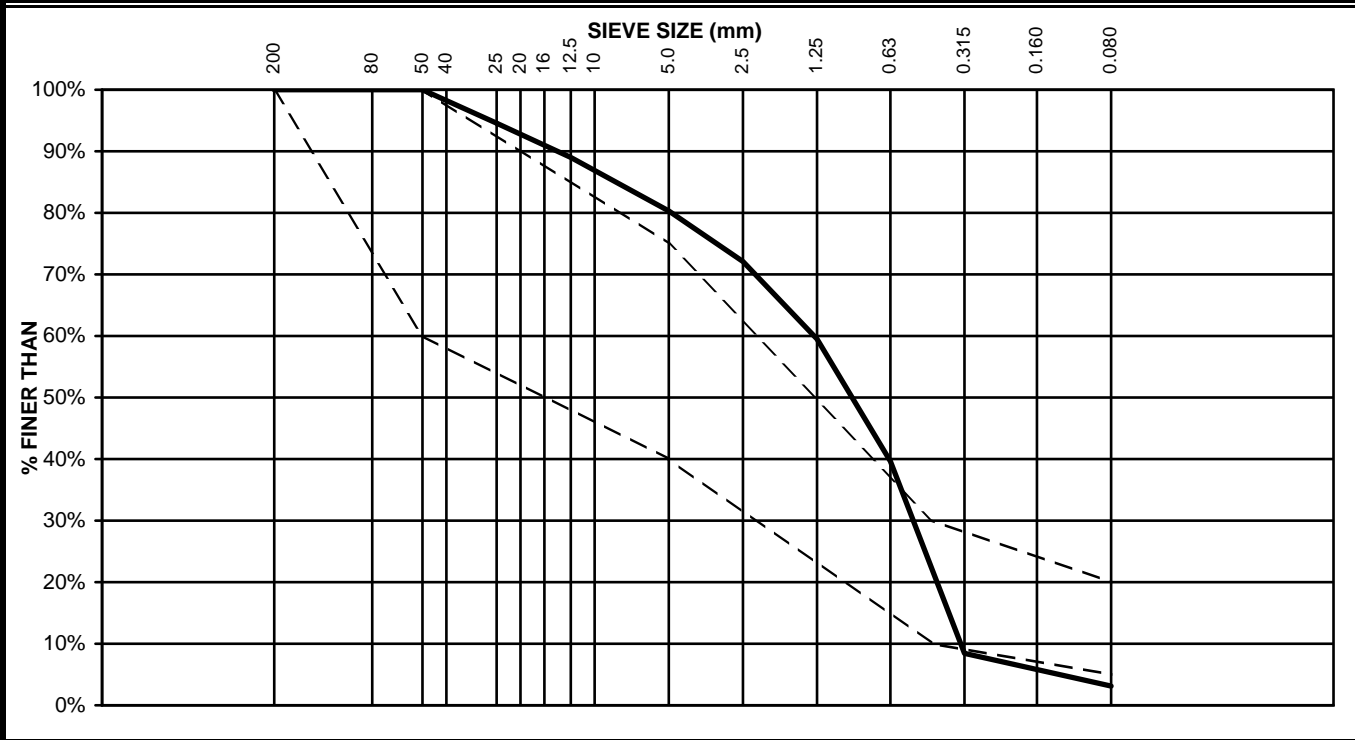


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 10, west side of Airstrip
 SAMPLE: 1 DEPTH : 0-0.8m
 DATE : September 5, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare	6668.1	80000	3	80.0			
Dry+Tare	6415.2	50000	2	50.0	0	100.0%	
Tare	918.9	40000	1 1/2	40.0			
Wt. Dry	5496.3	25000	1	25.0	298.9	5.4%	94.6%
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	6668.1	16000	5/8	16.0			
Dry+Tare	6415.2	12500	1/2	12.5	305.6	5.6%	89.0%
Tare	918.9	10000	3/8	10.0			
MC (%)	4.6%	5000	0.185	5.0	477.7	8.7%	80.3%
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	451.8	8.2%	72.1%	
Wt. Dry+Tare	1250	0.0469	1.25	691.8	12.6%	59.5%	
Tare	630	0.0234	0.630	1091.6	19.9%	39.6%	
Wt. Dry	315	0.01240	0.315	1715.4	31.2%	8.4%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	291.8	5.3%	3.1%	
	PAN			138.0	2.5%	0.6%	

Classification: **SP**
 Description and Remarks: Fine - crs SAND, trace gravel, loose. Permafrost at 0.8m depth.
 d₁₀ 0.33
 C_c 0.66
 C_u 3.93



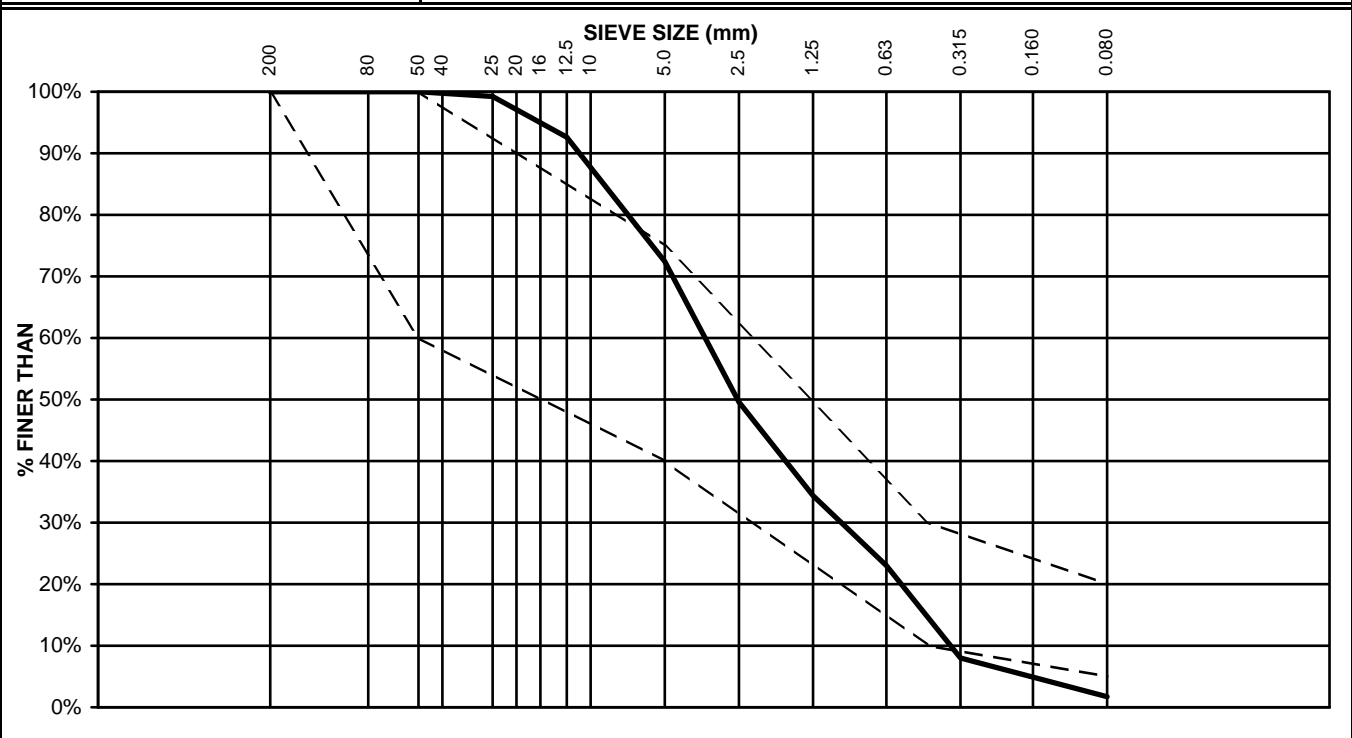
SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Geotechnical Testpit 11, Adjacent to Apron Area excavation point N14
 SAMPLE: 1 DEPTH : 0-0.8m
 DATE : September 5, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0	o		100.0%	
Wet + Tare	9615.2	80000	3	80.0			
Dry+Tare	8669.8	50000	2	50.0	o	100.0%	
Tare	918.9	40000	1 1/2	40.0			
Wt. Dry	7750.9	25000	1	25.0	59.5	0.8%	99.2%
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	9615.2	16000	5/8	16.0			
Dry+Tare	8669.8	12500	1/2	12.5	512.9	6.6%	92.6%
Tare	918.9	10000	3/8	10.0			
MC (%)	12.2%	5000	0.185	5.0	1564.9	20.2%	72.4%
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	1770.8	22.8%	49.6%	
Wt. Dry+Tare	1250	0.0469	1.25	1177.9	15.2%	34.4%	
Tare	630	0.0234	0.630	880.7	11.4%	23.0%	
Wt. Dry	315	0.01240	0.315	1164.1	15.0%	8.0%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	487.0	6.3%	1.7%	
	PAN			130.0	1.7%	0.0%	

Classification: **SP**
 d₁₀ 0.36
 C_c 0.79
 C_u 10.20

Description and Remarks: Permafrost at 0.8m depth. 0- 0.4 fine-med SAND, minor gravel, brn. 0.4+ Fine-med GRAVEL, clean, water inflow at 100L/ minute

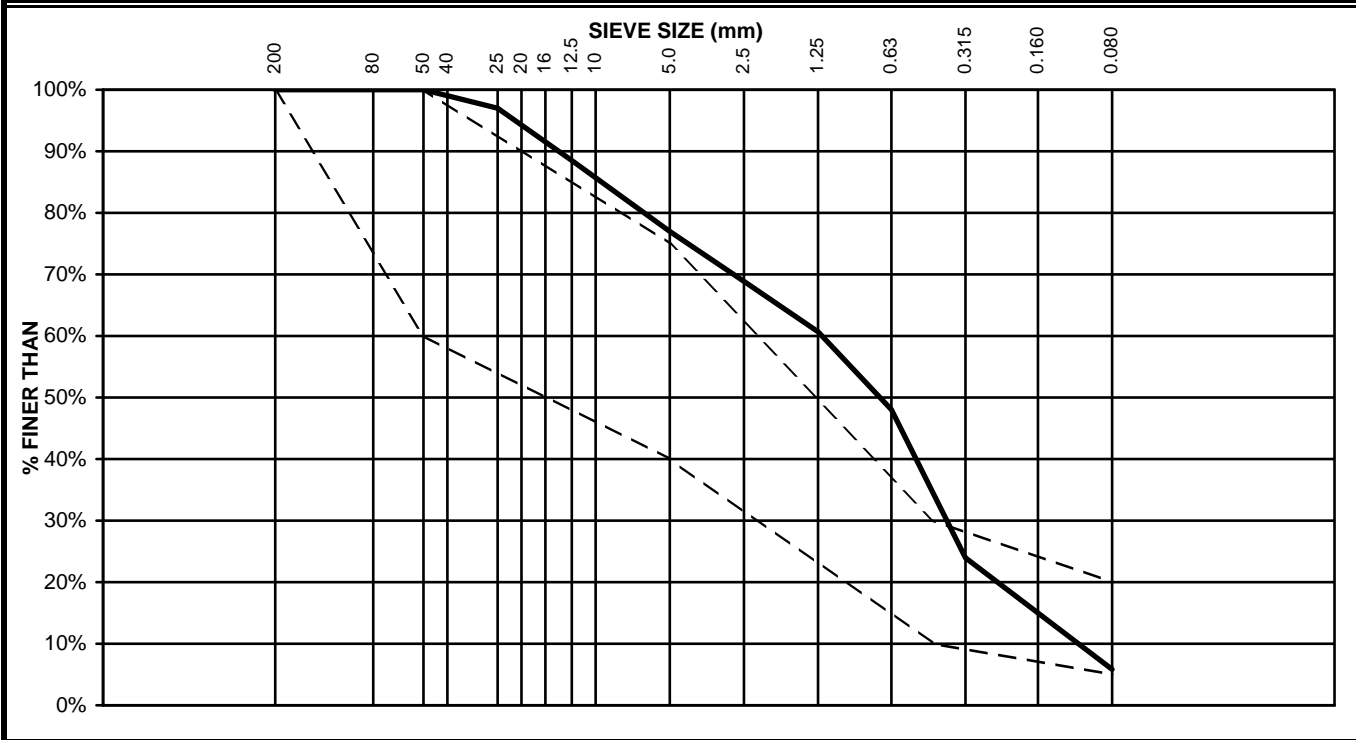


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : JOHNSON POINT CLEAN UP
 JOB No. : 2977-371-00
 LOCATION : Landfill Lobe D. Sample of First Lift
 SAMPLE: 1 DEPTH : 0-0.3m
 DATE : September 5, 2008 TECHNICIAN : BHN

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	PERCENT FINER THAN BASIS ORIG SAMPLE
		APPROX. INCHES	mm				
<u>Before Washing</u>	200000	8	200.0			100.0%	
Wet + Tare	5621.9	80000	3	80.0	0	100.0%	
Dry+Tare	5059.3	50000	2	50.0			
Tare	429.8	40000	1 1/2	40.0			
Wt. Dry	4629.5	25000	1	25.0	138.9	3.0%	97.0%
<u>Moisture Content</u>	20000	3/4	20.0				
Wet + Tare	5621.9	16000	5/8	16.0			
Dry+Tare	5059.3	12500	1/2	12.5	392.8	8.5%	88.5%
Tare	429.8	10000	3/8	10.0			
MC (%)	12.2%	5000	0.185	5.0	534.1	11.5%	77.0%
Passing	5000						
<u>After Washing</u>	2500	0.0937	2.5	375.0	8.1%	68.9%	
Wt. Dry+Tare	1250	0.0469	1.25	379.1	8.2%	60.7%	
Tare	630	0.0234	0.630	585.6	12.6%	48.0%	
Wt. Dry	315	0.01240	0.315	1114.8	24.1%	24.0%	
Tare No.	160	0.0059	0.160				
	80	0.0029	0.080	838.8	18.1%	5.8%	
	PAN			265.9	5.7%	0.1%	

Classification: **SP**
 d₁₀ 0.13
 C_c 0.95
 C_u 9.08
 Description and Remarks: Sample of compacted first lift on landfill regrade

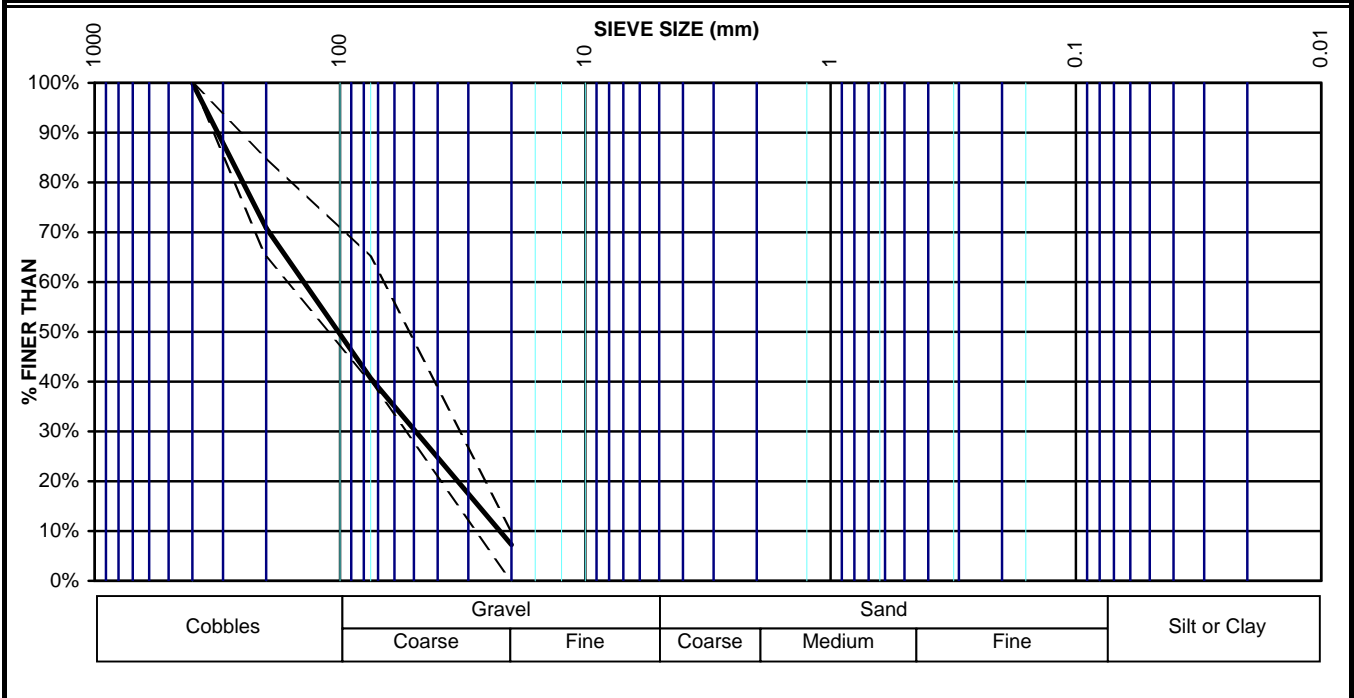


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : Johnson Point
 JOB No. : 2977-371-00
 LOCATION : Ulukhaktok Borrow
 SAMPLE: #1 on Aug.17/08
 DATE : August 27, 2008
 TECHNICIAN: CK

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	SPECIFICATION	
		APPROX. INCHES	mm				LOWER	UPPER
<u>Before Washing</u>	400000	16	400.0			100%	100%	100%
Wet + Tare	200000	8	200.0	22567.8	29%	71%	65%	85%
Dry+Tare	100000	4	100.0	38589.0	50%	50%		
Tare	75000	3	75.0	45959.8	59%	41%	40%	65%
Wt. Dry 77465.8	50000	2	50.0	66959.8	86%	14%		
<u>Moisture Content</u>	20000	3/4	20.0	71851.8	93%	7%		10%
Wet + Tare 2726.9	16000	5/8	16.0	71851.8	93%	7%		
Dry+Tare 2712.4	12500	1/2	12.5	71851.8	93%	7%		
Tare 236.1	10000	3/8	10.0	71851.8	93%	7%		
MC (%) 0.6%	5000	0.185	5.0	71856.4	93%	7%		
Passing	5000							
<u>After Washing</u>	2000	0.0937	2.0	71858.4	93%	7%		
Wt. Dry+Tare	1250	0.0469	1.25	71861.5	93%	7%		
Tare	630	0.0234	0.630	71866.1	93%	7%		
Wt. Dry	315	0.0116	0.315	71870.0	93%	7%		
Tare No.	160	0.0059	0.160	71874.0	93%	7%		
	80	0.0029	0.080	71878.4	93%	7%		
	PAN							

Classification: GP Description and Remarks: Type 1 Material
 Cc 0.9
 Cu 4

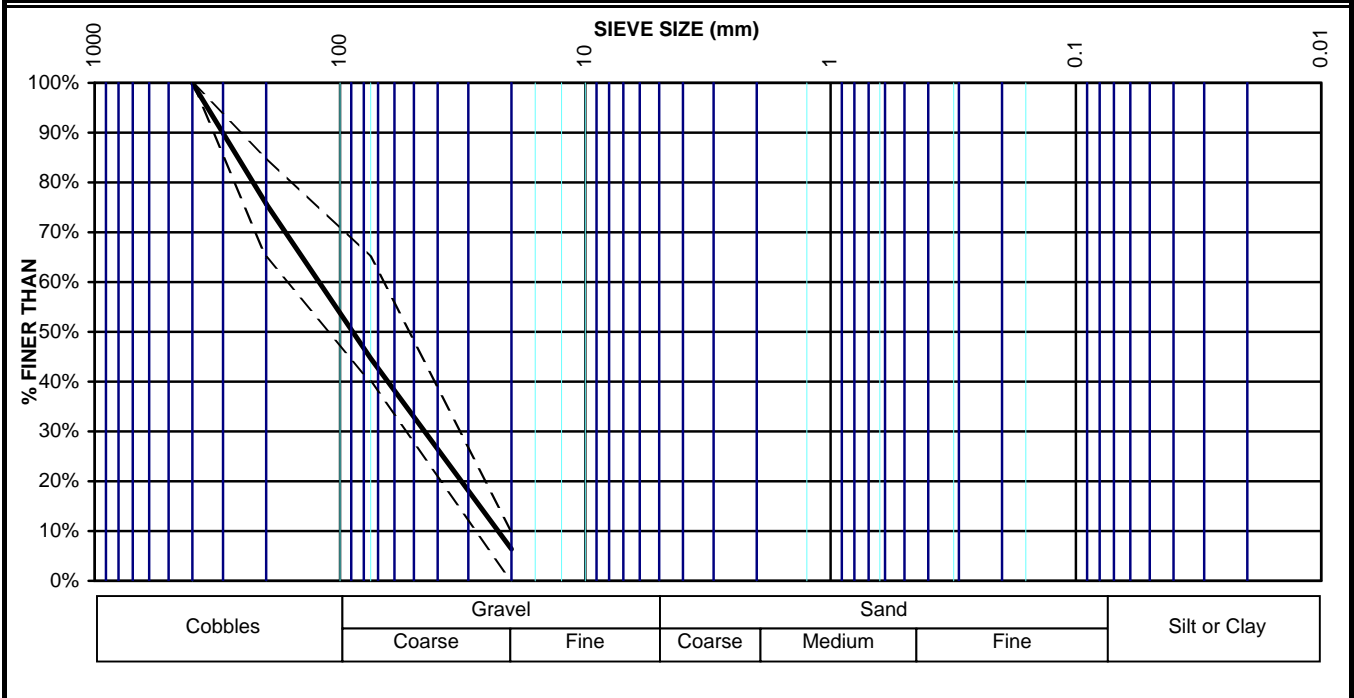


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : Johnson Point
 JOB No. : 2977-371-00
 LOCATION : Ulukhaktok Borrow
 SAMPLE: #2 on Aug.18/08
 DATE : August 27, 2008
 TECHNICIAN: CK

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	SPECIFICATION	
		APPROX. INCHES	mm				LOWER	UPPER
<u>Before Washing</u>	400000	16	400.0			100%	100%	100%
Wet + Tare	200000	8	200.0	17010.2	24%	76%	65%	85%
Dry+Tare	100000	4	100.0	31285.9	45%	55%		
Tare	75000	3	75.0	38756.4	55%	45%	40%	65%
Wt. Dry 70058.9	50000	2	50.0	47589.2	68%	32%		
<u>Moisture Content</u>	20000	3/4	20.0	65594.3	94%	6%		10%
Wet + Tare 2249.1	16000	5/8	16.0	65594.3	94%	6%		
Dry+Tare 2239.8	12500	1/2	12.5	65594.3	94%	6%		
Tare 180.4	10000	3/8	10.0	65594.3	94%	6%		
MC (%) 0.5%	5000	0.185	5.0	65596.6	94%	6%		
Passing	5000							
<u>After Washing</u>	2000	0.0937	2.0	65598.6	94%	6%		
Wt. Dry+Tare	1250	0.0469	1.25	65602.3	94%	6%		
Tare	630	0.0234	0.630	65606.4	94%	6%		
Wt. Dry	315	0.0116	0.315	65610.3	94%	6%		
Tare No.	160	0.0059	0.160	65613.6	94%	6%		
	80	0.0029	0.080	65618.0	94%	6%		
	PAN							

Classification: GP Description and Remarks: Type 1 Material
 Cc 0.8
 Cu 5

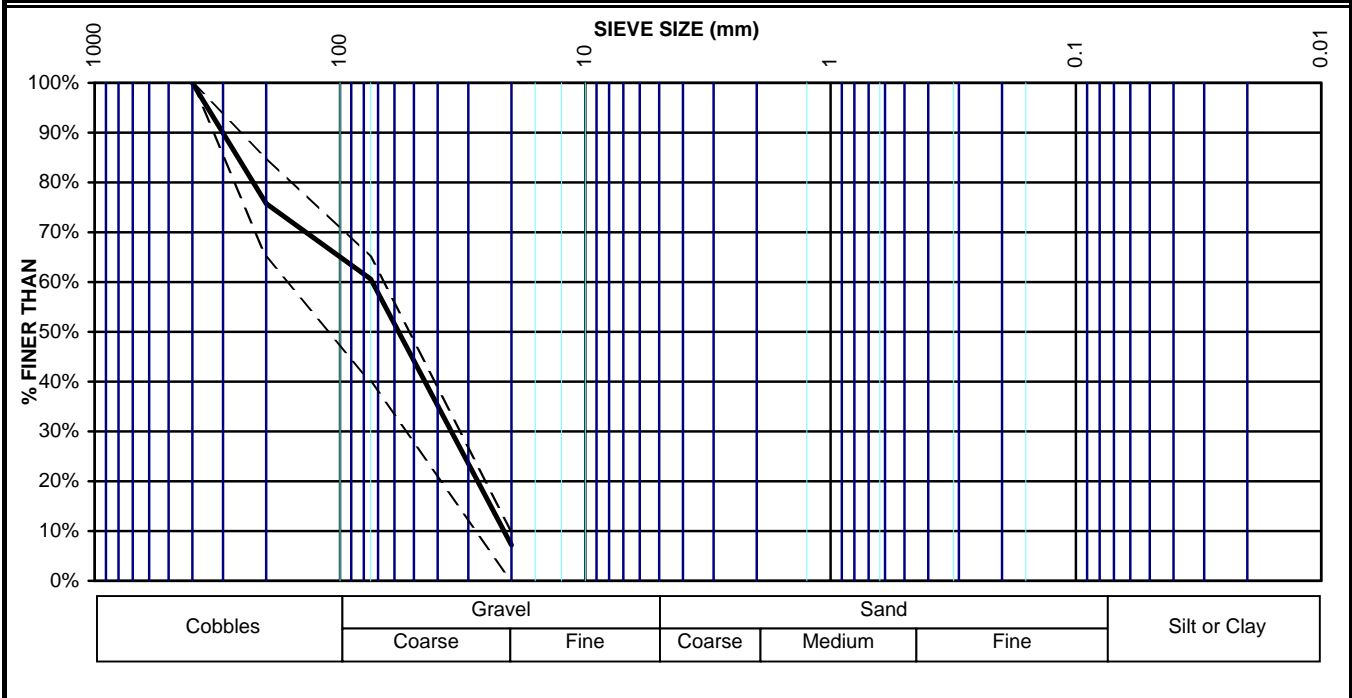


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : Johnson Point
 JOB No. : 2977-371-00
 LOCATION : Ulukhaktok Borrow
 SAMPLE: #3 on Aug.19/08
 DATE : August 27, 2008
 TECHNICIAN: CK

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	SPECIFICATION	
		APPROX. INCHES	mm				LOWER	UPPER
<u>Before Washing</u>	400000	16	400.0			100%	100%	100%
Wet + Tare	200000	8	200.0	16575.1	24%	76%	65%	85%
Dry+Tare	100000	4	100.0	23666.8	35%	65%		
Tare	75000	3	75.0	26941.2	39%	61%	40%	65%
Wt. Dry 68398.3	50000	2	50.0	39998.1	58%	42%		
<u>Moisture Content</u>	20000	3/4	20.0	63481.2	93%	7%		10%
Wet + Tare 2071.0	16000	5/8	16.0	63481.2	93%	7%		
Dry+Tare 2064.1	12500	1/2	12.5	63481.2	93%	7%		
Tare 180.4	10000	3/8	10.0	63481.2	93%	7%		
MC (%) 0.4%	5000	0.185	5.0	63483.5	93%	7%		
Passing	5000							
<u>After Washing</u>	2000	0.0937	2.0	63485.5	93%	7%		
Wt. Dry+Tare	1250	0.0469	1.25	63488.0	93%	7%		
Tare	630	0.0234	0.630	63491.5	93%	7%		
Wt. Dry	315	0.0116	0.315	63494.2	93%	7%		
Tare No.	160	0.0059	0.160	63496.8	93%	7%		
	80	0.0029	0.080	63502.4	93%	7%		
	PAN							

Classification: GP Description and Remarks: Type 1 Material
 Cc 1.0
 Cu 3

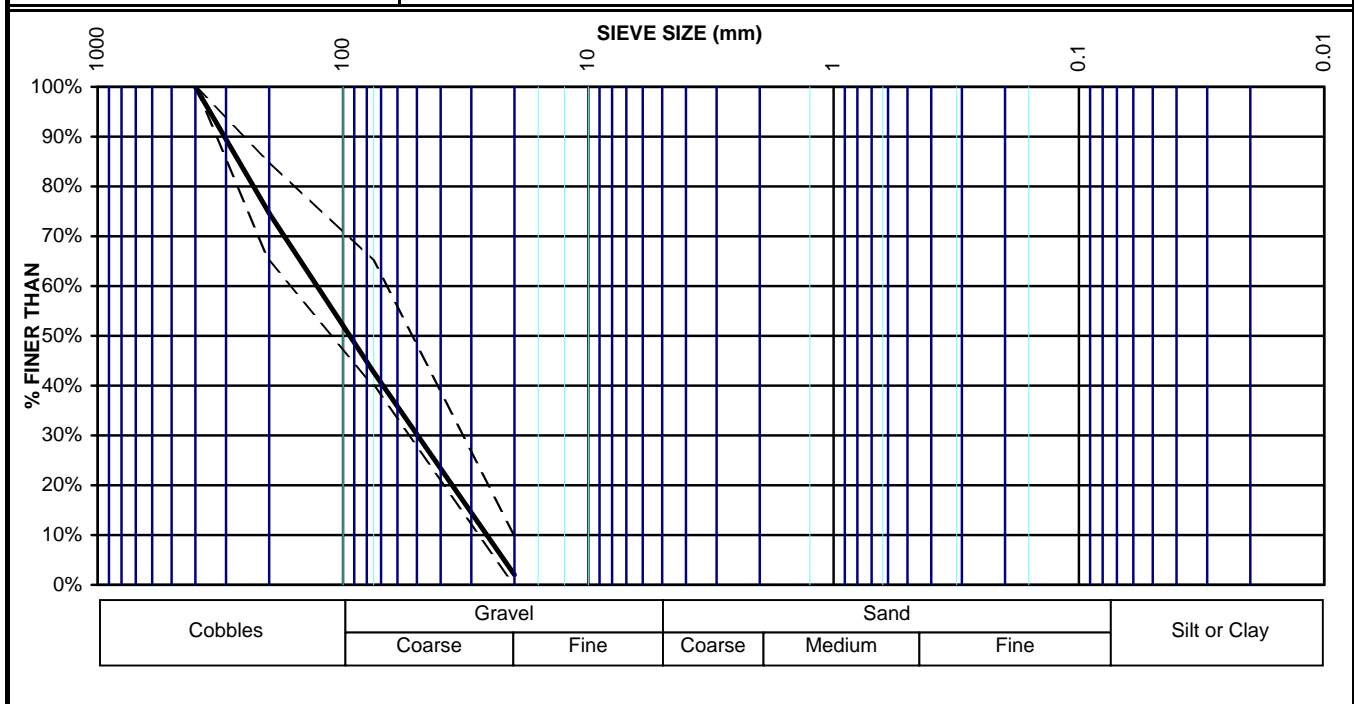


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : Johnson Point
 JOB No. : 2977-371-00
 LOCATION : Ulukhaktok Borrow
 SAMPLE: #4 on Aug.20/08
 DATE : August 27, 2008
 TECHNICIAN: CK

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (μm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	SPECIFICATION	
		APPROX. INCHES	mm				LOWER	UPPER
<u>Before Washing</u>	400000	16	400.0			100%	100%	100%
Wet + Tare	200000	8	200.0	16770.0	25%	75%	65%	85%
Dry+Tare	100000	4	100.0	31895.4	48%	52%		
Tare	75000	3	75.0	37891.0	57%	43%	40%	65%
Wt. Dry	66128.0	50000	2	50.0	45678.9	69%	31%	
<u>Moisture Content</u>	20000	3/4	20.0	64787.1	98%	2%		10%
Wet + Tare	2914.0	16000	5/8	16.0	64787.1	98%	2%	
Dry+Tare	2904.5	12500	1/2	12.5	64787.1	98%	2%	
Tare	180.4	10000	3/8	10.0	64787.1	98%	2%	
MC (%)	0.3%	5000	0.185	5.0	64789.4	98%	2%	
Passing	5000							
<u>After Washing</u>	2000	0.0937	2.0	64791.4	98%	2%		
Wt. Dry+Tare	1250	0.0469	1.25	64794.7	98%	2%		
Tare	630	0.0234	0.630	64798.6	98%	2%		
Wt. Dry	315	0.0116	0.315	64802.4	98%	2%		
Tare No.	160	0.0059	0.160	64806.5	98%	2%		
	80	0.0029	0.080	64811.6	98%	2%		
	PAN							

Classification:	GP	Description and Remarks: Type 1 Material
Cc	0.6	
Cu	5	

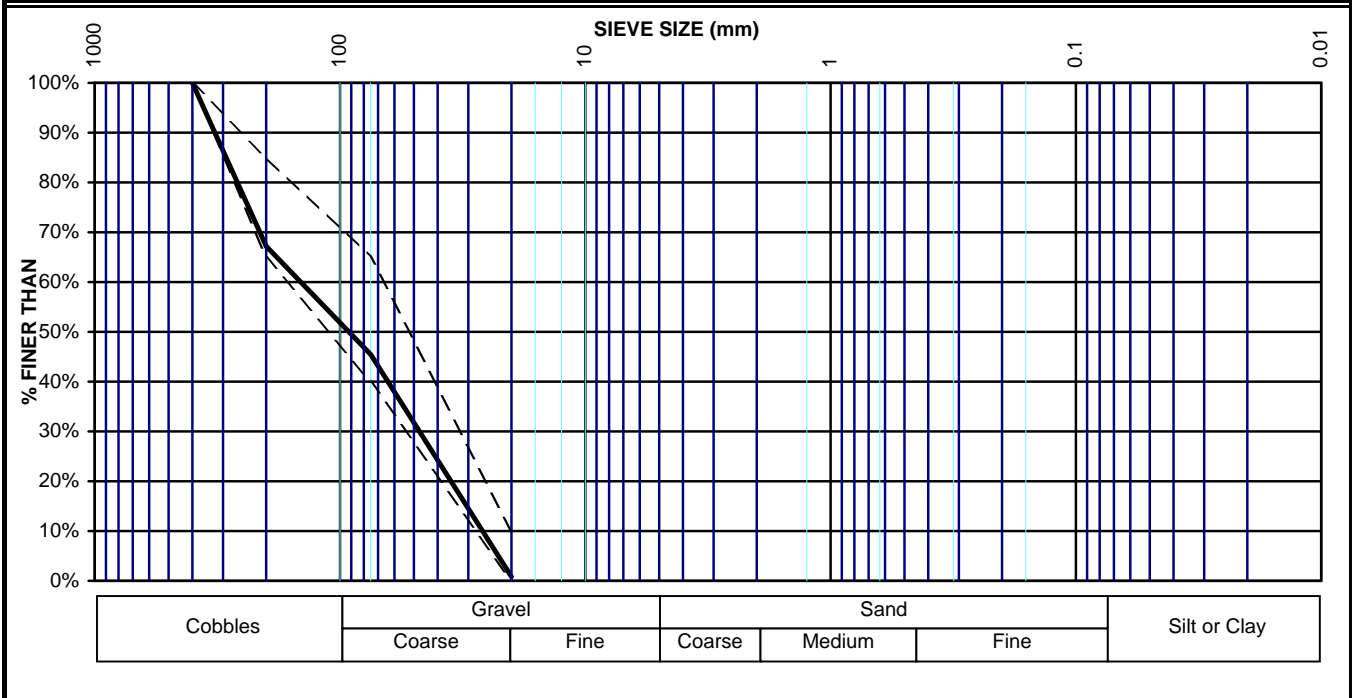


SIEVE ANALYSIS

CLIENT : PWGSC
 PROJECT : Johnson Point
 JOB No. : 2977-371-00
 LOCATION : Ulukhaktok Borrow
 SAMPLE: #5 on Aug.21/08
 DATE : August 27, 2008 TECHNICIAN: CK

TOTAL DRY WEIGHT OF SAMPLE	SIEVE NO. (µm)	SIZE OF OPENING		WEIGHT RETAINED (g)	PERCENT RETAINED	PERCENT FINER THAN	SPECIFICATION	
		APPROX. INCHES	mm				LOWER	UPPER
<u>Before Washing</u>	400000	16	400.0			100%	100%	100%
Wet + Tare	200000	8	200.0	20987.8	33%	67%	65%	85%
Dry+Tare	100000	4	100.0	34898.4	55%	45%		
Tare	75000	3	75.0	34898.4	55%	45%	40%	65%
Wt. Dry 63988.9	50000	2	50.0	61877.8	97%	3%		
<u>Moisture Content</u>	20000	3/4	20.0	63456.7	99%	1%		10%
Wet + Tare 2867.2	16000	5/8	16.0	63456.7	99%	1%		
Dry+Tare 2857.8	12500	1/2	12.5	63456.7	99%	1%		
Tare 175.2	10000	3/8	10.0	63456.7	99%	1%		
MC (%) 0.4%	5000	0.185	5.0	63464.1	99%	1%		
Passing	5000							
<u>After Washing</u>	2000	0.0937	2.0	63467.0	99%	1%		
Wt. Dry+Tare	1250	0.0469	1.25	63469.9	99%	1%		
Tare	630	0.0234	0.630	63474.8	99%	1%		
Wt. Dry	315	0.0116	0.315	63478.6	99%	1%		
Tare No.	160	0.0059	0.160	63482.0	99%	1%		
	80	0.0029	0.080	63486.6	99%	1%		
	PAN							

Classification: GP Description and Remarks: Type 1 Material
 Cc 0.5
 Cu 3



Appendix C

Permits/Health and Safety/Inspectors Report



Indian and Northern
Affairs Canada
www.inac.gc.ca

Affaires indiennes
et du Nord Canada
www.ainc.gc.ca

P. O. Box 1500
Yellowknife, NT X1A 2R3

Your file - Votre référence

Our file - Notre référence

License # N7L1-1824

July 21, 2008

Joel Gowman
Project Officer
Contaminants and Remediation Directorate (CARD)
Yellowknife, NT

Dear Mr Gowman :

**Re: Quality Assurance/Quality Control Plan as per the NWT Water Board
License No. N7L1-1824
Johnson Point Staging Area**

Submitted : July 11, 2008

Reviewed : July 18, 2008

Thank you for the submission of the Quality Assurance and Quality Control Plan prepared to support the License N7L1-1824 issued by the NWT Water Board to CARD.

Upon review, it has been found that the Plan is complete. Approval of the Plan is hereby granted.

Should you require further information, please do not hesitate to contact me at (867) 669-2781.

Sincerely,

Angelique Ruzindana, M.Sc.
Analyst Under the
Northwest Territories Waters Act

cc: Northwest Territories Water Board



August 14, 2009

Katherine Silcock, Project Manager
Contaminants and Remediation Directorate
Indian & Northern Affairs Canada
3rd Floor, Waldron Building
5103 48th Street, P.O. Box 1500
Yellowknife, NT X1A 1N5

Via Email

Dear Katherine:

Re: **Johnson Point Remediation Project, Banks Island, Inuvialuit Settlement Region**

Fisheries and Oceans Canada – Western Arctic Area (DFO) received a report of potential non-compliance with the federal *Fisheries Act* that occurred on August 6, 2009 at Johnson Point on Banks Island. Based on the information received and subsequent DFO compliance monitoring conducted on August 11, 2009, the following works and undertakings were determined to have taken place at the above location:

- Hydrocarbon contaminated soil excavations were undertaken between 1 and 5 meters from the banks of the unnamed river flowing along the northeast portion of the site. Excavations progressed away from the river.
- A combination of high tide and heavy rains caused the river level to rise and overtop the 1meter wide portion of the buffer berm and spill into the excavation. This portion of the buffer berm quickly eroded away and the excavation flooded and connected to the unnamed river.
- Between 7:00 AM and 4:00 PM on August 6, 2009 the river was connected with the contaminated soil excavation area via an approximately 3 meter wide by 0.3 meter deep break in the buffer berm.

After review, DFO has determined that the above work or undertaking likely resulted in the following impacts to fish and fish habitat:

- Deposit of unknown quantity of sediment and sediment-laden water into the unnamed river.
- Potential input of hydrocarbons into the unnamed river from contaminated soil in the flooded excavation area.

Near shore coastal zones and estuaries provide a band of fresh, warm water that are important feeding and rearing areas for anadromous fish. During the open water period, the narrow belt of brackish waters extending along the near shore coast is also an important migration corridor for anadromous fish species. Arctic char (*Salvelinus alpinus*) migrate past the near shore coastal area and up the

unnamed river at Johnson Point on their way to spawning and over-wintering areas located in the upstream lake systems.

DFO is responsible for the administration and enforcement of the *Fisheries Act*, including Subsection 35(1), which states: “No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat.” Fish habitat is defined as “Spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes”. Depositing deleterious substances into fish bearing waters is prohibited as stated under Subsection 36(3) of the *Fisheries Act*.

To resolve the above potential non-compliance and future risk of non-compliance at the site, the following course of action was agreed to by the completion of this field season:

- As a short-term mitigation measure, erosion control materials (i.e. geomembrane, polyurethane sheets, tarps, etc.) are to be secured over the existing loose soil berm that has been constructed along the length of the river bank next to the soil excavation site. This is in order to protect and stabilize these materials from potential rain events and high water levels associated with the river and tides.
- The conditions of the berm should be monitored until the site is backfilled and remediated.
- As required by the INAC inspector, water quality and soil quality samples are to be analyzed prior to remediation work occurring in the excavation area.
- The excavation is to be backfilled with clean materials and leveled back to the natural contours of the surrounding environment.
- The excavation site is to be suitably compacted and stabilized to prevent future erosion into the unnamed river.

During the August 11, 2009 site inspection it was brought to our attention that there may be a need to do further hydrocarbon contaminated soil excavation in the area near the river, depending upon results of soil samples. DFO should be consulted prior to any additional excavations towards the river in this location.

It was also noted during the inspection that there is an excavation on site located along the beach on the airstrip close to the ocean coast. The pit is currently located approximately 12 meters from the high tide/high water mark. It was communicated by the contractor that there may still be a need to excavate towards the water at this site. The following advice was provided by DFO regarding the work activity at this beach excavation site:

- A silt fence should be properly installed in a U-shape along the coast-side of the current excavation to prevent potential erosion and sediment-laden water from entering the ocean. The silt fence should encompass the soil piles surrounding the excavation site.
- Excavation activity should stop prior to the high water mark.
- If further excavation towards the water is required in this location and/or if conditions on site change (i.e. water levels) DFO should be notified.

The contaminated soil excavations are currently taking place within a large coastal flood plain area where site conditions and water levels will be constantly changing. When conditions at a site change, as they did in this instance, DFO should be consulted.

Given the remedial work that has already been undertaken to control the riverside excavation site and the planned work to stabilize the excavations, we have concluded that a follow-up site visit by DFO is not required. In order to review if the above actions have been effective in preventing impacts to fish and fish habitat, or to identify if additional works will be necessary, we request that photos at the two excavations sites identified in this letter be taken before, during and after backfilling and remediation work and forwarded in a closure report to DFO.

We appreciate your cooperation in this matter. Please contact me at (867)-669-4944 if you have any questions, concerns, or wish to discuss any of the foregoing in more detail.

Sincerely,



Morag McPherson
Fish Habitat Management
Department of Fisheries and Oceans

cc: Amanda Joynt, DFO FHM
Terry Stein, DFO C&P
Gerald Fillatre, DFO C&P
Larry Dow, DFO District Manager
Glenn Sorensen, INAC
Joel Gowan, INAC CARD
Michael Bernardin, PWGSC
Barry Fedorak, AECOM
Brendan Norrie, AECOM
Russell Newmark, EGT
Doug Saunders, EGT



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Fish Habitat Management
Suite 101, 5204-50th Avenue
Yellowknife, Northwest Territories
X1A 1E2

Gestion de l'Habitat du Poisson
Suite 101 5204, 50e Avenue
Yellowknife (Territoires du Nord-Ouest)
X1A 1E2

Your file *Votre référence*

Our file *Notre référence*
YK-09-0097

September 10, 2009

Katherine Silcock, Project Manager
Contaminants and Remediation Directorate
Indian & Northern Affairs Canada
3rd Floor, Waldron Building
5103 48th Street, P.O. Box 1500
Yellowknife, NT X1A 1N5

Via Email

Dear Katherine:

Re: **Johnson Point Remediation Project, Banks Island, Inuvialuit Settlement Region**

The purpose of this letter is to follow-up on the site visit conducted on September 8, 2009 and status of the excavation area next to the unnamed river on the Johnson Point remediation site.

The compliance letter sent by Fisheries and Oceans Canada – Western Arctic Area (DFO) on August 14, 2009 outlined several actions that were agreed to be completed this field season in order to resolve the potential non-compliance and future risk of non-compliance at this site. Based on the observations at the river excavation site on Tuesday, September 8th there are two action items that still remain in question, specifically:

- The excavation is to be backfilled with clean materials and leveled back to the natural contours of the surrounding environment.
- The excavation site is to be suitably compacted and stabilized to prevent future erosion into the unnamed river.

The river excavation area has been backfilled with clean material, but there is still a substantial amount of water ponded in this area causing it to be lower than the surrounding environment and unsuitable to even walk on.

It has been an unusually wet season making it difficult to move materials and equipment on site. I'm aware that work is still underway on site and that there may still be time for the ground to dry out enough to allow more backfilling and compacting to take place in this river location to ensure it is properly stabilized.

As requested in the August 14, 2009 letter, please forward along final photos of the river excavation site upon closure. Also, any additional updates or as-built information related to this site that is included in the in the final closure reports, would also be appreciated.

We appreciate your cooperation in this matter. Please contact me in my office at (867) 669-4944 or by cell at (867) 669-4944 if you have any questions, concerns, or wish to discuss any of the foregoing in more detail.

Sincerely,

A handwritten signature in blue ink that reads "Morag McPherson". The signature is fluid and cursive, with the first name "Morag" being more prominent.

Morag McPherson
Fish Habitat Management
Department of Fisheries and Oceans

cc: Gerald Fillatre, DFO C&P
Glenn Sorensen, INAC
Joel Gowan, INAC CARD
Michael Bernardin, PWGSC
Brendan Norrie, AECOM
Russell Newmark, EGT
Amanda Joynt, DFO FHM
Terry Stein, DFO C&P
Larry Dow, DFO District Manager
Barry Fedorak, AECOM
Doug Saunders, EGT

**Indian and Northern
Affairs Canada**www.inac.gc.caNorth Mackenzie District
P.O. Box 2100
Inuvik, NT X0E 0T0**Affaires Indiennes
et du Nord Canada**www.ainc.gc.caTelephone: (867) 777-3361
Fax: (867) 777-2090

May 22, 2008

Contaminants and Remediation Directorate
PO Box 1500, 4920 52nd Ave.
Yellowknife, NT X1A 2R3**Attn: Emma Pike, Project Manager****RE: Land Use Permit N2008X0011
Johnson's Point: Site Remediation**

To Ms. Pike,

Enclosed is your copy of Land Use Permit N2008X0011 for the Johnson's Point Site Remediation program as requested in your application dated February 15, 2008.

Your application has received a wide distribution to other federal departments, departments of the Government of the N.W.T., communities in the area of your operation, and concerned aboriginal groups. In distributing your application, we sought comments from these various agencies based on their area of expertise that will help ensure minimum negative impact on the environment.

The issuance of this Permit indicates that as a result of this environmental screening process, it was decided that the potential adverse environmental effects that may be caused by your proposal are mitigable with known technology and are not significant. The terms and conditions in the Permit will, in our opinion, provide the necessary protection to the environment.

I would like to point out however, that a second Land Use application is currently being reviewed which has identified Johnson Point as a camp location and air strip. There exists, as a result, the potential for overlap in timing and usage for both the 08 and 09 operating seasons. In efforts to manage this, it is important to ensure dialogue between yourself and Diamonds North occur in advance of the operating seasons to ensure cooperative use of the Johnson Point site. It is further advised that any dialogue be followed up with written agreement in terms of camp locations on site, air strip usage and scheduling, common air to ground radio frequency usages, fuel staging areas, and recognition of differing health, safety and environment policies and procedures. This agreement must be submitted to the Land Use Inspector in advance of each seasons start up.

If you have any questions, please contact me.

Regards,

A handwritten signature in black ink, appearing to be 'CB', written over a vertical line.

Conrad Baetz
District Manager

Cc: Resource Management Officers - Inuvik



Indian and Northern Affairs Canada / Affaires indiennes et du Nord Canada

**LAND USE PERMIT
NORTHERN AFFAIRS PROGRAM**

**PERMIS D'UTILISATION DES TERRES
PROGRAMME DES AFFAIRES DU NORD**

Permit Class - Permis Catégorie A	Permit No. - N° de permis N2008X0011
---	--

Subject to the Territorial Land Use Regulations and the terms and conditions in this permit, authority is hereby granted to:

Sous réserve du Règlement sur l'utilisation des terres territoriales et des conditions de ce permis:

**Contaminants and Remediation Directorate
Indian and Northern Affairs Canada**
Permittee - Détenteur de permis

To proceed with the land use operation described in the application of:

Est autorisé à entreprendre les travaux d'exploitation des terres décrits dans la demande de permis du:

Signature Emma Pike	Date February 15th, 2008
Type of Land Use Operation - Genre de travaux d'exploitation des terres Site Remediation	
Location - Emplacement Johnson's Point, Banks Island, NT	

This permit may be assigned, extended, discontinued, suspended or cancelled pursuant to the Territorial Land Use Regulations.

Ce permis peut faire l'objet d'une cession, d'une prolongation, d'une cessation, d'une suspension ou d'une annulation, en vertu du Règlement sur l'utilisation des terres territoriales.

Dated at Inuvik, NT Engineer [Signature]
Date à Inuvik, NT Ingénieur [Signature]

This Ce 15th Day of May, 2008
Ce 15th jour de May, 2008

Commencement Date July 1st, 2008 Expiry Date June 30th, 2010
Date du début des travaux July 1st, 2008 Date d'achèvement June 30th, 2010

NOTE

IT IS A CONDITION OF THIS PERMIT THAT THE PERMITTEE COMPLY WITH ANY OTHER APPLICABLE ACT, REGULATION, ORDINANCE BY - LAW OR ORDER DEFAULT HEREOF MAY RESULT IN SUSPENSION OR CANCELLATION OF THIS PERMIT.

REMARQUE

LE DÉTENTEUR DU PRÉSENT PERMIS DOIT SE CONFORMER À TOUT AUTRE RÈGLEMENT, LOI, DÉCRET RÈGLEMENT MUNICIPAL OU ARRÊTÉ APPLICABLE. LE MANQUEMENT À CETTE OBLIGATION POURRAIT DONNER LIEU À LA SUSPENSION OU À L'ANNULATION DU PERMIS.

Canada

**CONDITIONS ANNEXED TO AND FORMING PART OF
LAND USE PERMIT NUMBER N2008X0011**

31 (1) (a) - LOCATION AND AREA

- | | | |
|----|--|---|
| 1. | The Permittee shall not conduct this land use operation on any lands not designated in the accepted application, unless otherwise authorized, in writing, by the Engineer. | PLANS |
| 2. | The Permittee shall not conduct any part of the land use operation within three hundred (300) metres of any privately owned land or structure, unless otherwise authorized, in writing, by the Engineer. | PRIVATE
PROPERTY |
| 3. | The Permittee shall remove from Territorial Lands, all scrap metal, discarded machinery and parts, barrels and kegs, buildings and building material. | REMOVE
WASTE
MATERIAL |
| 4. | The Permittee shall use existing campsites. | CAMP
LOCATION |
| 5. | The Permittee shall at all times conform to all applicable Federal, Territorial or local regulations, ordinances or bylaws. | CONFORM TO
APPLICABLE
LAWS |

31 (1) (b) - TIME

- | | | |
|----|--|---------------------------------------|
| 6. | The Permittee's Field Supervisor shall contact or meet with a Land Use Inspector at the Inuvik office of the Department of Indian Affairs and Northern Development, telephone number (867) 777-3361, at least 48 hours prior to the commencement of this land use operation. | CONTACT
INSPECTOR |
| 7. | The Permittee shall advise a Land Use Inspector at least ten (10) days prior to the completion of the land use operation of (a) his plan for removal or storage of equipment and materials, and (b) when final clean-up and restoration of the lands used will be completed. | REPORTS
BEFORE
REMOVAL |
| 8. | The Permittee shall complete all clean-up and restoration of the lands used prior to the expiry date of this Permit. | CLEAN-UP |
| 9. | The Engineer reserves the right to impose closure of any area to the Permittee in periods when dangers to natural resources are severe. | CLOSURE |

31 (1) (c) - EQUIPMENT

- | | | |
|-----|--|--|
| 10. | The Permittee shall not use any equipment except of the type, size, and number that is listed in the accepted application, unless otherwise authorized, in writing, by a Land Use Inspector. | ONLY
APPROVED
EQUIPMENT |
| 11. | The Permittee shall burn all combustible garbage and debris in a container acceptable to a Land Use Inspector. | INCINERATION |
| 12. | The Permittee shall ensure a garbage container is on site. | GARBAGE
CONTAINER |

**31 (1) (e) - TYPE, LOCATION, CAPACITY
AND OPERATION OF FACILITIES**

- | | | |
|-----|--|-----------------------------|
| 13. | The Permittee shall not locate any sump within thirty (30) metres of the normal high water mark of any stream. | SUMPS
FROM WATER |
| 14. | The Permittee shall backfill and restore all sumps prior to the expiry date of this Permit. | BACKFILL
SUMPS |
| 15. | The Permittee shall ensure that the land use area is kept clean and tidy at all times. | CLEAN WORK
AREA |

**31 (1) (f) - CONTROL OR PREVENTION OF FLOODING,
EROSION AND SUBSIDENCE OF LAND**

- | | | |
|-----|---|-----------------------------|
| 16. | The Permittee shall remove any obstruction to natural drainage caused by any part of this land use operation. | NATURAL
DRAINAGE |
|-----|---|-----------------------------|

**31 (1) (g) - USE, STORAGE, HANDLING AND DISPOSAL
OF CHEMICAL OR TOXIC MATERIAL**

- | | | |
|-----|---|----------------------------------|
| 17. | The Permittee shall not use chemicals in connection with the land use operation without the prior approval of the Engineer. | APPROVAL
OF CHEMICALS |
| 18. | The Permittee shall burn all garbage and debris at least daily. | GARBAGE
DISPOSAL |
| 19. | The Permittee shall remove all noncombustible garbage and debris from the land use area to a disposal site approved, in writing, by a Land Use Inspector. | REMOVE
GARBAGE |

20. The Permittee shall report all spills immediately in accordance with instructions contained in "Spill Report" form N.W.T. 1086(10/79). 24 hour spill report line (867) 920-8130.
21. The Permittee shall dispose of all sewage in a manner approved by a Land Use Inspector.

**REPORT
CHEMICAL
AND
PETROLEUM
SPILLS**

**SEWAGE
DISPOSAL**

31 (l) (h) - WILDLIFE AND FISHERIES HABITAT

22. The Permittee shall not unnecessarily damage wildlife habitat in conducting this land use operation.
23. Your operation is in an area where bears may be encountered. Proper food handling and garbage disposal procedures will lessen the likelihood of bears being attracted to your operation. Information about the latest bear detection and deterrent techniques can be obtained from the Department of Resources, Wildlife and Economic Development at (867) 777-7308 or (867) 777-7230.
24. The Permittee shall not in any circumstances deposit or allow the deposit of any deleterious substances (including but not limited to fuels, lubricants, hydraulics, and coolants) of any type into any waters, or in any place under any conditions where the deleterious substances may enter any waters.

**HABITAT
DAMAGE**

**BEAR/MAN
CONFLICT**

**DEPOSITING
DELETERIOUS
SUBSTANCES**

**31 (l) (i) - OBJECTS AND PLACES OF RECREATIONAL,
SCENIC AND ECOLOGICAL VALUE**

25. The Permittee shall not feed wildlife.
26. The Permittee shall immediately suspend the Land Use operation on the site and notify the Land Use Inspector of the location of the site and nature of any unearthed materials, structures or artifacts.

**NO FEEDING
WILDLIFE**

**ARCHAEOLOGICAL
SITES AND /OR
BURIAL GROUND**

31 (l) (k) - PETROLEUM FUEL STORAGE

27. The Permittee shall not place any petroleum fuel storage containers within thirty (30) metres of the normal high water mark of any stream where possible.
28. The Permittee shall not allow petroleum products to spread to surrounding lands or into water bodies.

**FUEL BY
STREAM**

**FUEL
CONTAINMENT**

- | | | |
|-----|--|---|
| 29. | The Permittee shall not use bladders for storing and/or transporting petroleum products. | BLADDERS
PROHIBITED |
| 30. | The Permittee shall mark all fuel containers with the Permittee's name. This includes forty-five (45) gallon drums. | MARK
CONTAINERS |
| 31. | The Permittee shall at all times have on site sufficient spill clean-up equipment and material in readiness to clean-up all hazardous material which may be spilled. | SPILL
CLEAN-UP
EQUIPMENT |

**31 (1) (m) - MATTERS NOT INCONSISTENT
WITH THE REGULATIONS**

- | | | |
|-----|--|--|
| 32. | The Permittee shall display a copy of this Permit in a conspicuous place in each campsite established to carry out this land use operation. | DISPLAY
PERMIT |
| 33. | The Permittee shall keep on hand, at all times during this land use operation, a copy of the Land Use Permit. | COPY OF
PERMIT |
| 34. | The Permittee shall provide in writing to the Engineer, at least forty-eight (48) hours prior to commencement of this land use operation, the following information: <ul style="list-style-type: none"> (a) person, or persons, in charge of the field operation to whom notices, orders, and reports may be served; (b) alternates; (c) all the indirect methods for contacting the above person(s). | IDENTIFY
AGENT |
| 35. | The Permittee shall ensure that a copy of this Permit, operating conditions and definitions is provided to and understood by all contractors and sub-contractors prior to the start-up of this Land Use Operation. | PERMIT
CONTRACTORS
& SUB-
CONTRACTORS |
| 36. | PART 1 - In this Permit: <p style="margin-left: 40px;">"sump" means a man-made pit, trench hollow or cavity in the earth's surface used for the purpose of depositing waste material therein.</p> | |



**Indian and Northern
Affairs Canada**
www.inac.gc.ca

North Mackenzie District
P.O. Box 2100
Inuvik, NT X0E 0T0

**Affaires Indiennes
et du Nord Canada**
www.ainc.gc.ca

Telephone: (867) 777-3361
Fax: (867) 777-2090

August 11, 2008

Contamination and Remediation Directorate
Indian and Northern Affairs Canada
P.O. Box 1500
Yellowknife, NWT
X1A 2R3

ATTENTION: Emma Pike

Dear Emma,

Re: Quarry Permit 2008QP0077

Enclosed is the above mentioned Quarry Permit issued today. Please note that the locations are as identified on the sketch attached to the Quarry Permit

To ensure the environmental integrity of the locations noted, please consider the following :

- Quarrying is only to occur within the areas identified on the attached diagram
- Volumes identified are to remain as applied for in each area.
- Any exposed permafrost as a result of your quarry operation is to be re-covered.
- Quarry sides to be contoured as approved by an Inspector (approx 2:1)

Please ensure the attached quarry return is submitted by the 10th of each month, as per Condition 9 of your Quarry Permit.

If you have any questions or concerns, please contact our office at (867) 777-3361.

Yours truly,


Conrad Baetz
District Manager
North Mackenzie District
cc: RMO, North Mackenzie District



Indian and Northern Affairs Canada / Affaires indiennes et du Nord Canada

TERRITORIAL QUARRYING REGULATIONS

QUARRYING PERMIT NO.2008QP0077

Permit Fee.....\$ 0.00 Free Permit under Section 12(2)(b)
Royalty at \$1.25 per cu. m \$ 0.00 of Territorial Quarrying
Receipt No.AXXXXX TOTAL \$ 0.00 Regulations.

Indian and Northern Affairs Canada,
Contaminants and Remediation Directorate

4920 52nd Street
Yellowknife, NT X1A 3T1

is hereby authorized to take 42,000 m³ of Sand , Gravel, General fill,
from the lands described as follows and indicated on the attached
sketch:

- Borrow Area 2 10,000 cubic Meters
Borrow Area 3 - 6,000 cubic meters
Borrow Area 4 - 8,000 cubic meters
Borrow Area 5 - 5,000 cubic meters
Borrow Area 6 - 3,000 cubic meters
Borrow Area 7 - 5,000 cubic meters
Borrow Area 8 - 5,000 cubic meters

SUBJECT TO THE FOLLOWING CONDITIONS:

- 1. This permit expires twelve months from the date of issue or when the
authorized quantity of material has been quarried or removed, whichever is
the sooner.
2. This permit does not grant to the permittee any exclusive right or leasehold
interest in the land described herein.
3. This permit shall not be assigned.
4. All quarrying under this permit shall be carried out in accordance with the
N.W.T. Mining Safety Ordinance.
5. This permit is subject to the provisions of the Territorial Quarrying
Regulations and the conditions set out herein. Failure to comply with the
provisions of the Regulations and the conditions prescribed in this permit
may result in cancellation of the permit in accordance with Section 12(5) of
the Territorial Quarrying Regulations without prior notice to the permittee.
6. The Permittee will identify the work area to the satisfaction of the Land
Use Inspector prior to the removal of any material and any change in
location will require prior approval of the Land Use Inspector.
7. The Permittee will not work any area worked by any other Permittee except as
coordinated by the Land Use Inspector.
8. No material is to be removed from any land protected by a registered mineral
claim, without the Permittee obtaining prior permission of the registered
owner(s).
9. Prior to the tenth day of each month, the Permittee shall submit a report to
the Land Use Inspector at Inuvik indicating the quantity of material
quarried and the quantity of material removed from the site.
10. Upon expiration of this Permit, as prescribed in Condition One, the
Permittee shall level the excavation and restore the lands to the
satisfaction of the Land Use Inspector within 30 days of said expiration
date or as may be authorized by the Land Use Inspector.
11. Land Use Permit N2008X0011 and its operating conditions will apply.

Issued at Inuvik, NT, this 11th day of August, 2008.

[Handwritten signature]

Land Agent

Canada

REAL PROPERTY SERVICES
Thruco Report

Canada
CONTAMINANT REMEDIATION DIRECTORATE
YELLOWKNIFE, N.W.T.

**PRELIMINARY
NOT FOR CONSTRUCTION**

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
2. SIZE PLANS AND TOPOGRAPHIC INFORMATION FOR BASED ON AIR PHOTO AND SURVEY PROVIDED BY THE CURRENT POSSESSIONS MAY NOT BE EXACTLY AS SHOWN.
3. REMEDIATION AREAS AND LOCATIONS ARE POTENTIAL REMEDIATION LOCATIONS FOR APPROX AREA AND CONTAMINATED SOILS.
4. REMOVE ALL DEBRIS FROM PLAN AREA.

LEGEND:

- BOUNDARY
- TEST POINT LOCATION

IMA

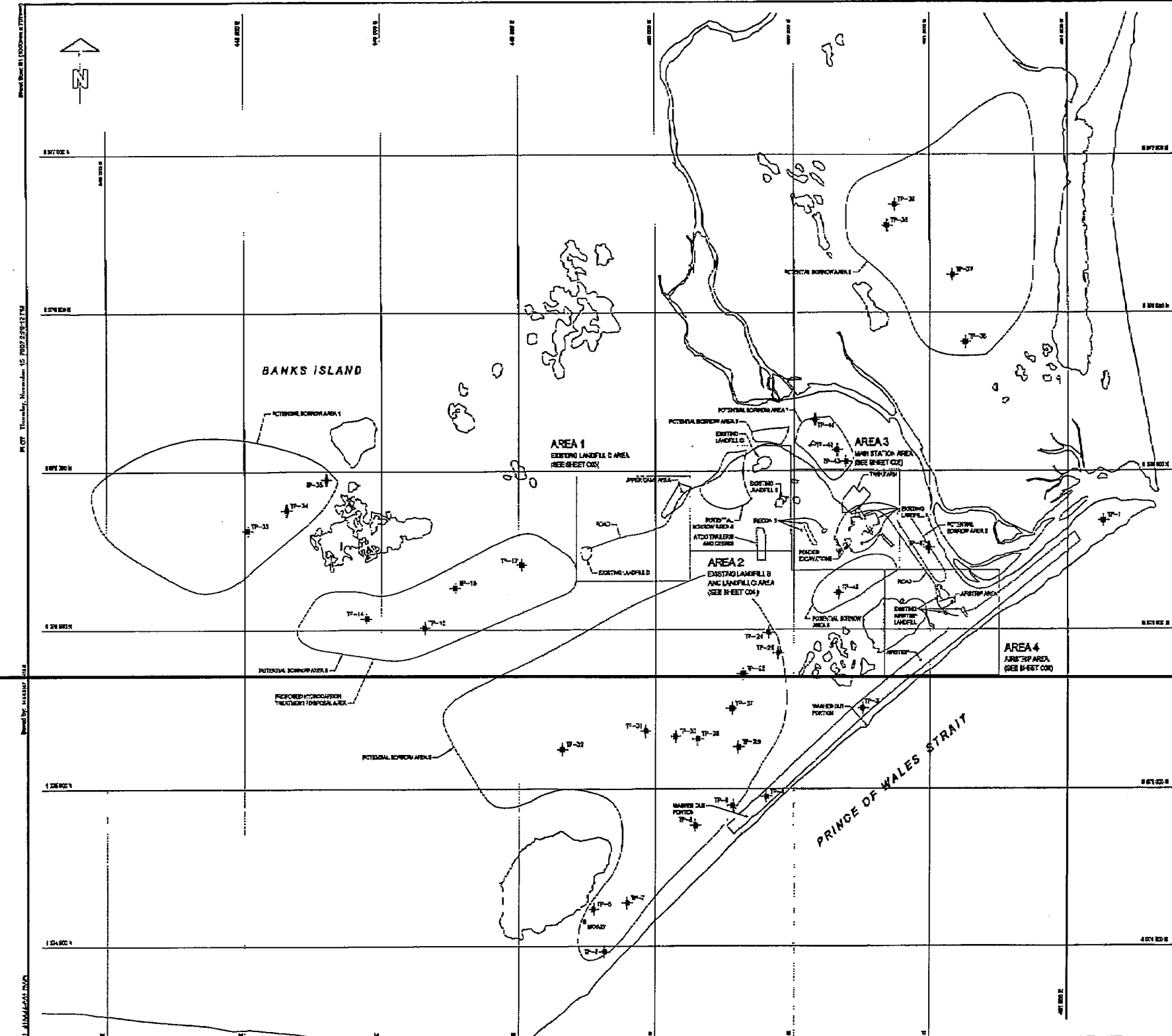
1	NOISE	1/10
2	WATER	1/10
3	WATER	1/10
4	WATER	1/10

A Add number
 B Add drawing to detail
 C Add on drawing to add on detail

JOHNSON POINT
REMEDIATION PROJECT
NORTHWEST TERRITORIES

OVERALL SITE PLAN

Drawn by	B. PEARSON	Checked by	
Scale	1:5000	Reviewed by	
Project No.	18677772090	Approved by	
Field Station Number		Project Manager	



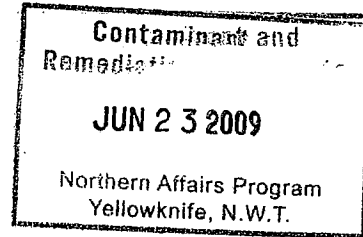


**Indian and Northern
Affairs Canada**
www.inac.gc.ca

North Mackenzie District
P.O. Box 2100
Inuvik, NT X0E 0T0

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et du Nord Canada**
www.ainc.gc.ca

Telephone: (867) 777-3361
Fax: (867) 777-2090



June 17, 2009

Indian and Northern Affairs
Contaminants and Remediation Directorate
5103-48 Street
Yellowknife, NT X1A 2R3

Attn: **Katherine Silcock**
Project Manager

Re: **Quarry Permit 2009QP0089**
Land Use Permit N2008X0011, Johnson Point Borrow Pits

To Ms. Silcock,

Enclosed is the above mentioned Quarrying Permit issued today.

Prior to the commencement of any activities under this new permit, a meeting with inspectors needs to be arranged to establish a time frame to work within, as well as the area the activities are to take place in the pit.

Please ensure your monthly quarry returns are received by this office no later than the 10th of every month, as per condition # 11 of the Quarrying Conditions.

Pre-surveys and post-surveys are not required as per discussions with the Land Use inspector on-site.

Should you have any other questions, please call our office at the number noted above.

Regards,


Conrad Baetz
North Mackenzie District Manager.

Cc: Resource Management Officers, Inuvik
EISC



TERRITORIAL QUARRYING REGULATIONS

QUARRY PERMIT No. 2009QP0089

Permit Fee	\$ 0.00	Permittee: Indian and Northern Affairs Canada, Contaminants and Remediation Directorate
Royalty at \$	per cu. m. \$ 0.00	Address: 5103 48 th Street, Yellowknife, NT
Receipt No.	TOTAL \$ 0.00	Phone: (867) 669-2461

Is hereby authorized to take: **79,000 cubic metres of Gravel**
From the lands described as follows:

Johnson Point Borrow Pits - 72 degrees 45' 10" N, 118 degrees 30' 00" E
(as shown on attached sketch)

Borrow Area 2	10,000 cubic metres
Borrow Area 3	20,000 cubic metres
Borrow Area 4	14,000 cubic metres
Borrow Area 5	5,000 cubic metres
Borrow Area 6	3,000 cubic metres
Borrow Area 7	19,000 cubic metres
Borrow Area C	8,000 cubic metres

SUBJECT TO THE FOLLOWING CONDITIONS:

1. This permit shall expire when the quantity of material or substance mentioned in the permit has been quarried or removed, or on the expiry of one year from the date of issue of the permit, whichever is the earlier.
2. This permit does not grant to the Permittee and exclusive right or leasehold interest in the land described herein.
3. This permit shall not be assigned.
4. All quarrying under this permit shall be carried out in accordance with the approved Quarry Management Plan, if applicable.
5. The Permittee will identify the work area to the satisfaction of the Land Use Inspector prior to the removal of any material and any change in location will require prior approval of the Land Use Inspector.
6. Pre and post surveys, if required, must be conducted by a certified Canada Land Surveyor or certified engineering technician or as approved by the land use inspector.
7. Pre-surveys, if required, must be submitted to the land use inspector, 10 days prior to the commencement of operations, for approval.
8. Post-surveys, if required, must be submitted to the land use inspector within 60 days of completion of the operation.
9. Quarry operations in all crown pits, including multi user pits, must be coordinated by the Land Use Inspector and be conducted as per the quarry permit application and/or Quarry Operations Plan.
10. The Permittee will not work any area worked by any other Permittee except as co-ordinated by the Land Use Inspector.
11. Prior to the tenth day of each month, the Permittee shall submit a report to the Land Use Inspector at **Inuvik**, indicating the quantity of material quarried and the quantity of material removed from the site. Failure to submit the monthly report within indicated time frames may result in cancellation of this permit as per section 12 (5) of the regulations.
12. Upon expiry of the permit, the Permittee must submit a Final Plan to the Land Use Inspector for reconciliation and approval. Failure to submit a Final Plan within 60 days of project completion may result in rejection of future Quarry Permit Applications until rectified.
13. A permittee who over-quarries may be ineligible for future quarry permits for a twelve month period and additional legal action may be taken by the Land Use Inspector under the Territorial Quarrying Regulations.
14. This permit is subject to the provisions of the Territorial Quarrying Regulations and the conditions set out herein. Failure to comply with the provisions of the Regulations and the conditions prescribed in this permit may result in cancellation of the permit in accordance with Section 12(5) of the Territorial Quarrying Regulations without prior notice to the Permittee.
15. Upon expiration of this Permit, as prescribed in Condition One, the Permittee shall carry out the reclamation activities within timelines as approved by the Inspector in the Quarry Operations Plan.

Definitions:

- **Quarrying:** the acts of blasting, ripping, excavating and piling material

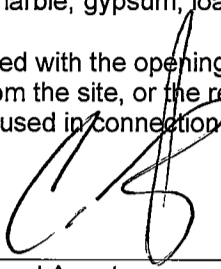
- **Work area:** that area designated in the quarry application to be used for the extraction of material or substance and for further processing thru screening or crushing.

- **Opening Up** - The preparation of a pit or quarry site from an undisturbed condition for the working and extraction of material and includes surface clearing and overburden removal and placement.

- **Quarry Material** - Material including limestone, granite, slate, marble, gypsum, loam, marl, gravel, sand, clay, stone, or volcanic ash.

- **Quarry Operation** - Means activities at a pit or quarry associated with the opening up of the site or any portion thereof, or the extraction, processing, stockpiling or removal of materials from the site, or the restoration of the site, and includes any works, machinery, plant, buildings and premises belonging to or used in connection with the pit or quarry.

Issued at Inuvik, this **17th** day of June, **2009** .



Land Agent

Canada



E. GRUBEN'S TRANSPORT LTD.

P.O. BOX 177, TUKTOYAKTUK, NT X0E 1C0

PHONE: [867] 977-7000

FAX: [867] 977-7040

FAX COVER PAGE

Company:	<i>E. NWT STILL REPORT</i>
Attention:	
Fax Number:	<i>867-873-6924</i>
Date:	<i>21 DEC 09</i>
# of pages, including cover:	<i>4</i>

- From:**
- | | |
|--|--|
| <input type="checkbox"/> - Russell Newmark | <input type="checkbox"/> - Mervyn Gruben |
| <input type="checkbox"/> - Doug Saunders | <input type="checkbox"/> - Bob Stefure |
| <input type="checkbox"/> - Brenda Lucas | <input type="checkbox"/> - Sarah Ross |
| <input type="checkbox"/> - Mahalia Newmark | <input checked="" type="checkbox"/> - Other <u>JIM STEVENS</u> |

Message:

<i>see attached</i>

If you have problems receiving this fax,
Please call (867) 977 - 7000. Thank you.

N.W.T. SPILL REPORT (Oil, Gas, Hazardous Chemicals or other Materials)

National Energy Board
 Phone (403) 292-6614 Home (403) 275-6256
 Fax (403) 292-5876 or 292-5875

24-Hour Report Line
 Phone (867) 920-8130
 Fax (867) 873-6924

A Report date and time Jul 22/09	B Date and time of spill (if known) July 25/09	C <input checked="" type="radio"/> Original Report <input type="radio"/> Update Report	Spill number
D Location and map coordinates (if known) and direction (if moving) JOHNSON POINT, BANKS ISLAND, NT 72°46'N, 118°30'W			
E Party responsible for spill WATER & LAND USE PERMITS HELD BY INAC. * SITE CONTRACTOR E. GROUBEN'S TRANSPORT LTD.			
F Product(s) spilled and estimated quantities (provide metric volumes/weights if possible) 5,000 L			
G Cause of spill EXCESSIVE RAINS, SIGNIFICANTLY ABOVE SEASONAL NORMALS LED TO WASHOUT OF EXCAVATION RETAINING WALL			
H Is Spill terminated? <input checked="" type="radio"/> yes <input type="radio"/> no	I If spill is continuing, give estimated rate N/A	J Is further spillage possible? yes <input type="radio"/> no <input checked="" type="radio"/>	K Extent of contaminated area (m2)
L Factors affecting spill recovery (weathering conditions, terrain, snow cover, etc.) NON-RECOVERABLE - RAIN		M Containment (natural depression, dykes, etc.) N/A	
N Action, if any, taken or proposed to contain, recover, clean up or dispose of product(s) and contaminated materials Could not locate any effluent to clean up.			
O Do you require assistance? <input checked="" type="radio"/> no <input type="radio"/> yes, describe:		P Possible hazards to persons, property, or environment	
Q Comments and/or recommendations see attached descriptions (1) Description by Departmental rep. on site at the time. (2) Analysis of ponded water prior to dilution & spill.			FOR SPILL LINE USE ONLY
			Lead Agency _____ Spill significance _____ Lead Agency contact and time _____ _____ _____ _____ _____
Reported by SIM STEVENSON	Position, Employer, Location SITE SUPERVISOR, E. GROUBEN'S, JOHNSON PT		Is this file now closed? <input type="checkbox"/>
Reported to	Position, Employer, Location		Telephone 867-977-7000
			Telephone

Subject: RE: Spill Reporting

Hi

Brief description follows:

The main Station excavation was completed to design limits on July 16. The excavation was on the sloping ground to the north of the Station Area. The base of the excavation sloped to the north and the northern excavation wall was approximately 0.5m high. The ground to the north of the excavation sloped away so the northern excavation perimeter wall was effectively a small berm. Melting permafrost a minor rain formed an area of ponded water against the north berm of approximately 5000L. This volume of water was sampled July 21st.

Following three days of rain, heavy overnight rain on July 25 (prior to sample results coming back) caused a channel to develop in the northern excavation perimeter wall and the ponded water (and additional water from the heavy precipitation) to escape from the excavation.

1

The volume of ponded water that was released from the excavation is unknown but it was likely significantly more than the volume sampled due to the heavy rain. Filling to berm capacity prior to discharge would be approximately 10,000L - 15,000L.

Johnson Point
Summary of Analytical Data
Ponded Water in Excavations

Johnson Point

Analytical Summary of Ponded Water in Excavations

Sample ID	Sampling Location	Date Collected	Time Collected	Parameters		
				pH	Volatiles Hydrocarbons VH (W5-10) (mg/L)	Extractable Hydrocarbons EH (W10-19) (mg/L)
Water Discharge Criteria						
09-430	NE Plume - Lobe L	7-Jul-09	15:20	6 - 9	15 mg/L	5 mg/L
09-431 ¹	SW Plume - Lobe Y/U	7-Jul-09	15:25	7.87	0.374	1.70
09-520	SW Plume - Lobe Y	16-Jul-09	9:10	7.67	6.480	19.3
09-521	SW Plume - Lobe X	16-Jul-09	9:15	8.16	0.724	1.18
09-597	NE Plume - Lobe P	21-Jul-09	15:25	7.44	1.580	4.14
09-598	SW Plume - Part 6	21-Jul-09	15:33	7.64	<0.300	0.15
09-599	SW Plume - Lobe Y/U	21-Jul-09	15:38	8.25	1.100	3.39
09-600 ²	Main Station	21-Jul-09	15:57	7.61	0.995	3.86
09-601(d)	Main Station	21-Jul-09	15:57	8.14	1.400	6.09
09-729	NE Plume	07-Aug-09	10:00	8.12	1.050	6.40
09-774	NE Plume	09-Aug-09	17:00	7.84	<0.300	0.4
09-775	NE Plume - Part 1	09-Aug-09	17:15	7.92	<0.300	<0.08
09-806	SW Plume - Part 4	11-Aug-09	10:00	7.85	<0.300	0.31
09-807	NE Plume - Lobe L	11-Aug-09	10:30	8.30	0.736	0.79
				8.22	3.890	1.80



Notes:

BOLD exceeds water discharge criteria

¹ Water was held in excavation and reanalysed on July 21 (Sample ID 09-599). Heavy rain fell during intervening period.

² Period of heavy rain over night between sampling and return of result caused erosion channel to develop through excavation wall and held water to be released.

(d) = duplicate sample



E. GRUBEN'S TRANSPORT LTD.

P.O. BOX 177, TUKTOYAKTUK, NT X0E 1C0

PHONE: [867] 977-7000

FAX: [867] 977-7040

FAX COVER PAGE

Company:	NWT STILL REPORT
Attention:	
Fax Number:	867-873-6924
Date:	20 NOV 09
# of pages, including cover:	FIVE

From: - Russell Newmark - Mervyn Gruben
 - Doug Saunders - Bob Stefure
 - Brenda Lucas - Sarah Ross
 - Mahalia Newmark - Other JIM STEVENS

Message:

ATTACHED ARE TWO STILL REPORTS WE HAVE COMPLETED AT THE REQUEST OF INAC FOR WOOTOK WE CONDUCTED FOR INAC AT JOHNSON PT, BANKS ISLAND THIS SUMMER ONE IS AN INCLUSION OF RIVER WATER INTO A SOIL EXCAVATION & THE SECOND IS A RELEASE OF GREY WATER.

JIM STEVENS

If you have problems receiving this fax,
Please call (867) 977 - 7000. Thank you.

N.W.T. SPILL REPORT (Oil, Gas, Hazardous Chemicals or other Materials)

National Energy Board
 Phone (403) 292-6614 Home (403) 275-6256
 Fax (403) 292-5876 or 292-5875

24-Hour Report Line
 Phone (867) 920-8130
 Fax (867) 873-6924

A Report date and time 20 NOV 09		B Date and time of spill (if known) 5 AUG 09 / 0700 HRS		C <input checked="" type="radio"/> Original Report <input type="radio"/> Update Report		Spill number	
D Location and map coordinates (if known) and direction (if moving) JOHNSON PT, BANKS ISLAND, NT 72° 46' N, 118° 30' W							
E Party responsible for spill WATER & LAND USE PERMITS HELD BY INAC. AECOM/UMA IS GOV'T REP. ON SITE * SITE CONTRACTOR E. COCHRANE TRANSPORT LTD.							
F Product(s) spilled and estimated quantities (provide metric volumes/weights if possible) RIVER WATER FLOODED INTO AN EXCAVATION							
G Cause of spill INADEQUATE BUFFER BETWEEN RIVER AND EXCAVATION							
H Is Spill terminated? <input checked="" type="radio"/> yes <input type="radio"/> no		I If spill is continuing, give estimated rate N/A		J Is further spillage possible? yes <input checked="" type="radio"/> no		K Extent of contaminated area (m2)	
L Factors affecting spill recovery (weathering conditions, terrain, snow cover, etc.)				M Containment (natural depression, dykes, etc.) IN EXCAVATION, BEHIND DYKE			
N Action, if any, taken or proposed to contain, recover, clean up or dispose of product(s) and contaminated materials Spill contained and cleaned up.							
O Do you require assistance? <input checked="" type="radio"/> no <input type="radio"/> yes, describe:				P Possible hazards to persons, property, or environment			
Q Comments and/or recommendations EXCAVATION OF HYDROCARBON CONTAMINATED SOILS ADJACENT TO RIVER. STORM BROUGHT HIGH WATER INTO RIVER. EQUIPMENT CRACKING WORKING AT EDGE OF EXCAVATION CAUSED WEAKENING/BREACH OF BUFFER AND RIVER WATER FLOODED INTO EXCAVATION. DYKE REPAIRED & SILT FENCE ERECTED WHEN RIVER WATER DROPPED. ALLIED EXCAVATION WATER SUBSEQUENTLY PASSED DISCHARGE CRITERIA & WAS RELEASED. SUBSEQUENTLY INSPECTED BY AFO, LANDS & WATER LICENSE INSPECTORS.						FOR SPILL LINE USE ONLY	
						Lead Agency	
Reported by KURT KURTZ		Position, Employer, Location ACTING SUPER. EGT, JOHNSON PT				Is this file now closed?	
Reported to SIM STEVENS		Position, Employer, Location SITE SUPER, EGT, JOHNSON PT				Telephone 867-977-7000	
						Telephone "	

N.W.T. SPILL REPORT (Oil, Gas, Hazardous Chemicals or other Materials)

National Energy Board
 Phone (403) 292-6614 Home (403) 275-6256
 Fax (403) 292-5876 or 292-5875

24-Hour Report Line
 Phone (867) 920-8130
 Fax (867) 873-6924

A Report date and time 20 NOV 09	B Date and time of spill (if known) 19 Sept 09	C <input checked="" type="radio"/> Original Report <input type="radio"/> Update Report	Spill number
D Location and map coordinates (if known) and direction (if moving) JOHNSON PT, BANKS ISLAND, NT 72° 46' N, 118° 30' W			
E Party responsible for spill WATER WILCOLE HELD BY INAC. E. GRODGEN'S TRANSPORT WAS CONTRACTOR ON SITE			
F Product(s) spilled and estimated quantities (provide metric volumes/weights if possible) GREY WATER, APPROXIMATELY 12 M ³ . CHLORINE LEVELS OVER DISCHARGE CRITERIA (SEE ATTACHED LAB SAMPLE RESULTS)			
G Cause of spill INTENTIONAL RELEASE - SEE Q BELOW.			
H Is Spill terminated? <input checked="" type="radio"/> yes <input type="radio"/> no	I If spill is continuing, give estimated rate N/A	J Is further spillage possible? yes <input type="radio"/> no <input checked="" type="radio"/>	K Extent of contaminated area (m2)
L Factors affecting spill recovery (weathering conditions, terrain, snow cover, etc.) FREEZING		M Containment (natural depression, dykes, etc.) N/A	
N Action, if any, taken or proposed to contain, recover, clean up or dispose of product(s) and contaminated materials SEE ATTACHED REPORT			
O Do you require assistance? <input checked="" type="radio"/> no <input type="radio"/> yes, describe:		P Possible hazards to persons, property, or environment N/A	
Q Comments and/or recommendations GREY WATER WAS INTENTIONALLY RELEASED WHEN IT BECAME APPARENT BARGE COULD NOT GET TO SHORE FOR REMOVAL OF TANKS & EQUIP. WITH GREY WATER. IF LEFT IN TANKS IT WOULD HAVE FROZEN, CRACKED TANKS & VALVES AND RESULTED IN A SPILL IN SPRINGTIME. GREY WATER WAS RELEASED TO PREVIOUSLY APPROVED DISCHARGE AREA WHERE IT WILL BE DILUTED WITH WINTER SNOW & SPRING RUNOFF.			FOR SPILL LINE USE ONLY
			Lead Agency _____ Spill significance _____ Lead Agency contact and time _____ _____ _____ _____ _____ _____ Is this file now closed? _____
Reported by JIM STEVENS	Position, Employer, Location E. GRODGEN'S TRANSPORT, JOHNSON PT		Telephone 867-977-7000
Reported to 11	Position, Employer, Location 11		Telephone 867-977-7000



Your Project #: JOHNSON POINT
 Site Location: JOHNSON POINT, BANKS ISLAND, NT
 Your C.O.C. #: 58164

Attention: JIM STEVENS
 E. GRUBEN'S TRANSPORT
 PO BOX 177
 TUKTOYAKTUK, NT
 CANADA X0E 1C0

Report Date: 2009/09/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A950089

Received: 2009/09/12, 9:45

Sample Matrix: Water
 # Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Chlorine (Free)	1	N/A	2009/09/14	EENVSOP-00070	HACH 8021
Mineral Oil and Grease	1	2009/09/15	2009/09/16	EENVSOP-00050	EPA 1664
Total Suspended Solids (NFR)	1	2009/09/14	2009/09/14	EENVSOP-00073	SM 2540 D

Encryption Key Kristopher Beaudet

16 Sep 2009 15:20:20 -06:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SHELYCE MORRISON, Project Manager
 Email: shelyce.morrison@maxxamanalytics.com
 Phone# (780) 577-7115 Ext:7115

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Total cover pages: 1

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		Q71139		
Sampling Date		2009/09/10 18:00		
COC Number		58164		
	Units	JPGW-19	RDL	QC Batch

Misc. Inorganics				
Free Chlorine	mg/L	0.23 (1)	0.02	3413781
Total Suspended Solids	mg/L	22 (2)	3	3413625
OIL & GREASE				
Oil & Grease (mineral/synthetic)	mg/L	<2	2	3419014

RDL = Reportable Detection Limit
 (1) Sample was past hold time when received.
 Matrix Spike exceeds acceptance limits for CL2 ,due to matrix interference.
 Reanalysis yields similar results. (Recovery: 2%, limits 80-120%)
 (2) Detection limit raised based on sample volume used for analysis.
 Matrix spike non calculable due to high concentration of original analyte.

NORTHWEST
TERRITORIES
WATER BOARD



NUNAPPA
SIVUNIUKPAIT
IMMAKUN

WATER REGISTER: N7L1-1824

May 21, 2008

Ms. Emma Pike
Project Manager
Contaminants and Remediation Directorate (CARD)
Indian and Northern Affairs Canada
P.O. Box 1500
YELLOWKNIFE, NT X1A 2R3

Dear Ms. Pike:

ISSUANCE OF A "B" TYPE LICENCE – JOHNSON POINT

Attached is a duplicate of Licence No. N7L1-1824 granted to CARD-Johnson Point by the Northwest Territories Water Board in accordance with the *Northwest Territories Waters Act*. The other original of this Licence has been filed with the Department of Indian Affairs and Northern Development in Yellowknife, Northwest Territories.

Please be advised that this letter with attached procedures, all inspection reports, and correspondence related thereto are part of the public Water Register, and are intended to keep all interested parties informed of the manner in which the Licence requirements are being met. All Water Register material will be considered when the Licence comes up for renewal or amendment.

The full cooperation of Contaminants and Remediation Directorate is anticipated.

Sincerely,

Rudy Cockney
Interim Chairman
N.W.T. Water Board

Attach.

**GENERAL PROCEDURES FOR THE ADMINISTRATION OF LICENCES
ISSUED UNDER THE NORTHWEST TERRITORIES WATERS ACT
IN THE NORTHWEST TERRITORIES**

1. At the time of issuance, a copy of the Licence is placed on the Water Register in the Office of the Northwest Territories Water Board in Yellowknife, and is then available to the public.
2. To enforce the terms and conditions of the Licence, the Minister of Indian Affairs and Northern Development has appointed Inspectors in accordance with Section 35(1) of the *Northwest Territories Waters Act*. The Inspectors coordinate their activities with officials of the Water Resources Division of the Department of Indian Affairs and Northern Development. The Inspector responsible for Licence No. N7L1-1824 is located in the North Mackenzie - Inuvik District Office.
3. To keep the Water Board and members of the public informed of the Licensee's conformity to Licence conditions, the Inspectors prepare reports which detail observations on how each item in the Licence has been met. These reports are forwarded to the Licensee with a covering letter indicating what action, if any, should be taken. The inspection reports and covering letters are placed on the public Water Register, as are any responses received from the Licensee pertaining to the inspection reports. It is therefore of prime importance that you react in all areas of concern regarding all inspection reports so that these concerns may be clarified.
4. If the renewal of Licence No. N7L1-1824 is contemplated it is the responsibility of the Licensee to apply to the Water Board for renewal of the Licence. The past performance of the Licensee, new documentation and information, and points raised during a public hearing, if required, will be used to determine the terms and conditions of any Licence renewal. Please note that if the Licence expires and another has not been issued, then water and waste disposal must cease, or you, the Licensee, would be in contravention of the *Northwest Territories Waters Act*. It is suggested that an application for renewal of Licence No. N7L1-1824 be made at least eight months in advance of the Licence expiry date.
5. If, for some reason, Licence No. N7L1-1824 requires amendment, then a public hearing may be required. You are reminded that applications for amendments should be submitted as soon as possible to provide the Water Board with ample time to go through the amendment process. The process may take up to six (6) months or more depending on the scope of the amendment requested.

6. Specific clauses of your Licence make reference to the Board, Analyst or Inspector. The contact person, address, phone and fax number of each is:

BOARD: Executive Director
Northwest Territories Water Board
Box 1326
YELLOWKNIFE, NT X1A 2N9
Phone No: (867) 765-0106
Fax No: (867) 765-0114

ANALYST: Analyst
Water Laboratory
Department of Indian Affairs
and Northern Development
Box 1500, 4601 - 52nd Avenue
YELLOWKNIFE, NT X1A 2R3
Phone No: (867) 669-2780
Fax No: (867) 669-2718

INSPECTOR: Inspector
North Mackenzie-Inuvik District Office
Department of Indian Affairs
and Northern Development
P.O. Box 2100
INUUVIK, NT X0E 0T0
Phone No: (867) 777-3361
Fax No: (867) 777-2090

NORTHWEST TERRITORIES WATER BOARD

Pursuant to the *Northwest Territories Waters Act* and Regulations the Northwest Territories Water Board, hereinafter referred to as the Board, hereby grants to

CONTAMINANTS AND REMEDIATION DIRECTORATE

(Licensee)

Indian and Northern Affairs Canada
P.O. Box 1500

of

YELLOWKNIFE, NT X1A 2R3

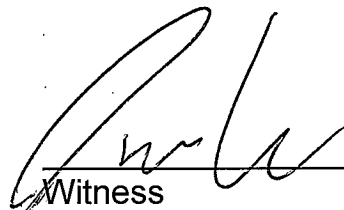
(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water subject to the restrictions and conditions contained in the *Northwest Territories Waters Act* and Regulations made thereunder and subject to and in accordance with the conditions specified in this Licence.


Licence Number	<u>N7L1-1824</u>
Licence Type	<u>"B"</u>
Water Management Area	<u>NORTHWEST TERRITORIES 07</u>
Location	<u>Johnson Point, Banks Island Latitude 72°45'10" North and Longitude 118°30' West, NORTHWEST TERRITORIES</u>
Purpose	<u>To use water and dispose of waste for industrial undertakings</u>
Quantity of Water Not to be Exceeded	<u>20 CUBIC METRES DAILY</u>
Effective Date of Licence	<u>JUNE 1, 2008</u>
Expiry Date of Licence	<u>MAY 31, 2013</u>

This Licence issued and recorded at Yellowknife includes and is subject to the annexed conditions.

NORTHWEST TERRITORIES WATER BOARD



Witness



Interim Chairman

PART A: SCOPE AND DEFINITIONS

1. Scope

- a) This Licence entitles INAC Contaminants and Remediation Directorate to use Water and dispose of Waste for industrial undertakings on Banks Island for the Johnson Point Project located at Latitude 72°45'10" North, and Longitude 118°30' West, Northwest Territories;
- b) This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the *Northwest Territories Waters Act*, or other statutes imposing more stringent conditions relating to the quantity or type of Waste that may be so deposited or under which any such Waste may be so deposited this Licence shall be deemed, upon promulgation of such Regulations, to be automatically amended to conform with such Regulations; and
- c) Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

2. Definitions

In this Licence: **N7L1-1824**

"Act" means the *Northwest Territories Waters Act*;

"Analyst" means an Analyst designated by the Minister under Section 35(1) of the *Northwest Territories Waters Act*;

"Board" means the Northwest Territories Water Board established under Section 10 of the *Northwest Territories Waters Act*;

"Greywater" means all liquid Wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet Wastes;

"Inspector" means an Inspector designated by the Minister under Section 35(1) of the *Northwest Territories Waters Act*;

"Licensee" means the holder of this Licence;

"Maximum Average Concentration" means the running average of any four (4) consecutive analytical results, or if less than four analytical results collected, and submitted to the Inspector in accordance with the sampling and analysis requirements specified in the "Surveillance Network Program";

"Minister" means the Minister of Indian Affairs and Northern Development;

"Modification" means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does include an expansion;

"Project Description" refers to the report titled "Johnson Point Remediation Application for Water Licence", dated "February 13, 2008" and prepared by CARD;

"Sewage" means all toilet Waste and greywater;

"Toilet Wastes (Blackwater)" mean all human excreta and associated products, but does not include greywater;

"Regulations" mean Regulations proclaimed pursuant to Section 33 of the *Northwest Territories Waters Act*;

"Sump" means an excavation with an impermeable layer for the purpose of catching or storing fluids.

"Waste" means Waste as defined by Section 2 of the *Northwest Territories Waters Act*; and

"Waters" mean Waters as defined by Section 2 of the *Northwest Territories Waters Act*.

PART B: GENERAL CONDITIONS

1. The Licensee shall file an Annual Report with the Board not later than December 1st of the year reported which shall contain the following information:
 - a) the total quantity in cubic metres of fresh Water obtained from all sources;
 - b) the total quantities in cubic metres of each and all Waste discharged;
 - c) the location and direction of flow of all Waste discharged to the land or Water;

- d) a summary of any modifications carried out on the water supply and Waste disposal facilities, including all associated structures;
 - e) a list of spills and unauthorized discharges;
 - f) a summary of the remediation activities undertaken in the year being reported;
 - g) a description of the planned activities for the upcoming field season; and
 - h) any other details on water use or Waste disposal requested by the Board within forty-five (45) days before the annual report is due.
2. Meters, devices or other such methods used for measuring the volumes of Water used and Waste discharged shall be installed, operated and maintained by the Licensee to the satisfaction of an Inspector.
 3. The Licensee shall comply with the "Surveillance Network Program" annexed to this Licence, and any amendment to the said "Surveillance Network Program" as may be made from time to time, pursuant to the conditions of this Licence.
 4. The "Surveillance Network Program" and compliance dates specified in the Licence may be modified at the discretion of the Board.
 5. All monitoring data shall be submitted in printed form and electronically in spreadsheet format on a diskette or other electronic forms acceptable to the Board.
 6. All reports shall be submitted to the Board in printed format accompanied by an electronic copy in a common word processing format on diskette or other electronic forms acceptable to the Board.
 7. The Licensee shall ensure a copy of this Licence is maintained at the site of operation at all times.
 8. The Licensee shall, at a minimum, implement all of the policies, practices, mitigative measures, recommendations and procedures for the protection of the environment referred to in its Project Description.

PART C: CONDITIONS APPLYING TO WATER USE

1. The daily quantity of Water used for all purposes shall not exceed 20 cubic metres.
2. No works shall occur in Unnamed Creek after September 15th of each year, unless approved by an Inspector.
3. Where practical, the Licensee shall minimize freshwater use by serially transferring Water from one tank to another.
4. The Water intake hose used on the Water pumps shall be equipped with a screen with a mesh size sufficient to ensure no entrainment of fish (2.54 mm).

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. All Greywater from the camp shall be directed to the sump or disposed of in a manner as approved by an Inspector.
2. All Greywater must meet the following effluent parameters prior to disposal to the environment:

Sample Parameter	Maximum Average Concentration
Mineral Oil and Grease	5.0 mg/L
Total Suspended Solids	100 mg/L
Residual Chlorine	0.1mg/L

3. All Toilet Wastes (Blackwater) from the camp will be incinerated or disposed of in a manner as approved by an Inspector.
4. The Licensee shall dispose of all solid Wastes in a manner acceptable to the Inspector.
5. All Waste Water derived from soil treatment and tank cleaning operations must meet the following effluent parameters prior to disposal to the environment:

Parameter	Maximum Average Concentration
Volatile hydrocarbons (VH) (W5-10)	15 mg/L
Extractable hydrocarbons (EH) (W10-19)	5 mg/L
Non-aqueous Phase Liquids pH	Non visible sheen 6-9

6. If tank bottom sludge is consolidated with the hydrocarbon waste stream or treated separately, the waste stream must also meet the following effluent parameters prior to discharge:

Parameter	Maximum Average Concentration
Arsenic (total)	100 µg/L
Cadmium (dissolved)	10 µg/L
Chromium (total)	100 µg/L
Cobalt (dissolved)	50 µg/L
Copper (dissolved)	200 µg/L
Lead (dissolved)	50 µg/L
Mercury (total)	0.6 µg/L
Nickel (dissolved)	200 µg/L
Polychlorinated Biphenyls (total) Discharged to barren land	50 µg/L
Polychlorinated Biphenyls (total) Discharged to vegetation	5.0 µg/L
Zinc (total)	1000 µg/L

7. All analyses shall be conducted in accordance with methods prescribed in the current edition of "Standard Methods for the Examination of Water and Wastewater" or by such other methods as may be approved by an Analyst.
8. The Licensee must discharge all Greywater and Waste water derived from sludge consolidation, soil treatment and tank cleaning operations at least thirty (30) metres from any natural water drainage and at least one hundred (100) metres from fish-bearing Waters, or as approved by an Inspector.
9. The Licensee must notify an Inspector at least five (5) days prior to any discharge of Waste Water from the holding tank.

10. The Licensee may commence the discharge of Waste Water from the holding tank upon receipt of an Inspector's approval.
11. The Licensee shall submit to the Board a letter of notification prior to the transportation of Waste from the site, outlining an agreement between third parties to harbour, transport or dispose of Waste along with details including, but not limited to, type of Waste, quantities of Waste, and ultimate disposal location, if Waste is to be transported away from the site.

PART E: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written approval from the Board, carry out Modifications to the planned undertakings provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a) the Licensee has notified an Inspector in writing of such proposed Modifications at least five (5) days prior to beginning the Modifications;
 - b) such Modifications do not place the Licensee in contravention of either this Licence or the Act;
 - c) an Inspector has not, during the five (5) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than five (5) days; and
 - d) an Inspector has not rejected the proposed Modifications.
2. Modifications for which all of the conditions referred to in Part E, Item 1 have not been met may be carried out only with written approval from an Inspector.
3. The Licensee shall provide to the Board as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modifications.

PART F: CONDITIONS APPLYING TO CONTINGENCY PLANNING

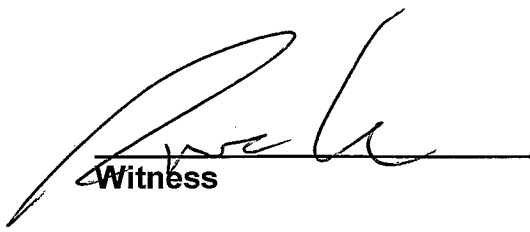
1. The Licensee shall submit to the Board for approval a Spill Contingency Plan prior to commencing operations on-site.
2. The Licensee shall implement the Spill Contingency Plan as approved and, until such time the Plan is approved, the Licensee shall implement the Plan as submitted.
3. The Licensee shall maintain a copy of the approved Spill Contingency Plan onsite in a readily available location, to the satisfaction of an Inspector.
4. The Licensee shall ensure that petroleum products, hazardous material and other Wastes associated with the project do not enter any Waters.
5. The Licensee shall ensure that all containment berms are constructed of an impermeable material, to the satisfaction of an Inspector.
6. If, during the period of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a) report the incident immediately via the 24 Hour Spill Reporting Line (867) 920-8130; and
 - b) submit to an Inspector a detailed report on each occurrence not later than thirty (30) days after initially reporting the event.

PART G: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION


1. Upon completion of all activities, the Licensee shall ensure that all equipment and materials are removed from the site. Other final restoration activities as outlined in the Project Description should be implemented to the satisfaction of an Inspector.
2. The licensee shall submit a Johnson Point Landfill Monitoring Plan to the Board for approval within 12 months of the issuance of the Licence.
3. The Licensee shall implement the Johnson Point Landfill Monitoring Plan as approved by the Board.
4. Prior to the expiry of the Licence, the Licensee shall provide a report describing the remediation and restoration activities undertaken under the term of the Water Licence, including all monitoring results and analytical data

in relation to the effectiveness of the remediation undertaken. Any sampling for total petroleum hydrocarbons should include analysis and results for F1 (C₆ – C₁₀), F2 (C₁₀-C₁₆), F3(C₁₆-C₃₄) and F4(>C₃₄) and be included in the final remediation and restoration activities report.

NORTHWEST TERRITORIES WATER BOARD



Witness



Interim Chairman

NORTHWEST TERRITORIES WATER BOARD

LICENSEE: Contaminants and Remediation Directorate, DIAND

LICENCE NUMBER: N711-1824

EFFECTIVE DATE OF LICENCE: June 1, 2008

EFFECTIVE DATE OF SURVEILLANCE NETWORK PROGRAM: June 1, 2008

SURVEILLANCE NETWORK PROGRAM

A. Location of Sampling Stations

<u>Station Number</u>	<u>Description</u>
1824-1	Discharge from the Greywater treatment facility.
1824-2	Discharges from treatment facilities for tank cleaning, soil treatment and equipment cleaning.

B. Sampling and Analysis Requirements

1. Effluent at "Surveillance Network Program" Station Number 1824-1 shall be sampled on the first day of discharge and bi-weekly thereafter during discharge and analyzed for the following parameters:

Mineral Oil and Grease	Total Suspended Solids
Residual Chlorine	

An observance for visible oil sheen should also be made and recorded.

2. Effluent from "Surveillance Network Program" Station Number 1824-2 shall be sampled on the first day of discharge and biweekly thereafter during discharge and analyzed for the following parameters:

Total Hydrocarbons	Volatile Hydrocarbons
Extractable Hydrocarbons	pH

An observance for visible oil sheen should also be made and recorded.

3. If tank bottom sludge is consolidated with the hydrocarbon waste stream or treated separately, effluent from "Surveillance Network Program" Station Number 1824-2 shall be sampled on the first day of discharge and biweekly thereafter during discharge and analyzed for the following parameters:

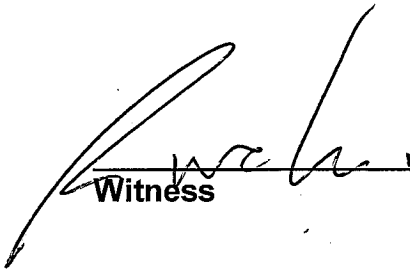
Total Arsenic	Dissolved Cadmium
Total Chromium	Dissolved Cobalt
Dissolved Copper	Dissolved Lead
Total Mercury	Dissolved Nickel
Total Zinc	Total PCB

4. Additional or more frequent sample collection may be required at the request of an Inspector.
5. All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the current edition of "Standard Methods of Examination of Water and Wastewater", or by such other methods approved by an Analyst.
6. All analyses shall be performed in a laboratory approved by an Analyst.
7. The Licensee shall submit to an Analyst within two (2) weeks of the issuance of this licence a Quality Assurance/Quality Control Plan.
8. The Plan referred to in Part B, Item 7 shall be implemented as approved by an Analyst.

C. Reports

1. The Licensee shall, within thirty (30) days following the month being reported, submit to the Board all data and information required by the "Surveillance Network Program" including the results of the Quality Assurance Plan.

NORTHWEST TERRITORIES WATER BOARD



Witness



Interim Chairman



Indian and Northern
Affairs Canada

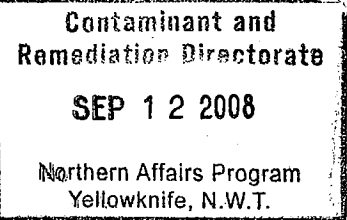
Affaires Indiennes
et du Nord Canada

North Mackenzie
P.O. Box 2100
Inuvik, NT X0E 0T0

Telephone: (867) 777-3361
Fax: (867) 777-2090

September 8, 2008

Indian and Northern Affairs Canada
P O Box 1500,
4920 52nd Ave.
Yellowknife, NWT
X1A 2R3



Attn: Ms Emma Pike, Project Officer

**RE: Land Use Permit N2008X0011 Site Remediation
Quarry Permit 2008QP0077**

To Ms. Emma Pike

On August 27, 2008, Resource Management Officer, Glenn Sorensen conducted an inspection of your operation under the above mentioned Land Use & Quarry Permit.

Enclosed is a copy of the Environmental Inspection Report. Please refer to the unacceptable and noted conditions in the general comments section of this report. Your attention to this matter is appreciated.

If you have any questions, please contact our office at (867) 777-3361.

Sincerely,


Conrad Baetz
District Manager, North Mackenzie District, Inuvik

Cc: Resource Management Officers, Inuvik



INSPECTION DATE – August 27, 2008

ENVIRONMENTAL INSPECTION REPORT

Permittee:	Indian & Northern Affairs Canada, Box 1500, Yellowknife, NT X1A 2R3
------------	---

	Permit Expiry Date	Last Previous Inspection
Land Use Permit No.	N2008X0011	June 30 th , 2010
Quarrying Permit No.	2008QP0077	August 10 th , 2009
Contractor:	EGT Gruben	Subcontractor:

Location(s) Inspected:	Johnson Point site
------------------------	--------------------

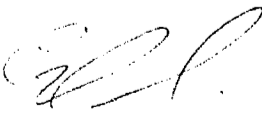
Current Stage of Operation:	Site Remediation proceeding, Camp Operating
-----------------------------	---

Program Modifications Approved:	
---------------------------------	--

Condition of Operation "A" - Acceptable "U" - Unacceptable "N/A" - Not Applicable "N/I" - Not Inspected

	Operating Condition	Aspect Inspected				
		Site				
A	Location as Permitted	A				
B	Timing as Permitted	A				
C	Equipment as Approved (Type & Size.)	A				
D	Methods & Techniques	A				
E	Facilities	A				
F	Erosion (Control or Prevention)	A				
G	Chemicals & Waste	A				
H	Wildlife and Fisheries Habitat (Protection)	A				
I	Ecological Resources	A				
J	Security Deposit	NA				
K	Fuel Storage	A				
L	Brush Disposal	NA				
M	Matters Not Inconsistent	A				
N	Restoration of Lands	N/A				
O	Quarrying Methods	A*				See comment
P						
R	Sections 12 – 19 T.L.U.R.	A				
S						
T						

N.A.
Representative Signature


Inspector's Signature



ENVIRONMENTAL INSPECTION REPORT Pg. 2
(Continued)

Date:	August 27 th 2008	Permit #:	N2008X0011
-------	------------------------------	-----------	------------

General Comments:

All aspects of the operation were found to be within the acceptable limits.

Diamonds North is utilizing a shed for a generator, this structure is contaminated from lead based paint and requires removal to an approved disposal facility. Diamonds North will be made aware of this situation in their Environmental Inspection report. (See Attached Pictures)

Borrow Area 2 has been ground truthed, the preliminary results are that the soil is Type 3 and not deemed suitable as capping material. (See Attached Pictures)

Borrow Area 3 near the end of the Airstrip has under gone a preliminary soil type investigation (Approx 5 ha +/-), the initial results are that this is a marginal discontinuos Type 2 Soil with permafrost found at a depth of 1 -2 m. (See Attached Pictures)

Discussions on site resulted in the agreement to have the Borrow Areas Ground Truthed by a GeoTechnical Engineer, this procedure would ultimately provide a Pit Development Plan and would offer various solutions with the soil types discovered on site to date. There has been a request to blend the 2 Soil types, this request is outside on INAC's Operations Authority. Blending or mixing of soil types should be addressed by a Geotechnical Engineer or other associated professional (P. Ag. etc). This request should be scoped in the Geotechnical Review.

The Greywater system appeared to be functioning within the allowable limits. The site Manager and INAC agreed on a suitable area to dispose of the greywater to land when the Lab results confirm the water quality meets the water licence requirements. (See Attached Pictures)

Inspectors Signature



ENVIRONMENTAL INSPECTION REPORT Pg. 3
(Continued)

Date:	August 27 th , 2008	Permit #:	N2008X0011
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Inspection Images:

Figure 1: Water Treatment System

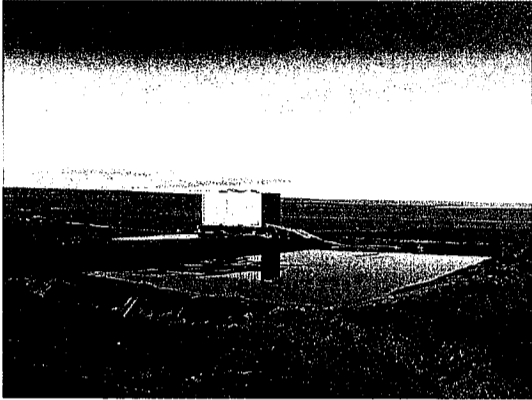


Figure 2: Type 3 Soil Borrow Area 2



Figure 3: Type 2 Soil Pit



Figure 4: Type 2 Soil Profile



Figure 5: Greywater Discharge Area



Figure 6: Fuel Storage System

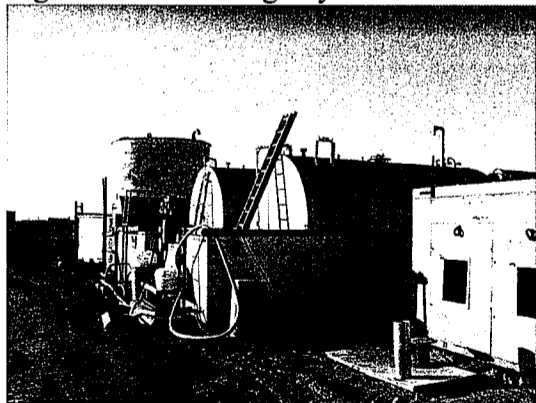
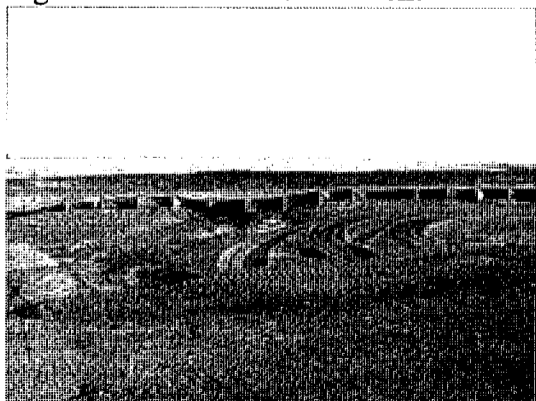


Figure 7: Tank Demolition



Figure 8: Sediment Containment



Inspection Images:

Figure 1: Water Treatment System

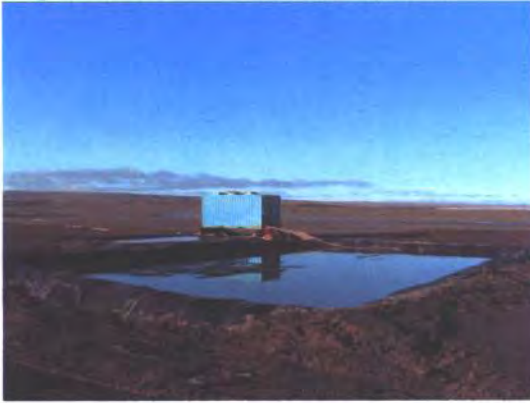


Figure 2: Type 3 Soil Borrow Area 2

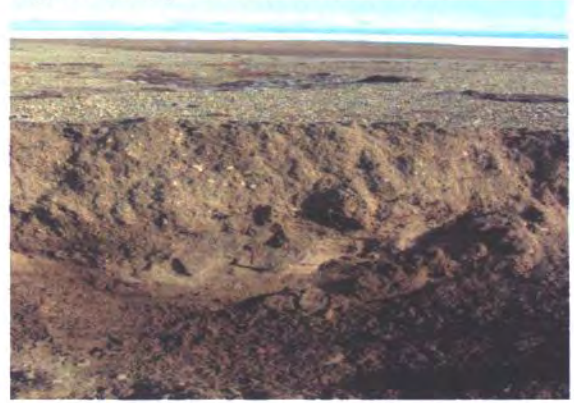


Figure 3: Type 2 Soil Pit



Figure 4: Type 2 Soil Profile



Figure 5: Greywater Discharge Area



Figure 6: Fuel Storage System



Figure 7: Tank Demolition



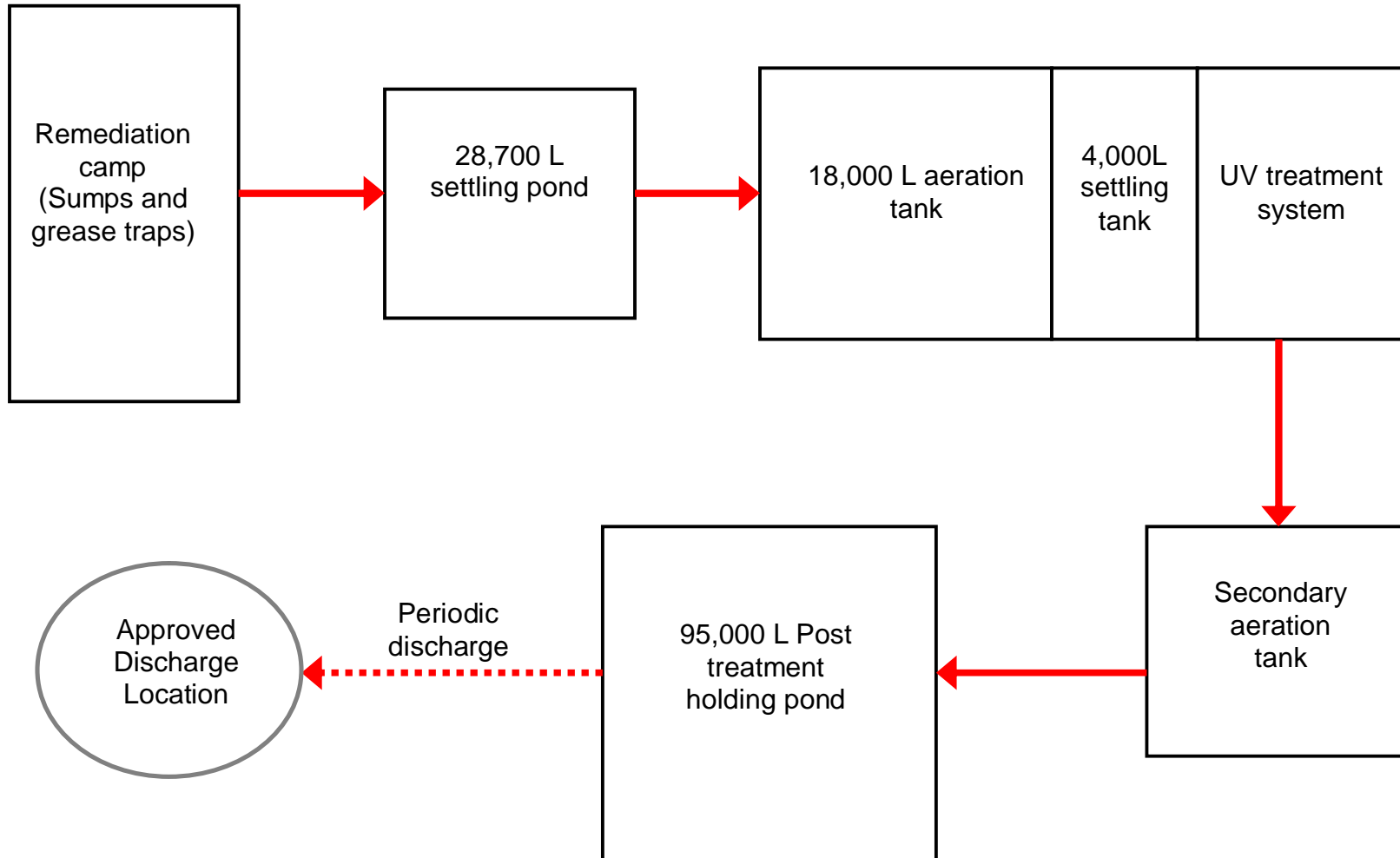
Figure 8: Sediment Containment



Appendix D

Greywater Treatment System Details

2008-2009 Johnson Point Greywater Treatment System

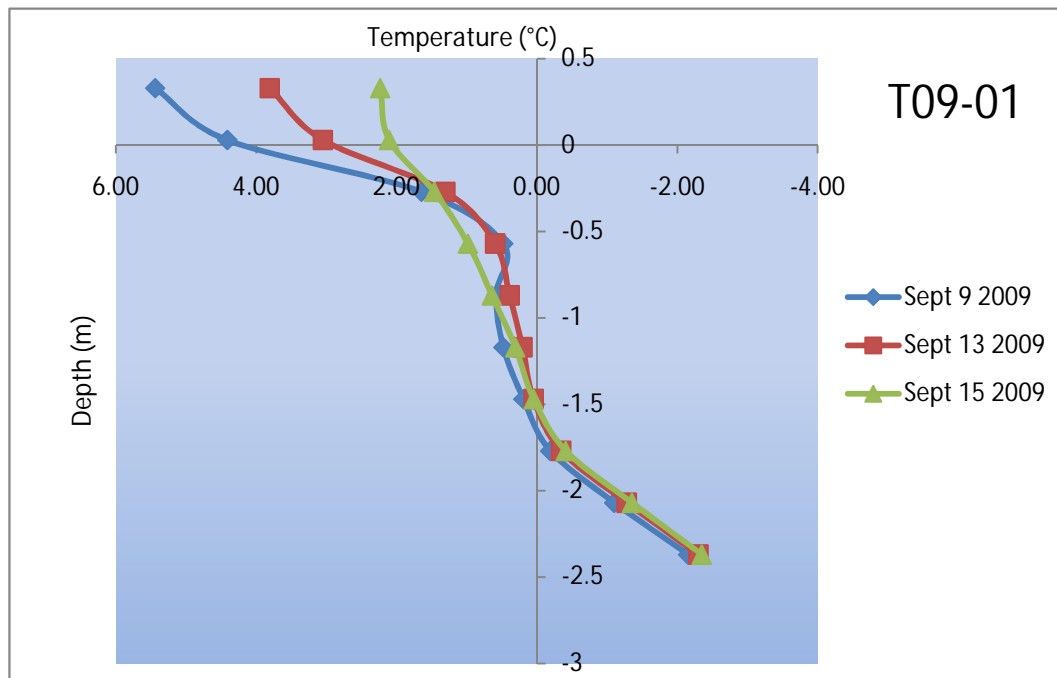


Appendix E

Apron Area Thermistor Readings

Johnson Point Thermistor readings
T09-01

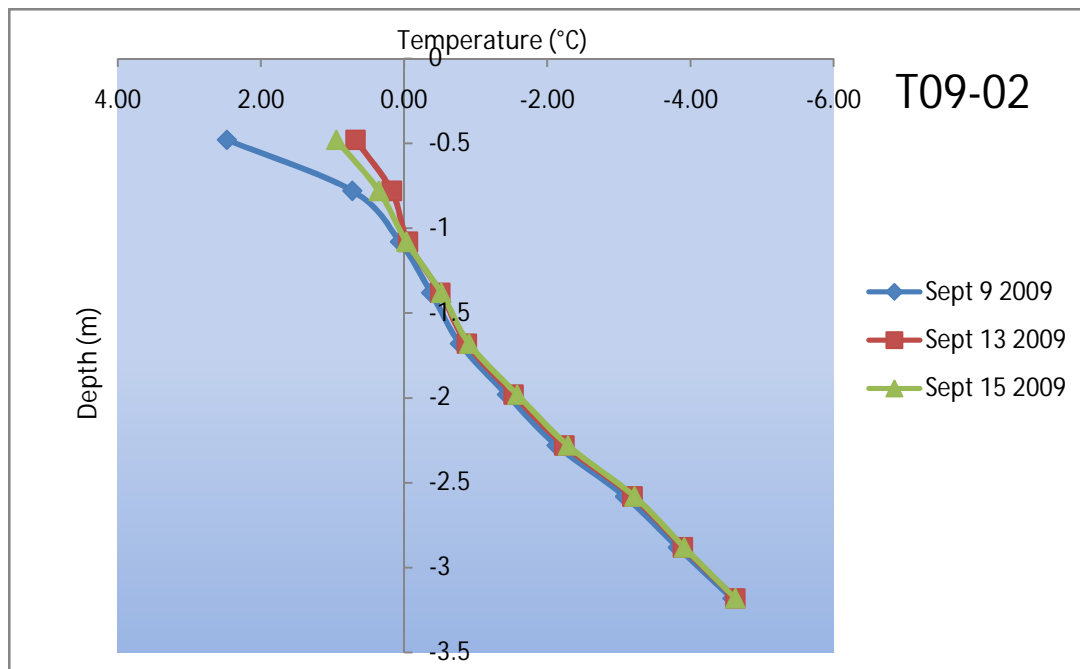
Sensor	Height relative to top of white pipe (m)	elevation relative to final ground surface (m)	Ohms to temp conversion factor	Sept 9	Sept 9 2009		Sept 13 2009		Sept 15 2009	
				Ohms	Ohms	Temp	Ohms	Temp	Ohms	Temp
1	-0.6	0.33	$(-18.49 \cdot \ln(x)) + 51.78$	6.16	12.26	5.44	13.39	3.81	14.58	2.23
2	-0.9	0.03	$(-18.49 \cdot \ln(x)) + 51.79$	6.25	12.96	4.41	13.95	3.05	14.68	2.11
3	-1.2	-0.27	$(-18.49 \cdot \ln(x)) + 51.80$	6.31	15.05	1.65	15.33	1.31	15.2	1.46
4	-1.5	-0.57	$(-18.49 \cdot \ln(x)) + 51.81$	6.32	16.03	0.48	15.93	0.60	15.6	0.98
5	-1.8	-0.87	$(-18.49 \cdot \ln(x)) + 51.82$	6.25	15.94	0.58	16.11	0.39	15.89	0.64
6	-2.1	-1.17	$(-18.49 \cdot \ln(x)) + 51.83$	6.11	16.03	0.48	16.27	0.21	16.18	0.31
7	-2.4	-1.47	$(-18.49 \cdot \ln(x)) + 51.84$	6.23	16.28	0.19	16.41	0.05	16.41	0.05
8	-2.7	-1.77	$(-18.49 \cdot \ln(x)) + 51.85$	6.26	16.62	-0.19	16.76	-0.34	16.82	-0.41
9	-3	-2.07	$(-18.49 \cdot \ln(x)) + 51.86$	6.14	17.46	-1.10	17.63	-1.28	17.7	-1.35
10	-3.3	-2.37	$(-18.49 \cdot \ln(x)) + 51.87$	6.58	18.48	-2.15	18.63	-2.30	18.68	-2.35



Note: Sensors 1 and 2 are above ground and measure ambient air and surface temperature respectively.

Johnson Point Thermistor readings
T09-02

Sensor	Depth below top of white pipe	Depth below final ground surface	Ohms to temp conversion factor	Sept 9	Sept 9 2009		Sept 13 2009		Sept 15 2009	
				Ohms	Ohms	Temp	Ohms	Temp	Ohms	Temp
1	1.18	-0.48	$(-18.49 \cdot \ln(x)) + 51.78$	5.9	14.39	2.48	15.86	0.68	15.63	0.95
2	1.48	-0.78	$(-18.49 \cdot \ln(x)) + 51.79$	5.85	15.82	0.72	16.3	0.17	16.14	0.35
3	1.78	-1.08	$(-18.49 \cdot \ln(x)) + 51.80$	5.87	16.4	0.06	16.5	-0.05	16.48	-0.03
4	2.08	-1.38	$(-18.49 \cdot \ln(x)) + 51.81$	5.93	16.79	-0.38	16.91	-0.51	16.92	-0.52
5	2.38	-1.68	$(-18.49 \cdot \ln(x)) + 51.82$	5.87	17.16	-0.78	17.25	-0.88	17.28	-0.91
6	2.68	-1.98	$(-18.49 \cdot \ln(x)) + 51.83$	5.83	17.78	-1.44	17.87	-1.53	17.92	-1.58
7	2.98	-2.28	$(-18.49 \cdot \ln(x)) + 51.84$	5.88	18.46	-2.13	18.57	-2.24	18.62	-2.29
8	3.28	-2.58	$(-18.49 \cdot \ln(x)) + 51.85$	6	19.44	-3.09	19.55	-3.19	19.58	-3.22
9	3.58	-2.88	$(-18.49 \cdot \ln(x)) + 51.86$	5.94	20.23	-3.82	20.31	-3.90	20.33	-3.91
10	3.88	-3.18	$(-18.49 \cdot \ln(x)) + 51.87$	5.93	21.08	-4.58	21.13	-4.63	21.13	-4.63



Johnson Point Thermistor Calibration page

TYPE: YSI 44007

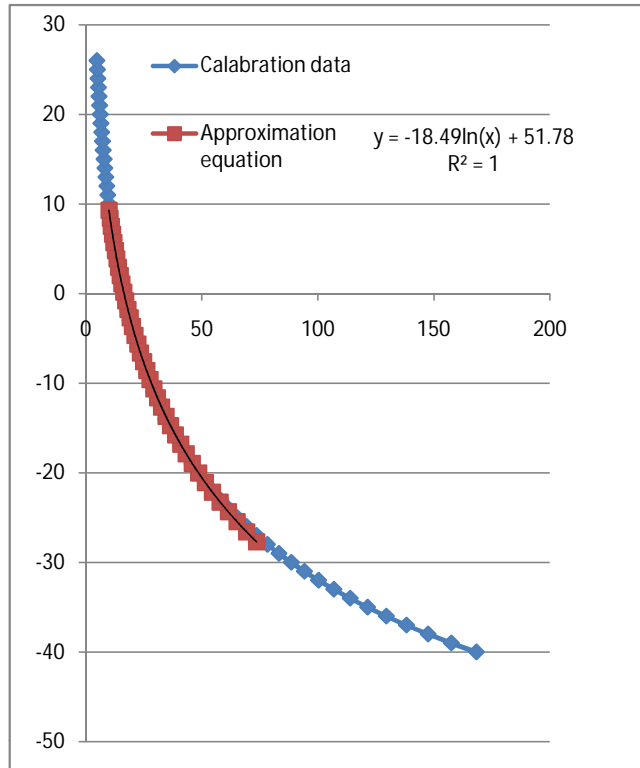
Approximation equation

Calabration data

Likely temp range

°C	ohms	kohms
-40	168,300	168.3
-39	157,500	157.5
-38	147,500	147.5
-37	138,200	138.2
-36	129,500	129.5
-35	121,400	121.4
-34	113,900	113.9
-33	106,900	106.9
-32	100,300	100.3
-31	94,220	94.22
-30	88,530	88.53
-29	83,220	83.22
-28	78,260	78.26
-27	73,620	73.62
-26	69,290	69.29
-25	65,240	65.24
-24	61,450	61.45
-23	57,900	57.9
-22	54,580	54.58
-21	51,470	51.47
-20	48,560	48.56
-19	45,830	45.83
-18	43,270	43.27
-17	40,860	40.86
-16	38,610	38.61
-15	36,490	36.49
-14	34,500	34.5
-13	32,630	32.63
-12	30,880	30.88
-11	29,230	29.23
-10	27,670	27.67
-9	26,210	26.21
-8	24,830	24.83
-7	23,540	23.54
-6	22,320	22.32
-5	21,170	21.17
-4	20,080	20.08
-3	19,060	19.06
-2	18,100	18.1
-1	17,190	17.19
0	16,330	16.33
1	15,520	15.52
2	14,750	14.75
3	14,030	14.03
4	13,340	13.34
5	12,700	12.7
6	12,090	12.09
7	11,510	11.51
8	10,960	10.96
9	10,440	10.44
10	9951	9.951
11	9486	9.486
12	9046	9.046
13	8628	8.628
14	8232	8.232
15	7857	7.857
16	7500	7.5
17	7162	7.162
18	6841	6.841
19	6536	6.536
20	6247	6.247
21	5972	5.972
22	5710	5.71
23	5462	5.462
24	5225	5.225
25	5000	5
26	4787	4.787

°C	kohms
-27.7	73.62
-26.6	69.29
-25.5	65.24
-24.4	61.45
-23.3	57.9
-22.2	54.58
-21.1	51.47
-20.0	48.56
-18.9	45.83
-17.9	43.27
-16.8	40.86
-15.8	38.61
-14.7	36.49
-13.7	34.5
-12.7	32.63
-11.6	30.88
-10.6	29.23
-9.6	27.67
-8.6	26.21
-7.6	24.83
-6.6	23.54
-5.6	22.32
-4.7	21.17
-3.7	20.08
-2.7	19.06
-1.8	18.1
-0.8	17.19
0.1	16.33
1.1	15.52
2.0	14.75
2.9	14.03
3.9	13.34
4.8	12.7
5.7	12.09
6.6	11.51
7.5	10.96
8.4	10.44
9.3	9.951



Appendix F

IEG Hydrocarbon Contaminated Soil Treatment Reports



MEMORANDUM

TO: Brendon Norrie, AECOM
FROM: Sam Bird, IEG Consultants

DATE: September 9th, 2009
FILE NO: A04029A01
LOG NO:

SUBJECT: *Decommissioning of treatment cell, confirmatory sampling of soils underlying liner.*

1. INTRODUCTION

During the remediation of Johnson Point on Banks Island, a treatment cell was constructed and used for the treatment of petroleum hydrocarbon (PHC) contaminated soils found on-site. The treatment cell was constructed on top of native soils by laying an impermeable synthetic liner over the soils. PHC contaminated soils were treated within this cell and disposed of at nearby disposal areas. Following the successful treatment of PHC contaminated soils, the cell was decommissioned and the liner removed.

Sample results indicate that the base layer of native soils underlying the treatment cell liner are well below the site specific target level (SSTL) of 4570mg/kg Total Petroleum Hydrocarbons (C6-C30) as defined in the specifications. At this point, E. Grubens Transport is requesting that you accept that soils in the decommissioned treatment cell area meet the requirements of the specifications, may be left in place and do not require treatment for petroleum hydrocarbon contamination.

2. SAMPLING METHODOLOGY

Samples from the treatment area were collected on September 3, 2009. Prior to sampling, the area of the soils underlying the treatment cell was determined to be approximately 650 m² (21m x 31m) and therefore, six discrete samples were collected to characterize the soil. Samples from an additional two locations down-gradient of the treatment cell were collected on August 26, 2009. The sample locations relative to the treatment cell area are shown on the attached figure. Two AECOM duplicates and two IEG duplicates were collected with these confirmatory samples.

3. SAMPLE RESULTS

Sample results are shown in Table 1. The analytical results are attached for your reference.

MEMORANDUM

Table 1 - Analytical and Field Results

Location	Sample Number	PID (ppmv)	PetroFlag (mg/kg)	Analytical Results – TPH (C5 to C30) (mg/kg)	Notes
SE side	826-051	N/A	N/A	<20	Down-gradient of cell
SE side	826-052	N/A	N/A	<20	IEG dup of 826-051
S drainage	826-053	N/A	N/A	<20	Down-gradient of cell
Treatment Cell	054	N/A	N/A	108	AECOM duplicate 1
Treatment Cell	055	N/A	N/A	69	
Treatment Cell	056	N/A	N/A	73	
Treatment Cell	057	N/A	N/A	73	AECOM duplicate 2
Treatment Cell	058	N/A	N/A	106	
Treatment Cell	059	N/A	N/A	185	
Treatment Cell	060	N/A	N/A	<20	
Treatment Cell	061	N/A	N/A	<20	IEG dup of 060

NA-Not Applicable

4. AUTHORIZATION

I agree that the soils in the area of the decommissioned treatment cell are below the SSTL of 4570mg/kg and may be left in place.

AECOM

Name: Brendon Norrie

Signature: _____

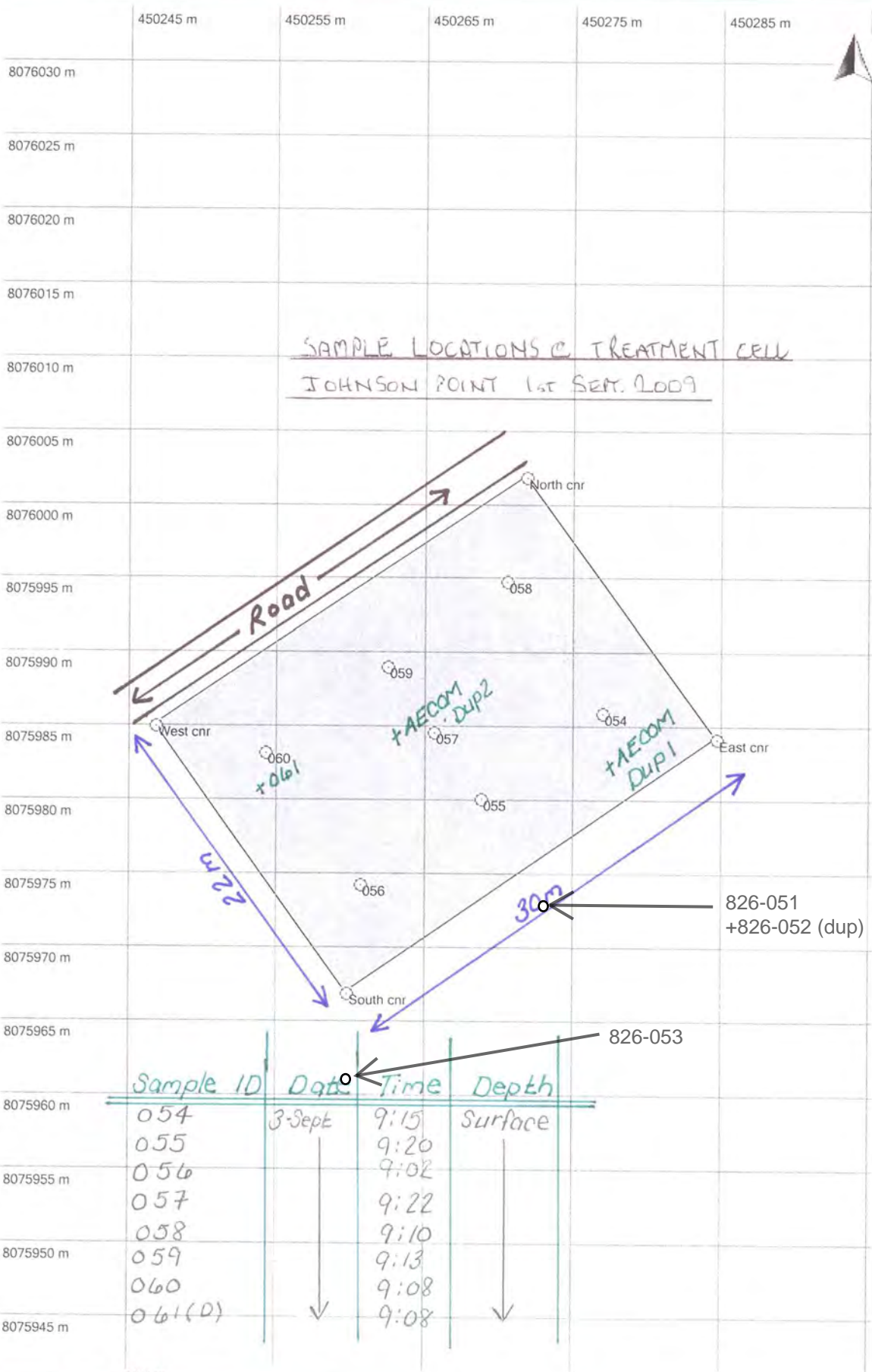
IEG Consultants

Name: Sam Bird

Signature:  _____

Attachments: Maxxam Analytical Report
Sample Location Figure

SAMPLE_LOCATIONS



- + Estimated
- Measured
- ⊗ Adjusted
- ▲ Control - 3D
- Navigated
- ⊙ Average
- ▲ Control - 1D
- ⊗ SPP
- ▽ Reference
- ▲ Control - 2D



Your Project #: A0429A01 JOHNSON POINT REMED
 Site: BANKS ISLAND NT
 Your C.O.C. #: 58162

Attention: SAM BIRD
 E. GRUBEN'S TRANSPORT
 PO BOX 177
 TUKTOYAKTUK, NT
 CANADA X0E 1C0

Report Date: 2009/08/29

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A946712
Received: 2009/08/28, 17:15

Sample Matrix: Soil
 # Samples Received: 6

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	6	2009/08/29	2009/08/29	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	6	2009/08/29	2009/08/29	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	6	N/A	2009/08/29	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	6	2009/08/29	2009/08/29	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
TPH (C6-C30) Soil Calc	6	N/A	2009/08/29		

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SHELYCE MORRISON, Project Manager
 Email: shelyce.morrison@maxxamanalytics.com
 Phone# (780) 577-7115 Ext:7115

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Total cover pages: 1



Maxxam Job #: A946712
 Report Date: 2009/08/29

E. GRUBEN'S TRANSPORT
 Client Project #: A0429A01 JOHNSON POINT REMED
 Site Reference: BANKS ISLAND NT
 Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		Q49681	Q49719	Q49720	Q49721	Q49722		
Sampling Date		2009/08/26	2009/08/26	2009/08/26	2009/08/26	2009/08/26		
COC Number		58162	58162	58162	58162	58162		
	Units	826-048	826-049	826-050	826-051	826-052	RDL	QC Batch

Physical Properties								
Moisture	%	11	11	11	11	11	0.3	3383173

RDL = Reportable Detection Limit

Maxxam ID		Q49723		
Sampling Date		2009/08/26		
COC Number		58162		
	Units	826-053	RDL	QC Batch

Physical Properties				
Moisture	%	11	0.3	3383173

RDL = Reportable Detection Limit

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		Q49681	Q49719	Q49720	Q49721		
Sampling Date		2009/08/26	2009/08/26	2009/08/26	2009/08/26		
COC Number		58162	58162	58162	58162		
	Units	826-048	826-049	826-050	826-051	RDL	QC Batch

Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	1000	1200	810	<10	10	3383069
F3 (C16-C34 Hydrocarbons)	mg/kg	130	140	110	11	10	3383069
F4 (C34-C50 Hydrocarbons)	mg/kg	28	<10	17	<10	10	3383069
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		3383069
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	119	110	92	89		3383069

RDL = Reportable Detection Limit

Maxxam ID		Q49722	Q49723		
Sampling Date		2009/08/26	2009/08/26		
COC Number		58162	58162		
	Units	826-052	826-053	RDL	QC Batch

Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	13	10	3383069
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	14	10	3383069
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3383069
Reached Baseline at C50	mg/kg	Yes	Yes		3383069
Surrogate Recovery (%)					
O-TERPHENYL (sur.)	%	89	103		3383069

RDL = Reportable Detection Limit

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		Q49681	Q49719	Q49720	Q49721		
Sampling Date		2009/08/26	2009/08/26	2009/08/26	2009/08/26		
COC Number		58162	58162	58162	58162		
	Units	826-048	826-049	826-050	826-051	RDL	QC Batch

Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3383066
Toluene	mg/kg	1.5	5.0	3.5	<0.020	0.020	3383066
Ethylbenzene	mg/kg	0.56	3.3	2.6	<0.010	0.010	3383066
Xylenes (Total)	mg/kg	13	33	25	<0.040	0.040	3383066
m & p-Xylene	mg/kg	8.7	24	17	<0.040	0.040	3383066
o-Xylene	mg/kg	4.4	9.4	8.4	<0.020	0.020	3383066
LH (C5-C10)	mg/kg	520	880	690	<12	12	3383066
(C6-C10)	mg/kg	480	810	640	<12	12	3383066
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	98	93	119	94		3383066
D10-ETHYLBENZENE (sur.)	%	105	100	113	97		3383066
D4-1,2-DICHLOROETHANE (sur.)	%	92	92	93	95		3383066
D8-TOLUENE (sur.)	%	83	118	92	112		3383066

RDL = Reportable Detection Limit

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		Q49722	Q49723		
Sampling Date		2009/08/26	2009/08/26		
COC Number		58162	58162		
	Units	826-052	826-053	RDL	QC Batch

Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3383066
Toluene	mg/kg	<0.020	<0.020	0.020	3383066
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	3383066
Xylenes (Total)	mg/kg	<0.040	<0.040	0.040	3383066
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	3383066
o-Xylene	mg/kg	<0.020	<0.020	0.020	3383066
LH (C5-C10)	mg/kg	<12	<12	12	3383066
(C6-C10)	mg/kg	<12	<12	12	3383066
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	95	99		3383066
D10-ETHYLBENZENE (sur.)	%	104	103		3383066
D4-1,2-DICHLOROETHANE (sur.)	%	86	79		3383066
D8-TOLUENE (sur.)	%	100	86		3383066
RDL = Reportable Detection Limit					

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		Q49681	Q49719	Q49720	Q49721		
Sampling Date		2009/08/26	2009/08/26	2009/08/26	2009/08/26		
COC Number		58162	58162	58162	58162		
	Units	826-048	826-049	826-050	826-051	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	1070	1330	912	10	10	3383303
Total hydrocarbons C5-C30	mg/kg	1590	2210	1610	<20	20	3383047
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	103	110	92	89		3383303
RDL = Reportable Detection Limit							

Maxxam ID		Q49722	Q49723		
Sampling Date		2009/08/26	2009/08/26		
COC Number		58162	58162		
	Units	826-052	826-053	RDL	QC Batch

Hydrocarbons					
Total Extractables C10 to C30	mg/kg	<10	16	10	3383303
Total hydrocarbons C5-C30	mg/kg	<20	<20	20	3383047
Surrogate Recovery (%)					
O-TERPHENYL (sur.)	%	89	103		3383303
RDL = Reportable Detection Limit					



Maxxam Job #: A946712
Report Date: 2009/08/29

E. GRUBEN'S TRANSPORT
Client Project #: A0429A01 JOHNSON POINT REMED
Site Reference: BANKS ISLAND NT
Sampler Initials: SB

General Comments

Sample Q49681-01: Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results for F24.

Results relate only to the items tested.



E. GRUBEN'S TRANSPORT
 Attention: SAM BIRD
 Client Project #: A0429A01 JOHNSON POINT REMED
 P.O. #:
 Site Reference: BANKS ISLAND NT

Quality Assurance Report
 Maxxam Job Number: EA946712

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3383066 DR3	Matrix Spike [Q49719-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/29		106	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/29		107	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/29		95	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/29		102	%	60 - 140	
		Benzene	2009/08/29		90	%	60 - 140	
		Toluene	2009/08/29		NC	%	60 - 140	
		Ethylbenzene	2009/08/29		NC	%	60 - 140	
		m & p-Xylene	2009/08/29		NC	%	60 - 140	
		o-Xylene	2009/08/29		NC	%	60 - 140	
		(C6-C10)	2009/08/29		NC	%	60 - 140	
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/29		111	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/29		98	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/29		95	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/29		97	%	60 - 140	
		Benzene	2009/08/29		90	%	60 - 140	
		Toluene	2009/08/29		81	%	60 - 140	
		Ethylbenzene	2009/08/29		84	%	60 - 140	
		m & p-Xylene	2009/08/29		106	%	60 - 140	
		o-Xylene	2009/08/29		106	%	60 - 140	
		(C6-C10)	2009/08/29		91	%	80 - 120	
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/29		98	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/29		102	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/29		90	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/29		102	%	60 - 140	
		Benzene	2009/08/29	<0.0050			mg/kg	
		Toluene	2009/08/29	<0.020			mg/kg	
		Ethylbenzene	2009/08/29	<0.010			mg/kg	
		Xylenes (Total)	2009/08/29	<0.040			mg/kg	
		m & p-Xylene	2009/08/29	<0.040			mg/kg	
		o-Xylene	2009/08/29	<0.020			mg/kg	
(C6-C10)	2009/08/29	<12			mg/kg			
3383069 KO	Matrix Spike [Q49719-01]	O-TERPHENYL (sur.)	2009/08/29		106	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/29		NC	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/08/29		103	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/08/29		120	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/29		87	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/29		95	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/29		102	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/08/29		111	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/08/29		90	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/29	<10			mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/29	<10			mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/29	<10			mg/kg	
	RPD [Q49681-01]	F2 (C10-C16 Hydrocarbons)	2009/08/29	46.4			%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/29	84.6 (f)			%	50
F4 (C34-C50 Hydrocarbons)		2009/08/29	NC			%	50	
3383173 SR7	Method Blank	Moisture	2009/08/29	<0.3		%		
	RPD [Q49681-01]	Moisture	2009/08/29	1.8		%	20	
3383303 KO	Matrix Spike [Q49719-01]	O-TERPHENYL (sur.)	2009/08/29		106	%	50 - 130	
		Total Extractables C10 to C30	2009/08/29		92	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/29		87	%	50 - 130	
		Total Extractables C10 to C30	2009/08/29		94	%	60 - 130	



E. GRUBEN'S TRANSPORT
 Attention: SAM BIRD
 Client Project #: A0429A01 JOHNSON POINT REMED
 P.O. #:
 Site Reference: BANKS ISLAND NT

Quality Assurance Report (Continued)
 Maxxam Job Number: EA946712

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3383303 KO	Method Blank	O-TERPHENYL (sur.)	2009/08/29		90	%	50 - 130
		Total Extractables C10 to C30	2009/08/29	<10		mg/kg	
	RPD [Q49681-01]	Total Extractables C10 to C30	2009/08/29	1.4		%	50

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
 (1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



Your Project #: A04029A01 JOHNSON POINT REMED
 Site: BANKS ISLAND NT
 Your C.O.C. #: 58163

Attention: SAM BIRD
 E. GRUBEN'S TRANSPORT
 PO BOX 177
 TUKTOYAKTUK, NT
 CANADA X0E 1C0

Report Date: 2009/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A948616
Received: 2009/09/05, 9:50

Sample Matrix: Soil
 # Samples Received: 8

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	8	2009/09/05	2009/09/06	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	8	2009/09/05	2009/09/08	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	8	N/A	2009/09/08	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	8	2009/09/05	2009/09/08	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
TPH (C6-C30) Soil Calc	8	N/A	2009/09/08		

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SHELYCE MORRISON, Project Manager
 Email: shelyce.morrison@maxxamanalytics.com
 Phone# (780) 577-7115 Ext:7115

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Total cover pages: 1

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q62198	Q62199	Q62200		
Sampling Date		2009/09/03 09:15	2009/09/03 09:20	2009/09/03 09:02		
COC Number		58163	58163	58163		
	Units	054	055	056	RDL	QC Batch

Physical Properties						
Moisture	%	9.7	8.5	8.4	0.3	3400515
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	15	<10	<10	10	3399428
F3 (C16-C34 Hydrocarbons)	mg/kg	65	54	57	10	3399428
F4 (C34-C50 Hydrocarbons)	mg/kg	76	74	75	10	3399428
Reached Baseline at C50	mg/kg	Yes	Yes	Yes		3399428
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3399346
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3399346
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3399346
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3399346
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3399346
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3399346
LH (C5-C10)	mg/kg	15	<12	<12	12	3399346
(C6-C10)	mg/kg	14	<12	<12	12	3399346
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	94	96		3399346
D10-ETHYLBENZENE (sur.)	%	92	93	94		3399346
D4-1,2-DICHLOROETHANE (sur.)	%	84	85	84		3399346
D8-TOLUENE (sur.)	%	97	97	99		3399346
O-TERPHENYL (sur.)	%	113	109	111		3399428
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q62201	Q62202	Q62203		
Sampling Date		2009/09/03 09:22	2009/09/03 09:10	2009/09/03 09:13		
COC Number		58163	58163	58163		
	Units	057	058	059	RDL	QC Batch

Physical Properties						
Moisture	%	9.3	8.8	9.0	0.3	3400515
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	37	23	10	3399428
F3 (C16-C34 Hydrocarbons)	mg/kg	59	45	150	10	3399428
F4 (C34-C50 Hydrocarbons)	mg/kg	79	<10	<10	10	3399428
Reached Baseline at C50	mg/kg	Yes	Yes	Yes		3399428
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3399346
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3399346
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3399346
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3399346
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3399346
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3399346
LH (C5-C10)	mg/kg	<12	29	17	12	3399346
(C6-C10)	mg/kg	<12	25	16	12	3399346
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96	97	95		3399346
D10-ETHYLBENZENE (sur.)	%	89	97	94		3399346
D4-1,2-DICHLOROETHANE (sur.)	%	83	81	85		3399346
D8-TOLUENE (sur.)	%	99	101	97		3399346
O-TERPHENYL (sur.)	%	120	109	105		3399428
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q62210	Q62211		
Sampling Date		2009/09/03 09:08	2009/09/03 09:08		
COC Number		58163	58163		
	Units	060	061	RDL	QC Batch

Physical Properties					
Moisture	%	7.5	7.0	0.3	3400515
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	10	3399428
F3 (C16-C34 Hydrocarbons)	mg/kg	15	11	10	3399428
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3399428
Reached Baseline at C50	mg/kg	Yes	Yes		3399428
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3399346
Toluene	mg/kg	<0.020	<0.020	0.020	3399346
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	3399346
Xylenes (Total)	mg/kg	<0.040	<0.040	0.040	3399346
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	3399346
o-Xylene	mg/kg	<0.020	<0.020	0.020	3399346
LH (C5-C10)	mg/kg	<12	<12	12	3399346
(C6-C10)	mg/kg	<12	<12	12	3399346
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	94	93		3399346
D10-ETHYLBENZENE (sur.)	%	90	92		3399346
D4-1,2-DICHLOROETHANE (sur.)	%	82	84		3399346
D8-TOLUENE (sur.)	%	101	100		3399346
O-TERPHENYL (sur.)	%	103	95		3399428
RDL = Reportable Detection Limit					

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		Q62198	Q62199	Q62200		
Sampling Date		2009/09/03 09:15	2009/09/03 09:20	2009/09/03 09:02		
COC Number		58163	58163	58163		
	Units	054	055	056	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	93	69	73	10	3400348
Total hydrocarbons C5-C30	mg/kg	108	69	73	20	3399473
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	113	109	111		3400348
RDL = Reportable Detection Limit						

Maxxam ID		Q62201	Q62202	Q62203		
Sampling Date		2009/09/03 09:22	2009/09/03 09:10	2009/09/03 09:13		
COC Number		58163	58163	58163		
	Units	057	058	059	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	73	77	168	10	3400348
Total hydrocarbons C5-C30	mg/kg	73	106	185	20	3399473
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	120	109	105		3400348
RDL = Reportable Detection Limit						

Maxxam ID		Q62210	Q62211		
Sampling Date		2009/09/03 09:08	2009/09/03 09:08		
COC Number		58163	58163		
	Units	060	061	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	20	<10	10		3400348
Total hydrocarbons C5-C30	mg/kg	<20	<20	20		3399473
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	103	95			3400348
RDL = Reportable Detection Limit						



Maxxam Job #: A948616
Report Date: 2009/09/08

E. GRUBEN'S TRANSPORT
Client Project #: A04029A01 JOHNSON POINT REMED
Site Reference: BANKS ISLAND NT
Sampler Initials: SB

General Comments

Results relate only to the items tested.

Quality Assurance Report
 Maxxam Job Number: EA948616

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3399346 CD1	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/09/06		99	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/09/06		92	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/06		81	%	60 - 140	
		D8-TOLUENE (sur.)	2009/09/06		98	%	60 - 140	
		Benzene	2009/09/06		84	%	60 - 140	
		Toluene	2009/09/06		82	%	60 - 140	
		Ethylbenzene	2009/09/06		89	%	60 - 140	
		m & p-Xylene	2009/09/06		92	%	60 - 140	
		o-Xylene	2009/09/06		89	%	60 - 140	
		(C6-C10)	2009/09/06		95	%	60 - 140	
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/09/06		97	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/09/06		92	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/06		87	%	60 - 140	
		D8-TOLUENE (sur.)	2009/09/06		100	%	60 - 140	
		Benzene	2009/09/06		87	%	60 - 140	
		Toluene	2009/09/06		82	%	60 - 140	
		Ethylbenzene	2009/09/06		87	%	60 - 140	
		m & p-Xylene	2009/09/06		91	%	60 - 140	
		o-Xylene	2009/09/06		88	%	60 - 140	
		(C6-C10)	2009/09/06		93	%	80 - 120	
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/09/06		94	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/09/06		88	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/06		83	%	60 - 140	
		D8-TOLUENE (sur.)	2009/09/06		100	%	60 - 140	
		Benzene	2009/09/06	<0.0050		mg/kg		
		Toluene	2009/09/06	<0.020		mg/kg		
		Ethylbenzene	2009/09/06	<0.010		mg/kg		
		Xylenes (Total)	2009/09/06	<0.040		mg/kg		
		m & p-Xylene	2009/09/06	<0.040		mg/kg		
		o-Xylene	2009/09/06	<0.020		mg/kg		
RPD	(C6-C10)	2009/09/06	<12		mg/kg			
	Benzene	2009/09/06	NC		%	50		
	Toluene	2009/09/06	NC		%	50		
	Ethylbenzene	2009/09/06	NC		%	50		
	Xylenes (Total)	2009/09/06	NC		%	50		
	m & p-Xylene	2009/09/06	NC		%	50		
	o-Xylene	2009/09/06	NC		%	50		
	(C6-C10)	2009/09/06	NC		%	50		
	3399428 LD2	Matrix Spike	O-TERPHENYL (sur.)	2009/09/05		92	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2009/09/05		115	%	50 - 130
F3 (C16-C34 Hydrocarbons)			2009/09/05		122	%	50 - 130	
F4 (C34-C50 Hydrocarbons)			2009/09/05		118	%	50 - 130	
Spiked Blank		O-TERPHENYL (sur.)	2009/09/05		122	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/09/05		108	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/09/05		108	%	80 - 120	
Method Blank		F4 (C34-C50 Hydrocarbons)	2009/09/05		110	%	80 - 120	
		O-TERPHENYL (sur.)	2009/09/05		120	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/09/05	<10		mg/kg		
RPD	F3 (C16-C34 Hydrocarbons)	2009/09/05	<10		mg/kg			
	F4 (C34-C50 Hydrocarbons)	2009/09/05	<10		mg/kg			
	F2 (C10-C16 Hydrocarbons)	2009/09/05	NC		%	50		
	F3 (C16-C34 Hydrocarbons)	2009/09/05	NC		%	50		
3400348 LD2	Spiked Blank	F4 (C34-C50 Hydrocarbons)	2009/09/05	NC		%	50	
		O-TERPHENYL (sur.)	2009/09/08		122	%	50 - 130	
		Total Extractables C10 to C30	2009/09/08		118	%	60 - 130	



E. GRUBEN'S TRANSPORT
 Attention: SAM BIRD
 Client Project #: A04029A01 JOHNSON POINT REMED
 P.O. #:
 Site Reference: BANKS ISLAND NT

Quality Assurance Report (Continued)
 Maxxam Job Number: EA948616

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3400348 LD2	Method Blank	O-TERPHENYL (sur.)	2009/09/08		120	%	50 - 130
		Total Extractables C10 to C30	2009/09/08	<10		mg/kg	
3400515 SR7	Method Blank	Moisture	2009/09/08	<0.3		%	
	RPD	Moisture	2009/09/08	2.9		%	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780)577-7100 FAX(780)450-4187

MEMORANDUM

Table 1 - Analytical and Field Results

Location	Sample Number	PID (ppmv)	PetroFlag (mg/kg)	Analytical Results - TPH (C5 to C30) (mg/kg)	Notes
SE side	826-051	N/A	N/A	<20	Down-gradient of cell
SE side	826-052	N/A	N/A	<20	IEG dup of 826-051
S drainage	826-053	N/A	N/A	<20	Down-gradient of cell
Treatment Cell	054	N/A	N/A	108	AECOM duplicate 1
Treatment Cell	055	N/A	N/A	69	
Treatment Cell	056	N/A	N/A	73	
Treatment Cell	057	N/A	N/A	73	AECOM duplicate 2
Treatment Cell	058	N/A	N/A	106	
Treatment Cell	059	N/A	N/A	185	
Treatment Cell	060	N/A	N/A	<20	
Treatment Cell	061	N/A	N/A	<20	IEG dup of 060

NA-Not Applicable

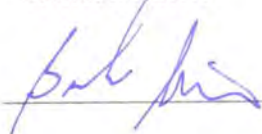
4. AUTHORIZATION

I agree that the soils in the area of the decommissioned treatment cell are below the SSTL of 4570mg/kg and may be left in place.

AECOM

Name: Brendon Norrie

Signature: _____



IEG Consultants

Name: Sam Bird

Signature: _____



Attachments: Maxxam Analytical Report
Sample Location Figure

MEMORANDUM

TO: Greg Wright, AECOM
FROM: Kurt Kure, IEG Consultants

DATE: July 14th, 2009
FILE NO: A04029A01
LOG NO: Disposal Memo 2

SUBJECT: *Removal of treated stockpiles SP-3A, SP-3B, SP-3C and SP-2B from Treatment Cell for disposal*

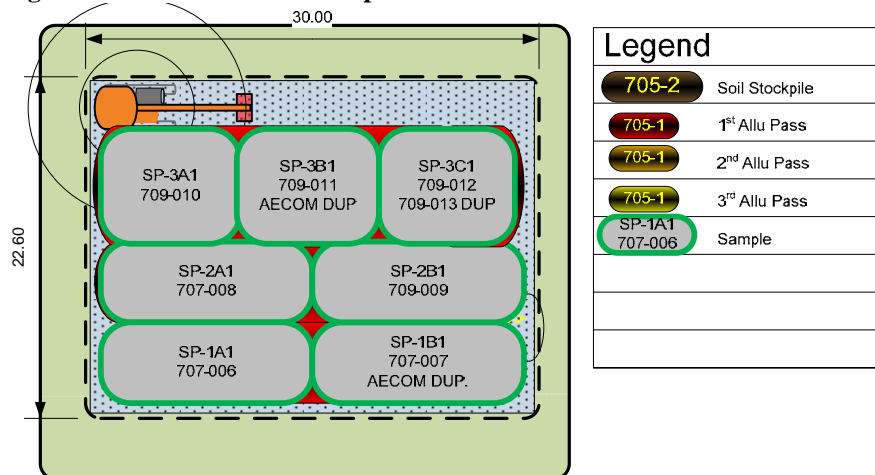
1. INTRODUCTION

Sample results indicate that the soil from stockpiles SP-3A, SP-3B, SP-3C and SP-2B which were excavated from the predefined area from the apron area Johnson Point, Banks Island, hauled to the treatment cell and allu'd are now below the site specific target level (SSTL) of 4570mg/kg Total Petroleum Hydrocarbons (C6-C30) as defined in the specifications. At this point E. Grubens is requesting permission to remove these soils from the treatment area.

2. SAMPLING METHODOLOGY

Samples were collected on July 9th, 2009 by compositing 5 discrete samples per 100m³ of soil. The cross-sectional area of the pile was agreed upon with the site engineer before dividing the piles for sampling. The sub-samples were collected from random positions at various heights in the pile, generally taking two 1m deep samples, two 0.5m deep samples and one near surface and cutting/mixing the sample in a bucket from which the analytical sample was taken. Figure 1 show the locations from where the samples were taken.

Figure 1 - Treatment Area Sample Location Plan



3. SAMPLE RESULTS

Sample results along with field testing results are attached in Table 1. The analytical results are attached for your reference.

MEMORANDUM

Table 1 - Analytical and Field Results

Location	Sample Number	PID (ppmv)	PetroFlag (mg/kg)	Analytical Results – TPH (C5 to C30) (mg/kg)	Notes
SP-1A1	707-006	1900	7400	3530	RF for Weathered Gasoline Used. For Diesel multiply by 2/5. Lobe X soil is not gasoline
SP-1B1	707-007	1900	3600	1720	
SP-2A1	707-008	2000	3200	1990	
SP-2B1	709-009	2000	3800	1730	
SP-3A1	709-010	1800	2500	771	
SP-3B1	709-011	2100	4100	1590	
SP-3C1	709-012	1600	3700	1410	

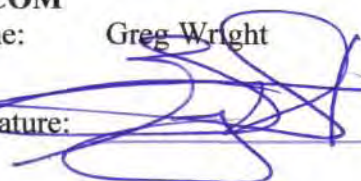
4. AUTHORIZATION FOR DISPOSAL

I authorize the disposal of treated soil as identified in this document below SSTL of 4570mg/kg.

AECOM

Name: Greg Wright

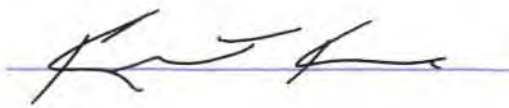
Signature:



IEG Consultants

Name: Kurt Kure

Signature:



Attachments: Maxxam Analytical Report



Your Project #: A04029A01JOHNSON POINT REMEDIA
 Site: BANK ISLAND, NWT
 Your C.O.C. #: 31326

Attention: DAVID WELLS
 IEG CONSULTANTS LTD.
 PO BOX 3178
 INUVIK, NT
 CANADA X0E0T0

Report Date: 2009/07/14

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A935584
Received: 2009/07/13, 9:00

Sample Matrix: Soil
 # Samples Received: 5

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	5	2009/07/13	2009/07/14	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	5	2009/07/13	2009/07/13	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	5	N/A	2009/07/14	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	5	2009/07/13	2009/07/13	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
TPH (C6-C30) Soil Calc	5	N/A	2009/07/14		

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SHELYCE MORRISON, Project Manager
 Email: shelyce.morrison@maxxamanalytics.com
 Phone# (780) 577-7115 Ext:7115

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		P73854	P73855	P73856	P73857		
Sampling Date		2009/07/09	2009/07/09	2009/07/09	2009/07/09		
		14:43	14:33	15:05	15:15		
COC Number		31326	31326	31326	31326		
	Units	0709-009	0709-010	0709-011	0709-012	RDL	QC Batch

Physical Properties							
Moisture	%	7.9	7.9	8.3	8.0	0.3	3271313

RDL = Reportable Detection Limit

Maxxam ID		P73859		
Sampling Date		2009/07/09		
		15:15		
COC Number		31326		
	Units	0709-013	RDL	QC Batch

Physical Properties				
Moisture	%	8.4	0.3	3271313

RDL = Reportable Detection Limit

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		P73854	P73855	P73856		
Sampling Date		2009/07/09 14:43	2009/07/09 14:33	2009/07/09 15:05		
COC Number		31326	31326	31326		
	Units	0709-009	0709-010	0709-011	RDL	QC Batch

Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	650	310	680	10	3270309
F3 (C16-C34 Hydrocarbons)	mg/kg	140	93	140	10	3270309
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3270309
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3270309
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	70	62	68	N/A	3270309

N/A = Not Applicable
RDL = Reportable Detection Limit

Maxxam ID		P73857	P73859		
Sampling Date		2009/07/09 15:15	2009/07/09 15:15		
COC Number		31326	31326		
	Units	0709-012	0709-013	RDL	QC Batch

Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	560	15	10	3270309
F3 (C16-C34 Hydrocarbons)	mg/kg	120	130	10	3270309
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	65	10	3270309
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3270309
Surrogate Recovery (%)					
O-TERPHENYL (sur.)	%	66	74	N/A	3270309

N/A = Not Applicable
RDL = Reportable Detection Limit

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		P73854	P73855	P73856		
Sampling Date		2009/07/09 14:43	2009/07/09 14:33	2009/07/09 15:05		
COC Number		31326	31326	31326		
	Units	0709-009	0709-010	0709-011	RDL	QC Batch

Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	0.062	0.0050	3269761
Toluene	mg/kg	<0.020	1.2	6.2	0.020	3269761
Ethylbenzene	mg/kg	0.69	2.5	7.7	0.010	3269761
Xylenes (Total)	mg/kg	34	18	52	0.040	3269761
m & p-Xylene	mg/kg	22	12	36	0.040	3269761
o-Xylene	mg/kg	12	5.5	16	0.020	3269761
F1 (C6-C10) - BTEX	mg/kg	900	350	700	12	3269761
LH (C5-C10)	mg/kg	940	370	760	12	3269761
(C6-C10)	mg/kg	940	370	770	12	3269761
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	103	94	81	N/A	3269761
D10-ETHYLBENZENE (sur.)	%	112	114	110	N/A	3269761
D4-1,2-DICHLOROETHANE (sur.)	%	101	103	101	N/A	3269761
D8-TOLUENE (sur.)	%	99	98	99	N/A	3269761

N/A = Not Applicable
 RDL = Reportable Detection Limit

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		P73857	P73859		
Sampling Date		2009/07/09	2009/07/09		
		15:15	15:15		
COC Number		31326	31326		
	Units	0709-012	0709-013	RDL	QC Batch

Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3269761
Toluene	mg/kg	4.6	4.5	0.020	3269761
Ethylbenzene	mg/kg	5.0	5.1	0.010	3269761
Xylenes (Total)	mg/kg	33	33	0.040	3269761
m & p-Xylene	mg/kg	23	23	0.040	3269761
o-Xylene	mg/kg	10	9.9	0.020	3269761
F1 (C6-C10) - BTEX	mg/kg	690	690	12	3269761
LH (C5-C10)	mg/kg	730	730	12	3269761
(C6-C10)	mg/kg	730	730	12	3269761
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	105	109	N/A	3269761
D10-ETHYLBENZENE (sur.)	%	115	115	N/A	3269761
D4-1,2-DICHLOROETHANE (sur.)	%	100	99	N/A	3269761
D8-TOLUENE (sur.)	%	101	101	N/A	3269761
N/A = Not Applicable RDL = Reportable Detection Limit					

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P73854	P73855	P73856		
Sampling Date		2009/07/09 14:43	2009/07/09 14:33	2009/07/09 15:05		
COC Number		31326	31326	31326		
	Units	0709-009	0709-010	0709-011	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	788	399	822	10	3271077
Total hydrocarbons C5-C30	mg/kg	1730	771	1590	20	3269003
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	70	62	68	N/A	3271077

N/A = Not Applicable
 RDL = Reportable Detection Limit

Maxxam ID		P73857	P73859		
Sampling Date		2009/07/09 15:15	2009/07/09 15:15		
COC Number		31326	31326		
	Units	0709-012	0709-013	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	679	68	10	3271077	
Total hydrocarbons C5-C30	mg/kg	1410	801	20	3269003	
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	66	74	N/A	3271077	

N/A = Not Applicable
 RDL = Reportable Detection Limit

Package 1	10.0°C
-----------	--------

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Results relate only to the items tested.



IEG CONSULTANTS LTD.
 Attention: DAVID WELLS
 Client Project #: A04029A01JOHNSON POINT REMEDIA
 P.O. #:
 Site Reference: BANK ISLAND, NWT

Quality Assurance Report
 Maxxam Job Number: EA935584

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3269761 DR3	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/14		92	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/14		103	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/14		100	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/14		100	%	60 - 140	
		Benzene	2009/07/14		94	%	60 - 140	
		Toluene	2009/07/14		97	%	60 - 140	
		Ethylbenzene	2009/07/14		100	%	60 - 140	
		m & p-Xylene	2009/07/14		104	%	60 - 140	
		o-Xylene	2009/07/14		99	%	60 - 140	
		(C6-C10)	2009/07/14		120	%	60 - 140	
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/14		91	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/14		106	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/14		100	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/14		100	%	60 - 140	
		Benzene	2009/07/14		91	%	60 - 140	
		Toluene	2009/07/14		94	%	60 - 140	
		Ethylbenzene	2009/07/14		98	%	60 - 140	
		m & p-Xylene	2009/07/14		102	%	60 - 140	
		o-Xylene	2009/07/14		96	%	60 - 140	
		(C6-C10)	2009/07/14		94	%	80 - 120	
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/14		93	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/14		100	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/14		103	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/14		103	%	60 - 140	
		Benzene	2009/07/14	<0.0050		mg/kg		
		Toluene	2009/07/14	<0.020		mg/kg		
		Ethylbenzene	2009/07/14	<0.010		mg/kg		
		Xylenes (Total)	2009/07/14	<0.040		mg/kg		
		m & p-Xylene	2009/07/14	<0.040		mg/kg		
		o-Xylene	2009/07/14	<0.020		mg/kg		
	RPD	F1 (C6-C10) - BTEX	2009/07/14	<12		mg/kg		
		(C6-C10)	2009/07/14	<12		mg/kg		
Benzene		2009/07/14	NC		%	50		
Toluene		2009/07/14	NC		%	50		
Ethylbenzene		2009/07/14	NC		%	50		
Xylenes (Total)		2009/07/14	NC		%	50		
m & p-Xylene		2009/07/14	NC		%	50		
o-Xylene		2009/07/14	NC		%	50		
F1 (C6-C10) - BTEX		2009/07/14	NC		%	50		
(C6-C10)		2009/07/14	NC		%	50		
3270309 LC8		MATRIX SPIKE	O-TERPHENYL (sur.)	2009/07/13		65	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2009/07/13		76	%	50 - 130
	F3 (C16-C34 Hydrocarbons)		2009/07/13		74	%	50 - 130	
	F4 (C34-C50 Hydrocarbons)		2009/07/13		75	%	50 - 130	
	SPIKE	O-TERPHENYL (sur.)	2009/07/13		66	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/13		91	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/13		90	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/13		89	%	80 - 120	
	BLANK	O-TERPHENYL (sur.)	2009/07/13		73	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/13	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/07/13	14, RDL=10		mg/kg		
		F4 (C34-C50 Hydrocarbons)	2009/07/13	<10		mg/kg		
	RPD	F2 (C10-C16 Hydrocarbons)	2009/07/13	20.8		%	50	
		F3 (C16-C34 Hydrocarbons)	2009/07/13	44.3		%	50	
F4 (C34-C50 Hydrocarbons)		2009/07/13	35.3		%	50		



IEG CONSULTANTS LTD.
 Attention: DAVID WELLS
 Client Project #: A04029A01JOHNSON POINT REMEDIA
 P.O. #:
 Site Reference: BANK ISLAND, NWT

Quality Assurance Report (Continued)

Maxxam Job Number: EA935584

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3271077 LC8	SPIKE	O-TERPHENYL (sur.)	2009/07/13		67	%	50 - 130	
		Total Extractables C10 to C30	2009/07/13		91	%	60 - 130	
	BLANK	O-TERPHENYL (sur.)	2009/07/13			73	%	50 - 130
		Total Extractables C10 to C30	2009/07/13		20, RDL=10		mg/kg	
3271313 JP6	BLANK	Moisture	2009/07/14	<0.3		%		
	RPD	Moisture	2009/07/14	13.1		%	20	

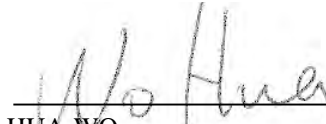
NC = Non-calculable
 RPD = Relative Percent Difference

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780)577-7100 FAX(780)450-4187

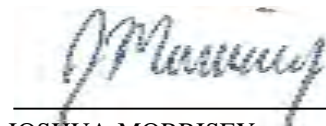
Validation Signature Page

Maxxam Job #: A935584


The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



HUA WO,



JOSHUA MORRISEY,



LISA CUMMINGS, Extractables Supervisor

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

234



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9619 - 42 Ave., T6E 5R2

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll-free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll-free: (877) 465-8889
www.maxxamanalytics.com

31326

CHAIN OF CUSTODY

Page: _____ of _____

Invoice To: Require Report? Yes No

Company Name: IEG CONSULTANTS

Contact Name: DAVID WELLS

Address: PO BOX 3178 INUVUK, NWT
PC: XOE OTO

Phone / Fax #: Ph: _____ Fax: _____

Report To: A935584

Ph: _____

PO # / AFE #: _____

Quotation #: _____

Project #: A04029A01

Project Name: JOHNSON POINT REMEDIATION

Location: BANKS ISLAND, NWT

Sampler's Initials: KAMK

REGULATORY REQUIREMENTS:

- AT1 - (1994)
- CCME
- CCME FWAL
- Regulatory Limits to appear on Final report
- PST
- CDWQG
- G50

REPORT DISTRIBUTION:

EMAIL ADDRESSES:

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
- Date Required: _____
- REGULAR Turnaround

SOILS											WATERS										
Sample ID	Matrix S/W	Date & Time Sampled	Sieve (75 micron)	Salinity 4	Metals	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package	TOC	TOTAL Metals	DISS. Metals	Mercury	NH3-D	TKN	TPH (C6-C30)	
1	0709-001	S	2009-07-09 14 ⁴³	X																X	
2	0709-010	S	2009-07-09 14 ⁵³	X																X	
3	0709-011	S	2009-07-09 15 ⁰³	X																X	
4	0709-012	S	2009-07-09 15 ¹⁵	X																X	
5	0709-013	S	2009-07-09 15 ¹⁵	X																X	
6																					
7																					
8																					
9																					
10																					
11																					
12																					

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager.

Relinquished By: KURT KURE
Signature: _____

Date/Time: 2009-07-09 16³⁰

Received
09:00h
13/07/09 RT

Temperature
9/9/12°C

COMMENTS/SPECIAL INSTRUCTIONS: DO NOT REPORT BTEX

COC #

TO: Brendon Norrie, AECOM
FROM: Josh Foster, IEG Consultants

DATE: July 28th, 2009
FILE NO: A04029A01
LOG NO:

SUBJECT: *Removal of treated stockpiles SP-4 and SP-5 from Treatment Cell for disposal*

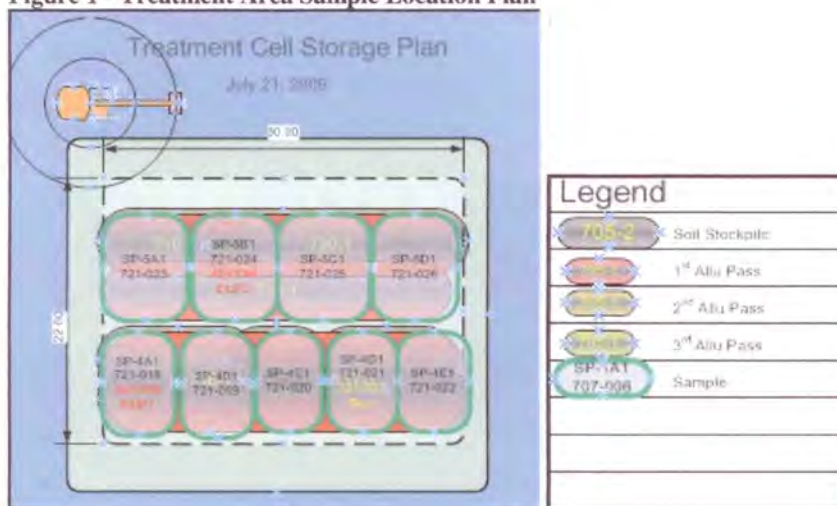
1. INTRODUCTION

Sample results indicate that the soil from stockpiles SP-4 and SP-5 which were excavated from the predefined area from the apron area and Main Station area at Johnson Point, Banks Island, hauled to the treatment cell and allu'd are now below the site specific target level (SSTL) of 4570mg/kg Total Petroleum Hydrocarbons (C6-C30) as defined in the specifications. At this point E. Grubens is requesting permission to remove these soils from the treatment area.

2. SAMPLING METHODOLOGY

Samples were collected on July 21st, 2009 by compositing 5 discrete samples per 100m³ of soil. The cross-sectional area of the pile was agreed upon with the site engineer before dividing the piles for sampling. The sub-samples were collected from random positions at various heights in the pile, generally taking two 1m deep samples, two 0.5m deep samples and one near surface and cutting/mixing the sample in a bucket from which the analytical sample was taken. Figure 1 show the locations from where the samples were taken.

Figure 1 - Treatment Area Sample Location Plan



3. SAMPLE RESULTS

Sample results along with field testing results are attached in Table 1. The analytical results are attached for your reference.

Table 1 - Analytical and Field Results

Location	Sample Number	PID (ppmv)	PetroFlag (mg/kg)	Analytical Results – TPH (C5 to C30) (mg/kg)	Notes
SP-4A1	721-018	1400	11600	3790	RF for Weathered Gasoline Used. For Diesel multiply by 2/5
SP-4B1	721-019	1200	12200	3840	
SP-4C1	721-020	1400	11500	4130	
SP-4D1	721-021	1100	8600	3150	
SP-4E1	721-022	1500	11100	3700	
SP-5A1	721-023	600	10000	3030	
SP-5B1	721-024	600	8300	2440	
SP-5C1	721-025	800	4000	1530	
SP-5D1	721-026	900	3900	1590	

4. AUTHORIZATION FOR DISPOSAL

I authorize the disposal of treated soil as identified in this document below SSTL of 4570mg/kg.

AECOM

Name: Brendon Norrie

Signature: _____

IEG Consultants

Name: Josh Foster

Signature: _____

Attachments: Maxxam Analytical Report

Attention: DAVID WELLS
 IEG CONSULTANTS LTD.
 PO BOX 3178
 INUVIK, NT
 CANADA X0E0T0

Report Date: 2009/07/28

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A938628
Received: 2009/07/24, 12:40

Sample Matrix: Soil
 # Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	11	2009/07/27	2009/07/27	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	11	2009/07/27	2009/07/27	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	11	N/A	2009/07/28	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	11	2009/07/27	2009/07/27	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
TPH (C6-C30) Soil Calc	11	N/A	2009/07/28		

Encryption Key

 Alaina Hunter
 28 Jul 2009 10:20:23 -06:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SHELYCE MORRISON, Project Manager
 Email: shelyce.morrison@maxxamanalytics.com
 Phone# (780) 577-7115 Ext:7115

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94123	P94123	P94124		
Sampling Date		2009/07/21	2009/07/21	2009/07/21		
		11:15	11:15	11:15		
COC Number		58225	58225	58225		
	Units	721-018	721-018 Lab-Dup	721-019	RDL	QC Batch

Physical Properties						
Moisture	%	13	13	11	0.3	3305777
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	2600	N/A	2700	10	3301821
F3 (C16-C34 Hydrocarbons)	mg/kg	330	N/A	430	10	3301821
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	N/A	<10	10	3301821
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	3301821
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	0.041	0.0050	3302674
Toluene	mg/kg	<0.020	<0.020	1.6	0.020	3302674
Ethylbenzene	mg/kg	1.2	0.76	1.7	0.010	3302674
Xylenes (Total)	mg/kg	32	31	37	0.040	3302674
m & p-Xylene	mg/kg	17	15	23	0.040	3302674
o-Xylene	mg/kg	15	16	14	0.020	3302674
F1 (C6-C10) - BTEX	mg/kg	800	920	680	12	3302674
LH (C5-C10)	mg/kg	840	960	720	12	3302674
(C6-C10)	mg/kg	840	960	720	12	3302674
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	86	86	93	N/A	3302674
D10-ETHYLBENZENE (sur.)	%	80	117	78	N/A	3302674
D4-1,2-DICHLOROETHANE (sur.)	%	100	110	96	N/A	3302674
D8-TOLUENE (sur.)	%	119	83	119	N/A	3302674
O-TERPHENYL (sur.)	%	95	N/A	96	N/A	3301821
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94125	P94126	P94127		
Sampling Date		2009/07/21	2009/07/21	2009/07/21		
		11:35	11:35	11:35		
COC Number		58225	58225	58225		
	Units	721-020	721-021	721-022	RDL	QC Batch

Physical Properties						
Moisture	%	11	11	13	0.3	3305777
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	2700	2200	2300	10	3301821
F3 (C16-C34 Hydrocarbons)	mg/kg	440	400	450	10	3301821
F4 (C34-C50 Hydrocarbons)	mg/kg	11	<10	22	10	3301821
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3301821
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3302674
Toluene	mg/kg	0.94	0.31	<0.020	0.020	3302674
Ethylbenzene	mg/kg	1.6	0.53	<0.010	0.010	3302674
Xylenes (Total)	mg/kg	48	17	12	0.040	3302674
m & p-Xylene	mg/kg	29	7.8	2.2	0.040	3302674
o-Xylene	mg/kg	19	9.0	9.7	0.020	3302674
F1 (C6-C10) - BTEX	mg/kg	950	550	540	12	3302674
LH (C5-C10)	mg/kg	1000	570	950	12	3302674
(C6-C10)	mg/kg	1000	570	550	12	3302674
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	112	86	88	N/A	3302674
D10-ETHYLBENZENE (sur.)	%	107	111	97	N/A	3302674
D4-1,2-DICHLOROETHANE (sur.)	%	95	104	104	N/A	3302674
D8-TOLUENE (sur.)	%	117	101	91	N/A	3302674
O-TERPHENYL (sur.)	%	109	101	106	N/A	3301821
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94128	P94129	P94130		
Sampling Date		2009/07/21 12:10	2009/07/21 12:10	2009/07/21 12:30		
COC Number		58225	58225	58225		
	Units	721-023	721-024	721-025	RDL	QC Batch

Physical Properties						
Moisture	%	11	9.6	9.2	0.3	3305777
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	2300	1800	1100	10	3301821
F3 (C16-C34 Hydrocarbons)	mg/kg	410	380	230	10	3301821
F4 (C34-C50 Hydrocarbons)	mg/kg	17	11	<10	10	3301821
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3301821
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3302674
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3302674
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3302674
Xylenes (Total)	mg/kg	4.5	4.5	3.0	0.040	3302674
m & p-Xylene	mg/kg	1.5	2.5	1.3	0.040	3302674
o-Xylene	mg/kg	3.0	2.0	1.7	0.020	3302674
F1 (C6-C10) - BTEX	mg/kg	310	270	200	12	3302674
LH (C5-C10)	mg/kg	320	280	210	12	3302674
(C6-C10)	mg/kg	320	280	210	12	3302674
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	88	105	107	N/A	3302674
D10-ETHYLBENZENE (sur.)	%	96	108	95	N/A	3302674
D4-1,2-DICHLOROETHANE (sur.)	%	101	96	96	N/A	3302674
D8-TOLUENE (sur.)	%	90	101	70	N/A	3302674
O-TERPHENYL (sur.)	%	106	102	102	N/A	3301821
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94131	P94132	P94133		
Sampling Date		2009/07/21 12:30	2009/07/21 12:50	2009/07/21 15:20		
COC Number		58225	58225	58225		
	Units	721-026	721-027	721-028	RDL	QC Batch

Physical Properties						
Moisture	%	9.0	9.7	11	0.3	3305777
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1100	2500	850	10	3301821
F3 (C16-C34 Hydrocarbons)	mg/kg	210	480	90	10	3301821
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3301821
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3301821
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	0.25	0.0050	3302674
Toluene	mg/kg	<0.020	<0.020	5.2	0.020	3302674
Ethylbenzene	mg/kg	<0.010	0.074	5.0	0.010	3302674
Xylenes (Total)	mg/kg	5.2	11	39	0.040	3302674
m & p-Xylene	mg/kg	1.7	3.2	29	0.040	3302674
o-Xylene	mg/kg	3.5	7.4	10	0.020	3302674
F1 (C6-C10) - BTEX	mg/kg	320	480	590	12	3302674
LH (C5-C10)	mg/kg	330	500	640	12	3302674
(C6-C10)	mg/kg	330	490	640	12	3302674
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	84	109	89	N/A	3302674
D10-ETHYLBENZENE (sur.)	%	96	111	116	N/A	3302674
D4-1,2-DICHLOROETHANE (sur.)	%	106	92	110	N/A	3302674
D8-TOLUENE (sur.)	%	114	88	122	N/A	3302674
O-TERPHENYL (sur.)	%	103	104	91	N/A	3301821
N/A = Not Applicable RDL = Reportable Detection Limit						

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P94123	P94124	P94125		
Sampling Date		2009/07/21 11:15	2009/07/21 11:15	2009/07/21 11:35		
COC Number		58225	58225	58225		
	Units	721-018	721-019	721-020	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	2950	3120	3130	10	3305131
Total hydrocarbons C5-C30	mg/kg	3790	3840	4130	20	3302358
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	96	97	109	N/A	3305131
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P94126	P94127	P94128		
Sampling Date		2009/07/21 11:35	2009/07/21 11:35	2009/07/21 12:10		
COC Number		58225	58225	58225		
	Units	721-021	721-022	721-023	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	2570	2750	2710	10	3305131
Total hydrocarbons C5-C30	mg/kg	3150	3700	3030	20	3302358
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	101	106	106	N/A	3305131
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P94129	P94130	P94131		
Sampling Date		2009/07/21 12:10	2009/07/21 12:30	2009/07/21 12:30		
COC Number		58225	58225	58225		
	Units	721-024	721-025	721-026	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	2170	1330	1260	10	3305131
Total hydrocarbons C5-C30	mg/kg	2440	1530	1590	20	3302358
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	102	102	103	N/A	3305131
N/A = Not Applicable RDL = Reportable Detection Limit						

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P94132	P94133		
Sampling Date		2009/07/21 12:50	2009/07/21 15:20		
COC Number		58225	58225		
	Units	721-027	721-028	RDL	QC Batch

Hydrocarbons					
Total Extractables C10 to C30	mg/kg	2990	936	10	3305131
Total hydrocarbons C5-C30	mg/kg	3480	1580	20	3302358
Surrogate Recovery (%)					
O-TERPHENYL (sur.)	%	104	91	N/A	3305131
N/A = Not Applicable RDL = Reportable Detection Limit					

Package 1	12.0°C
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Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Results relate only to the items tested.

Quality Assurance Report
 Maxxam Job Number: EA938628

QA/QC Batch	Date Analyzed	Value	Recovery	Units	QC Limits			
Num Init	QC Type	Parameter	yyyy/mm/dd					
3301821 LD2	MATRIX SPIKE	O-TERPHENYL (sur.)	2009/07/27		107 %	50 - 130		
		F2 (C10-C16 Hydrocarbons)	2009/07/27		NC %	50 - 130		
		F3 (C16-C34 Hydrocarbons)	2009/07/27		NC %	50 - 130		
		F4 (C34-C50 Hydrocarbons)	2009/07/27		101 %	50 - 130		
	SPIKE	O-TERPHENYL (sur.)	2009/07/27		92 %	50 - 130		
		F2 (C10-C16 Hydrocarbons)	2009/07/27		103 %	80 - 120		
		F3 (C16-C34 Hydrocarbons)	2009/07/27		110 %	80 - 120		
		F4 (C34-C50 Hydrocarbons)	2009/07/27		116 %	80 - 120		
	BLANK	O-TERPHENYL (sur.)	2009/07/27		104 %	50 - 130		
		F2 (C10-C16 Hydrocarbons)	2009/07/27	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/07/27	11, RDL=10		mg/kg		
		F4 (C34-C50 Hydrocarbons)	2009/07/27	<10		mg/kg		
	RPD	F2 (C10-C16 Hydrocarbons)	2009/07/27	44.6		%	50	
		F3 (C16-C34 Hydrocarbons)	2009/07/27	NC		%	50	
		F4 (C34-C50 Hydrocarbons)	2009/07/27	NC		%	50	
3302674 DR3	MATRIX SPIKE [P94124-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/27		98 %	60 - 140		
		D10-ETHYLBENZENE (sur.)	2009/07/27		91 %	30 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/27		96 %	60 - 140		
		D8-TOLUENE (sur.)	2009/07/27		80 %	60 - 140		
		Benzene	2009/07/27		76 %	60 - 140		
		Toluene	2009/07/27		NC %	60 - 140		
		Ethylbenzene	2009/07/27		NC %	60 - 140		
		m & p-Xylene	2009/07/27		NC %	60 - 140		
		o-Xylene (C6-C10)	2009/07/27		NC %	60 - 140		
		4-BROMOFLUOROBENZENE (sur.)	2009/07/27		110 %	60 - 140		
		D10-ETHYLBENZENE (sur.)	2009/07/27		87 %	30 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/27		96 %	60 - 140		
		D8-TOLUENE (sur.)	2009/07/27		115 %	60 - 140		
		Benzene	2009/07/27		84 %	60 - 140		
		Toluene	2009/07/27		105 %	60 - 140		
		Ethylbenzene	2009/07/27		93 %	60 - 140		
	m & p-Xylene	2009/07/27		98 %	60 - 140			
	o-Xylene (C6-C10)	2009/07/27		105 %	60 - 140			
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/27		104 %	80 - 120		
		D10-ETHYLBENZENE (sur.)	2009/07/27		118 %	60 - 140		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/27		107 %	30 - 130		
		D8-TOLUENE (sur.)	2009/07/27		95 %	60 - 140		
		Benzene	2009/07/27	<0.0050		mg/kg		
		Toluene	2009/07/27	<0.020		mg/kg		
		Ethylbenzene	2009/07/27	<0.010		mg/kg		
		Xylenes (Total)	2009/07/27	<0.040		mg/kg		
		m & p-Xylene	2009/07/27	<0.040		mg/kg		
		o-Xylene	2009/07/27	<0.020		mg/kg		
		F1 (C6-C10) - BTEX (C6-C10)	2009/07/27	<12		mg/kg		
		RPD [P94123-01]	Benzene	2009/07/27	NC		%	50
		Toluene	2009/07/27	NC		%	50	
		Ethylbenzene	2009/07/27	47.8		%	50	
Xylenes (Total)		2009/07/27	2.5		%	50		
m & p-Xylene		2009/07/27	14.8		%	50		
o-Xylene	2009/07/27	10.3		%	50			
F1 (C6-C10) - BTEX	2009/07/27	14.1		%	50			



IEG CONSULTANTS LTD.
 Attention: DAVID WELLS
 Client Project #: A04029A01
 P.O. #:
 Site Reference: BANKS ISLAND, NT

Quality Assurance Report (Continued)

Maxxam Job Number: EA938628

QA/QC Batch				Date Analyzed				
Num	Init	QC Type	Parameter	yyyy/mm/dd	Value	Recovery	Units	QC Limits
3302674	DR3	RPD [P94123-01]	LH (C5-C10)	2009/07/27	13.5		%	50
			(C6-C10)	2009/07/27	13.5		%	50
3305131	LD2	SPIKE	O-TERPHENYL (sur.)	2009/07/27		92	%	50 - 130
			Total Extractables C10 to C30	2009/07/27		103	%	60 - 130
		BLANK	O-TERPHENYL (sur.)	2009/07/27		104	%	50 - 130
			Total Extractables C10 to C30	2009/07/27	<10		mg/kg	
3305777	GG3	BLANK	Moisture	2009/07/28	<0.3		%	
		RPD [P94123-01]	Moisture	2009/07/28	0		%	20

NC = Non-calculable
 RPD = Relative Percent Difference

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780)577-7100 FAX(780)450-4187

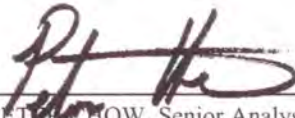
Validation Signature Page

Maxxam Job #: A938628

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



HUA WO,



PETER CHOW, Senior Analyst

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.



MEMORANDUM

TO: Barry Fedorak, AECOM
FROM: Sam Bird, IEG Consultants

DATE: August 12th, 2009
FILE NO: A04029A01
LOG NO:

SUBJECT: *Removal of beach soils to on-site disposal area 2 and treatment cell*

1. INTRODUCTION

Sample results indicate that the soil from the planned southern extent of Southwest Plume – Part 4 is above the near shore criteria. Samples were collected by AECOM along the southern wall (parallel to the beach) and the eastern wall. Results show that the southwest corner of the excavation is above the site specific target level (SSTL) and soils from this location require treatment prior to on-site disposal (sample #9676).

For the rest of the excavation wall, hydrocarbon concentrations are below the site specific target level (SSTL) of 4570mg/kg Total Petroleum Hydrocarbons (C6-C30) as defined in the specifications and are suitable for on-site disposal (sample #: 9672; 9673; 9674; and, 9675).

At this point, E. Grubens Transport is requesting permission to place the beach soils below the SSTL at disposal area 2. Soils from the southern corner of the excavation will be placed in the treatment area for alluving.

2. SAMPLE RESULTS

These samples were collected and submitted by AECOM. AECOM has the laboratory results for these samples (9672; 9673; 9674; 9675; and, 9676).

3. AUTHORIZATION FOR DISPOSAL

I authorize the disposal of soil as identified in this document below SSTL of 4570mg/kg.

AECOM

Name: Barry Fedorak

IEG Consultants

Name: Sam Bird

Signature: _____

Signature: _____



MEMORANDUM

TO: Greg Wright, AECOM
FROM: Sam Bird, IEG Consultants
DATE: August 22, 2009
FILE NO: A04029A01
LOG NO:
SUBJECT: *Removal of treated stockpiles SP-8 and SP-10 (A, B and C) from Treatment Cell for disposal*

1. INTRODUCTION

Sample results indicate that the soil from stockpiles SP-8 and SP-9 which were excavated from lateral extensions to the predefined area from the apron area and tank farm (TF) area at Johnson Point, Banks Island, hauled to the treatment cell are below the site specific target level (SSTL) of 4570mg/kg Total Petroleum Hydrocarbons (C6-C30) as defined in the specifications. Soil from SP-8 was excavated and held at the treatment cell without being alluded. Soil from SP-9 (A, B and C) were alluded two times prior to sampling and have since been alluded a third time. At this point, E. Grubens Transport is requesting permission to remove these soils from the treatment area.

2. SAMPLING METHODOLOGY

Samples were collected on August 18nd, 2009. SP-8 contains approximately 230 m³ of soil. The composite sample for this soil was collected by compositing 5 discrete samples of soil. The cross-sectional area of the pile was determined before dividing the piles for sampling. The sub-samples were collected from random positions at various heights in the pile, taking two 1 m deep samples, two 0.5 m deep samples and one near surface and cutting/mixing the sample in a bucket from which the analytical sample was taken.

The piles of soil comprising SP-9 A, B and C were surveyed by the site surveyor. The survey data was plotted and soil volume calculated using Surfer 9. The volume of all three piles was calculated to be 198 m³. A composite sample was collected for each of the three piles by compositing 3 discrete samples of soil. The sub-samples were collected from random positions at various heights in the pile, taking one 1 m deep sample, one 0.5 m deep sample and one near surface and cutting/mixing the sample in a bucket from which the analytical sample was taken.

Attachement 1 shows the locations from where the samples were taken and where the stockpiles are located in the treatment cell. Attachment 2 shows the Surfer calculations for area.

3. SAMPLE RESULTS

Sample results along with field testing results are attached in Table 1. The analytical results are attached for your reference.

Table 1 - Analytical and Field Results

Location	Sample Number	PID (ppmv)	PetroFlag (mg/kg)	Analytical Results – TPH (C5 to C30) (mg/kg)	Notes
SP-8A1	818-036	NA	NA	506	Beyond NE plume extents
SP-9A1	818-037	NA	NA	3200	Downgradient of TF
SP-9B1 DUP	818-038	NA	NA	2570	Extension of plume at TF berm/pad
SP-9C1	818-039	NA	NA	1720	Beach plume extension
SP-10A1	818-040	NA	NA	2620	Beyond NE plume and Lobe X.

4. AUTHORIZATION FOR DISPOSAL

I authorize the disposal of treated soil as identified in this document below SSTL of 4570mg/kg.

AECOM

Name: Greg Wright

Signature: _____

IEG Consultants

Name: Sam Bird

Signature:  _____

Attachments: Field notes showing treatment cell layout
Surer 9 volume calculations
Maxxam Analytical Report



MEMORANDUM

TO: Greg Wright, AECOM
FROM: Sam Bird, IEG Consultants

DATE: August 26th, 2009
FILE NO: A04029A01
LOG NO:

SUBJECT: *Removal of treated stockpiles SP-9D, SP-10B, SP-11A, SP-11B and SP-11C from Treatment Cell for disposal*

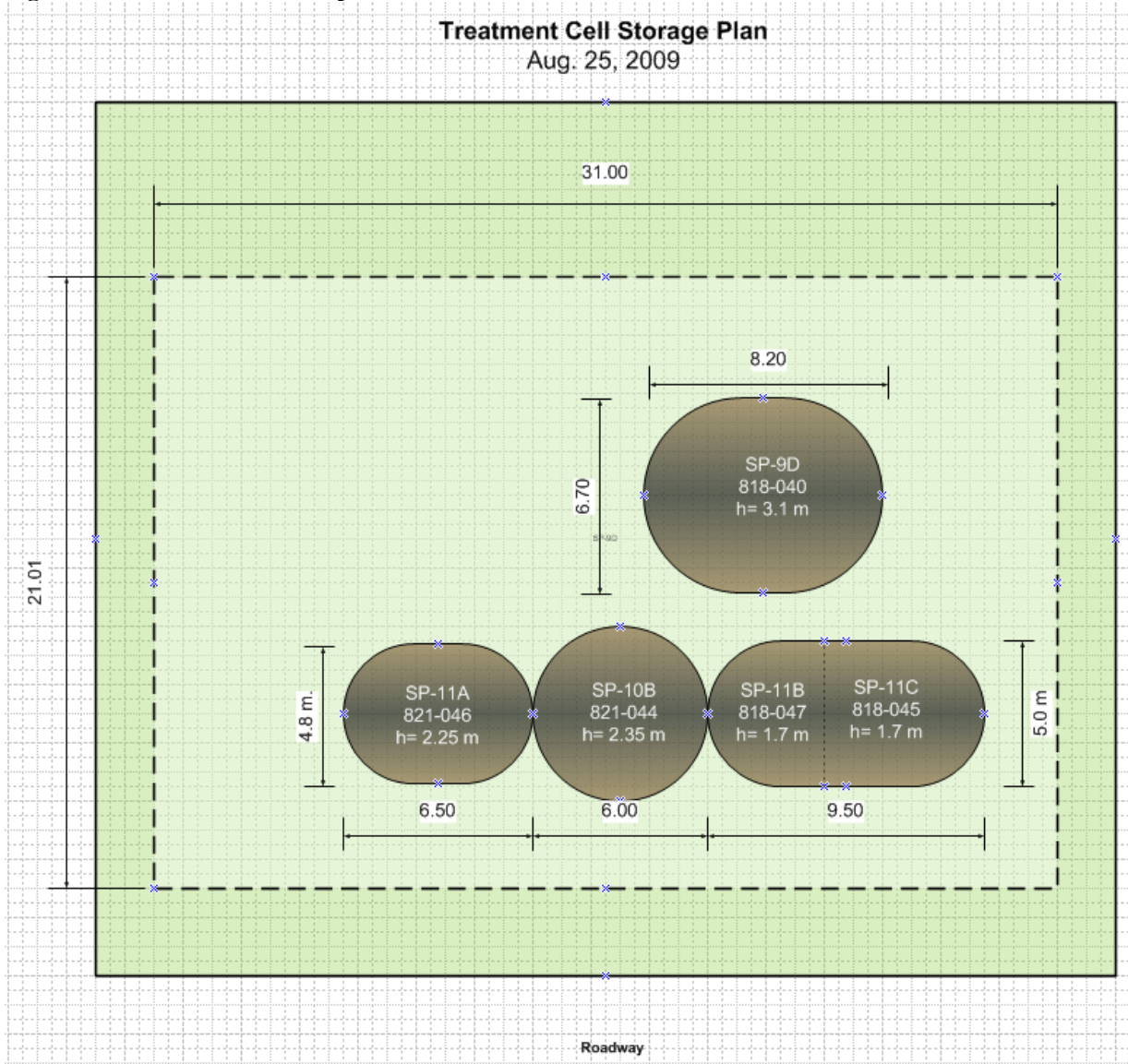
1. INTRODUCTION

Sample results indicate that the soil from stockpiles SP-9D, SP-10B, SP-11A, SP-11B and SP-11C which were excavated from extensions to the predefined design plumes presented in the specifications are below the site specific target level (SSTL) of 4570mg/kg Total Petroleum Hydrocarbons (C6-C30) as defined in the specifications. The soils were excavated from outside of the design areas around the northeast plume and around lobe X at Johnson Point, Banks Island, hauled to the treatment cell and allued. At this point, E. Grubens Transport is requesting permission to remove these soils from the treatment area.

2. SAMPLING METHODOLOGY

Samples were collected on August 18 and 21, 2009 by compositing 5 discrete samples per individual stockpile (<100m³ of soil/composite). The cross-sectional areas of the pile were determined before dividing the piles for sampling. The volume of soil in each stockpile ranges from 22m³ up to 82m³ per pile. The sub-samples were collected from random positions at various heights in the pile, generally taking two 1m deep samples, two 0.5m deep samples and one near surface and cutting/mixing the sample in a bucket from which the analytical sample was taken. Figure 1 show the locations of the stockpiles and from where the samples were taken. An AECOM duplicate was not collected from the soils currently in the treatment cell.

Figure 1 - Treatment Area Sample Location Plan



3. SAMPLE RESULTS

Sample results along with field testing results are attached in Table 1. The analytical results are attached for your reference.

Table 1 - Analytical and Field Results

Location	Sample Number	PID (ppmv)	PetroFlag (mg/kg)	Analytical Results – TPH (C5 to C30) (mg/kg)	Notes
SP-9D	818-040	NA	2884	2620	
SP-10B	821-044	NA	540	665	
SP-11A	821-046	45	828	538	
SP-11B	821-047	1800	0	812	Suspect error for Petro-Flag
SP-11C	821-045	358	1740	2110	

NA-Not Analyzed

4. AUTHORIZATION FOR DISPOSAL

I authorize the disposal of treated soil as identified in this document below SSTL of 4570mg/kg.

AECOM

Name: Greg Wright

Signature:



IEG Consultants

Name: Sam Bird

Signature:



Attachments: Maxxam Analytical Report



Your Project #: A04029A01JOHNSON POINT REMEDIA
 Site: BANK ISLAND, NWT
 Your C.O.C. #: 58160

Attention: SAM BIRD
 E. GRUBEN'S TRANSPORT
 PO BOX 177
 TUKTOYAKTUK, NT
 CANADA X0E 1C0

Report Date: 2009/08/21

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A944531
Received: 2009/08/20, 12:05

Sample Matrix: Soil
 # Samples Received: 5

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	5	2009/08/20	2009/08/21	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	4	2009/08/20	2009/08/20	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	5	N/A	2009/08/21	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	5	2009/08/20	2009/08/20	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
TPH (C6-C30) Soil Calc	5	N/A	2009/08/21		

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SHELYCE MORRISON, Project Manager
 Email: shelyce.morrison@maxxamanalytics.com
 Phone# (780) 577-7115 Ext:7115

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Total cover pages: 1

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33913	Q33914	Q33915		
Sampling Date		2009/08/18	2009/08/18	2009/08/18		
		12:30	02:30	02:45		
COC Number		58160	58160	58160		
	Units	818-036	818-037	818-038	RDL	QC Batch

Physical Properties						
Moisture	%	9.2	11	8.1	0.3	3363867
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg		1600	1700	10	3362658
F3 (C16-C34 Hydrocarbons)	mg/kg		270	280	10	3362658
F4 (C34-C50 Hydrocarbons)	mg/kg		<10	<10	10	3362658
Reached Baseline at C50	mg/kg		Yes	Yes		3362658
Volatiles						
LH (C5-C10)	mg/kg	380	1300	520	12	3362341
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	106	115	81		3362341
D10-ETHYLBENZENE (sur.)	%	108	107	100		3362341
D4-1,2-DICHLOROETHANE (sur.)	%	99	96	97		3362341
D8-TOLUENE (sur.)	%	104	102	104		3362341
O-TERPHENYL (sur.)	%		76	79		3362658
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33916	Q33917		
Sampling Date		2009/08/18	2009/08/18		
		03:00	03:15		
COC Number		58160	58160		
	Units	818-039	818-040	RDL	QC Batch

Physical Properties					
Moisture	%	8.4	18	0.3	3363867
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	800	2100	10	3362658
F3 (C16-C34 Hydrocarbons)	mg/kg	150	160	10	3362658
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	11	10	3362658
Reached Baseline at C50	mg/kg	Yes	Yes		3362658
Volatiles					
LH (C5-C10)	mg/kg	760	320	12	3362341
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	108	114		3362341
D10-ETHYLBENZENE (sur.)	%	101	93		3362341
D4-1,2-DICHLOROETHANE (sur.)	%	97	94		3362341
D8-TOLUENE (sur.)	%	104	99		3362341
O-TERPHENYL (sur.)	%	79	78		3362658
RDL = Reportable Detection Limit					

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		Q33913	Q33914	Q33915		
Sampling Date		2009/08/18	2009/08/18	2009/08/18		
		12:30	02:30	02:45		
COC Number		58160	58160	58160		
	Units	818-036	818-037	818-038	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg		1870	2050	10	3363158
Total hydrocarbons C5-C30	mg/kg	506	3200	2570	20	3363055
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	83	76	79		3363158

RDL = Reportable Detection Limit

Maxxam ID		Q33916	Q33917		
Sampling Date		2009/08/18	2009/08/18		
		03:00	03:15		
COC Number		58160	58160		
	Units	818-039	818-040	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	954	2300	10	3363158	
Total hydrocarbons C5-C30	mg/kg	1720	2620	20	3363055	
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	79	78		3363158	

RDL = Reportable Detection Limit



Maxxam Job #: A944531
Report Date: 2009/08/21

E. GRUBEN'S TRANSPORT
Client Project #: A04029A01JOHNSON POINT REMEDIA
Site Reference: BANK ISLAND, NWT
Sampler Initials: KK

General Comments

Results relate only to the items tested.

Quality Assurance Report
 Maxxam Job Number: EA944531

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3362341 DR3	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/20		109	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/20		93	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/20		115	%	60 - 140	
	Spiked Blank	D8-TOLUENE (sur.)	2009/08/20		99	%	60 - 140	
		4-BROMOFLUOROBENZENE (sur.)	2009/08/20		105	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/20		95	%	30 - 130	
	Method Blank	D4-1,2-DICHLOROETHANE (sur.)	2009/08/20		98	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/20		101	%	60 - 140	
		4-BROMOFLUOROBENZENE (sur.)	2009/08/20		101	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/20		91	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/20		98	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/20		103	%	60 - 140	
3362658 KO	Matrix Spike	O-TERPHENYL (sur.)	2009/08/20		92	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/20		89	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/08/20		93	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/08/20		105	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/20		84	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/20		91	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/20		97	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/08/20		107	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/08/20		105	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/20	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/08/20	<10		mg/kg		
		F4 (C34-C50 Hydrocarbons)	2009/08/20	<10		mg/kg		
		RPD	F2 (C10-C16 Hydrocarbons)	2009/08/20	NC		%	50
			F3 (C16-C34 Hydrocarbons)	2009/08/20	NC		%	50
			F4 (C34-C50 Hydrocarbons)	2009/08/20	NC		%	50
3363158 KO	Spiked Blank	O-TERPHENYL (sur.)	2009/08/20		84	%	50 - 130	
		Total Extractables C10 to C30	2009/08/20		90	%	60 - 130	
	Method Blank	O-TERPHENYL (sur.)	2009/08/20		105	%	50 - 130	
3363867 JP6	Method Blank	Total Extractables C10 to C30	2009/08/20	12, RDL=10		mg/kg		
		Moisture	2009/08/21	<0.3		%		
		Moisture	2009/08/21	1.2		%	20	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.



Your Project #: A04029A01 JOHNSON POINT REMED
 Site: BANKS ISLAND, NT
 Your C.O.C. #: 58161

Attention: SAM BIRD
 E. GRUBEN'S TRANSPORT
 PO BOX 177
 TUKTOYAKTUK, NT
 CANADA X0E 1C0

Report Date: 2009/08/25

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A945092
Received: 2009/08/23, 9:45

Sample Matrix: Soil
 # Samples Received: 4

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	4	2009/08/23	2009/08/24	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	3	2009/08/23	2009/08/24	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	4	N/A	2009/08/24	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	4	2009/08/23	2009/08/24	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
TPH (C6-C30) Soil Calc	4	N/A	2009/08/25		

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SHELYCE MORRISON, Project Manager
 Email: shelyce.morrison@maxxamanalytics.com
 Phone# (780) 577-7115 Ext:7115

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Total cover pages: 1



Maxxam Job #: A945092
Report Date: 2009/08/25

E. GRUBEN'S TRANSPORT
Client Project #: A04029A01JOHNSON POINT REMED
Site Reference: BANKS ISLAND, NT
Sampler Initials: KK

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		Q37799	Q37800	Q37801	Q37802		
Sampling Date		2009/08/20	2009/08/21	2009/08/21	2009/08/21		
COC Number		58161	58161	58161	58161		
	Units	820-044	821-045	821-046	821-047	RDL	QC Batch

Physical Properties							
Moisture	%	12	10	15	16	0.3	3366931

RDL = Reportable Detection Limit

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		Q37800	Q37801	Q37802		
Sampling Date		2009/08/21	2009/08/21	2009/08/21		
COC Number		58161	58161	58161		
	Units	821-045	821-046	821-047	RDL	QC Batch

Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1900	290	260	10	3366800
F3 (C16-C34 Hydrocarbons)	mg/kg	140	77	89	10	3366800
F4 (C34-C50 Hydrocarbons)	mg/kg	14	15	12	10	3366800
Reached Baseline at C50	mg/kg	Yes	Yes	Yes		3366800
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	111	99	100		3366800
RDL = Reportable Detection Limit						

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		Q37799	Q37800	Q37801	Q37802		
Sampling Date		2009/08/20	2009/08/21	2009/08/21	2009/08/21		
COC Number		58161	58161	58161	58161		
	Units	820-044	821-045	821-046	821-047	RDL	QC Batch

Volatiles							
LH (C5-C10)	mg/kg	200	87	200	490	12	3367864
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	108	111	102	111		3367864
D10-ETHYLBENZENE (sur.)	%	106	99	103	103		3367864
D4-1,2-DICHLOROETHANE (sur.)	%	94	90	91	95		3367864
D8-TOLUENE (sur.)	%	108	95	103	99		3367864
RDL = Reportable Detection Limit							

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		Q37799	Q37800	Q37801	Q37802		
Sampling Date		2009/08/20	2009/08/21	2009/08/21	2009/08/21		
COC Number		58161	58161	58161	58161		
	Units	820-044	821-045	821-046	821-047	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg		2020	342	325	10	3371540
Total hydrocarbons C5-C30	mg/kg	665	2110	538	812	20	3366643
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	102	111	99	100		3371540
RDL = Reportable Detection Limit							



Maxxam Job #: A945092
Report Date: 2009/08/25

E. GRUBEN'S TRANSPORT
Client Project #: A04029A01JOHNSON POINT REMED
Site Reference: BANKS ISLAND, NT
Sampler Initials: KK

General Comments

Results relate only to the items tested.



E. GRUBEN'S TRANSPORT
 Attention: SAM BIRD
 Client Project #: A04029A01JOHNSON POINT REMED
 P.O. #:
 Site Reference: BANKS ISLAND, NT

Quality Assurance Report
 Maxxam Job Number: EA945092

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3366800 KW2	Matrix Spike	O-TERPHENYL (sur.)	2009/08/24		105	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/24		NC	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/08/24		117	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/08/24		125	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/24		70	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/24		83	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/24		85	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/08/24		89	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/08/24			101	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/24		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/24		15, RDL=10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/24		<10		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2009/08/24		NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/24		16.3		%	50
		F4 (C34-C50 Hydrocarbons)	2009/08/24		NC		%	50
3366931 JP6	Method Blank	Moisture	2009/08/24	<0.3		%		
	RPD	Moisture	2009/08/24	3.1		%	20	
3367864 DR3	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/24		105	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/24		99	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/24		90	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/24		100	%	60 - 140	
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/24		104	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/24		111	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/24		100	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/24		105	%	60 - 140	
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/24		108	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/24		90	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/24		91	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/24		119	%	60 - 140	
3371540 KW2	Spiked Blank	O-TERPHENYL (sur.)	2009/08/24		114	%	50 - 130	
		Total Extractables C10 to C30	2009/08/24		105	%	60 - 130	
	Method Blank	O-TERPHENYL (sur.)	2009/08/24		101	%	50 - 130	
		Total Extractables C10 to C30	2009/08/24		15, RDL=10	mg/kg		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

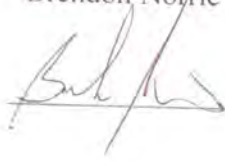
4. **AUTHORIZATION FOR DISPOSAL**

I authorize the disposal of treated soil as identified in this document below SSTL of 4570mg/kg.

AECOM

Name: Brendon Norrie

Signature: _____



IEG Consultants

Name: Sam Bird

Signature: _____



Attachments: Maxxam Analytical Report



November 18, 2008

Jim Stevens – Site Superintendent
E. Grubens Transport
PO Box 177
Tuktoyaktuk, NT
X0E 1C0

Soil Characterization Interim Report - Johnson Point, NT

Dear Mr. Stevens:

Please find attached IEG Consultants Ltd. (IEG) Interim Report - Soil Hydrocarbon Remediation, Johnson Point, NT, Public Works and Government Services Canada (PWGSC) Project Number: 418844. This report was completed in accordance with item 5.2 Section 025514 of the issue for tender.

The following document outlines the work completed during the 2008 summer field season, along with the remediation recommendations for 2009. The report focuses on the nature of the contaminated areas as well as the quantities of soil in these areas. Methods and results from the 2008 activities are included.

If you have any questions or concerns, please do not hesitate to contact the undersigned at your convenience.

Yours truly,

IEG Consultants Ltd.

A handwritten signature in black ink, appearing to read "David Wells", written over a horizontal line.

David Wells M.A.Sc
Northern Manager

081118 Johnson Pt Soil HC Characterization Interim Report
File: A04029A01.500

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Appendix I Summarized Analytical Data and GPS Readings

Appendix II Laboratory Analytical Data

1. INTRODUCTION

On August 18 - 27, 2008, and September 3 - 9, 2008, IEG Consultants Ltd. (IEG) completed onsite activities at Johnson Point, NT, in accordance with the Hydrocarbon Contaminated Soil Remediation Plan – Johnson Point, NWT (IEG 2008). As per the Hydrocarbon Remediation Plan, IEG provided a Soil Remediation Specialist to conduct the scope of work.

This report summarizes the methods and findings of the 2008 field work and provides recommendations for the 2009 field season, pending approval from the Departmental Representative (DR).

2. BACKGROUND INFORMATION

2.1 PHC Remediation Objectives

The remediation criterion for PHC contaminated soil identified at the Johnson Point site was divided into the Apron Area PHC Contaminated Soil and the Main Station PHC Contaminated Soil (PWGSC 2007).

Apron Area PHC Contaminated Soil remediation guidelines were set as follows:

- F1 (C₆-C₁₀) <230 mg/kg; and,
- F2 (C₁₀-C₁₆) <150 mg/kg.

No remediation guidelines were set for heavier F3 and F4 hydrocarbons.

At the Main Station, the site specific target level (SSTL) has been set at <4570 mg/kg Total Petroleum Hydrocarbons (TPH; C₆-C₅₀) for PHC Contaminated Soil.

2.1.1 Petroleum Hydrocarbon Contaminated Soils – Apron Area

The Apron Area, adjacent to the airstrip at Johnson Point contains approximately 18000 m³ of PHC contaminated soils located in two separate areas (plumes); northeast and southwest. The northeast plume contains approximately 7000 m³ of PHC contaminated soils while the southwest plume contains approximately 10315 m³ of PHC contaminated soils.

3. PROCEDURES AND PROTOCOLS

3.1 Soil Characterization Sampling Procedures – Apron Area

The onsite surveying company, (Inukshuk Geomatics), surveyed the future excavation limits as prescribed in the tender documents for Public Works and Government Services Canada (PWGSC) project Number: 418844 for the Environmental Site remediation Project at Johnson Point, Northwest Territories (Figure 1). Inukshuk Geomatics also established a 10 m x 10 m grid that overlaid the excavation limits. The objective of the drilling program was to characterize the soil within the excavation limits by generating a representative sample per 100 m³ of soil to determine future treatment/remediation requirements. Three hundred and sixty-nine (369) boreholes were drilled at the apron area using a solid stem auger attached to a track-hoe. Boreholes were advanced at the intersections of the 10 m x 10 m grid as well as at the centre point of each 10 x 10 m area as described in the July 9, 2008 Updated Contaminated Soil Remediation Plan –Johnson Point, NT, and the onsite meeting held August 12, 2008 between IEG, EGT and the DR. Additional samples boreholes were advanced following the removal of the survey lath from the 10 m x 10 m grid due to initial sampling errors. These boreholes were advanced adjacent to the previous borehole locations. The borehole locations were recorded using a handheld GPS. GPS coordinates can be found in Appendix I. Boreholes were drilled to a depth of 1 m below ground surface (bgs). Soil was collected from the entire length of the

auger and placed in two 125 mL laboratory-supplied jars and one zip-closure bag. Samples were labelled with the location from which they were collected.

All soil samples were collected as described in *Guidance Manual on Sampling, Analysis, and Data Management for Contaminated Sites*, Canadian Council of Ministers of the Environment and followed the typical QA/QC standards. The location, depth of hole and permafrost depths were then documented.

Collected samples were stored in an onsite refrigerator until transportation to the laboratory. A chain-of-custody form was sealed in a plastic zip-closure bag for protection against moisture and was placed in the cooler along with the samples. The cooler was then sealed with evidence tape to prevent and/or detect potential sample tampering before being shipped to the laboratory.

3.2 Soil Characterization Analytical Procedures

Samples were screened in the field for volatile hydrocarbons using a MiniRae photo-ionization detector (PID). The PID was used to measure the volatile hydrocarbons present in the head space of each zip-closure bag sample. The sample with the highest headspace reading per 100 m² area was submitted for analysis at Maxxam Analytics in Edmonton, AB. Maxxam Analytics is accredited by the Canadian Association for Environmental Analytical Laboratories (CAEAL). In the case where the sample with the highest headspace reading was already selected for analyses in an adjacent area because it was located in a corner of the 10 x 10 m grid, the sample with the second highest headspace reading was submitted. Duplicates of all samples were provided to the DR.

The analytical results from the CAEAL laboratory were plotted on the 10m x 10 m grid using the computer program Surfer 8. Based on the approved sample plan (IEG 2008), it

was predetermined that if a submitted laboratory sample exceeded the SSTL, then the entire 10m x 10m area was assumed to also exceed the SSTL. Once the areas exceeding the SSTL were plotted, the volumes of soil in these areas were calculated using a standard depth of 1 m, as per information provided by PWGSC (2007). The areas of soil that exceed the SSTL within the northeast and southwest plumes are shown in Figure 2, Figure 3, and Figure 4. The concentration of soil for each grid cell is shown in Figure 5.

4. CHARACTERIZATION RESULTS

4.1 Soil Characterization Sampling Results

In total, 369 sample locations (boreholes) were advanced throughout the apron area by IEG. Seventy-four (74) soil samples were submitted for laboratory analysis from the northeast plume (Figure 3). Of these 74 samples, one exceeded the SSTL (>4570 mg/kg TPH). Three samples from grid cells 95,165, 105,195, and 155, 125 were accidentally not submitted to the analytical laboratory for analysis. Since grid cells 95, 165 and 155, 125 are surrounded by grid cells below the SSTL, it can also be assumed they are below the SSTL. Grid cell 105, 195 is adjacent to a grid cell which exceeds the SSTL, it can be assumed that this grid cell is above the SSTL.

Ninety-four (94) soil samples were submitted for laboratory analysis from the southwest plume (Figure 4). Of these 94 samples, five exceeded the SSTL (>4570 mg/kg TPH). Eight samples from grid cells 15,75, 25,65, 25,75, 35,95, 55,95, 55,115, 75,85, and 75,95 were accidentally not submitted to the analytical laboratory for analysis. Since all of these grid cells are clustered in area where other grid cells exceed the SSTL it can be assumed that these grid cells are also exceed the SSTL. Table 1, below, shows the borehole coordinates and the contamination levels of the boreholes exceeding the SSTL. The TPH results for each sample location are summarized in Appendix I. Complete laboratory analytical reports are included in Appendix II.

Table 1 – Boreholes Exceeding the Site Specific Target Level

Sample Location		Grid Cell		Plume	TPH (C6-C50) (mg/kg)
E	N	E	N		
25	85	25	85	Southwest	4623
30	160	25	155	Southwest	9681
45	85	45	85	Southwest	7870
50	90	45	95	Southwest	11110
60	100	65	105	Southwest	6380
-	-	15	75	Southwest	>4570*
-	-	25	65	Southwest	>4570*
-	-	25	75	Southwest	>4570*
-	-	35	95	Southwest	>4570*
-	-	55	95	Southwest	>4570*
-	-	55	115	Southwest	>4570*
-	-	75	85	Southwest	>4570*
-	-	75	95	Southwest	>4570*
110	180	105	185	Northeast	4974
-	-	105	195	Northeast	>4570*

Note: * represents grid cells that were not analyzed but are assumed to exceed SSTL.

Based on the analytical results from 2008 sampling program, the total volume of soil which exceeds the SSTL is summarized in Table 2:

Table 2 – Estimated Soil Volumes Exceeding the Site Specific Target Level

Plume	Volume of Soil Exceeding SSTL
Northeast	200 m ³
Southwest	1300 m ³

5. GROUNDWATER

Several monitoring wells were installed at the site during previous site assessments conducted by others (PWGSC 2007). IEG proposed in the 2008 Johnson Point Groundwater Treatment Plan to collect groundwater samples from the existing monitoring wells surrounding the northeast and southwest PHC soil plumes. Groundwater samples were to be analyzed for CCME Hydrocarbons, total and dissolved metals, and routine parameters. Slug tests were to be completed in an attempt to calculate groundwater infiltration during soil excavation.

On September 6, 2008 IEG personnel conducted groundwater sampling at the only two intact monitoring wells in the vicinity of the northeast and southwest PHC soil plumes. All other monitoring wells located in the area were destroyed or damaged prior to IEG's mobilization to the site in mid August. Sampling was attempted at MW-116 and MW-74.

Prior to sample collection the water depth, and well depth were measured to determine the well volume. As per IEG's standard operating procedures, three well volumes of groundwater were to be removed prior to sampling. One well volume was removed from MW-116, the well did not recover to allow sampling. Three well volumes were removed from MW-74 over a period of 25 minutes, at which point the water column was at half of its initial height. Based on the initial and final well volumes, groundwater flow rates at MW-74 is estimated to be 64 mL/min.

Fraction 1 hydrocarbons (volatile hydrocarbons C₆-C₁₀) were collected in triplicate, while F2 – F4 hydrocarbons (extractable hydrocarbons C₁₀-C₅₀) were collected in duplicate, and pH and general parameters were analyzed from one sample. While the Water License (N7L1-1824) classifies extractable hydrocarbons as carbon chain 10 – 19, IEG analyzed for all carbon ranges to ensure heavy end hydrocarbons were not present in the

groundwater, as previous studies only focused on lower carbon chain hydrocarbons. For this reason, IEG will assume that the F2 hydrocarbons (C₁₀-C₁₆) are equivalent to the extractable hydrocarbons described in the Water License. The summarized analytical data for the required parameters can be found in Table 3.

Table 3 - Summarized hydrocarbon and pH concentrations from MW74

Parameter	Units	Guideline	JP02-01	JP02-02	JP02-03	JP02-04	JP02-05	JP02-07
F1 C ₆ -C ₁₀	mg/L	15	1.8	3.5	2.9			
F1 C ₁₀ -C ₁₆	mg/L	5				4.1	3.0	
F1 C ₁₆ -C ₃₂	mg/L	-				0.1	0.1	
F1 C ₃₂ -C ₅₀	mg/L	-				<0.1	<0.1	
pH	mg/L	6-9						7.7

As can be seen from Table 3, none of the parameters analyzed from MW-74 exceeded the guidelines set forth in the Water License. The complete laboratory report including routine parameters, BTEX, and dissolved and total metals can be viewed in Appendix II.

6. CONCLUSIONS

Based on the 2008 field program, of the approximately 18,000 m³ of hydrocarbon contaminated soil identified in the Apron Area, 1500 m³ are above the SSTL developed for the Johnson Point site. All soils characterized below the SSTL can be excavated, relocated and disposed at an onsite location approved by the DR and those Authorities Having Jurisdiction (AHJ). The 1500 m³ of soil above the SSTL will require excavation and further treatment by mechanical agitation as proposed by the contractor.

Groundwater collected from MW-74 is below the guidelines set forth in the Water License. Monitoring wells 116 did not recover following purging. Groundwater data is limited and will not aid in soil excavation plan.

7. CLOSURE

This report was prepared by IEG Consultants Ltd. for the account of E. Grubens Transport. The material in it reflects IEG's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. IEG Consultants Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

REFERENCES

Canadian Council of Ministers of the Environment (CCME). 2001. *Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil*. April/May 2001.

IEG Consultants Ltd. (IEG). 2008. *Updated Hydrocarbon Contaminated Soil Remediation Plan – Johnson Point, NWT*. July 2008.

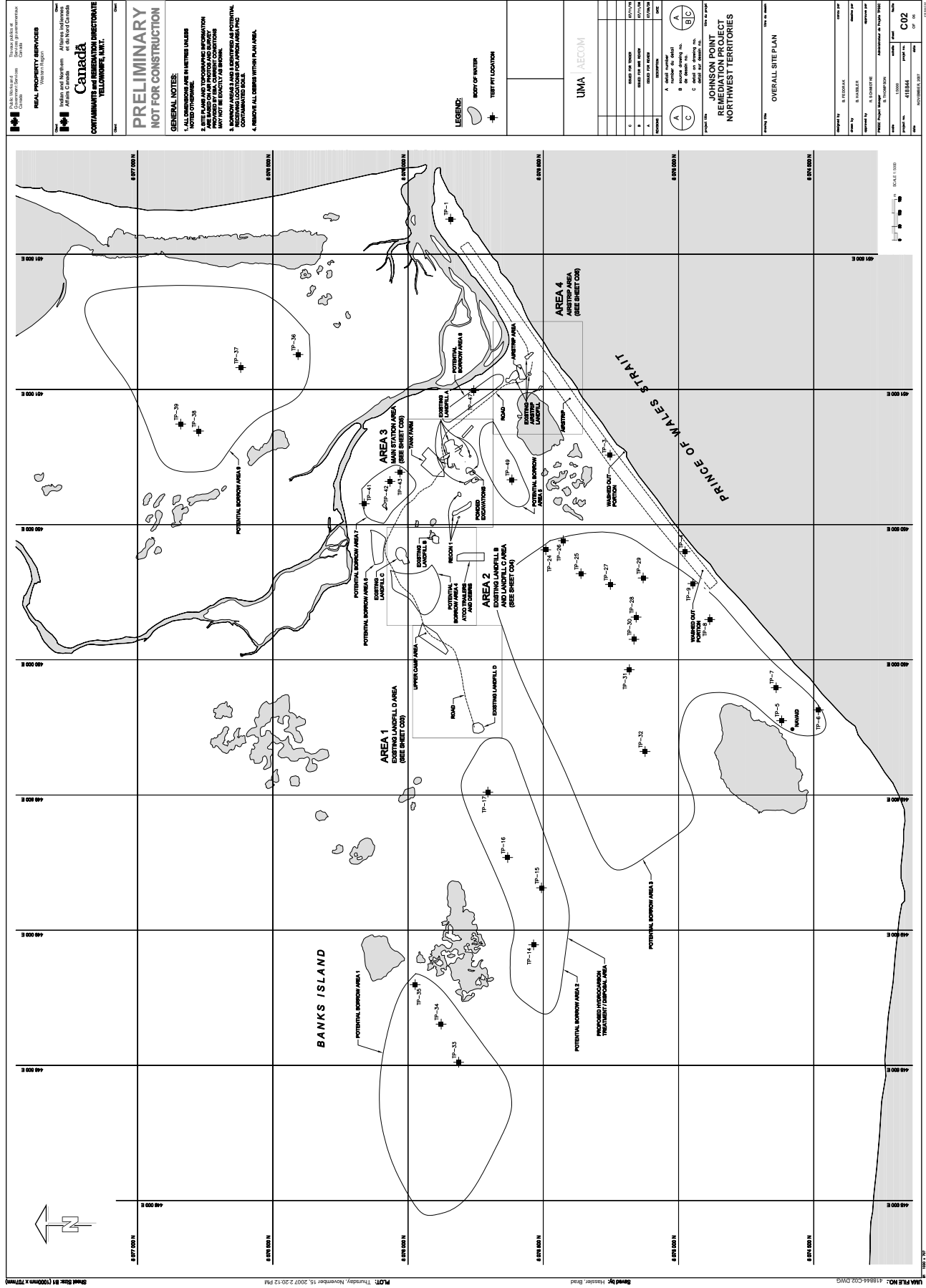
IEG Consultants Ltd. (IEG). 2008. *Contaminated Groundwater Treatment Plan – Johnson Point, NT* July 2008.

Northwest Territories Water Board. 2008 Type B Water License (N7L1-1824) for Johnson Point.

Public Works and Government Services Canada (PWGSC). 2007. *Project Number: 418844, Environmental Site Remediation Johnson Point, Northwest Territories Tender Documents*.

FIGURES

ISSUE FOR TENDER



2000-2001
 REAL PROPERTY SERVICES
 Yellowknife Region
 1000-1001
 Yellowknife, N.W.T.

PRELIMINARY
 NOT FOR CONSTRUCTION

GENERAL NOTES:
 1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 2. THE LOCATION OF ALL TEST PITS IS SUBJECT TO APPROVAL BY THE REGULATORY AGENCIES.
 3. BORROW AREAS 1 & 2 IDENTIFIED AS POTENTIAL CONTAMINATED AREAS FOR WHICH A PAVEMENT IS TO BE CONSTRUCTED.
 4. REMOVE ALL CORNERS WITHIN PLAN AREA.

LEGEND:
 BODY OF WATER
 TEST PIT LOCATION

UMA AECOM	
DATE	01/11/11
BY	01/11/11
FOR	01/11/11
SCALE	AS SHOWN
PROJECT	JOHNSON POINT
CLIENT	NT
NO.	001
REV.	001

JOHNSON POINT
 REMEDIATION PROJECT
 NORTHWEST TERRITORIES

OVERALL SITE PLAN

SCALE: 1:1000

PROJECT NO.: 418844-002-DWG

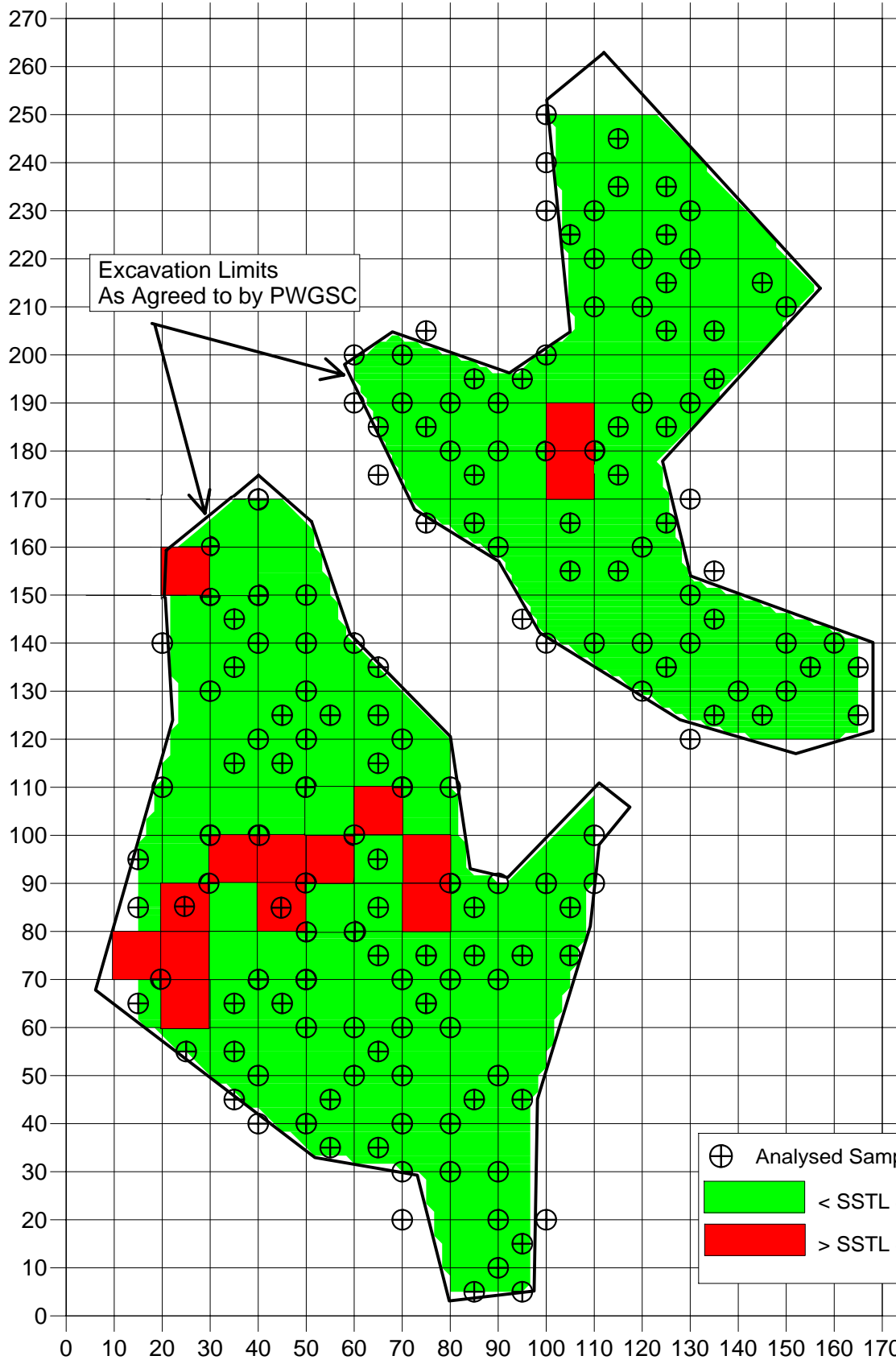
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DATE: 15/11/2007 2:02:12 PM

DRAWN BY: Hester, Brad

PROJECT NO.: 418844-002-DWG

SHEET NO.: C02

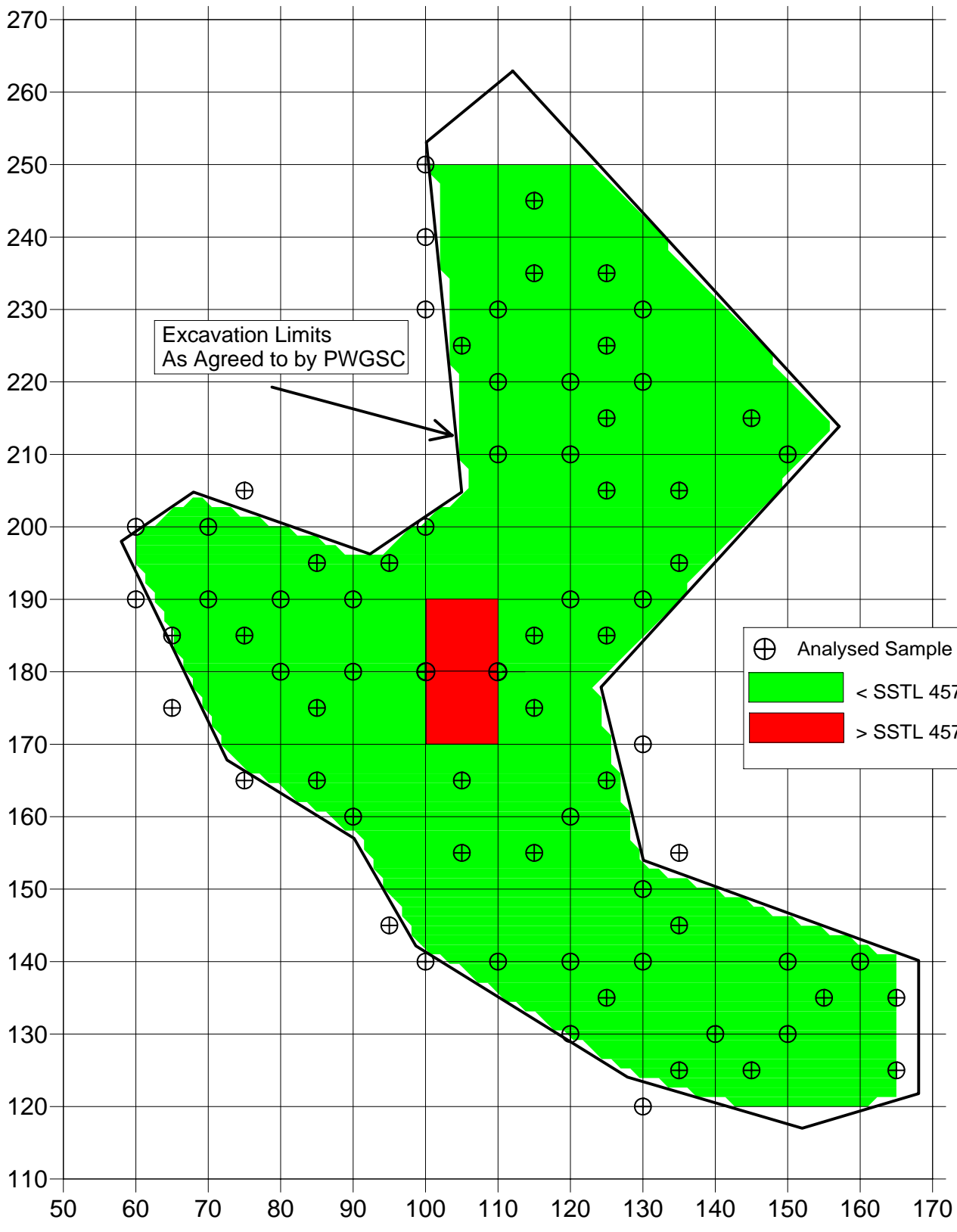


TITLE: AREA EXCEEDING SITE SPECIFIC TARGET LEVEL

LOCATION: NE and SW PLUMES
APRON AREA
JOHNSON POINT, NT

PROJECT NO.: A04029A01

FIG NO.: FIGURE 2

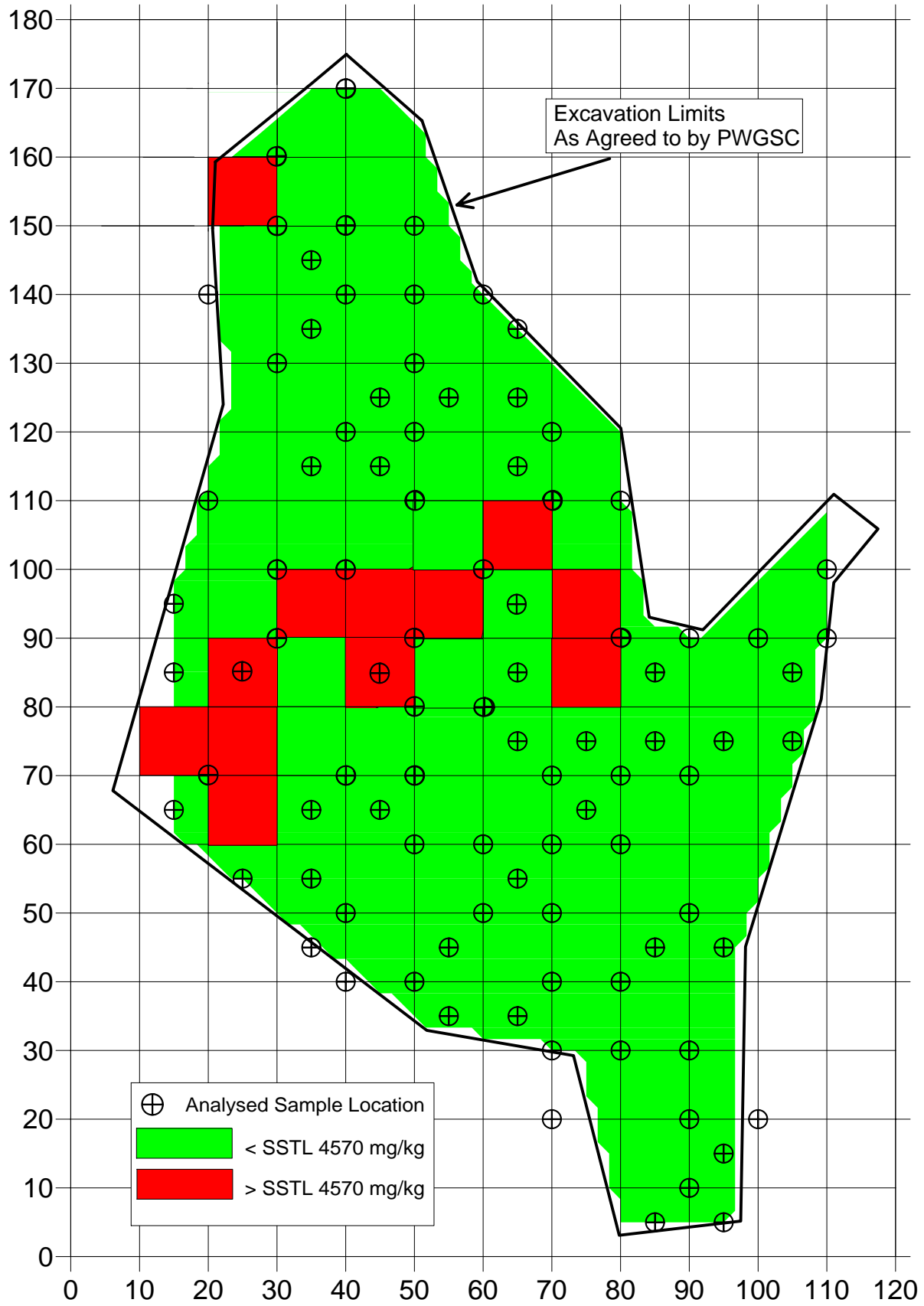


Excavation Limits
As Agreed to by PWGSC

⊕	Analysed Sample Location
■ (Green)	< SSTL 4570 mg/kg
■ (Red)	> SSTL 4570 mg/kg

TITLE:	AREA EXCEEDING SITE SPECIFIC TARGET LEVEL	
LOCATION:	NE PLUME APRON AREA JOHNSON POINT, NT	
PROJECT NO.:	A04029A01	FIG NO.: FIGURE 3



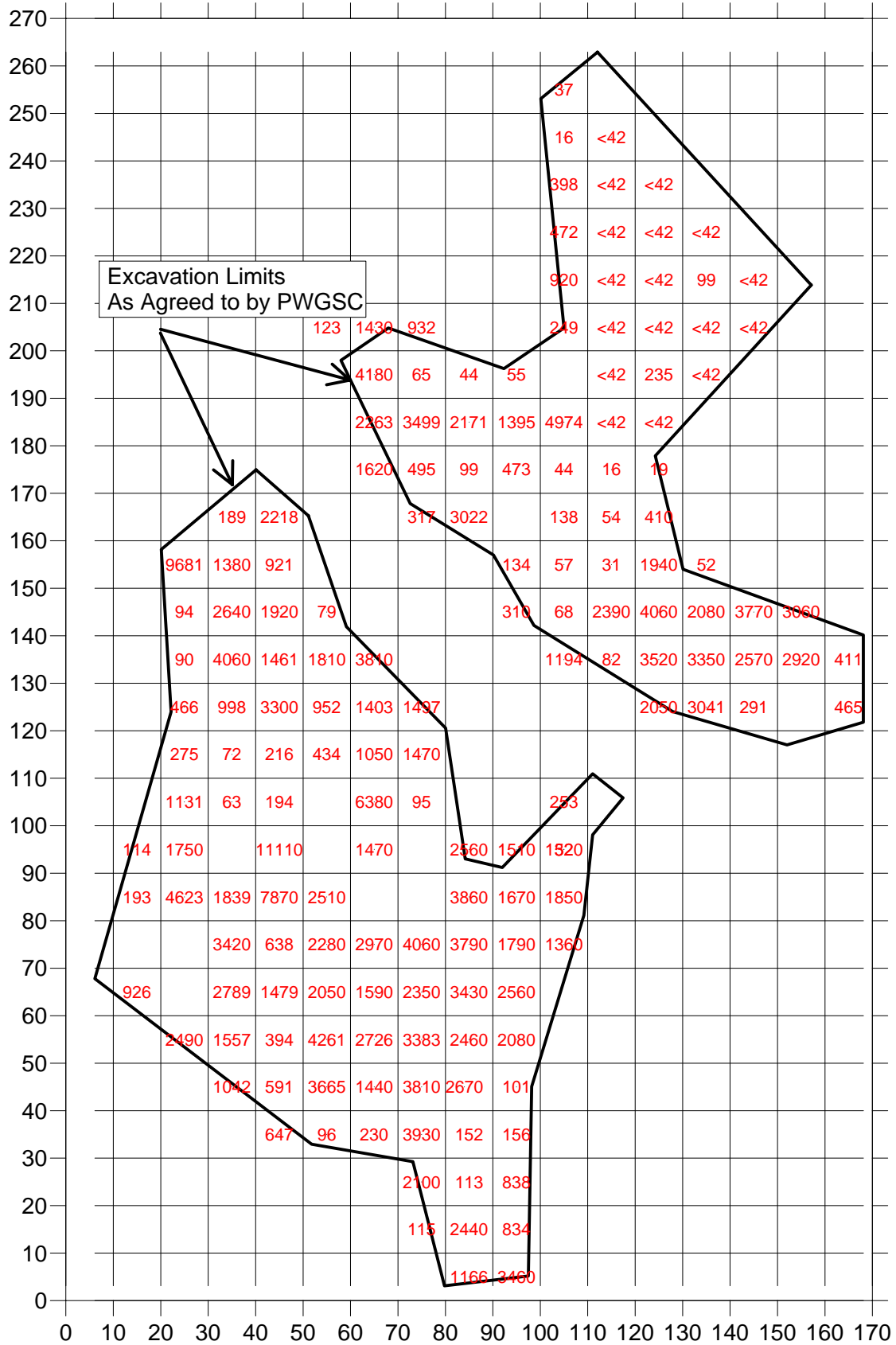


TITLE: AREA EXCEEDING SITE SPECIFIC TARGET LEVEL

LOCATION: SW PLUME
APRON AREA
JOHNSON POINT, NT

PROJECT NO.: A04029A01

FIG NO.: FIGURE 4



TITLE: 2008 Analytical Results for Each Grid Cell

LOCATION: NE and SW PLUMES
APRON AREA
JOHNSON POINT, NT

PROJECT NO.: A04029A01

FIG NO.: FIGURE 5

APPENDIX I

Summarized Analytical Data and GPS readings

GPS Waypoint	Northing (m)	Easting (m)	Location on Grid	
			X	Y
3	8075621.68	451034.39	65	190
4	8075630.69	451031.30	60	200
5	8075637.07	451044.03	75	205
6	8075632.51	451047.88	80	200
7	8075626.79	451053.69	85	195
8	8075616.75	451053.44	85	185
9	8075606.75	451051.54	85	175
10	8075601.89	451067.96	100	170
11	8075606.22	451073.03	105	175
12	8075610.59	451077.10	110	180
13	8075605.98	451082.94	115	175
14	8075599.17	451087.73	120	170
15	8075594.60	451091.92	125	165
16	8075602.26	451098.06	130	170
17	8075612.28	451098.97	130	180
18	8075621.23	451097.87	130	190
19	8075624.46	451102.58	135	195
20	8075628.82	451106.98	140	200
21	8075634.29	451111.42	145	205
22	8075639.69	451118.50	150	210
23	8075644.30	451112.66	145	215
24	8075652.22	451108.22	140	220
25	8075659.04	451103.43	135	225
26	8075663.60	451099.24	130	230
27	8075667.05	451095.03	125	235
28	8075673.89	451089.25	120	240
29	8075677.36	451084.37	115	245
30	8075683.08	451078.56	110	250
31	8075686.56	451073.36	105	255
32	8075682.23	451067.96	100	250
33	8075671.06	451068.34	100	240
34	8075661.02	451068.43	100	230
35	8075650.99	451067.85	100	220
36	8075638.71	451067.88	100	210
37	8075628.69	451066.97	100	200
38	8075588.34	451074.24	105	165
39	8075569.58	451065.84	90	145
40	8075575.87	451082.20	115	155
41	8075555.63	451088.31	120	130
42	8075566.58	451096.85	130	140
44	8075575.46	451098.72	130	150
45	8075580.95	451102.50	135	155
46	8075568.25	451119.71	160	140
47	8075564.99	451115.99	155	135
48	8075554.68	451126.98	165	125
49	8075555.40	451097.90	135	125
50	8075596.75	451005.00	35	165
51	8075577.93	450998.58	30	150
52	8075573.34	451003.76	35	145
53	8075568.10	450990.07	35	135
54	8075546.82	450993.18	35	115
55	8075521.20	450991.56	30	90
56	8075495.83	450979.36	15	65
57	8075489.69	451002.35	35	65
58	8075498.40	451011.17	40	70
59	8075468.19	451014.39	40	40
60	8075462.02	451038.05	55	35
61	8075465.28	451041.77	70	40
62	8075459.38	451054.52	80	30
63	8075445.73	451065.43	90	20
64	8075441.10	451071.93	95	45
65	8075473.82	451057.52	85	45
66	8075470.18	451024.03	55	45
67	8075475.66	451028.13	60	50
68	8075481.11	451033.23	65	55
69	8075486.54	451039.32	70	60
70	8075490.86	451045.05	75	65
71	8075495.22	451049.45	80	70
72	8075502.90	451054.60	85	75
73	8075488.58	451046.97	80	60
74	8075503.11	451046.01	75	75
75	8075516.83	451078.10	110	75
76	8075520.86	451050.42	130	210
77	8075514.57	451034.06	125	185
78	8075525.71	451034.66	65	95
79	8075571.61	451028.85	60	140
80	8075580.81	451017.83	50	150
81	8075557.24	451023.20	55	125
82	8075551.77	451018.77	50	120
83	8075529.43	451019.87	50	100
84	8075519.39	451019.62	50	90
85	8075509.11	451029.29	60	80
86	8075512.30	451035.65	60	100
87	8075532.51	451030.53	45	115
88	8075545.92	451029.54	45	120

APPENDIX II

Laboratory Analytical Data



Your Project #: JOHNSON POINT
Site Location: JOHNSON POINT, BANKS ISLAND, NT
Your C.O.C. #: 87191, 87192, 87193, 87194

Attention: DAVID WELLS
E. GRUBEN'S TRANSPORT
PO BOX 177
TUKTOYAKTUK, NT
CANADA X0E 1C0

Report Date: 2008/09/04

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A844108
Received: 2008/08/27, 12:30

Sample Matrix: Soil
Samples Received: 46

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	22	2008/08/27	2008/08/28	EENVSOP-00005 EENVSOP-00002	EPA 8260C / CCME
BTEX/F1 by HS GC/MS (MeOH extract)	24	2008/08/27	2008/08/29	EENVSOP-00005 EENVSOP-00002	EPA 8260C / CCME
CCME Hydrocarbons (F2-F4 in soil)	46	2008/08/27	2008/08/28	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	46	N/A	2008/08/28	EENVSOP-00139	Carter SSMA 51.2

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SHELYCE MORRISON, Project Manager
Email: shelyce.morrison@maxxamanalytics.com
Phone# (780) 577-7115 Ext:7115

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31273		L31278		
Sampling Date						
COC Number		87191		87191		
	Units	100,140	RDL	95,145	RDL	QC Batch

Physical Properties						
Moisture	%	9.4	0.3	13	0.3	2537546
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	37	10	270	10	2537220
F3 (C16-C34 Hydrocarbons)	mg/kg	31	10	70	10	2537220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2537220
Reached Baseline at C50	mg/kg	Yes		Yes		2537220
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	2537343
Toluene	mg/kg	0.13	0.020	22	0.20	2537343
Ethylbenzene	mg/kg	0.023	0.010	17	0.10	2537343
Xylenes (Total)	mg/kg	0.34	0.040	150	0.40	2537343
m & p-Xylene	mg/kg	0.23	0.040	100	0.40	2537343
o-Xylene	mg/kg	0.11	0.020	43	0.20	2537343
F1 (C6-C10) - BTEX	mg/kg	<12	12	1500	12	2537343
(C6-C10)	mg/kg	<12	12	1700	12	2537343
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	87		109		2537343
D10-ETHYLBENZENE (sur.)	%	96		105		2537343
D4-1,2-DICHLOROETHANE (sur.)	%	95		84		2537343
D8-TOLUENE (sur.)	%	96		98		2537343
O-TERPHENYL (sur.)	%	83		83		2537220
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31279	L31280		L31281		
Sampling Date							
COC Number		87191	87191		87191		
	Units	90,160	85,165	RDL	80,180	RDL	QC Batch

Physical Properties							
Moisture	%	18	13	0.3	15	0.3	2537546
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	46	2200	10	97	10	2537220
F3 (C16-C34 Hydrocarbons)	mg/kg	64	460	10	55	10	2537220
F4 (C34-C50 Hydrocarbons)	mg/kg	24	92	10	13	10	2537220
Reached Baseline at C50	mg/kg	Yes	Yes		Yes		2537220
Volatiles							
Benzene	mg/kg	<0.0050	0.11	0.0050	<0.0050	0.0050	2537343
Toluene	mg/kg	0.053	0.62	0.020	4.9	0.020	2537343
Ethylbenzene	mg/kg	<0.010	1.9	0.010	4.5	0.010	2537343
Xylenes (Total)	mg/kg	0.094	8.2	0.040	30	0.40	2537343
m & p-Xylene	mg/kg	0.094	4.2	0.040	22	0.40	2537343
o-Xylene	mg/kg	<0.020	4.1	0.020	8.8	0.020	2537343
F1 (C6-C10) - BTEX	mg/kg	<12	250	12	290	12	2537343
(C6-C10)	mg/kg	<12	270	12	330	12	2537343
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	90	93		91		2537343
D10-ETHYLBENZENE (sur.)	%	89	100		106		2537343
D4-1,2-DICHLOROETHANE (sur.)	%	90	90		84		2537343
D8-TOLUENE (sur.)	%	95	96		96		2537343
O-TERPHENYL (sur.)	%	84	84		84		2537220
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31282		L31283		
Sampling Date						
COC Number		87191		87191		
	Units	65,185	RDL	75,185	RDL	QC Batch

Physical Properties						
Moisture	%	11	0.3	13	0.3	2537546
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	920	10	2000	10	2537220
F3 (C16-C34 Hydrocarbons)	mg/kg	130	10	470	10	2537220
F4 (C34-C50 Hydrocarbons)	mg/kg	13	10	29	10	2537220
Reached Baseline at C50	mg/kg	Yes		Yes		2537220
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	2.1	0.0050	2537343
Toluene	mg/kg	7.8	0.020	14	0.20	2537343
Ethylbenzene	mg/kg	6.5	0.010	11	0.10	2537343
Xylenes (Total)	mg/kg	110	0.40	50	0.40	2537343
m & p-Xylene	mg/kg	80	0.40	35	0.40	2537343
o-Xylene	mg/kg	33	0.20	15	0.20	2537343
F1 (C6-C10) - BTEX	mg/kg	1100	12	940	12	2537343
(C6-C10)	mg/kg	1200	12	1000	12	2537343
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96		100		2537343
D10-ETHYLBENZENE (sur.)	%	102		104		2537343
D4-1,2-DICHLOROETHANE (sur.)	%	86		85		2537343
D8-TOLUENE (sur.)	%	99		99		2537343
O-TERPHENYL (sur.)	%	86		92		2537220
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31284	L31285	L31286	L31287		
Sampling Date							
COC Number		87191	87191	87191	87191		
	Units	70,190	90,190	100,170	100,200	RDL	QC Batch

Physical Properties							
Moisture	%	15	14	13	14	0.3	2537546
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	18	18	140	16	10	2537220
F3 (C16-C34 Hydrocarbons)	mg/kg	25	26	94	23	10	2537220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	13	<10	10	2537220
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2537220
Volatiles							
Benzene	mg/kg	0.30	<0.0050	<0.0050	<0.0050	0.0050	2537343
Toluene	mg/kg	0.029	0.59	1.7	<0.020	0.020	2537343
Ethylbenzene	mg/kg	0.15	0.25	2.1	<0.010	0.010	2537343
Xylenes (Total)	mg/kg	1.5	2.1	13	<0.040	0.040	2537343
m & p-Xylene	mg/kg	0.89	1.5	9.1	<0.040	0.040	2537343
o-Xylene	mg/kg	0.62	0.63	3.4	<0.020	0.020	2537343
F1 (C6-C10) - BTEX	mg/kg	20	<12	330	<12	12	2537343
(C6-C10)	mg/kg	22	<12	350	<12	12	2537343
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	87	87	93	88		2537343
D10-ETHYLBENZENE (sur.)	%	90	99	105	103		2537343
D4-1,2-DICHLOROETHANE (sur.)	%	90	88	85	83		2537343
D8-TOLUENE (sur.)	%	95	97	100	99		2537343
O-TERPHENYL (sur.)	%	84	88	81	87		2537220
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31288		L31289		
Sampling Date						
COC Number		87191		87191		
	Units	110,140	RDL	120,140	RDL	QC Batch

Physical Properties						
Moisture	%	7.7	0.3	11	0.3	2537546
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	910	10	860	10	2537220
F3 (C16-C34 Hydrocarbons)	mg/kg	250	10	130	10	2537220
F4 (C34-C50 Hydrocarbons)	mg/kg	10	10	<10	10	2537220
Reached Baseline at C50	mg/kg	Yes		Yes		2537220
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	2537343
Toluene	mg/kg	<0.020	0.020	9.3	0.020	2537343
Ethylbenzene	mg/kg	<0.010	0.010	17	0.10	2537343
Xylenes (Total)	mg/kg	<0.040	0.040	94	0.40	2537343
m & p-Xylene	mg/kg	<0.040	0.040	67	0.40	2537343
o-Xylene	mg/kg	<0.020	0.020	27	0.20	2537343
F1 (C6-C10) - BTEX	mg/kg	24	12	1200	12	2537343
(C6-C10)	mg/kg	24	12	1400	12	2537343
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	86		100		2537343
D10-ETHYLBENZENE (sur.)	%	100		107		2537343
D4-1,2-DICHLOROETHANE (sur.)	%	84		83		2537343
D8-TOLUENE (sur.)	%	98		98		2537343
O-TERPHENYL (sur.)	%	89		88		2537220
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31290		L31291		
Sampling Date						
COC Number		87192		87192		
	Units	120,160	RDL	125,135	RDL	QC Batch

Physical Properties						
Moisture	%	11	0.3	9.6	0.3	2537546
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	14	10	1700	10	2537220
F3 (C16-C34 Hydrocarbons)	mg/kg	29	10	220	10	2537220
F4 (C34-C50 Hydrocarbons)	mg/kg	11	10	<10	10	2537220
Reached Baseline at C50	mg/kg	Yes		Yes		2537220
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	2537343
Toluene	mg/kg	0.035	0.020	17	0.20	2537343
Ethylbenzene	mg/kg	<0.010	0.010	22	0.10	2537343
Xylenes (Total)	mg/kg	0.11	0.040	100	0.40	2537343
m & p-Xylene	mg/kg	0.11	0.040	70	0.40	2537343
o-Xylene	mg/kg	<0.020	0.020	35	0.20	2537343
F1 (C6-C10) - BTEX	mg/kg	<12	12	1400	12	2537343
(C6-C10)	mg/kg	<12	12	1600	12	2537343
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	85		116		2537343
D10-ETHYLBENZENE (sur.)	%	90		107		2537343
D4-1,2-DICHLOROETHANE (sur.)	%	90		82		2537343
D8-TOLUENE (sur.)	%	95		98		2537343
O-TERPHENYL (sur.)	%	83		82		2537220
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31293		L31295		
Sampling Date						
COC Number		87192		87192		
	Units	130,120	RDL	145,125	RDL	QC Batch
Physical Properties						
Moisture	%	10	0.3	8.2	0.3	2537546
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	740	10	120	10	2537220
F3 (C16-C34 Hydrocarbons)	mg/kg	110	10	61	10	2537220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	10	10	2537220
Reached Baseline at C50	mg/kg	Yes		Yes		2537220
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	2537343
Toluene	mg/kg	2.7	0.020	<0.020	0.020	2537343
Ethylbenzene	mg/kg	8.1	0.010	<0.010	0.010	2537343
Xylenes (Total)	mg/kg	61	0.40	1.1	0.040	2537343
m & p-Xylene	mg/kg	39	0.40	0.49	0.040	2537343
o-Xylene	mg/kg	22	0.20	0.59	0.020	2537343
F1 (C6-C10) - BTEX	mg/kg	1100	12	99	12	2537343
(C6-C10)	mg/kg	1200	12	100	12	2537343
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	84		86		2537343
D10-ETHYLBENZENE (sur.)	%	105		91		2537343
D4-1,2-DICHLOROETHANE (sur.)	%	83		87		2537343
D8-TOLUENE (sur.)	%	99		96		2537343
O-TERPHENYL (sur.)	%	83		80		2537220
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31300		L31303		
Sampling Date						
COC Number		87192		87192		
	Units	140,130	RDL	150,130	RDL	QC Batch
Physical Properties						
Moisture	%	10	0.3	8.2	0.3	2537546
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	2100	10	850	10	2537220
F3 (C16-C34 Hydrocarbons)	mg/kg	270	10	120	10	2537220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2537220
Reached Baseline at C50	mg/kg	Yes		Yes		2537220
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	2537343
Toluene	mg/kg	0.13	0.020	12	0.20	2537343
Ethylbenzene	mg/kg	3.4	0.010	17	0.10	2537343
Xylenes (Total)	mg/kg	37	0.40	110	0.40	2537343
m & p-Xylene	mg/kg	22	0.40	76	0.40	2537343
o-Xylene	mg/kg	15	0.20	30	0.20	2537343
F1 (C6-C10) - BTEX	mg/kg	940	12	1400	12	2537343
(C6-C10)	mg/kg	980	12	1600	12	2537343
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	113		81		2537343
D10-ETHYLBENZENE (sur.)	%	107		103		2537343
D4-1,2-DICHLOROETHANE (sur.)	%	81		84		2537343
D8-TOLUENE (sur.)	%	100		97		2537343
O-TERPHENYL (sur.)	%	84		95		2537220
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31312			L31315		
Sampling Date							
COC Number		87192			87192		
	Units	165,135	RDL	QC Batch	150,140	RDL	QC Batch

Physical Properties							
Moisture	%	8.4	0.3	2537546	8.3	0.3	2537985
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	240	10	2537220	990	10	2537237
F3 (C16-C34 Hydrocarbons)	mg/kg	51	10	2537220	180	10	2537237
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	2537220	<10	10	2537237
Reached Baseline at C50	mg/kg	Yes		2537220	Yes		2537237
Volatiles							
Benzene	mg/kg	<0.0050	0.0050	2537343	<0.0050	0.0050	2537348
Toluene	mg/kg	<0.020	0.020	2537343	11	0.20	2537348
Ethylbenzene	mg/kg	<0.010	0.010	2537343	27	0.10	2537348
Xylenes (Total)	mg/kg	0.99	0.040	2537343	130	0.40	2537348
m & p-Xylene	mg/kg	0.42	0.040	2537343	91	0.40	2537348
o-Xylene	mg/kg	0.57	0.020	2537343	42	0.20	2537348
F1 (C6-C10) - BTEX	mg/kg	120	12	2537343	2400	12	2537348
(C6-C10)	mg/kg	120	12	2537343	2600	12	2537348
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	82		2537343	121		2537348
D10-ETHYLBENZENE (sur.)	%	94		2537343	112		2537348
D4-1,2-DICHLOROETHANE (sur.)	%	82		2537343	96		2537348
D8-TOLUENE (sur.)	%	98		2537343	116		2537348
O-TERPHENYL (sur.)	%	83		2537220	92		2537237
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31316		L31317	L31318		
Sampling Date							
COC Number		87192		87192	87192		
	Units	135,145	RDL	105,155	130,170	RDL	QC Batch

Physical Properties							
Moisture	%	12	0.3	11	11	0.3	2537985
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	360	10	<10	<10	10	2537237
F3 (C16-C34 Hydrocarbons)	mg/kg	120	10	57	<10	10	2537237
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	<10	10	2537237
Reached Baseline at C50	mg/kg	Yes		Yes	Yes		2537237
Volatiles							
Benzene	mg/kg	0.018	0.0050	<0.0050	<0.0050	0.0050	2537348
Toluene	mg/kg	34	0.20	0.026	<0.020	0.020	2537348
Ethylbenzene	mg/kg	21	0.10	0.012	0.012	0.010	2537348
Xylenes (Total)	mg/kg	98	0.40	<0.040	<0.040	0.040	2537348
m & p-Xylene	mg/kg	70	0.40	<0.040	<0.040	0.040	2537348
o-Xylene	mg/kg	28	0.20	<0.020	0.035	0.020	2537348
F1 (C6-C10) - BTEX	mg/kg	1500	12	<12	<12	12	2537348
(C6-C10)	mg/kg	1600	12	<12	<12	12	2537348
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	96		97	99		2537348
D10-ETHYLBENZENE (sur.)	%	109		100	101		2537348
D4-1,2-DICHLOROETHANE (sur.)	%	97		95	94		2537348
D8-TOLUENE (sur.)	%	111		103	104		2537348
O-TERPHENYL (sur.)	%	69		64	87		2537237
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31319	L31320	L31321	L31322		
Sampling Date							
COC Number		87192	87192	87193	87193		
	Units	110,180	110,200	125,195	130,210	RDL	QC Batch

Physical Properties							
Moisture	%	15	13	14	12	0.3	2537985
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	130	15	<10	43	10	2537237
F3 (C16-C34 Hydrocarbons)	mg/kg	110	17	40	82	10	2537237
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2537237
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2537237
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2537348
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2537348
Ethylbenzene	mg/kg	0.034	<0.010	<0.010	<0.010	0.010	2537348
Xylenes (Total)	mg/kg	0.32	<0.040	<0.040	<0.040	0.040	2537348
m & p-Xylene	mg/kg	0.20	<0.040	<0.040	<0.040	0.040	2537348
o-Xylene	mg/kg	0.12	<0.020	<0.020	<0.020	0.020	2537348
F1 (C6-C10) - BTEX	mg/kg	24	<12	<12	<12	12	2537348
(C6-C10)	mg/kg	24	<12	<12	<12	12	2537348
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	102	97	99	97		2537348
D10-ETHYLBENZENE (sur.)	%	99	98	100	101		2537348
D4-1,2-DICHLOROETHANE (sur.)	%	95	92	93	92		2537348
D8-TOLUENE (sur.)	%	104	104	104	104		2537348
O-TERPHENYL (sur.)	%	83	93	71	69		2537237

RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31323	L31324	L31325	L31326		
Sampling Date							
COC Number		87193	87193	87193	87193		
	Units	145,215	100,220	100,230	110,210	RDL	QC Batch

Physical Properties							
Moisture	%	9.4	12	13	12	0.3	2537985
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	11	31	22	10	2537237
F3 (C16-C34 Hydrocarbons)	mg/kg	21	28	32	28	10	2537237
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2537237
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2537237
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2537348
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2537348
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	2537348
Xylenes (Total)	mg/kg	<0.040	0.16	0.11	<0.040	0.040	2537348
m & p-Xylene	mg/kg	<0.040	0.11	0.064	<0.040	0.040	2537348
o-Xylene	mg/kg	<0.020	0.055	0.044	<0.020	0.020	2537348
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	2537348
(C6-C10)	mg/kg	<12	<12	<12	<12	12	2537348
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	96	97	99	98		2537348
D10-ETHYLBENZENE (sur.)	%	106	97	96	99		2537348
D4-1,2-DICHLOROETHANE (sur.)	%	94	91	97	95		2537348
D8-TOLUENE (sur.)	%	105	105	102	103		2537348
O-TERPHENYL (sur.)	%	83	78	91	93		2537237

RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31327	L31328	L31329	L31330		
Sampling Date							
COC Number		87193	87193	87193	87193		
	Units	125,225	110,230	140,220	125,235	RDL	QC Batch

Physical Properties							
Moisture	%	9.5	11	10	13	0.3	2537985
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	15	22	14	18	10	2537237
F3 (C16-C34 Hydrocarbons)	mg/kg	16	11	12	17	10	2537237
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2537237
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2537237
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2537348
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2537348
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	2537348
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	2537348
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	2537348
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2537348
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	2537348
(C6-C10)	mg/kg	<12	<12	<12	<12	12	2537348
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	102	99	98	98		2537348
D10-ETHYLBENZENE (sur.)	%	99	98	98	97		2537348
D4-1,2-DICHLOROETHANE (sur.)	%	95	99	92	95		2537348
D8-TOLUENE (sur.)	%	103	103	104	104		2537348
O-TERPHENYL (sur.)	%	92	95	96	93		2537237
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31331	L31332	L31333	L31334		
Sampling Date							
COC Number		87193	87193	87193	87194		
	Units	110,240	100,250	100,240	140,200	RDL	QC Batch

Physical Properties							
Moisture	%	9.5	12	12	11	0.3	2537985
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	36	<10	<10	<10	10	2537237
F3 (C16-C34 Hydrocarbons)	mg/kg	23	<10	<10	18	10	2537237
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2537237
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2537237
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2537348
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2537348
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	2537348
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	2537348
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	2537348
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2537348
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	2537348
(C6-C10)	mg/kg	<12	<12	<12	<12	12	2537348
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	100	99	98	97		2537348
D10-ETHYLBENZENE (sur.)	%	98	97	98	101		2537348
D4-1,2-DICHLOROETHANE (sur.)	%	99	95	96	94		2537348
D8-TOLUENE (sur.)	%	102	103	103	104		2537348
O-TERPHENYL (sur.)	%	90	86	87	90		2537237
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31335		L31336		
Sampling Date						
COC Number		87194		87194		
	Units	130,180	RDL	70,200	RDL	QC Batch

Physical Properties						
Moisture	%	12	0.3	14	0.3	2538004
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	29	10	530	10	2537224
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	10	220	10	2537224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2537224
Reached Baseline at C50	mg/kg	Yes		Yes		2537224
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	1.8	0.0050	2537501
Toluene	mg/kg	<0.020	0.020	28	0.20	2537501
Ethylbenzene	mg/kg	<0.010	0.010	19	0.10	2537501
Xylenes (Total)	mg/kg	<0.040	0.040	94	0.40	2537501
m & p-Xylene	mg/kg	<0.040	0.040	65	0.40	2537501
o-Xylene	mg/kg	<0.020	0.020	30	0.20	2537501
F1 (C6-C10) - BTEX	mg/kg	<12	12	540	12	2537501
(C6-C10)	mg/kg	<12	12	680	12	2537501
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97		101		2537501
D10-ETHYLBENZENE (sur.)	%	98		103		2537501
D4-1,2-DICHLOROETHANE (sur.)	%	93		98		2537501
D8-TOLUENE (sur.)	%	106		106		2537501
O-TERPHENYL (sur.)	%	80		86		2537224
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31338	L31374	L31375		
Sampling Date						
COC Number		87194	87194	87194		
	Units	65,175	75,165	165,125	RDL	QC Batch

Physical Properties						
Moisture	%	12	13	6.3	0.3	2538004
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1400	110	3600	10	2537224
F3 (C16-C34 Hydrocarbons)	mg/kg	110	160	200	10	2537224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	47	<10	10	2537224
Reached Baseline at C50	mg/kg	Yes	Yes	Yes		2537224
Volatiles						
Benzene	mg/kg	0.020	<0.0050	<0.0050	0.0050	2537501
Toluene	mg/kg	0.23	<0.020	0.047	0.020	2537501
Ethylbenzene	mg/kg	0.59	<0.010	0.045	0.010	2537501
Xylenes (Total)	mg/kg	3.7	<0.040	0.33	0.040	2537501
m & p-Xylene	mg/kg	2.4	<0.040	0.18	0.040	2537501
o-Xylene	mg/kg	1.3	<0.020	0.16	0.020	2537501
F1 (C6-C10) - BTEX	mg/kg	100	<12	16	12	2537501
(C6-C10)	mg/kg	110	<12	16	12	2537501
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	98	107		2537501
D10-ETHYLBENZENE (sur.)	%	102	97	97		2537501
D4-1,2-DICHLOROETHANE (sur.)	%	95	93	93		2537501
D8-TOLUENE (sur.)	%	106	105	106		2537501
O-TERPHENYL (sur.)	%	86	91	86		2537224
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L31376		
Sampling Date				
COC Number		87194		
	Units	135,155	RDL	QC Batch

Physical Properties				
Moisture	%	11	0.3	2538004
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/kg	12	10	2537221
F3 (C16-C34 Hydrocarbons)	mg/kg	33	10	2537221
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	2537221
Reached Baseline at C50	mg/kg	Yes		2537221
Volatiles				
Benzene	mg/kg	<0.0050	0.0050	2537501
Toluene	mg/kg	0.033	0.020	2537501
Ethylbenzene	mg/kg	0.017	0.010	2537501
Xylenes (Total)	mg/kg	0.19	0.040	2537501
m & p-Xylene	mg/kg	0.11	0.040	2537501
o-Xylene	mg/kg	0.076	0.020	2537501
F1 (C6-C10) - BTEX	mg/kg	<12	12	2537501
(C6-C10)	mg/kg	<12	12	2537501
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	96		2537501
D10-ETHYLBENZENE (sur.)	%	102		2537501
D4-1,2-DICHLOROETHANE (sur.)	%	88		2537501
D8-TOLUENE (sur.)	%	110		2537501
O-TERPHENYL (sur.)	%	91		2537221
RDL = Reportable Detection Limit				

AT1 BTEX AND F1-F4 IN SOIL (SOIL) Comments

- Sample L31278-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.
- Sample L31281-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.
- Sample L31282-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.
- Sample L31283-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.
- Sample L31289-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.
- Sample L31291-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.
- Sample L31293-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.
- Sample L31300-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.
- Sample L31303-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.
- Sample L31315-01 BTEX/F1 by HS GC/MS (MeOH extract): Duplicate exceeds acceptance criteria for Toluene due to sample non homogeneity. Reanalysis yields similar results. RDL raised due to sample dilution.
- Sample L31316-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.
- Sample L31336-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Results relate only to the items tested.



E. GRUBEN'S TRANSPORT
 Attention: DAVID WELLS
 Client Project #: JOHNSON POINT
 P.O. #:
 Site Reference: JOHNSON POINT, BANKS ISLAND, NT

Quality Assurance Report
 Maxxam Job Number: EA844108

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
2537220 MB7	MATRIX SPIKE [L31278-01]	O-TERPHENYL (sur.)	2008/08/28		77	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2008/08/28		81	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2008/08/28		81	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2008/08/28		81	%	50 - 130	
	SPIKE	O-TERPHENYL (sur.)	2008/08/28		81	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2008/08/28		90	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2008/08/28		90	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2008/08/28		92	%	80 - 120	
	BLANK	O-TERPHENYL (sur.)	2008/08/28			89	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/08/28		11, RDL=10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2008/08/28		<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2008/08/28		<10		mg/kg	
	RPD [L31273-01]	F2 (C10-C16 Hydrocarbons)	2008/08/28		NC		%	50
		F3 (C16-C34 Hydrocarbons)	2008/08/28		NC		%	50
		F4 (C34-C50 Hydrocarbons)	2008/08/28		NC		%	50
		O-TERPHENYL (sur.)	2008/08/28			74	%	50 - 130
2537221 MB7	MATRIX SPIKE	F2 (C10-C16 Hydrocarbons)	2008/08/28		84	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2008/08/28		84	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2008/08/28		88	%	50 - 130	
		O-TERPHENYL (sur.)	2008/08/28		75	%	50 - 130	
	SPIKE	F2 (C10-C16 Hydrocarbons)	2008/08/28		86	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2008/08/28		88	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2008/08/28		90	%	80 - 120	
		O-TERPHENYL (sur.)	2008/08/28		89	%	50 - 130	
	BLANK	F2 (C10-C16 Hydrocarbons)	2008/08/28		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2008/08/28		13, RDL=10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2008/08/28		<10		mg/kg	
		F2 (C10-C16 Hydrocarbons)	2008/08/28		3.9		%	50
	RPD	F3 (C16-C34 Hydrocarbons)	2008/08/28		4.1		%	50
		F4 (C34-C50 Hydrocarbons)	2008/08/28		NC		%	50
		O-TERPHENYL (sur.)	2008/08/28			79	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/08/28		88	%	50 - 130	
2537224 MB7	MATRIX SPIKE	F3 (C16-C34 Hydrocarbons)	2008/08/28		90	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2008/08/28		92	%	50 - 130	
		O-TERPHENYL (sur.)	2008/08/28		87	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2008/08/28		93	%	80 - 120	
	SPIKE	F3 (C16-C34 Hydrocarbons)	2008/08/28		95	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2008/08/28		92	%	80 - 120	
		O-TERPHENYL (sur.)	2008/08/28		92	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2008/08/28		<10		mg/kg	
	BLANK	F3 (C16-C34 Hydrocarbons)	2008/08/28		<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2008/08/28		<10		mg/kg	
		F2 (C10-C16 Hydrocarbons)	2008/08/28		NC		%	50
		F3 (C16-C34 Hydrocarbons)	2008/08/28		NC		%	50
	RPD	F4 (C34-C50 Hydrocarbons)	2008/08/28		NC		%	50
		O-TERPHENYL (sur.)	2008/08/28			58	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/08/28		96	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2008/08/28		93	%	50 - 130	
2537237 KW2	MATRIX SPIKE [L31316-01]	F4 (C34-C50 Hydrocarbons)	2008/08/28		82	%	50 - 130	
		O-TERPHENYL (sur.)	2008/08/28		60	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2008/08/28		108	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2008/08/28		97	%	80 - 120	
	SPIKE	F4 (C34-C50 Hydrocarbons)	2008/08/28		84	%	80 - 120	



E. GRUBEN'S TRANSPORT
 Attention: DAVID WELLS
 Client Project #: JOHNSON POINT
 P.O. #:
 Site Reference: JOHNSON POINT, BANKS ISLAND, NT

Quality Assurance Report (Continued)

Maxxam Job Number: EA844108

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2537237 KW2	BLANK	O-TERPHENYL (sur.)	2008/08/28		97	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/08/28	12, RDL=10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2008/08/28	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2008/08/28	<10		mg/kg	
	RPD [L31315-01]	F2 (C10-C16 Hydrocarbons)	2008/08/28	14.3		%	50
		F3 (C16-C34 Hydrocarbons)	2008/08/28	28.6		%	50
		F4 (C34-C50 Hydrocarbons)	2008/08/28	NC		%	50
2537343 CMF	MATRIX SPIKE [L31278-01]	4-BROMOFLUOROBENZENE (sur.)	2008/08/29		90	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/08/29		97	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/08/29		93	%	60 - 140
		D8-TOLUENE (sur.)	2008/08/29		95	%	60 - 140
		Benzene	2008/08/29		90	%	60 - 140
		Toluene	2008/08/29		NC	%	60 - 140
		Ethylbenzene	2008/08/29		NC	%	60 - 140
		m & p-Xylene	2008/08/29		NC	%	60 - 140
		o-Xylene	2008/08/29		NC	%	60 - 140
		(C6-C10)	2008/08/29		NC	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/08/28		89	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/08/28		94	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/08/28		90	%	60 - 140
		D8-TOLUENE (sur.)	2008/08/28		96	%	60 - 140
		Benzene	2008/08/28		88	%	60 - 140
		Toluene	2008/08/28		81	%	60 - 140
		Ethylbenzene	2008/08/28		91	%	60 - 140
		m & p-Xylene	2008/08/28		87	%	60 - 140
		o-Xylene	2008/08/28		86	%	60 - 140
		(C6-C10)	2008/08/28		92	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2008/08/28		87	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/08/28		96	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/08/28		87	%	60 - 140
		D8-TOLUENE (sur.)	2008/08/28		97	%	60 - 140
		Benzene	2008/08/28	<0.0050		mg/kg	
		Toluene	2008/08/28	<0.020		mg/kg	
		Ethylbenzene	2008/08/28	<0.010		mg/kg	
		Xylenes (Total)	2008/08/28	<0.040		mg/kg	
		m & p-Xylene	2008/08/28	<0.040		mg/kg	
		o-Xylene	2008/08/28	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2008/08/28	<12		mg/kg	
		(C6-C10)	2008/08/28	<12		mg/kg	
	RPD [L31273-01]	Benzene	2008/08/28	NC		%	50
		Toluene	2008/08/28	11.2		%	50
		Ethylbenzene	2008/08/28	NC		%	50
		Xylenes (Total)	2008/08/28	16.3		%	50
		m & p-Xylene	2008/08/28	17.7		%	50
		o-Xylene	2008/08/28	13.3		%	50
		F1 (C6-C10) - BTEX	2008/08/28	NC		%	50
		(C6-C10)	2008/08/28	NC		%	50
2537348 RI3	MATRIX SPIKE [L31316-01]	4-BROMOFLUOROBENZENE (sur.)	2008/08/28		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/08/28		107	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/08/28		105	%	60 - 140
		D8-TOLUENE (sur.)	2008/08/28		111	%	60 - 140
		Benzene	2008/08/28		99	%	60 - 140
		Toluene	2008/08/28		NC	%	60 - 140

Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187



E. GRUBEN'S TRANSPORT
 Attention: DAVID WELLS
 Client Project #: JOHNSON POINT
 P.O. #:
 Site Reference: JOHNSON POINT, BANKS ISLAND, NT

Quality Assurance Report (Continued)

Maxxam Job Number: EA844108

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
2537348 RI3	MATRIX SPIKE [L31316-01]	Ethylbenzene	2008/08/28		NC	%	60 - 140	
		m & p-Xylene	2008/08/28		NC	%	60 - 140	
		o-Xylene	2008/08/28		NC	%	60 - 140	
		(C6-C10)	2008/08/28		NC	%	60 - 140	
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/08/28		95	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2008/08/28		101	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2008/08/28		100	%	60 - 140	
		D8-TOLUENE (sur.)	2008/08/28		106	%	60 - 140	
		Benzene	2008/08/28		97	%	60 - 140	
		Toluene	2008/08/28		90	%	60 - 140	
		Ethylbenzene	2008/08/28		91	%	60 - 140	
		m & p-Xylene	2008/08/28		84	%	60 - 140	
		o-Xylene	2008/08/28		91	%	60 - 140	
		(C6-C10)	2008/08/28		113	%	80 - 120	
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2008/08/28		99	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2008/08/28		102	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2008/08/28		93	%	60 - 140	
		D8-TOLUENE (sur.)	2008/08/28		105	%	60 - 140	
		Benzene	2008/08/28	<0.0050			mg/kg	
		Toluene	2008/08/28	<0.020			mg/kg	
		Ethylbenzene	2008/08/28	<0.010			mg/kg	
		Xylenes (Total)	2008/08/28	<0.040			mg/kg	
		m & p-Xylene	2008/08/28	<0.040			mg/kg	
		o-Xylene	2008/08/28	<0.020			mg/kg	
	RPD [L31315-01]	F1 (C6-C10) - BTEX	2008/08/28		<12		mg/kg	
		(C6-C10)	2008/08/28		<12		mg/kg	
		Benzene	2008/08/29		NC		%	50
		Toluene	2008/08/29		66.8 (f)		%	50
		Ethylbenzene	2008/08/29		41.7		%	50
		Xylenes (Total)	2008/08/29		34.5		%	50
		m & p-Xylene	2008/08/29		36.1		%	50
		o-Xylene	2008/08/29		31.2		%	50
		F1 (C6-C10) - BTEX	2008/08/29		17.1		%	50
(C6-C10)		2008/08/29		18.3		%	50	
2537501 RI3		MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/08/28		94	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2008/08/28		104	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2008/08/28		101	%	60 - 140
	D8-TOLUENE (sur.)		2008/08/28		106	%	60 - 140	
	SPIKE	Benzene	2008/08/28		99	%	60 - 140	
		Toluene	2008/08/28		95	%	60 - 140	
		Ethylbenzene	2008/08/28		97	%	60 - 140	
		m & p-Xylene	2008/08/28		88	%	60 - 140	
		o-Xylene	2008/08/28		95	%	60 - 140	
		(C6-C10)	2008/08/28		94	%	60 - 140	
		4-BROMOFLUOROBENZENE (sur.)	2008/08/28		97	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2008/08/28		106	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2008/08/28		102	%	60 - 140	
		D8-TOLUENE (sur.)	2008/08/28		107	%	60 - 140	
		Benzene	2008/08/28		102	%	60 - 140	
		Toluene	2008/08/28		94	%	60 - 140	
		Ethylbenzene	2008/08/28		96	%	60 - 140	
		m & p-Xylene	2008/08/28		87	%	60 - 140	
		o-Xylene	2008/08/28		94	%	60 - 140	
(C6-C10)	2008/08/28		103	%	80 - 120			



E. GRUBEN'S TRANSPORT
 Attention: DAVID WELLS
 Client Project #: JOHNSON POINT
 P.O. #:
 Site Reference: JOHNSON POINT, BANKS ISLAND, NT

Quality Assurance Report (Continued)

Maxxam Job Number: EA844108

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2537501 RI3	BLANK	4-BROMOFLUOROBENZENE (sur.)	2008/08/28		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/08/28		104	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/08/28		94	%	60 - 140
		D8-TOLUENE (sur.)	2008/08/28		105	%	60 - 140
		Benzene	2008/08/28	<0.0050		mg/kg	
		Toluene	2008/08/28	<0.020		mg/kg	
		Ethylbenzene	2008/08/28	<0.010		mg/kg	
		Xylenes (Total)	2008/08/28	<0.040		mg/kg	
		m & p-Xylene	2008/08/28	<0.040		mg/kg	
		o-Xylene	2008/08/28	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2008/08/28	<12		mg/kg	
		(C6-C10)	2008/08/28	<12		mg/kg	
	RPD	Benzene	2008/08/28	NC		%	50
		Toluene	2008/08/28	NC		%	50
		Ethylbenzene	2008/08/28	NC		%	50
		Xylenes (Total)	2008/08/28	NC		%	50
		m & p-Xylene	2008/08/28	NC		%	50
		o-Xylene	2008/08/28	NC		%	50
		F1 (C6-C10) - BTEX	2008/08/28	NC		%	50
		(C6-C10)	2008/08/28	NC		%	50
2537546 PY	BLANK	Moisture	2008/08/28	<0.3		%	
	RPD [L31273-01]	Moisture	2008/08/28	2.1		%	20
2537985 PY	BLANK	Moisture	2008/08/28	<0.3		%	
	RPD [L31315-01]	Moisture	2008/08/28	5.8		%	20
2538004 RT1	BLANK	Moisture	2008/08/28	<0.3		%	
	RPD	Moisture	2008/08/28	12.5		%	20

NC = Non-calculable

RPD = Relative Percent Difference

(1) Please note that the recovery of some compounds are outside control limits however the overall quality control for this analysis meets our acceptability criteria.

Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187



Your Project #: JOHNSON POINT
 Site Location: JOHNSON POINT, BANKS ISLAND, NT
 Your C.O.C. #: 116334, 116335, 116336, 116338,
 116337, 116339

Attention: DAVID WELLS
 E. GRUBEN'S TRANSPORT
 PO BOX 177
 TUKTOYAKTUK, NT
 CANADA X0E 1C0

Report Date: 2008/09/05

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A845092

Received: 2008/09/02, 9:25

Sample Matrix: Soil
 # Samples Received: 37

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	32	2008/09/02	2008/09/04	EENVSOP-00005 EENVSOP-00002	EPA 8260C / CCME
BTEX/F1 by HS GC/MS (MeOH extract)	5	2008/09/02	2008/09/05	EENVSOP-00005 EENVSOP-00002	EPA 8260C / CCME
CCME Hydrocarbons (F2-F4 in soil)	37	2008/09/02	2008/09/03	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	37	N/A	2008/09/03	EENVSOP-00139	Carter SSMA 51.2

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SHELYCE MORRISON, Project Manager
 Email: shelyce.morrison@maxxamanalytics.com
 Phone# (780) 577-7115 Ext:7115

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

Total cover pages: 1

Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38851	L38858	L38859	L38860		
Sampling Date							
COC Number		116334	116335	116335	116335		
	Units	80,190	40,120	30,160	30,130	RDL	QC Batch

Physical Properties							
Moisture	%	12	20	12	16	0.3	2547675
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	330	650	8800	210	10	2546980
F3 (C16-C34 Hydrocarbons)	mg/kg	220	250	660	240	10	2546980
F4 (C34-C50 Hydrocarbons)	mg/kg	12	30	11	16	10	2546980
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2546980
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2547287
Toluene	mg/kg	0.61	<0.020	<0.020	<0.020	0.020	2547287
Ethylbenzene	mg/kg	0.94	<0.010	0.33	<0.010	0.010	2547287
Xylenes (Total)	mg/kg	13	0.10	3.5	<0.040	0.040	2547287
m & p-Xylene	mg/kg	9.1	<0.040	0.95	<0.040	0.040	2547287
o-Xylene	mg/kg	4.0	0.10	2.6	<0.020	0.020	2547287
F1 (C6-C10) - BTEX	mg/kg	120	68	200	<12	12	2547287
(C6-C10)	mg/kg	140	68	210	<12	12	2547287
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	86	104	87	104		2547287
D10-ETHYLBENZENE (sur.)	%	105	99	100	99		2547287
D4-1,2-DICHLOROETHANE (sur.)	%	100	100	104	100		2547287
D8-TOLUENE (sur.)	%	102	96	95	101		2547287
O-TERPHENYL (sur.)	%	88	82	93	97		2546980
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38861	L38862		L38863		
Sampling Date							
COC Number		116335	116335		116336		
	Units	30,100	50,140	RDL	50,130	RDL	QC Batch

Physical Properties							
Moisture	%	42	8.0	0.3	17	0.3	2547675
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	800	35	10	510	10	2546980
F3 (C16-C34 Hydrocarbons)	mg/kg	230	44	10	210	10	2546980
F4 (C34-C50 Hydrocarbons)	mg/kg	16	<10	10	51	10	2546980
Reached Baseline at C50	mg/kg	Yes	Yes		Yes		2546980
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	0.0050	<0.0050	0.0050	2547287
Toluene	mg/kg	<0.020	<0.020	0.020	<0.020	0.020	2547287
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	0.44	0.010	2547287
Xylenes (Total)	mg/kg	0.42	<0.040	0.040	27	0.040	2547287
m & p-Xylene	mg/kg	0.14	<0.040	0.040	10	0.040	2547287
o-Xylene	mg/kg	0.28	<0.020	0.020	16	0.20	2547287
F1 (C6-C10) - BTEX	mg/kg	85	<12	12	660	12	2547287
(C6-C10)	mg/kg	85	<12	12	690	12	2547287
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	103	98		96		2547287
D10-ETHYLBENZENE (sur.)	%	107	105		112		2547287
D4-1,2-DICHLOROETHANE (sur.)	%	100	99		99		2547287
D8-TOLUENE (sur.)	%	96	102		100		2547287
O-TERPHENYL (sur.)	%	98	95		98		2546980
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38864	L38865	L38866		
Sampling Date						
COC Number		116336	116336	116336		
	Units	20,110	15,95	15,85	RDL	QC Batch

Physical Properties						
Moisture	%	21	14	28	0.3	2547675
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	30	18	14	10	2546980
F3 (C16-C34 Hydrocarbons)	mg/kg	180	78	140	10	2546980
F4 (C34-C50 Hydrocarbons)	mg/kg	65	18	39	10	2546980
Reached Baseline at C50	mg/kg	Yes	Yes	Yes		2546980
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	2547287
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	2547287
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	2547287
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	2547287
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	2547287
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	2547287
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	2547287
(C6-C10)	mg/kg	<12	<12	<12	12	2547287
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	101	102	99		2547287
D10-ETHYLBENZENE (sur.)	%	107	102	103		2547287
D4-1,2-DICHLOROETHANE (sur.)	%	99	99	100		2547287
D8-TOLUENE (sur.)	%	100	102	96		2547287
O-TERPHENYL (sur.)	%	100	99	98		2546980
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38867	L38868		L38869		
Sampling Date							
COC Number		116336	116336		116336		
	Units	25,85	20,70	RDL	40,170	RDL	QC Batch

Physical Properties							
Moisture	%	22	9.6	0.3	10	0.3	2547675
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	2100	810	10	1800	10	2546980
F3 (C16-C34 Hydrocarbons)	mg/kg	290	100	10	370	10	2546980
F4 (C34-C50 Hydrocarbons)	mg/kg	33	10	10	23	10	2546980
Reached Baseline at C50	mg/kg	Yes	Yes		Yes		2546980
Volatiles							
Benzene	mg/kg	<0.0050	0.10	0.0050	<0.0050	0.0050	2547287
Toluene	mg/kg	0.51	2.1	0.020	<0.020	0.020	2547287
Ethylbenzene	mg/kg	<0.010	1.5	0.010	<0.010	0.010	2547287
Xylenes (Total)	mg/kg	76	49	0.40	<0.040	0.040	2547287
m & p-Xylene	mg/kg	39	36	0.40	<0.040	0.040	2547287
o-Xylene	mg/kg	37	14	0.20	<0.020	0.020	2547287
F1 (C6-C10) - BTEX	mg/kg	2100	930	12	25	12	2547287
(C6-C10)	mg/kg	2200	990	12	25	12	2547287
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	101	88		97		2547287
D10-ETHYLBENZENE (sur.)	%	111	109		104		2547287
D4-1,2-DICHLOROETHANE (sur.)	%	99	104		98		2547287
D8-TOLUENE (sur.)	%	103	101		102		2547287
O-TERPHENYL (sur.)	%	97	98		86		2546980
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38870		L38871		
Sampling Date						
COC Number		116336		116336		
	Units	40,150	RDL	65,135	RDL	QC Batch

Physical Properties						
Moisture	%	18	0.3	7.5	0.3	2547675
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	780	10	1900	10	2546980
F3 (C16-C34 Hydrocarbons)	mg/kg	160	10	210	10	2546980
F4 (C34-C50 Hydrocarbons)	mg/kg	20	10	<10	10	2546980
Reached Baseline at C50	mg/kg	Yes		Yes		2546980
Volatiles						
Benzene	mg/kg	0.31	0.0050	0.14	0.0050	2547287
Toluene	mg/kg	<0.020	0.020	0.21	0.020	2547287
Ethylbenzene	mg/kg	0.73	0.010	13	0.10	2547287
Xylenes (Total)	mg/kg	12	0.040	68	0.40	2547287
m & p-Xylene	mg/kg	4.2	0.040	41	0.40	2547287
o-Xylene	mg/kg	8.1	0.020	27	0.20	2547287
F1 (C6-C10) - BTEX	mg/kg	410	12	1600	12	2547287
(C6-C10)	mg/kg	420	12	1700	12	2547287
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	90		105		2547287
D10-ETHYLBENZENE (sur.)	%	108		106		2547287
D4-1,2-DICHLOROETHANE (sur.)	%	99		103		2547287
D8-TOLUENE (sur.)	%	101		100		2547287
O-TERPHENYL (sur.)	%	96		87		2546980
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38872		L38873	L38874		
Sampling Date							
COC Number		116338		116338	116338		
	Units	60,60	RDL	50,40	85,5	RDL	QC Batch

Physical Properties							
Moisture	%	9.9	0.3	5.8	5.2	0.3	2547675
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	1500	10	280	570	10	2546980
F3 (C16-C34 Hydrocarbons)	mg/kg	190	10	120	140	10	2546980
F4 (C34-C50 Hydrocarbons)	mg/kg	10	10	11	16	10	2546980
Reached Baseline at C50	mg/kg	Yes		Yes	Yes		2546980
Volatiles							
Benzene	mg/kg	0.14	0.0050	<0.0050	<0.0050	0.0050	2547287
Toluene	mg/kg	9.0	0.020	<0.020	<0.020	0.020	2547287
Ethylbenzene	mg/kg	3.7	0.010	0.050	<0.010	0.010	2547287
Xylenes (Total)	mg/kg	32	0.40	3.3	1.9	0.040	2547287
m & p-Xylene	mg/kg	23	0.40	2.0	0.94	0.040	2547287
o-Xylene	mg/kg	9.0	0.020	1.3	0.97	0.020	2547287
F1 (C6-C10) - BTEX	mg/kg	310	12	180	440	12	2547287
(C6-C10)	mg/kg	350	12	180	440	12	2547287
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	90		105	100		2547287
D10-ETHYLBENZENE (sur.)	%	106		107	98		2547287
D4-1,2-DICHLOROETHANE (sur.)	%	101		100	100		2547287
D8-TOLUENE (sur.)	%	103		96	100		2547287
O-TERPHENYL (sur.)	%	86		92	88		2546980
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38875		L38876		
Sampling Date						
COC Number		116338		116338		
	Units	95,5	RDL	90,10	RDL	QC Batch
Physical Properties						
Moisture	%	6.9	0.3	6.1	0.3	2547675
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1200	10	790	10	2546980
F3 (C16-C34 Hydrocarbons)	mg/kg	160	10	150	10	2546980
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2546980
Reached Baseline at C50	mg/kg	Yes		Yes		2546980
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	2547287
Toluene	mg/kg	17	0.20	0.30	0.020	2547287
Ethylbenzene	mg/kg	20	0.10	<0.010	0.010	2547287
Xylenes (Total)	mg/kg	130	0.40	28	0.40	2547287
m & p-Xylene	mg/kg	97	0.40	18	0.40	2547287
o-Xylene	mg/kg	38	0.20	10	0.20	2547287
F1 (C6-C10) - BTEX	mg/kg	1900	12	1500	12	2547287
(C6-C10)	mg/kg	2100	12	1500	12	2547287
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	102		98		2547287
D10-ETHYLBENZENE (sur.)	%	105		107		2547287
D4-1,2-DICHLOROETHANE (sur.)	%	99		100		2547287
D8-TOLUENE (sur.)	%	106		102		2547287
O-TERPHENYL (sur.)	%	85		87		2546980
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38877		L38878		
Sampling Date						
COC Number		116338		116338		
	Units	90,30	RDL	70,70	RDL	QC Batch
Physical Properties						
Moisture	%	7.5	0.3	9.9	0.3	2547284
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	46	10	820	10	2546963
F3 (C16-C34 Hydrocarbons)	mg/kg	110	10	130	10	2546963
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2546963
Reached Baseline at C50	mg/kg	Yes		Yes		2546963
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	0.24	0.0050	2547006
Toluene	mg/kg	<0.020	0.020	16	0.20	2547006
Ethylbenzene	mg/kg	<0.010	0.010	8.0	0.010	2547006
Xylenes (Total)	mg/kg	<0.040	0.040	60	0.40	2547006
m & p-Xylene	mg/kg	<0.040	0.040	43	0.40	2547006
o-Xylene	mg/kg	<0.020	0.020	17	0.20	2547006
F1 (C6-C10) - BTEX	mg/kg	<12	12	550	12	2547006
(C6-C10)	mg/kg	<12	12	640	12	2547006
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99		97		2547006
D10-ETHYLBENZENE (sur.)	%	94		100		2547006
D4-1,2-DICHLOROETHANE (sur.)	%	99		104		2547006
D8-TOLUENE (sur.)	%	102		99		2547006
O-TERPHENYL (sur.)	%	89		86		2546963
RDL = Reportable Detection Limit						



Maxxam Job #: A845092
 Report Date: 2008/09/05

E. GRUBEN'S TRANSPORT
 Client Project #: JOHNSON POINT
 Site Reference: JOHNSON POINT, BANKS ISLAND, NT
 Sampler Initials: DW

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38879	L38881		L38882		
Sampling Date							
COC Number		116338	116338		116338		
	Units	70,30	70,20	RDL	90,70	RDL	QC Batch

Physical Properties							
Moisture	%	6.7	9.0	0.3	11	0.3	2547284
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	1100	35	10	910	10	2546963
F3 (C16-C34 Hydrocarbons)	mg/kg	190	80	10	150	10	2546963
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	<10	10	2546963
Reached Baseline at C50	mg/kg	Yes	Yes		Yes		2546963
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	0.0050	<0.0050	0.0050	2547006
Toluene	mg/kg	<0.020	0.040	0.020	2.1	0.020	2547006
Ethylbenzene	mg/kg	0.23	0.10	0.010	2.2	0.010	2547006
Xylenes (Total)	mg/kg	21	1.8	0.040	54	0.40	2547006
m & p-Xylene	mg/kg	14	1.1	0.040	33	0.40	2547006
o-Xylene	mg/kg	7.6	0.67	0.020	20	0.20	2547006
F1 (C6-C10) - BTEX	mg/kg	790	<12	12	1400	12	2547006
(C6-C10)	mg/kg	810	<12	12	1500	12	2547006
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	89	98		95		2547006
D10-ETHYLBENZENE (sur.)	%	103	95		105		2547006
D4-1,2-DICHLOROETHANE (sur.)	%	104	101		102		2547006
D8-TOLUENE (sur.)	%	99	102		100		2547006
O-TERPHENYL (sur.)	%	84	80		79		2546963
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38883		L38884		
Sampling Date						
COC Number		116338		116337		
	Units	90,50	RDL	70,120	RDL	QC Batch
Physical Properties						
Moisture	%	4.7	0.3	8.3	0.3	2547284
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1200	10	1300	10	2546963
F3 (C16-C34 Hydrocarbons)	mg/kg	220	10	610	10	2546963
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2546963
Reached Baseline at C50	mg/kg	Yes		Yes		2546963
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	2547006
Toluene	mg/kg	<0.020	0.020	8.3	0.020	2547006
Ethylbenzene	mg/kg	<0.010	0.010	15	0.10	2547006
Xylenes (Total)	mg/kg	12	0.040	93	0.40	2547006
m & p-Xylene	mg/kg	6.4	0.040	65	0.40	2547006
o-Xylene	mg/kg	5.4	0.020	28	0.20	2547006
F1 (C6-C10) - BTEX	mg/kg	650	12	1100	12	2547006
(C6-C10)	mg/kg	660	12	1200	12	2547006
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96		92		2547006
D10-ETHYLBENZENE (sur.)	%	105		103		2547006
D4-1,2-DICHLOROETHANE (sur.)	%	99		100		2547006
D8-TOLUENE (sur.)	%	106		101		2547006
O-TERPHENYL (sur.)	%	83		82		2546963
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38885	L38886	L38887		
Sampling Date						
COC Number		116337	116337	116337		
	Units	80,110	50,110	70,50	RDL	QC Batch

Physical Properties						
Moisture	%	7.2	12	13	0.3	2547284
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	45	74	870	10	2546963
F3 (C16-C34 Hydrocarbons)	mg/kg	50	120	130	10	2546963
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	2546963
Reached Baseline at C50	mg/kg	Yes	Yes	Yes		2546963
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	2547006
Toluene	mg/kg	<0.020	<0.020	1.5	0.020	2547006
Ethylbenzene	mg/kg	0.034	<0.010	0.89	0.010	2547006
Xylenes (Total)	mg/kg	0.25	<0.040	22	0.040	2547006
m & p-Xylene	mg/kg	0.17	<0.040	13	0.040	2547006
o-Xylene	mg/kg	0.078	<0.020	9.1	0.020	2547006
F1 (C6-C10) - BTEX	mg/kg	<12	<12	410	12	2547006
(C6-C10)	mg/kg	<12	<12	440	12	2547006
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96	98	92		2547006
D10-ETHYLBENZENE (sur.)	%	103	106	103		2547006
D4-1,2-DICHLOROETHANE (sur.)	%	100	101	100		2547006
D8-TOLUENE (sur.)	%	102	98	99		2547006
O-TERPHENYL (sur.)	%	82	83	83		2546963
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38888		L38889		
Sampling Date						
COC Number		116337		116339		
	Units	80,40	RDL	105,75	RDL	QC Batch

Physical Properties						
Moisture	%	6.3	0.3	7.3	0.3	2547284
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	2200	10	650	10	2546963
F3 (C16-C34 Hydrocarbons)	mg/kg	330	10	150	10	2546963
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2546963
Reached Baseline at C50	mg/kg	Yes		Yes		2546963
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	2547006
Toluene	mg/kg	0.97	0.020	0.39	0.020	2547006
Ethylbenzene	mg/kg	4.6	0.010	0.17	0.010	2547006
Xylenes (Total)	mg/kg	87	0.40	25	0.040	2547006
m & p-Xylene	mg/kg	59	0.40	11	0.040	2547006
o-Xylene	mg/kg	28	0.20	14	0.20	2547006
F1 (C6-C10) - BTEX	mg/kg	1300	12	530	12	2547006
(C6-C10)	mg/kg	1400	12	560	12	2547006
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	93		98		2547006
D10-ETHYLBENZENE (sur.)	%	106		104		2547006
D4-1,2-DICHLOROETHANE (sur.)	%	102		103		2547006
D8-TOLUENE (sur.)	%	99		98		2547006
O-TERPHENYL (sur.)	%	83		84		2546963
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38890	L38891	L38892		
Sampling Date						
COC Number		116339	116339	116339		
	Units	110,90	110,100	20,140	RDL	QC Batch

Physical Properties						
Moisture	%	16	12	15	0.3	2547284
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	580	120	51	10	2546963
F3 (C16-C34 Hydrocarbons)	mg/kg	120	39	39	10	2546963
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	2546963
Reached Baseline at C50	mg/kg	Yes	Yes	Yes		2546963
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	2547006
Toluene	mg/kg	2.3	<0.020	<0.020	0.020	2547006
Ethylbenzene	mg/kg	3.8	0.38	<0.010	0.010	2547006
Xylenes (Total)	mg/kg	26	2.0	<0.040	0.040	2547006
m & p-Xylene	mg/kg	19	1.5	<0.040	0.040	2547006
o-Xylene	mg/kg	7.4	0.53	<0.020	0.020	2547006
F1 (C6-C10) - BTEX	mg/kg	780	92	<12	12	2547006
(C6-C10)	mg/kg	820	94	<12	12	2547006
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	86	99	98		2547006
D10-ETHYLBENZENE (sur.)	%	103	105	103		2547006
D4-1,2-DICHLOROETHANE (sur.)	%	97	97	99		2547006
D8-TOLUENE (sur.)	%	104	98	98		2547006
O-TERPHENYL (sur.)	%	81	81	82		2546963
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L38893	L38894		
Sampling Date					
COC Number		116339	116339		
	Units	100,20	95,75	RDL	QC Batch

Physical Properties					
Moisture	%	6.1	12	0.3	2547284
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	340	1000	10	2546985
F3 (C16-C34 Hydrocarbons)	mg/kg	140	120	10	2546985
F4 (C34-C50 Hydrocarbons)	mg/kg	88	<10	10	2546985
Reached Baseline at C50	mg/kg	Yes	Yes		2546985
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	2547006
Toluene	mg/kg	<0.020	0.71	0.020	2547006
Ethylbenzene	mg/kg	<0.010	0.50	0.010	2547006
Xylenes (Total)	mg/kg	0.23	19	0.040	2547006
m & p-Xylene	mg/kg	0.12	11	0.040	2547006
o-Xylene	mg/kg	0.11	7.3	0.020	2547006
F1 (C6-C10) - BTEX	mg/kg	270	650	12	2547006
(C6-C10)	mg/kg	270	670	12	2547006
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	89	86		2547006
D10-ETHYLBENZENE (sur.)	%	104	107		2547006
D4-1,2-DICHLOROETHANE (sur.)	%	102	98		2547006
D8-TOLUENE (sur.)	%	103	109		2547006
O-TERPHENYL (sur.)	%	68	64		2546985
RDL = Reportable Detection Limit					

AT1 BTEX AND F1-F4 IN SOIL (SOIL) Comments

Sample L38863-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.
Sample L38867-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.
Sample L38868-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.
Sample L38871-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.
Sample L38872-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.
Sample L38875-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.
Sample L38876-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.
Sample L38878-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.
Sample L38882-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.
Sample L38884-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.
Sample L38888-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.
Sample L38889-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raised due to sample dilution.

Results relate only to the items tested.



E. GRUBEN'S TRANSPORT
 Attention: DAVID WELLS
 Client Project #: JOHNSON POINT
 P.O. #:
 Site Reference: JOHNSON POINT, BANKS ISLAND, NT

Quality Assurance Report
 Maxxam Job Number: EA845092

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2546963 KW2	MATRIX SPIKE	O-TERPHENYL (sur.)	2008/09/03		59	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/03		93	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2008/09/03		NC	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2008/09/03		NC	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2008/09/03		56	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/03		107	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2008/09/03		94	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2008/09/03		81	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2008/09/03		70	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/03		<10		mg/kg
		F3 (C16-C34 Hydrocarbons)	2008/09/03		14, RDL=10		mg/kg
		F4 (C34-C50 Hydrocarbons)	2008/09/03		<10		mg/kg
	RPD	F2 (C10-C16 Hydrocarbons)	2008/09/03		17.6	%	50
		F3 (C16-C34 Hydrocarbons)	2008/09/03		3.4	%	50
		F4 (C34-C50 Hydrocarbons)	2008/09/03		2.3	%	50
2546980 KW2	MATRIX SPIKE [L38858-01]	O-TERPHENYL (sur.)	2008/09/03		58	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/03		101	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2008/09/03		99	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2008/09/03		113	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2008/09/03		66	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/03		105	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2008/09/03		96	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2008/09/03		84	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2008/09/03		102	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/03		<10		mg/kg
		F3 (C16-C34 Hydrocarbons)	2008/09/03		<10		mg/kg
		F4 (C34-C50 Hydrocarbons)	2008/09/03		<10		mg/kg
	RPD [L38851-01]	F2 (C10-C16 Hydrocarbons)	2008/09/03		47.1	%	50
		F3 (C16-C34 Hydrocarbons)	2008/09/03		45.2	%	50
		F4 (C34-C50 Hydrocarbons)	2008/09/03		NC	%	50
2546985 LC8	MATRIX SPIKE	O-TERPHENYL (sur.)	2008/09/03		77	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/03		86	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2008/09/03		80	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2008/09/03		60	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2008/09/03		78	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/03		97	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2008/09/03		91	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2008/09/03		111	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2008/09/03		87	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/03		<10		mg/kg
		F3 (C16-C34 Hydrocarbons)	2008/09/03		<10		mg/kg
		F4 (C34-C50 Hydrocarbons)	2008/09/03		<10		mg/kg
	RPD	F2 (C10-C16 Hydrocarbons)	2008/09/03		NC	%	50
		F3 (C16-C34 Hydrocarbons)	2008/09/03		NC	%	50
		F4 (C34-C50 Hydrocarbons)	2008/09/03		NC	%	50
2547006 DR3	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/09/04		101	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/09/04		98	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/04		110	%	60 - 140
		D8-TOLUENE (sur.)	2008/09/04		100	%	60 - 140
		Benzene	2008/09/04		90	%	60 - 140
		Toluene	2008/09/04		77	%	60 - 140
		Ethylbenzene	2008/09/04		84	%	60 - 140
		m & p-Xylene	2008/09/04		81	%	60 - 140
		o-Xylene	2008/09/04		80	%	60 - 140



E. GRUBEN'S TRANSPORT
 Attention: DAVID WELLS
 Client Project #: JOHNSON POINT
 P.O. #:
 Site Reference: JOHNSON POINT, BANKS ISLAND, NT

Quality Assurance Report (Continued)

Maxxam Job Number: EA845092

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
2547006 DR3	MATRIX SPIKE	(C6-C10)	2008/09/04		99	%	60 - 140		
		4-BROMOFLUOROBENZENE (sur.)	2008/09/04		97	%	60 - 140		
		D10-ETHYLBENZENE (sur.)	2008/09/04		97	%	30 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/04		102	%	60 - 140		
		D8-TOLUENE (sur.)	2008/09/04		100	%	60 - 140		
		Benzene	2008/09/04		87	%	60 - 140		
		Toluene	2008/09/04		78	%	60 - 140		
		Ethylbenzene	2008/09/04		87	%	60 - 140		
		m & p-Xylene	2008/09/04		84	%	60 - 140		
		o-Xylene	2008/09/04		83	%	60 - 140		
		(C6-C10)	2008/09/04		103	%	80 - 120		
		BLANK	4-BROMOFLUOROBENZENE (sur.)	2008/09/04		99	%	60 - 140	
			D10-ETHYLBENZENE (sur.)	2008/09/04		98	%	30 - 130	
			D4-1,2-DICHLOROETHANE (sur.)	2008/09/04		99	%	60 - 140	
	D8-TOLUENE (sur.)		2008/09/04		99	%	60 - 140		
	Benzene		2008/09/04	<0.0050			mg/kg		
	Toluene		2008/09/04	<0.020			mg/kg		
	Ethylbenzene		2008/09/04	<0.010			mg/kg		
	Xylenes (Total)		2008/09/04	<0.040			mg/kg		
	m & p-Xylene		2008/09/04	<0.040			mg/kg		
	o-Xylene		2008/09/04	<0.020			mg/kg		
	F1 (C6-C10) - BTEX		2008/09/04	<12			mg/kg		
	(C6-C10)		2008/09/04	<12			mg/kg		
	RPD		Benzene	2008/09/04	NC			%	50
			Toluene	2008/09/04	NC			%	50
			Ethylbenzene	2008/09/04	NC			%	50
			Xylenes (Total)	2008/09/04	NC			%	50
		m & p-Xylene	2008/09/04	NC			%	50	
		o-Xylene	2008/09/04	NC			%	50	
		F1 (C6-C10) - BTEX	2008/09/04	NC			%	50	
(C6-C10)		2008/09/04	NC			%	50		
2547284 GG3		BLANK	Moisture	2008/09/03	<0.3		%		
		RPD [L38877-01]	Moisture	2008/09/03	4.1		%	20	
	2547287 DR3	MATRIX SPIKE [L38858-01]	4-BROMOFLUOROBENZENE (sur.)	2008/09/04		90	%	60 - 140	
D10-ETHYLBENZENE (sur.)			2008/09/04		109	%	30 - 130		
D4-1,2-DICHLOROETHANE (sur.)			2008/09/04		104	%	60 - 140		
D8-TOLUENE (sur.)			2008/09/04		100	%	60 - 140		
Benzene			2008/09/04		98	%	60 - 140		
Toluene			2008/09/04		96	%	60 - 140		
Ethylbenzene			2008/09/04		105	%	60 - 140		
m & p-Xylene			2008/09/04		102	%	60 - 140		
o-Xylene			2008/09/04		100	%	60 - 140		
(C6-C10)			2008/09/04		72	%	60 - 140		
SPIKE			4-BROMOFLUOROBENZENE (sur.)	2008/09/04		97	%	60 - 140	
			D10-ETHYLBENZENE (sur.)	2008/09/04		99	%	30 - 130	
			D4-1,2-DICHLOROETHANE (sur.)	2008/09/04		106	%	60 - 140	
			D8-TOLUENE (sur.)	2008/09/04		99	%	60 - 140	
		Benzene	2008/09/04		97	%	60 - 140		
		Toluene	2008/09/04		93	%	60 - 140		
		Ethylbenzene	2008/09/04		96	%	60 - 140		
		m & p-Xylene	2008/09/04		92	%	60 - 140		
		o-Xylene	2008/09/04		92	%	60 - 140		
BLANK		(C6-C10)	2008/09/04		91	%	80 - 120		
		4-BROMOFLUOROBENZENE (sur.)	2008/09/04		99	%	60 - 140		



E. GRUBEN'S TRANSPORT
 Attention: DAVID WELLS
 Client Project #: JOHNSON POINT
 P.O. #:
 Site Reference: JOHNSON POINT, BANKS ISLAND, NT

Quality Assurance Report (Continued)

Maxxam Job Number: EA845092

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2547287 DR3	BLANK	D10-ETHYLBENZENE (sur.)	2008/09/04		98	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/04		101	%	60 - 140
		D8-TOLUENE (sur.)	2008/09/04		100	%	60 - 140
		Benzene	2008/09/04	<0.0050		mg/kg	
		Toluene	2008/09/04	<0.020		mg/kg	
		Ethylbenzene	2008/09/04	<0.010		mg/kg	
		Xylenes (Total)	2008/09/04	<0.040		mg/kg	
		m & p-Xylene	2008/09/04	<0.040		mg/kg	
		o-Xylene	2008/09/04	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2008/09/04	<12		mg/kg	
		(C6-C10)	2008/09/04	<12		mg/kg	
	RPD [L38851-01]	Benzene	2008/09/04	NC		%	50
		Toluene	2008/09/04	27.4		%	50
		Ethylbenzene	2008/09/04	4.4		%	50
		Xylenes (Total)	2008/09/04	4.0		%	50
		m & p-Xylene	2008/09/04	2.7		%	50
		o-Xylene	2008/09/04	6.8		%	50
		F1 (C6-C10) - BTEX	2008/09/04	2.0		%	50
		(C6-C10)	2008/09/04	1.5		%	50
2547675 GG3	BLANK	Moisture	2008/09/03	<0.3		%	
	RPD [L38851-01]	Moisture	2008/09/03	11.4		%	20

NC = Non-calculable
 RPD = Relative Percent Difference

Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53645	L53691	L53694	L53697		
Sampling Date		2008/09/04	2008/09/04	2008/09/04	2008/09/04		
COC Number		58158	58158	58158	58158		
	Units	110,220	110,210	100,200	110,180	RDL	QC Batch

Physical Properties							
Moisture	%	14	15	13	14	0.3	2571395
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	700	96	14	3700	10	2569893
F3 (C16-C34 Hydrocarbons)	mg/kg	220	140	18	1000	10	2569893
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	13	<10	34	10	2569893
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2569893
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2570036
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2570036
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.30	0.010	2570036
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	2.4	0.040	2570036
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	1.5	0.040	2570036
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.89	0.020	2570036
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	240	12	2570036
(C6-C10)	mg/kg	<12	<12	<12	240	12	2570036
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	98	102	102	102		2570036
D10-ETHYLBENZENE (sur.)	%	118	124	122	125		2570036
D4-1,2-DICHLOROETHANE (sur.)	%	93	93	91	93		2570036
D8-TOLUENE (sur.)	%	103	103	104	106		2570036
O-TERPHENYL (sur.)	%	94	92	85	93		2569893
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53698	L53699	L53701	L53706		
Sampling Date		2008/09/04	2008/09/04	2008/09/04	2008/09/04		
COC Number		58158	58158	58158	58158		
	Units	100,240	100,250	100,230	105,225	RDL	QC Batch

Physical Properties							
Moisture	%	13	16	15	14	0.3	2571395
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	16	20	170	380	10	2569893
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	17	28	92	10	2569893
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2569893
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2569893
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2570036
Toluene	mg/kg	<0.020	<0.020	0.13	<0.020	0.020	2570036
Ethylbenzene	mg/kg	<0.010	<0.010	0.36	<0.010	0.010	2570036
Xylenes (Total)	mg/kg	<0.040	<0.040	3.8	<0.040	0.040	2570036
m & p-Xylene	mg/kg	<0.040	<0.040	2.9	<0.040	0.040	2570036
o-Xylene	mg/kg	<0.020	<0.020	0.85	<0.020	0.020	2570036
F1 (C6-C10) - BTEX	mg/kg	<12	<12	200	<12	12	2570036
(C6-C10)	mg/kg	<12	<12	200	<12	12	2570036
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	106	103	105	103		2570036
D10-ETHYLBENZENE (sur.)	%	126	129	123	122		2570036
D4-1,2-DICHLOROETHANE (sur.)	%	92	94	98	93		2570036
D8-TOLUENE (sur.)	%	103	105	104	105		2570036
O-TERPHENYL (sur.)	%	92	91	91	95		2569893
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53707		L53708	L53709		
Sampling Date		2008/09/04		2008/09/04	2008/09/04		
COC Number		58158		58158	58158		
	Units	90,190	RDL	95,195	100,180	RDL	QC Batch

Physical Properties							
Moisture	%	13	0.3	13	12	0.3	2571395
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	34	10	29	660	10	2569893
F3 (C16-C34 Hydrocarbons)	mg/kg	37	10	13	250	10	2569893
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	15	10	2569893
Reached Baseline at C50	mg/kg	Yes		Yes	Yes		2569893
Volatiles							
Benzene	mg/kg	<0.0050	0.0050	<0.0050	<0.0050	0.0050	2570036
Toluene	mg/kg	4.6	0.20	<0.020	2.9	0.020	2570036
Ethylbenzene	mg/kg	7.9	0.10	<0.010	1.3	0.010	2570036
Xylenes (Total)	mg/kg	98	0.40	0.41	25	0.040	2570036
m & p-Xylene	mg/kg	66	0.40	0.28	18	0.040	2570036
o-Xylene	mg/kg	31	0.20	0.13	7.5	0.020	2570036
F1 (C6-C10) - BTEX	mg/kg	2000	12	12	440	12	2570036
(C6-C10)	mg/kg	2100	12	13	470	12	2570036
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	88		102	110		2570036
D10-ETHYLBENZENE (sur.)	%	127		119	125		2570036
D4-1,2-DICHLOROETHANE (sur.)	%	101		97	98		2570036
D8-TOLUENE (sur.)	%	96		102	103		2570036
O-TERPHENYL (sur.)	%	90		91	91		2569893
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53710	L53711	L53712	L53715		
Sampling Date		2008/09/04	2008/09/04	2008/09/04	2008/09/04		
COC Number		58158	58143	58143	58143		
	Units	90,180	85,195	135,155	115,155	RDL	QC Batch

Physical Properties							
Moisture	%	13	14	11	10	0.3	2571395
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	190	14	12	12	10	2569893
F3 (C16-C34 Hydrocarbons)	mg/kg	110	15	26	19	10	2569893
F4 (C34-C50 Hydrocarbons)	mg/kg	13	<10	14	<10	10	2569893
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2569893
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2570036
Toluene	mg/kg	0.20	<0.020	<0.020	<0.020	0.020	2570036
Ethylbenzene	mg/kg	0.77	<0.010	<0.010	<0.010	0.010	2570036
Xylenes (Total)	mg/kg	6.8	2.8	<0.040	<0.040	0.040	2570036
m & p-Xylene	mg/kg	4.0	2.1	<0.040	<0.040	0.040	2570036
o-Xylene	mg/kg	2.8	0.77	<0.020	<0.020	0.020	2570036
F1 (C6-C10) - BTEX	mg/kg	160	12	<12	<12	12	2570036
(C6-C10)	mg/kg	160	15	<12	<12	12	2570036
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	107	104	105	104		2570036
D10-ETHYLBENZENE (sur.)	%	125	118	118	117		2570036
D4-1,2-DICHLOROETHANE (sur.)	%	97	97	95	97		2570036
D8-TOLUENE (sur.)	%	106	104	103	103		2570036
O-TERPHENYL (sur.)	%	91	89	90	90		2569893
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53720	L53725	L53726	L53727		
Sampling Date		2008/09/04	2008/09/04	2008/09/04	2008/09/04		
COC Number		58143	58143	58143	58143		
	Units	105,165	85,175	75,205	60,190	RDL	QC Batch

Physical Properties							
Moisture	%	15	12	11	12	0.3	2571395
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	37	19	150	3500	10	2569893
F3 (C16-C34 Hydrocarbons)	mg/kg	68	61	22	330	10	2569893
F4 (C34-C50 Hydrocarbons)	mg/kg	33	19	<10	<10	10	2569893
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2569893
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.064	0.0050	2570036
Toluene	mg/kg	0.14	<0.020	10	0.096	0.020	2570036
Ethylbenzene	mg/kg	0.12	<0.010	2.0	1.5	0.010	2570036
Xylenes (Total)	mg/kg	0.75	0.13	45	13	0.040	2570036
m & p-Xylene	mg/kg	0.52	0.094	32	5.7	0.040	2570036
o-Xylene	mg/kg	0.23	0.040	13	7.0	0.020	2570036
F1 (C6-C10) - BTEX	mg/kg	<12	<12	710	340	12	2570036
(C6-C10)	mg/kg	<12	<12	760	350	12	2570036
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	104	102	110	110		2570036
D10-ETHYLBENZENE (sur.)	%	124	122	126	124		2570036
D4-1,2-DICHLOROETHANE (sur.)	%	93	92	100	97		2570036
D8-TOLUENE (sur.)	%	105	105	104	104		2570036
O-TERPHENYL (sur.)	%	89	99	90	90		2569893
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53728			L53729		
Sampling Date		2008/09/04			2008/09/04		
COC Number		58143			58143		
	Units	60,200	RDL	QC Batch	55,125	RDL	QC Batch

Physical Properties							
Moisture	%	16	0.3	2571395	13	0.3	2571320
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	89	10	2569893	250	10	2569896
F3 (C16-C34 Hydrocarbons)	mg/kg	34	10	2569893	91	10	2569896
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	2569893	11	10	2569896
Reached Baseline at C50	mg/kg	Yes		2569893	Yes		2569896
Volatiles							
Benzene	mg/kg	<0.0050	0.0050	2570036	0.25	0.0050	2570043
Toluene	mg/kg	<0.020	0.020	2570036	6.4	0.020	2570043
Ethylbenzene	mg/kg	<0.010	0.010	2570036	9.6	0.010	2570043
Xylenes (Total)	mg/kg	0.10	0.040	2570036	50	0.40	2570043
m & p-Xylene	mg/kg	<0.040	0.040	2570036	33	0.40	2570043
o-Xylene	mg/kg	0.10	0.020	2570036	17	0.20	2570043
F1 (C6-C10) - BTEX	mg/kg	<12	12	2570036	530	12	2570043
(C6-C10)	mg/kg	<12	12	2570036	600	12	2570043
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	105		2570036	87		2570043
D10-ETHYLBENZENE (sur.)	%	117		2570036	110		2570043
D4-1,2-DICHLOROETHANE (sur.)	%	88		2570036	96		2570043
D8-TOLUENE (sur.)	%	107		2570036	107		2570043
O-TERPHENYL (sur.)	%	88		2569893	85		2569896
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53730		L53731		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58143		58143		
	Units	60,140	RDL	60,100	RDL	QC Batch
Physical Properties						
Moisture	%	11	0.3	9.8	0.3	2571320
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1200	10	2300	10	2569896
F3 (C16-C34 Hydrocarbons)	mg/kg	230	10	280	10	2569896
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2569896
Reached Baseline at C50	mg/kg	Yes		Yes		2569896
Volatiles						
Benzene	mg/kg	1.7	0.0050	1.1	0.0050	2570043
Toluene	mg/kg	<0.020	0.020	48	2.0	2570043
Ethylbenzene	mg/kg	4.1	0.010	39	1.0	2570043
Xylenes (Total)	mg/kg	14	0.040	210	4.0	2570043
m & p-Xylene	mg/kg	8.3	0.040	150	4.0	2570043
o-Xylene	mg/kg	5.4	0.020	56	2.0	2570043
F1 (C6-C10) - BTEX	mg/kg	360	12	3500	12	2570043
(C6-C10)	mg/kg	380	12	3800	12	2570043
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	88		99		2570043
D10-ETHYLBENZENE (sur.)	%	107		108		2570043
D4-1,2-DICHLOROETHANE (sur.)	%	100		100		2570043
D8-TOLUENE (sur.)	%	105		111		2570043
O-TERPHENYL (sur.)	%	92		105		2569896
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53732		L53733	L53734		
Sampling Date		2008/09/04		2008/09/04	2008/09/04		
COC Number		58143		58144	58144		
	Units	65,95	RDL	35,165	30,150	RDL	QC Batch

Physical Properties							
Moisture	%	8.3	0.3	13	35	0.3	2571320
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	660	10	160	27	10	2569896
F3 (C16-C34 Hydrocarbons)	mg/kg	140	10	29	67	10	2569896
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	<10	10	2569896
Reached Baseline at C50	mg/kg	Yes		Yes	Yes		2569896
Volatiles							
Benzene	mg/kg	0.15	0.0050	<0.0050	<0.0050	0.0050	2570043
Toluene	mg/kg	17	0.20	0.11	<0.020	0.020	2570043
Ethylbenzene	mg/kg	8.9	0.010	0.10	<0.010	0.010	2570043
Xylenes (Total)	mg/kg	44	0.40	0.41	<0.040	0.040	2570043
m & p-Xylene	mg/kg	29	0.40	0.30	<0.040	0.040	2570043
o-Xylene	mg/kg	15	0.20	0.11	<0.020	0.020	2570043
F1 (C6-C10) - BTEX	mg/kg	600	12	<12	<12	12	2570043
(C6-C10)	mg/kg	670	12	<12	<12	12	2570043
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	88		91	92		2570043
D10-ETHYLBENZENE (sur.)	%	110		99	102		2570043
D4-1,2-DICHLOROETHANE (sur.)	%	96		92	90		2570043
D8-TOLUENE (sur.)	%	106		103	101		2570043
O-TERPHENYL (sur.)	%	97		91	98		2569896
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53735		L53736		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58144		58144		
	Units	35,145	RDL	40,140	RDL	QC Batch

Physical Properties						
Moisture	%	22	0.3	19	0.3	2571320
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1000	10	1100	10	2569896
F3 (C16-C34 Hydrocarbons)	mg/kg	140	10	260	10	2569896
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2569896
Reached Baseline at C50	mg/kg	Yes		Yes		2569896
Volatiles						
Benzene	mg/kg	9.0	0.0050	5.3	0.0050	2570043
Toluene	mg/kg	3.2	0.020	2.9	0.020	2570043
Ethylbenzene	mg/kg	21	0.10	7.9	0.010	2570043
Xylenes (Total)	mg/kg	68	0.40	22	0.040	2570043
m & p-Xylene	mg/kg	44	0.40	12	0.040	2570043
o-Xylene	mg/kg	25	0.20	10	0.020	2570043
F1 (C6-C10) - BTEX	mg/kg	1400	12	520	12	2570043
(C6-C10)	mg/kg	1500	12	560	12	2570043
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	104		89		2570043
D10-ETHYLBENZENE (sur.)	%	105		102		2570043
D4-1,2-DICHLOROETHANE (sur.)	%	93		97		2570043
D8-TOLUENE (sur.)	%	109		105		2570043
O-TERPHENYL (sur.)	%	94		100		2569896
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53737		L53738		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58144		58144		
	Units	130,150	RDL	35,135	RDL	QC Batch

Physical Properties						
Moisture	%	12	0.3	19	0.3	2571320
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	510	10	2300	10	2569896
F3 (C16-C34 Hydrocarbons)	mg/kg	130	10	260	10	2569896
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2569896
Reached Baseline at C50	mg/kg	Yes		Yes		2569896
Volatiles						
Benzene	mg/kg	0.021	0.0050	29	0.050	2570043
Toluene	mg/kg	48	0.20	9.6	0.020	2570043
Ethylbenzene	mg/kg	29	0.10	29	0.10	2570043
Xylenes (Total)	mg/kg	150	0.40	110	0.40	2570043
m & p-Xylene	mg/kg	110	0.40	72	0.40	2570043
o-Xylene	mg/kg	43	0.20	37	0.20	2570043
F1 (C6-C10) - BTEX	mg/kg	1000	12	1300	12	2570043
(C6-C10)	mg/kg	1300	12	1500	12	2570043
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	101		103		2570043
D10-ETHYLBENZENE (sur.)	%	110		105		2570043
D4-1,2-DICHLOROETHANE (sur.)	%	91		92		2570043
D8-TOLUENE (sur.)	%	111		109		2570043
O-TERPHENYL (sur.)	%	93		93		2569896
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53739	L53740		L53741		
Sampling Date		2008/09/04	2008/09/04		2008/09/04		
COC Number		58144	58144		58144		
	Units	35,115	40,100	RDL	30,90	RDL	QC Batch

Physical Properties							
Moisture	%	20	18	0.3	26	0.3	2571320
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	16	17	10	950	10	2569896
F3 (C16-C34 Hydrocarbons)	mg/kg	35	20	10	250	10	2569896
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	10	10	2569896
Reached Baseline at C50	mg/kg	Yes	Yes		Yes		2569896
Volatiles							
Benzene	mg/kg	<0.0050	0.025	0.0050	0.28	0.0050	2570043
Toluene	mg/kg	0.057	0.10	0.020	3.5	0.020	2570043
Ethylbenzene	mg/kg	0.033	0.61	0.010	7.2	0.010	2570043
Xylenes (Total)	mg/kg	0.45	1.5	0.040	65	0.40	2570043
m & p-Xylene	mg/kg	0.19	0.68	0.040	53	0.40	2570043
o-Xylene	mg/kg	0.26	0.86	0.020	12	0.020	2570043
F1 (C6-C10) - BTEX	mg/kg	20	24	12	460	12	2570043
(C6-C10)	mg/kg	21	26	12	540	12	2570043
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	93	90		86		2570043
D10-ETHYLBENZENE (sur.)	%	102	100		110		2570043
D4-1,2-DICHLOROETHANE (sur.)	%	91	92		92		2570043
D8-TOLUENE (sur.)	%	99	99		105		2570043
O-TERPHENYL (sur.)	%	93	84		90		2569896
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53742	L53743		L53744		
Sampling Date		2008/09/04	2008/09/04		2008/09/04		
COC Number		58144	58144		58144		
	Units	15,65	120,130	RDL	25,55	RDL	QC Batch

Physical Properties							
Moisture	%	6.2	9.9	0.3	8.9	0.3	2571320
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	210	34	10	400	10	2569896
F3 (C16-C34 Hydrocarbons)	mg/kg	86	27	10	90	10	2569896
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	<10	10	2569896
Reached Baseline at C50	mg/kg	Yes	Yes		Yes		2569896
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	0.0050	0.85	0.0050	2570043
Toluene	mg/kg	0.061	<0.020	0.020	47	0.20	2570043
Ethylbenzene	mg/kg	0.11	<0.010	0.010	9.2	0.010	2570043
Xylenes (Total)	mg/kg	13	0.20	0.040	110	0.40	2570043
m & p-Xylene	mg/kg	7.8	0.10	0.040	78	0.40	2570043
o-Xylene	mg/kg	5.7	0.094	0.020	31	0.20	2570043
F1 (C6-C10) - BTEX	mg/kg	620	21	12	1800	12	2570043
(C6-C10)	mg/kg	630	21	12	2000	12	2570043
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	84	92		98		2570043
D10-ETHYLBENZENE (sur.)	%	108	100		106		2570043
D4-1,2-DICHLOROETHANE (sur.)	%	95	91		105		2570043
D8-TOLUENE (sur.)	%	104	104		106		2570043
O-TERPHENYL (sur.)	%	99	96		97		2569896
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53745	L53746		L53747		
Sampling Date		2008/09/04	2008/09/04		2008/09/04		
COC Number		58145	58145		58145		
	Units	35,65	40,70	RDL	50,60	RDL	QC Batch

Physical Properties							
Moisture	%	11	9.5	0.3	20	0.3	2571320
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	990	1400	10	180	10	2569896
F3 (C16-C34 Hydrocarbons)	mg/kg	99	120	10	78	10	2569896
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	<10	10	2569896
Reached Baseline at C50	mg/kg	Yes	Yes		Yes		2569896
Volatiles							
Benzene	mg/kg	0.61	0.39	0.0050	0.081	0.0050	2570043
Toluene	mg/kg	45	20	0.20	0.096	0.020	2570043
Ethylbenzene	mg/kg	20	15	0.10	5.9	0.010	2570043
Xylenes (Total)	mg/kg	120	99	0.40	13	0.040	2570043
m & p-Xylene	mg/kg	85	68	0.40	11	0.040	2570043
o-Xylene	mg/kg	35	30	0.20	2.4	0.020	2570043
F1 (C6-C10) - BTEX	mg/kg	1500	1800	12	180	12	2570043
(C6-C10)	mg/kg	1700	1900	12	200	12	2570043
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	100	107		88		2570043
D10-ETHYLBENZENE (sur.)	%	107	109		109		2570043
D4-1,2-DICHLOROETHANE (sur.)	%	98	96		91		2570043
D8-TOLUENE (sur.)	%	110	113		105		2570043
O-TERPHENYL (sur.)	%	93	93		102		2569896
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53748			L53749		
Sampling Date		2008/09/04			2008/09/04		
COC Number		58145			58145		
	Units	50,90	RDL	QC Batch	45,115	RDL	QC Batch

Physical Properties							
Moisture	%	13	0.3	2571320	16	0.3	2570819
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	5200	10	2569896	48	10	2569907
F3 (C16-C34 Hydrocarbons)	mg/kg	410	10	2569896	70	10	2569907
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	2569896	33	10	2569907
Reached Baseline at C50	mg/kg	Yes		2569896	Yes		2569907
Volatiles							
Benzene	mg/kg	1.9	0.0050	2570043	0.26	0.0050	2569890
Toluene	mg/kg	56	0.20	2570043	0.16	0.020	2569890
Ethylbenzene	mg/kg	57	0.10	2570043	0.43	0.010	2569890
Xylenes (Total)	mg/kg	250	0.40	2570043	3.4	0.040	2569890
m & p-Xylene	mg/kg	170	0.40	2570043	1.9	0.040	2569890
o-Xylene	mg/kg	76	0.20	2570043	1.5	0.020	2569890
F1 (C6-C10) - BTEX	mg/kg	5100	12	2570043	61	12	2569890
(C6-C10)	mg/kg	5500	12	2570043	65	12	2569890
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	110		2570043	102		2569890
D10-ETHYLBENZENE (sur.)	%	107		2570043	106		2569890
D4-1,2-DICHLOROETHANE (sur.)	%	100		2570043	100		2569890
D8-TOLUENE (sur.)	%	111		2570043	97		2569890
O-TERPHENYL (sur.)	%	92		2569896	77		2569907
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53750		L53752		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58145		58145		
	Units	130,140	RDL	50,120	RDL	QC Batch

Physical Properties						
Moisture	%	9.2	0.3	16	0.3	2570819
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	970	10	36	10	2569907
F3 (C16-C34 Hydrocarbons)	mg/kg	190	10	110	10	2569907
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	18	10	2569907
Reached Baseline at C50	mg/kg	Yes		Yes		2569907
Volatiles						
Benzene	mg/kg	0.46	0.0050	<0.0050	0.0050	2569890
Toluene	mg/kg	69	0.20	<0.020	0.020	2569890
Ethylbenzene	mg/kg	34	0.10	6.1	0.010	2569890
Xylenes (Total)	mg/kg	160	0.40	14	0.040	2569890
m & p-Xylene	mg/kg	120	0.40	6.1	0.040	2569890
o-Xylene	mg/kg	45	0.20	7.7	0.020	2569890
F1 (C6-C10) - BTEX	mg/kg	2600	12	250	12	2569890
(C6-C10)	mg/kg	2900	12	270	12	2569890
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	101		102		2569890
D10-ETHYLBENZENE (sur.)	%	107		106		2569890
D4-1,2-DICHLOROETHANE (sur.)	%	95		96		2569890
D8-TOLUENE (sur.)	%	101		98		2569890
O-TERPHENYL (sur.)	%	100		100		2569907
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53753		L53754	L53755		
Sampling Date		2008/09/04		2008/09/04	2008/09/04		
COC Number		58145		58145	58145		
	Units	45,125	RDL	50,150	40,40	RDL	QC Batch

Physical Properties							
Moisture	%	20	0.3	15	6.9	0.3	2570819
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	2300	10	310	150	10	2569907
F3 (C16-C34 Hydrocarbons)	mg/kg	260	10	61	96	10	2569907
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	11	10	2569907
Reached Baseline at C50	mg/kg	Yes		Yes	Yes		2569907
Volatiles							
Benzene	mg/kg	6.2	0.0050	1.9	<0.0050	0.0050	2569890
Toluene	mg/kg	5.5	0.020	<0.020	<0.020	0.020	2569890
Ethylbenzene	mg/kg	9.5	0.10	5.1	<0.010	0.010	2569890
Xylenes (Total)	mg/kg	46	0.40	11	0.096	0.040	2569890
m & p-Xylene	mg/kg	31	0.40	4.4	<0.040	0.040	2569890
o-Xylene	mg/kg	15	0.20	6.6	0.096	0.020	2569890
F1 (C6-C10) - BTEX	mg/kg	670	12	530	390	12	2569890
(C6-C10)	mg/kg	740	12	550	390	12	2569890
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	86		86	95		2569890
D10-ETHYLBENZENE (sur.)	%	110		109	103		2569890
D4-1,2-DICHLOROETHANE (sur.)	%	97		97	98		2569890
D8-TOLUENE (sur.)	%	102		101	93		2569890
O-TERPHENYL (sur.)	%	104		101	106		2569907
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53756		L53757		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58145		58145		
	Units	135,125	RDL	55,45	RDL	QC Batch

Physical Properties						
Moisture	%	9.7	0.3	8.4	0.3	2570819
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	2000	10	2100	10	2569907
F3 (C16-C34 Hydrocarbons)	mg/kg	280	10	350	10	2569907
F4 (C34-C50 Hydrocarbons)	mg/kg	11	10	15	10	2569907
Reached Baseline at C50	mg/kg	Yes		Yes		2569907
Volatiles						
Benzene	mg/kg	0.57	0.0050	<0.0050	0.0050	2569890
Toluene	mg/kg	32	0.20	<0.020	0.020	2569890
Ethylbenzene	mg/kg	18	0.10	<0.010	0.010	2569890
Xylenes (Total)	mg/kg	79	0.40	60	0.40	2569890
m & p-Xylene	mg/kg	53	0.40	33	0.40	2569890
o-Xylene	mg/kg	26	0.20	27	0.20	2569890
F1 (C6-C10) - BTEX	mg/kg	620	12	1100	12	2569890
(C6-C10)	mg/kg	750	12	1200	12	2569890
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	94		87		2569890
D10-ETHYLBENZENE (sur.)	%	100		101		2569890
D4-1,2-DICHLOROETHANE (sur.)	%	93		96		2569890
D8-TOLUENE (sur.)	%	99		97		2569890
O-TERPHENYL (sur.)	%	103		105		2569907
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53758	L53759		L53760		
Sampling Date		2008/09/04	2008/09/04		2008/09/04		
COC Number		58146	58146		58146		
	Units	55,35	65,35	RDL	70,40	RDL	QC Batch

Physical Properties							
Moisture	%	9.6	9.5	0.3	3.5	0.3	2570819
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	40	120	10	2400	10	2569907
F3 (C16-C34 Hydrocarbons)	mg/kg	56	65	10	310	10	2569907
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	<10	10	2569907
Reached Baseline at C50	mg/kg	Yes	Yes		Yes		2569907
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	0.0050	<0.0050	0.0050	2569890
Toluene	mg/kg	<0.020	<0.020	0.020	<0.020	0.020	2569890
Ethylbenzene	mg/kg	<0.010	0.061	0.010	<0.010	0.010	2569890
Xylenes (Total)	mg/kg	0.69	3.8	0.040	50	0.40	2569890
m & p-Xylene	mg/kg	0.30	2.5	0.040	24	0.40	2569890
o-Xylene	mg/kg	0.39	1.3	0.020	26	0.20	2569890
F1 (C6-C10) - BTEX	mg/kg	<12	41	12	1100	12	2569890
(C6-C10)	mg/kg	<12	45	12	1100	12	2569890
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	97	97		92		2569890
D10-ETHYLBENZENE (sur.)	%	105	101		103		2569890
D4-1,2-DICHLOROETHANE (sur.)	%	96	94		94		2569890
D8-TOLUENE (sur.)	%	94	94		98		2569890
O-TERPHENYL (sur.)	%	101	99		88		2569907
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53761	L53762	L53763	L53764		
Sampling Date		2008/09/04	2008/09/04	2008/09/04	2008/09/04		
COC Number		58146	58146	58146	58146		
	Units	80,30	90,20	95,145	95,15	RDL	QC Batch

Physical Properties							
Moisture	%	5.8	4.3	11	9.7	0.3	2570819
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	50	28	88	310	10	2569907
F3 (C16-C34 Hydrocarbons)	mg/kg	88	73	42	120	10	2569907
F4 (C34-C50 Hydrocarbons)	mg/kg	14	12	<10	14	10	2569907
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2569907
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2569890
Toluene	mg/kg	<0.020	<0.020	0.31	<0.020	0.020	2569890
Ethylbenzene	mg/kg	0.032	<0.010	0.25	0.62	0.010	2569890
Xylenes (Total)	mg/kg	0.38	<0.040	3.3	22	0.040	2569890
m & p-Xylene	mg/kg	0.21	<0.040	2.0	16	0.040	2569890
o-Xylene	mg/kg	0.18	<0.020	1.4	6.2	0.020	2569890
F1 (C6-C10) - BTEX	mg/kg	<12	<12	180	370	12	2569890
(C6-C10)	mg/kg	<12	<12	180	390	12	2569890
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	102	101	100	93		2569890
D10-ETHYLBENZENE (sur.)	%	104	102	107	104		2569890
D4-1,2-DICHLOROETHANE (sur.)	%	96	95	94	98		2569890
D8-TOLUENE (sur.)	%	100	102	99	99		2569890
O-TERPHENYL (sur.)	%	93	95	91	94		2569907
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53765		L53766		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58146		58146		
	Units	95,45	RDL	85,45	RDL	QC Batch

Physical Properties						
Moisture	%	4.5	0.3	4.7	0.3	2570819
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	27	10	1700	10	2569907
F3 (C16-C34 Hydrocarbons)	mg/kg	63	10	270	10	2569907
F4 (C34-C50 Hydrocarbons)	mg/kg	11	10	<10	10	2569907
Reached Baseline at C50	mg/kg	Yes		Yes		2569907
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	2569890
Toluene	mg/kg	<0.020	0.020	<0.020	0.020	2569890
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	0.010	2569890
Xylenes (Total)	mg/kg	0.29	0.040	34	0.040	2569890
m & p-Xylene	mg/kg	0.20	0.040	17	0.040	2569890
o-Xylene	mg/kg	0.091	0.020	18	0.20	2569890
F1 (C6-C10) - BTEX	mg/kg	<12	12	670	12	2569890
(C6-C10)	mg/kg	<12	12	700	12	2569890
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99		98		2569890
D10-ETHYLBENZENE (sur.)	%	103		99		2569890
D4-1,2-DICHLOROETHANE (sur.)	%	95		95		2569890
D8-TOLUENE (sur.)	%	101		97		2569890
O-TERPHENYL (sur.)	%	92		93		2569907
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53767	L53768		L53769		
Sampling Date		2008/09/04	2008/09/04		2008/09/04		
COC Number		58146	58146		58146		
	Units	60,50	65,55	RDL	70,60	RDL	QC Batch

Physical Properties							
Moisture	%	7.5	7.2	0.3	6.3	0.3	2570819
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	2400	1500	10	2400	10	2569907
F3 (C16-C34 Hydrocarbons)	mg/kg	340	210	10	310	10	2569907
F4 (C34-C50 Hydrocarbons)	mg/kg	21	16	10	13	10	2569907
Reached Baseline at C50	mg/kg	Yes	Yes		Yes		2569907
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	0.0050	<0.0050	0.0050	2569890
Toluene	mg/kg	4.1	4.3	0.020	1.4	0.020	2569890
Ethylbenzene	mg/kg	5.4	8.2	0.010	1.7	0.010	2569890
Xylenes (Total)	mg/kg	110	71	0.40	20	0.040	2569890
m & p-Xylene	mg/kg	69	49	0.40	12	0.040	2569890
o-Xylene	mg/kg	38	22	0.20	7.6	0.020	2569890
F1 (C6-C10) - BTEX	mg/kg	1400	940	12	630	12	2569890
(C6-C10)	mg/kg	1500	1000	12	660	12	2569890
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	101	94		96		2569890
D10-ETHYLBENZENE (sur.)	%	102	102		105		2569890
D4-1,2-DICHLOROETHANE (sur.)	%	96	97		97		2569890
D8-TOLUENE (sur.)	%	101	100		99		2569890
O-TERPHENYL (sur.)	%	91	92		94		2569907
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53770		L53771		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58147		58147		
	Units	165,125	RDL	75,65	RDL	QC Batch

Physical Properties						
Moisture	%	12	0.3	7.4	0.3	2570977
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	400	10	960	10	2569917
F3 (C16-C34 Hydrocarbons)	mg/kg	65	10	180	10	2569917
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	10	10	2569917
Reached Baseline at C50	mg/kg	Yes		Yes		2569917
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	0.11	0.0050	2569895
Toluene	mg/kg	<0.020	0.020	13	0.20	2569895
Ethylbenzene	mg/kg	<0.010	0.010	10	0.10	2569895
Xylenes (Total)	mg/kg	0.064	0.040	95	0.40	2569895
m & p-Xylene	mg/kg	0.064	0.040	67	0.40	2569895
o-Xylene	mg/kg	<0.020	0.020	28	0.20	2569895
F1 (C6-C10) - BTEX	mg/kg	<12	12	1100	12	2569895
(C6-C10)	mg/kg	<12	12	1200	12	2569895
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	103		88		2569895
D10-ETHYLBENZENE (sur.)	%	123		122		2569895
D4-1,2-DICHLOROETHANE (sur.)	%	95		92		2569895
D8-TOLUENE (sur.)	%	104		96		2569895
O-TERPHENYL (sur.)	%	84		87		2569917
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53772		L53773		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58147		58147		
	Units	80,60	RDL	80,70	RDL	QC Batch

Physical Properties						
Moisture	%	4.5	0.3	6.7	0.3	2570977
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1700	10	1400	10	2569917
F3 (C16-C34 Hydrocarbons)	mg/kg	260	10	230	10	2569917
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2569917
Reached Baseline at C50	mg/kg	Yes		Yes		2569917
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	2569895
Toluene	mg/kg	1.0	0.020	12	0.20	2569895
Ethylbenzene	mg/kg	0.19	0.010	6.5	0.010	2569895
Xylenes (Total)	mg/kg	13	0.040	110	0.40	2569895
m & p-Xylene	mg/kg	5.4	0.040	77	0.40	2569895
o-Xylene	mg/kg	7.8	0.020	35	0.20	2569895
F1 (C6-C10) - BTEX	mg/kg	490	12	1700	12	2569895
(C6-C10)	mg/kg	500	12	1800	12	2569895
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	104		88		2569895
D10-ETHYLBENZENE (sur.)	%	116		124		2569895
D4-1,2-DICHLOROETHANE (sur.)	%	92		96		2569895
D8-TOLUENE (sur.)	%	104		96		2569895
O-TERPHENYL (sur.)	%	101		99		2569917
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53774	L53775		L53776		
Sampling Date		2008/09/04	2008/09/04		2008/09/04		
COC Number		58147	58147		58147		
	Units	85,75	155,135	RDL	105,85	RDL	QC Batch

Physical Properties							
Moisture	%	6.3	9.3	0.3	6.3	0.3	2570977
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	2100	950	10	1000	10	2569917
F3 (C16-C34 Hydrocarbons)	mg/kg	290	170	10	160	10	2569917
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	<10	10	2569917
Reached Baseline at C50	mg/kg	Yes	Yes		Yes		2569917
Volatiles							
Benzene	mg/kg	<0.0050	0.29	0.0050	<0.0050	0.0050	2569895
Toluene	mg/kg	16	30	0.20	7.0	0.020	2569895
Ethylbenzene	mg/kg	10	26	0.10	7.6	0.010	2569895
Xylenes (Total)	mg/kg	100	150	0.40	48	0.40	2569895
m & p-Xylene	mg/kg	72	110	0.40	33	0.40	2569895
o-Xylene	mg/kg	31	46	0.20	15	0.20	2569895
F1 (C6-C10) - BTEX	mg/kg	1300	1600	12	630	12	2569895
(C6-C10)	mg/kg	1400	1800	12	690	12	2569895
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	88	90		87		2569895
D10-ETHYLBENZENE (sur.)	%	123	122		121		2569895
D4-1,2-DICHLOROETHANE (sur.)	%	93	91		96		2569895
D8-TOLUENE (sur.)	%	95	98		95		2569895
O-TERPHENYL (sur.)	%	91	100		97		2569917
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53777		L53778		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58147		58147		
	Units	80,90	RDL	75,75	RDL	QC Batch

Physical Properties						
Moisture	%	8.9	0.3	7.4	0.3	2570977
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1000	10	1800	10	2569917
F3 (C16-C34 Hydrocarbons)	mg/kg	160	10	160	10	2569917
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2569917
Reached Baseline at C50	mg/kg	Yes		Yes		2569917
Volatiles						
Benzene	mg/kg	0.43	0.0050	0.35	0.0050	2569895
Toluene	mg/kg	0.54	0.020	32	0.20	2569895
Ethylbenzene	mg/kg	13	0.10	25	0.10	2569895
Xylenes (Total)	mg/kg	28	0.40	150	0.40	2569895
m & p-Xylene	mg/kg	20	0.40	100	0.40	2569895
o-Xylene	mg/kg	7.7	0.020	45	0.20	2569895
F1 (C6-C10) - BTEX	mg/kg	1400	12	1900	12	2569895
(C6-C10)	mg/kg	1400	12	2100	12	2569895
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	86		89		2569895
D10-ETHYLBENZENE (sur.)	%	109		116		2569895
D4-1,2-DICHLOROETHANE (sur.)	%	87		92		2569895
D8-TOLUENE (sur.)	%	99		96		2569895
O-TERPHENYL (sur.)	%	103		84		2569917
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53779		L53780	L53781		
Sampling Date		2008/09/04		2008/09/04	2008/09/04		
COC Number		58147		58147	58147		
	Units	60,80	RDL	65,85	160,140	RDL	QC Batch

Physical Properties							
Moisture	%	8.6	0.3	8.8	8.7	0.3	2570977
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	1400	10	370	1200	10	2569917
F3 (C16-C34 Hydrocarbons)	mg/kg	110	10	69	160	10	2569917
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	<10	10	2569917
Reached Baseline at C50	mg/kg	Yes		Yes	Yes		2569917
Volatiles							
Benzene	mg/kg	0.28	0.0050	0.23	0.040	0.0050	2569895
Toluene	mg/kg	5.3	0.020	13	25	0.20	2569895
Ethylbenzene	mg/kg	12	0.10	14	22	0.10	2569895
Xylenes (Total)	mg/kg	58	0.40	70	110	0.40	2569895
m & p-Xylene	mg/kg	39	0.40	48	73	0.40	2569895
o-Xylene	mg/kg	19	0.20	21	32	0.20	2569895
F1 (C6-C10) - BTEX	mg/kg	970	12	1300	1600	12	2569895
(C6-C10)	mg/kg	1000	12	1400	1700	12	2569895
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	86		87	88		2569895
D10-ETHYLBENZENE (sur.)	%	118		121	118		2569895
D4-1,2-DICHLOROETHANE (sur.)	%	92		95	89		2569895
D8-TOLUENE (sur.)	%	96		98	96		2569895
O-TERPHENYL (sur.)	%	87		93	92		2569917
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53782		L53783	L53784		
Sampling Date		2008/09/04		2008/09/04	2008/09/04		
COC Number		58148		58148	58148		
	Units	35,55	RDL	150,210	145,215	RDL	QC Batch

Physical Properties							
Moisture	%	11	0.3	16	12	0.3	2570977
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	520	10	<10	<10	10	2569917
F3 (C16-C34 Hydrocarbons)	mg/kg	77	10	<10	<10	10	2569917
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	<10	10	2569917
Reached Baseline at C50	mg/kg	Yes		Yes	Yes		2569917
Volatiles							
Benzene	mg/kg	0.31	0.0050	<0.0050	<0.0050	0.0050	2569895
Toluene	mg/kg	18	0.20	<0.020	<0.020	0.020	2569895
Ethylbenzene	mg/kg	5.8	0.010	<0.010	<0.010	0.010	2569895
Xylenes (Total)	mg/kg	44	0.40	<0.040	<0.040	0.040	2569895
m & p-Xylene	mg/kg	31	0.40	<0.040	<0.040	0.040	2569895
o-Xylene	mg/kg	13	0.20	<0.020	<0.020	0.020	2569895
F1 (C6-C10) - BTEX	mg/kg	890	12	<12	<12	12	2569895
(C6-C10)	mg/kg	960	12	<12	<12	12	2569895
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	86		101	99		2569895
D10-ETHYLBENZENE (sur.)	%	122		122	120		2569895
D4-1,2-DICHLOROETHANE (sur.)	%	92		92	94		2569895
D8-TOLUENE (sur.)	%	96		102	101		2569895
O-TERPHENYL (sur.)	%	94		98	94		2569917
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53785	L53786	L53787	L53788		
Sampling Date		2008/09/04	2008/09/04	2008/09/04	2008/09/04		
COC Number		58148	58148	58148	58148		
	Units	135,205	135,195	130,230	130,220	RDL	QC Batch

Physical Properties							
Moisture	%	15	12	13	14	0.3	2570977
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2569917
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	<10	99	10	2569917
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2569917
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2569917
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2569895
Toluene	mg/kg	<0.020	<0.020	0.045	<0.020	0.020	2569895
Ethylbenzene	mg/kg	<0.010	<0.010	0.041	<0.010	0.010	2569895
Xylenes (Total)	mg/kg	<0.040	<0.040	0.29	<0.040	0.040	2569895
m & p-Xylene	mg/kg	<0.040	<0.040	0.20	<0.040	0.040	2569895
o-Xylene	mg/kg	<0.020	<0.020	0.081	<0.020	0.020	2569895
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	2569895
(C6-C10)	mg/kg	<12	<12	<12	<12	12	2569895
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	100	100	87	100		2569895
D10-ETHYLBENZENE (sur.)	%	121	116	123	116		2569895
D4-1,2-DICHLOROETHANE (sur.)	%	92	93	88	95		2569895
D8-TOLUENE (sur.)	%	103	101	98	101		2569895
O-TERPHENYL (sur.)	%	90	89	89	92		2569917
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53789		L53790	L53791		
Sampling Date		2008/09/04		2008/09/04	2008/09/04		
COC Number		58148		58148	58148		
	Units	130,190	QC Batch	130,170	125,235	RDL	QC Batch

Physical Properties							
Moisture	%	14	2570977	11	14	0.3	2571192
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	15	2569917	19	<10	10	2569905
F3 (C16-C34 Hydrocarbons)	mg/kg	190	2569917	<10	<10	10	2569905
F4 (C34-C50 Hydrocarbons)	mg/kg	30	2569917	<10	<10	10	2569905
Reached Baseline at C50	mg/kg	Yes	2569917	Yes	Yes		2569905
Volatiles							
Benzene	mg/kg	<0.0050	2569895	<0.0050	<0.0050	0.0050	2570053
Toluene	mg/kg	<0.020	2569895	<0.020	<0.020	0.020	2570053
Ethylbenzene	mg/kg	<0.010	2569895	<0.010	<0.010	0.010	2570053
Xylenes (Total)	mg/kg	<0.040	2569895	<0.040	<0.040	0.040	2570053
m & p-Xylene	mg/kg	<0.040	2569895	<0.040	<0.040	0.040	2570053
o-Xylene	mg/kg	<0.020	2569895	<0.020	<0.020	0.020	2570053
F1 (C6-C10) - BTEX	mg/kg	<12	2569895	<12	<12	12	2570053
(C6-C10)	mg/kg	<12	2569895	<12	<12	12	2570053
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	99	2569895	94	95		2570053
D10-ETHYLBENZENE (sur.)	%	120	2569895	87	86		2570053
D4-1,2-DICHLOROETHANE (sur.)	%	93	2569895	99	97		2570053
D8-TOLUENE (sur.)	%	102	2569895	100	100		2570053
O-TERPHENYL (sur.)	%	92	2569917	81	87		2569905

RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53792	L53793	L53794	L53795		
Sampling Date		2008/09/04	2008/09/04	2008/09/04	2008/09/04		
COC Number		58148	58148	58149	58149		
	Units	125,225	125,215	125,205	125,185	RDL	QC Batch

Physical Properties							
Moisture	%	14	13	15	12	0.3	2571192
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2569905
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2569905
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2569905
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2569905
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2570053
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2570053
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	2570053
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	2570053
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	2570053
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2570053
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	2570053
(C6-C10)	mg/kg	<12	<12	<12	<12	12	2570053
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	92	93	96	93		2570053
D10-ETHYLBENZENE (sur.)	%	105	94	88	129		2570053
D4-1,2-DICHLOROETHANE (sur.)	%	98	100	104	100		2570053
D8-TOLUENE (sur.)	%	100	100	100	100		2570053
O-TERPHENYL (sur.)	%	91	84	88	86		2569905
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53796	L53797	L53798	L53799		
Sampling Date		2008/09/04	2008/09/04	2008/09/04	2008/09/04		
COC Number		58149	58149	58149	58149		
	Units	125,165	120,220	120,210	120,190	RDL	QC Batch

Physical Properties							
Moisture	%	12	15	15	13	0.3	2571192
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	210	<10	<10	<10	10	2569905
F3 (C16-C34 Hydrocarbons)	mg/kg	200	<10	<10	<10	10	2569905
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2569905
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2569905
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2570053
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2570053
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	2570053
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	2570053
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	2570053
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2570053
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	2570053
(C6-C10)	mg/kg	<12	<12	<12	<12	12	2570053
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	96	95	95	94		2570053
D10-ETHYLBENZENE (sur.)	%	117	106	76	118		2570053
D4-1,2-DICHLOROETHANE (sur.)	%	102	96	96	101		2570053
D8-TOLUENE (sur.)	%	100	103	101	99		2570053
O-TERPHENYL (sur.)	%	92	92	91	88		2569905
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53801	L53805	L53806	L53807		
Sampling Date		2008/09/04	2008/09/04	2008/09/04	2008/09/04		
COC Number		58149	58149	58149	58149		
	Units	115,245	115,235	115,185	115,175	RDL	QC Batch

Physical Properties							
Moisture	%	13	13	15	11	0.3	2571192
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2569905
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	<10	16	10	2569905
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2569905
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2569905
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	2570053
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2570053
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	2570053
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	2570053
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	2570053
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	2570053
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	2570053
(C6-C10)	mg/kg	<12	<12	<12	<12	12	2570053
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	92	94	94	94		2570053
D10-ETHYLBENZENE (sur.)	%	109	109	126	112		2570053
D4-1,2-DICHLOROETHANE (sur.)	%	99	98	102	101		2570053
D8-TOLUENE (sur.)	%	100	101	100	99		2570053
O-TERPHENYL (sur.)	%	88	89	91	87		2569905
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53808	L53809	L53810	L53811		
Sampling Date		2008/09/04	2008/09/04	2008/09/04	2008/09/04		
COC Number		58149	58149	58150	58150		
	Units	110,230	105,175	100,90	90,90	RDL	QC Batch

Physical Properties							
Moisture	%	12	14	7.4	9.5	0.3	2571192
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	630	700	10	2569905
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	23	100	110	10	2569905
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	2569905
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		2569905
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.061	0.0050	2570053
Toluene	mg/kg	<0.020	0.030	0.17	<0.020	0.020	2570053
Ethylbenzene	mg/kg	<0.010	0.025	1.9	1.4	0.010	2570053
Xylenes (Total)	mg/kg	<0.040	0.27	16	5.7	0.040	2570053
m & p-Xylene	mg/kg	<0.040	0.20	10	4.0	0.040	2570053
o-Xylene	mg/kg	<0.020	0.064	5.5	1.7	0.020	2570053
F1 (C6-C10) - BTEX	mg/kg	<12	20	920	690	12	2570053
(C6-C10)	mg/kg	<12	21	940	700	12	2570053
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	91	98	102	100		2570053
D10-ETHYLBENZENE (sur.)	%	126	112	123	120		2570053
D4-1,2-DICHLOROETHANE (sur.)	%	100	100	100	98		2570053
D8-TOLUENE (sur.)	%	100	103	107	108		2570053
O-TERPHENYL (sur.)	%	89	88	89	86		2569905
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53812		L53813		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58150		58150		
	Units	85,85	RDL	70,120	RDL	QC Batch

Physical Properties						
Moisture	%	9.4	0.3	11	0.3	2571192
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1300	10	150	10	2569905
F3 (C16-C34 Hydrocarbons)	mg/kg	160	10	47	10	2569905
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2569905
Reached Baseline at C50	mg/kg	Yes		Yes		2569905
Volatiles						
Benzene	mg/kg	0.15	0.0050	0.041	0.0050	2570053
Toluene	mg/kg	13	0.20	19	0.20	2570053
Ethylbenzene	mg/kg	7.8	0.010	11	0.10	2570053
Xylenes (Total)	mg/kg	51	0.40	56	0.40	2570053
m & p-Xylene	mg/kg	34	0.40	40	0.40	2570053
o-Xylene	mg/kg	17	0.20	16	0.20	2570053
F1 (C6-C10) - BTEX	mg/kg	2300	12	1200	12	2570053
(C6-C10)	mg/kg	2400	12	1300	12	2570053
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	108		92		2570053
D10-ETHYLBENZENE (sur.)	%	126		125		2570053
D4-1,2-DICHLOROETHANE (sur.)	%	99		101		2570053
D8-TOLUENE (sur.)	%	112		109		2570053
O-TERPHENYL (sur.)	%	93		91		2569905
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53814		L53815		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58150		58150		
	Units	70,110	RDL	65,125	RDL	QC Batch

Physical Properties						
Moisture	%	11	0.3	9.5	0.3	2571074
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	800	10	410	10	2569923
F3 (C16-C34 Hydrocarbons)	mg/kg	130	10	170	10	2569923
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	13	10	2569923
Reached Baseline at C50	mg/kg	Yes		Yes		2569923
Volatiles						
Benzene	mg/kg	0.47	0.0050	0.025	0.0050	2570016
Toluene	mg/kg	0.55	0.020	26	0.20	2570016
Ethylbenzene	mg/kg	6.2	0.010	28	0.10	2570016
Xylenes (Total)	mg/kg	21	0.040	150	0.40	2570016
m & p-Xylene	mg/kg	12	0.040	110	0.40	2570016
o-Xylene	mg/kg	9.3	0.020	44	0.20	2570016
F1 (C6-C10) - BTEX	mg/kg	510	12	610	12	2570016
(C6-C10)	mg/kg	540	12	810	12	2570016
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	91		92		2570016
D10-ETHYLBENZENE (sur.)	%	106		105		2570016
D4-1,2-DICHLOROETHANE (sur.)	%	98		97		2570016
D8-TOLUENE (sur.)	%	105		108		2570016
O-TERPHENYL (sur.)	%	91		87		2569923
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53816		L53817		
Sampling Date		2008/09/04		2008/09/04		
COC Number		58150		58150		
	Units	65,115	RDL	65,75	RDL	QC Batch

Physical Properties						
Moisture	%	8.7	0.3	10	0.3	2571074
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	440	10	1700	10	2569923
F3 (C16-C34 Hydrocarbons)	mg/kg	110	10	170	10	2569923
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	2569923
Reached Baseline at C50	mg/kg	Yes		Yes		2569923
Volatiles						
Benzene	mg/kg	0.029	0.0050	0.55	0.0050	2570016
Toluene	mg/kg	<0.020	0.020	21	0.20	2570016
Ethylbenzene	mg/kg	0.48	0.010	19	0.10	2570016
Xylenes (Total)	mg/kg	9.9	0.040	95	0.40	2570016
m & p-Xylene	mg/kg	5.3	0.040	66	0.40	2570016
o-Xylene	mg/kg	4.5	0.020	29	0.20	2570016
F1 (C6-C10) - BTEX	mg/kg	490	12	930	12	2570016
(C6-C10)	mg/kg	500	12	1100	12	2570016
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	101		104		2570016
D10-ETHYLBENZENE (sur.)	%	106		107		2570016
D4-1,2-DICHLOROETHANE (sur.)	%	94		99		2570016
D8-TOLUENE (sur.)	%	107		107		2570016
O-TERPHENYL (sur.)	%	87		96		2569923
RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53818	L53819		L53820		
Sampling Date		2008/09/04	2008/09/04		2008/09/04		
COC Number		58150	58150		58150		
	Units	50,70	50,80	RDL	45,85	RDL	QC Batch

Physical Properties							
Moisture	%	10	9.2	0.3	8.6	0.3	2571074
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	230	1700	10	5200	10	2569923
F3 (C16-C34 Hydrocarbons)	mg/kg	68	180	10	270	10	2569923
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	<10	10	2569923
Reached Baseline at C50	mg/kg	Yes	Yes		Yes		2569923
Volatiles							
Benzene	mg/kg	0.12	0.18	0.0050	0.26	0.0050	2570016
Toluene	mg/kg	1.4	2.6	0.020	1.2	0.020	2570016
Ethylbenzene	mg/kg	1.7	5.2	0.010	30	0.10	2570016
Xylenes (Total)	mg/kg	13	24	0.040	160	0.40	2570016
m & p-Xylene	mg/kg	8.2	16	0.040	100	0.40	2570016
o-Xylene	mg/kg	4.7	7.7	0.020	55	0.20	2570016
F1 (C6-C10) - BTEX	mg/kg	320	360	12	2200	12	2570016
(C6-C10)	mg/kg	340	400	12	2400	12	2570016
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	89	93		101		2570016
D10-ETHYLBENZENE (sur.)	%	107	104		97		2570016
D4-1,2-DICHLOROETHANE (sur.)	%	92	95		95		2570016
D8-TOLUENE (sur.)	%	104	103		121		2570016
O-TERPHENYL (sur.)	%	100	97		92		2569923
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		L53821		L53822	L53823		
Sampling Date		2008/09/04		2008/09/04	2008/09/04		
COC Number		58150		58151	58151		
	Units	45,65	RDL	40,50	35,45	RDL	QC Batch

Physical Properties							
Moisture	%	16	0.3	13	6.6	0.3	2571074
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	570	10	160	270	10	2569923
F3 (C16-C34 Hydrocarbons)	mg/kg	59	10	54	62	10	2569923
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	<10	10	2569923
Reached Baseline at C50	mg/kg	Yes		Yes	Yes		2569923
Volatiles							
Benzene	mg/kg	0.55	0.050	<0.0050	<0.0050	0.0050	2570016
Toluene	mg/kg	35	0.20	0.34	0.19	0.020	2570016
Ethylbenzene	mg/kg	17	0.10	0.14	0.11	0.010	2570016
Xylenes (Total)	mg/kg	92	0.40	3.3	8.2	0.040	2570016
m & p-Xylene	mg/kg	65	0.40	2.1	5.1	0.040	2570016
o-Xylene	mg/kg	27	0.20	1.2	3.0	0.020	2570016
F1 (C6-C10) - BTEX	mg/kg	710	12	180	700	12	2570016
(C6-C10)	mg/kg	850	12	180	710	12	2570016
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	87		96	90		2570016
D10-ETHYLBENZENE (sur.)	%	101		107	102		2570016
D4-1,2-DICHLOROETHANE (sur.)	%	91		93	95		2570016
D8-TOLUENE (sur.)	%	104		103	100		2570016
O-TERPHENYL (sur.)	%	99		88	85		2569923
RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL) Comments

Sample L53749-01 CCME Hydrocarbons (F2-F4 in soil): Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results.

Sample L53707-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53729-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53731-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53732-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53735-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53737-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53738-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53741-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53744-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53745-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53746-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53748-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53749-01 BTEX/F1 by HS GC/MS (MeOH extract): Duplicates do not match for o-xylene due to matrix interference.

Sample L53750-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raise due to sample dilution.

Sample L53753-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raise due to sample dilution.

Sample L53756-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raise due to sample dilution.

Sample L53757-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raise due to sample dilution.

Sample L53760-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raise due to sample dilution.

Sample L53766-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raise due to sample dilution.

Sample L53767-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raise due to sample dilution.

Sample L53768-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL Raise due to sample dilution.

Sample L53771-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53773-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53774-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53775-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53776-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53777-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53778-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53779-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53780-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53781-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53782-01 BTEX/F1 by HS GC/MS (MeOH extract): RDL raised due to sample dilution.

Sample L53812-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53813-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53815-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53817-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53820-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Sample L53821-01 BTEX/F1 by HS GC/MS (MeOH extract): Detection limits raised due to dilution to bring analyte within the calibrated range.

Results relate only to the items tested.

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
2569890 DR3	MATRIX SPIKE [L53750-01]	4-BROMOFLUOROBENZENE (sur.)	2008/09/13		92	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2008/09/13		103	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/13		101	%	60 - 140	
		D8-TOLUENE (sur.)	2008/09/13		99	%	60 - 140	
		Benzene	2008/09/13		105	%	60 - 140	
		Toluene	2008/09/13		NC	%	60 - 140	
		Ethylbenzene	2008/09/13		NC	%	60 - 140	
		m & p-Xylene	2008/09/13		NC	%	60 - 140	
		o-Xylene	2008/09/13		NC	%	60 - 140	
		(C6-C10)	2008/09/13		NC	%	60 - 140	
		SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/09/12		97	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2008/09/12		100	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2008/09/12		103	%	60 - 140
			D8-TOLUENE (sur.)	2008/09/12		101	%	60 - 140
			Benzene	2008/09/12		100	%	60 - 140
	Toluene		2008/09/12		85	%	60 - 140	
	Ethylbenzene		2008/09/12		90	%	60 - 140	
	m & p-Xylene		2008/09/12		87	%	60 - 140	
	o-Xylene		2008/09/12		85	%	60 - 140	
	(C6-C10)		2008/09/12		94	%	80 - 120	
	BLANK		4-BROMOFLUOROBENZENE (sur.)	2008/09/13		100	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2008/09/13		98	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2008/09/13		100	%	60 - 140
			D8-TOLUENE (sur.)	2008/09/13		98	%	60 - 140
			Benzene	2008/09/13	<0.0050			mg/kg
		Toluene	2008/09/13	<0.020			mg/kg	
		Ethylbenzene	2008/09/13	<0.010			mg/kg	
		Xylenes (Total)	2008/09/13	<0.040			mg/kg	
		m & p-Xylene	2008/09/13	<0.040			mg/kg	
		o-Xylene	2008/09/13	<0.020			mg/kg	
		F1 (C6-C10) - BTEX	2008/09/13	<12			mg/kg	
		(C6-C10)	2008/09/13	<12			mg/kg	
		RPD [L53749-01]	Benzene	2008/09/15		1.2		%
Toluene	2008/09/15			26.0		%	50	
Ethylbenzene	2008/09/15			24.3		%	50	
Xylenes (Total)	2008/09/15			34.9		%	50	
m & p-Xylene	2008/09/15			18.5		%	50	
o-Xylene	2008/09/15			51.3 (1)		%	50	
F1 (C6-C10) - BTEX	2008/09/15			50.1 (1)		%	50	
(C6-C10)	2008/09/15			49.0		%	50	
2569893 LC8	MATRIX SPIKE [L53691-01]		O-TERPHENYL (sur.)	2008/09/13		93	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2008/09/13		95	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2008/09/13		93	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2008/09/13		98	%	50 - 130
		SPIKE	O-TERPHENYL (sur.)	2008/09/13		86	%	50 - 130
	F2 (C10-C16 Hydrocarbons)		2008/09/13		98	%	80 - 120	
	F3 (C16-C34 Hydrocarbons)		2008/09/13		94	%	80 - 120	
	F4 (C34-C50 Hydrocarbons)		2008/09/13		98	%	80 - 120	
	BLANK		O-TERPHENYL (sur.)	2008/09/13		98	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/13		11, RDL=10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2008/09/13		<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2008/09/13		<10		mg/kg	
		RPD [L53645-01]	F2 (C10-C16 Hydrocarbons)	2008/09/13		48.3		%

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2569893 LC8	RPD [L53645-01]	F3 (C16-C34 Hydrocarbons)	2008/09/13	40.8		%	50
		F4 (C34-C50 Hydrocarbons)	2008/09/13	NC		%	50
2569895 JM7	MATRIX SPIKE [L53771-01]	4-BROMOFLUOROBENZENE (sur.)	2008/09/13		117	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/09/13		128	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/13		93	%	60 - 140
		D8-TOLUENE (sur.)	2008/09/13		107	%	60 - 140
		Benzene	2008/09/13		99	%	60 - 140
		Toluene	2008/09/13		NC	%	60 - 140
		Ethylbenzene	2008/09/13		NC	%	60 - 140
		m & p-Xylene	2008/09/13		NC	%	60 - 140
		o-Xylene	2008/09/13		NC	%	60 - 140
		(C6-C10)	2008/09/13		NC	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/09/13		101	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/09/13		124	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/13		90	%	60 - 140
		D8-TOLUENE (sur.)	2008/09/13		106	%	60 - 140
		Benzene	2008/09/13		94	%	60 - 140
		Toluene	2008/09/13		103	%	60 - 140
		Ethylbenzene	2008/09/13		110	%	60 - 140
		m & p-Xylene	2008/09/13		105	%	60 - 140
		o-Xylene	2008/09/13		107	%	60 - 140
		(C6-C10)	2008/09/13		89	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2008/09/13		102	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/09/13		122	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/13		95	%	60 - 140
		D8-TOLUENE (sur.)	2008/09/13		105	%	60 - 140
		Benzene	2008/09/13	<0.0050		mg/kg	
		Toluene	2008/09/13	<0.020		mg/kg	
		Ethylbenzene	2008/09/13	<0.010		mg/kg	
		Xylenes (Total)	2008/09/13	<0.040		mg/kg	
		m & p-Xylene	2008/09/13	<0.040		mg/kg	
		o-Xylene	2008/09/13	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2008/09/13	<12		mg/kg	
		(C6-C10)	2008/09/13	<12		mg/kg	
	RPD [L53770-01]	Benzene	2008/09/13	NC		%	50
		Toluene	2008/09/13	NC		%	50
		Ethylbenzene	2008/09/13	NC		%	50
		Xylenes (Total)	2008/09/13	NC		%	50
		m & p-Xylene	2008/09/13	NC		%	50
		o-Xylene	2008/09/13	NC		%	50
		F1 (C6-C10) - BTEX	2008/09/13	NC		%	50
		(C6-C10)	2008/09/13	NC		%	50
2569896 LC8	MATRIX SPIKE [L53730-01]	O-TERPHENYL (sur.)	2008/09/15		101	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/15		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2008/09/15		103	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2008/09/15		105	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2008/09/15		80	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/15		91	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2008/09/15		92	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2008/09/15		97	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2008/09/15		105	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/15	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2008/09/15	<10		mg/kg	

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2569896 LC8	BLANK RPD [L53729-01]	F4 (C34-C50 Hydrocarbons)	2008/09/15	<10		mg/kg	
		F2 (C10-C16 Hydrocarbons)	2008/09/15	47.1		%	50
		F3 (C16-C34 Hydrocarbons)	2008/09/15	19.1		%	50
		F4 (C34-C50 Hydrocarbons)	2008/09/15	NC		%	50
2569905 LC8	MATRIX SPIKE [L53791-01]	O-TERPHENYL (sur.)	2008/09/15		91	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/15		90	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2008/09/15		89	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2008/09/15		83	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2008/09/15		88	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/15		98	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2008/09/15		97	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2008/09/15		88	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2008/09/15		85	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/15	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2008/09/15	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2008/09/15	<10		mg/kg	
	RPD [L53790-01]	F2 (C10-C16 Hydrocarbons)	2008/09/15	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2008/09/15	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2008/09/15	NC		%	50
		2569907 LC8	MATRIX SPIKE [L53750-01]	O-TERPHENYL (sur.)	2008/09/15		87
F2 (C10-C16 Hydrocarbons)	2008/09/15				NC	%	50 - 130
F3 (C16-C34 Hydrocarbons)	2008/09/15				89	%	50 - 130
F4 (C34-C50 Hydrocarbons)	2008/09/15				93	%	50 - 130
SPIKE	O-TERPHENYL (sur.)		2008/09/15		78	%	50 - 130
	F2 (C10-C16 Hydrocarbons)		2008/09/15		92	%	80 - 120
	F3 (C16-C34 Hydrocarbons)		2008/09/15		94	%	80 - 120
	F4 (C34-C50 Hydrocarbons)		2008/09/15		97	%	80 - 120
BLANK	O-TERPHENYL (sur.)		2008/09/15		100	%	50 - 130
	F2 (C10-C16 Hydrocarbons)		2008/09/15	11, RDL=10		mg/kg	
	F3 (C16-C34 Hydrocarbons)		2008/09/15	<10		mg/kg	
	F4 (C34-C50 Hydrocarbons)		2008/09/15	<10		mg/kg	
RPD [L53749-01]	F2 (C10-C16 Hydrocarbons)		2008/09/15	NC		%	50
	F3 (C16-C34 Hydrocarbons)		2008/09/15	9.5		%	50
	F4 (C34-C50 Hydrocarbons)		2008/09/15	NC		%	50
	2569917 LC8		MATRIX SPIKE [L53771-01]	O-TERPHENYL (sur.)	2008/09/13		83
F2 (C10-C16 Hydrocarbons)		2008/09/13			NC	%	50 - 130
F3 (C16-C34 Hydrocarbons)		2008/09/13			77	%	50 - 130
F4 (C34-C50 Hydrocarbons)		2008/09/13			76	%	50 - 130
SPIKE		O-TERPHENYL (sur.)	2008/09/13		79	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/13		96	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2008/09/13		93	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2008/09/13		91	%	80 - 120
BLANK		O-TERPHENYL (sur.)	2008/09/13		94	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/13	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2008/09/13	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2008/09/13	<10		mg/kg	
RPD [L53770-01]		F2 (C10-C16 Hydrocarbons)	2008/09/13	10.9		%	50
		F3 (C16-C34 Hydrocarbons)	2008/09/13	23.2		%	50
		F4 (C34-C50 Hydrocarbons)	2008/09/13	NC		%	50
		2569923 LC8	MATRIX SPIKE [L53815-01]	O-TERPHENYL (sur.)	2008/09/14		78
F2 (C10-C16 Hydrocarbons)	2008/09/14				77	%	50 - 130

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2569923 LC8	MATRIX SPIKE [L53815-01]	F3 (C16-C34 Hydrocarbons)	2008/09/14		79	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2008/09/14		85	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2008/09/14		79	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/14		86	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2008/09/14		89	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2008/09/14		94	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2008/09/14		90	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2008/09/14	11, RDL=10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2008/09/14	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2008/09/14	<10		mg/kg	
	RPD [L53814-01]	F2 (C10-C16 Hydrocarbons)	2008/09/14	27.1		%	50
		F3 (C16-C34 Hydrocarbons)	2008/09/14	9.2		%	50
		F4 (C34-C50 Hydrocarbons)	2008/09/14	NC		%	50
2570016 PC1	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/09/14		88	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/09/14		92	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/14		103	%	60 - 140
		D8-TOLUENE (sur.)	2008/09/14		99	%	60 - 140
		Benzene	2008/09/14		97	%	60 - 140
		Toluene	2008/09/14		86	%	60 - 140
		Ethylbenzene	2008/09/14		87	%	60 - 140
		m & p-Xylene	2008/09/14		80	%	60 - 140
		o-Xylene	2008/09/14		85	%	60 - 140
		(C6-C10)	2008/09/14		92	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/09/14		87	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/09/14		90	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/14		115	%	60 - 140
		D8-TOLUENE (sur.)	2008/09/14		100	%	60 - 140
		Benzene	2008/09/14		96	%	60 - 140
		Toluene	2008/09/14		84	%	60 - 140
		Ethylbenzene	2008/09/14		85	%	60 - 140
		m & p-Xylene	2008/09/14		76	%	60 - 140
		o-Xylene	2008/09/14		83	%	60 - 140
		(C6-C10)	2008/09/14		90	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2008/09/14		92	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2008/09/14		88	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/14		101	%	60 - 140
		D8-TOLUENE (sur.)	2008/09/14		100	%	60 - 140
		Benzene	2008/09/14	<0.0050		mg/kg	
		Toluene	2008/09/14	<0.020		mg/kg	
		Ethylbenzene	2008/09/14	<0.010		mg/kg	
		Xylenes (Total)	2008/09/14	<0.040		mg/kg	
		m & p-Xylene	2008/09/14	<0.040		mg/kg	
		o-Xylene	2008/09/14	<0.020		mg/kg	
	RPD	F1 (C6-C10) - BTEX	2008/09/14	<12		mg/kg	
		(C6-C10)	2008/09/14	<12		mg/kg	
		Benzene	2008/09/14	7.1		%	50
		Toluene	2008/09/14	NC		%	50
Ethylbenzene		2008/09/14	NC		%	50	
Xylenes (Total)		2008/09/14	NC		%	50	
m & p-Xylene		2008/09/14	NC		%	50	
o-Xylene		2008/09/14	NC		%	50	
F1 (C6-C10) - BTEX		2008/09/14	NC		%	50	
(C6-C10)		2008/09/14	NC		%	50	
2570036 JM7	MATRIX SPIKE [L53691-01]	4-BROMOFLUOROBENZENE (sur.)	2008/09/16		87	%	60 - 140

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
2570036 JM7	MATRIX SPIKE [L53691-01]	D10-ETHYLBENZENE (sur.)	2008/09/16		118	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/16		99	%	60 - 140	
		D8-TOLUENE (sur.)	2008/09/16		97	%	60 - 140	
		Benzene	2008/09/16		79	%	60 - 140	
		Toluene	2008/09/16		87	%	60 - 140	
		Ethylbenzene	2008/09/16		94	%	60 - 140	
		m & p-Xylene	2008/09/16		86	%	60 - 140	
		o-Xylene	2008/09/16		91	%	60 - 140	
		(C6-C10)	2008/09/16		74	%	60 - 140	
		SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/09/13		100	%	60 - 140
	D10-ETHYLBENZENE (sur.)		2008/09/13		117	%	30 - 130	
	D4-1,2-DICHLOROETHANE (sur.)		2008/09/13		94	%	60 - 140	
	D8-TOLUENE (sur.)		2008/09/13		103	%	60 - 140	
	Benzene		2008/09/13		95	%	60 - 140	
	Toluene		2008/09/13		100	%	60 - 140	
	Ethylbenzene		2008/09/13		102	%	60 - 140	
	m & p-Xylene		2008/09/13		97	%	60 - 140	
	o-Xylene		2008/09/13		101	%	60 - 140	
	(C6-C10)		2008/09/13		86	%	80 - 120	
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2008/09/13		99	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2008/09/13		112	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/13		89	%	60 - 140	
		D8-TOLUENE (sur.)	2008/09/13		103	%	60 - 140	
		Benzene	2008/09/13	<0.0050		mg/kg		
		Toluene	2008/09/13	<0.020		mg/kg		
		Ethylbenzene	2008/09/13	<0.010		mg/kg		
		Xylenes (Total)	2008/09/13	<0.040		mg/kg		
		m & p-Xylene	2008/09/13	<0.040		mg/kg		
		o-Xylene	2008/09/13	<0.020		mg/kg		
	RPD [L53645-01]	F1 (C6-C10) - BTEX	2008/09/13		<12		mg/kg	
		(C6-C10)	2008/09/13		<12		mg/kg	
		Benzene	2008/09/13		NC		%	50
		Toluene	2008/09/13		NC		%	50
Ethylbenzene		2008/09/13		NC		%	50	
Xylenes (Total)		2008/09/13		NC		%	50	
m & p-Xylene		2008/09/13		NC		%	50	
o-Xylene		2008/09/13		NC		%	50	
F1 (C6-C10) - BTEX		2008/09/13		NC		%	50	
(C6-C10)		2008/09/13		NC		%	50	
2570043 MB7	MATRIX SPIKE [L53730-01]	4-BROMOFLUOROBENZENE (sur.)	2008/09/15		103	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2008/09/15		110	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/15		96	%	60 - 140	
		D8-TOLUENE (sur.)	2008/09/15		109	%	60 - 140	
		Benzene	2008/09/15		NC	%	60 - 140	
		Toluene	2008/09/15		102	%	60 - 140	
		Ethylbenzene	2008/09/15		NC	%	60 - 140	
		m & p-Xylene	2008/09/15		NC	%	60 - 140	
		o-Xylene	2008/09/15		NC	%	60 - 140	
		(C6-C10)	2008/09/15		NC	%	60 - 140	
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/09/15		89	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2008/09/15		99	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/15		100	%	60 - 140	
		D8-TOLUENE (sur.)	2008/09/15		105	%	60 - 140	

Quality Assurance Report (Continued)
 Maxxam Job Number: EA847289

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
2570043 MB7	SPIKE	Benzene	2008/09/15		95	%	60 - 140		
		Toluene	2008/09/15		88	%	60 - 140		
		Ethylbenzene	2008/09/15		91	%	60 - 140		
		m & p-Xylene	2008/09/15		83	%	60 - 140		
		o-Xylene	2008/09/15		87	%	60 - 140		
	BLANK	(C6-C10)	2008/09/15		88	%	80 - 120		
		4-BROMOFLUOROBENZENE (sur.)	2008/09/15		92	%	60 - 140		
		D10-ETHYLBENZENE (sur.)	2008/09/15		98	%	30 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/15		95	%	60 - 140		
		D8-TOLUENE (sur.)	2008/09/15		102	%	60 - 140		
		Benzene	2008/09/15	<0.0050			mg/kg		
		Toluene	2008/09/15	<0.020			mg/kg		
		Ethylbenzene	2008/09/15	<0.010			mg/kg		
		Xylenes (Total)	2008/09/15	<0.040			mg/kg		
		m & p-Xylene	2008/09/15	<0.040			mg/kg		
	RPD [L53729-01]	o-Xylene	2008/09/15	<0.020			mg/kg		
		F1 (C6-C10) - BTEX	2008/09/15	<12			mg/kg		
		(C6-C10)	2008/09/15	<12			mg/kg		
		Benzene	2008/09/16	3.9			%	50	
		Toluene	2008/09/16	1.6			%	50	
		Ethylbenzene	2008/09/16	27.3			%	50	
		Xylenes (Total)	2008/09/16	7.9			%	50	
		m & p-Xylene	2008/09/16	7.3			%	50	
		o-Xylene	2008/09/16	8.9			%	50	
		F1 (C6-C10) - BTEX	2008/09/16	34.8			%	50	
		(C6-C10)	2008/09/16	31.5			%	50	
		2570053 MB7	MATRIX SPIKE [L53791-01]	4-BROMOFLUOROBENZENE (sur.)	2008/09/16		89	%	60 - 140
				D10-ETHYLBENZENE (sur.)	2008/09/16		95	%	30 - 130
	D4-1,2-DICHLOROETHANE (sur.)			2008/09/16		100	%	60 - 140	
	D8-TOLUENE (sur.)			2008/09/16		102	%	60 - 140	
	Benzene			2008/09/16		89	%	60 - 140	
	SPIKE		Toluene	2008/09/16		83	%	60 - 140	
			Ethylbenzene	2008/09/16		83	%	60 - 140	
m & p-Xylene			2008/09/16		75	%	60 - 140		
o-Xylene			2008/09/16		78	%	60 - 140		
(C6-C10)			2008/09/16		111	%	60 - 140		
4-BROMOFLUOROBENZENE (sur.)			2008/09/16		87	%	60 - 140		
D10-ETHYLBENZENE (sur.)			2008/09/16		93	%	30 - 130		
D4-1,2-DICHLOROETHANE (sur.)			2008/09/16		104	%	60 - 140		
D8-TOLUENE (sur.)			2008/09/16		100	%	60 - 140		
Benzene			2008/09/16		94	%	60 - 140		
BLANK	Toluene		2008/09/16		88	%	60 - 140		
	Ethylbenzene		2008/09/16		86	%	60 - 140		
	m & p-Xylene		2008/09/16		80	%	60 - 140		
	o-Xylene		2008/09/16		80	%	60 - 140		
	(C6-C10)		2008/09/16		108	%	80 - 120		
	4-BROMOFLUOROBENZENE (sur.)		2008/09/16		92	%	60 - 140		
	D10-ETHYLBENZENE (sur.)		2008/09/16		51	%	30 - 130		
	D4-1,2-DICHLOROETHANE (sur.)		2008/09/16		96	%	60 - 140		
	D8-TOLUENE (sur.)		2008/09/16		99	%	60 - 140		
	Benzene		2008/09/16	<0.0050			mg/kg		
Toluene	2008/09/16		<0.020			mg/kg			
Ethylbenzene	2008/09/16		<0.010			mg/kg			
Xylenes (Total)	2008/09/16		<0.040			mg/kg			

Quality Assurance Report (Continued)
 Maxxam Job Number: EA847289

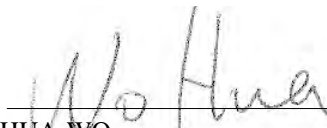
QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2570053 MB7	BLANK	m & p-Xylene	2008/09/16	<0.040		mg/kg	
		o-Xylene	2008/09/16	<0.020		mg/kg	
	RPD [L53790-01]	F1 (C6-C10) - BTEX	2008/09/16	<12		mg/kg	
		(C6-C10)	2008/09/16	<12		mg/kg	
		Benzene	2008/09/16	NC		%	50
		Toluene	2008/09/16	NC		%	50
		Ethylbenzene	2008/09/16	NC		%	50
		Xylenes (Total)	2008/09/16	NC		%	50
		m & p-Xylene	2008/09/16	NC		%	50
		o-Xylene	2008/09/16	NC		%	50
		F1 (C6-C10) - BTEX	2008/09/16	NC		%	50
		(C6-C10)	2008/09/16	NC		%	50
2570819 GG3	BLANK	Moisture	2008/09/12	<0.3		%	
	RPD [L53749-01]	Moisture	2008/09/12	1.9		%	20
2570977 RT1	BLANK	Moisture	2008/09/12	<0.3		%	
	RPD [L53770-01]	Moisture	2008/09/12	1.8		%	20
2571074 GG3	BLANK	Moisture	2008/09/12	<0.3		%	
	RPD [L53814-01]	Moisture	2008/09/12	2.7		%	20
2571192 RT1	BLANK	Moisture	2008/09/12	<0.3		%	
	RPD [L53790-01]	Moisture	2008/09/12	2.7		%	20
2571320 RT1	BLANK	Moisture	2008/09/05	<0.3		%	
	RPD [L53729-01]	Moisture	2008/09/05	0.8		%	20
2571395 RT1	BLANK	Moisture	2008/09/12	<0.3		%	
	RPD [L53645-01]	Moisture	2008/09/12	8.5		%	20

NC = Non-calculable
 RPD = Relative Percent Difference
 (1) Please note that the recovery of some compounds are outside control limits however the overall quality control for this analysis meets our acceptability criteria.


Validation Signature Page

Maxxam Job #: A847289

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



HUA WO,



KRISTOPHER BEAUDET,

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

58158
 A847289

Invoice To: Require Report? Yes No

Company Name: E. GRUBER'S TRANSPORT

Contact Name: JIM STEVENS

Address: PO BOX 177, Tuktoyaktuk, NT
 PC: X0E 1C0

Phone / Fax #: Ph: 867-977-7000 Fax: 867-977-2257

Report To:
 SAME AS INVOICE

Ph:

PO # / AFE #:

Quotation #: C08-032

Project #:

Project Name: JOHNSON POINT

Location: JOHNSON POINT, NT

Sampler's Initials: JP

REGULATORY REQUIREMENTS:

Please Indicate Landuse

AT1

CCME

OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESSES:

jstevens@egrubers.com

djwells@klbha.com

jpeterson@klbha.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab)

Date Required:

REGULAR Turnaround

SOILS											WATERS										
BTEX F1-F4	Sieve (75 micron)	Salinity 4	Metals <input type="checkbox"/> Extended <input type="checkbox"/> CCME <input type="checkbox"/> AT1	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	TOC <input type="checkbox"/> DOC	TOTAL Metals	DISS. Metals	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	NH3 <input type="checkbox"/> NH3-D	TKN <input type="checkbox"/> DKN				
X																					

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager.

Relinquished By: JARED PETERSON

Signature: [Signature]

COMMENTS/SPECIAL INSTRUCTIONS:

Date/Time: SEPT 9/08 11:30

Received
 11/09/08
 8:25 KE

Temperature
 56.5 42.3

58143
As47289

Invoice To: Require Report? Yes No

Company Name: _____

Contact Name: _____

Address: _____

Phone / Fax #: Ph: _____ PC: _____ Fax: _____

Report To: _____

Ph: _____

PO # / AFE #: _____

Quotation #: 108-032

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

REGULATORY REQUIREMENTS:

Please Indicate Landuse

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESSES:

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab)

Date Required: _____

REGULAR Turnaround

SOILS												WATERS									
BTEX F1-F4	Sieve (75 micron)	Salinity 4	Metals <input type="checkbox"/> Extended <input type="checkbox"/> CCME <input type="checkbox"/> AT1	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	TOC <input type="checkbox"/> DOC	TOTAL Metals	DISS. Metals	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	NH3 <input type="checkbox"/> NH3-D	TKN <input type="checkbox"/> DKN				
X																					

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager.

Relinquished By: _____ Date/Time: _____

Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

Received
11/09/08
8:25 KE

Temperature
56.5 42.3

58144
 A547289

Invoice To: Require Report? Yes No

Company Name: _____

Contact Name: _____

Address: _____

Phone / Fax #: Ph: _____ Fax: _____

PC: _____

Report To: _____

Ph: _____

PO # / AFE #: _____

Quotation #: COB032

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

REGULATORY REQUIREMENTS:

Please Indicate Landuse

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESSES:

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab)
 Date Required: _____

REGULAR Turnaround

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS											WATERS									
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Metals <input type="checkbox"/> Extended <input type="checkbox"/> CCME <input type="checkbox"/> AT1	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	TOC <input type="checkbox"/> DOC	TOTAL Metals	DISS. Metals	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	NH3 <input type="checkbox"/> NH3-D	TKN <input type="checkbox"/> DKN			
1 35, 165	S	2008/SEPT/4	X																				
2 30, 150																							
3 35, 145																							
4 40, 140																							
5 130, 150																							
6 35, 135																							
7 35, 115																							
8 40, 100																							
9 30, 90																							
10 15, 65																							
11 120, 130																							
12 25, 55																							

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager.

Relinquished By: _____ Date/Time: _____

Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____ Page 51 of 58

Received
 11/09/08 KE
 8:25

Temperature
 5.6, 5.4, 2.3

COC #

58145

As47289

Invoice To: Require Report? Yes No

Company Name: _____

Contact Name: _____

Address: _____

PC: _____

Phone / Fax #: Ph: _____ **Fax:** _____

Report To:

Ph: _____

PO # / AFE #: _____

Quotation #: L08-032

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

REGULATORY REQUIREMENTS:

Please Indicate Landuse

- AT1 _____
- CCME _____
- OTHER _____

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
- Date Required: _____
- REGULAR Turnaround

REPORT DISTRIBUTION:

EMAIL ADDRESSES:

- _____
- _____
- _____
- _____
- _____

SOILS			WATERS																		
BTEX F1-F4	Sieve (75 micron)	Salinity 4	Metals	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package			DOC	TOTAL Metals		DISS. Metals		Mercury	NH3	TKN
			<input type="checkbox"/> Extended <input type="checkbox"/> CCME <input type="checkbox"/> AT1								<input type="checkbox"/> F	<input type="checkbox"/> Turb	<input type="checkbox"/> Preserved		<input type="checkbox"/> NOT Preserved	<input type="checkbox"/> AT1	<input type="checkbox"/> Extended	<input type="checkbox"/> Preserved			
Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day																			
1	35,65	S	2008/SEPT/4	X																	
2	40,70																				
3	50,60																				
4	50,90																				
5	45,115																				
6	130,140																				
7	50,120																				
8	45,125																				
9	50,150																				
10	40,40																				
11	135,125																				
12	55,45																				

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager.

Relinquished By: _____ Date/Time: _____

Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

Received
11/09/08
8:25
KE

Temperature
56.5
4.2, 3

COC #

58146
As47289

Invoice To: Require Report? Yes No

Company Name: _____

Contact Name: _____

Address: _____

Phone / Fax #: Ph: _____ **Fax:** _____

PC: _____

Report To:

Ph: _____

PO # / AFE #: _____

Quotation #: 108-032

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

REGULATORY REQUIREMENTS:

Please Indicate Landuse

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESSES:

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab)

Date Required: _____

REGULAR Turnaround

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS										WATERS																																													
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Metals <input type="checkbox"/> Extended <input type="checkbox"/> CCME <input type="checkbox"/> AT1	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	TOC <input type="checkbox"/> DOC	TOTAL Metals	DISS. Metals	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	NH3 <input type="checkbox"/> NH3-D	TKN <input type="checkbox"/> DKN																																						
1	55,35	S	2008/SEPT/04	X																																																							
2	65,35																																																										
3	70,40																																																										
4	80,30																																																										
5	90,20																																																										
6	95,145																																																										
7	95,15																																																										
8	95,45																																																										
9	85,45																																																										
10	60,50																																																										
11	65,55																																																										
12	70,60																																																										

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager.

Relinquished By: _____

Date/Time: _____

Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

Received
11/09/08
8:25 KE

Temperature
5.65 4.2, 3

Invoice To: Require Report? Yes No

Company Name: _____

Contact Name: _____

Address: _____

PC: _____

Phone / Fax #: **Ph:** _____ **Fax:** _____

Report To:

Ph: _____

PO # / AFE #: _____

Quotation #: 208-032

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

REGULATORY REQUIREMENTS:

Please Indicate Landuse

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESSES:

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab)
Date Required: _____

REGULAR Turnaround

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS								WATERS											
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Metals <input type="checkbox"/> Extended <input type="checkbox"/> CCME <input type="checkbox"/> AT1	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	TOC <input type="checkbox"/> DOC	TOTAL Metals	DISS. Metals	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	<input type="checkbox"/> NH3 <input type="checkbox"/> NH3-D	<input type="checkbox"/> TKN <input type="checkbox"/> DKN		
1	165,125	S	2008/SEP/4	X																			
2	75,65																						
3	80,60																						
4	80,70																						
5	85,75																						
6	155,135																						
7	105,85																						
8	80,90																						
9	75,75																						
10	60,80																						
11	65,85																						
12	160,140																						

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager.

Relinquished By: _____ **Date/Time:** _____

Signature: [Signature]

Received
11/09/08
8:25 *KG*

Temperature
5.6, 5.4, 2.3

COMMENTS/SPECIAL INSTRUCTIONS: _____



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9619 - 42 Ave., T6E 5R2

Ph: (403) 291-3077 Fax: (403) 735-2240
Ph: (780) 465-1212 Fax: (780) 450-4187
www.maxxamanalytics.com

Toll-free: (800) 386-7247
Toll-free: (877) 465-8889

58148
As 47289

CHAIN OF CUSTODY

Page: 7 of 10

Invoice To: Require Report? Yes No

Company Name: _____
Contact Name: _____
Address: _____
PC: _____
Phone / Fax #: _____ Ph: _____ Fax: _____

Report To:

Ph: _____

PO # / AFE #: _____
Quotation #: 608-032
Project #: _____
Project Name: _____
Location: _____
Sampler's Initials: _____

REGULATORY REQUIREMENTS:

Please Indicate Landuse

- AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESSES:

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
Date Required: _____
 REGULAR Turnaround

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS										WATERS													
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Metals <input type="checkbox"/> Extended <input type="checkbox"/> CCME <input type="checkbox"/> AT1	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	<input type="checkbox"/> TOC <input type="checkbox"/> DOC	TOTAL Metals		DISS. Metals		Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	<input type="checkbox"/> NH3 <input type="checkbox"/> NH3-D	<input type="checkbox"/> TKN <input type="checkbox"/> DKN				
1	35,55	S	2008/SEPT/4	X																							
2	150,210																										
3	145,215																										
4	135,205																										
5	135,195																										
6	130,230																										
7	130,220																										
8	130,190																										
9	130,170																										
10	125,235																										
11	125,225																										
12	125,215																										

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager:

Relinquished By: _____ Date/Time: _____

Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

Received
11/09/08
8:25 KE

Temperature
5.6, 5.4, 2.3

COC #

58149
 A507289

Invoice To: Require Report? Yes No

Company Name: _____

Contact Name: _____

Address: _____

PC: _____

Phone / Fax #: Ph: _____ **Fax:** _____

Report To:

Ph: _____

PO # / AFE #: _____

Quotation #: 608-032

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

REGULATORY REQUIREMENTS:

Please Indicate Landuse

AT1

CCME

OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESSES:

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab)

Date Required: _____

REGULAR Turnaround

SOILS										WATERS									
BTEX F1-F4	Sieve (75 micron)	Salinity 4	Metals <input type="checkbox"/> Extended <input type="checkbox"/> CCME <input type="checkbox"/> AT1	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	TOC <input type="checkbox"/> DOC	CCME FWAL <input type="checkbox"/> AT1 <input type="checkbox"/> Extended	Preserved <input type="checkbox"/> NOT Preserved	CCME FWAL <input type="checkbox"/> AT1 <input type="checkbox"/> Extended	Preserved <input type="checkbox"/> NOT Preserved	Filtered <input type="checkbox"/> NOT Filtered	Total <input type="checkbox"/> Dissolved	Mercury <input type="checkbox"/> NH3 <input type="checkbox"/> NH3-D <input type="checkbox"/> TKN <input type="checkbox"/> DKN
X																			

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day
1 125, 205	S	2008/09/04
2 125, 185		
3 125, 165		
4 120, 120 220		
5 120, 210		
6 120, 190		
7 115, 245		
8 115, 235		
9 115, 185		
10 115, 175		
11 110, 230		
12 105, 175		

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager.

Relinquished By: _____ **Date/Time:** _____

Signature: _____

Received
 11/09/08
 8:25 KE

Temperature
 5.6, 5.4, 2.3

COMMENTS/SPECIAL INSTRUCTIONS: _____

COC #

Asutayag **58150**

Invoice To: Require Report? Yes No

Company Name: _____
 Contact Name: _____
 Address: _____
 PC: _____
 Phone / Fax #: Ph: _____ Fax: _____

Report To: _____

 Ph: _____

PO # / AFE #: _____
 Quotation #: 108-032
 Project #: _____
 Project Name: _____
 Location: _____
 Sampler's Initials: _____

REGULATORY REQUIREMENTS:

Please Indicate Landuse
 AT1
 CCME
 OTHER

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab)
 Date Required: _____
 REGULAR Turnaround

REPORT DISTRIBUTION:

EMAIL ADDRESSES:

SOILS													WATERS							
BTEX F1-F4	Sieve (75 micron)	Salinity 4	Metals <input type="checkbox"/> Extended <input type="checkbox"/> CCME <input type="checkbox"/> AT1	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F <input type="checkbox"/>	TOC <input type="checkbox"/> DOC <input type="checkbox"/>	TOTAL Metals <input type="checkbox"/> CCME FWAL <input type="checkbox"/> AT1 <input type="checkbox"/> Extended <input type="checkbox"/>	DISS. Metals <input type="checkbox"/> Preserved <input type="checkbox"/> NOT Preserved <input type="checkbox"/>	Mercury <input type="checkbox"/> CCME FWAL <input type="checkbox"/> AT1 <input type="checkbox"/> Extended <input type="checkbox"/>	Total <input type="checkbox"/> Dissolved <input type="checkbox"/>	NH3 <input type="checkbox"/> NH3-D <input type="checkbox"/>	TKN <input type="checkbox"/> DKN <input type="checkbox"/>		
X																				

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day
1	<u>100,90</u>	<u>S</u>	<u>2008/SEP/04</u>
2	<u>90,90</u>		
3	<u>85,85</u>		
4	<u>70,120</u>		
5	<u>70,110</u>		
6	<u>65,125</u>		
7	<u>65,115</u>		
8	<u>65,75</u>		
9	<u>50,70</u>		
10	<u>50,80</u>		
11	<u>45,85</u>		
12	<u>45,65</u>		

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager.

Relinquished By: *[Signature]* Date/Time: _____
 Signature: _____
 COMMENTS/SPECIAL INSTRUCTIONS: _____ Page 57 of 58

Received
11/09/08
8:25 KE

Temperature
5, 6, 5, 4, 2, 3
 COC #



Calgary: 4000 19st St. NE, T2E 6P8
 Edmonton: 9619 - 42 Ave., T6E 5R2

Ph: (403) 291-3077 Fax: (403) 735-2240
 Ph: (780) 465-1212 Fax: (780) 450-4187
 www.maxxamanalytics.com

Toll-free: (800) 386-7247
 Toll-free: (877) 465-8889

58151
 Acutag

CHAIN OF CUSTODY

Page: 10 of 10

Invoice To: Require Report? Yes No

Company Name: _____

Contact Name: _____

Address: _____

PC: _____

Phone / Fax #: Ph: Fax: _____

Report To: _____

Ph: _____

PO # / AFE #: _____

Quotation #: 208 032

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

REGULATORY REQUIREMENTS:

Please Indicate Landuse

- AT1 _____
- CCME _____
- OTHER _____

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab)

Date Required: _____

REGULAR Turnaround

REPORT DISTRIBUTION:

EMAIL ADDRESSES:

SOILS											WATERS										
Matrix S/W	Date & Time Sampled	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Metals <input type="checkbox"/> Extended <input type="checkbox"/> CCME <input type="checkbox"/> AT1	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F <input type="checkbox"/> TOC <input type="checkbox"/> DOC	TOTAL Metals	DISS. Metals	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	NH3 <input type="checkbox"/> NH3-D	TKN <input type="checkbox"/> DKN			
1	40, 50	S	2008/SEPT/04	X																	
2	35, 45	S	2008/SEPT/04	X																	
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager.

Relinquished By: _____

Date/Time: _____

Signature: _____

Received
 11/09/08
 825 KE

Temperature
 56.5 4.2, 3

COMMENTS/SPECIAL INSTRUCTIONS: _____

COC #



Your Project #: JOHNSON PONT
 Site: JOHNSON PONT,NWT
 Your C.O.C. #: 31324

Attention: JIM STEVENS
 IEG CONSULTANTS LTD.
 BOX 177
 TUKTOYAKTUK, NT
 CANADA X0E 1C0

Report Date: 2008/09/14

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A846341

Received: 2008/09/08, 9:30

Sample Matrix: Water
 # Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity (pp, total), CO ₃ ,HCO ₃ ,OH	1	N/A	2008/09/10	EENVSOP-00054	SM 2320-B
BTEX/F1 in Water by HS GC/MS	3	N/A	2008/09/10	EENVSOP-00004 EENVSOP-00002	EPA 8260C / CCME
Cadmium - low level CCME - Dissolved	1	N/A	2008/09/10	CAL SOP-00191	EPA SW-846 6020A
Cadmium - low level CCME (Total)	1	2008/09/09	2008/09/10	CAL SOP-00191	EPA SW-846 6020A
Chloride by Automated Colourimetry	1	N/A	2008/09/10	EENVSOP-00055	EPA 325.2
Conductivity	1	N/A	2008/09/10	EENVSOP-00054	SM 2510-B
CCME Hydrocarbons (F2-F4 in water)	2	2008/09/09	2008/09/09	EENVSOP-00009 EENVSOP-00008	EPA 8015D/3510C
Hardness	1	N/A	2008/09/10		
Elements by ICP - Dissolved	2	N/A	2008/09/09	CAL SOP-00192	EPA SW846 6010B
Elements by ICP - Total	1	2008/09/11	2008/09/11	CAL SOP-00192	EPA SW846 6010B
Elements by ICPMS - Dissolved	1	N/A	2008/09/10	CAL SOP-00191	EPA SW-846 6020A
Elements by ICPMS - Total	1	2008/09/11	2008/09/11	CAL SOP-00191	EPA SW-846 6020A
Ion Balance	1	N/A	2008/09/10		
Sum of cations, anions	1	N/A	2008/09/10	CAL WI# 0013	
Nitrate + Nitrite-N (calculated)	1	N/A	2008/09/12		
Nitrogen, (Nitrite, Nitrate) by IC	1	N/A	2008/09/11	CAL SOP-00060	SM 4110-B
pH (Alkalinity titrator)	1	N/A	2008/09/10		
Sulphate by Automated Colourimetry	1	N/A	2008/09/10	EENVSOP-00057	EPA 375.4
Total Dissolved Solids (Calculated)	1	N/A	2008/09/11	CAL WI-00053	

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SHELYCE MORRISON, Project Manager
 Email: shelyce.morrison@maxxamanalytics.com
 Phone# (780) 577-7115 Ext:7115



Your Project #: JOHNSON PONT
Site: JOHNSON PONT,NWT
Your C.O.C. #: 31324

Attention: JIM STEVENS
IEG CONSULTANTS LTD.
BOX 177
TUKTOYAKTUK, NT
CANADA X0E 1C0

Report Date: 2008/09/14

CERTIFICATE OF ANALYSIS

-2-

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

AT1 BTEX AND F1 (WATER)

Maxxam ID		L46881	L46883	L46884		
Sampling Date		2008/09/06	2008/09/06	2008/09/06		
COC Number		31324	31324	31324		
	Units	JP02-01	JP02-02	JP02-03	RDL	QC Batch

Volatiles						
Benzene	ug/L	190	220	170	0.4	2560044
Toluene	ug/L	6100	5800	5900	40	2560044
Ethylbenzene	ug/L	1000	930	1100	40	2560044
o-Xylene	ug/L	2300	2300	2200	40	2560044
m & p-Xylene	ug/L	4700	4500	4600	80	2560044
Xylenes (Total)	ug/L	6900	6700	6800	80	2560044
F1 (C6-C10) - BTEX	ug/L	1800	3500	2900	100	2560044
(C6-C10)	ug/L	16000	17000	17000	100	2560044
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	94	106		2560044
D4-1,2-DICHLOROETHANE (sur.)	%	107	107	88		2560044
D8-TOLUENE (sur.)	%	96	98	103		2560044
RDL = Reportable Detection Limit						

AT1 F2-F4 (WATER)

Maxxam ID		L46885	L46886		
Sampling Date		2008/09/06	2008/09/06		
COC Number		31324	31324		
	Units	JP02-04	JP02-05	RDL	QC Batch

Extractable Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	mg/L	4.1	3.0	0.1	2559121
F3 (C16-C34 Hydrocarbons)	mg/L	0.1	0.1	0.1	2559121
F4 (C34-C50 Hydrocarbons)	mg/L	<0.1	<0.1	0.1	2559121
Reached Baseline at C50	mg/L	Yes	Yes		2559121
Surrogate Recovery (%)					
O-TERPHENYL (sur.)	%	103	109		2559121
RDL = Reportable Detection Limit					

RCAP - PARTIAL ROUTINE (WATER)

Maxxam ID		L46888		
Sampling Date		2008/09/06		
COC Number		31324		
	Units	JP02-07	RDL	QC Batch

Calculated Parameters				
Anion Sum	meq/L	24	N/A	2559624
Cation Sum	meq/L	23	N/A	2559624
Hardness (CaCO3)	mg/L	560	0.5	2559161
Ion Balance	N/A	0.94	0.01	2559618
Total Dissolved Solids	mg/L	1200	10	2559640
Misc. Inorganics				
Conductivity	uS/cm	2300	1	2561979
pH	N/A	7.7	N/A	2561981
Anions				
Alkalinity (PP as CaCO3)	mg/L	<0.5	0.5	2561975
Alkalinity (Total as CaCO3)	mg/L	560	0.5	2561975
Bicarbonate (HCO3)	mg/L	690	0.5	2561975
Carbonate (CO3)	mg/L	<0.5	0.5	2561975
Hydroxide (OH)	mg/L	<0.5	0.5	2561975
Dissolved Sulphate (SO4)	mg/L	5.9	0.5	2563905
Dissolved Chloride (Cl)	mg/L	450	0.5	2562817
Nutrients				
Dissolved Nitrate (N)	mg/L	0.13	0.003	2570061
Nitrate plus Nitrite (N)	mg/L	0.15	0.003	2559631
Dissolved Nitrite (N)	mg/L	0.014	0.003	2570061
Elements				
Dissolved Calcium (Ca)	mg/L	67	0.3	2561174
Dissolved Iron (Fe)	mg/L	0.07	0.06	2561174
Dissolved Magnesium (Mg)	mg/L	96	0.2	2561174
Dissolved Manganese (Mn)	mg/L	1.8	0.004	2561174
Dissolved Potassium (K)	mg/L	8.2	0.3	2561174
Dissolved Sodium (Na)	mg/L	250	0.5	2561174
RDL = Reportable Detection Limit				

CCME FWAL METALS SCAN - DISSOLVED (WATER)

Maxxam ID		L46887		
Sampling Date		2008/09/06		
COC Number		31324		
	Units	JP02-06	RDL	QC Batch

Low Level Elements				
Dissolved Cadmium (Cd)	ug/L	<0.01	0.01	2557066
Elements				
Dissolved Aluminum (Al)	mg/L	0.022	0.001	2557052
Dissolved Antimony (Sb)	mg/L	<0.0002	0.0002	2557052
Dissolved Arsenic (As)	mg/L	0.001	0.001	2557052
Dissolved Barium (Ba)	mg/L	0.13	0.01	2561174
Dissolved Beryllium (Be)	mg/L	<0.001	0.001	2557052
Dissolved Boron (B)	mg/L	0.22	0.02	2561174
Dissolved Calcium (Ca)	mg/L	68	0.3	2561174
Dissolved Chromium (Cr)	mg/L	<0.001	0.001	2557052
Dissolved Cobalt (Co)	mg/L	0.0051	0.0003	2557052
Dissolved Copper (Cu)	mg/L	0.0009	0.0002	2557052
Dissolved Iron (Fe)	mg/L	0.47	0.06	2561174
Dissolved Lead (Pb)	mg/L	<0.0002	0.0002	2557052
Dissolved Lithium (Li)	mg/L	<0.02	0.02	2561174
Dissolved Magnesium (Mg)	mg/L	98	0.2	2561174
Dissolved Manganese (Mn)	mg/L	1.9	0.004	2561174
Dissolved Molybdenum (Mo)	mg/L	0.0007	0.0002	2557052
Dissolved Nickel (Ni)	mg/L	0.010	0.0005	2557052
Dissolved Phosphorus (P)	mg/L	<0.1	0.1	2561174
Dissolved Potassium (K)	mg/L	8.3	0.3	2561174
Dissolved Selenium (Se)	mg/L	<0.001	0.001	2557052
Dissolved Silicon (Si)	mg/L	6.3	0.1	2561174
Dissolved Silver (Ag)	mg/L	<0.0001	0.0001	2557052
Dissolved Sodium (Na)	mg/L	250	0.5	2561174
Dissolved Strontium (Sr)	mg/L	0.35	0.02	2561174
Dissolved Sulphur (S)	mg/L	2.7	0.2	2561174
Dissolved Thallium (Tl)	mg/L	<0.0002	0.0002	2557052
Dissolved Tin (Sn)	mg/L	<0.001	0.001	2557052
Dissolved Titanium (Ti)	mg/L	<0.001	0.001	2557052
Dissolved Uranium (U)	mg/L	0.0030	0.0001	2557052
Dissolved Vanadium (V)	mg/L	<0.001	0.001	2557052
Dissolved Zinc (Zn)	mg/L	<0.003	0.003	2557052
RDL = Reportable Detection Limit				

CCME FWAL METALS SCAN - TOTAL (WATER)

Maxxam ID		L46887		
Sampling Date		2008/09/06		
COC Number		31324		
	Units	JP02-06	RDL	QC Batch

Low Level Elements				
Total Cadmium (Cd)	ug/L	0.10	0.01	2559272
Elements				
Total Aluminum (Al)	mg/L	6.4	0.002	2568823
Total Antimony (Sb)	mg/L	<0.0002	0.0002	2568823
Total Arsenic (As)	mg/L	0.006	0.001	2568823
Total Barium (Ba)	mg/L	0.16	0.01	2568814
Total Beryllium (Be)	mg/L	<0.001	0.001	2568823
Total Boron (B)	mg/L	0.25	0.02	2568814
Total Calcium (Ca)	mg/L	86	0.3	2568814
Total Chromium (Cr)	mg/L	0.010	0.001	2568823
Total Cobalt (Co)	mg/L	0.0096	0.0003	2568823
Total Copper (Cu)	mg/L	0.014	0.0002	2568823
Total Iron (Fe)	mg/L	9.3	0.06	2568814
Total Lead (Pb)	mg/L	0.0062	0.0002	2568823
Total Lithium (Li)	mg/L	<0.02	0.02	2568814
Total Magnesium (Mg)	mg/L	120	0.2	2568814
Total Manganese (Mn)	mg/L	2.2	0.004	2568814
Total Molybdenum (Mo)	mg/L	0.0015	0.0002	2568823
Total Nickel (Ni)	mg/L	0.021	0.0005	2568823
Total Phosphorus (P)	mg/L	0.2	0.1	2568814
Total Potassium (K)	mg/L	10	0.3	2568814
Total Selenium (Se)	mg/L	<0.001	0.001	2568823
Total Silicon (Si)	mg/L	16	0.1	2568814
Total Silver (Ag)	mg/L	<0.0001	0.0001	2568823
Total Sodium (Na)	mg/L	260	0.5	2568814
Total Strontium (Sr)	mg/L	0.37	0.02	2568814
Total Sulphur (S)	mg/L	2.8	0.2	2568814
Total Thallium (Tl)	mg/L	<0.0002	0.0002	2568823
Total Tin (Sn)	mg/L	<0.001	0.001	2568823
Total Titanium (Ti)	mg/L	0.13	0.001	2568823
Total Uranium (U)	mg/L	0.0038	0.0001	2568823
Total Vanadium (V)	mg/L	0.015	0.001	2568823
Total Zinc (Zn)	mg/L	0.026	0.003	2568823
RDL = Reportable Detection Limit				

AT1 BTEX AND F1 (WATER) Comments

Sample L46881-01 BTEX/F1 in Water by HS GC/MS: Rdl raised due to sample dillution.

Sample L46883-01 BTEX/F1 in Water by HS GC/MS: Rdl raised due to sample dillution.

Sample L46884-01 BTEX/F1 in Water by HS GC/MS: Rdl raised due to sample dillution.

RCAP - PARTIAL ROUTINE (WATER) Comments

Sample L46888-01 Chloride by Automated Colourimetry: Matrix spike non calculable due to high concentration of original analyte.

CCME FWAL METALS SCAN - TOTAL (WATER) Comments

Sample L46887-01 Elements by ICPMS - Total: Matrix spike non calculable due to high concentration of original analyte. Detection limits raised due to dilution to bring analyte within the calibrated range.

Results relate only to the items tested.



IEG CONSULTANTS LTD.
 Attention: JIM STEVENS
 Client Project #: JOHNSON PONT
 P.O. #:
 Site Reference: JOHNSON PONT,NWT

Quality Assurance Report
 Maxxam Job Number: EA846341

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
2557052 CB5	Calibration Check	Dissolved Aluminum (Al)	2008/09/08		92	%	80 - 120		
		Dissolved Arsenic (As)	2008/09/08		92	%	80 - 120		
		Dissolved Beryllium (Be)	2008/09/08		95	%	80 - 120		
		Dissolved Chromium (Cr)	2008/09/08		89	%	81 - 120		
		Dissolved Cobalt (Co)	2008/09/08		88	%	80 - 120		
		Dissolved Copper (Cu)	2008/09/08		93	%	81 - 120		
		Dissolved Lead (Pb)	2008/09/08		88	%	80 - 120		
		Dissolved Molybdenum (Mo)	2008/09/08		90	%	80 - 120		
		Dissolved Nickel (Ni)	2008/09/08		92	%	80 - 120		
		Dissolved Selenium (Se)	2008/09/08		93	%	80 - 120		
		Dissolved Silver (Ag)	2008/09/08		88	%	80 - 120		
		Dissolved Thallium (Tl)	2008/09/08		97	%	80 - 120		
		Dissolved Tin (Sn)	2008/09/08		88	%	80 - 120		
		Dissolved Titanium (Ti)	2008/09/08		91	%	80 - 120		
		Dissolved Uranium (U)	2008/09/08		97	%	80 - 120		
		Dissolved Vanadium (V)	2008/09/08		92	%	80 - 120		
		Dissolved Zinc (Zn)	2008/09/08		93	%	80 - 120		
		MATRIX SPIKE		Dissolved Aluminum (Al)	2008/09/08		96	%	80 - 120
				Dissolved Antimony (Sb)	2008/09/08		84	%	80 - 120
				Dissolved Arsenic (As)	2008/09/08		93	%	80 - 120
				Dissolved Beryllium (Be)	2008/09/08		99	%	80 - 120
				Dissolved Chromium (Cr)	2008/09/08		87	%	80 - 120
				Dissolved Cobalt (Co)	2008/09/08		85	%	80 - 120
				Dissolved Copper (Cu)	2008/09/08		89	%	80 - 120
				Dissolved Lead (Pb)	2008/09/08		86	%	80 - 120
				Dissolved Molybdenum (Mo)	2008/09/08		93	%	80 - 120
				Dissolved Nickel (Ni)	2008/09/08		88	%	80 - 120
				Dissolved Selenium (Se)	2008/09/08		82	%	80 - 120
				Dissolved Silver (Ag)	2008/09/08		86	%	80 - 120
				Dissolved Thallium (Tl)	2008/09/08		93	%	80 - 120
				Dissolved Tin (Sn)	2008/09/08		84	%	80 - 120
				Dissolved Titanium (Ti)	2008/09/08		92	%	80 - 120
		Dissolved Uranium (U)	2008/09/08		96	%	80 - 120		
Dissolved Vanadium (V)	2008/09/08		94	%	80 - 120				
Dissolved Zinc (Zn)	2008/09/08		91	%	80 - 120				
BLANK		Dissolved Aluminum (Al)	2008/09/08	<0.001		mg/L			
		Dissolved Antimony (Sb)	2008/09/08	0.0004, RDL=0.0002		mg/L			
		Dissolved Arsenic (As)	2008/09/08	<0.001		mg/L			
		Dissolved Beryllium (Be)	2008/09/08	<0.001		mg/L			
		Dissolved Chromium (Cr)	2008/09/08	<0.001		mg/L			
		Dissolved Cobalt (Co)	2008/09/08	<0.0003		mg/L			
		Dissolved Copper (Cu)	2008/09/08	<0.0002		mg/L			
		Dissolved Lead (Pb)	2008/09/08	<0.0002		mg/L			
		Dissolved Molybdenum (Mo)	2008/09/08	<0.0002		mg/L			
		Dissolved Nickel (Ni)	2008/09/08	<0.0005		mg/L			
		Dissolved Selenium (Se)	2008/09/08	<0.001		mg/L			
		Dissolved Silver (Ag)	2008/09/08	<0.0001		mg/L			
		Dissolved Thallium (Tl)	2008/09/08	<0.0002		mg/L			
		Dissolved Tin (Sn)	2008/09/08	<0.001		mg/L			
		Dissolved Titanium (Ti)	2008/09/08	<0.001		mg/L			
Dissolved Uranium (U)	2008/09/08	<0.0001		mg/L					
Dissolved Vanadium (V)	2008/09/08	<0.001		mg/L					
Dissolved Zinc (Zn)	2008/09/08	<0.003		mg/L					
RPD		Dissolved Arsenic (As)	2008/09/08	NC		%	20		
		Dissolved Chromium (Cr)	2008/09/08	NC		%	20		



IEG CONSULTANTS LTD.
 Attention: JIM STEVENS
 Client Project #: JOHNSON PONT
 P.O. #:
 Site Reference: JOHNSON PONT,NWT

Quality Assurance Report (Continued)
 Maxxam Job Number: EA846341

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2557052 CB5	RPD	Dissolved Copper (Cu)	2008/09/08	19.5		%	20
		Dissolved Lead (Pb)	2008/09/08	NC		%	20
		Dissolved Zinc (Zn)	2008/09/08	12.2		%	20
2557066 CB5	Calibration Check	Dissolved Cadmium (Cd)	2008/09/08		91	%	80 - 120
	MATRIX SPIKE	Dissolved Cadmium (Cd)	2008/09/08		93	%	80 - 120
	BLANK	Dissolved Cadmium (Cd)	2008/09/08	<0.01		ug/L	
	RPD	Dissolved Cadmium (Cd)	2008/09/08	NC		%	20
2559121 AMD	SPIKE	F2 (C10-C16 Hydrocarbons)	2008/09/09		103	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2008/09/09		94	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2008/09/09		87	%	80 - 120
		O-TERPHENYL (sur.)	2008/09/09		104	%	50 - 130
	BLANK	F2 (C10-C16 Hydrocarbons)	2008/09/09	<0.1		mg/L	
		F3 (C16-C34 Hydrocarbons)	2008/09/09	<0.1		mg/L	
		F4 (C34-C50 Hydrocarbons)	2008/09/09	<0.1		mg/L	
		O-TERPHENYL (sur.)	2008/09/09		103	%	50 - 130
2559272 CB5	Calibration Check	Total Cadmium (Cd)	2008/09/10		105	%	80 - 120
	MATRIX SPIKE	Total Cadmium (Cd)	2008/09/10		112	%	80 - 120
	BLANK	Total Cadmium (Cd)	2008/09/10	0.01, RDL=0.01		ug/L	
	RPD	Total Cadmium (Cd)	2008/09/10	NC		%	20
2560044 CD1	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/09/10		102	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/10		101	%	70 - 130
		D8-TOLUENE (sur.)	2008/09/10		102	%	70 - 130
		Benzene	2008/09/10		94	%	70 - 130
		Toluene	2008/09/10		95	%	70 - 130
		Ethylbenzene	2008/09/10		101	%	70 - 130
		o-Xylene	2008/09/10		99	%	70 - 130
		m & p-Xylene	2008/09/10		101	%	70 - 130
		(C6-C10)	2008/09/10		70	%	70 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2008/09/09		103	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/09		96	%	70 - 130
		D8-TOLUENE (sur.)	2008/09/09		104	%	70 - 130
		Benzene	2008/09/09		94	%	70 - 130
		Toluene	2008/09/09		95	%	70 - 130
		Ethylbenzene	2008/09/09		103	%	70 - 130
		o-Xylene	2008/09/09		100	%	70 - 130
		m & p-Xylene	2008/09/09		104	%	70 - 130
		(C6-C10)	2008/09/09		109	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2008/09/09		96	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2008/09/09		100	%	70 - 130
		D8-TOLUENE (sur.)	2008/09/09		98	%	70 - 130
		Benzene	2008/09/09	<0.4		ug/L	
		Toluene	2008/09/09	<0.4		ug/L	
		Ethylbenzene	2008/09/09	<0.4		ug/L	
		o-Xylene	2008/09/09	<0.4		ug/L	
		m & p-Xylene	2008/09/09	<0.8		ug/L	
		Xylenes (Total)	2008/09/09	<0.8		ug/L	
		F1 (C6-C10) - BTEX	2008/09/09	<100		ug/L	
		(C6-C10)	2008/09/09	<100		ug/L	
	RPD	Benzene	2008/09/09	8.6		%	40
		Toluene	2008/09/09	2.8		%	40
		Ethylbenzene	2008/09/09	1.2		%	40
		o-Xylene	2008/09/09	2.4		%	40
		m & p-Xylene	2008/09/09	1.7		%	40
		Xylenes (Total)	2008/09/09	1.9		%	40
		F1 (C6-C10) - BTEX	2008/09/09	NC		%	40

Quality Assurance Report (Continued)

Maxxam Job Number: EA846341

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2560044 CD1	RPD	(C6-C10)	2008/09/09	0.3		%	40
2561174 EO1	Calibration Check	Dissolved Barium (Ba)	2008/09/09		100	%	80 - 120
		Dissolved Boron (B)	2008/09/09		103	%	80 - 120
		Dissolved Calcium (Ca)	2008/09/09		103	%	80 - 120
		Dissolved Iron (Fe)	2008/09/09		95	%	80 - 120
		Dissolved Lithium (Li)	2008/09/09		101	%	80 - 120
		Dissolved Magnesium (Mg)	2008/09/09		104	%	80 - 120
		Dissolved Manganese (Mn)	2008/09/09		100	%	80 - 120
		Dissolved Phosphorus (P)	2008/09/09		105	%	80 - 120
		Dissolved Potassium (K)	2008/09/09		102	%	80 - 120
		Dissolved Silicon (Si)	2008/09/09		83	%	80 - 120
		Dissolved Sodium (Na)	2008/09/09		103	%	80 - 120
		Dissolved Strontium (Sr)	2008/09/09		100	%	80 - 120
	MATRIX SPIKE	Dissolved Barium (Ba)	2008/09/09		107	%	80 - 120
		Dissolved Boron (B)	2008/09/09		115	%	80 - 120
		Dissolved Calcium (Ca)	2008/09/09		NC	%	80 - 120
		Dissolved Iron (Fe)	2008/09/09		99	%	80 - 120
		Dissolved Lithium (Li)	2008/09/09		109	%	80 - 120
		Dissolved Magnesium (Mg)	2008/09/09		NC	%	80 - 120
		Dissolved Manganese (Mn)	2008/09/09		106	%	80 - 120
		Dissolved Phosphorus (P)	2008/09/09		116	%	80 - 120
		Dissolved Potassium (K)	2008/09/09		113	%	80 - 120
		Dissolved Silicon (Si)	2008/09/09		116	%	80 - 120
		Dissolved Sodium (Na)	2008/09/09		NC	%	80 - 120
		Dissolved Strontium (Sr)	2008/09/09		117	%	80 - 120
	SPIKE	Dissolved Sulphur (S)	2008/09/09		105	%	80 - 120
	BLANK	Dissolved Barium (Ba)	2008/09/09	<0.01		mg/L	
		Dissolved Boron (B)	2008/09/09	<0.02		mg/L	
		Dissolved Calcium (Ca)	2008/09/09	<0.3		mg/L	
		Dissolved Iron (Fe)	2008/09/09	<0.06		mg/L	
		Dissolved Lithium (Li)	2008/09/09	<0.02		mg/L	
		Dissolved Magnesium (Mg)	2008/09/09	<0.2		mg/L	
		Dissolved Manganese (Mn)	2008/09/09	<0.004		mg/L	
		Dissolved Phosphorus (P)	2008/09/09	<0.1		mg/L	
		Dissolved Potassium (K)	2008/09/09	<0.3		mg/L	
		Dissolved Silicon (Si)	2008/09/09	<0.1		mg/L	
		Dissolved Sodium (Na)	2008/09/09	<0.5		mg/L	
		Dissolved Strontium (Sr)	2008/09/09	<0.02		mg/L	
		Dissolved Sulphur (S)	2008/09/09	<0.2		mg/L	
	RPD	Dissolved Calcium (Ca)	2008/09/09	1.1		%	20
		Dissolved Magnesium (Mg)	2008/09/09	0.3		%	20
		Dissolved Potassium (K)	2008/09/09	0.3		%	20
		Dissolved Sodium (Na)	2008/09/09	0.4		%	20
2561975 LF1	Calibration Check	Alkalinity (Total as CaCO3)	2008/09/09		92	%	80 - 120
	BLANK	Alkalinity (PP as CaCO3)	2008/09/09	<0.5		mg/L	
		Alkalinity (Total as CaCO3)	2008/09/09	<0.5		mg/L	
		Bicarbonate (HCO3)	2008/09/09	<0.5		mg/L	
		Carbonate (CO3)	2008/09/09	<0.5		mg/L	
		Hydroxide (OH)	2008/09/09	<0.5		mg/L	
	RPD	Alkalinity (PP as CaCO3)	2008/09/10	NC		%	20
		Alkalinity (Total as CaCO3)	2008/09/10	0.4		%	20
		Bicarbonate (HCO3)	2008/09/10	0.4		%	20
		Carbonate (CO3)	2008/09/10	NC		%	20
		Hydroxide (OH)	2008/09/10	NC		%	20
2561979 LF1	Calibration Check	Conductivity	2008/09/09		101	%	80 - 120

Quality Assurance Report (Continued)

Maxxam Job Number: EA846341

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2561979 LF1	BLANK	Conductivity	2008/09/10	<1		uS/cm	
	RPD	Conductivity	2008/09/10	1.2		%	20
2561981 LF1	Calibration Check	pH	2008/09/09		100	%	97 - 103
	RPD	pH	2008/09/10	0.6		%	5
2562817 PF1	MATRIX SPIKE						
	[L46888-01]	Dissolved Chloride (Cl)	2008/09/10		NC	%	80 - 120
	SPIKE	Dissolved Chloride (Cl)	2008/09/10		111	%	80 - 120
	BLANK	Dissolved Chloride (Cl)	2008/09/10	<0.5		mg/L	
	RPD [L46888-01]	Dissolved Chloride (Cl)	2008/09/10	0.2		%	20
2563905 PF1	MATRIX SPIKE						
	[L46888-01]	Dissolved Sulphate (SO4)	2008/09/10		96	%	80 - 120
	SPIKE	Dissolved Sulphate (SO4)	2008/09/10		95	%	80 - 120
	BLANK	Dissolved Sulphate (SO4)	2008/09/10	0.9, RDL=0.5		mg/L	
	RPD [L46888-01]	Dissolved Sulphate (SO4)	2008/09/10	1.2		%	20
2568814 TK	Calibration Check	Total Barium (Ba)	2008/09/11		99	%	80 - 120
		Total Boron (B)	2008/09/11		109	%	80 - 120
		Total Calcium (Ca)	2008/09/11		96	%	80 - 120
		Total Iron (Fe)	2008/09/11		98	%	80 - 120
		Total Lithium (Li)	2008/09/11		98	%	80 - 120
		Total Magnesium (Mg)	2008/09/11		98	%	80 - 120
		Total Manganese (Mn)	2008/09/11		98	%	80 - 120
		Total Phosphorus (P)	2008/09/11		101	%	80 - 120
		Total Potassium (K)	2008/09/11		99	%	80 - 120
		Total Silicon (Si)	2008/09/11		115	%	80 - 120
		Total Sodium (Na)	2008/09/11		102	%	80 - 120
		Total Strontium (Sr)	2008/09/11		98	%	80 - 120
	MATRIX SPIKE	Total Barium (Ba)	2008/09/11		103	%	80 - 120
		Total Boron (B)	2008/09/11		114	%	80 - 120
		Total Calcium (Ca)	2008/09/11		102	%	80 - 120
		Total Iron (Fe)	2008/09/11		102	%	80 - 120
		Total Lithium (Li)	2008/09/11		101	%	80 - 120
		Total Magnesium (Mg)	2008/09/11		103	%	80 - 120
		Total Manganese (Mn)	2008/09/11		103	%	80 - 120
		Total Phosphorus (P)	2008/09/11		111	%	80 - 120
		Total Potassium (K)	2008/09/11		106	%	80 - 120
		Total Sodium (Na)	2008/09/11		NC	%	80 - 120
		Total Strontium (Sr)	2008/09/11		102	%	80 - 120
	SPIKE	Total Sulphur (S)	2008/09/11		104	%	80 - 120
	BLANK	Total Barium (Ba)	2008/09/11	<0.01		mg/L	
		Total Boron (B)	2008/09/11	<0.02		mg/L	
		Total Calcium (Ca)	2008/09/11	<0.3		mg/L	
		Total Iron (Fe)	2008/09/11	<0.06		mg/L	
		Total Lithium (Li)	2008/09/11	<0.02		mg/L	
		Total Magnesium (Mg)	2008/09/11	<0.2		mg/L	
		Total Manganese (Mn)	2008/09/11	<0.004		mg/L	
		Total Phosphorus (P)	2008/09/11	<0.1		mg/L	
		Total Potassium (K)	2008/09/11	<0.3		mg/L	
		Total Silicon (Si)	2008/09/11	<0.1		mg/L	
		Total Sodium (Na)	2008/09/11	<0.5		mg/L	
		Total Strontium (Sr)	2008/09/11	<0.02		mg/L	
		Total Sulphur (S)	2008/09/11	<0.2		mg/L	
	RPD	Total Iron (Fe)	2008/09/11	NC		%	20
		Total Manganese (Mn)	2008/09/11	NC		%	20
2568823 CB5	Calibration Check	Total Aluminum (Al)	2008/09/11		86	%	80 - 120
		Total Antimony (Sb)	2008/09/11		88	%	80 - 120



IEG CONSULTANTS LTD.
 Attention: JIM STEVENS
 Client Project #: JOHNSON PONT
 P.O. #:
 Site Reference: JOHNSON PONT,NWT

Quality Assurance Report (Continued)
 Maxxam Job Number: EA846341

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2568823	CB5	Calibration Check					
		Total Arsenic (As)	2008/09/11		100	%	80 - 120
		Total Beryllium (Be)	2008/09/11		101	%	80 - 120
		Total Chromium (Cr)	2008/09/11		107	%	80 - 120
		Total Cobalt (Co)	2008/09/11		111	%	80 - 120
		Total Copper (Cu)	2008/09/11		109	%	80 - 120
		Total Lead (Pb)	2008/09/11		100	%	80 - 120
		Total Molybdenum (Mo)	2008/09/11		101	%	80 - 120
		Total Nickel (Ni)	2008/09/11		110	%	80 - 120
		Total Silver (Ag)	2008/09/11		105	%	80 - 120
		Total Thallium (Tl)	2008/09/11		100	%	80 - 120
		Total Tin (Sn)	2008/09/11		92	%	80 - 120
		Total Titanium (Ti)	2008/09/11		110	%	80 - 120
		Total Vanadium (V)	2008/09/11		111	%	80 - 120
		Total Zinc (Zn)	2008/09/11		98	%	80 - 120
	MATRIX SPIKE [L46887-01]	Total Aluminum (Al)	2008/09/11		NC	%	80 - 120
		Total Antimony (Sb)	2008/09/11		117	%	80 - 120
		Total Arsenic (As)	2008/09/11		117	%	80 - 120
		Total Beryllium (Be)	2008/09/11		113	%	80 - 120
		Total Chromium (Cr)	2008/09/11		119	%	80 - 120
		Total Cobalt (Co)	2008/09/11		112	%	80 - 120
		Total Copper (Cu)	2008/09/11		111	%	80 - 120
		Total Lead (Pb)	2008/09/11		116	%	80 - 120
		Total Molybdenum (Mo)	2008/09/11		120	%	80 - 120
		Total Nickel (Ni)	2008/09/11		117	%	80 - 120
		Total Selenium (Se)	2008/09/11		118	%	80 - 120
		Total Silver (Ag)	2008/09/11		116	%	80 - 120
		Total Thallium (Tl)	2008/09/11		109	%	80 - 120
		Total Tin (Sn)	2008/09/11		82	%	80 - 120
		Total Titanium (Ti)	2008/09/11		106	%	80 - 120
		Total Zinc (Zn)	2008/09/11		113	%	80 - 120
	BLANK	Total Aluminum (Al)	2008/09/11	<0.001		mg/L	
		Total Antimony (Sb)	2008/09/11	<0.0002		mg/L	
		Total Arsenic (As)	2008/09/11	<0.001		mg/L	
		Total Beryllium (Be)	2008/09/11	<0.001		mg/L	
		Total Chromium (Cr)	2008/09/11	<0.001		mg/L	
		Total Cobalt (Co)	2008/09/11	<0.0003		mg/L	
		Total Copper (Cu)	2008/09/11	<0.0002		mg/L	
		Total Lead (Pb)	2008/09/11	<0.0002		mg/L	
		Total Molybdenum (Mo)	2008/09/11	<0.0002		mg/L	
		Total Nickel (Ni)	2008/09/11	<0.0005		mg/L	
		Total Selenium (Se)	2008/09/11	<0.001		mg/L	
		Total Silver (Ag)	2008/09/11	<0.0001		mg/L	
		Total Thallium (Tl)	2008/09/11	<0.0002		mg/L	
		Total Tin (Sn)	2008/09/11	<0.001		mg/L	
		Total Titanium (Ti)	2008/09/11	<0.001		mg/L	
		Total Uranium (U)	2008/09/11	<0.0001		mg/L	
		Total Vanadium (V)	2008/09/11	<0.001		mg/L	
		Total Zinc (Zn)	2008/09/11	<0.003		mg/L	
	RPD [L46887-01]	Total Aluminum (Al)	2008/09/11	3.2		%	20
		Total Antimony (Sb)	2008/09/11	NC		%	20
		Total Arsenic (As)	2008/09/11	13.5		%	20
		Total Beryllium (Be)	2008/09/11	NC		%	20
		Total Chromium (Cr)	2008/09/11	7.5		%	20
		Total Cobalt (Co)	2008/09/11	12.2		%	20



IEG CONSULTANTS LTD.
 Attention: JIM STEVENS
 Client Project #: JOHNSON PONT
 P.O. #:
 Site Reference: JOHNSON PONT,NWT

Quality Assurance Report (Continued)
 Maxxam Job Number: EA846341


QA/QC Batch			Date Analyzed					
Num Init	QC Type	Parameter	yyyy/mm/dd	Value	Recovery	Units	QC Limits	
2568823	CB5	RPD [L46887-01]	Total Copper (Cu)	2008/09/11	12.2		%	20
			Total Lead (Pb)	2008/09/11	13.7		%	20
			Total Molybdenum (Mo)	2008/09/11	3.2		%	20
			Total Nickel (Ni)	2008/09/11	11.1		%	20
			Total Selenium (Se)	2008/09/11	NC		%	20
			Total Silver (Ag)	2008/09/11	NC		%	20
			Total Thallium (Tl)	2008/09/11	NC		%	20
			Total Tin (Sn)	2008/09/11	NC		%	20
			Total Titanium (Ti)	2008/09/11	18.0		%	20
			Total Uranium (U)	2008/09/11	8.3		%	20
			Total Vanadium (V)	2008/09/11	12.5		%	20
			Total Zinc (Zn)	2008/09/11	5.1		%	20
			2570061	JQ	Calibration Check	Dissolved Nitrate (N)	2008/09/11	
Dissolved Nitrite (N)	2008/09/11					100	%	80 - 120
BLANK		Dissolved Nitrate (N)		2008/09/11	<0.003		mg/L	
		Dissolved Nitrite (N)		2008/09/11	<0.003		mg/L	
RPD		Dissolved Nitrate (N)		2008/09/11	0.08		%	20
		Dissolved Nitrite (N)		2008/09/11	NC		%	20

NC = Non-calculable
 RPD = Relative Percent Difference


Validation Signature Page

Maxxam Job #: A846341


The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



HUA WO,



KRISTOPHER BEAUDET,



ROBERT VIVIAN,

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

Invoice To: Require Report? Yes No
Company Name: E. GRUBENS TRANSPORT
Contact Name: SIM STEVENS
Address: PO Box 177
TUKTOYAKTUK, NWT X0E 1C0
Phone / Fax #: Ph: 867-977-7000 Fax: 867-977-2257

Report To: SAME AS INVOICE
dwells@ieg.ca
Ph:

PO # / AFE #:
Quotation #:
Project #:
Project Name: JOHNSON POINT
Location: JOHNSON POINT, NWT
Sampler's Initials: JP

REGULATORY REQUIREMENTS:
 AT1 - (1994) PST
 CCME CDWQG
 CCME FWAL G50
 Regulatory Limits to appear on Final report

REPORT DISTRIBUTION:
EMAIL ADDRESSES:
jstevens@grubens.com
dwells@ieg.ca
jpeterson@klbm.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab)
Date Required: _____
 REGULAR Turnaround

SOILS											WATERS										
BTEX F1-F4	Sieve (75 micron)	Salinity 4	Metals <input type="checkbox"/> Extended <input type="checkbox"/> CCME <input type="checkbox"/> AT1	Mercury	Leachable BTEX	Leachable Metals	Paint Filter (Free liquid)	Flashpoint	pH	BTEX F1-F2	Routine Water Package <input type="checkbox"/> Turb <input checked="" type="checkbox"/> F	TOC <input type="checkbox"/> DOC	TOTAL Metals	DISS. Metals	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	NH3 <input type="checkbox"/> NH3-D	TKN <input type="checkbox"/> DKN	F2-F4			
										X											
										X											
										X											
																		X			
													X	X				X			
											X										

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day
1	JP02-01	W	2008/09/06
2	JP02-02		
3	JP02-03		
4	JP02-04		
5	JP02-05		
6	JP02-06		
7	JP02-07		
8			
9			
10			
11			
12			

**All samples are held for 60 days after sample receipt. For special requests please contact your Project Manager.

Relinquished By: JARED PETERSON
Signature: [Signature]
COMMENTS/SPECIAL INSTRUCTIONS:

Date/Time: 14:30 SEPT 6/08

Received
BAP
08/09/08
9:30

Temperature
4.5, 6

COC #

Appendix G

EGT Salvage Liability Waiver Form/Waste Receipt



12301 MUSQUEAM DRIVE, SURREY, BC, CANADA V3V 3T2
 TELEPHONE (604) 580-0251 TOLL FREE 1-800-663-6406 FAX (604) 580-1922

"RECYCLERS OF SCRAP METAL"

SALVAGE & SALES LTD.

Receipt for Johnson Point Demolition items

17-Sep-08

#	Pic #	Description	Ident	Tonnes
1		Large Silver Fuel Tank with Steel Skid	# 20	7.1
2		Large Silver Fuel Tank with Steel Skid	# 21	7.1
3		Large Silver Fuel Tank with Steel Skid	# 22	7.1
4		Large Silver Fuel Tank with Steel Skid	# 23	7.1
5		Large Silver Fuel Tank with Steel Skid	# 24	7.1
6		Large Red Fuel Tank no Skid		7.8
7		Large Red Fuel Tank no Skid		7.8
8		Large Red Fuel Tank no Skid		7.8
9		Large Red Fuel Tank no Skid		7.8
10		Large Red Fuel Tank no Skid		7.8
11		Large Red Fuel Tank no Skid		7.8
12		Large Red Fuel Tank no Skid		7.8
13		Silver Fuel Tank on Steel Skid	# 25	5.1
14		Steel Sleigh with 18 x 500 gallon fuel tanks on it		13.6
15		Steel Sleigh with 4 x 750 gallon fuel tanks on it		6.8
16		Steel Sleigh with Nodwell Tracks on it		4.6
17		Steel Skid with Cat Rails on it		8.2
18		Cat 977 Dozer with Forks and Winch	# 65	21.5
19		Steel Skid with asst. Skis, Bunks, and hitches on it		20.9
20		Steel Skid with asst. Skis, Bunks, and hitches on it		18.1
21		Steel Skid with asst. Skis, Bunks, hitches and Cat Blade on it		24.5
22		Metal shack with Amber Beacon on Roof	# 56	5.9
23		Orange Pipe Ramp		11.3
24		Plywood Shack # 1 (White Plywood on Steel Skid)		1.2
25		Plywood Shack # 2 (Unpainted on a wooden skid)		1.8
26		Plywood Shack # 3 (Unpainted on a steel skid)		2.2
27		6 ea 12 x 12 bundled together w/ steel end caps & 1 ea 12 x 12 w/ end cap		5
28		1/2 Tank filled w/ Nodwell tracks, steel skids, 2 ea 500 gal silver tanks & misc debris	# 50, 51	20.4
29		Atco Type - 3 Room Bunkhouse #1		8.1
30		Atco Type - 3 Room Bunkhouse #2		8.2
31		Atco Type - 2 Room Generator Unit #3		11.8
32		Atco Type - 2 Room TV Room #4		11.3
33		Atco Type - 3 Room Washroom Trailer # 5		7.9
34		Atco Type Kitchen Trailer #6		8.8
35		Atco Type Maintenance Trailer #7		11.8
36		Portabuilt Silver with Nodwell Trailer #1 - Bunk/Office Unit		12.7
37		Portabuilt Silver #2 Bunk/office Unit		7.3
38		Portabuilt Silver #3 Kitchen Unit		8.3
39		Portabuilt Orange/Silver #4 Bunk/Sleeper Unit		8.3
40		Portabuilt Orange #5 Kitchen Unit (Asbestos Lino)		7.7
41		Portabuilt Orange #6 Washroom/Bunk Unit		7.5
42		Portabuilt Yellow with Nodwell Trailer #8 Washroom/Shower Unit (Asbestos Lino)		13.2
43		Portabuilt Yellow with Nodwell Trailer #8 Bunkhouse Unit (Asbestos Lino)		12.7
			Totals	407

Amix has disposed of the above items from Johnson Point transported by Amix barge from Tuktoyaktuk to Surrey, B.C. Items were either salvaged for scrap metal or landfilled. Items salvaged or disposed of and their weights are as listed on the above disposal receipt

As Per:

Amix

MOBILE CAR CRUSHING CONTAINER SERVICE USED EQUIPMENT LARGE SURPLUS YARD
 DEMOLITION CONTRACTORS TUG & BARGE SERVICES



12301 MUSQUEAM DRIVE, SURREY, BC, CANADA V3V 3T2
TELEPHONE (604) 580-0251 TOLL FREE 1-800-663-6406 FAX (604) 580-1922

September 29, 2009

E. Gruben's Transport Ltd.

PO Box 177

Tuktoyaktuk, NT

X0E 1C0

Attention: James Lay

Re: Scrap Steel from Tuktoyaktuk

This letter is to confirm that Amix has disposed of the items from Johnson Point transported by Amix barge from Tuktoyaktuk to Surrey, B.C.

Items were either salvaged for scrap metal or landfilled. Items salvaged or disposed of and their weights are as listed on the attached disposal receipt.

Thank you

A handwritten signature in black ink, appearing to read "David Dungey".

David Dungey

Controller



12301 MUSQUEAM DRIVE, SURREY, BC, CANADA V3V 3T2
 TELEPHONE (604) 580-0251 TOLL FREE 1-800-663-6406 FAX (604) 580-1922

Johnson Point Scrap metal Disposal

Johnson Point Scrap metal Disposal

September-09

September-09

Lift #	Description of Lift	Picture	Weight	Lift #	Description of Lift	Picture	Weight
1	2 Steel Nodwell Chassis	1	8	31	2 Lifts of Tank Steel (4 Pallets)	31	14.7
2	2 Steel Nodwell Chassis	2	9.5	32	1 Lift of Tank Steel (2 Pallets)	32	8.2
3	2 Steel Nodwell Chassis	3	10.2	33	1 Skid of Steel Strapping, Tower & Pipe	33	13.2
4	1 Steel Nodwell Chassis	4	10	34	1 Skid of Tank Strapping and Skis	34	7.3
5	1 Red Wooden Kapps Crate	5	6.8	35	Few Tank Bottoms Folded	35	15.9
6	1 Green Wooden Bay Geo Crate	6	6.4	36	Few Tank Bottoms Folded	36	16.3
7	1 Green Wooden Bay Geo Crate	7	5.5	37	1 Skid of Tank Strapping & Misc Steel	37	8.2
8	1 Nodwell Wagon with Tires Inside	8	9.5	38	1 Wooden Crate with Steel	38	5.1
9	1 Green Wooden Bay Geo Crate	9	5.5	39	1 Skid of Pipes, Drums and Misc Steel	39	10.4
10	1 Green Wooden Bay Geo Crate	10	5.9	40	1 Steel Bin with Tank Steel Inside	40	17.7
11	1 Red Steel Shack	11	10.9	41	2 Lifts of Tank Steel (2 Pallets)	41	8.2
12	1 Wooden Shack on Steel Skid	12	10.4	42	1 Lift Pie Shaped Tank Steel	42	7.3
13	1 Red Wooden Kapps Crate	13	5.5	43	1 Skid Wooden Frames and Steel Skid	43	2.3
14	1 Unpainted Wooden Shack on Steel Runners	14	11.8	44	1 Steel Bin with Tank Steel Inside	44	12.2
15	2 Lifts of Tank Steel (4 Pallets)	15	13.6	45	1 Lift Pie Shaped Tank Steel	45	8.6
16	2 Lifts of Tank Steel (4 Pallets)	16	14.9	46	1 Lift of Steel Pipe	46	8
17	1 Lift of Tank Steel (2 Pallets)	17	9.8	47	1 Lift of Steel Pipe	47	8.3
18	1 Lift of Wood and Steel	18	4.9	48	1 Lift of Steel Pipe	48	8.1
19	2 Lifts of Tank Steel (4 Pallets)	19	11.5	49	1 Lift of Steel Pipe	49	7.7
20	1 Skid of Steel Strapping	20	14.1	50	Red 500 Gal Tank with Nuts & Bolts #37	50	9.3
21	1 Skid of Steel Strapping and Pipe	21	18.6	51	1 Lift of Wood & Steel	51	4.1
22	2 Lifts of Tank Steel (4 Pallets)	22	13.6	52	1 White Wooden Crate	52	4.6
23	Red 500 Gal Tank with Nuts & Bolts #37	23	9.1	53	2 Lifts of Tank Steel (4 Pallets)	N/A	12.7
24	Sleigh full of Drums and Nodwell Tracks	24	15.9	54	1 Lift of Tank Steel (2 Pallets)	N/A	7.9
25	Sleigh full of Drums and Nodwell Tracks	25	16.3	55	1 Lift of Tank Steel (2 Pallets)	N/A	6.8
26	Wooden Sleigh Bunk with Steel Pipe	26	12.3	56	1 Lift of Tank Steel (2 Pallets)	N/A	5.9
27	Steel Skid with Propane Tanks and Steel Bin	27	15	57	1 Lift of Steel Pipe	N/A	8.7
28	2 Skids of Tank Steel (2 Pallets)	28	12.7				
29	Steel Bin with Steel strapping	29	10.9				
30	2 Lifts of Tank Steel (4 Pallets)	30	14.5				

Sub-Total - A

323.6

Sub-Total - B

247.7

TOTAL - A + B 571.3

Soil + Broken crates

STRAIGHT BILL OF LADING - SHORT FORM - Original - Not Negotiable

Shipper's No. 3771

(Carrier) AMIX SCAC. Carrier's No.

at , date 11/3/09 from

the property described below, in apparent good order, except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own road or its own water line, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO: (Mail or street address of consignee for purposes of notification only.) FROM: Consignee SUMAS Shipper AMIX Street 4623 Byrnie Rd. Street Destination Zip Origin Zip Route:

Delivering Carrier Trailer Initial/Number U.S. Dot Hazmat Reg. Number

Table with 10 columns: No of packages, HM, Description of articles, special marks, and exceptions, Hazard Class, I.D. Number, Packing Group, *Weight (subject to correction), Class or rate, Labels required (or exemption), Check column. Handwritten entries include 'Soil in bags + crates', '09-508', and 'Hrb slip #28938'.

This is to certify that the above-named materials are properly classified, described, packaged, marked and labelled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. Per PLACARDS REQUIRED NO PLACARDS SUPPLIED YES NO - FURNISHED BY CARRIER DRIVER'S SIGNATURE:

SPECIAL INSTRUCTIONS: SHIPPER: CARRIER: PER: DATE: EMERGENCY RESPONSE TELEPHONE NUMBER: ()

Permanent post office address of shipper Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (\$172.604).



4623 BYRNE ROAD
BURNABY, BC V5J 3H6
TELEPHONE (604) 682-6678
FAX (604) 687-8108
HEAD OFFICE (604) 682-6678

Certified Scale Ticket

PROJECT NO.: _____

12:55 NOV 03/09

TIME & DATE: _____

CLIENT: _____

MATERIAL: _____

DESCRIPTION: <C/IL >C/IL SW

SUSPECT CONFIRMED

GROSS WT: _____ 20440 kg

TARE WT: _____

3 13540 kg

NET WT: _____

6900 kg

TRUCKING CO.: _____

TRUCK NO.: _____

DRIVER: _____

85/hours 4/4

NO.: B- 28938

Soil from Barrels

STRAIGHT BILL OF LADING - SHORT FORM - Original - Not Negotiable

Shipper's No. 3770

(Carrier) Amix SCAC. Carrier's No.

at , date 11/3/09 from

the property described below, in apparent good order, except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own road or its own water line, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO: (Mail or street address of consignee for purposes of notification only.)

FROM:

Consignee SUMPS

Shipper Amix Salvage + Sales

Street 4623 Byrne Rd

Street

Destination KIRKMAN Zip

Origin Zip

Route:

Delivering Carrier Trailer Initial/Number U.S. Dot Hazmat Reg. Number

Table with 10 columns: No of packages, HM, Description of articles, special marks, and exceptions, Hazard Class, I.D. Number, Packing Group, *Weight (subject to correction), Class or rate, Labels required (or exemption), Check column. Row 1: Contaminated Soil, 110, 110, 110, 3030 kg, To Procell 09-506.

This is to certify that the above-named materials are properly classified, described, packaged, marked and labelled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

PLACARDS REQUIRED 110

PLACARDS SUPPLIED

YES NO - FURNISHED BY CARRIER DRIVER'S SIGNATURE:

SPECIAL INSTRUCTIONS:

SHIPPER: PER: DATE:

CARRIER: PER: DATE:

Permanent post office address of shipper

EMERGENCY RESPONSE TELEPHONE NUMBER: Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (\$172.604).



4623 BYRNE ROAD
BURNABY, BC V5J 3H6
TELEPHONE (604) 682-6678
FAX (604) 687-8108
HEAD OFFICE (604) 682-6678

Certified Scale Ticket

PROJECT NO.: _____

11:12 NOV 03/09

TIME & DATE: _____

CLIENT: _____

MATERIAL: _____

DESCRIPTION: <C/IL >C/IL SW

SUSPECT CONFIRMED

GROSS WT: _____ 16360 kg

TARE WT: _____ 1 13330 kg

NET WT: _____ 3030 kg

TRUCKING CO.: _____

85/h. 4/14

TRUCK NO.: _____

DRIVER: _____

NO.: B- 28935

wood w/ Lead Based Paint

STRAIGHT BILL OF LADING - SHORT FORM - Original - Not Negotiable

Shipper's No. 3769

(Carrier) Amix SCAC. _____ Carrier's No. _____
Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading:

at _____, date 11/3/00 from _____
the property described below, in apparent good order, except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own road or its own water line, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO: (Mail or street address of consignee for purposes of notification only.)

Consignee SUMPS ENVIRONMENTAL

Street 4623 BYNNE RD.

Destination EURVABY Zip _____

Route: _____

FROM:

Shipper Amix

Street _____

Origin _____ Zip _____

Delivering Carrier _____ Trailer Initial/Number _____ U.S. Dot Hazmat Reg. Number _____

No of packages	HM	Description of articles, special marks, and exceptions	Hazard Class	I.D. Number	Packing Group	*Weight (subject to correction)	Class or rate	Labels required (or exemption)	Check column
		<u>WOODWASTE</u>	<u>911A</u>	<u>112</u>	<u>112</u>				
		<u>LEAD PAINTED</u>							

4/4
\$ 85/hour

This is to certify that the above-named materials are properly classified, described, packaged, marked and labelled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Per _____ **PLACARDS REQUIRED** **PLACARDS SUPPLIED** YES NO - FURNISHED BY CARRIER

SPECIAL INSTRUCTIONS:

SHIPPER: _____ CARRIER: Amix

PER: _____ DATE: _____ PER: _____ DATE: _____

EMERGENCY RESPONSE TELEPHONE NUMBER: ()

JOB # 09-508



DATE

WEIGHT RECORD

NOV. 2. 09

GROSS	44680	\$
TARE	32080	

NET	12600kg	\$	6.3 TON
-----	---------	----	---------

NAME Sumas Enviro.

TRUCK T131

DRIVER Byron

COMMODITY <u>waste wood</u>	PRICE
-----------------------------	-------

CHEQUE #	PAID	UNPAID
----------	------	--------

Solicitation No. - N° de l'invitation

EW699-070038/C

Client Ref. No. - N° de réf. du client

EW699-7-0038

Amd. No. - N° de la modif.

002

File No. - N° du dossier

NCS-7-20227

Buyer ID - Id de l'acheteur

ncs006

CCC No./N° CCC - FMS No/ N° VME

9.0 NAME AND LOCATION OF DESIGNATED LICENSED WASTE FACILITY(S) CERTIFICATION

Bidders are to identify and provide the name and location of the licensed waste facility(s) they will be shipping to and disposing of hazardous/non-hazardous waste(s) for this project as follows:

Name: SWAN HILLS TREATMENT CENTRE.

Location: 1000 CHRISTINA LAKE RD.
SWAN HILLS, AB

Facility License No.: 1744-02-00

Telephone No.: 780-333-4197.

JAMES LAY.
(Name - Print)


(Signature of Authorized Officer)

Jan 21/08
(Date)

The Contractor certifies herein that information regarding the name and location of licensed waste facility, submitted with its bid is accurate and complete.



A **tyco** International Ltd. Company

Monday, January 14, 2008

James Lay
E. Gruben's Transport Ltd.
Inuvik, NT X0E 0T0

Dear James:

Earth Tech, operator of the Swan Hills Treatment Centre, is capable of disposing of most types of hazardous wastes with the exception of radioactive, explosive and biological wastes as well as certain types of wastes such as transformers, batteries and mercury-bearing materials. Earth Tech will also not accept large pieces of equipment such as generators, vehicles and tanks.

Wastes are only accepted with a signed contract in place with the customer and is subject to review and approval by the Treatment Centre of a completed Waste Profile Sheet which fully characterizes each waste stream. A sample may be required for analysis of certain types of materials such as inorganic wastes.

The following information about our facility is provided:

Name: Swan Hills Treatment Centre (operated by Earth Tech Canada Inc.)
Location: 1000 Christina Lake Road, Swan Hills, AB T0G 2C0 (NE 1/4 Sec 6 – 67 – 8 W5M)
Facility Licence Number: (Alberta Environment Approval Number) 1744-02-00
Telephone Number: 780-333-4197, ext 300 (facility) or 403-275-2989 (sales)

If you have any questions or concerns, please call me at 403-275-2989 or e-mail me at zoltan.nevelos@earthtech.ca . For additional information, please visit our website at www.shtc.ca

Sincerely,

A handwritten signature in blue ink that reads "Zoltan Nevelos".

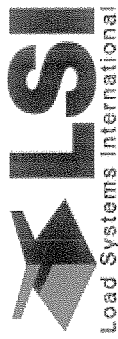
Zoltan Nevelos, B.Sc. Geol.
Technical Sales Representative

Earth Tech Canada Inc.

Earth Tech Canada Inc.

128 MacEwan Park View NW
Calgary, AB T3K 4K3

Phone: 403-275-2989
Fax: 403-275-9734



LOAD CELL CALIBRATION CERTIFICATE

General

Part Number: GC060
Serial Number: G16764 / JM60K9
Rated Capacity: 60 KLbs

Safe Overload: 200 % of Safe Working Load
Ultimate Overload: 500 % of Safe Working Load

Material: Stainless Steel

Performance

Total combined error non-linearity, hysteresis and repeatability: < 1.25 % of Safe Working Load

Calibration Information

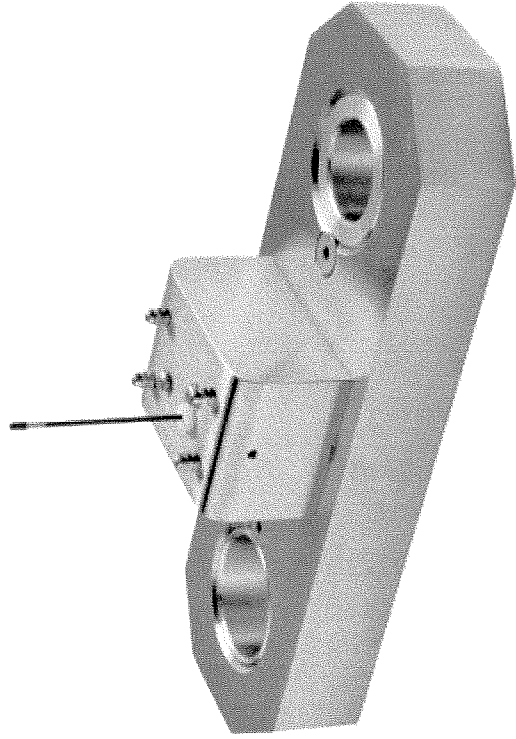
Calibration with load cell s/n 7418 on 2008-03-27, tested at 21.4°C
Temperature compensated curve set points: -38.3°C, -19.2°C, -9.4°C, 5.0°C, 22.4°C and 58.9°C

Standard load cell s/n 7418 calibration information:

Conform to standard ASTM E74 and ISO376. Calibrated at Morehouse Instrument Company, Inc. on Dead Weight Force Machine S/N M-7471 NIST Lab No. 822/268391-03 date: 2006-12-01, tested at 23°C (73.4°F) report No. 7418L0106. Calibration laboratory is accredited by the A2LA in the standard ISO/IEC 17025:2005 and meet the requirement of ANSI/NC SL Z540-1-1994 date: 2006-04-20, certificate No. 1398.01. Reference weights could be traced to National Institute of Standards and Technology (NIST).

Packet Analyzer G3 Software - P/N: B0027
Version: 2.0.1.3
Date: 2008-03-27

Verification:



Calibration Data

Standard (Lbs)	UUT (Bits)	Coefficient	Calc. Weight	Error (Lbs)	Error (%)	Displayed Weight	Displayed Error (Lbs)	Displayed Error (%)
0	507	4	98	98	0.16	0	0	0.00
12051	1627	1	12260	209	0.35	12260	209	0.35
24057	2730	1	24238	181	0.30	24238	181	0.30
36062	3843	1	36325	263	0.44	36325	263	0.44
48068	4961	1	48466	398	0.66	48466	398	0.66
60028	6081	2	60628	600	1.00	60628	600	1.00

Worst case internal measurement error: 1.00%

Rounding factor error: (Rounding / 2) / Capacity = 0.00%

Calibration Parameters

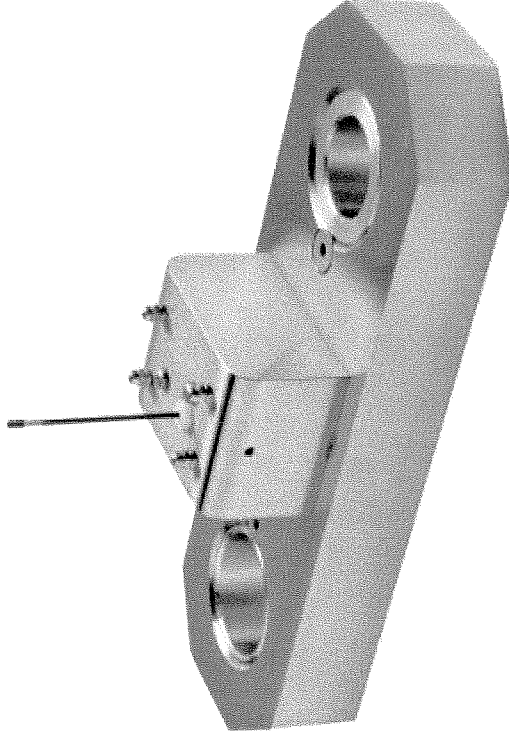
Scale Factor	10.7771
Sensing Percentage	100.00%
Adjustment Percentage	1.00%
Final Scale Factor	10.8594
Calculated Offset (Bits)	507.0
Security Offset (Lbs)	100
Final Offset (Bits)	498
Rounding (Lbs)	1
Minimum Value (Lbs)	250

Temperature Compensation

Temperature (°C)	Read ADC (Bits)
-38.3	490
-19.2	500
-9.4	502
5.0	506
22.4	508
58.9	494

Serial Number

G16764 / JM60K9





LOAD CELL CALIBRATION CERTIFICATE

General

Part Number: GC060
Serial Number: G17695 / JY60K11
Rated Capacity: 60 KLLbs

Safe Overload: 200 % of Safe Working Load
Ultimate Overload: 500 % of Safe Working Load

Material: Stainless Steel

Performance

Total combined error non-linearity, hysteresis and repeatability: < 1.25 % of Safe Working Load

Calibration Information

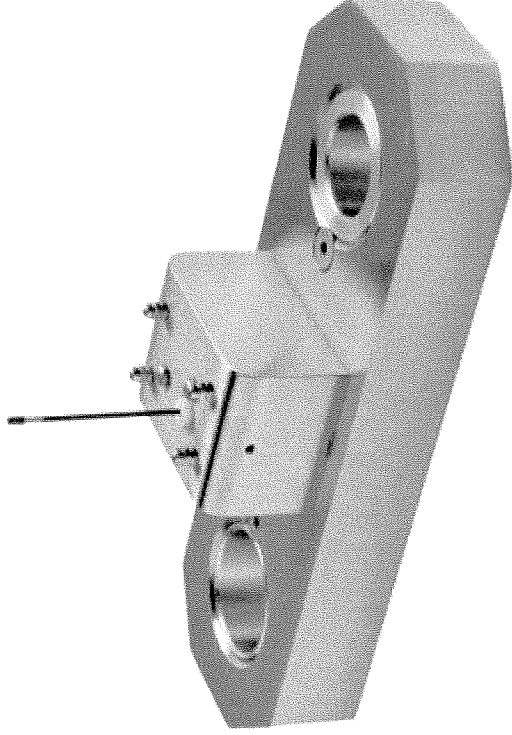
Calibration with load cell s/n 7418 on 2008-04-21, tested at 18.8°C
Temperature compensated curve set points: -38.4°C, -19.7°C, -9.2°C, 4.9°C, 21.1°C and 59.4°C

Standard load cell s/n 7418 calibration information:

Conform to standard ASTM E74 and ISO376. Calibrated at Morehouse Instrument Company, Inc. on Dead Weight Force Machine S/N M-7471 NIST Lab No. 822/268391-03 date: 2006-12-01, tested at 23°C (73.4°F) report No. 7418L0106. Calibration laboratory is accredited by the A2LA in the standard ISO/IEC 17025:2005 and meet the requirement of ANSI/NCSL Z540-1-1994 date: 2006-04-20, certificate No. 1398.01. Reference weights could be traced to National Institute of Standards and Technology (NIST).

Packet Analyzer G3 Software - P/N: B0027
Version: 2.0.1.4
Date: 2008-04-21

Verification:



Calibration Data

Standard (Lbs)	UUT (Bits)	Coefficient	Calc. Weight	Error (Lbs)	Error (%)	Displayed Weight	Displayed Error (Lbs)	Displayed Error (%)
0	516	4	106	106	0.18	0	0	0.00
12119	1551	1	12331	212	0.35	12331	212	0.35
24056	2560	1	24248	192	0.32	24248	192	0.32
36130	3588	1	36390	260	0.43	36390	260	0.43
48113	4614	1	48509	396	0.66	48509	396	0.66
60050	5642	2	60651	601	1.00	60651	601	1.00

Worst case internal measurement error: 1.00%

Rounding factor error: (Rounding / 2) / Capacity = 0.00%

Calibration Parameters

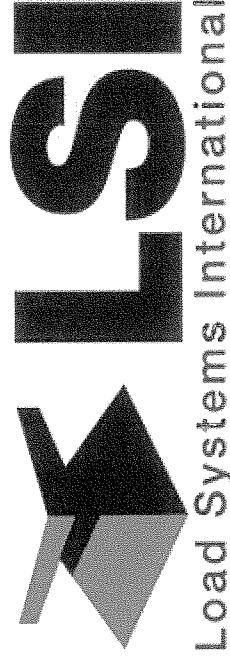
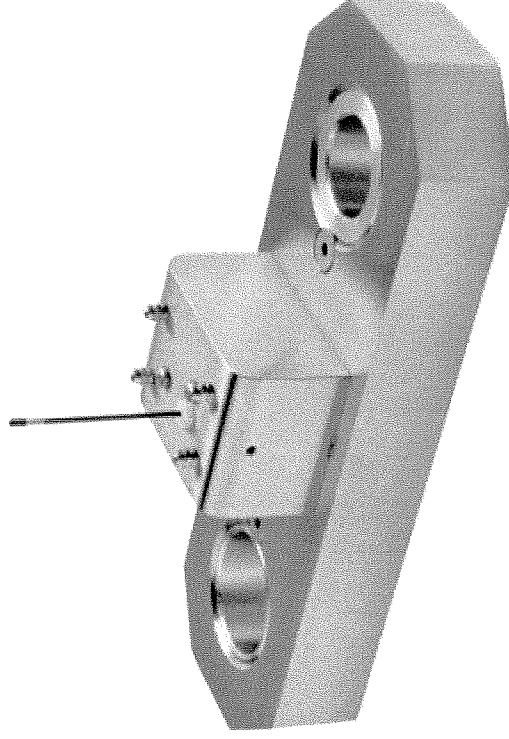
Scale Factor	11.7235
Sensing Percentage	100.00%
Adjustment Percentage	1.00%
Final Scale Factor	11.8112
Calculated Offset (Bits)	516.0
Security Offset (Lbs)	100
Final Offset (Bits)	507
Rounding (Lbs)	1
Minimum Value (Lbs)	250

Temperature Compensation

Temperature (°C)	Read ADC (Bits)
-38.4	532
-19.7	523
-9.2	517
4.9	513
21.1	514
59.4	494

Serial Number

G17695 / JY60K11



Waiver of Liability
Salvage items from Johnson Point Cleanup


I, Jim Stevens, of E. Gruben's Transport Ltd. accept full responsibility for
(Name of Individual) (Company, if applicable)

the following materials salvaged from the cleanup of the Johnson Point site and agree to hold Indian and Northern Affairs Canada harmless for any future liability which may be associated with these materials.

Material/items

Intact untreated timbers including 10"x10", 12"x12" and 3"x10" planks.

[Government savings will include reduced incineration costs under item 02 41 23-2]


Signature

19 Aug 2008
Date

Acceptance of Owner

On behalf of Indian and Northern Affairs Canada I, _____,

accept the above salvage waiver.

Signature

Date

Appendix H

Diamonds North Site Use Agreement

Johnson Point Site

3rd Party Overlap Meeting Minutes/ Operations Agreement - FINAL

Date: June 17, 2008 Time: 2:00pm- 3:30pm MST (1pm PST)

Location: Teleconference

Participants/Contributors

Land Managers and Regulators

Glenn Sorenson –INAC, Land Use Inspector (acting for Conrad Baetz)

Diamonds North (DN)

Graham Gill –VP Operations, Diamonds North

Shellie Jober - Geologist, Diamonds North –will be on-site

CARD Remediation

Emma Pike- INAC, Project Manager Contaminants & Remediation Directorate (CARD)

Joel Gowman –INAC Project Officer CARD

Brad Thompson –Public Works & Government Services Canada (PWGSC), Project Engineer Johnson Point Remediation

Russell Newmark - E. Gruben's Transport (EGT), remediation contractor, project manager

Jim Stevens –E. Gruben's Transport, site supervisor

James Lay - E. Gruben's Transport

Doug Saunders - E. Gruben's Transport, operations

Purpose

To establish an appropriate understanding by all land use permit holders of respective responsibilities, discuss pending work programs and areas of potential overlap, and to discuss how overlapping or competing activities will be addressed and resolved. The overall purpose is to limit potential conflicting situations and identify and address health and safety risks.

These minutes will represent a joint operations agreement that will be submitted to regulators as per the land use permits' requirements for both parties.

Minutes

Overall, the meeting was held in a spirit of cooperation and both parties agreed that there would be great benefits in working together. There were no major issues of contention and there was an ongoing commitment to good communication and on-site co-operation.

- 1) Introductions and Overview of meeting objectives
 - Introductions
 - Confirmed objective & purpose
 - Main lines of communication – will be between the on-site contacts – Shellie Jobber for DN, Jim Stevens for EGT and Brendon Norrie (INAC/PWGSC onsite rep with UMA Engineering). Once phone numbers have been set up on site, and flight schedules determined, these will be mutually shared
 - If anything needs a broader level discussion or if incidents occur, notifications should be made to the various project team members/managers or issues can be raised to the appropriate level

- 2) Land Use Enforcement- Glenn Sorenson
 - Both land use permit applications were treated equally and reviewed in their own right. Both permittees have equal access rights to the site and routes.
 - Overview of potential issues – concern over separating camp locations and fuel cache locations in space and time such that there is clear ownership and management. This would also ensure that the conditions of each respective land use permit are enforceable.

- 3) Proponent Work Programs
 - Contaminants and Remediation Directorate (CARD)
 - i. Historic overview of Johnson Point & Remediation Program – CARD
 - Broad level history of site provided
 - In the last few years, some site assessment completed, incineration of waste fuel, extensive community consultation and more recently regulatory application and project procurement
 - Current remedial action plan includes:
 - a. Excavate and treat hydrocarbon soils on site
 - b. Upgrade existing non-hazardous waste dumps/landfills (drainage, more fill)
 - c. Decommission and dismantle all buildings and tanks on site
 - d. Package and transport all hazardous (some asbestos, lead painted materials,

batteries, acids etc.) and non-hazardous materials for off-site transport

ii. Overview of 2008 field season - EGT

- Some work at site before barge arrives, in mid to late July –likely staying in DN camp
- Loading barge in Tuk ~July 21, barge likely to arrive around July 24 depending on ice conditions. Unload, and reload with non-hazardous material for backhaul
- Test pitting in airstrip (see table of activities for airstrip use)
- Will work on remediation tasks as long as weather holds out –such as addressing bolted tanks
- Likely shut down in early Sept.

iii. Overview of 2009/2010 field seasons –EGT

- Start the season ~ mid-July depending on weather
- Main work in apron area excavating hydrocarbon contaminated soils, dewatering, treatment
- Tank farm decommissioning (bolted tanks)- may start in 2008
- Landfill stabilization
- Close camp early/mid Sept depending on weather.
- Plan to demob in 2010, however, maybe in 2009 if work goes well and weather is good.

iv. Long term plans for the site –CARD

- Plan for two years of post-remediation inspections to ensure remediation work completed as planned and site is stable (landfill work, excavations etc. in particular)
- No other long-term plans as the residual liability post-remediation is negligible
- Note that the airstrip will be left “as-is” post-remediation and that the culverts in the roads will be removed and drainage restored. DN did not have any issues with this.

- Diamonds North

i. Overview of 2008 field season

- Work to date in the area has included 3 years or so of airborne exploration and stream sediment

sampling for kimberlite. Mineral claims are
~70km NE of Johnson Point

- In 2008, planned to continue fixed wing geophysics, but this may not happen now. Will complete further prospecting/ground-truthing of previous work – about 40 or so targets
 - Plan mob July 6-8 with fuel and camp (tent camp – 6 tents) , set up crew July 8-15(Dornier from YK/Uluhaktuk, later resupply Aklak from Inuvik). July 15 main crew arrives and demob ~Aug 9-15.
 - Expect 8 DN personnel on site and can accommodate EGT's preliminary work crew (prep for barge arrival)
 - Will have Bell 206 Jetranger on site – Great Slave Helicopters– what equipment, fuel, # persons on site, schedule, site needs & potential for field program extension - DN
- ii. Potential work for 2009 field season – DN
- Work in results-driven and therefore planned work for 2009 uncertain until get results from 2008
 - If work planned, will be an extension of current exploration with some potential for heli-portable drilling
- 4) Risks of overlap without discussion/agreement –to further emphasize need for cooperation
- i. Accident on site – aircraft, person
 - ii. Exposure of workers to contaminants without proper knowledge or PPE
 - iii. Hazards to workers if workplans/work areas unknown
 - iv. Increased risk of wildlife encounters
 - v. Inability to address health and safety or environmental emergencies efficiently
 - vi. Competition for limited charter availability
- 5) Potential overlap issues at the Work Site and with the Camp (i.e. Health and Safety)
- o Camp
 - § Camp location
 - DN camp proposed near the tank farm. This area will need to be accessed by EGT this summer in terms of removing the non-bolted

tanks. There are additional risks of worker exposure and traffic

- After discussion on expected traffic, noise and risks to staff, DN likely to move their camp – exact location TBD
- As the DN camp is only a few tents, EGT could move the camp relatively easily if needed

§ Water sources and access

- Both EGT & DN will be using the unnamed river for a water source
- Water flow may be limited at the end of summer (more of an issue for EGT), so may need to get water further upstream (~0.5km upstream)
- Discussed need for water conservation, especially for the EGT camp due to size (waterless toilets etc.)

§ Camp communications

- EGT to set up satellite system – internet, phone/fax, Iridium back-up
- DN also to set up satellite system – small system with internet, Iridium back-up
- Work out radios such that two camps can talk to each other

§ Camp rules of conduct, alcohol & drug policy

- Zero tolerance policy on alcohol or drugs at site, and Zero tolerance with respect to fighting – for both camps
- No hunting, fishing or recreational use of ATVs at site – again, seem to be consistent camp rules – will compare once health and safety plans are shared

§ Camp logistics (transportation, noise and activities)

- EGT will only have a night shift while the barge is on site (2-3 days), although a generator will be going 24 hours a day. Standard work hours
- DN work hours expected to be 7am-6pm but may vary depending on weather. Will also have a small generator. One ATV and trailer expected with some potential slinging by helicopter from airstrip to camp.
- Care must be taken during transportation through work areas and along roads during site operations. If DN staff walking the roads, should have proper PPE – especially high-visibility vests

- Each group should identify “noise” generators and try to minimize on site if possible
- § Camp waste management – garbage/ grey/blackwater
 - Food waste will be incinerated on site by both camps. EGT will use dual chamber incinerator, DN was also planning to burn waste, but EGT is willing to incinerate DN’s camp waste to ensure full combustion and minimize wildlife attractants
 - Black water will be incinerated by EGT. DN will have a pit latrine with added lye and will be covered and levelled at end of season
 - Greywater treatment planned by both EGT and smaller scale by DN (grease traps)
 - Provisions are set out in the land-use permits on waste handling.
- Wildlife management
 - § EGT & DN both plan to use wildlife monitors. EGT will have two shifts. EGT wildlife monitors will be running slightly staggered shifts but will not be on 24 hours/day. They like to have one of the monitors do a site tour every morning prior to safety meeting and shift start
 - § All attempts will be made to avoid interactions and minimize attractants, then deter then use force as necessary.
 - § Should be in regular contact with each other and share information about wildlife sightings
- Airstrip use, maintenance/upgrade, excavation and scheduling, final closure
 - § The Airstrip will constitute the only significant “shared” resource. Any changes/ tampering (maintenance/ repair) to the airstrip should be undertaken with consultation of both EGT & DN. EGT has provided a tentative schedule of activities planned in and around the airstrip; however it should be useable by a twin otter at (almost) all times.
 - § 2008 – testpitting in the airstrip contaminated area & upgrading airstrip at south end to extend usable length
 - § 2009 -- major excavation of main apron area and into the airstrip
 - § At end of remediation project, airstrip will be left “as-is” and still considered abandoned
- Air Traffic safety

- § The Airstrip is considered “abandoned” from the view of Ministry of Transportation.
- § Need to establish a Class 2 NOTAM zone for the airstrip; including the set up of mandatory radio frequencies (e.g. 130.15) for air traffic.
- § DN will have a base station and hand held and will have one frequency for GSH and the other can link to EGT.
- § EGT will have one staff member act as a ground radio person during periods of overlap (e.g. a medic on site or someone with appropriate training) to act in an 'advisory' position for ground traffic related to the airstrip and air traffic above. EGT has extensive experience managing strips (Tuk airstrip etc.) EGT will likely be setting up a helium system to get ceiling estimates on site.
- § Should consider flagging, buggy whips or strobe lights on vehicles, a set radio frequency for a 10-mile radius of the airstrip.
- § Incoming/outgoing flights will have right of way on the airstrip. If any work on the strip, equipment and people will be removed accordingly.
- Fuel storage/staging areas, labelling, fuel transfer and potential spills
 - § All fuel drum should be labelled by each owner (as per land use permit) and separated by space for easier management. Diamonds North’s drums will be labelled DN or DBN.
 - § Unlikely fuel theft will be an issue but a log of flights in/out could help address this
 - § Shared communications should take place between Diamonds North & EGT when “known” spills occur.
 - § “Observed” spills are generally handled under a “Good Neighbour” approach and appropriate officials would be contacted.
 - § Fuel caches of 3rd parties should be monitored by EGT & DN to ensure further liabilities are not assumed.
- Roads – use, material hauling, upgrade/decommissioning
 - § EGT will upgrade site roads by installing temporary culverts and perhaps some pull-outs for passing
 - § Roads on site will be used by EGT for hauling contaminated soil and for moving granular resource on site.

- § At the end of the remediation project, the roads will be decommissioned – culverts removed and re-graded to match natural drainage
- o Other
 - § In overlapping areas both EGT & DN to discuss PPE protocols for staff.
 - § DN was wondering what the risks are at site to their staff in terms of contaminants. As long as the DN staff stays out of the buildings and tanks on site, there is very minimal contaminant risk. Site-specific risks are identified in the EGT site-specific health and safety plan and will be shared with DN.
 - § DN will also send health and safety plan and spill contingency plan to EGT

Please advise in writing within five days of receipt if these minutes contain any errors or omissions, otherwise they will become part of the project documentation as presented.

Appendix I

Site Photographs

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 1: Camp Water intake



Photo 2: Camp garbage incinerator

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 3: Constructing Post Treatment Greywater holding Pond



Photo 4: Greywater treatment system and holding ponds

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 5: View of Apron area excavation with construction camp in top right corner and greywater treatment system between camp and excavation



Photo 6: Soil sampling Auger equipment

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 7: Initial stages of borrow extraction at Borrow Area B



Photo 8: Barrel Sample JP-05

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 9: Barrel washing station



Photo 10: Hazardous Waste Storage Area

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 11: Wooden tent frames prior to demolition



Photo 12: Orange Nodwell unit

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 13: Non-hazardous Waste packaged for off site transport



Photo 14: NAVAID structure during demolition

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 15: 2008 Barge removing waste from site



Photo 16: Loading non-hazardous waste on barge

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 17: Main station maintenance building



Photo 18: Burning of non-painted, non-treated wood

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 19: POL Tank demolition operations



Photo 20: POL Tank demolition operations

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 21: POL Tank demolition operations



Photo 22: Palletised POL tank sections

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 23: Leachable lead painted waste in lined Marine Shipping Container



Photo 24: reshaping of tankfarm berms using drag

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 25: Type 1 Material operations at Ulukhaktok



Photo 26: Type 1 Material operations at Ulukhaktok

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 27: Silt screen erected around airstrip wash out during fill placement



Photo 28: Debris removed from Buried Debris Lobe P

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 29: Excavation of Apron Area SW plume (Part 3)



Photo 30: Excavation of Apron Area SW plume (Part 1). Note ice lens at base of excavation

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 31: Soil sampling in SW plume excavation following rain



Photo 32: Trackpacking of SW Plume backfill material.

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 33: Vibration roller compaction of Type 2 material on Landfill Regrade D



Photo 34: Type 1 Material and geotextile French Drains along base of Landfill Regrade A

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 35: Type 1 material cover on Landfill Regrade C



Photo 36: Type 1 material cover on SE slope of Landfill Regrade A

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 37: View from finished Landfill Regrade B towards finished Landfill Regrade C



Photo 38: Soil Disposal Area 1 at close of 2009 season

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 39: South End of Soil Disposal Area 2 at close of 2009 season



Photo 40: View across Borrow Area 6 following reclamation at the close of the 2009 season

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 41: View of Borrow Area B following reclamation at the close of the 2009 season



Photo 42: Swale at south end of the Airstrip following removal of culvert at the close of the 2009 season

**Johnson Point Remediation Project
PHOTOGRAPHIC RECORD**



Photo 43: View west across backfilled Apron Area NE Plume



Photo 44: View SW across backfilled Apron Area excavations.

Appendix J (on CD)

Environmental Results

Task Order#:
 Site#:
 Site Location:
 Project #: A934217
 Your C.O.C. #: na

Attention: Erin Anderson

Maxxam Analytics
 Edmonton - ENV
 9331-48 St
 Edmonton, AB
 T6B 2R4

Report Date: 2009/07/09

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A983573

Received: 2009/07/07, 09:02

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Laboratory Method	Method
Polychlorinated Biphenyl in Solids (l)	1	CAM SOP-00307	Primary reference EPA 8082
MOISTURE	1	CAM SOP-00445	McKeague 2nd ed 1978

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Sample(s) analyzed using methodologies that have not been subjected to Maxxam's standard validation process for the submitted matrix and is not an Accredited method. Analysis performed with client consent, however results should be viewed with discretion

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ELORA DI BRATTO, Project Manager
 Email: Elora.DiBratto@maxxamanalytics.com
 Phone# (905) 817-5700

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

Maxxam Job #: A983573
 Report Date: 2009/07/09

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934217

RESULTS OF ANALYSES OF SOIL

Maxxam ID		CZ5346		
Sampling Date		2009/07/02		
COC Number		na		
	Units	P64821-02R\09-202	RDL	QC Batch

Moisture	%	1.7	0.2	1870805
----------	---	-----	-----	---------

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A983573
 Report Date: 2009/07/09

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934217

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		CZ5346		
Sampling Date		2009/07/02		
COC Number		na		
	Units	P64821-02R\09-202	RDL	QC Batch

Aroclor 1262	ug/g	<0.1	0.1	1871459
Aroclor 1016	ug/g	<0.1	0.1	1871459
Aroclor 1221	ug/g	<0.1	0.1	1871459
Aroclor 1232	ug/g	<0.1	0.1	1871459
Aroclor 1242	ug/g	<0.1	0.1	1871459
Aroclor 1248	ug/g	<0.1	0.1	1871459
Aroclor 1254	ug/g	<0.1	0.1	1871459
Aroclor 1260	ug/g	<0.1	0.1	1871459
Aroclor 1268	ug/g	<0.1	0.1	1871459
Total PCB	ug/g	<0.1	0.1	1871459
Extraction Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	66		1871459
Decachlorobiphenyl	%	78		1871459

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A983573
 Report Date: 2009/07/09

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934217

Test Summary

Maxxam ID CZ5346
Sample ID P64821-02R\09-202
Matrix Soil

Collected 2009/07/02
Shipped
Received 2009/07/07

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Solids	GC/ECD	1871459	2009/07/08	2009/07/09	LGA
MOISTURE	BAL	1870805	N/A	2009/07/08	AC

Maxxam Job #: A983573
Report Date: 2009/07/09

Maxxam Analytics
Task Order#:
Site#:

Project #: A934217

Package 1	2.0°C
-----------	-------

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Sample CZ5346-01: PCB Analysis: Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Results relate only to the items tested.

Maxxam Analytics
 Task Order#:
 Site#:
 Site Location:
 Project #: A934217

Quality Assurance Report

Maxxam Job Number: A983573

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1871459 LGA	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/07/09		80	%	40 - 130
		Decachlorobiphenyl	2009/07/09		94	%	40 - 130
		Aroclor 1262	2009/07/09	<0.01		ug/g	
		Aroclor 1016	2009/07/09	<0.01		ug/g	
		Aroclor 1221	2009/07/09	<0.01		ug/g	
		Aroclor 1232	2009/07/09	<0.01		ug/g	
		Aroclor 1242	2009/07/09	<0.01		ug/g	
		Aroclor 1248	2009/07/09	<0.01		ug/g	
		Aroclor 1254	2009/07/09	<0.01		ug/g	
		Aroclor 1260	2009/07/09	<0.01		ug/g	
		Aroclor 1268	2009/07/09	<0.01		ug/g	
		Total PCB	2009/07/09	<0.01		ug/g	
	RPD	Aroclor 1260	2009/07/09	7.8		%	50
		Total PCB	2009/07/09	7.8		%	50
	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/09		85	%	40 - 130
		Decachlorobiphenyl	2009/07/09		93	%	40 - 130
		Aroclor 1260	2009/07/09		93	%	30 - 130
		Total PCB	2009/07/09		93	%	30 - 130

RPD = Relative Percent Difference

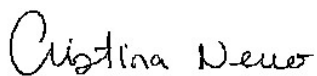
Validation Signature Page

Maxxam Job #: A983573

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CHARLES ANCKER, B.Sc., M.Sc., C.Chem, Senior Analyst



CRISTINA NERVO, Scientific Services

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.



MAXXAM ANALYTICS
 9331 - 48th Street
 Edmonton, Alberta, T6B 2R4
 Phone: (780) 577-7100
 Fax: (780) 450-4187

Maxxam
 Analytics
 SUBCONTRACTING REQUEST FORM

Page #: 1
 AECOM - CALGARY
 Maxxam PM Erin Maxxam

To: Maxxam Ontario (From Edmonton)

Job# A934217

- Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Zofia (print) ZOFIA CERETA

Received @ Subcontract Lab (Date) 09/07/07 (Time) 9:02

Received Lab's Job # _____ Inspected by (print) _____ SIF Yes No
 Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 1°C Temp2 2°C Temp3 3°C Custody sealed YES

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
PG4821-02R \ 09-202	S	Miscellaneous Inorganics Test = PCBs	2(125J)	2009/07/02	2009/07/10

- NOTES:
 1) Please call us if due date cannot be met. Please reference Sample ID on your report.
 2) Include copy of this completed form, Client COC & signed final report to edmenvirocs@m

7-Jul-09 09:02
 ANTONELLA BRASIL

 A983573
 J_L ENV-143

July 6.

Send 2 x 125mL Jars

please Run PCBs

SHIPPING INSTRUCTIONS

- Ship Immediately (highlight Yellow) Ship Cold
 Requires 9am Ship Room Temp
 Requires Sat. Delivery Ship Frozen
 Regular Ship next available day COC Must be Attached
 Sender (Print) _____ Initial _____

SHIPPING DEPARTMENT CHECKLIST

- Correct Shipping location
 Correct Sample Ids (Paperwork vs. Bottles)
 Yes No Special-Cooler, Ice, Tape-custody seal, Date&Sign
 Date Shipped _____
 Shipper (Print) _____ Initial _____

t6



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

81170 CHAIN OF CUSTODY

Page: 1 of 1

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALLIE

Address: ana.gallie@aecom.com

Prov: Calgary AB **PC:**

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To: Dara Schmidt (AECOM)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3

Ph: 403-450-9924 **Fax:** 403-270-9822

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: Temp. Storage Area

Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)				# of Containers Submitted		
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	BTEX F1	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Flashpoint	pH	Chlorine (Cl)	Cd (Cadmium)		Cr (Chromium)	Pb (Lead)
09-200	WO	2009/06/25 16:30															1
09-201	WO	2009/06/27 14:45															1x
09-202	SWaste	2009/07/02 14:00				X											4
09-203	SWaste	2009/07/02 14:10				X											2
09-204	SWaste	2009/07/02 14:20				X											2

All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: DARA SCHMIDT

Signature and Print: *Dara Schmidt*

Date/Time: 2009/07/02 18:35

JARS USED & NOT SUBMITTED: 07/06/09

Received By: RT

Temperature: 9 9 7 Y

Ice:

Page 9 of 9

CUSTODY SEAL: YES/ NO

COMMENTS/SPECIAL INSTRUCTIONS:
limited sample from unsterilized drum



Your Project #: 2977-371-00 JOHNSON POINT
 Site: TEMP. STORAGE AREA
 Your C.O.C. #: 81170

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/07/14

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A934217
Received: 2009/07/06, 10:50

Sample Matrix: Soil
 # Samples Received: 3

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Flash Point	3	N/A	2009/07/07	EENVSOP-00079	ASTM D3828-93
pH (1:1 extract, solid waste)	3	2009/07/11	2009/07/11	AB SOP-00006	SSMA 16.3

Sample Matrix: Water
 # Samples Received: 2

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Cadmium - low level CCME (Total)	2	2009/07/06	2009/07/10	CAL SOP-00191	EPA SW-846 6020A
Chlorine (Total)	2	N/A	2009/07/09	EENVSOP-00070	HACH 8167
Flash Point	1	2009/07/09	2009/07/09		
Ethylene, Di, Tri & Tetraethylene glycol (Ø)	1	N/A	2009/07/13	CAL SOP-00093	EPA 8015 D
Elements by ICPMS - Total	2	2009/07/10	2009/07/10	CAL SOP-00191	EPA SW-846 6020A
pH	1	N/A	2009/07/09	EENVSOP-00054	SM 4500-H B

(1) This test was performed by Maxxam Calgary

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
 Email: eanderson@maxxamanalytics.com
 Phone# (780) 577-7113 Ext:7113

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section



Your Project #: 2977-371-00 JOHNSON POINT
Site: TEMP. STORAGE AREA
Your C.O.C. #: 81170

Attention: DARA SCHMIDT
AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/07/14

CERTIFICATE OF ANALYSIS

-2-

5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		P64821	P64821	P64833		
Sampling Date		2009/07/02	2009/07/02	2009/07/02		
		14:00	14:00	14:10		
COC Number		81170	81170	81170		
	Units	09-202	09-202 Lab-Dup	09-203	RDL	QC Batch

FOR OIL ANALYSES						
Flash point	°C	>61	>61	>61	23	3257394
Soluble Parameters						
Soluble (1:1) pH	N/A	1.96 (1)	N/A	7.80	N/A	3267342

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
(1) Sample pH value outside pH calibration range 4 to 10, verified using pH 1.68 buffer

Maxxam ID		P64834		
Sampling Date		2009/07/02		
		14:20		
COC Number		81170		
	Units	09-204	RDL	QC Batch

FOR OIL ANALYSES				
Flash point	°C	>61	23	3257394
Soluble Parameters				
Soluble (1:1) pH	N/A	6.79	N/A	3267342

RDL = Reportable Detection Limit

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		P64685	P64685		P64754		
Sampling Date		2009/06/25 16:30	2009/06/25 16:30		2009/06/27 14:45		
COC Number		81170	81170		81170		
	Units	09-200	09-200 Lab-Dup	RDL	09-201	RDL	QC Batch

FOR OIL ANALYSES							
Flash point	°C	>61	>61	23	N/A	23	3261507
Misc. Inorganics							
Total Dissolved Chlorine	mg/L	0.50 (1)	0.50	0.02	1.5 (1)	0.02	3264391
pH	N/A	7.96	N/A	N/A	N/A	N/A	3263207
Low Level Elements							
Total Cadmium (Cd)	ug/L	14	N/A	0.005	0.10	0.006	3255495

N/A = Not Applicable
 RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate
 (1) Sample was past hold time when received.

GLYCOLS BY GC-FID (WATER)

Maxxam ID		P64754		
Sampling Date		2009/06/27 14:45		
COC Number		81170		
	Units	09-201	RDL	QC Batch

Glycols				
Ethylene Glycol	mg/L	<10	10	3270112
Diethylene Glycol	mg/L	670	10	3270112
Triethylene Glycol	mg/L	<10	10	3270112
Tetraethylene Glycol	mg/L	<10	10	3270112
Propylene Glycol	mg/L	<10	10	3270112
Surrogate Recovery (%)				
Methyl Sulfone (sur.)	%	19 (1)	N/A	3270112

N/A = Not Applicable
 RDL = Reportable Detection Limit
 (1) Surrogate recovery below acceptance criteria due to matrix interference. Reanalysis yields similar results.

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		P64685		P64754		
Sampling Date		2009/06/25 16:30		2009/06/27 14:45		
COC Number		81170		81170		
	Units	09-200	RDL	09-201	RDL	QC Batch

Elements						
Total Chromium (Cr)	mg/L	0.071	0.001	0.013	0.001	3263730
Total Lead (Pb)	mg/L	9.2 (1)	0.002	0.015	0.0002	3263730

RDL = Reportable Detection Limit
 (1) Detection limits raised due to dilution to bring analyte within the calibrated range.

Package 1	8.3°C
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Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Sample P64754-01: Detection limits raised due to insufficient sample volume.

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference: TEMP. STORAGE AREA

Quality Assurance Report
 Maxxam Job Number: EA934217

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3257394 RW3	RPD [P64821-01]	Flash point	2009/07/07	NC		%	25
3261507 RW3	RPD [P64685-01]	Flash point	2009/07/09	NC		%	N/A
3263207 MG5	Calibration Check	pH	2009/07/09		100	%	97 - 103
	RPD	pH	2009/07/09	0.2		%	5
3263730 AS7	Calibration Check	Total Chromium (Cr)	2009/07/09		107	%	80 - 120
		Total Lead (Pb)	2009/07/09		111	%	80 - 120
	MATRIX SPIKE	Total Chromium (Cr)	2009/07/09		108	%	80 - 120
		Total Lead (Pb)	2009/07/09		114	%	80 - 120
	BLANK	Total Chromium (Cr)	2009/07/09	<0.001		mg/L	
		Total Lead (Pb)	2009/07/09	<0.0002		mg/L	
	RPD	Total Chromium (Cr)	2009/07/09	NC		%	20
		Total Lead (Pb)	2009/07/09	NC		%	20
3264391 LF1	Calibration Check	Total Dissolved Chlorine	2009/07/09		98	%	80 - 120
	MATRIX SPIKE	Total Dissolved Chlorine	2009/07/09		107	%	80 - 120
	[P64685-01]	Total Dissolved Chlorine	2009/07/09	<0.02		mg/L	
	BLANK	Total Dissolved Chlorine	2009/07/09	<0.02		mg/L	
	RPD [P64685-01]	Total Dissolved Chlorine	2009/07/09	0		%	20
3267342 MA	Calibration Check	Soluble (1:1) pH	2009/07/11		100	%	99 - 101
	QC STANDARD	Soluble (1:1) pH	2009/07/11		100	%	97 - 103
	RPD	Soluble (1:1) pH	2009/07/11	0.2		%	5
3270112 AM7	MATRIX SPIKE	Methyl Sulfone (sur.)	2009/07/14		93	%	70 - 130
		Ethylene Glycol	2009/07/14		111	%	70 - 130
		Diethylene Glycol	2009/07/14		89	%	70 - 130
		Triethylene Glycol	2009/07/14		90	%	70 - 130
		Tetraethylene Glycol	2009/07/14		72	%	70 - 130
		Propylene Glycol	2009/07/14		84	%	70 - 130
	SPIKE	Methyl Sulfone (sur.)	2009/07/13		99	%	70 - 130
		Ethylene Glycol	2009/07/13		108	%	70 - 130
		Diethylene Glycol	2009/07/13		98	%	70 - 130
		Triethylene Glycol	2009/07/13		97	%	70 - 130
		Tetraethylene Glycol	2009/07/13		104	%	70 - 130
		Propylene Glycol	2009/07/13		92	%	70 - 130
	BLANK	Methyl Sulfone (sur.)	2009/07/13		97	%	70 - 130
		Ethylene Glycol	2009/07/13	<10		mg/L	
		Diethylene Glycol	2009/07/13	<10		mg/L	
		Triethylene Glycol	2009/07/13	<10		mg/L	
		Tetraethylene Glycol	2009/07/13	<10		mg/L	
		Propylene Glycol	2009/07/13	<10		mg/L	
	RPD	Ethylene Glycol	2009/07/14	NC		%	20
		Diethylene Glycol	2009/07/14	NC		%	20
		Triethylene Glycol	2009/07/14	NC		%	20
		Tetraethylene Glycol	2009/07/14	NC		%	20
		Propylene Glycol	2009/07/14	NC		%	20

N/A = Not Applicable
 NC = Non-calculable
 RPD = Relative Percent Difference

Validation Signature Page

Maxxam Job #: A934217

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



DINA TLEUGABULOVA, Ph.D., Project Manager



ORLA JORGENSEN, Organics Supervisor

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

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Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

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Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

81170 CHAIN OF CUSTODY

Page: 1 of 1

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: ANA GALLIE
Address: ana.gallie@aecom.com
Prov: Calgary AB **PC:**
Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To: A934217
 Dara Schmidt (AECOM)
 2540 Kensington Rd NW
 Calgary
Prov: AB **PC:** T2N 3S3
Ph: 403-450-9924 **Fax:** 403-270-9822
 (site) (office)

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: Temp Storage Area
Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use
 AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
 dara.schmidt@
 aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)						OTHER TEST(S)						# of Containers Submitted																	
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ²	BTEX F1	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved		Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	DOC	Flashpoint	pH	Chlorine (Cl)	Cd (Cadmium)	Cr (Chromium)	Pb (lead)	Glycol	*HOLD for 60 Days
1	09-200	WD	2009/06/25	16:30																																1
2	09-201	WD	2009/06/27	14:45																																1x
3	09-202	S.Waste	2009/07/02	14:00																															4	
4	09-203	S.Waste	2009/07/02	14:10																															2	
5	09-204	S.Waste	2009/07/02	14:20																															2	
6																																				
7																																				
8																																				
9																																				
10																																				
11																																				
12																																				

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: DARA SCHMIDT Date/Time: 2009/07/02 18:35
 Sign and Print: Dara Schmidt

COMMENTS/SPECIAL INSTRUCTIONS:
 *limited sample from waste oil drums.
 Page 10 of 10

# JARS USED & NOT SUBMITTED	Received By 07/06/09 10:50h RT	Temperature		Ice
		9	9	7
CUSTODY SEAL		YES / NO		

Task Order#:
Site#:
Site Location:
Project #: A934996
Your C.O.C. #: n/a

Attention: Erin Anderson

Maxxam Analytics
Edmonton - ENV
9331-48 St
Edmonton, AB
T6B 2R4

Report Date: 2009/07/17

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A987017

Received: 2009/07/13, 08:50

Sample Matrix: Soil
Samples Received: 153

Analyses	Quantity	Laboratory Method	Method
MOISTURE	153	CAM SOP-00445	Primary reference McKeague 2nd ed 1978
Polychlorinated Biphenyl in Soil	153	CAM SOP-00309	SW846 8082

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ELORA DI BRATTO, Project Manager
Email: Elora.DiBratto@maxxamanalytics.com
Phone# (905) 817-5700

=====
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Total cover pages: 1

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DB1821	DB1822	DB1823		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69850-02R/09-270	P69851-02R/09-271	P69852-02R/09-272	RDL	QC Batch

Moisture	%	9.6	10	9.5	0.2	1876851
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1824	DB1825	DB1826		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69853-02R/09-273	P69854-02R/09-274	P69855-02R/09-275	RDL	QC Batch

Moisture	%	8.9	8.8	9.4	0.2	1876851
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1826	DB1827	DB1828		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69855-02R/09-275	P69856-02R/09-276	P69857-02R/09-277	RDL	QC Batch
		Lab-Dup				

Moisture	%	9.6	9.3	8.3	0.2	1876851
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1829	DB1830	DB1831		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69858-02R/09-278	P69859-02R/09-279	P69860-02R/09-280	RDL	QC Batch

Moisture	%	10	11	10	0.2	1876851
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DB1832	DB1833	DB1834		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69861-02R/09-281	P69862-02R/09-282	P69863-02R/09-283	RDL	QC Batch

Moisture	%	10	10	9.8	0.2	1876851
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1835	DB1836	DB1837		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69864-02R/09-284	P69865-02R/09-285	P69866-02R/09-286	RDL	QC Batch

Moisture	%	9.9	9.2	9.7	0.2	1876851
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1838	DB1839	DB1840		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69867-02R/09-287	P69868-02R/09-288	P69869-02R/09-289	RDL	QC Batch

Moisture	%	9.9	9.9	9.9	0.2	1876851
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1841	DB1842	DB1843		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69870-02R/09-290	P69871-02R/09-291	P69872-02R/09-292	RDL	QC Batch

Moisture	%	7.8	11	10	0.2	1876851
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DB1844	DB1845	DB1846		
Sampling Date		2009/07/05	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69873-02R/09-293	P69874-02R/09-294	P69876-02R/09-296	RDL	QC Batch

Moisture	%	10	9.9	11	0.2	1876851
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1847	DB1848	DB1849		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69877-02R/09-297	P69878-02R/09-298	P69918-02R/09-299	RDL	QC Batch

Moisture	%	9.6	11	10	0.2	1876851
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1850	DB1851	DB1852		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69928-02R/09-300	P69929-02R/09-301	P69930-02R/09-302	RDL	QC Batch

Moisture	%	10	9.7	10	0.2	1876851
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1853	DB1854		DB1855	
Sampling Date		2009/07/06	2009/07/06		2009/07/06	
COC Number		n/a	n/a		n/a	
	Units	P69931-02R/09-303	P69932-02R/09-304	QC Batch	P69933-02R/09-305	RDL QC Batch

Moisture	%	11	9.9	1876851	9.0	0.2	1879757
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DB1856	DB1857	DB1858		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69934-02R/09-306	P69935-02R/09-307	P69936-02R/09-308	RDL	QC Batch

Moisture	%	9.4	9.7	9.8	0.2	1879757
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1859	DB1860		DB1861		
Sampling Date		2009/07/06	2009/07/06		2009/07/06		
COC Number		n/a	n/a		n/a		
	Units	P69939-02R/09-311	P69940-02R/09-312	QC Batch	P69941-02R/09-313	RDL	QC Batch

Moisture	%	9.4	10	1879757	10	0.2	1877976
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam ID		DB1861	DB1862	DB1863		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69941-02R/09-313	P69942-02R/09-314	P69943-02R/09-315	RDL	QC Batch
		Lab-Dup				

Moisture	%	10	9.9	10	0.2	1877976
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1864	DB1865	DB1866		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69944-02R/09-316	P69945-02R/09-317	P69946-02R/09-318	RDL	QC Batch

Moisture	%	9.3	10	9.8	0.2	1877976
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DB1867	DB1868	DB1869		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69947-02R/09-319	P69948-02R/09-320	P69949-02R/09-321	RDL	QC Batch

Moisture	%	11	11	12	0.2	1877976
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1870	DB1871	DB1872		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69950-02R/09-322	P69951-02R/09-323	P69952-02R/09-324	RDL	QC Batch

Moisture	%	13	11	11	0.2	1877976
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1873	DB1874	DB1875		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69953-02R/09-325	P69954-02R/09-326	P69955-02R/09-327	RDL	QC Batch

Moisture	%	12	11	12	0.2	1877976
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1876	DB1877	DB1878		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69956-02R/09-328	P69966-02R/09-329	P69969-02R/09-330	RDL	QC Batch

Moisture	%	12	11	9.2	0.2	1877976
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DB1879	DB1880	DB1881		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69970-02R/09-331	P69971-02R/09-332	P69972-02R/09-333	RDL	QC Batch

Moisture	%	10	13	12	0.2	1877976
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1882	DB1883	DB1884		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69973-02R/09-334	P69974-02R/09-335	P69975-02R/09-336	RDL	QC Batch

Moisture	%	9.9	11	10	0.2	1877976
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1885	DB1886	DB1887		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69976-02R/09-337	P69977-02R/09-338	P69978-02R/09-339	RDL	QC Batch

Moisture	%	9.3	12	11	0.2	1877976
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1888	DB1889	DB1890		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69979-02R/09-340	P69980-02R/09-341	P69981-02R/09-342	RDL	QC Batch

Moisture	%	8.8	10	11	0.2	1877976
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

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Maxxam ID		DB1891	DB1892	DB1893		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69982-02R/09-343	P69983-02R/09-344	P69984-02R/09-345	RDL	QC Batch

Moisture	%	10	8.8	8.9	0.2	1877976
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1894	DB1895	DB1896		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69985-02R/09-346	P69986-02R/09-347	P69987-02R/09-348	RDL	QC Batch

Moisture	%	9.2	9.2	9.3	0.2	1877976
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1897	DB1898	DB1899		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69988-02R/09-349	P69989-02R/09-350	P69990-02R/09-351	RDL	QC Batch

Moisture	%	8.4	9.1	8.9	0.2	1877976
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1900	DB1900	DB1901		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69991-02R/09-352	P69991-02R/09-352	QC Batch	P69992-02R/09-353	RDL
			Lab-Dup			QC Batch

Moisture	%	8.1	9.0	1877976	8.5	0.2	1879382
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

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Maxxam ID		DB1901	DB1902	DB1903		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69992-02R/09-353	P69993-02R/09-354	P69994-02R/09-355	RDL	QC Batch
		Lab-Dup				

Moisture	%	8.7	7.8	9.6	0.2	1879382
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1904	DB1905	DB1906		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69995-02R/09-356	P69996-02R/09-357	P69997-02R/09-358	RDL	QC Batch

Moisture	%	8.0	8.8	7.8	0.2	1879382
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1907	DB1908	DB1909		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70019-02R/09-359	P70020-02R/09-360	P70021-02R/09-361	RDL	QC Batch

Moisture	%	8.3	6.6	8.8	0.2	1879382
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1910	DB1911		DB1912		
Sampling Date		2009/07/06	2009/07/06		2009/07/06		
COC Number		n/a	n/a		n/a		
	Units	P70022-02R/09-362	P70023-02R/09-363	QC Batch	P70024-02R/09-364	RDL	QC Batch

Moisture	%	8.4	8.7	1879382	8.0	0.2	1879757
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

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Maxxam ID		DB1913	DB1914	DB1915		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70025-02R/09-365	P70026-02R/09-366	P70027-02R/09-367	RDL	QC Batch

Moisture	%	8.4	7.9	8.2	0.2	1879757
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1916	DB1917	DB1918		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70028-02R/09-368	P70029-02R/09-369	P70030-02R/09-370	RDL	QC Batch

Moisture	%	9.2	9.2	8.8	0.2	1879757
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DB1919	DB1920		DB1921	
Sampling Date		2009/07/06	2009/07/06		2009/07/06	
COC Number		n/a	n/a		n/a	
	Units	P70031-02R/09-371	P70032-02R/09-372	QC Batch	P70033-02R/09-373	RDL QC Batch

Moisture	%	9.8	10	1879757	9.2	0.2	1878246
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam ID		DB1921	DB1922	DB1923		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70033-02R/09-373	P70034-02R/09-374	P70035-02R/09-375	RDL	QC Batch
		Lab-Dup				

Moisture	%	9.0	9.2	7.5	0.2	1878246
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

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Maxxam ID		DB1924	DB1925	DB1926		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70036-02R/09-376	P70037-02R/09-377	P70038-02R/09-378	RDL	QC Batch

Moisture	%	7.8	10	11	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1927	DB1928	DB1929		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70039-02R/09-379	P70040-02R/09-380	P70041-02R/09-381	RDL	QC Batch

Moisture	%	10	8.8	12	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1930	DB1931	DB1932		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70042-02R/09-382	P70043-02R/09-383	P70044-02R/09-384	RDL	QC Batch

Moisture	%	10	11	12	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1933	DB1934	DB1935		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70045-02R/09-385	P70046-02R/09-386	P70047-02R/09-387	RDL	QC Batch

Moisture	%	9.1	11	12	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

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Maxxam ID		DB1936	DB1937	DB1938		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70048-02R/09-388	P70053-02R/09-389	P70054-02R/09-390	RDL	QC Batch

Moisture	%	9.5	9.5	10	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1939	DB1940	DB1941		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70055-02R/09-391	P70056-02R/09-392	P70057-02R/09-393	RDL	QC Batch

Moisture	%	9.7	11	8.9	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1942	DB1943	DB1944		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70058-02R/09-394	P70059-02R/09-395	P70061-02R/09-396	RDL	QC Batch

Moisture	%	12	7.9	11	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1945	DB1945	DB1946		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70062-02R/09-397	P70062-02R/09-397 Lab-Dup	P70063-02R/09-398	RDL	QC Batch

Moisture	%	12	12	11	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

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Maxxam ID		DB1947	DB1948	DB1949		
Sampling Date		2009/07/06	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70065-02R/09-399	P70066-02R/09-400	P70067-02R/09-401	RDL	QC Batch

Moisture	%	12	11	9.4	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1950	DB1951	DB1952		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70069-02R/09-402	P70070-02R/09-403	P70071-02R/09-404	RDL	QC Batch

Moisture	%	9.9	11	11	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1953	DB1954	DB1955		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70072-02R/09-405	P70073-02R/09-406	P70074-02R/09-407	RDL	QC Batch

Moisture	%	8.3	11	15	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1956	DB1957	DB1958		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70075-02R/09-408	P70076-02R/09-409	P70077-02R/09-410	RDL	QC Batch

Moisture	%	11	11	11	0.2	1878246
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

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Maxxam ID		DB1959	DB1960		DB1961		
Sampling Date		2009/07/07	2009/07/07		2009/07/07		
COC Number		n/a	n/a		n/a		
	Units	P70078-02R/09-411	P70079-02R/09-412	QC Batch	P70080-02R/09-413	RDL	QC Batch

Moisture	%	11	12	1878246	11	0.2	1879757
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1962	DB1963	DB1964		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70081-02R/09-414	P70082-02R/09-415	P70083-02R/09-416	RDL	QC Batch

Moisture	%	12	8.1	8.1	0.2	1879757
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1965	DB1966	DB1967		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70084-02R/09-417	P70103-02R/09-418	P70104-02R/09-419	RDL	QC Batch

Moisture	%	9.8	11	13	0.2	1879757
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1968	DB1968	DB1969		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70105-02R/09-420	P70105-02R/09-420	P70106-02R/09-421	RDL	QC Batch
			Lab-Dup			

Moisture	%	11	11	13	0.2	1879757
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

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Maxxam ID		DB1970	DB1971	DB1972		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70107-02R/09-422	P70108-02R/09-423	P70109-02R/09-424	RDL	QC Batch

Moisture	%	14	13	13	0.2	1880193
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DB1973		
Sampling Date		2009/07/07		
COC Number		n/a		
	Units	P70110-02R/09-425	RDL	QC Batch

Moisture	%	6.9	0.2	1880193
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N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1821	DB1821	DB1822		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69850-02R/09-270	P69850-02R/09-270 Lab-Dup	P69851-02R/09-271	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	86	80	77		1876609
Decachlorobiphenyl	%	85	86	93		1876609
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

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Maxxam ID		DB1823	DB1824	DB1825		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69852-02R/09-272	P69853-02R/09-273	P69854-02R/09-274	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	78	69	72		1876609
Decachlorobiphenyl	%	96	81	87		1876609
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1826	DB1827	DB1828		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69855-02R/09-275	P69856-02R/09-276	P69857-02R/09-277	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	83	90	83		1876609
Decachlorobiphenyl	%	87	98	90		1876609
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1829	DB1830	DB1831		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69858-02R/09-278	P69859-02R/09-279	P69860-02R/09-280	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	80	84	85		1876609
Decachlorobiphenyl	%	82	92	94		1876609
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1832	DB1833	DB1834		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69861-02R/09-281	P69862-02R/09-282	P69863-02R/09-283	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	110	78	90		1876609
Decachlorobiphenyl	%	122	101	99		1876609
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1835	DB1836	DB1837		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69864-02R/09-284	P69865-02R/09-285	P69866-02R/09-286	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	109	86	84		1876609
Decachlorobiphenyl	%	120	100	96		1876609
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1838	DB1839	DB1840		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69867-02R/09-287	P69868-02R/09-288	P69869-02R/09-289	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876609
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	84	80	76		1876609
Decachlorobiphenyl	%	96	96	97		1876609
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

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 Task Order#:
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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1841	DB1842	DB1843		
Sampling Date		2009/07/05	2009/07/05	2009/07/05		
COC Number		n/a	n/a	n/a		
	Units	P69870-02R/09-290	P69871-02R/09-291	P69872-02R/09-292	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	71	66	68		1876610
Decachlorobiphenyl	%	89	73	72		1876610
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1844	DB1845	DB1846		
Sampling Date		2009/07/05	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69873-02R/09-293	P69874-02R/09-294	P69876-02R/09-296	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	63	68	67		1876610
Decachlorobiphenyl	%	80	79	71		1876610
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1847	DB1848	DB1848		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69877-02R/09-297	P69878-02R/09-298	P69878-02R/09-298	RDL	QC Batch
				Lab-Dup		
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	68	68	67		1876610
Decachlorobiphenyl	%	70	69	75		1876610
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1849	DB1850	DB1851		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69918-02R/09-299	P69928-02R/09-300	P69929-02R/09-301	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	72	73	75		1876610
Decachlorobiphenyl	%	78	70	77		1876610
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1852	DB1853	DB1854		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69930-02R/09-302	P69931-02R/09-303	P69932-02R/09-304	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	130	71	65		1876610
Decachlorobiphenyl	%	128	73	62		1876610
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1855	DB1856	DB1857		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69933-02R/09-305	P69934-02R/09-306	P69935-02R/09-307	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	70	65	73		1876610
Decachlorobiphenyl	%	76	68	76		1876610
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

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 Task Order#:
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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1858	DB1859	DB1860		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69936-02R/09-308	P69939-02R/09-311	P69940-02R/09-312	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876610
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	68	69	66		1876610
Decachlorobiphenyl	%	77	69	69		1876610
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1861	DB1861	DB1862		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69941-02R/09-313	P69941-02R/09-313 Lab-Dup	P69942-02R/09-314	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	85	86	80		1876740
Decachlorobiphenyl	%	86	89	96		1876740
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1863	DB1864	DB1865		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69943-02R/09-315	P69944-02R/09-316	P69945-02R/09-317	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	88	84	79		1876740
Decachlorobiphenyl	%	101	96	91		1876740
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

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 Task Order#:
 Site#:

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1866	DB1867	DB1868		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69946-02R/09-318	P69947-02R/09-319	P69948-02R/09-320	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	82	80	81		1876740
Decachlorobiphenyl	%	97	95	98		1876740
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1869	DB1870	DB1871		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69949-02R/09-321	P69950-02R/09-322	P69951-02R/09-323	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	87	85	78		1876740
Decachlorobiphenyl	%	103	103	88		1876740
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1872	DB1873	DB1874		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69952-02R/09-324	P69953-02R/09-325	P69954-02R/09-326	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	70	88	84		1876740
Decachlorobiphenyl	%	81	109	102		1876740
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1875	DB1876	DB1877		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69955-02R/09-327	P69956-02R/09-328	P69966-02R/09-329	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	72	81	84		1876740
Decachlorobiphenyl	%	87	92	104		1876740
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1878	DB1879	DB1880		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69969-02R/09-330	P69970-02R/09-331	P69971-02R/09-332	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876740
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	85	91	99		1876740
Decachlorobiphenyl	%	100	102	109		1876740
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1881	DB1882	DB1883		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69972-02R/09-333	P69973-02R/09-334	P69974-02R/09-335	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	80	79	80		1876736
Decachlorobiphenyl	%	108	105	106		1876736
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1884	DB1885	DB1886		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69975-02R/09-336	P69976-02R/09-337	P69977-02R/09-338	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	83	78	77		1876736
Decachlorobiphenyl	%	112	112	100		1876736
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1887	DB1888	DB1889		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69978-02R/09-339	P69979-02R/09-340	P69980-02R/09-341	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	82	78	82		1876736
Decachlorobiphenyl	%	106	103	111		1876736
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1890	DB1891	DB1892		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69981-02R/09-342	P69982-02R/09-343	P69983-02R/09-344	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	86	87	79		1876736
Decachlorobiphenyl	%	102	100	97		1876736
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1893	DB1893	DB1894		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69984-02R/09-345	P69984-02R/09-345 Lab-Dup	P69985-02R/09-346	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	63	72	81		1876736
Decachlorobiphenyl	%	97	101	105		1876736
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1895	DB1896	DB1897		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69986-02R/09-347	P69987-02R/09-348	P69988-02R/09-349	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	78	71	73		1876736
Decachlorobiphenyl	%	102	93	92		1876736
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
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Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1898	DB1899	DB1900		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69989-02R/09-350	P69990-02R/09-351	P69991-02R/09-352	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876736
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	76	92	65		1876736
Decachlorobiphenyl	%	103	114	95		1876736
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1901	DB1901	DB1902		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69992-02R/09-353	P69992-02R/09-353 Lab-Dup	P69993-02R/09-354	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	56	66	59		1876857
Decachlorobiphenyl	%	84	87	89		1876857
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1903	DB1904	DB1905		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69994-02R/09-355	P69995-02R/09-356	P69996-02R/09-357	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	58	64	70		1876857
Decachlorobiphenyl	%	88	89	92		1876857
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1906	DB1907	DB1908		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P69997-02R/09-358	P70019-02R/09-359	P70020-02R/09-360	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	64	68	63		1876857
Decachlorobiphenyl	%	90	86	85		1876857
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

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 Task Order#:
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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1909	DB1910	DB1911		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70021-02R/09-361	P70022-02R/09-362	P70023-02R/09-363	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	63	62	71		1876857
Decachlorobiphenyl	%	84	86	88		1876857
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1912	DB1913	DB1914		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70024-02R/09-364	P70025-02R/09-365	P70026-02R/09-366	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	55	68	59		1876857
Decachlorobiphenyl	%	87	89	87		1876857
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1915	DB1916	DB1917		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70027-02R/09-367	P70028-02R/09-368	P70029-02R/09-369	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	69	74	52		1876857
Decachlorobiphenyl	%	87	90	83		1876857
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1918	DB1919	DB1920		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70030-02R/09-370	P70031-02R/09-371	P70032-02R/09-372	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876857
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	54	64	65		1876857
Decachlorobiphenyl	%	83	89	86		1876857
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1921	DB1921	DB1922		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70033-02R/09-373	P70033-02R/09-373 Lab-Dup	P70034-02R/09-374	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	73	63	68		1876856
Decachlorobiphenyl	%	89	81	79		1876856
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1923	DB1924	DB1925		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70035-02R/09-375	P70036-02R/09-376	P70037-02R/09-377	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	58	70	71		1876856
Decachlorobiphenyl	%	87	89	92		1876856
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1926	DB1927	DB1928		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70038-02R/09-378	P70039-02R/09-379	P70040-02R/09-380	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	62	76	59		1876856
Decachlorobiphenyl	%	87	92	76		1876856
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1929	DB1930	DB1931		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70041-02R/09-381	P70042-02R/09-382	P70043-02R/09-383	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	61	68	90		1876856
Decachlorobiphenyl	%	83	84	106		1876856
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1932	DB1933	DB1934		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70044-02R/09-384	P70045-02R/09-385	P70046-02R/09-386	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	73	76	83		1876856
Decachlorobiphenyl	%	86	95	103		1876856
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1935	DB1936	DB1937		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70047-02R/09-387	P70048-02R/09-388	P70053-02R/09-389	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1876856
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	71	77	102		1876856
Decachlorobiphenyl	%	89	95	128		1876856
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1938		DB1939		
Sampling Date		2009/07/06		2009/07/06		
COC Number		n/a		n/a		
	Units	P70054-02R/09-390	QC Batch	P70055-02R/09-391	RDL	QC Batch

Aroclor 1262	ug/g	<0.01	1876856	<0.01	0.01	1877339
Aroclor 1016	ug/g	<0.01	1876856	<0.01	0.01	1877339
Aroclor 1221	ug/g	<0.01	1876856	<0.01	0.01	1877339
Aroclor 1232	ug/g	<0.01	1876856	<0.01	0.01	1877339
Aroclor 1242	ug/g	<0.01	1876856	<0.01	0.01	1877339
Aroclor 1248	ug/g	<0.01	1876856	<0.01	0.01	1877339
Aroclor 1254	ug/g	<0.01	1876856	<0.01	0.01	1877339
Aroclor 1260	ug/g	<0.01	1876856	<0.01	0.01	1877339
Aroclor 1268	ug/g	<0.01	1876856	<0.01	0.01	1877339
Total PCB	ug/g	<0.01	1876856	<0.01	0.01	1877339
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	61	1876856	73		1877339
Decachlorobiphenyl	%	85	1876856	115		1877339

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1940	DB1941	DB1941		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70056-02R/09-392	P70057-02R/09-393	P70057-02R/09-393 Lab-Dup	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	79	71	72		1877339
Decachlorobiphenyl	%	108	108	111		1877339
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1942	DB1943	DB1944		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70058-02R/09-394	P70059-02R/09-395	P70061-02R/09-396	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	78	69	77		1877339
Decachlorobiphenyl	%	113	113	122		1877339
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1945	DB1946	DB1947		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		n/a	n/a	n/a		
	Units	P70062-02R/09-397	P70063-02R/09-398	P70065-02R/09-399	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	68	61	83		1877339
Decachlorobiphenyl	%	104	103	116		1877339
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1948	DB1949	DB1950		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70066-02R/09-400	P70067-02R/09-401	P70069-02R/09-402	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	68	64	59		1877339
Decachlorobiphenyl	%	105	106	103		1877339
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1951	DB1952	DB1953		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70070-02R/09-403	P70071-02R/09-404	P70072-02R/09-405	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	67	73	82		1877339
Decachlorobiphenyl	%	95	108	115		1877339
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1954	DB1955	DB1956		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70073-02R/09-406	P70074-02R/09-407	P70075-02R/09-408	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1877339
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	71	73	66		1877339
Decachlorobiphenyl	%	97	97	94		1877339
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1957	DB1958		
Sampling Date		2009/07/07	2009/07/07		
COC Number		n/a	n/a		
	Units	P70076-02R/09-409	P70077-02R/09-410	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	0.01	1877339
Aroclor 1016	ug/g	<0.01	<0.01	0.01	1877339
Aroclor 1221	ug/g	<0.01	<0.01	0.01	1877339
Aroclor 1232	ug/g	<0.01	<0.01	0.01	1877339
Aroclor 1242	ug/g	<0.01	<0.01	0.01	1877339
Aroclor 1248	ug/g	<0.01	<0.01	0.01	1877339
Aroclor 1254	ug/g	<0.01	<0.01	0.01	1877339
Aroclor 1260	ug/g	<0.01	<0.01	0.01	1877339
Aroclor 1268	ug/g	<0.01	<0.01	0.01	1877339
Total PCB	ug/g	<0.01	<0.01	0.01	1877339
Extraction Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	64	68		1877339
Decachlorobiphenyl	%	102	100		1877339
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1959	DB1960	DB1961		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70078-02R/09-411	P70079-02R/09-412	P70080-02R/09-413	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	71	66	67		1877358
Decachlorobiphenyl	%	113	104	101		1877358
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1962	DB1963	DB1964		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70081-02R/09-414	P70082-02R/09-415	P70083-02R/09-416	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	80	74	76		1877358
Decachlorobiphenyl	%	112	108	115		1877358
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1965	DB1966	DB1967		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70084-02R/09-417	P70103-02R/09-418	P70104-02R/09-419	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	80	73	80		1877358
Decachlorobiphenyl	%	116	111	118		1877358
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1968	DB1968	DB1969		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70105-02R/09-420	P70105-02R/09-420 Lab-Dup	P70106-02R/09-421	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	81	81	67		1877358
Decachlorobiphenyl	%	122	119	106		1877358
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1970	DB1971	DB1972		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		n/a	n/a	n/a		
	Units	P70107-02R/09-422	P70108-02R/09-423	P70109-02R/09-424	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1877358
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	76	73	72		1877358
Decachlorobiphenyl	%	125	111	110		1877358
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB1973		
Sampling Date		2009/07/07		
COC Number		n/a		
	Units	P70110-02R/09-425	RDL	QC Batch

Aroclor 1262	ug/g	<0.01	0.01	1877358
Aroclor 1016	ug/g	<0.01	0.01	1877358
Aroclor 1221	ug/g	<0.01	0.01	1877358
Aroclor 1232	ug/g	<0.01	0.01	1877358
Aroclor 1242	ug/g	<0.01	0.01	1877358
Aroclor 1248	ug/g	<0.01	0.01	1877358
Aroclor 1254	ug/g	<0.01	0.01	1877358
Aroclor 1260	ug/g	<0.01	0.01	1877358
Aroclor 1268	ug/g	<0.01	0.01	1877358
Total PCB	ug/g	<0.01	0.01	1877358
Extraction Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	86		1877358
Decachlorobiphenyl	%	119		1877358

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1821 **Collected** 2009/07/05
Sample ID P69850-02R/09-270 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1821 Dup **Collected** 2009/07/05
Sample ID P69850-02R/09-270 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1822 **Collected** 2009/07/05
Sample ID P69851-02R/09-271 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1823 **Collected** 2009/07/05
Sample ID P69852-02R/09-272 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1824 **Collected** 2009/07/05
Sample ID P69853-02R/09-273 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1825 **Collected** 2009/07/05
Sample ID P69854-02R/09-274 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1826 **Collected** 2009/07/05
Sample ID P69855-02R/09-275 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1826 Dup **Collected** 2009/07/05
Sample ID P69855-02R/09-275 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC

Maxxam ID DB1827 **Collected** 2009/07/05
Sample ID P69856-02R/09-276 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1828 **Collected** 2009/07/05
Sample ID P69857-02R/09-277 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1829 **Collected** 2009/07/05
Sample ID P69858-02R/09-278 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1830 **Collected** 2009/07/05
Sample ID P69859-02R/09-279 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1831 **Collected** 2009/07/05
Sample ID P69860-02R/09-280 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1832 **Collected** 2009/07/05
Sample ID P69861-02R/09-281 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1833 **Collected** 2009/07/05
Sample ID P69862-02R/09-282 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1834 **Collected** 2009/07/05
Sample ID P69863-02R/09-283 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1835 **Collected** 2009/07/05
Sample ID P69864-02R/09-284 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1836 **Collected** 2009/07/05
Sample ID P69865-02R/09-285 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1837 **Collected** 2009/07/05
Sample ID P69866-02R/09-286 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1838 **Collected** 2009/07/05
Sample ID P69867-02R/09-287 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1839 **Collected** 2009/07/05
Sample ID P69868-02R/09-288 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1840 **Collected** 2009/07/05
Sample ID P69869-02R/09-289 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876609	2009/07/14	2009/07/14	JZ

Maxxam ID DB1841 **Collected** 2009/07/05
Sample ID P69870-02R/09-290 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1842 **Collected** 2009/07/05
Sample ID P69871-02R/09-291 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1843
Sample ID P69872-02R/09-292
Matrix Soil
Collected 2009/07/05
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1844
Sample ID P69873-02R/09-293
Matrix Soil
Collected 2009/07/05
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1845
Sample ID P69874-02R/09-294
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1846
Sample ID P69876-02R/09-296
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1847
Sample ID P69877-02R/09-297
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1848
Sample ID P69878-02R/09-298
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1848 Dup
Sample ID P69878-02R/09-298
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1849
Sample ID P69918-02R/09-299
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1850
Sample ID P69928-02R/09-300
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1851
Sample ID P69929-02R/09-301
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1852
Sample ID P69930-02R/09-302
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1853
Sample ID P69931-02R/09-303
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1854
Sample ID P69932-02R/09-304
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1876851	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1855
Sample ID P69933-02R/09-305
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1856
Sample ID P69934-02R/09-306
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1857
Sample ID P69935-02R/09-307
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1858
Sample ID P69936-02R/09-308
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1859
Sample ID P69939-02R/09-311
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1860 **Collected** 2009/07/06
Sample ID P69940-02R/09-312 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876610	2009/07/14	2009/07/14	ART

Maxxam ID DB1861 **Collected** 2009/07/06
Sample ID P69941-02R/09-313 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1861 Dup **Collected** 2009/07/06
Sample ID P69941-02R/09-313 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1862 **Collected** 2009/07/06
Sample ID P69942-02R/09-314 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1863 **Collected** 2009/07/06
Sample ID P69943-02R/09-315 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1864 **Collected** 2009/07/06
Sample ID P69944-02R/09-316 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1865
Sample ID P69945-02R/09-317
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1866
Sample ID P69946-02R/09-318
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1867
Sample ID P69947-02R/09-319
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1868
Sample ID P69948-02R/09-320
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1869
Sample ID P69949-02R/09-321
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1870
Sample ID P69950-02R/09-322
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1871 **Collected** 2009/07/06
Sample ID P69951-02R/09-323 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1872 **Collected** 2009/07/06
Sample ID P69952-02R/09-324 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1873 **Collected** 2009/07/06
Sample ID P69953-02R/09-325 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1874 **Collected** 2009/07/06
Sample ID P69954-02R/09-326 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1875 **Collected** 2009/07/06
Sample ID P69955-02R/09-327 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1876 **Collected** 2009/07/06
Sample ID P69956-02R/09-328 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1877
Sample ID P69966-02R/09-329
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1878
Sample ID P69969-02R/09-330
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1879
Sample ID P69970-02R/09-331
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1880
Sample ID P69971-02R/09-332
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876740	2009/07/14	2009/07/15	JZ

Maxxam ID DB1881
Sample ID P69972-02R/09-333
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam ID DB1882
Sample ID P69973-02R/09-334
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1883 **Collected** 2009/07/06
Sample ID P69974-02R/09-335 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam ID DB1884 **Collected** 2009/07/06
Sample ID P69975-02R/09-336 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam ID DB1885 **Collected** 2009/07/06
Sample ID P69976-02R/09-337 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam ID DB1886 **Collected** 2009/07/06
Sample ID P69977-02R/09-338 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam ID DB1887 **Collected** 2009/07/06
Sample ID P69978-02R/09-339 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam ID DB1888 **Collected** 2009/07/06
Sample ID P69979-02R/09-340 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
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Project #: A934996

Test Summary

Maxxam ID DB1889 **Collected** 2009/07/06
Sample ID P69980-02R/09-341 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam ID DB1890 **Collected** 2009/07/06
Sample ID P69981-02R/09-342 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam ID DB1891 **Collected** 2009/07/06
Sample ID P69982-02R/09-343 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam ID DB1892 **Collected** 2009/07/06
Sample ID P69983-02R/09-344 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam ID DB1893 **Collected** 2009/07/06
Sample ID P69984-02R/09-345 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/14	ART

Maxxam ID DB1893 Dup **Collected** 2009/07/06
Sample ID P69984-02R/09-345 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/15	ART

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1894
Sample ID P69985-02R/09-346
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/15	ART

Maxxam ID DB1895
Sample ID P69986-02R/09-347
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/15	ART

Maxxam ID DB1896
Sample ID P69987-02R/09-348
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/15	ART

Maxxam ID DB1897
Sample ID P69988-02R/09-349
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/15	ART

Maxxam ID DB1898
Sample ID P69989-02R/09-350
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/15	ART

Maxxam ID DB1899
Sample ID P69990-02R/09-351
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/15	ART

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1900 **Collected** 2009/07/06
Sample ID P69991-02R/09-352 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876736	2009/07/14	2009/07/15	ART

Maxxam ID DB1900 Dup **Collected** 2009/07/06
Sample ID P69991-02R/09-352 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1877976	N/A	2009/07/14	AC

Maxxam ID DB1901 **Collected** 2009/07/06
Sample ID P69992-02R/09-353 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1901 Dup **Collected** 2009/07/06
Sample ID P69992-02R/09-353 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1902 **Collected** 2009/07/06
Sample ID P69993-02R/09-354 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1903 **Collected** 2009/07/06
Sample ID P69994-02R/09-355 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
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Project #: A934996

Test Summary

Maxxam ID DB1904 **Collected** 2009/07/06
Sample ID P69995-02R/09-356 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1905 **Collected** 2009/07/06
Sample ID P69996-02R/09-357 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1906 **Collected** 2009/07/06
Sample ID P69997-02R/09-358 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1907 **Collected** 2009/07/06
Sample ID P70019-02R/09-359 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1908 **Collected** 2009/07/06
Sample ID P70020-02R/09-360 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1909 **Collected** 2009/07/06
Sample ID P70021-02R/09-361 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1910
Sample ID P70022-02R/09-362
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1911
Sample ID P70023-02R/09-363
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879382	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1912
Sample ID P70024-02R/09-364
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1913
Sample ID P70025-02R/09-365
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1914
Sample ID P70026-02R/09-366
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1915
Sample ID P70027-02R/09-367
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
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Project #: A934996

Test Summary

Maxxam ID DB1916 **Collected** 2009/07/06
Sample ID P70028-02R/09-368 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1917 **Collected** 2009/07/06
Sample ID P70029-02R/09-369 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1918 **Collected** 2009/07/06
Sample ID P70030-02R/09-370 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1919 **Collected** 2009/07/06
Sample ID P70031-02R/09-371 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/15	LPG

Maxxam ID DB1920 **Collected** 2009/07/06
Sample ID P70032-02R/09-372 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876857	2009/07/14	2009/07/16	LPG

Maxxam ID DB1921 **Collected** 2009/07/06
Sample ID P70033-02R/09-373 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/14	JZ

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
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 Site#:

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Test Summary

Maxxam ID DB1921 Dup
Sample ID P70033-02R/09-373
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/14	JZ

Maxxam ID DB1922
Sample ID P70034-02R/09-374
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/14	JZ

Maxxam ID DB1923
Sample ID P70035-02R/09-375
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1924
Sample ID P70036-02R/09-376
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1925
Sample ID P70037-02R/09-377
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1926
Sample ID P70038-02R/09-378
Matrix Soil
Collected 2009/07/06
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
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Project #: A934996

Test Summary

Maxxam ID DB1927 **Collected** 2009/07/06
Sample ID P70039-02R/09-379 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1928 **Collected** 2009/07/06
Sample ID P70040-02R/09-380 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1929 **Collected** 2009/07/06
Sample ID P70041-02R/09-381 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1930 **Collected** 2009/07/06
Sample ID P70042-02R/09-382 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1931 **Collected** 2009/07/06
Sample ID P70043-02R/09-383 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1932 **Collected** 2009/07/06
Sample ID P70044-02R/09-384 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
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Project #: A934996

Test Summary

Maxxam ID DB1933 **Collected** 2009/07/06
Sample ID P70045-02R/09-385 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1934 **Collected** 2009/07/06
Sample ID P70046-02R/09-386 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1935 **Collected** 2009/07/06
Sample ID P70047-02R/09-387 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1936 **Collected** 2009/07/06
Sample ID P70048-02R/09-388 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1937 **Collected** 2009/07/06
Sample ID P70053-02R/09-389 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam ID DB1938 **Collected** 2009/07/06
Sample ID P70054-02R/09-390 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1876856	2009/07/14	2009/07/15	JZ

Maxxam Job #: A987017
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Test Summary

Maxxam ID DB1939 **Collected** 2009/07/06
Sample ID P70055-02R/09-391 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1940 **Collected** 2009/07/06
Sample ID P70056-02R/09-392 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1941 **Collected** 2009/07/06
Sample ID P70057-02R/09-393 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1941 Dup **Collected** 2009/07/06
Sample ID P70057-02R/09-393 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1942 **Collected** 2009/07/06
Sample ID P70058-02R/09-394 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1943 **Collected** 2009/07/06
Sample ID P70059-02R/09-395 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam Job #: A987017
 Report Date: 2009/07/17

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB1944 **Collected** 2009/07/06
Sample ID P70061-02R/09-396 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1945 **Collected** 2009/07/06
Sample ID P70062-02R/09-397 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1945 Dup **Collected** 2009/07/06
Sample ID P70062-02R/09-397 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC

Maxxam ID DB1946 **Collected** 2009/07/06
Sample ID P70063-02R/09-398 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1947 **Collected** 2009/07/06
Sample ID P70065-02R/09-399 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1948 **Collected** 2009/07/07
Sample ID P70066-02R/09-400 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

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Test Summary

Maxxam ID DB1949 **Collected** 2009/07/07
Sample ID P70067-02R/09-401 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1950 **Collected** 2009/07/07
Sample ID P70069-02R/09-402 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1951 **Collected** 2009/07/07
Sample ID P70070-02R/09-403 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1952 **Collected** 2009/07/07
Sample ID P70071-02R/09-404 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1953 **Collected** 2009/07/07
Sample ID P70072-02R/09-405 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1954 **Collected** 2009/07/07
Sample ID P70073-02R/09-406 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

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 Report Date: 2009/07/17

Maxxam Analytics
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Test Summary

Maxxam ID DB1955 **Collected** 2009/07/07
Sample ID P70074-02R/09-407 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1956 **Collected** 2009/07/07
Sample ID P70075-02R/09-408 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1957 **Collected** 2009/07/07
Sample ID P70076-02R/09-409 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1958 **Collected** 2009/07/07
Sample ID P70077-02R/09-410 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877339	2009/07/14	2009/07/16	LPG

Maxxam ID DB1959 **Collected** 2009/07/07
Sample ID P70078-02R/09-411 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1960 **Collected** 2009/07/07
Sample ID P70079-02R/09-412 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1878246	N/A	2009/07/15	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

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Test Summary

Maxxam ID DB1961
Sample ID P70080-02R/09-413
Matrix Soil
Collected 2009/07/07
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1962
Sample ID P70081-02R/09-414
Matrix Soil
Collected 2009/07/07
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1963
Sample ID P70082-02R/09-415
Matrix Soil
Collected 2009/07/07
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1964
Sample ID P70083-02R/09-416
Matrix Soil
Collected 2009/07/07
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1965
Sample ID P70084-02R/09-417
Matrix Soil
Collected 2009/07/07
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1966
Sample ID P70103-02R/09-418
Matrix Soil
Collected 2009/07/07
Shipped
Received 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

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Test Summary

Maxxam ID DB1967 **Collected** 2009/07/07
Sample ID P70104-02R/09-419 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1968 **Collected** 2009/07/07
Sample ID P70105-02R/09-420 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1968 Dup **Collected** 2009/07/07
Sample ID P70105-02R/09-420 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1969 **Collected** 2009/07/07
Sample ID P70106-02R/09-421 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879757	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1970 **Collected** 2009/07/07
Sample ID P70107-02R/09-422 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1880193	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1971 **Collected** 2009/07/07
Sample ID P70108-02R/09-423 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1880193	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

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Test Summary

Maxxam ID DB1972 **Collected** 2009/07/07
Sample ID P70109-02R/09-424 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1880193	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

Maxxam ID DB1973 **Collected** 2009/07/07
Sample ID P70110-02R/09-425 **Shipped**
Matrix Soil **Received** 2009/07/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1880193	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1877358	2009/07/14	2009/07/15	LPG

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Package 1	4.0°C
Package 2	4.0°C
Package 3	6.0°C
Package 4	3.7°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Results relate only to the items tested.

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Quality Assurance Report

Maxxam Job Number: A987017

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
1876609 JZ	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/07/14		86	%	40 - 130	
		Decachlorobiphenyl	2009/07/14		86	%	40 - 130	
		Aroclor 1262	2009/07/14	<0.01			ug/g	
		Aroclor 1016	2009/07/14	<0.01			ug/g	
		Aroclor 1221	2009/07/14	<0.01			ug/g	
		Aroclor 1232	2009/07/14	<0.01			ug/g	
		Aroclor 1242	2009/07/14	<0.01			ug/g	
		Aroclor 1248	2009/07/14	<0.01			ug/g	
		Aroclor 1254	2009/07/14	<0.01			ug/g	
		Aroclor 1260	2009/07/14	<0.01			ug/g	
		Aroclor 1268	2009/07/14	<0.01			ug/g	
		Total PCB	2009/07/14	<0.01			ug/g	
		1876610 ART	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/07/14		80	%
Decachlorobiphenyl	2009/07/14				72	%	40 - 130	
Aroclor 1262	2009/07/14			<0.01			ug/g	
Aroclor 1016	2009/07/14			<0.01			ug/g	
Aroclor 1221	2009/07/14			<0.01			ug/g	
Aroclor 1232	2009/07/14			<0.01			ug/g	
Aroclor 1242	2009/07/14			<0.01			ug/g	
Aroclor 1248	2009/07/14			<0.01			ug/g	
Aroclor 1254	2009/07/14			<0.01			ug/g	
Aroclor 1260	2009/07/14			<0.01			ug/g	
Aroclor 1268	2009/07/14			<0.01			ug/g	
Total PCB	2009/07/14			<0.01			ug/g	
1876736 ART	Method Blank			2,4,5,6-Tetrachloro-m-xylene	2009/07/14		83	%
		Decachlorobiphenyl	2009/07/14		88	%	40 - 130	
		Aroclor 1262	2009/07/14	<0.01			ug/g	
		Aroclor 1016	2009/07/14	<0.01			ug/g	
		Aroclor 1221	2009/07/14	<0.01			ug/g	
		Aroclor 1232	2009/07/14	<0.01			ug/g	
		Aroclor 1242	2009/07/14	<0.01			ug/g	
		Aroclor 1248	2009/07/14	<0.01			ug/g	
		Aroclor 1254	2009/07/14	<0.01			ug/g	
		Aroclor 1260	2009/07/14	<0.01			ug/g	
		Aroclor 1268	2009/07/14	<0.01			ug/g	
		Total PCB	2009/07/14	<0.01			ug/g	
		1876740 JZ	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/07/15		97	%
Decachlorobiphenyl	2009/07/15				96	%	40 - 130	
Aroclor 1262	2009/07/15			<0.01			ug/g	
Aroclor 1016	2009/07/15			<0.01			ug/g	
Aroclor 1221	2009/07/15			<0.01			ug/g	
Aroclor 1232	2009/07/15			<0.01			ug/g	
Aroclor 1242	2009/07/15			<0.01			ug/g	
Aroclor 1248	2009/07/15			<0.01			ug/g	
Aroclor 1254	2009/07/15			<0.01			ug/g	
Aroclor 1260	2009/07/15			<0.01			ug/g	
Aroclor 1268	2009/07/15			<0.01			ug/g	
Total PCB	2009/07/15			<0.01			ug/g	
1876856 JZ	Method Blank			2,4,5,6-Tetrachloro-m-xylene	2009/07/14		85	%
		Decachlorobiphenyl	2009/07/14		93	%	40 - 130	
		Aroclor 1262	2009/07/14	<0.01			ug/g	
		Aroclor 1016	2009/07/14	<0.01			ug/g	
		Aroclor 1221	2009/07/14	<0.01			ug/g	
		Aroclor 1232	2009/07/14	<0.01			ug/g	
		Aroclor 1242	2009/07/14	<0.01			ug/g	

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1876856 JZ	Method Blank	Aroclor 1248	2009/07/14	<0.01		ug/g	
		Aroclor 1254	2009/07/14	<0.01		ug/g	
		Aroclor 1260	2009/07/14	<0.01		ug/g	
		Aroclor 1268	2009/07/14	<0.01		ug/g	
		Total PCB	2009/07/14	<0.01		ug/g	
1876857 LPG	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/07/15		82	%	40 - 130
		Decachlorobiphenyl	2009/07/15		93	%	40 - 130
		Aroclor 1262	2009/07/15	<0.01		ug/g	
		Aroclor 1016	2009/07/15	<0.01		ug/g	
		Aroclor 1221	2009/07/15	<0.01		ug/g	
		Aroclor 1232	2009/07/15	<0.01		ug/g	
		Aroclor 1242	2009/07/15	<0.01		ug/g	
		Aroclor 1248	2009/07/15	<0.01		ug/g	
		Aroclor 1254	2009/07/15	<0.01		ug/g	
		Aroclor 1260	2009/07/15	<0.01		ug/g	
		Aroclor 1268	2009/07/15	<0.01		ug/g	
		Total PCB	2009/07/15	<0.01		ug/g	
		1877339 LPG	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/07/16		67
Decachlorobiphenyl	2009/07/16				104	%	40 - 130
Aroclor 1262	2009/07/16			<0.01		ug/g	
Aroclor 1016	2009/07/16			<0.01		ug/g	
Aroclor 1221	2009/07/16			<0.01		ug/g	
Aroclor 1232	2009/07/16			<0.01		ug/g	
Aroclor 1242	2009/07/16			<0.01		ug/g	
Aroclor 1248	2009/07/16			<0.01		ug/g	
Aroclor 1254	2009/07/16			<0.01		ug/g	
Aroclor 1260	2009/07/16			<0.01		ug/g	
Aroclor 1268	2009/07/16			<0.01		ug/g	
Total PCB	2009/07/16			<0.01		ug/g	
1877358 LPG	Method Blank			2,4,5,6-Tetrachloro-m-xylene	2009/07/15		81
		Decachlorobiphenyl	2009/07/15		110	%	40 - 130
		Aroclor 1262	2009/07/15	<0.01		ug/g	
		Aroclor 1016	2009/07/15	<0.01		ug/g	
		Aroclor 1221	2009/07/15	<0.01		ug/g	
		Aroclor 1232	2009/07/15	<0.01		ug/g	
		Aroclor 1242	2009/07/15	<0.01		ug/g	
		Aroclor 1248	2009/07/15	<0.01		ug/g	
		Aroclor 1254	2009/07/15	<0.01		ug/g	
		Aroclor 1260	2009/07/15	<0.01		ug/g	
		Aroclor 1268	2009/07/15	<0.01		ug/g	
		Total PCB	2009/07/15	<0.01		ug/g	
		1876609 JZ	RPD [DB1821-01]	Aroclor 1262	2009/07/14	NC	
Aroclor 1016	2009/07/14			NC		%	50
Aroclor 1221	2009/07/14			NC		%	50
Aroclor 1232	2009/07/14			NC		%	50
Aroclor 1242	2009/07/14			NC		%	50
Aroclor 1248	2009/07/14			NC		%	50
Aroclor 1254	2009/07/14			NC		%	50
Aroclor 1260	2009/07/14			NC		%	50
Aroclor 1268	2009/07/14			NC		%	50
Total PCB	2009/07/14	NC		%	50		
1876851 MYG	RPD [DB1826-01]	Moisture	2009/07/14	2.1		%	50
1876610 ART	RPD [DB1848-01]	Aroclor 1262	2009/07/14	NC		%	50
		Aroclor 1016	2009/07/14	NC		%	50
		Aroclor 1221	2009/07/14	NC		%	50

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1876610 ART	RPD [DB1848-01]	Aroclor 1232	2009/07/14	NC		%	50
		Aroclor 1242	2009/07/14	NC		%	50
		Aroclor 1248	2009/07/14	NC		%	50
		Aroclor 1254	2009/07/14	NC		%	50
		Aroclor 1260	2009/07/14	NC		%	50
		Aroclor 1268	2009/07/14	NC		%	50
		Total PCB	2009/07/14	NC		%	50
1876740 JZ	RPD [DB1861-01]	Aroclor 1262	2009/07/15	NC		%	50
		Aroclor 1016	2009/07/15	NC		%	50
		Aroclor 1221	2009/07/15	NC		%	50
		Aroclor 1232	2009/07/15	NC		%	50
		Aroclor 1242	2009/07/15	NC		%	50
		Aroclor 1248	2009/07/15	NC		%	50
		Aroclor 1254	2009/07/15	NC		%	50
		Aroclor 1260	2009/07/15	NC		%	50
		Aroclor 1268	2009/07/15	NC		%	50
		Total PCB	2009/07/15	NC		%	50
1877976 FF	RPD [DB1861-01]	Moisture	2009/07/14	1.9		%	50
1876736 ART	RPD [DB1893-01]	Aroclor 1262	2009/07/15	NC		%	50
		Aroclor 1016	2009/07/15	NC		%	50
		Aroclor 1221	2009/07/15	NC		%	50
		Aroclor 1232	2009/07/15	NC		%	50
		Aroclor 1242	2009/07/15	NC		%	50
		Aroclor 1248	2009/07/15	NC		%	50
		Aroclor 1254	2009/07/15	NC		%	50
		Aroclor 1260	2009/07/15	NC		%	50
		Aroclor 1268	2009/07/15	NC		%	50
		Total PCB	2009/07/15	NC		%	50
1877976 FF	RPD [DB1900-01]	Moisture	2009/07/14	10.5		%	50
1876857 LPG	RPD [DB1901-01]	Aroclor 1262	2009/07/15	NC		%	50
		Aroclor 1016	2009/07/15	NC		%	50
		Aroclor 1221	2009/07/15	NC		%	50
		Aroclor 1232	2009/07/15	NC		%	50
		Aroclor 1242	2009/07/15	NC		%	50
		Aroclor 1248	2009/07/15	NC		%	50
		Aroclor 1254	2009/07/15	NC		%	50
		Aroclor 1260	2009/07/15	NC		%	50
		Aroclor 1268	2009/07/15	NC		%	50
		Total PCB	2009/07/15	NC		%	50
1879382 C_A	RPD [DB1901-01]	Moisture	2009/07/15	2.3		%	50
1876856 JZ	RPD [DB1921-01]	Aroclor 1262	2009/07/14	NC		%	50
		Aroclor 1016	2009/07/14	NC		%	50
		Aroclor 1221	2009/07/14	NC		%	50
		Aroclor 1232	2009/07/14	NC		%	50
		Aroclor 1242	2009/07/14	NC		%	50
		Aroclor 1248	2009/07/14	NC		%	50
		Aroclor 1254	2009/07/14	NC		%	50
		Aroclor 1260	2009/07/14	NC		%	50
		Aroclor 1268	2009/07/14	NC		%	50
		Total PCB	2009/07/14	NC		%	50
1878246 DAN	RPD [DB1921-01]	Moisture	2009/07/15	2.2		%	50
1877339 LPG	RPD [DB1941-01]	Aroclor 1262	2009/07/16	NC		%	50
		Aroclor 1016	2009/07/16	NC		%	50
		Aroclor 1221	2009/07/16	NC		%	50
		Aroclor 1232	2009/07/16	NC		%	50

Maxxam Analytics
 Task Order#:
 Site#:
 Site Location:
 Project #: A934996

Quality Assurance Report (Continued)

Maxxam Job Number: A987017

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1877339 LPG	RPD [DB1941-01]	Aroclor 1242	2009/07/16	NC		%	50
		Aroclor 1248	2009/07/16	NC		%	50
		Aroclor 1254	2009/07/16	NC		%	50
		Aroclor 1260	2009/07/16	NC		%	50
		Aroclor 1268	2009/07/16	NC		%	50
		Total PCB	2009/07/16	NC		%	50
1878246 DAN	RPD [DB1945-01]	Moisture	2009/07/15	2.6		%	50
1877358 LPG	RPD [DB1968-01]	Aroclor 1262	2009/07/15	NC		%	50
		Aroclor 1016	2009/07/15	NC		%	50
		Aroclor 1221	2009/07/15	NC		%	50
		Aroclor 1232	2009/07/15	NC		%	50
		Aroclor 1242	2009/07/15	NC		%	50
		Aroclor 1248	2009/07/15	NC		%	50
		Aroclor 1254	2009/07/15	NC		%	50
		Aroclor 1260	2009/07/15	NC		%	50
		Aroclor 1268	2009/07/15	NC		%	50
		Total PCB	2009/07/15	NC		%	50
1879757 AC	RPD [DB1968-01]	Moisture	2009/07/16	0		%	50
1876609 JZ	MATRIX SPIKE [DB1821-01]	2,4,5,6-Tetrachloro-m-xylene	2009/07/14		78	%	40 - 130
		Decachlorobiphenyl	2009/07/14		85	%	40 - 130
		Aroclor 1260	2009/07/14		79	%	30 - 130
		Total PCB	2009/07/14		79	%	30 - 130
1876610 ART	MATRIX SPIKE [DB1848-01]	2,4,5,6-Tetrachloro-m-xylene	2009/07/14		75	%	40 - 130
		Decachlorobiphenyl	2009/07/14		75	%	40 - 130
		Aroclor 1260	2009/07/14		79	%	30 - 130
		Total PCB	2009/07/14		79	%	30 - 130
1876736 ART	MATRIX SPIKE [DB1893-01]	2,4,5,6-Tetrachloro-m-xylene	2009/07/14		83	%	40 - 130
		Decachlorobiphenyl	2009/07/14		105	%	40 - 130
		Aroclor 1260	2009/07/14		105	%	30 - 130
		Total PCB	2009/07/14		105	%	30 - 130
1876740 JZ	MATRIX SPIKE [DB1861-01]	2,4,5,6-Tetrachloro-m-xylene	2009/07/15		81	%	40 - 130
		Decachlorobiphenyl	2009/07/15		84	%	40 - 130
		Aroclor 1260	2009/07/15		82	%	30 - 130
		Total PCB	2009/07/15		82	%	30 - 130
1876856 JZ	MATRIX SPIKE [DB1921-01]	2,4,5,6-Tetrachloro-m-xylene	2009/07/14		72	%	40 - 130
		Decachlorobiphenyl	2009/07/14		93	%	40 - 130
		Aroclor 1260	2009/07/14		87	%	30 - 130
		Total PCB	2009/07/14		87	%	30 - 130
1876857 LPG	MATRIX SPIKE [DB1901-01]	2,4,5,6-Tetrachloro-m-xylene	2009/07/15		68	%	40 - 130
		Decachlorobiphenyl	2009/07/15		94	%	40 - 130
		Aroclor 1260	2009/07/15		91	%	30 - 130
		Total PCB	2009/07/15		91	%	30 - 130
1877339 LPG	MATRIX SPIKE [DB1941-01]	2,4,5,6-Tetrachloro-m-xylene	2009/07/16		74	%	40 - 130
		Decachlorobiphenyl	2009/07/16		114	%	40 - 130
		Aroclor 1260	2009/07/16		103	%	30 - 130
		Total PCB	2009/07/16		103	%	30 - 130
1877358 LPG	MATRIX SPIKE [DB1968-01]	2,4,5,6-Tetrachloro-m-xylene	2009/07/15		69	%	40 - 130

Maxxam Analytics
 Task Order#:
 Site#:
 Site Location:
 Project #: A934996

Quality Assurance Report (Continued)

Maxxam Job Number: A987017

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1877358 LPG	MATRIX SPIKE [DB1968-01]	Decachlorobiphenyl	2009/07/15		101	%	40 - 130
		Aroclor 1260	2009/07/15		91	%	30 - 130
		Total PCB	2009/07/15		91	%	30 - 130
1876609 JZ	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/14		90	%	40 - 130
		Decachlorobiphenyl	2009/07/14		91	%	40 - 130
		Aroclor 1260	2009/07/14		92	%	30 - 130
		Total PCB	2009/07/14		92	%	30 - 130
1876610 ART	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/14		83	%	40 - 130
		Decachlorobiphenyl	2009/07/14		70	%	40 - 130
		Aroclor 1260	2009/07/14		85	%	30 - 130
		Total PCB	2009/07/14		85	%	30 - 130
1876736 ART	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/14		96	%	40 - 130
		Decachlorobiphenyl	2009/07/14		109	%	40 - 130
		Aroclor 1260	2009/07/14		106	%	30 - 130
		Total PCB	2009/07/14		106	%	30 - 130
1876740 JZ	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/14		85	%	40 - 130
		Decachlorobiphenyl	2009/07/14		88	%	40 - 130
		Aroclor 1260	2009/07/14		90	%	30 - 130
		Total PCB	2009/07/14		90	%	30 - 130
1876856 JZ	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/14		85	%	40 - 130
		Decachlorobiphenyl	2009/07/14		97	%	40 - 130
		Aroclor 1260	2009/07/14		94	%	30 - 130
		Total PCB	2009/07/14		94	%	30 - 130
1876857 LPG	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/15		88	%	40 - 130
		Decachlorobiphenyl	2009/07/15		91	%	40 - 130
		Aroclor 1260	2009/07/15		95	%	30 - 130
		Total PCB	2009/07/15		95	%	30 - 130
1877339 LPG	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/16		66	%	40 - 130
		Decachlorobiphenyl	2009/07/16		103	%	40 - 130
		Aroclor 1260	2009/07/16		102	%	30 - 130
		Total PCB	2009/07/16		102	%	30 - 130
1877358 LPG	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/15		79	%	40 - 130
		Decachlorobiphenyl	2009/07/15		105	%	40 - 130
		Aroclor 1260	2009/07/15		96	%	30 - 130
		Total PCB	2009/07/15		96	%	30 - 130

NC = Non-calculable
 RPD = Relative Percent Difference

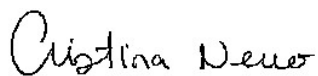
Validation Signature Page

Maxxam Job #: A987017

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CHARLES ANCKER, B.Sc., M.Sc., C.Chem, Senior Analyst



CRISTINA NERVO, Scientific Services

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

RUSH

MAXXAM ANALYTICS
9331 - 48th Street
Edmonton, Alberta, T6B 2R4
Phone: (780) 577-7100
Fax: (780) 450-4187

AECOM - CALGARY
Maxxam PM Erin Maxxam

13-Jul-09 08:50
ANTONELLA BRASIL



A987017
HSO ENV-202

SUBCONTRA

Job# A934996

To: Maxxam Ontario (From Edmonton)

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # _____ Inspected by (print) _____ SIF Yes No
Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4 Temp2 4 Temp3 4 Custody sealed Yes
6 6 6
4 4 3

09 JUL 13 8:50

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P69818-02R \ 09-270	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69850-02R \ 09-270	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69851-02R \ 09-271	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69852-02R \ 09-272	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69853-02R \ 09-273	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69854-02R \ 09-274	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69855-02R \ 09-275	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69856-02R \ 09-276	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69857-02R \ 09-277	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69858-02R \ 09-278	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69859-02R \ 09-279	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15

For PCB's

Report to: Bonnie Pollishy
Ph: (780) 577-7107
email: Bonnie.Pollishy@maxxamanalytics.com

SIF : Sample Inspection
Resolved By: _____
Date: _____

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Maxxam Analytics

SUBCONTRACTING REQUEST FORM

AECOM - CALGARY
 Maxxam PM Erin Maxxam

Job: Maxxam Ontario (From Edmonton)

Job# A934996

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
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Received (a) Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received (a) Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A987017 Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4 Temp2 4 Temp3 4 Custody sealed yes
6 6 6
4 4 3

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P69860-02R \ 09-280	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69861-02R \ 09-281	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69862-02R \ 09-282	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69863-02R \ 09-283	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69864-02R \ 09-284	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69865-02R \ 09-285	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69866-02R \ 09-286	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69867-02R \ 09-287	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69868-02R \ 09-288	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69869-02R \ 09-289	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69870-02R \ 09-290	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15

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Maxxam Analytics

SUBCONTRACTING REQUEST FORM

AECOM - CALGARY
Maxxam PM Erin Maxxam

To: Maxxam Ontario (From Edmonton)

Job# A934996

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A 987017 Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4^u 6 Temp2 4^u 6 Temp3 4^u 6^u 3^u Custody sealed Yes

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P69871-02R \ 09-291	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69872-02R \ 09-292	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69873-02R \ 09-293	S	Miscellaneous Organics Test	1	2009/07/05	2009/07/15
P69874-02R \ 09-294	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69875-02R \ 09-295	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69876-02R \ 09-296	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69877-02R \ 09-297	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69878-02R \ 09-298	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69918-02R \ 09-299	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69928-02R \ 09-300	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69929-02R \ 09-301	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15

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Maxxam Analytics

SUBCONTRACTING REQUEST FORM

AECOM - CALGARY
 Maxxam PM Erin Maxxam

o: Maxxam Ontario (From Edmonton)

Job# A934996

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
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Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A987017 Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 44 Temp2 44 Temp3 42.2 Custody sealed Yes
6 6 6
4 4 3.2

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P69930-02R \ 09-302	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69931-02R \ 09-303	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69932-02R \ 09-304	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69933-02R \ 09-305	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69934-02R \ 09-306	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69935-02R \ 09-307	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69936-02R \ 09-308	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69937-02R \ 09-309	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69938-02R \ 09-310	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69939-02R \ 09-311	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69940-02R \ 09-312	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15

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Maxxam Analytics

SUBCONTRACTING REQUEST FORM

AECOM - CALGARY
 Maxxam PM Erin Maxxam

to: Maxxam Ontario (From Edmonton)

Job# A934996

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes: Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A987017 Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 44 Temp2 44 Temp3 42 Custody sealed Yes
6 6 6
4 4 3

<u>Sample ID</u>	<u>MATRIX</u>	<u>Test(s) Required</u>	<u>Container</u>	<u>Date Sampled</u>	<u>Date Required</u>
P69930-02R \ 09-302	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69931-02R \ 09-303	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69932-02R \ 09-304	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69933-02R \ 09-305	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69934-02R \ 09-306	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69935-02R \ 09-307	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69936-02R \ 09-308	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69937-02R \ 09-309	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69938-02R \ 09-310	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69939-02R \ 09-311	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69940-02R \ 09-312	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15

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Maxxam Analytics

SUBCONTRACTING REQUEST FORM

Job: **Maxxam Ontario (From Edmonton)**

Job# A93499

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 08:50

Received Lab's Job # A987017 Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4 Temp2 4 Temp3 4°C Custody sealed yes
6 6 6°C

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Require
P69941-02R \ 09-313	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69942-02R \ 09-314	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69943-02R \ 09-315	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69944-02R \ 09-316	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69945-02R \ 09-317	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69946-02R \ 09-318	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69947-02R \ 09-319	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69948-02R \ 09-320	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69949-02R \ 09-321	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69950-02R \ 09-322	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69951-02R \ 09-323	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15

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Maxxam Analytics

SUBCONTRACTING REQUEST FORM

AECOM - CALGARY
 Maxxam PM Erin Maxxam

Job: Maxxam Ontario (From Edmonton)

Job# A934996

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A987017 Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4 Temp2 6 Temp3 4°C Custody sealed Yes

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P69952-02R \ 09-324	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69953-02R \ 09-325	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69954-02R \ 09-326	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69955-02R \ 09-327	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69956-02R \ 09-328	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69966-02R \ 09-329	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69969-02R \ 09-330	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69970-02R \ 09-331	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69971-02R \ 09-332	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69972-02R \ 09-333	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69973-02R \ 09-334	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15

Continued

Maxxam Analytics

SUBCONTRACTING REQUEST FORM

AECOM - CALGARY
Maxxam PM Erin Maxxam

To: Maxxam Ontario (From Edmonton)

Job# A934996

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # P987017 Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4 Temp2 4 Temp3 4°C Custody sealed Yes
6 6 6°C

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P69974-02R \ 09-335	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69975-02R \ 09-336	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69976-02R \ 09-337	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69977-02R \ 09-338	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69978-02R \ 09-339	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69979-02R \ 09-340	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69980-02R \ 09-341	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69981-02R \ 09-342	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69982-02R \ 09-343	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69983-02R \ 09-344	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69984-02R \ 09-345	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15

Continued...

ANALYTICS
Alberta, T6B 2R4
877-7100
450-4187

Maxxam Analytics

SUBCONTRACTING REQUEST FORM

Job# A934996

TO: Maxxam Ontario (From Edmonton)

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A987017 Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4 Temp2 4 Temp3 4 Custody sealed Yes

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P69985-02R \ 09-346	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69986-02R \ 09-347	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69987-02R \ 09-348	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69988-02R \ 09-349	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69989-02R \ 09-350	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69990-02R \ 09-351	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69991-02R \ 09-352	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69992-02R \ 09-353	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69993-02R \ 09-354	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69994-02R \ 09-355	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69995-02R \ 09-356	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15

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ANALYTICS
 erta, T6B 2R4
 577-7100
 450-4187

Maxxam Analytics

SUBCONTRACTING REQUEST FORM

AECOM - CALGARY
 Maxxam PM Erin Maxxam

Job: Maxxam Ontario (From Edmonton)

Job# A934996

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A937017 Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4⁶ Temp2 6⁴ Temp3 4² 6² Custody sealed Yes

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P69996-02R\09-357	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69997-02R\09-358	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70019-02R\09-359	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70020-02R\09-360	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70021-02R\09-361	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70022-02R\09-362	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70023-02R\09-363	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70024-02R\09-364	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70025-02R\09-365	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70026-02R\09-366	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70027-02R\09-367	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15

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Maxxam Analytics

SUBCONTRACTING REQUEST FORM

Pag
 AECOM - CAL
 Maxxam PM Erin M

o: Maxxam Ontario (From Edmonton)

Job# A93

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A9870# Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4 Temp2 4 Temp3 4°C Custody sealed Yes
6 6 6°C

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Req
P70028-02R \ 09-368	S	Miscellaneous Organics Test	1	2009/07/06	2009/07
P70029-02R \ 09-369	S	Miscellaneous Organics Test	1	2009/07/06	2009/07
P70030-02R \ 09-370	S	Miscellaneous Organics Test	1	2009/07/06	2009/07
P70031-02R \ 09-371	S	Miscellaneous Organics Test	1	2009/07/06	2009/07
P70032-02R \ 09-372	S	Miscellaneous Organics Test	1	2009/07/06	2009/07
P70033-02R \ 09-373	S	Miscellaneous Organics Test	1	2009/07/06	2009/07
P70034-02R \ 09-374	S	Miscellaneous Organics Test	1	2009/07/06	2009/07
P70035-02R \ 09-375	S	Miscellaneous Organics Test	1	2009/07/06	2009/07
P70036-02R \ 09-376	S	Miscellaneous Organics Test	1	2009/07/06	2009/07
P70037-02R \ 09-377	S	Miscellaneous Organics Test	1	2009/07/06	2009/07
P70038-02R \ 09-378	S	Miscellaneous Organics Test	1	2009/07/06	2009/07

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ANALYTICS
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 450-4187

Maxxam Analytics

SUBCONTRACTING REQUEST FORM

AECOM - CALGAR
 Maxxam PM Erin Maxxa

Location: **Maxxam Ontario (From Edmonton)**

Job# A93499

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A 927017 Inspected by (print) _____ SIF Yes No
 Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4 Temp2 4 Temp3 4°C Custody sealed Yes

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P70039-02R \ 09-379	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70040-02R \ 09-380	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70041-02R \ 09-381	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70042-02R \ 09-382	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70043-02R \ 09-383	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70044-02R \ 09-384	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70045-02R \ 09-385	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70046-02R \ 09-386	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70047-02R \ 09-387	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70048-02R \ 09-388	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70053-02R \ 09-389	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15

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450-4187

Maxxam Analytics

SUBCONTRACTING REQUEST FORM

Job: Maxxam Ontario (From Edmonton)

Job# A934996

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A9870H Inspected by (print) _____ SIF Yes No
Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 9 Temp2 4 Temp3 4°C Custody sealed Yes

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P70054-02R \ 09-390	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70055-02R \ 09-391	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70056-02R \ 09-392	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70057-02R \ 09-393	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70058-02R \ 09-394	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70059-02R \ 09-395	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70061-02R \ 09-396	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70062-02R \ 09-397	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70063-02R \ 09-398	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70065-02R \ 09-399	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P70066-02R \ 09-400	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15

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TICS
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 577-7100
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Maxxam Analytics

SUBCONTRACTING REQUEST FORM

AECOM - C.
 Maxxam PM Erin

From: Maxxam Ontario (From Edmonton)

Job# A9

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A 987017 Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4 Temp2 4 Temp3 4 Custody sealed yes

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date R
P70067-02R \ 09-401	S	Miscellaneous Organics Test	1	2009/07/07	2009
P70069-02R \ 09-402	S	Miscellaneous Organics Test	1	2009/07/07	2009
P70070-02R \ 09-403	S	Miscellaneous Organics Test	1	2009/07/07	2009
P70071-02R \ 09-404	S	Miscellaneous Organics Test	1	2009/07/07	2009
P70072-02R \ 09-405	S	Miscellaneous Organics Test	1	2009/07/07	2009
P70073-02R \ 09-406	S	Miscellaneous Organics Test	1	2009/07/07	2009
P70074-02R \ 09-407	S	Miscellaneous Organics Test	1	2009/07/07	2009
P70075-02R \ 09-408	S	Miscellaneous Organics Test	1	2009/07/07	2009
P70076-02R \ 09-409	S	Miscellaneous Organics Test	1	2009/07/07	2009
P70077-02R \ 09-410	S	Miscellaneous Organics Test	1	2009/07/07	2009
P70078-02R \ 09-411	S	Miscellaneous Organics Test	1	2009/07/07	2009

Maxxam Analytics

SUBCONTRACTING REQUEST FORM

YTICS
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577-7100
450-4187

Job# A934996

Maxxam Ontario (From Edmonton)

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A937017 Inspected by (print) _____ SIF Yes No
 Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4 Temp2 4 Temp3 4 Custody sealed yes

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P70079-02R \ 09-412	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70080-02R \ 09-413	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70081-02R \ 09-414	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70082-02R \ 09-415	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70083-02R \ 09-416	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70084-02R \ 09-417	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70103-02R \ 09-418	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70104-02R \ 09-419	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70105-02R \ 09-420	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70106-02R \ 09-421	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70107-02R \ 09-422	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15

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Maxxam Analytics

SUBCONTRACTING REQUEST FORM

AECOM - CALGARY
 Maxxam PM Erin Maxxam

Maxxam Ontario (From Edmonton)

Job# A934996

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) Nagla Mikhail (print) Nagla Mikhail

Received @ Subcontract Lab (Date) 09/07/13 (Time) 8:50

Received Lab's Job # A 9870 17 Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 4 Temp2 4 Temp3 4 Custody sealed yes
6 6 6

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P70108-02R \ 09-423	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70109-02R \ 09-424	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15
P70110-02R \ 09-425	S	Miscellaneous Organics Test	1	2009/07/07	2009/07/15

NOTES:

- Please call us if due date cannot be met. Please reference Sample ID on your report.
- Include copy of this completed form, Client COC & signed final report to edmenvirocs@maxxamanalytics.com

SHIPPING INSTRUCTIONS

- Ship Immediately (highlight Yellow)
- Requires 9am
- Requires Sat. Delivery
- Regular Ship next available day
- Sender (Print) _____ Initial _____
- Ship Cold
- Ship Room Temp
- Ship Frozen
- COC Must be Attached

SHIPPING DEPARTMENT CHECKLIST

- Correct Shipping location
- Correct Sample Ids (Paperwork vs Bottles)
- Yes No Special-Cooler, Ice, Tape-custody seal, Date&Sign
- Date Shipped _____
- Shipper (Print) _____ Initial _____

099(10)



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

81174

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galus (Accounting)

Address: ana.galus@aecom.com

Prov: Calgary AB **PC:** #

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:

Dara Schmidt - AECOM
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3

Ph: 403-450-9926 **Fax:** 403-270-4822

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: Lobe P Stockpile

Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1

CCME

OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

dara.schmidt@
aecom.com
ana.galus@
aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required:

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix SW	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)			# of Containers Submitted					
			BTEX F1-F4 Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) *	Assessment ICP Metals	BTEX F1	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Total	REGULATED METALS (CCME / AT1) *	Mercury		Ammonia	TKN	COD	DOC	
1 09-400 09-270	S	2009/07/05 17:30	X																
2 09-270		17:35																	
3 -271		17:40																	
4 -272		17:45																	
5 -273		17:50																	
6 -274		17:55																	
7 -275		18:00																	
8 -276		18:05																	
9 -277																			
10 -278																			
11 ✓ -279																			
12 09-280	S	2009/07/05	X																

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Dara Schmidt **Date/Time:** 18:00 July 7

Sign and Print: [Signature]

# JARS USED & NOT SUBMITTED	Received By	Temperature		
		7/16/09	6/16/09	5/2/09
		6/16/09	6/16/09	6/16/09
CUSTODY SEAL YES (NO)		bags	bags	7/16/09

COMMENTS/SPECIAL INSTRUCTIONS: NO PART TO BE USED. *Metals - Cu, Co, Cd, Pb, Zn, Cr, AS

Invoice To: Require Report? Yes No

Company Name: ANA Galue (AECOM)
Contact Name: Ana Galue
Address: ana.galue@aecom.com
Prov: Calgary/AB **PC:**
Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
 Dara Schmidt - AECOM
 2540 Kensington Rd NW
 Calgary
Prov: AB **PC:** T2N 3S3
 Ph: 403-450-9926 Fax: 403-270-4822

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: LOBE P Stockpile
Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
 dara.schmidt@
 aecom.com
 priya.handa@
 aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
 Date Required:
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)				# of Containers Submitted			
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)*	BTEX F1	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Total	Dissolved	Mercury	Ammonia		TKN	COD	
1 09-281	S	2009/07/05				X											X	3
2 -282																		
3 -283																		
4 -284																		
5 -285																		
6 -286																		
7 -287																		
8 -288																		
9 -289																		
10 -290																		
11 -291																		
12 09-292	S	2009/07/05				X											X	3

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to page 1 Date/Time: _____
 Sign and Print: _____

# JARS USED & NOT SUBMITTED	Received By 09/07/09 11:45h RT	Temperature		Ice
		7/6/6	6/6/4	5/7/6
CUSTODY SEAL YES (NO)		bags	bags	7/6/8

COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL RPTS. PLEASE
 see page 1 for inorganics
 Page 123 of 131

099/10)

81175

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galuc

Address: ana.galuc@aecom.com

Prov: Calgary AB **PC:**

Contact #s: Ph: 403-270-9200 Fax: 403-270-4822

Report To: Dara Schmidt - AECOM

2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3

Ph: 403-1150-9926 **Fax:** 403-270-4822

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: refer to pg 1

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):

dara.schmidt@aecom.com
ana.galuc@aecom.com
ana.galuc@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required:

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)				# of Containers Submitted	
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) Assessment (ICP Metals) <input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1) TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	REGULATED METALS (CCME / AT1) ³ Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Filtered <input type="checkbox"/> Not Filtered Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD TOC <input type="checkbox"/> DOC						
1 09-293	S	2009/07/05	X													3
2 294		2009/07/06														1
3 295																1
4 296																1
5 297																1
6 298																1
7 299																1
8 300																1
9 301																1
10 302																1
11 303																1
12 09-304	S	2009/07/06	X													3

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to pg 1 **Date/Time:**

Sign and Print:

COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL... * see metals on pg 1.

# JARS USED & NOT SUBMITTED	Received By	Temperature		Ice
09/07/09 11:45h	RT	7/6/6	6/6/4	5/6/6
CUSTODY SEAL YES (NO)		6/6/6	6/6/4	6/6/6

099(10)



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

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Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

81176

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galve

Address: ana.galve@aecom.com

Prov: Calgary, AB PC: CO

Contact #'s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:

AECOM - Dara Schmidt

2540 Kensington Rd NW

Calgary

Prov: AB PC: TAN 353

Ph: 403-450-9926 Fax: 403-270-4822

PO # / AFE #:

Quotation #: C08-339

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: refer to pg 1

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1

CCME

OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
prya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required:

REGULAR Turnaround (5 to 7 Days)

SOILS (footnotes defined on back) **WATERS** (footnotes defined on back) **OTHER TEST(S)**

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCPL <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	RUB			TPH			BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	REGULATED METALS (CCME / AT1) ³	# of Containers Submitted					
										<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 09-305	S	2009/07/06				X						X	X																		
2 306																															
3 307																															
4 308																															
5 309																															
6 310																															
7 311																															
8 312																															
9 313																															
10 314																															
11 315																															
12 09-316	S	2009/07/06				X						X	X																		

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to pg 1 Date/Time: _____

Sign and Print: _____

JARS USED & NOT SUBMITTED: 09/02/09 11:45h

Received By: RT

Temperature: 7/6/6 6/1/4 5/2/6

Ice: 6/6/6 6/6/4 6/6/6

CUSTODY SEAL YES (NO)

COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL Page 125 of 131

099(10)



Calgary: 4000 19st St. NE, T2E 6P8
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Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

81177

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galuc
Address: ana.galuc@aecorm.com
Prov: Calgary AB **PC:**
Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
 AECOM - Dara Schmidt
 2540 Kensington Rd NW
 Calgary
Prov: AB **PC:** T2N 3S3
Ph: 403-450-9926 **Fax:** 403-270-4822

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location:
Sampler's Initials: refer to pg 1

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
 dara.schmidt@aecorm.com
 priya.banta@aecorm.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)						WATERS (footnotes defined on back)					OTHER TEST(S)			# of Containers Submitted									
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package		Turb	F	REGULATED METALS (CCME / AT1) ³	Mercury	Ammonia	TKN	COD	DOC	
1 09-317	S	2009/07/06				X																			2	
2 318																										1
3 319																										1
4 320																										1
5 321																										1
6 322																										1
7 323																										1
8 324																										1
9 325																										1
10 326																										1
11 327																										1
12 09-328	S	2009/07/06				X																				3

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: [Signature] Date/Time: _____

Sign and Print: [Signature]

COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL RPT PLEASE

# JARS USED & NOT SUBMITTED	Received By	Temperature	Ice
09/07/09 11:45h	RT	7/6/6 8/6/6	5/2/6 8/6/6

81178
SEND
Calgary Water Package
R
H
D
+ Dry and
+ ML 50%
PRESERVATIVE
PROUS

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galuc
Address: ana.galuc@aecom.com
Prov: PC
Contact #s: Ph: 403-270-4200 Fax: 403-270-0399

Report To:
AECOM - Dara Schmidt
2540 Kensington Rd NW
Calgary
Prov: AB **PC:** TAN 353
Ph: 403-270-9926 **Fax:** 403-270-4822

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: refer to pg
Sampler's Initials: pg

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.banda@aecom.com
bram.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)	*HOLD for 60 Days # of Containers Submitted			
			BTEX F1-F4 Sieve (75 micron) Salinity 4	Regulated Metals (CCME / AT1) Assessment ICP Metals ²	Paint Filter Flashpoint pH (1:1)	TCLP Metals	BTEX F1 VOCs	BTEX F1-F2 BTEX F1-F4	Routine Water Package Turb F	REGULATED METALS (CCME / AT1) ¹ Total Preserved Not Preserved Dissolved Preserved Not Preserved Filtered Not Filtered			Mercury Total Dissolved	Ammonia TKN COD TOC DOC	
1 09-329	S	2009/07/06		X											
2 330															3
3 331															1
4 332															
5 333															
6 334															
7 335															
8 336															
9 337															
10 338															
11 339															
12 09-340	J	2009/07/06		X			XX								3

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Relinquished By: see pg 1 Date/Time: _____
Sign and Print: _____

JARS USED & NOT SUBMITTED: 09/07/09 11:45h
Received By: RT
Temperature: 7/6/6 6/6/4 7/3/6
Ice: 6/6/6 6/6/6 6/6/6

COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL RPTS. PLEASE

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALVE

Address: ana.galve@aecom.com

Prov: Calgary, AB PC: _____

Contact #: Ph: 403-270-9200 Fax: 403-270-0399

Report To:

Dara Schmidt (AECOM)

2540 Kensington Road NW

Calgary, AB

Prov: AB PC: TAN 353

Ph: 403-270-4822 Fax: site: 403-450-9926

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: see pg 1

Sampler's Initials: DA S

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1

CCME

OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

dara.schmidt@aecom.com

priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (f:t)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	REGULATED METALS (CCME / AT1) ³	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	OTHER TEST(S)	*HOLD for 60 Days	# of Containers Submitted
1 09-353	S	2009/07/06				X													3
2 354																			
3 355																			
4 356																			
5 357																			
6 358																			
7 359																			
8 360																			
9 361																			
10 362																			
11 v 363																			v
12 09-364	S	2009/07/06				X													3

¹All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL

# JARS USED & NOT SUBMITTED	Received By	Temperature	Ice
	<u>09/07/09</u>	<u>7/6/6 6/14 5/2/6</u>	
	<u>11:45h</u>	<u>6/6/6 6/14 6/6/6</u>	
CUSTODY SEAL YES <input checked="" type="checkbox"/> NO		<u>bags</u>	<u>bags</u>



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 Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
 www.maxxamanalytics.com

8118

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALUE

Address: ana.galue@aecom.com

Prov: Calgary, AB PC: _____

Contact #: Ph: 403-270-9200 Fax: 403-270-0399

Report To:

Dara Schmidt (AECOM)

2540 Kensington Rd NW

Calgary

Prov: AB PC: TAN 3S3

Ph: 403-450-9926 Fax: 403-270-9802

PO # / AFE #: _____

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: _____

Sampler's Initials: refer to pgs 1

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use

AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:
 EMAIL ADDRESS(S):
dara.schmidt@aecom.com
prya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)							WATERS (footnotes defined on back)						OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted											
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	pH (1:1)	Paint Filter <input type="checkbox"/>	Flashpoint <input type="checkbox"/>	Metals	TCLP <input type="checkbox"/>	BTEX <input type="checkbox"/>	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb <input type="checkbox"/>	F <input type="checkbox"/>		Total <input type="checkbox"/>	Preserved <input type="checkbox"/>	Not Preserved <input type="checkbox"/>	REGULATED METALS (CCME / AT1) ³	Mercury <input type="checkbox"/>	Total <input type="checkbox"/>	Dissolved <input type="checkbox"/>	Ammonia <input type="checkbox"/>	TKN <input type="checkbox"/>	COD <input type="checkbox"/>	TOC <input type="checkbox"/>
1 09-365	S	2009/07/06				X																									3
2 366																															1
3 367																														1	
4 368																														1	
5 369																														1	
6 370																														1	
7 371																														1	
8 372																														1	
9 373																														1	
10 374																														1	
11 375	v	v				v																								v	
12 09-376	S	2009/07/06				X																								3	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

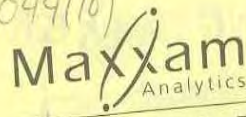
Relinquished By: _____ Date/Time: _____

Sign and Print: _____ Page 129 of 131

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By	Temperature	Ice
	<u>09/07/09</u>		
11 CUSTODY SEAL YES / NO			

049(10)
09/01/09



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

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Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

8118

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: Calgary AB **PC:**

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
Dara Schmidt (AECOM)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3

Ph: 403-450-9926 **Fax:** 403-270-4822

PO # / AFE #:

Quotation #: C08-329

Project #: 2007-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: [Signature]

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
prya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

REGULAR Turnaround (5 to 7 Days)

Date Required:

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	OTHER TEST(S)																													
			SOILS (footnotes defined on back)					WATERS (footnotes defined on back)					*HOLD for 60 Days # of Containers Submitted																			
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX		Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	F	Routine Water Package	Turb	Total	Preserved	Not Preserved	Regulated METALS (CCME / AT1)	Mercury	Ammonia	TKN	COD	TOC	DOC	
1 09-401	S	2009/07/07				X																										3
2 402																																
3 403																																
4 404																																
5 405																																
6 406																																
7 407																																
8 408																																
9 409																																
10 410																																
11 Y 411	S	2009/07/07				X																										4
12 09-412																																3

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

JARS USED & NOT SUBMITTED

Received By: RT

09/03/09 11:45h

Temperature: 7/6/6, 6/6/4, 5/7/6, 6/6/6, 6/6/4, 6/6/6

Ice: bags, bags, 7/6/8

CUSTODY SEAL YES (NO)

Relinquished By: [Signature] Date/Time: _____

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALUE

Address: ana.galue@aecom.com

Prov: Calgary, AB **PC:**

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:

Dara Schmidt (AECOM)
 2540 Kensington Rd NW
 Calgary

Prov: AB **PC:** T2N 3S3

Ph: 403-270-9926 **Fax:** 403-270-4822

PO # / AFE #:

Quotation #: CD8-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: 7/6 to 8/6

Sampler's Initials: HFF/1

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

dara.schmidt@aecom.com
 priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)			WATERS (footnotes defined on back)							OTHER TEST(S)			# of Containers Submitted										
			BTEX F1-F4 Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) Assessment ICP Metals*	Paint Filter Flashpoint	pH (1:1) Metals	TCLP	PCB TPH	BTEX F1 VOCs	BTEX F1-F2 BTEX F1-F4 NOBTEX	Routine Water Package Turb F	Total Preserved Not Preserved	Dissolved Preserved Not Preserved	Filtered Not Filtered		Total Dissolved	Mercury TKN COD	Ammonia DOC	TOC PH						
1 09-425	S	2009/07/07			X																				3	
2 09-426	W	2009/07/07								X	X	X														6
3 09-427										X	X	X														6
4 09-428										X	X	X														
5 09-429										X	X	X														6
6 09-430	W									X	X	X														6
7 09-431	W									X	X	X														1
8 09-432	S									X	X	X														1
9 09-433	S	2009/07/07								X	X	X														1
10																										
11																										
12																										

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to pg 1 Date/Time: _____

Sign and Print: _____

JARS USED & NOT SUBMITTED: 09/07/09
 Received By: RT
 11:45h
 Temperature: 7/6/6 6/6/4 5/6/6 6/6/4
 CUSTODY SEAL YES (NO)

COMMENTS/SPECIAL INSTRUCTIONS: Water - C5-10 & W-10-12-AD BTEX Page 131 of 131



Your Project #: 2977-371-00
 Site: JOHNSON POINT
 Your C.O.C. #: 81187, .

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/07/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A935581
Received: 2009/07/13, 9:00

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	1	2009/07/13	2009/07/17	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	1	2009/07/13	2009/07/16	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Elements by ICPMS - Soils	1	2009/07/15	2009/07/15	CAL SOP-00191	EPA SW-846-6020A
Moisture	1	N/A	2009/07/14	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	1	2009/07/15	2009/07/16	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
TPH (C6-C30) Soil Calc	1	N/A	2009/07/20		

Sample Matrix: Water
 # Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Chlorine (Free)	4	N/A	2009/07/15	EENVSOP-00070	HACH 8021

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
 Email: eanderson@maxxamanalytics.com
 Phone# (780) 577-7113 Ext:7113

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.



Your Project #: 2977-371-00
Site: JOHNSON POINT
Your C.O.C. #: 81187, .

Attention: DARA SCHMIDT
AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/07/20

CERTIFICATE OF ANALYSIS

-2-

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P73897		
Sampling Date		2009/07/09 14:00		
COC Number		81187		
	Units	09-438	RDL	QC Batch

Physical Properties				
Moisture	%	4.9	0.3	3271313
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	10	3271152
F3 (C16-C34 Hydrocarbons)	mg/kg	19	10	3271152
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	3271152
Reached Baseline at C50	mg/kg	Yes	N/A	3271152
Volatiles				
Benzene	mg/kg	<0.0050	0.0050	3271115
Toluene	mg/kg	<0.020	0.020	3271115
Ethylbenzene	mg/kg	<0.010	0.010	3271115
Xylenes (Total)	mg/kg	<0.040	0.040	3271115
m & p-Xylene	mg/kg	<0.040	0.040	3271115
o-Xylene	mg/kg	<0.020	0.020	3271115
F1 (C6-C10) - BTEX	mg/kg	<12	12	3271115
LH (C5-C10)	mg/kg	<12	12	3271115
(C6-C10)	mg/kg	<12	12	3271115
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	98	N/A	3271115
D10-ETHYLBENZENE (sur.)	%	107	N/A	3271115
D4-1,2-DICHLOROETHANE (sur.)	%	95	N/A	3271115
D8-TOLUENE (sur.)	%	102	N/A	3271115
O-TERPHENYL (sur.)	%	85	N/A	3271152

N/A = Not Applicable
RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P73897		
Sampling Date		2009/07/09 14:00		
COC Number		81187		
	Units	09-438	RDL	QC Batch

Elements				
Total Arsenic (As)	mg/kg	3	1	3275874
Total Cadmium (Cd)	mg/kg	<0.1	0.1	3275874
Total Chromium (Cr)	mg/kg	4	1	3275874
Total Cobalt (Co)	mg/kg	3	1	3275874
Total Copper (Cu)	mg/kg	9	5	3275874
Total Lead (Pb)	mg/kg	3	1	3275874
Total Nickel (Ni)	mg/kg	7	1	3275874
Total Zinc (Zn)	mg/kg	13	10	3275874

RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P73897		
Sampling Date		2009/07/09		
		14:00		
COC Number		81187		
	Units	09-438	RDL	QC Batch

Hydrocarbons				
Total Extractables C10 to C30	mg/kg	21	10	3273798
Total hydrocarbons C5-C30	mg/kg	21	20	3269003
Surrogate Recovery (%)				
O-TERPHENYL (sur.)	%	85	N/A	3273798

N/A = Not Applicable
 RDL = Reportable Detection Limit

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		P73945	P74120	P74121	P74122		
Sampling Date		2009/07/09 16:20	2009/07/09 16:45	2009/07/09 16:30	2009/07/09 16:40		
COC Number		81187	81187	81187	81187		
	Units	09-434	09-435	09-436	09-437	RDL	QC Batch

Misc. Inorganics							
Free Chlorine	mg/L	0.05 (1)	0.02 (1)	0.03 (1)	0.10 (1)	0.02	3275370

RDL = Reportable Detection Limit
 (1) Sample was past hold time when received.



Maxxam Job #: A935581
Report Date: 2009/07/20

AECOM
Client Project #: 2977-371-00
Site Reference: JOHNSON POINT
Sampler Initials: DAS

Package 1	10.0°C
-----------	--------

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference: JOHNSON POINT

Quality Assurance Report
 Maxxam Job Number: EA935581

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
3271115	CC6	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/15		93 %	60 - 140		
			D10-ETHYLBENZENE (sur.)	2009/07/15		103 %	30 - 130		
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/15		97 %	60 - 140		
			D8-TOLUENE (sur.)	2009/07/15		97 %	60 - 140		
			Benzene	2009/07/15		85 %	60 - 140		
			Toluene	2009/07/15		86 %	60 - 140		
			Ethylbenzene	2009/07/15		96 %	60 - 140		
			m & p-Xylene	2009/07/15		98 %	60 - 140		
			o-Xylene	2009/07/15		97 %	60 - 140		
			(C6-C10)	2009/07/15		125 %	60 - 140		
			SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/15		95 %	60 - 140	
				D10-ETHYLBENZENE (sur.)	2009/07/15		103 %	30 - 130	
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/15		93 %	60 - 140		
			D8-TOLUENE (sur.)	2009/07/15		99 %	60 - 140		
			Benzene	2009/07/15		84 %	60 - 140		
			Toluene	2009/07/15		87 %	60 - 140		
			Ethylbenzene	2009/07/15		97 %	60 - 140		
			m & p-Xylene	2009/07/15		98 %	60 - 140		
			o-Xylene	2009/07/15		95 %	60 - 140		
			(C6-C10)	2009/07/15		106 %	80 - 120		
		BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/16			99 %	60 - 140	
			D10-ETHYLBENZENE (sur.)	2009/07/16			104 %	30 - 130	
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/16			100 %	60 - 140	
			D8-TOLUENE (sur.)	2009/07/16			108 %	60 - 140	
				Benzene	2009/07/16	<0.0050		mg/kg	
				Toluene	2009/07/16	<0.020		mg/kg	
				Ethylbenzene	2009/07/16	<0.010		mg/kg	
				Xylenes (Total)	2009/07/16	<0.040		mg/kg	
				m & p-Xylene	2009/07/16	<0.040		mg/kg	
				o-Xylene	2009/07/16	<0.020		mg/kg	
				F1 (C6-C10) - BTEX	2009/07/16	<12		mg/kg	
				(C6-C10)	2009/07/16	<12		mg/kg	
		RPD	Benzene	2009/07/15	NC		%	50	
	Toluene		2009/07/15	NC		%	50		
	Ethylbenzene		2009/07/15	NC		%	50		
	Xylenes (Total)		2009/07/15	NC		%	50		
	m & p-Xylene		2009/07/15	NC		%	50		
	o-Xylene		2009/07/15	NC		%	50		
	F1 (C6-C10) - BTEX		2009/07/15	NC		%	50		
	(C6-C10)		2009/07/15	NC		%	50		
3271152	JM7	MATRIX SPIKE	O-TERPHENYL (sur.)	2009/07/16		86 %	50 - 130		
			F2 (C10-C16 Hydrocarbons)	2009/07/16		NC	50 - 130		
			F3 (C16-C34 Hydrocarbons)	2009/07/16		95 %	50 - 130		
			F4 (C34-C50 Hydrocarbons)	2009/07/16		93 %	50 - 130		
		SPIKE	O-TERPHENYL (sur.)	2009/07/16		82 %	50 - 130		
			F2 (C10-C16 Hydrocarbons)	2009/07/16		100 %	80 - 120		
			F3 (C16-C34 Hydrocarbons)	2009/07/16		102 %	80 - 120		
			F4 (C34-C50 Hydrocarbons)	2009/07/16		100 %	80 - 120		
		BLANK	O-TERPHENYL (sur.)	2009/07/16		96 %	50 - 130		
			F2 (C10-C16 Hydrocarbons)	2009/07/16	<10		mg/kg		
			F3 (C16-C34 Hydrocarbons)	2009/07/16	<10		mg/kg		
			F4 (C34-C50 Hydrocarbons)	2009/07/16	<10		mg/kg		
		RPD	F2 (C10-C16 Hydrocarbons)	2009/07/16	NC		%	50	
			F3 (C16-C34 Hydrocarbons)	2009/07/16	NC		%	50	
			F4 (C34-C50 Hydrocarbons)	2009/07/16	NC		%	50	



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference: JOHNSON POINT

Quality Assurance Report (Continued)

Maxxam Job Number: EA935581

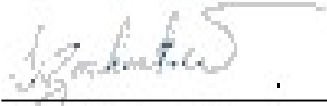
QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3271313 JP6	BLANK	Moisture	2009/07/14	<0.3		%	
	RPD	Moisture	2009/07/14	13.1		%	20
3273798 JM7	SPIKE	O-TERPHENYL (sur.)	2009/07/16		82	%	50 - 130
		Total Extractables C10 to C30	2009/07/16		83	%	60 - 130
	BLANK	O-TERPHENYL (sur.)	2009/07/16		96	%	50 - 130
		Total Extractables C10 to C30	2009/07/16	<10		mg/kg	
3275370 LF1	Calibration Check	Free Chlorine	2009/07/15		87	%	80 - 120
	BLANK	Free Chlorine	2009/07/15	<0.02		mg/L	
	RPD	Free Chlorine	2009/07/15	NC		%	20
3275874 EO1	Calibration Check	Total Arsenic (As)	2009/07/15		94	%	80 - 120
		Total Cadmium (Cd)	2009/07/15		98	%	80 - 120
		Total Chromium (Cr)	2009/07/15		93	%	80 - 120
		Total Cobalt (Co)	2009/07/15		99	%	80 - 120
		Total Copper (Cu)	2009/07/15		96	%	80 - 120
		Total Lead (Pb)	2009/07/15		99	%	80 - 120
		Total Nickel (Ni)	2009/07/15		98	%	80 - 120
		Total Zinc (Zn)	2009/07/15		119	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2009/07/15		98	%	75 - 125
		Total Cadmium (Cd)	2009/07/15		94	%	75 - 125
		Total Chromium (Cr)	2009/07/15		100	%	75 - 125
		Total Cobalt (Co)	2009/07/15		96	%	75 - 125
		Total Lead (Pb)	2009/07/15		102	%	75 - 125
		Total Nickel (Ni)	2009/07/15		115	%	75 - 125
		Total Zinc (Zn)	2009/07/15		NC	%	75 - 125
	QC STANDARD	Total Arsenic (As)	2009/07/15		98	%	72 - 128
		Total Chromium (Cr)	2009/07/15		74	%	50 - 150
		Total Cobalt (Co)	2009/07/15		112	%	75 - 125
		Total Copper (Cu)	2009/07/15		92	%	72 - 127
		Total Lead (Pb)	2009/07/15		100	%	65 - 135
		Total Nickel (Ni)	2009/07/15		104	%	75 - 125
		Total Zinc (Zn)	2009/07/15		97	%	74 - 125
	BLANK	Total Arsenic (As)	2009/07/15	<1		mg/kg	
		Total Cadmium (Cd)	2009/07/15	<0.1		mg/kg	
		Total Chromium (Cr)	2009/07/15	<1		mg/kg	
		Total Cobalt (Co)	2009/07/15	<1		mg/kg	
		Total Copper (Cu)	2009/07/15	<5		mg/kg	
		Total Lead (Pb)	2009/07/15	<1		mg/kg	
		Total Nickel (Ni)	2009/07/15	<1		mg/kg	
		Total Zinc (Zn)	2009/07/15	<10		mg/kg	
	RPD	Total Arsenic (As)	2009/07/15	0.5		%	35
		Total Cadmium (Cd)	2009/07/15	NC		%	35
		Total Chromium (Cr)	2009/07/15	17.4		%	35
		Total Cobalt (Co)	2009/07/15	4.7		%	35
		Total Copper (Cu)	2009/07/15	NC		%	35
		Total Lead (Pb)	2009/07/15	1.2		%	35
		Total Nickel (Ni)	2009/07/15	11.3		%	35
		Total Zinc (Zn)	2009/07/15	9.5		%	35

NC = Non-calculable
 RPD = Relative Percent Difference

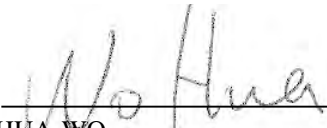
Validation Signature Page

Maxxam Job #: A935581

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



DIANE ZACHARKIW, Scientific Specialist



HUA WO,



LISA CUMMINGS, Extractables Supervisor

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

234



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

81187 CHAIN OF CUSTODY

Page: 1 of 1

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALUE

Address: ana.galuae@aecom.com

Prov: Calgary AB **PC:**

Contact #s: Ph: 270-9200 Fax: 270-0399

Report To:

Dara Schmidt (AECOM)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N3S3

Ph: 403-950-9926 **Fax:** 403-270-4822
(office)

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: * see comments.

Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@decom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

SOILS (footnotes defined on back) **WATERS** (footnotes defined on back) **OTHER TEST(S)**

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4 & TEH	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	Metals: As, Cu, Co, Cd, Pb, Ni, Cr	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs Zn, Cr	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	REGULATED METALS (CCME / AT1) ³			Mercury	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	<input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	VH (W5-10)	EH (W10-19)	pH	Residual Chlorine	*HOLD for 60 Days	# of Containers Submitted	
																<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														
1 09-438	S	2009/07/09 14:00	X								X	X																				3
2 09-434	W	16:20																														1
3 09-435	W	16:45																														1
4 09-436	W	16:30																														1
5 09-437	W	2009/07/09 16:40																														1
6 09-439	S	2009/07/09	X																													
7																																
8																																
9																																
10																																
11																																
12																																

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Dara Schmidt (AECOM) Date/Time: 2009/07/09 17:00
Sign and Print: D. Schmidt

# JARS USED & NOT SUBMITTED	Received By 09:00h 13/07/09 RT	Temperature		Ice
		9	9	12
CUSTODY SEAL (YES) / NO				

COMMENTS/SPECIAL INSTRUCTIONS: 09-438 - Location % Lobe N
09-434 & 09-435 % Upstream, 09-437: endpoint * metals: As, Cu, Co, Cd, Cr, Ni, Pb, Zn

Task Order#:
Site#:
Site Location:
Project #: A935581
Your C.O.C. #: n/a

Attention: Erin Anderson

Maxxam Analytics
Edmonton - ENV
9331-48 St
Edmonton, AB
T6B 2R4

Report Date: 2009/07/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A988480

Received: 2009/07/15, 07:40

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Laboratory Method	Method
MOISTURE	1	CAM SOP-00445	Primary reference McKeague 2nd ed 1978
Polychlorinated Biphenyl in Soil	1	CAM SOP-00309	SW846 8082

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ELORA DI BRATTO, Project Manager
Email: Elora.DiBratto@maxxamanalytics.com
Phone# (905) 817-5700

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

Maxxam Job #: A988480
 Report Date: 2009/07/20

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A935581

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DB8605		
Sampling Date		2009/07/09		
COC Number		n/a		
	Units	P73897	RDL	QC Batch
		\ 09-438		

Moisture	%	7.0	0.2	1879999
----------	---	-----	-----	---------

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A988480
 Report Date: 2009/07/20

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A935581

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB8605		
Sampling Date		2009/07/09		
COC Number		n/a		
	Units	P73897	RDL	QC Batch
		\ 09-438		

Aroclor 1262	ug/g	<0.01	0.01	1880386
Aroclor 1016	ug/g	<0.01	0.01	1880386
Aroclor 1221	ug/g	<0.01	0.01	1880386
Aroclor 1232	ug/g	<0.01	0.01	1880386
Aroclor 1242	ug/g	<0.01	0.01	1880386
Aroclor 1248	ug/g	<0.01	0.01	1880386
Aroclor 1254	ug/g	<0.01	0.01	1880386
Aroclor 1260	ug/g	<0.01	0.01	1880386
Aroclor 1268	ug/g	<0.01	0.01	1880386
Total PCB	ug/g	<0.01	0.01	1880386
Extraction				
Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	62		1880386
Decachlorobiphenyl	%	96		1880386

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A988480
 Report Date: 2009/07/20

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A935581

Test Summary

Maxxam ID DB8605
Sample ID P73897 \ 09-438
Matrix Soil

Collected 2009/07/09
Shipped
Received 2009/07/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1879999	N/A	2009/07/16	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1880386	2009/07/16	2009/07/17	LPG

Maxxam Job #: A988480
Report Date: 2009/07/20

Maxxam Analytics
Task Order#:
Site#:

Project #: A935581

Package 1	4.7°C
-----------	-------

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
 Task Order#:
 Site#:
 Site Location:
 Project #: A935581

Quality Assurance Report

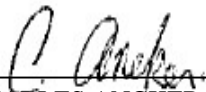
Maxxam Job Number: A988480

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1880386	LPG	Method Blank	2009/07/17		78	%	40 - 130
		Decachlorobiphenyl	2009/07/17		104	%	40 - 130
		Aroclor 1262	2009/07/17	<0.01		ug/g	
		Aroclor 1016	2009/07/17	<0.01		ug/g	
		Aroclor 1221	2009/07/17	<0.01		ug/g	
		Aroclor 1232	2009/07/17	<0.01		ug/g	
		Aroclor 1242	2009/07/17	<0.01		ug/g	
		Aroclor 1248	2009/07/17	<0.01		ug/g	
		Aroclor 1254	2009/07/17	<0.01		ug/g	
		Aroclor 1260	2009/07/17	<0.01		ug/g	
		Aroclor 1268	2009/07/17	<0.01		ug/g	
		Total PCB	2009/07/17	<0.01		ug/g	
	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/17		78	%	40 - 130
		Decachlorobiphenyl	2009/07/17		104	%	40 - 130
		Aroclor 1260	2009/07/17		102	%	30 - 130
		Total PCB	2009/07/17		102	%	30 - 130

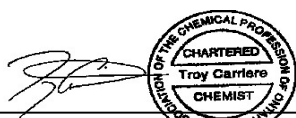
Validation Signature Page

Maxxam Job #: A988480

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CHARLES ANCKER, B.Sc., M.Sc., C.Chem, Senior Analyst



TROY CARRIERE, B.Sc., C.Chem, Scientific Specialist

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

To: Maxxam Ontario (From Edmonton)

Job# A935581

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) HS (print) HIRSCHH

Received @ Subcontract Lab (Date) 09/09/15 (Time) 0A:40

Received Lab's Job # A988460 Inspected by (print) MARK/Jimmy *SIF Yes No
 Upon receipt, record 3 temperatures for each package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 6c Temp2 4c Temp3 4c Custody sealed yes

Sample ID	MATRIX	Test(s) Required	Container	Date Sampled	Date Required
P73897-02R \ 09-438 ✓	S	PCB Extraction	1	2009/07/09	2009/07/17
P73897-02R \ 09-438	S	Polychlorinated Biphenyls	1	2009/07/09	2009/07/17

NOTES:

- Please call us if due date cannot be met. Please reference Sample ID on your report.
- Include copy of this completed form, Client COC & signed final report to edmenvirocs@maxxamanalytics.com

JUL 13 2009

1 x 125ml jar

PLEASE REPORT TO:
 Erin Anderson
 (780) 577-7113 (direct)
Erin.Anderson@maxxamanalytics.com

SHIPPING INSTRUCTIONS

- Ship Immediately (highlight Yellow) Ship Cold
 Requires 9am Ship Room Temp
 Requires Sat. Delivery Ship Frozen
 Regular Ship next available day COC Must be Attached
 Sender (Print) _____ Initial RT

SHIPPING DEPARTMENT CHECKLIST

- Correct Shipping location
 Correct Sample Ids (Paperwork vs Bottles)
 Yes No Special-Cooler, Ice, Tape-custody seal, Date&Sign
 Date Shipped _____
 Shipper (Print) _____ Initial _____



Your Project #: 2977-371-00
 Site Location: JOHNSON POINT/LOBE P STOCKPILE
 Your C.O.C. #: 81174, 81173, 81175, 81176, 81177,
 81178, 81179, 81180, 81181, 81182, 81184, 81185,
 81183, 81186

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/07/21

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A934996

Received: 2009/07/09, 11:45

Sample Matrix: Soil
 # Samples Received: 158

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	4	2009/07/11	2009/07/12	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	76	2009/07/11	2009/07/13	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	62	2009/07/11	2009/07/14	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	14	2009/07/11	2009/07/15	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	1	2009/07/11	2009/07/16	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	1	2009/07/13	2009/07/15	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	79	2009/07/11	2009/07/13	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	39	2009/07/11	2009/07/14	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	36	2009/07/11	2009/07/15	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	4	2009/07/11	2009/07/16	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Elements by ICPMS - Soils	101	2009/07/13	2009/07/13	CAL SOP-00191	EPA SW-846-6020A
Elements by ICPMS - Soils	20	2009/07/13	2009/07/14	CAL SOP-00191	EPA SW-846-6020A
Elements by ICPMS - Soils	27	2009/07/14	2009/07/14	CAL SOP-00191	EPA SW-846-6020A
Elements by ICPMS - Soils	7	2009/07/14	2009/07/15	CAL SOP-00191	EPA SW-846-6020A
Elements by ICPMS - Soils	1	2009/07/15	2009/07/15	CAL SOP-00191	EPA SW-846-6020A
Moisture	79	N/A	2009/07/11	EENVSOP-00139	Carter SSMA 51.2
Moisture	79	N/A	2009/07/13	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	79	2009/07/11	2009/07/13	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Hydrocarbons (C10-C30) in Soil By GC/FID	59	2009/07/11	2009/07/14	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Hydrocarbons (C10-C30) in Soil By GC/FID	20	2009/07/11	2009/07/15	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
TPH (C6-C30) Soil Calc	38	N/A	2009/07/14		
TPH (C6-C30) Soil Calc	21	N/A	2009/07/15		
TPH (C6-C30) Soil Calc	96	N/A	2009/07/16		
TPH (C6-C30) Soil Calc	3	N/A	2009/07/17		



Your Project #: 2977-371-00
 Site Location: JOHNSON POINT/LOBE P STOCKPILE
 Your C.O.C. #: 81174, 81173, 81175, 81176, 81177,
 81178, 81179, 81180, 81181, 81182, 81184, 81185,
 81183, 81186

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/07/21

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

-2-

Sample Matrix: Water
 # Samples Received: 6

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/MTBE LH, VH, F1 SIM/MS (1)	6	2009/07/13	2009/07/14	BRN-SOP-00304 R10.0	Based on EPA 8260B
pH	6	N/A	2009/07/12	EENVSOP-00054	SM 4500-H B
Extrac. Petroleum HC in Water by GC/FID (1)	5	2009/07/13	2009/07/14	BRN SOP-00341 R14	Based BCCSR Method 4
Extrac. Petroleum HC in Water by GC/FID (1)	1	2009/07/13	2009/07/15	BRN SOP-00341 R14	Based BCCSR Method 4

- (1) This test was performed by Maxxam Vancouver
- (2) SCC/CAEAL

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
 Email: eanderson@maxxamanalytics.com
 Phone# (780) 577-7113 Ext:7113

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69850	P69850	P69851	P69851		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81174	81174	81174	81174		
	Units	09-270	09-270 Lab-Dup	09-271	09-271 Lab-Dup	RDL	QC Batch

Physical Properties							
Moisture	%	10	10	11	N/A	0.3	3268170
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	730	590	410	N/A	10	3267500
F3 (C16-C34 Hydrocarbons)	mg/kg	520	430	300	N/A	10	3267500
F4 (C34-C50 Hydrocarbons)	mg/kg	67	49	54	N/A	10	3267500
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	N/A	3267500
Volatiles							
Benzene	mg/kg	<0.0050	N/A	<0.0050	<0.0050	0.0050	3267343
Toluene	mg/kg	<0.020	N/A	<0.020	<0.020	0.020	3267343
Ethylbenzene	mg/kg	0.013	N/A	<0.010	<0.010	0.010	3267343
Xylenes (Total)	mg/kg	0.70	N/A	0.13	0.086	0.040	3267343
m & p-Xylene	mg/kg	0.11	N/A	<0.040	<0.040	0.040	3267343
o-Xylene	mg/kg	0.59	N/A	0.13	0.086	0.020	3267343
F1 (C6-C10) - BTEX	mg/kg	180	N/A	63	43	12	3267343
LH (C5-C10)	mg/kg	180	N/A	63	40	12	3267343
(C6-C10)	mg/kg	180	N/A	63	43	12	3267343
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	105	N/A	93	92	N/A	3267343
D10-ETHYLBENZENE (sur.)	%	108	N/A	108	102	N/A	3267343
D4-1,2-DICHLOROETHANE (sur.)	%	110	N/A	97	103	N/A	3267343
D8-TOLUENE (sur.)	%	94	N/A	98	102	N/A	3267343
O-TERPHENYL (sur.)	%	83	82	99	N/A	N/A	3267500
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69852	P69853	P69854	P69855		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81174	81174	81174	81174		
	Units	09-272	09-273	09-274	09-275	RDL	QC Batch

Physical Properties							
Moisture	%	9.8	9.4	10	9.9	0.3	3268170
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	630	310	1300	230	10	3267500
F3 (C16-C34 Hydrocarbons)	mg/kg	410	700	810	420	10	3267500
F4 (C34-C50 Hydrocarbons)	mg/kg	51	53	130	29	10	3267500
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267500
Volatiles							
Benzene	mg/kg	<0.0050	0.013	<0.0050	<0.0050	0.0050	3267343
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267343
Ethylbenzene	mg/kg	0.021	<0.010	0.013	<0.010	0.010	3267343
Xylenes (Total)	mg/kg	1.1	0.31	0.10	0.28	0.040	3267343
m & p-Xylene	mg/kg	0.20	0.081	<0.040	0.076	0.040	3267343
o-Xylene	mg/kg	0.90	0.23	0.10	0.21	0.020	3267343
F1 (C6-C10) - BTEX	mg/kg	120	48	24	61	12	3267343
LH (C5-C10)	mg/kg	120	54	27	65	12	3267343
(C6-C10)	mg/kg	120	48	24	62	12	3267343
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	99	106	95	103	N/A	3267343
D10-ETHYLBENZENE (sur.)	%	104	106	101	114	N/A	3267343
D4-1,2-DICHLOROETHANE (sur.)	%	103	105	106	100	N/A	3267343
D8-TOLUENE (sur.)	%	92	94	95	94	N/A	3267343
O-TERPHENYL (sur.)	%	105	106	105	103	N/A	3267500
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69856	P69857	P69858	P69859		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81174	81174	81174	81174		
	Units	09-276	09-277	09-278	09-279	RDL	QC Batch

Physical Properties							
Moisture	%	9.5	9.1	9.9	11	0.3	3268170
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	420	390	140	240	10	3267500
F3 (C16-C34 Hydrocarbons)	mg/kg	410	630	140	190	10	3267500
F4 (C34-C50 Hydrocarbons)	mg/kg	31	45	<10	<10	10	3267500
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267500
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267343
Toluene	mg/kg	0.024	<0.020	<0.020	0.079	0.020	3267343
Ethylbenzene	mg/kg	0.012	<0.010	<0.010	0.039	0.010	3267343
Xylenes (Total)	mg/kg	0.33	0.23	<0.040	1.6	0.040	3267343
m & p-Xylene	mg/kg	0.056	0.058	<0.040	0.90	0.040	3267343
o-Xylene	mg/kg	0.27	0.17	0.035	0.73	0.020	3267343
F1 (C6-C10) - BTEX	mg/kg	220	52	16	56	12	3267343
LH (C5-C10)	mg/kg	230	55	17	62	12	3267343
(C6-C10)	mg/kg	220	53	16	58	12	3267343
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	103	105	100	99	N/A	3267343
D10-ETHYLBENZENE (sur.)	%	101	109	106	112	N/A	3267343
D4-1,2-DICHLOROETHANE (sur.)	%	106	105	109	114	N/A	3267343
D8-TOLUENE (sur.)	%	86	96	94	93	N/A	3267343
O-TERPHENYL (sur.)	%	103	97	105	108	N/A	3267500
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69860	P69861	P69862	P69863		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81174	81173	81173	81173		
	Units	09-280	09-281	09-282	09-283	RDL	QC Batch

Physical Properties							
Moisture	%	11	10	10	10	0.3	3268170
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	420	340	720	740	10	3267500
F3 (C16-C34 Hydrocarbons)	mg/kg	260	270	500	410	10	3267500
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	20	49	46	10	3267500
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267500
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267343
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267343
Ethylbenzene	mg/kg	0.021	<0.010	<0.010	<0.010	0.010	3267343
Xylenes (Total)	mg/kg	0.85	0.36	<0.040	0.36	0.040	3267343
m & p-Xylene	mg/kg	0.46	0.18	<0.040	0.36	0.040	3267343
o-Xylene	mg/kg	0.40	0.18	<0.020	<0.020	0.020	3267343
F1 (C6-C10) - BTEX	mg/kg	64	51	71	150	12	3267343
LH (C5-C10)	mg/kg	66	52	71	150	12	3267343
(C6-C10)	mg/kg	65	52	71	150	12	3267343
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	107	94	92	107	N/A	3267343
D10-ETHYLBENZENE (sur.)	%	112	101	103	94	N/A	3267343
D4-1,2-DICHLOROETHANE (sur.)	%	104	100	102	101	N/A	3267343
D8-TOLUENE (sur.)	%	100	92	97	88	N/A	3267343
O-TERPHENYL (sur.)	%	103	105	103	102	N/A	3267500
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69864	P69865	P69866	P69867		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81173	81173	81173	81173		
	Units	09-284	09-285	09-286	09-287	RDL	QC Batch

Physical Properties							
Moisture	%	9.6	10	9.7	10	0.3	3268170
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	290	300	100	160	10	3267500
F3 (C16-C34 Hydrocarbons)	mg/kg	250	310	150	160	10	3267500
F4 (C34-C50 Hydrocarbons)	mg/kg	14	13	<10	<10	10	3267500
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267500
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267343
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267343
Ethylbenzene	mg/kg	0.026	<0.010	<0.010	<0.010	0.010	3267343
Xylenes (Total)	mg/kg	0.90	0.54	0.30	0.27	0.040	3267343
m & p-Xylene	mg/kg	0.45	0.31	0.14	0.14	0.040	3267343
o-Xylene	mg/kg	0.45	0.23	0.16	0.13	0.020	3267343
F1 (C6-C10) - BTEX	mg/kg	110	38	34	42	12	3267343
LH (C5-C10)	mg/kg	110	38	34	42	12	3267343
(C6-C10)	mg/kg	110	38	34	42	12	3267343
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	106	94	93	96	N/A	3267343
D10-ETHYLBENZENE (sur.)	%	113	105	108	108	N/A	3267343
D4-1,2-DICHLOROETHANE (sur.)	%	103	101	101	101	N/A	3267343
D8-TOLUENE (sur.)	%	99	97	97	98	N/A	3267343
O-TERPHENYL (sur.)	%	106	106	101	104	N/A	3267500
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69868		P69869	P69869		
Sampling Date		2009/07/05		2009/07/05	2009/07/05		
COC Number		81173		81173	81173		
	Units	09-288	QC Batch	09-289	09-289 Lab-Dup	RDL	QC Batch

Physical Properties							
Moisture	%	9.8	3268170	10	10	0.3	3267524
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	200	3267500	810	1000	10	3267312
F3 (C16-C34 Hydrocarbons)	mg/kg	140	3267500	470	500	10	3267312
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3267500	39	43	10	3267312
Reached Baseline at C50	mg/kg	Yes	3267500	Yes	Yes	N/A	3267312
Volatiles							
Benzene	mg/kg	<0.0050	3267343	0.011	<0.0050	0.0050	3267470
Toluene	mg/kg	<0.020	3267343	<0.020	<0.020	0.020	3267470
Ethylbenzene	mg/kg	0.068	3267343	<0.010	<0.010	0.010	3267470
Xylenes (Total)	mg/kg	2.4	3267343	1.2	1.2	0.040	3267470
m & p-Xylene	mg/kg	1.5	3267343	0.26	0.22	0.040	3267470
o-Xylene	mg/kg	0.88	3267343	0.99	1.0	0.020	3267470
F1 (C6-C10) - BTEX	mg/kg	76	3267343	180	220	12	3267470
LH (C5-C10)	mg/kg	79	3267343	190	230	12	3267470
(C6-C10)	mg/kg	79	3267343	190	220	12	3267470
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	100	3267343	110	98	N/A	3267470
D10-ETHYLBENZENE (sur.)	%	102	3267343	105	108	N/A	3267470
D4-1,2-DICHLOROETHANE (sur.)	%	102	3267343	82	83	N/A	3267470
D8-TOLUENE (sur.)	%	91	3267343	105	105	N/A	3267470
O-TERPHENYL (sur.)	%	105	3267500	94	102	N/A	3267312
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69870	P69871	P69872	P69873		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81173	81173	81173	81175		
	Units	09-290	09-291	09-292	09-293	RDL	QC Batch

Physical Properties							
Moisture	%	8.6	10	11	11	0.3	3267524
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	240	130	250	270	10	3267312
F3 (C16-C34 Hydrocarbons)	mg/kg	200	100	180	200	10	3267312
F4 (C34-C50 Hydrocarbons)	mg/kg	25	12	26	22	10	3267312
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267312
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267470
Toluene	mg/kg	<0.020	<0.020	0.045	0.033	0.020	3267470
Ethylbenzene	mg/kg	0.061	<0.010	0.025	0.017	0.010	3267470
Xylenes (Total)	mg/kg	0.95	0.35	1.3	1.3	0.040	3267470
m & p-Xylene	mg/kg	0.63	0.13	0.79	0.71	0.040	3267470
o-Xylene	mg/kg	0.32	0.22	0.52	0.61	0.020	3267470
F1 (C6-C10) - BTEX	mg/kg	86	32	92	88	12	3267470
LH (C5-C10)	mg/kg	130	40	99	97	12	3267470
(C6-C10)	mg/kg	87	32	93	89	12	3267470
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	95	99	99	94	N/A	3267470
D10-ETHYLBENZENE (sur.)	%	107	105	95	107	N/A	3267470
D4-1,2-DICHLOROETHANE (sur.)	%	83	83	103	83	N/A	3267470
D8-TOLUENE (sur.)	%	103	102	97	102	N/A	3267470
O-TERPHENYL (sur.)	%	96	95	103	102	N/A	3267312

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69874		P69875		
Sampling Date		2009/07/06		2009/07/06		
COC Number		81175		81175		
	Units	09-294	QC Batch	09-295	RDL	QC Batch

Physical Properties						
Moisture	%	11	3267524	9.2	0.3	3271394
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	250	3267312	810	10	3267648
F3 (C16-C34 Hydrocarbons)	mg/kg	210	3267312	370	10	3267648
F4 (C34-C50 Hydrocarbons)	mg/kg	16	3267312	<10	10	3267648
Reached Baseline at C50	mg/kg	Yes	3267312	Yes	N/A	3267648
Volatiles						
Benzene	mg/kg	<0.0050	3267470	<0.0050	0.0050	3271115
Toluene	mg/kg	0.054	3267470	0.039	0.020	3271115
Ethylbenzene	mg/kg	<0.010	3267470	0.022	0.010	3271115
Xylenes (Total)	mg/kg	4.8	3267470	0.16	0.040	3271115
m & p-Xylene	mg/kg	3.2	3267470	0.089	0.040	3271115
o-Xylene	mg/kg	1.6	3267470	0.072	0.020	3271115
F1 (C6-C10) - BTEX	mg/kg	130	3267470	130	12	3271115
LH (C5-C10)	mg/kg	170	3267470	150	12	3271115
(C6-C10)	mg/kg	130	3267470	130	12	3271115
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	3267470	86	N/A	3271115
D10-ETHYLBENZENE (sur.)	%	108	3267470	97	N/A	3271115
D4-1,2-DICHLOROETHANE (sur.)	%	83	3267470	92	N/A	3271115
D8-TOLUENE (sur.)	%	101	3267470	98	N/A	3271115
O-TERPHENYL (sur.)	%	101	3267312	109	N/A	3267648
N/A = Not Applicable RDL = Reportable Detection Limit						



Maxxam Job #: A934996
 Report Date: 2009/07/21

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT/LOBE P STOCKPILE
 Sampler Initials: DAS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69876	P69877	P69878	P69918		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81175	81175	81175	81175		
	Units	09-296	09-297	09-298	09-299	RDL	QC Batch

Physical Properties							
Moisture	%	9.2	10	11	11	0.3	3267524
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	670	260	150	450	10	3267312
F3 (C16-C34 Hydrocarbons)	mg/kg	370	270	220	300	10	3267312
F4 (C34-C50 Hydrocarbons)	mg/kg	48	23	26	31	10	3267312
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267312
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267470
Toluene	mg/kg	<0.020	<0.020	<0.020	0.040	0.020	3267470
Ethylbenzene	mg/kg	<0.010	0.015	<0.010	0.047	0.010	3267470
Xylenes (Total)	mg/kg	0.71	0.18	<0.040	1.5	0.040	3267470
m & p-Xylene	mg/kg	0.26	0.11	<0.040	1.0	0.040	3267470
o-Xylene	mg/kg	0.45	0.068	0.028	0.53	0.020	3267470
F1 (C6-C10) - BTEX	mg/kg	140	53	93	130	12	3267470
LH (C5-C10)	mg/kg	140	78	92	140	12	3267470
(C6-C10)	mg/kg	140	53	93	130	12	3267470
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	104	98	100	95	N/A	3267470
D10-ETHYLBENZENE (sur.)	%	105	110	109	110	N/A	3267470
D4-1,2-DICHLOROETHANE (sur.)	%	84	82	85	82	N/A	3267470
D8-TOLUENE (sur.)	%	103	105	101	104	N/A	3267470
O-TERPHENYL (sur.)	%	93	103	106	104	N/A	3267312
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69928	P69929	P69930	P69931		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81175	81175	81175	81175		
	Units	09-300	09-301	09-302	09-303	RDL	QC Batch

Physical Properties							
Moisture	%	11	9.8	10	11	0.3	3267524
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	260	190	150	120	10	3267312
F3 (C16-C34 Hydrocarbons)	mg/kg	260	260	310	180	10	3267312
F4 (C34-C50 Hydrocarbons)	mg/kg	24	26	41	24	10	3267312
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267312
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267470
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267470
Ethylbenzene	mg/kg	0.026	0.032	<0.010	0.018	0.010	3267470
Xylenes (Total)	mg/kg	0.77	0.61	<0.040	0.15	0.040	3267470
m & p-Xylene	mg/kg	0.40	0.36	<0.040	0.085	0.040	3267470
o-Xylene	mg/kg	0.37	0.25	<0.020	0.060	0.020	3267470
F1 (C6-C10) - BTEX	mg/kg	97	63	19	53	12	3267470
LH (C5-C10)	mg/kg	100	75	22	54	12	3267470
(C6-C10)	mg/kg	98	64	19	53	12	3267470
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	95	95	94	97	N/A	3267470
D10-ETHYLBENZENE (sur.)	%	107	104	109	104	N/A	3267470
D4-1,2-DICHLOROETHANE (sur.)	%	82	86	88	86	N/A	3267470
D8-TOLUENE (sur.)	%	104	100	102	102	N/A	3267470
O-TERPHENYL (sur.)	%	105	103	102	92	N/A	3267312
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69932	P69933	P69934	P69935		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81175	81176	81176	81176		
	Units	09-304	09-305	09-306	09-307	RDL	QC Batch

Physical Properties							
Moisture	%	10	10	10	9.2	0.3	3267524
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	160	120	210	240	10	3267312
F3 (C16-C34 Hydrocarbons)	mg/kg	210	160	230	380	10	3267312
F4 (C34-C50 Hydrocarbons)	mg/kg	21	22	15	24	10	3267312
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267312
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267470
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267470
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267470
Xylenes (Total)	mg/kg	<0.040	<0.040	0.19	<0.040	0.040	3267470
m & p-Xylene	mg/kg	<0.040	<0.040	0.15	<0.040	0.040	3267470
o-Xylene	mg/kg	<0.020	0.030	0.042	0.035	0.020	3267470
F1 (C6-C10) - BTEX	mg/kg	30	25	54	24	12	3267470
LH (C5-C10)	mg/kg	33	26	60	25	12	3267470
(C6-C10)	mg/kg	30	25	54	24	12	3267470
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	97	101	98	98	N/A	3267470
D10-ETHYLBENZENE (sur.)	%	107	106	103	109	N/A	3267470
D4-1,2-DICHLOROETHANE (sur.)	%	83	84	87	85	N/A	3267470
D8-TOLUENE (sur.)	%	103	103	101	103	N/A	3267470
O-TERPHENYL (sur.)	%	98	92	94	90	N/A	3267312
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69936		P69937	P69937		
Sampling Date		2009/07/06		2009/07/06	2009/07/06		
COC Number		81176		81176	81176		
	Units	09-308	QC Batch	09-309	09-309 Lab-Dup	RDL	QC Batch

Physical Properties							
Moisture	%	9.8	3267524	9.9	10	0.3	3269064
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	420	3267312	140	140	10	3267319
F3 (C16-C34 Hydrocarbons)	mg/kg	320	3267312	160	180	10	3267319
F4 (C34-C50 Hydrocarbons)	mg/kg	21	3267312	11	20	10	3267319
Reached Baseline at C50	mg/kg	Yes	3267312	Yes	Yes	N/A	3267319
Volatiles							
Benzene	mg/kg	<0.0050	3267470	<0.0050	<0.0050	0.0050	3267307
Toluene	mg/kg	0.068	3267470	<0.020	<0.020	0.020	3267307
Ethylbenzene	mg/kg	0.21	3267470	<0.010	<0.010	0.010	3267307
Xylenes (Total)	mg/kg	6.1	3267470	0.13	0.12	0.040	3267307
m & p-Xylene	mg/kg	4.5	3267470	0.085	0.081	0.040	3267307
o-Xylene	mg/kg	1.6	3267470	0.044	0.040	0.020	3267307
F1 (C6-C10) - BTEX	mg/kg	180	3267470	31	28	12	3267307
LH (C5-C10)	mg/kg	190	3267470	35	32	12	3267307
(C6-C10)	mg/kg	180	3267470	31	28	12	3267307
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	107	3267470	97	95	N/A	3267307
D10-ETHYLBENZENE (sur.)	%	109	3267470	102	105	N/A	3267307
D4-1,2-DICHLOROETHANE (sur.)	%	83	3267470	90	89	N/A	3267307
D8-TOLUENE (sur.)	%	103	3267470	99	102	N/A	3267307
O-TERPHENYL (sur.)	%	98	3267312	69	77	N/A	3267319
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69938	P69939	P69940	P69941		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81176	81176	81176	81176		
	Units	09-310	09-311	09-312	09-313	RDL	QC Batch

Physical Properties							
Moisture	%	9.8	9.9	11	11	0.3	3269064
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	180	380	220	220	10	3267319
F3 (C16-C34 Hydrocarbons)	mg/kg	1000	270	220	310	10	3267319
F4 (C34-C50 Hydrocarbons)	mg/kg	41	12	<10	14	10	3267319
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267319
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267307
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267307
Ethylbenzene	mg/kg	<0.010	<0.010	0.020	<0.010	0.010	3267307
Xylenes (Total)	mg/kg	0.12	0.67	0.22	0.46	0.040	3267307
m & p-Xylene	mg/kg	0.048	0.44	0.15	0.28	0.040	3267307
o-Xylene	mg/kg	0.069	0.23	0.077	0.19	0.020	3267307
F1 (C6-C10) - BTEX	mg/kg	<12	35	28	37	12	3267307
LH (C5-C10)	mg/kg	21	42	35	47	12	3267307
(C6-C10)	mg/kg	<12	36	28	37	12	3267307
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	97	97	95	95	N/A	3267307
D10-ETHYLBENZENE (sur.)	%	103	102	104	106	N/A	3267307
D4-1,2-DICHLOROETHANE (sur.)	%	88	90	91	90	N/A	3267307
D8-TOLUENE (sur.)	%	101	100	100	101	N/A	3267307
O-TERPHENYL (sur.)	%	92	94	93	97	N/A	3267319
N/A = Not Applicable RDL = Reportable Detection Limit							



Maxxam Job #: A934996
 Report Date: 2009/07/21

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT/LOBE P STOCKPILE
 Sampler Initials: DAS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69942	P69943	P69944	P69945		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81176	81176	81176	81177		
	Units	09-314	09-315	09-316	09-317	RDL	QC Batch

Physical Properties							
Moisture	%	10	11	10	11	0.3	3269064
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	260	150	180	220	10	3267319
F3 (C16-C34 Hydrocarbons)	mg/kg	160	170	230	240	10	3267319
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	12	<10	10	3267319
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267319
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267307
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267307
Ethylbenzene	mg/kg	<0.010	<0.010	0.016	0.018	0.010	3267307
Xylenes (Total)	mg/kg	0.86	0.11	0.26	0.41	0.040	3267307
m & p-Xylene	mg/kg	0.60	0.066	0.14	0.25	0.040	3267307
o-Xylene	mg/kg	0.26	0.042	0.12	0.16	0.020	3267307
F1 (C6-C10) - BTEX	mg/kg	58	16	20	31	12	3267307
LH (C5-C10)	mg/kg	79	16	27	38	12	3267307
(C6-C10)	mg/kg	59	16	20	32	12	3267307
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	95	95	94	96	N/A	3267307
D10-ETHYLBENZENE (sur.)	%	108	106	105	104	N/A	3267307
D4-1,2-DICHLOROETHANE (sur.)	%	92	86	91	88	N/A	3267307
D8-TOLUENE (sur.)	%	100	102	100	101	N/A	3267307
O-TERPHENYL (sur.)	%	89	92	100	96	N/A	3267319
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69946	P69947	P69948	P69949		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81177	81177	81177	81177		
	Units	09-318	09-319	09-320	09-321	RDL	QC Batch

Physical Properties							
Moisture	%	12	11	12	11	0.3	3269064
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	250	170	330	430	10	3267319
F3 (C16-C34 Hydrocarbons)	mg/kg	190	120	190	230	10	3267319
F4 (C34-C50 Hydrocarbons)	mg/kg	33	<10	<10	35	10	3267319
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267319
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267307
Toluene	mg/kg	<0.020	<0.020	0.82	0.20	0.020	3267307
Ethylbenzene	mg/kg	0.20	0.039	1.2	0.030	0.010	3267307
Xylenes (Total)	mg/kg	4.0	1.8	12	1.5	0.040	3267307
m & p-Xylene	mg/kg	2.6	1.2	8.2	0.58	0.040	3267307
o-Xylene	mg/kg	1.4	0.61	3.5	0.95	0.020	3267307
F1 (C6-C10) - BTEX	mg/kg	120	71	270	95	12	3267307
LH (C5-C10)	mg/kg	140	86	310	100	12	3267307
(C6-C10)	mg/kg	130	73	290	97	12	3267307
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	98	97	110	97	N/A	3267307
D10-ETHYLBENZENE (sur.)	%	103	104	103	105	N/A	3267307
D4-1,2-DICHLOROETHANE (sur.)	%	89	89	90	87	N/A	3267307
D8-TOLUENE (sur.)	%	100	101	101	100	N/A	3267307
O-TERPHENYL (sur.)	%	91	88	92	97	N/A	3267319
N/A = Not Applicable RDL = Reportable Detection Limit							



Maxxam Job #: A934996
 Report Date: 2009/07/21

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT/LOBE P STOCKPILE
 Sampler Initials: DAS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69950	P69951	P69952	P69953		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81177	81177	81177	81177		
	Units	09-322	09-323	09-324	09-325	RDL	QC Batch

Physical Properties							
Moisture	%	11	11	11	10	0.3	3269064
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	200	280	240	240	10	3267319
F3 (C16-C34 Hydrocarbons)	mg/kg	150	200	190	210	10	3267319
F4 (C34-C50 Hydrocarbons)	mg/kg	11	23	22	13	10	3267319
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267319
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267307
Toluene	mg/kg	<0.020	0.096	<0.020	0.024	0.020	3267307
Ethylbenzene	mg/kg	0.015	0.25	0.023	0.038	0.010	3267307
Xylenes (Total)	mg/kg	0.31	4.3	0.81	0.85	0.040	3267307
m & p-Xylene	mg/kg	0.14	3.0	0.55	0.44	0.040	3267307
o-Xylene	mg/kg	0.18	1.3	0.26	0.41	0.020	3267307
F1 (C6-C10) - BTEX	mg/kg	63	160	85	79	12	3267307
LH (C5-C10)	mg/kg	63	180	97	81	12	3267307
(C6-C10)	mg/kg	63	160	86	80	12	3267307
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	96	98	96	97	N/A	3267307
D10-ETHYLBENZENE (sur.)	%	102	104	104	101	N/A	3267307
D4-1,2-DICHLOROETHANE (sur.)	%	90	90	90	91	N/A	3267307
D8-TOLUENE (sur.)	%	102	102	99	100	N/A	3267307
O-TERPHENYL (sur.)	%	90	96	98	91	N/A	3267319
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69954	P69955	P69956		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		81177	81177	81177		
	Units	09-326	09-327	09-328	RDL	QC Batch

Physical Properties						
Moisture	%	11	12	11	0.3	3269064
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	150	190	75	10	3267319
F3 (C16-C34 Hydrocarbons)	mg/kg	110	140	130	10	3267319
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	14	10	3267319
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3267319
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3267307
Toluene	mg/kg	0.097	0.066	<0.020	0.020	3267307
Ethylbenzene	mg/kg	0.14	0.071	<0.010	0.010	3267307
Xylenes (Total)	mg/kg	3.2	1.8	0.087	0.040	3267307
m & p-Xylene	mg/kg	2.3	1.0	0.056	0.040	3267307
o-Xylene	mg/kg	0.96	0.82	0.031	0.020	3267307
F1 (C6-C10) - BTEX	mg/kg	93	110	29	12	3267307
LH (C5-C10)	mg/kg	120	130	28	12	3267307
(C6-C10)	mg/kg	96	110	29	12	3267307
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	98	97	N/A	3267307
D10-ETHYLBENZENE (sur.)	%	103	102	103	N/A	3267307
D4-1,2-DICHLOROETHANE (sur.)	%	89	90	89	N/A	3267307
D8-TOLUENE (sur.)	%	99	100	100	N/A	3267307
O-TERPHENYL (sur.)	%	91	90	93	N/A	3267319
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69966	P69966	P69969	P69970		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81178	81178	81178	81178		
	Units	09-329	09-329 Lab-Dup	09-330	09-331	RDL	QC Batch

Physical Properties							
Moisture	%	12	11	9.1	9.3	0.3	3268253
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	200	180	140	12	10	3267314
F3 (C16-C34 Hydrocarbons)	mg/kg	160	140	130	66	10	3267314
F4 (C34-C50 Hydrocarbons)	mg/kg	17	14	36	48	10	3267314
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267314
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267306
Toluene	mg/kg	0.024	0.027	<0.020	<0.020	0.020	3267306
Ethylbenzene	mg/kg	0.013	0.019	<0.010	<0.010	0.010	3267306
Xylenes (Total)	mg/kg	0.40	0.55	<0.040	<0.040	0.040	3267306
m & p-Xylene	mg/kg	0.14	0.23	<0.040	<0.040	0.040	3267306
o-Xylene	mg/kg	0.25	0.31	<0.020	<0.020	0.020	3267306
F1 (C6-C10) - BTEX	mg/kg	53	63	13	<12	12	3267306
LH (C5-C10)	mg/kg	56	68	16	<12	12	3267306
(C6-C10)	mg/kg	53	64	13	<12	12	3267306
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	113	113	105	98	N/A	3267306
D10-ETHYLBENZENE (sur.)	%	111	103	94	104	N/A	3267306
D4-1,2-DICHLOROETHANE (sur.)	%	109	106	139	108	N/A	3267306
D8-TOLUENE (sur.)	%	94	95	89	92	N/A	3267306
O-TERPHENYL (sur.)	%	87	90	88	91	N/A	3267314
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69971	P69972	P69973	P69974		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81178	81178	81178	81178		
	Units	09-332	09-333	09-334	09-335	RDL	QC Batch

Physical Properties							
Moisture	%	9.3	9.7	8.8	9.1	0.3	3268253
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	74	200	300	160	10	3267314
F3 (C16-C34 Hydrocarbons)	mg/kg	120	150	130	130	10	3267314
F4 (C34-C50 Hydrocarbons)	mg/kg	42	35	25	37	10	3267314
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267314
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267306
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267306
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267306
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267306
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267306
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267306
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	3267306
LH (C5-C10)	mg/kg	<12	20	15	<12	12	3267306
(C6-C10)	mg/kg	<12	<12	<12	<12	12	3267306
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	96	99	101	87	N/A	3267306
D10-ETHYLBENZENE (sur.)	%	104	105	98	103	N/A	3267306
D4-1,2-DICHLOROETHANE (sur.)	%	108	106	111	107	N/A	3267306
D8-TOLUENE (sur.)	%	94	95	92	94	N/A	3267306
O-TERPHENYL (sur.)	%	99	96	93	97	N/A	3267314
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69975	P69976	P69977	P69978		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81178	81178	81178	81178		
	Units	09-336	09-337	09-338	09-339	RDL	QC Batch

Physical Properties							
Moisture	%	9.5	8.8	9.3	9.3	0.3	3268253
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	74	53	95	370	10	3267314
F3 (C16-C34 Hydrocarbons)	mg/kg	120	81	150	170	10	3267314
F4 (C34-C50 Hydrocarbons)	mg/kg	35	30	39	30	10	3267314
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267314
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267306
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267306
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267306
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267306
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267306
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267306
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	46	12	3267306
LH (C5-C10)	mg/kg	<12	<12	<12	47	12	3267306
(C6-C10)	mg/kg	<12	<12	<12	46	12	3267306
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	91	98	99	99	N/A	3267306
D10-ETHYLBENZENE (sur.)	%	106	103	104	103	N/A	3267306
D4-1,2-DICHLOROETHANE (sur.)	%	105	106	104	105	N/A	3267306
D8-TOLUENE (sur.)	%	97	94	98	96	N/A	3267306
O-TERPHENYL (sur.)	%	94	90	96	96	N/A	3267314
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69979	P69980	P69981	P69982		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81178	81179	81179	81179		
	Units	09-340	09-341	09-342	09-343	RDL	QC Batch

Physical Properties							
Moisture	%	8.4	9.1	9.9	9.9	0.3	3268253
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	140	140	36	26	10	3267314
F3 (C16-C34 Hydrocarbons)	mg/kg	150	130	110	100	10	3267314
F4 (C34-C50 Hydrocarbons)	mg/kg	35	35	43	60	10	3267314
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267314
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267306
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267306
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267306
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267306
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267306
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267306
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	3267306
LH (C5-C10)	mg/kg	<12	13	<12	<12	12	3267306
(C6-C10)	mg/kg	<12	<12	<12	<12	12	3267306
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	89	99	98	93	N/A	3267306
D10-ETHYLBENZENE (sur.)	%	108	103	103	102	N/A	3267306
D4-1,2-DICHLOROETHANE (sur.)	%	106	104	107	108	N/A	3267306
D8-TOLUENE (sur.)	%	97	96	95	96	N/A	3267306
O-TERPHENYL (sur.)	%	90	94	95	89	N/A	3267314
N/A = Not Applicable RDL = Reportable Detection Limit							



Maxxam Job #: A934996
 Report Date: 2009/07/21

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT/LOBE P STOCKPILE
 Sampler Initials: DAS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69983	P69984	P69985	P69986		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81179	81179	81179	81179		
	Units	09-344	09-345	09-346	09-347	RDL	QC Batch

Physical Properties							
Moisture	%	8.8	8.7	9.5	8.8	0.3	3268253
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	31	16	28	41	10	3267314
F3 (C16-C34 Hydrocarbons)	mg/kg	110	39	68	81	10	3267314
F4 (C34-C50 Hydrocarbons)	mg/kg	34	10	27	27	10	3267314
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267314
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267306
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267306
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267306
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267306
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267306
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267306
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	3267306
LH (C5-C10)	mg/kg	<12	<12	<12	<12	12	3267306
(C6-C10)	mg/kg	<12	<12	<12	<12	12	3267306
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	96	93	86	102	N/A	3267306
D10-ETHYLBENZENE (sur.)	%	106	102	106	108	N/A	3267306
D4-1,2-DICHLOROETHANE (sur.)	%	107	105	104	100	N/A	3267306
D8-TOLUENE (sur.)	%	95	96	94	98	N/A	3267306
O-TERPHENYL (sur.)	%	91	92	90	93	N/A	3267314
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69987		P69988	P69988		
Sampling Date		2009/07/06		2009/07/06	2009/07/06		
COC Number		81179		81179	81179		
	Units	09-348	QC Batch	09-349	09-349 Lab-Dup	RDL	QC Batch

Physical Properties							
Moisture	%	7.5	3268253	9.1	9.1	0.3	3267520
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	26	3267314	230	220	10	3267498
F3 (C16-C34 Hydrocarbons)	mg/kg	46	3267314	170	160	10	3267498
F4 (C34-C50 Hydrocarbons)	mg/kg	11	3267314	28	26	10	3267498
Reached Baseline at C50	mg/kg	Yes	3267314	Yes	Yes	N/A	3267498
Volatiles							
Benzene	mg/kg	<0.0050	3267306	<0.0050	<0.0050	0.0050	3267347
Toluene	mg/kg	<0.020	3267306	<0.020	<0.020	0.020	3267347
Ethylbenzene	mg/kg	<0.010	3267306	<0.010	<0.010	0.010	3267347
Xylenes (Total)	mg/kg	<0.040	3267306	0.13	0.12	0.040	3267347
m & p-Xylene	mg/kg	<0.040	3267306	<0.040	<0.040	0.040	3267347
o-Xylene	mg/kg	<0.020	3267306	0.13	0.12	0.020	3267347
F1 (C6-C10) - BTEX	mg/kg	<12	3267306	25	24	12	3267347
LH (C5-C10)	mg/kg	<12	3267306	25	24	12	3267347
(C6-C10)	mg/kg	<12	3267306	25	24	12	3267347
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	89	3267306	98	98	N/A	3267347
D10-ETHYLBENZENE (sur.)	%	104	3267306	105	107	N/A	3267347
D4-1,2-DICHLOROETHANE (sur.)	%	108	3267306	86	89	N/A	3267347
D8-TOLUENE (sur.)	%	95	3267306	100	99	N/A	3267347
O-TERPHENYL (sur.)	%	89	3267314	96	107	N/A	3267498

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69989	P69990	P69991	P69992		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81179	81179	81179	81180		
	Units	09-350	09-351	09-352	09-353	RDL	QC Batch

Physical Properties							
Moisture	%	8.8	9.4	9.2	8.7	0.3	3267520
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	96	1000	99	170	10	3267498
F3 (C16-C34 Hydrocarbons)	mg/kg	110	390	96	140	10	3267498
F4 (C34-C50 Hydrocarbons)	mg/kg	21	37	18	21	10	3267498
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267498
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267347
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267347
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267347
Xylenes (Total)	mg/kg	<0.040	0.15	<0.040	<0.040	0.040	3267347
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267347
o-Xylene	mg/kg	<0.020	0.15	<0.020	0.032	0.020	3267347
F1 (C6-C10) - BTEX	mg/kg	<12	45	14	24	12	3267347
LH (C5-C10)	mg/kg	<12	47	17	26	12	3267347
(C6-C10)	mg/kg	<12	45	14	24	12	3267347
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	98	94	99	98	N/A	3267347
D10-ETHYLBENZENE (sur.)	%	107	106	108	108	N/A	3267347
D4-1,2-DICHLOROETHANE (sur.)	%	87	84	83	84	N/A	3267347
D8-TOLUENE (sur.)	%	100	100	102	102	N/A	3267347
O-TERPHENYL (sur.)	%	96	104	94	97	N/A	3267498
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69993	P69994	P69995	P69996		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81180	81180	81180	81180		
	Units	09-354	09-355	09-356	09-357	RDL	QC Batch

Physical Properties							
Moisture	%	8.6	9.4	9.0	9.7	0.3	3267520
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	51	88	88	200	10	3267498
F3 (C16-C34 Hydrocarbons)	mg/kg	110	140	110	170	10	3267498
F4 (C34-C50 Hydrocarbons)	mg/kg	22	34	22	31	10	3267498
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267498
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267347
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267347
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267347
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267347
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267347
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267347
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	14	12	3267347
LH (C5-C10)	mg/kg	<12	<12	<12	13	12	3267347
(C6-C10)	mg/kg	<12	<12	<12	14	12	3267347
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	97	93	100	100	N/A	3267347
D10-ETHYLBENZENE (sur.)	%	108	108	107	103	N/A	3267347
D4-1,2-DICHLOROETHANE (sur.)	%	86	89	84	85	N/A	3267347
D8-TOLUENE (sur.)	%	100	102	101	99	N/A	3267347
O-TERPHENYL (sur.)	%	105	108	94	103	N/A	3267498
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P69997	P70019	P70020	P70021		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81180	81180	81180	81180		
	Units	09-358	09-359	09-360	09-361	RDL	QC Batch

Physical Properties							
Moisture	%	8.2	8.5	6.8	9.2	0.3	3267520
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	36	46	48	310	10	3267498
F3 (C16-C34 Hydrocarbons)	mg/kg	76	110	43	150	10	3267498
F4 (C34-C50 Hydrocarbons)	mg/kg	13	22	<10	22	10	3267498
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267498
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267347
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267347
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267347
Xylenes (Total)	mg/kg	<0.040	<0.040	0.045	0.68	0.040	3267347
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267347
o-Xylene	mg/kg	<0.020	<0.020	0.045	0.68	0.020	3267347
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	45	12	3267347
LH (C5-C10)	mg/kg	<12	<12	<12	47	12	3267347
(C6-C10)	mg/kg	<12	<12	<12	46	12	3267347
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	99	100	100	95	N/A	3267347
D10-ETHYLBENZENE (sur.)	%	103	105	104	105	N/A	3267347
D4-1,2-DICHLOROETHANE (sur.)	%	85	87	85	84	N/A	3267347
D8-TOLUENE (sur.)	%	101	100	100	101	N/A	3267347
O-TERPHENYL (sur.)	%	94	94	101	93	N/A	3267498
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70022	P70023	P70024	P70025		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81180	81180	81180	81181		
	Units	09-362	09-363	09-364	09-365	RDL	QC Batch

Physical Properties							
Moisture	%	9.5	8.7	8.8	8.5	0.3	3267520
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	270	350	74	220	10	3267498
F3 (C16-C34 Hydrocarbons)	mg/kg	180	190	72	150	10	3267498
F4 (C34-C50 Hydrocarbons)	mg/kg	35	15	11	20	10	3267498
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267498
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267347
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267347
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267347
Xylenes (Total)	mg/kg	0.56	0.13	<0.040	0.15	0.040	3267347
m & p-Xylene	mg/kg	0.085	<0.040	<0.040	<0.040	0.040	3267347
o-Xylene	mg/kg	0.48	0.13	0.025	0.15	0.020	3267347
F1 (C6-C10) - BTEX	mg/kg	68	44	<12	32	12	3267347
LH (C5-C10)	mg/kg	73	47	13	34	12	3267347
(C6-C10)	mg/kg	69	44	<12	32	12	3267347
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	95	95	99	95	N/A	3267347
D10-ETHYLBENZENE (sur.)	%	105	108	106	108	N/A	3267347
D4-1,2-DICHLOROETHANE (sur.)	%	88	85	84	85	N/A	3267347
D8-TOLUENE (sur.)	%	101	102	102	101	N/A	3267347
O-TERPHENYL (sur.)	%	103	95	107	100	N/A	3267498

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70026	P70027	P70028		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		81181	81181	81181		
	Units	09-366	09-367	09-368	RDL	QC Batch

Physical Properties						
Moisture	%	7.9	9.0	9.7	0.3	3267520
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	84	810	240	10	3267498
F3 (C16-C34 Hydrocarbons)	mg/kg	84	300	180	10	3267498
F4 (C34-C50 Hydrocarbons)	mg/kg	13	46	40	10	3267498
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3267498
Volatiles						
Benzene	mg/kg	<0.0050	0.0084	0.0072	0.0050	3267347
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3267347
Ethylbenzene	mg/kg	<0.010	0.059	<0.010	0.010	3267347
Xylenes (Total)	mg/kg	<0.040	3.0	0.42	0.040	3267347
m & p-Xylene	mg/kg	<0.040	0.94	0.057	0.040	3267347
o-Xylene	mg/kg	<0.020	2.1	0.36	0.020	3267347
F1 (C6-C10) - BTEX	mg/kg	<12	140	51	12	3267347
LH (C5-C10)	mg/kg	<12	150	53	12	3267347
(C6-C10)	mg/kg	<12	140	52	12	3267347
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	95	96	N/A	3267347
D10-ETHYLBENZENE (sur.)	%	103	108	108	N/A	3267347
D4-1,2-DICHLOROETHANE (sur.)	%	87	82	82	N/A	3267347
D8-TOLUENE (sur.)	%	99	102	102	N/A	3267347
O-TERPHENYL (sur.)	%	103	109	109	N/A	3267498
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70029	P70029	P70030	P70031		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81181	81181	81181	81181		
	Units	09-369	09-369 Lab-Dup	09-370	09-371	RDL	QC Batch

Physical Properties							
Moisture	%	8.9	11	8.8	11	0.3	3267538
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	130	120	66	210	10	3267313
F3 (C16-C34 Hydrocarbons)	mg/kg	98	96	81	120	10	3267313
F4 (C34-C50 Hydrocarbons)	mg/kg	16	16	46	23	10	3267313
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267313
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267301
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267301
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267301
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.31	0.040	3267301
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267301
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.31	0.020	3267301
F1 (C6-C10) - BTEX	mg/kg	47	43	14	59	12	3267301
LH (C5-C10)	mg/kg	46	42	19	59	12	3267301
(C6-C10)	mg/kg	47	43	14	59	12	3267301
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	91	90	93	95	N/A	3267301
D10-ETHYLBENZENE (sur.)	%	107	101	101	108	N/A	3267301
D4-1,2-DICHLOROETHANE (sur.)	%	106	104	108	110	N/A	3267301
D8-TOLUENE (sur.)	%	97	98	98	97	N/A	3267301
O-TERPHENYL (sur.)	%	89	106	108	99	N/A	3267313
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70032	P70033	P70034	P70035		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81181	81181	81181	81181		
	Units	09-372	09-373	09-374	09-375	RDL	QC Batch

Physical Properties							
Moisture	%	9.8	10	9.1	7.8	0.3	3267538
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	540	75	830	<10	10	3267313
F3 (C16-C34 Hydrocarbons)	mg/kg	230	180	310	46	10	3267313
F4 (C34-C50 Hydrocarbons)	mg/kg	36	33	46	<10	10	3267313
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267313
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267301
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267301
Ethylbenzene	mg/kg	<0.010	<0.010	0.070	<0.010	0.010	3267301
Xylenes (Total)	mg/kg	0.90	<0.040	4.8	<0.040	0.040	3267301
m & p-Xylene	mg/kg	<0.040	<0.040	1.4	<0.040	0.040	3267301
o-Xylene	mg/kg	0.90	<0.020	3.4	<0.020	0.020	3267301
F1 (C6-C10) - BTEX	mg/kg	240	22	420	<12	12	3267301
LH (C5-C10)	mg/kg	240	22	420	12	12	3267301
(C6-C10)	mg/kg	240	22	420	<12	12	3267301
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	106	99	94	106	N/A	3267301
D10-ETHYLBENZENE (sur.)	%	107	99	108	97	N/A	3267301
D4-1,2-DICHLOROETHANE (sur.)	%	104	105	106	105	N/A	3267301
D8-TOLUENE (sur.)	%	96	103	95	102	N/A	3267301
O-TERPHENYL (sur.)	%	101	106	108	98	N/A	3267313
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70036	P70037	P70038	P70039		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81181	81182	81182	81182		
	Units	09-376	09-377	09-378	09-379	RDL	QC Batch

Physical Properties							
Moisture	%	9.7	9.5	9.9	9.1	0.3	3267538
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	260	650	120	170	10	3267313
F3 (C16-C34 Hydrocarbons)	mg/kg	180	250	95	150	10	3267313
F4 (C34-C50 Hydrocarbons)	mg/kg	36	41	23	27	10	3267313
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267313
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267301
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267301
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267301
Xylenes (Total)	mg/kg	<0.040	0.44	<0.040	0.076	0.040	3267301
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267301
o-Xylene	mg/kg	<0.020	0.44	<0.020	0.076	0.020	3267301
F1 (C6-C10) - BTEX	mg/kg	27	110	28	40	12	3267301
LH (C5-C10)	mg/kg	27	110	28	40	12	3267301
(C6-C10)	mg/kg	27	110	28	40	12	3267301
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	92	92	93	93	N/A	3267301
D10-ETHYLBENZENE (sur.)	%	102	110	103	103	N/A	3267301
D4-1,2-DICHLOROETHANE (sur.)	%	112	104	107	103	N/A	3267301
D8-TOLUENE (sur.)	%	97	96	100	97	N/A	3267301
O-TERPHENYL (sur.)	%	110	116	111	119	N/A	3267313
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70040	P70041	P70042	P70043		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81182	81182	81182	81182		
	Units	09-380	09-381	09-382	09-383	RDL	QC Batch

Physical Properties							
Moisture	%	9.1	10	9.6	9.3	0.3	3267538
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	510	26	140	160	10	3267313
F3 (C16-C34 Hydrocarbons)	mg/kg	250	68	68	110	10	3267313
F4 (C34-C50 Hydrocarbons)	mg/kg	33	22	<10	21	10	3267313
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267313
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267301
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267301
Ethylbenzene	mg/kg	<0.010	<0.010	0.027	<0.010	0.010	3267301
Xylenes (Total)	mg/kg	0.26	<0.040	0.37	0.13	0.040	3267301
m & p-Xylene	mg/kg	<0.040	<0.040	0.10	<0.040	0.040	3267301
o-Xylene	mg/kg	0.26	<0.020	0.27	0.13	0.020	3267301
F1 (C6-C10) - BTEX	mg/kg	59	<12	120	33	12	3267301
LH (C5-C10)	mg/kg	830	<12	120	33	12	3267301
(C6-C10)	mg/kg	59	<12	120	33	12	3267301
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	91	110	93	94	N/A	3267301
D10-ETHYLBENZENE (sur.)	%	108	101	107	109	N/A	3267301
D4-1,2-DICHLOROETHANE (sur.)	%	105	105	102	101	N/A	3267301
D8-TOLUENE (sur.)	%	98	100	100	101	N/A	3267301
O-TERPHENYL (sur.)	%	110	103	102	110	N/A	3267313
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70044	P70045	P70046	P70047		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81182	81182	81182	81182		
	Units	09-384	09-385	09-386	09-387	RDL	QC Batch

Physical Properties							
Moisture	%	8.0	8.8	8.1	9.6	0.3	3267538
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	46	11	12	66	10	3267313
F3 (C16-C34 Hydrocarbons)	mg/kg	55	41	32	84	10	3267313
F4 (C34-C50 Hydrocarbons)	mg/kg	11	<10	<10	18	10	3267313
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267313
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267301
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267301
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267301
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267301
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267301
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267301
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	3267301
LH (C5-C10)	mg/kg	<12	<12	<12	<12	12	3267301
(C6-C10)	mg/kg	<12	<12	<12	<12	12	3267301
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	91	92	89	93	N/A	3267301
D10-ETHYLBENZENE (sur.)	%	102	98	107	96	N/A	3267301
D4-1,2-DICHLOROETHANE (sur.)	%	102	104	103	105	N/A	3267301
D8-TOLUENE (sur.)	%	103	103	104	98	N/A	3267301
O-TERPHENYL (sur.)	%	107	110	112	112	N/A	3267313
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70048		P70053	P70053		
Sampling Date		2009/07/06		2009/07/06	2009/07/06		
COC Number		81182		81184	81184		
	Units	09-388	QC Batch	09-389	09-389 Lab-Dup	RDL	QC Batch

Physical Properties							
Moisture	%	8.3	3267538	9.0	9.0	0.3	3268216
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	28	3267313	14	18	10	3267316
F3 (C16-C34 Hydrocarbons)	mg/kg	46	3267313	28	42	10	3267316
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3267313	<10	<10	10	3267316
Reached Baseline at C50	mg/kg	Yes	3267313	Yes	Yes	N/A	3267316
Volatiles							
Benzene	mg/kg	<0.0050	3267301	<0.0050	<0.0050	0.0050	3267304
Toluene	mg/kg	<0.020	3267301	<0.020	<0.020	0.020	3267304
Ethylbenzene	mg/kg	<0.010	3267301	<0.010	<0.010	0.010	3267304
Xylenes (Total)	mg/kg	<0.040	3267301	<0.040	<0.040	0.040	3267304
m & p-Xylene	mg/kg	<0.040	3267301	<0.040	<0.040	0.040	3267304
o-Xylene	mg/kg	<0.020	3267301	<0.020	<0.020	0.020	3267304
F1 (C6-C10) - BTEX	mg/kg	<12	3267301	<12	<12	12	3267304
LH (C5-C10)	mg/kg	<12	3267301	<12	<12	12	3267304
(C6-C10)	mg/kg	<12	3267301	<12	<12	12	3267304
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	92	3267301	88	90	N/A	3267304
D10-ETHYLBENZENE (sur.)	%	101	3267301	100	106	N/A	3267304
D4-1,2-DICHLOROETHANE (sur.)	%	106	3267301	103	103	N/A	3267304
D8-TOLUENE (sur.)	%	101	3267301	102	105	N/A	3267304
O-TERPHENYL (sur.)	%	103	3267313	80	82	N/A	3267316
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70054	P70055	P70056	P70057		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81184	81184	81184	81184		
	Units	09-390	09-391	09-392	09-393	RDL	QC Batch

Physical Properties							
Moisture	%	8.9	8.2	9.5	9.5	0.3	3268216
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	300	1500	420	180	10	3267316
F3 (C16-C34 Hydrocarbons)	mg/kg	130	340	140	120	10	3267316
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	3267316
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267316
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267304
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267304
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	3267304
Xylenes (Total)	mg/kg	<0.040	0.18	<0.040	0.23	0.040	3267304
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	3267304
o-Xylene	mg/kg	<0.020	0.18	<0.020	0.23	0.020	3267304
F1 (C6-C10) - BTEX	mg/kg	78	430	150	53	12	3267304
LH (C5-C10)	mg/kg	77	430	150	53	12	3267304
(C6-C10)	mg/kg	78	430	150	53	12	3267304
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	90	91	102	95	N/A	3267304
D10-ETHYLBENZENE (sur.)	%	107	104	86	102	N/A	3267304
D4-1,2-DICHLOROETHANE (sur.)	%	102	105	127	106	N/A	3267304
D8-TOLUENE (sur.)	%	98	94	85	97	N/A	3267304
O-TERPHENYL (sur.)	%	95	94	92	97	N/A	3267316
N/A = Not Applicable RDL = Reportable Detection Limit							



Maxxam Job #: A934996
 Report Date: 2009/07/21

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT/LOBE P STOCKPILE
 Sampler Initials: DAS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70058	P70059	P70061	P70062		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81184	81184	81184	81184		
	Units	09-394	09-395	09-396	09-397	RDL	QC Batch

Physical Properties							
Moisture	%	10	8.8	13	13	0.3	3268216
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	590	1600	490	130	10	3267316
F3 (C16-C34 Hydrocarbons)	mg/kg	250	360	270	150	10	3267316
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	3267316
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267316
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	0.044	<0.0050	0.0050	3267304
Toluene	mg/kg	<0.020	0.31	0.27	<0.020	0.020	3267304
Ethylbenzene	mg/kg	<0.010	0.90	0.22	<0.010	0.010	3267304
Xylenes (Total)	mg/kg	1.4	15	3.0	<0.040	0.040	3267304
m & p-Xylene	mg/kg	0.52	7.0	1.8	<0.040	0.040	3267304
o-Xylene	mg/kg	0.90	7.6	1.2	<0.020	0.020	3267304
F1 (C6-C10) - BTEX	mg/kg	130	1200	330	21	12	3267304
LH (C5-C10)	mg/kg	130	1200	330	20	12	3267304
(C6-C10)	mg/kg	130	1200	330	21	12	3267304
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	105	110	110	95	N/A	3267304
D10-ETHYLBENZENE (sur.)	%	101	109	99	105	N/A	3267304
D4-1,2-DICHLOROETHANE (sur.)	%	118	101	110	101	N/A	3267304
D8-TOLUENE (sur.)	%	93	101	101	101	N/A	3267304
O-TERPHENYL (sur.)	%	99	93	91	89	N/A	3267316
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70063	P70065	P70066	P70067		
Sampling Date		2009/07/06	2009/07/06	2009/07/07	2009/07/07		
COC Number		81184	81184	81184	81185		
	Units	09-398	09-399	09-400	09-401	RDL	QC Batch

Physical Properties							
Moisture	%	12	12	12	14	0.3	3268216
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	160	320	22	440	10	3267316
F3 (C16-C34 Hydrocarbons)	mg/kg	99	220	30	180	10	3267316
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	3267316
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267316
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267304
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	3267304
Ethylbenzene	mg/kg	0.072	0.24	<0.010	<0.010	0.010	3267304
Xylenes (Total)	mg/kg	2.2	4.3	0.40	0.074	0.040	3267304
m & p-Xylene	mg/kg	1.6	3.0	0.25	<0.040	0.040	3267304
o-Xylene	mg/kg	0.64	1.3	0.14	0.074	0.020	3267304
F1 (C6-C10) - BTEX	mg/kg	90	180	16	62	12	3267304
LH (C5-C10)	mg/kg	92	180	<12	62	12	3267304
(C6-C10)	mg/kg	92	180	17	62	12	3267304
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	97	103	89	92	N/A	3267304
D10-ETHYLBENZENE (sur.)	%	107	107	106	105	N/A	3267304
D4-1,2-DICHLOROETHANE (sur.)	%	105	104	104	109	N/A	3267304
D8-TOLUENE (sur.)	%	96	96	105	96	N/A	3267304
O-TERPHENYL (sur.)	%	91	98	93	93	N/A	3267316
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70069	P70070	P70071	P70072		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81185	81185	81185	81185		
	Units	09-402	09-403	09-404	09-405	RDL	QC Batch

Physical Properties							
Moisture	%	9.8	9.7	12	11	0.3	3268216
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	760	1900	1400	1700	10	3267316
F3 (C16-C34 Hydrocarbons)	mg/kg	200	460	460	380	10	3267316
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	11	<10	<10	10	3267316
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267316
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	0.31	0.20	0.0050	3267304
Toluene	mg/kg	<0.020	<0.020	1.5	1.2	0.020	3267304
Ethylbenzene	mg/kg	2.7	<0.010	1.7	2.4	0.010	3267304
Xylenes (Total)	mg/kg	14	5.0	24	27	0.040	3267304
m & p-Xylene	mg/kg	6.0	1.8	16	16	0.040	3267304
o-Xylene	mg/kg	7.7	3.3	8.0	11	0.020	3267304
F1 (C6-C10) - BTEX	mg/kg	920	890	1000	680	12	3267304
LH (C5-C10)	mg/kg	940	890	1100	710	12	3267304
(C6-C10)	mg/kg	930	890	1100	710	12	3267304
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	106	109	105	109	N/A	3267304
D10-ETHYLBENZENE (sur.)	%	111	105	107	113	N/A	3267304
D4-1,2-DICHLOROETHANE (sur.)	%	107	109	104	104	N/A	3267304
D8-TOLUENE (sur.)	%	98	98	101	103	N/A	3267304
O-TERPHENYL (sur.)	%	93	93	95	102	N/A	3267316
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70073	P70074	P70075		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		81185	81185	81185		
	Units	09-406	09-407	09-408	RDL	QC Batch

Physical Properties						
Moisture	%	12	19	13	0.3	3268216
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	15	25	590	10	3267316
F3 (C16-C34 Hydrocarbons)	mg/kg	27	66	280	10	3267316
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3267316
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3267316
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3267304
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3267304
Ethylbenzene	mg/kg	<0.010	<0.010	0.086	0.010	3267304
Xylenes (Total)	mg/kg	<0.040	<0.040	1.9	0.040	3267304
m & p-Xylene	mg/kg	<0.040	<0.040	1.3	0.040	3267304
o-Xylene	mg/kg	<0.020	<0.020	0.61	0.020	3267304
F1 (C6-C10) - BTEX	mg/kg	<12	<12	160	12	3267304
LH (C5-C10)	mg/kg	<12	<12	160	12	3267304
(C6-C10)	mg/kg	<12	<12	160	12	3267304
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	95	89	101	N/A	3267304
D10-ETHYLBENZENE (sur.)	%	100	104	110	N/A	3267304
D4-1,2-DICHLOROETHANE (sur.)	%	103	101	105	N/A	3267304
D8-TOLUENE (sur.)	%	102	104	98	N/A	3267304
O-TERPHENYL (sur.)	%	90	90	96	N/A	3267316
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70076	P70076	P70077	P70078		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81185	81185	81185	81185		
	Units	09-409	09-409 Lab-Dup	09-410	09-411	RDL	QC Batch

Physical Properties							
Moisture	%	12	13	11	13	0.3	3267514
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	1800	2100	3000	480	10	3267648
F3 (C16-C34 Hydrocarbons)	mg/kg	400	420	650	150	10	3267648
F4 (C34-C50 Hydrocarbons)	mg/kg	13	17	20	<10	10	3267648
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267648
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267986
Toluene	mg/kg	0.31	0.20	<0.020	<0.020	0.020	3267986
Ethylbenzene	mg/kg	0.50	0.34	<0.010	<0.010	0.010	3267986
Xylenes (Total)	mg/kg	20	15	13	1.7	0.040	3267986
m & p-Xylene	mg/kg	9.9	7.1	6.1	0.92	0.040	3267986
o-Xylene	mg/kg	10	8.1	7.1	0.83	0.020	3267986
F1 (C6-C10) - BTEX	mg/kg	1300	1200	1500	240	12	3267986
LH (C5-C10)	mg/kg	1400	1300	1500	240	12	3267986
(C6-C10)	mg/kg	1400	1300	1500	240	12	3267986
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	99	98	96	113	N/A	3267986
D10-ETHYLBENZENE (sur.)	%	121	114	112	107	N/A	3267986
D4-1,2-DICHLOROETHANE (sur.)	%	105	99	102	103	N/A	3267986
D8-TOLUENE (sur.)	%	99	102	100	96	N/A	3267986
O-TERPHENYL (sur.)	%	95	111	111	104	N/A	3267648

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70079	P70080	P70081	P70082		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81185	81183	81183	81183		
	Units	09-412	09-413	09-414	09-415	RDL	QC Batch

Physical Properties							
Moisture	%	13	12	12	9.4	0.3	3267514
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	520	340	720	2300	10	3267648
F3 (C16-C34 Hydrocarbons)	mg/kg	350	180	250	550	10	3267648
F4 (C34-C50 Hydrocarbons)	mg/kg	10	11	13	22	10	3267648
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267648
Volatiles							
Benzene	mg/kg	0.065	<0.0050	<0.0050	<0.0050	0.0050	3267986
Toluene	mg/kg	0.22	0.86	<0.020	<0.020	0.020	3267986
Ethylbenzene	mg/kg	0.12	0.50	0.091	0.10	0.010	3267986
Xylenes (Total)	mg/kg	4.4	6.5	4.5	2.7	0.040	3267986
m & p-Xylene	mg/kg	3.0	4.6	2.6	0.86	0.040	3267986
o-Xylene	mg/kg	1.4	1.9	1.9	1.9	0.020	3267986
F1 (C6-C10) - BTEX	mg/kg	190	250	390	490	12	3267986
LH (C5-C10)	mg/kg	200	260	400	490	12	3267986
(C6-C10)	mg/kg	200	260	390	490	12	3267986
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	108	112	66	98	N/A	3267986
D10-ETHYLBENZENE (sur.)	%	110	116	108	115	N/A	3267986
D4-1,2-DICHLOROETHANE (sur.)	%	103	99	111	99	N/A	3267986
D8-TOLUENE (sur.)	%	102	100	98	99	N/A	3267986
O-TERPHENYL (sur.)	%	119	109	108	111	N/A	3267648
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70083	P70084	P70103	P70104		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81183	81183	81183	81183		
	Units	09-416	09-417	09-418	09-419	RDL	QC Batch

Physical Properties							
Moisture	%	9.5	11	12	13	0.3	3267514
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	2900	1200	620	1300	10	3267648
F3 (C16-C34 Hydrocarbons)	mg/kg	630	520	330	460	10	3267648
F4 (C34-C50 Hydrocarbons)	mg/kg	19	19	17	20	10	3267648
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267648
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267986
Toluene	mg/kg	0.13	<0.020	<0.020	0.18	0.020	3267986
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.19	0.010	3267986
Xylenes (Total)	mg/kg	1.6	0.74	0.50	6.7	0.040	3267986
m & p-Xylene	mg/kg	0.57	0.28	0.20	4.0	0.040	3267986
o-Xylene	mg/kg	1.0	0.46	0.30	2.7	0.020	3267986
F1 (C6-C10) - BTEX	mg/kg	1900	260	97	470	12	3267986
LH (C5-C10)	mg/kg	1900	260	100	480	12	3267986
(C6-C10)	mg/kg	1900	260	98	480	12	3267986
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	136	113	108	65	N/A	3267986
D10-ETHYLBENZENE (sur.)	%	109	108	105	112	N/A	3267986
D4-1,2-DICHLOROETHANE (sur.)	%	101	100	99	101	N/A	3267986
D8-TOLUENE (sur.)	%	100	99	97	98	N/A	3267986
O-TERPHENYL (sur.)	%	98	100	97	99	N/A	3267648
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70105		P70106		
Sampling Date		2009/07/07		2009/07/07		
COC Number		81183		81183		
	Units	09-420	QC Batch	09-421	RDL	QC Batch

Physical Properties						
Moisture	%	12	3267514	13	0.3	3267514
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1600	3267648	490	10	3267648
F3 (C16-C34 Hydrocarbons)	mg/kg	460	3267648	260	10	3267648
F4 (C34-C50 Hydrocarbons)	mg/kg	19	3267648	10	10	3267648
Reached Baseline at C50	mg/kg	Yes	3267648	Yes	N/A	3267648
Volatiles						
Benzene	mg/kg	0.11	3267986	<0.0050	0.0050	3267343
Toluene	mg/kg	0.57	3267986	0.76	0.020	3267343
Ethylbenzene	mg/kg	0.44	3267986	0.99	0.010	3267343
Xylenes (Total)	mg/kg	6.6	3267986	8.8	0.040	3267343
m & p-Xylene	mg/kg	4.1	3267986	6.0	0.040	3267343
o-Xylene	mg/kg	2.5	3267986	2.8	0.020	3267343
F1 (C6-C10) - BTEX	mg/kg	660	3267986	150	12	3267343
LH (C5-C10)	mg/kg	680	3267986	160	12	3267343
(C6-C10)	mg/kg	670	3267986	160	12	3267343
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	74	3267986	105	N/A	3267343
D10-ETHYLBENZENE (sur.)	%	121	3267986	121	N/A	3267343
D4-1,2-DICHLOROETHANE (sur.)	%	107	3267986	101	N/A	3267343
D8-TOLUENE (sur.)	%	101	3267986	98	N/A	3267343
O-TERPHENYL (sur.)	%	105	3267648	105	N/A	3267648
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70107			P70108		
Sampling Date		2009/07/07			2009/07/07		
COC Number		81183			81183		
	Units	09-422	RDL	QC Batch	09-423	RDL	QC Batch

Physical Properties							
Moisture	%	13	0.3	3267514	13	0.3	3267514
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	440	10	3267648	310	10	3267648
F3 (C16-C34 Hydrocarbons)	mg/kg	110	10	3267648	160	10	3267648
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	3267648	<10	10	3267648
Reached Baseline at C50	mg/kg	Yes	N/A	3267648	Yes	N/A	3267648
Volatiles							
Benzene	mg/kg	2.1	0.0050	3267470	0.20	0.0050	3267386
Toluene	mg/kg	67 (1)	0.20	3267470	1.4	0.020	3267386
Ethylbenzene	mg/kg	35	0.010	3267470	0.44	0.010	3267386
Xylenes (Total)	mg/kg	200	0.40	3267470	3.3	0.040	3267386
m & p-Xylene	mg/kg	140 (1)	0.40	3267470	2.4	0.040	3267386
o-Xylene	mg/kg	57	0.020	3267470	0.94	0.020	3267386
F1 (C6-C10) - BTEX	mg/kg	770	12	3267470	53	12	3267386
LH (C5-C10)	mg/kg	1100	12	3267470	68	12	3267386
(C6-C10)	mg/kg	1100	12	3267470	59	12	3267386
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	105	N/A	3267470	93	N/A	3267386
D10-ETHYLBENZENE (sur.)	%	107	N/A	3267470	106	N/A	3267386
D4-1,2-DICHLOROETHANE (sur.)	%	87	N/A	3267470	105	N/A	3267386
D8-TOLUENE (sur.)	%	106	N/A	3267470	96	N/A	3267386
O-TERPHENYL (sur.)	%	108	N/A	3267648	104	N/A	3267648

N/A = Not Applicable
 RDL = Reportable Detection Limit
 (1) Detection limits raised due to dilution to bring analyte within the calibrated range.

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P70109	P70110	P70182	P70209		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81183	81186	81186	81186		
	Units	09-424	09-425	09-432	09-433	RDL	QC Batch

Physical Properties							
Moisture	%	13	8.1	5.2	8.2	0.3	3267514
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	230	13000	<10	600	10	3267648
F3 (C16-C34 Hydrocarbons)	mg/kg	120	710	<10	<10	10	3267648
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	3267648
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3267648
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	3267386
Toluene	mg/kg	<0.020	0.060	<0.020	1.3	0.020	3267386
Ethylbenzene	mg/kg	0.032	0.045	<0.010	1.5	0.010	3267386
Xylenes (Total)	mg/kg	1.0	0.74	<0.040	40	0.040	3267386
m & p-Xylene	mg/kg	0.76	0.45	<0.040	24	0.040	3267386
o-Xylene	mg/kg	0.25	0.29	<0.020	17	0.020	3267386
F1 (C6-C10) - BTEX	mg/kg	52	110	<12	1400	12	3267386
LH (C5-C10)	mg/kg	61	110	<12	1600	12	3267386
(C6-C10)	mg/kg	53	110	<12	1400	12	3267386
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	95	88	96	112	N/A	3267386
D10-ETHYLBENZENE (sur.)	%	109	105	92	116	N/A	3267386
D4-1,2-DICHLOROETHANE (sur.)	%	104	104	105	113	N/A	3267386
D8-TOLUENE (sur.)	%	97	95	102	98	N/A	3267386
O-TERPHENYL (sur.)	%	103	102	105	97	N/A	3267648
N/A = Not Applicable RDL = Reportable Detection Limit							



Maxxam Job #: A934996
 Report Date: 2009/07/21

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT/LOBE P STOCKPILE
 Sampler Initials: DAS

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P69850	P69850	P69851	P69852	P69853		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81174	81174	81174	81174	81174		
	Units	09-270	09-270 Lab-Dup	09-271	09-272	09-273	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	2	2	2	1	3270289
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3270289
Total Chromium (Cr)	mg/kg	6	6	6	6	6	1	3270289
Total Cobalt (Co)	mg/kg	3	3	3	3	3	1	3270289
Total Copper (Cu)	mg/kg	7	6	6	6	6	5	3270289
Total Lead (Pb)	mg/kg	4	4	4	4	4	1	3270289
Total Nickel (Ni)	mg/kg	7	7	7	6	7	1	3270289
Total Zinc (Zn)	mg/kg	13	13	13	13	15	10	3270289

RDL = Reportable Detection Limit

Maxxam ID		P69854	P69855	P69856	P69857	P69858		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81174	81174	81174	81174	81174		
	Units	09-274	09-275	09-276	09-277	09-278	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	2	2	2	1	3270289
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3270289
Total Chromium (Cr)	mg/kg	6	6	6	5	5	1	3270289
Total Cobalt (Co)	mg/kg	3	3	3	3	2	1	3270289
Total Copper (Cu)	mg/kg	6	6	7	6	<5	5	3270289
Total Lead (Pb)	mg/kg	4	4	26	4	4	1	3270289
Total Nickel (Ni)	mg/kg	7	6	7	6	5	1	3270289
Total Zinc (Zn)	mg/kg	13	13	14	12	10	10	3270289

RDL = Reportable Detection Limit



Maxxam Job #: A934996
 Report Date: 2009/07/21

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT/LOBE P STOCKPILE
 Sampler Initials: DAS

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P69859	P69860	P69861	P69862	P69863		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81174	81174	81173	81173	81173		
	Units	09-279	09-280	09-281	09-282	09-283	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	3	2	2	2	1	3270289
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3270289
Total Chromium (Cr)	mg/kg	7	6	6	6	6	1	3270289
Total Cobalt (Co)	mg/kg	3	3	3	3	3	1	3270289
Total Copper (Cu)	mg/kg	7	6	6	6	6	5	3270289
Total Lead (Pb)	mg/kg	4	4	4	7	4	1	3270289
Total Nickel (Ni)	mg/kg	7	7	6	7	7	1	3270289
Total Zinc (Zn)	mg/kg	15	13	13	13	12	10	3270289

RDL = Reportable Detection Limit

Maxxam ID		P69864	P69865		P69866	P69866		
Sampling Date		2009/07/05	2009/07/05		2009/07/05	2009/07/05		
COC Number		81173	81173		81173	81173		
	Units	09-284	09-285	QC Batch	09-286	09-286 Lab-Dup	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	3270289	2	2	1	3268810
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	3270289	<0.1	<0.1	0.1	3268810
Total Chromium (Cr)	mg/kg	6	7	3270289	6	6	1	3268810
Total Cobalt (Co)	mg/kg	3	3	3270289	3	3	1	3268810
Total Copper (Cu)	mg/kg	6	7	3270289	7	7	5	3268810
Total Lead (Pb)	mg/kg	5	4	3270289	3	3	1	3268810
Total Nickel (Ni)	mg/kg	6	7	3270289	7	7	1	3268810
Total Zinc (Zn)	mg/kg	12	12	3270289	12	12	10	3268810

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P69867	P69868		P69869	P69869		
Sampling Date		2009/07/05	2009/07/05		2009/07/05	2009/07/05		
COC Number		81173	81173		81173	81173		
	Units	09-287	09-288	QC Batch	09-289	09-289 Lab-Dup	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	3268810	2	2	1	3270229
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	3268810	<0.1	<0.1	0.1	3270229
Total Chromium (Cr)	mg/kg	6	7	3268810	7	6	1	3270229
Total Cobalt (Co)	mg/kg	3	3	3268810	3	3	1	3270229
Total Copper (Cu)	mg/kg	6	7	3268810	7	7	5	3270229
Total Lead (Pb)	mg/kg	3	4	3268810	7	7	1	3270229
Total Nickel (Ni)	mg/kg	7	7	3268810	8	8	1	3270229
Total Zinc (Zn)	mg/kg	11	12	3268810	14	14	10	3270229

RDL = Reportable Detection Limit

Maxxam ID		P69870	P69871	P69872	P69873	P69874		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05	2009/07/06		
COC Number		81173	81173	81173	81175	81175		
	Units	09-290	09-291	09-292	09-293	09-294	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	2	2	2	1	3270229
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3270229
Total Chromium (Cr)	mg/kg	6	6	6	6	6	1	3270229
Total Cobalt (Co)	mg/kg	3	3	3	3	3	1	3270229
Total Copper (Cu)	mg/kg	8	7	6	6	6	5	3270229
Total Lead (Pb)	mg/kg	5	4	9	4	3	1	3270229
Total Nickel (Ni)	mg/kg	7	7	7	7	6	1	3270229
Total Zinc (Zn)	mg/kg	13	12	13	13	12	10	3270229

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P69875	P69875		P69876	P69877		
Sampling Date		2009/07/06	2009/07/06		2009/07/06	2009/07/06		
COC Number		81175	81175		81175	81175		
	Units	09-295	09-295 Lab-Dup	QC Batch	09-296	09-297	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	3	3	3274308	2	2	1	3270229
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	3274308	0.1	<0.1	0.1	3270229
Total Chromium (Cr)	mg/kg	7	7	3274308	6	6	1	3270229
Total Cobalt (Co)	mg/kg	3	4	3274308	3	3	1	3270229
Total Copper (Cu)	mg/kg	9	9	3274308	7	7	5	3270229
Total Lead (Pb)	mg/kg	4	4	3274308	4	24	1	3270229
Total Nickel (Ni)	mg/kg	8	8	3274308	7	7	1	3270229
Total Zinc (Zn)	mg/kg	15	15	3274308	14	13	10	3270229

RDL = Reportable Detection Limit

Maxxam ID		P69878		P69918	P69928	P69929		
Sampling Date		2009/07/06		2009/07/06	2009/07/06	2009/07/06		
COC Number		81175		81175	81175	81175		
	Units	09-298	QC Batch	09-299	09-300	09-301	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	3	3271409	2	3	2	1	3270289
Total Cadmium (Cd)	mg/kg	<0.1	3271409	<0.1	<0.1	<0.1	0.1	3270289
Total Chromium (Cr)	mg/kg	7	3271409	6	7	6	1	3270289
Total Cobalt (Co)	mg/kg	3	3271409	3	4	3	1	3270289
Total Copper (Cu)	mg/kg	7	3271409	6	7	6	5	3270289
Total Lead (Pb)	mg/kg	7	3271409	6	9	4	1	3270289
Total Nickel (Ni)	mg/kg	7	3271409	7	8	7	1	3270289
Total Zinc (Zn)	mg/kg	14	3271409	12	15	13	10	3270289

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P69930	P69931	P69932	P69933		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81175	81175	81175	81176		
	Units	09-302	09-303	09-304	09-305	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	2	2	3	2	1	3270229
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1	3270229
Total Chromium (Cr)	mg/kg	6	7	6	6	1	3270229
Total Cobalt (Co)	mg/kg	3	3	3	3	1	3270229
Total Copper (Cu)	mg/kg	7	6	7	7	5	3270229
Total Lead (Pb)	mg/kg	5	5	4	4	1	3270229
Total Nickel (Ni)	mg/kg	7	7	7	7	1	3270229
Total Zinc (Zn)	mg/kg	13	12	15	13	10	3270229

RDL = Reportable Detection Limit

Maxxam ID		P69934	P69935	P69936	P69937		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81176	81176	81176	81176		
	Units	09-306	09-307	09-308	09-309	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	2	2	3	3	1	3268810
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1	3268810
Total Chromium (Cr)	mg/kg	6	7	7	7	1	3268810
Total Cobalt (Co)	mg/kg	3	3	3	3	1	3268810
Total Copper (Cu)	mg/kg	6	6	7	6	5	3268810
Total Lead (Pb)	mg/kg	21	4	5	4	1	3268810
Total Nickel (Ni)	mg/kg	7	7	8	7	1	3268810
Total Zinc (Zn)	mg/kg	12	12	14	13	10	3268810

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P69938	P69938	P69939	P69940	P69941		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81176	81176	81176	81176	81176		
	Units	09-310	09-310 Lab-Dup	09-311	09-312	09-313	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	2	5	2	1	3271553
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3271553
Total Chromium (Cr)	mg/kg	6	6	13	8	6	1	3271553
Total Cobalt (Co)	mg/kg	3	3	3	4	3	1	3271553
Total Copper (Cu)	mg/kg	6	6	7	8	6	5	3271553
Total Lead (Pb)	mg/kg	4	4	4	5	4	1	3271553
Total Nickel (Ni)	mg/kg	7	7	10	9	6	1	3271553
Total Zinc (Zn)	mg/kg	12	12	13	15	12	10	3271553

RDL = Reportable Detection Limit

Maxxam ID		P69942	P69943	P69944	P69945	P69946		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81176	81176	81176	81177	81177		
	Units	09-314	09-315	09-316	09-317	09-318	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	2	2	2	1	3270229
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3270229
Total Chromium (Cr)	mg/kg	6	6	5	6	7	1	3270229
Total Cobalt (Co)	mg/kg	3	3	3	3	3	1	3270229
Total Copper (Cu)	mg/kg	6	6	6	8	7	5	3270229
Total Lead (Pb)	mg/kg	4	4	4	4	4	1	3270229
Total Nickel (Ni)	mg/kg	7	7	6	7	7	1	3270229
Total Zinc (Zn)	mg/kg	13	12	13	13	13	10	3270229

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P69947	P69948	P69949		P69950		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		2009/07/06		
COC Number		81177	81177	81177		81177		
	Units	09-319	09-320	09-321	QC Batch	09-322	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	2	3270229	2	1	3271553
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	3270229	<0.1	0.1	3271553
Total Chromium (Cr)	mg/kg	6	7	6	3270229	6	1	3271553
Total Cobalt (Co)	mg/kg	3	3	3	3270229	3	1	3271553
Total Copper (Cu)	mg/kg	6	6	6	3270229	7	5	3271553
Total Lead (Pb)	mg/kg	5	5	4	3270229	4	1	3271553
Total Nickel (Ni)	mg/kg	7	7	7	3270229	7	1	3271553
Total Zinc (Zn)	mg/kg	12	13	13	3270229	12	10	3271553

RDL = Reportable Detection Limit

Maxxam ID		P69951	P69952		P69953	P69954		
Sampling Date		2009/07/06	2009/07/06		2009/07/06	2009/07/06		
COC Number		81177	81177		81177	81177		
	Units	09-323	09-324	QC Batch	09-325	09-326	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	3	3271553	3	3	1	3271409
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	3271553	<0.1	<0.1	0.1	3271409
Total Chromium (Cr)	mg/kg	6	7	3271553	9	7	1	3271409
Total Cobalt (Co)	mg/kg	3	3	3271553	4	4	1	3271409
Total Copper (Cu)	mg/kg	6	6	3271553	7	8	5	3271409
Total Lead (Pb)	mg/kg	4	4	3271553	20	5	1	3271409
Total Nickel (Ni)	mg/kg	7	8	3271553	8	8	1	3271409
Total Zinc (Zn)	mg/kg	12	14	3271553	15	14	10	3271409

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P69955	P69956		P69966	P69966		
Sampling Date		2009/07/06	2009/07/06		2009/07/06	2009/07/06		
COC Number		81177	81177		81178	81178		
	Units	09-327	09-328	QC Batch	09-329	09-329 Lab-Dup	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	3	3271409	3	3	1	3268593
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	3271409	<0.1	<0.1	0.1	3268593
Total Chromium (Cr)	mg/kg	7	7	3271409	8	8	1	3268593
Total Cobalt (Co)	mg/kg	3	3	3271409	4	4	1	3268593
Total Copper (Cu)	mg/kg	7	7	3271409	7	7	5	3268593
Total Lead (Pb)	mg/kg	4	4	3271409	4	4	1	3268593
Total Nickel (Ni)	mg/kg	8	8	3271409	8	8	1	3268593
Total Zinc (Zn)	mg/kg	13	14	3271409	14	14	10	3268593

RDL = Reportable Detection Limit

Maxxam ID		P69969	P69970	P69971	P69972	P69973		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81178	81178	81178	81178	81178		
	Units	09-330	09-331	09-332	09-333	09-334	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	3	2	2	2	2	1	3268593
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3268593
Total Chromium (Cr)	mg/kg	6	7	6	6	5	1	3268593
Total Cobalt (Co)	mg/kg	3	3	3	4	3	1	3268593
Total Copper (Cu)	mg/kg	7	6	7	7	5	5	3268593
Total Lead (Pb)	mg/kg	3	3	3	3	3	1	3268593
Total Nickel (Ni)	mg/kg	7	7	7	8	6	1	3268593
Total Zinc (Zn)	mg/kg	13	13	13	13	18	10	3268593

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P69974	P69975	P69976	P69977	P69978		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81178	81178	81178	81178	81178		
	Units	09-335	09-336	09-337	09-338	09-339	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	3	2	3	1	3268593
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3268593
Total Chromium (Cr)	mg/kg	6	6	5	6	7	1	3268593
Total Cobalt (Co)	mg/kg	3	3	3	3	3	1	3268593
Total Copper (Cu)	mg/kg	6	7	6	6	7	5	3268593
Total Lead (Pb)	mg/kg	3	3	3	3	4	1	3268593
Total Nickel (Ni)	mg/kg	7	7	6	7	8	1	3268593
Total Zinc (Zn)	mg/kg	13	13	12	12	14	10	3268593

RDL = Reportable Detection Limit

Maxxam ID		P69979	P69980	P69981	P69982	P69983		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81178	81179	81179	81179	81179		
	Units	09-340	09-341	09-342	09-343	09-344	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	3	2	3	3	2	1	3268593
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3268593
Total Chromium (Cr)	mg/kg	6	6	6	6	6	1	3268593
Total Cobalt (Co)	mg/kg	3	3	4	3	3	1	3268593
Total Copper (Cu)	mg/kg	7	6	6	6	6	5	3268593
Total Lead (Pb)	mg/kg	4	3	3	3	3	1	3268593
Total Nickel (Ni)	mg/kg	7	7	8	7	7	1	3268593
Total Zinc (Zn)	mg/kg	13	13	13	13	12	10	3268593

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P69984	P69985	P69986	P69987		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81179	81179	81179	81179		
	Units	09-345	09-346	09-347	09-348	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	2	2	3	2	1	3268593
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1	3268593
Total Chromium (Cr)	mg/kg	7	7	6	6	1	3268593
Total Cobalt (Co)	mg/kg	3	3	3	3	1	3268593
Total Copper (Cu)	mg/kg	6	7	7	6	5	3268593
Total Lead (Pb)	mg/kg	3	3	3	3	1	3268593
Total Nickel (Ni)	mg/kg	7	7	7	7	1	3268593
Total Zinc (Zn)	mg/kg	11	12	12	11	10	3268593
RDL = Reportable Detection Limit							

Maxxam ID		P69988	P69989	P69990	P69991	P69992		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81179	81179	81179	81179	81180		
	Units	09-349	09-350	09-351	09-352	09-353	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	2	2	2	3	2	3268810
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	3268810
Total Chromium (Cr)	mg/kg	7	7	6	6	6	3268810
Total Cobalt (Co)	mg/kg	3	3	3	3	3	3268810
Total Copper (Cu)	mg/kg	7	8	6	11	7	3268810
Total Lead (Pb)	mg/kg	3	3	3	4	3	3268810
Total Nickel (Ni)	mg/kg	7	8	7	7	7	3268810
Total Zinc (Zn)	mg/kg	12	12	12	13	12	3268810
RDL = Reportable Detection Limit							

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P69993	P69994	P69995	P69996	P69997		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81180	81180	81180	81180	81180		
	Units	09-354	09-355	09-356	09-357	09-358	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	3	3	3	3	3	1	3268810
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3268810
Total Chromium (Cr)	mg/kg	6	7	6	7	6	1	3268810
Total Cobalt (Co)	mg/kg	4	3	3	4	4	1	3268810
Total Copper (Cu)	mg/kg	7	9	6	7	7	5	3268810
Total Lead (Pb)	mg/kg	3	4	3	3	3	1	3268810
Total Nickel (Ni)	mg/kg	8	8	7	8	8	1	3268810
Total Zinc (Zn)	mg/kg	13	15	12	13	13	10	3268810

RDL = Reportable Detection Limit

Maxxam ID		P70019	P70020	P70021		P70022		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		2009/07/06		
COC Number		81180	81180	81180		81180		
	Units	09-359	09-360	09-361	QC Batch	09-362	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	3	3	2	3268810	2	1	3271409
Total Cadmium (Cd)	mg/kg	0.1	<0.1	<0.1	3268810	<0.1	0.1	3271409
Total Chromium (Cr)	mg/kg	6	6	5	3268810	6	1	3271409
Total Cobalt (Co)	mg/kg	4	3	3	3268810	3	1	3271409
Total Copper (Cu)	mg/kg	7	8	6	3268810	7	5	3271409
Total Lead (Pb)	mg/kg	3	3	3	3268810	4	1	3271409
Total Nickel (Ni)	mg/kg	9	7	6	3268810	7	1	3271409
Total Zinc (Zn)	mg/kg	14	11	10	3268810	14	10	3271409

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P70023	P70024	P70025	P70026	P70027		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81180	81180	81181	81181	81181		
	Units	09-363	09-364	09-365	09-366	09-367	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	3	2	2	2	3	1	3271409
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1	0.1	3271409
Total Chromium (Cr)	mg/kg	6	6	6	6	7	1	3271409
Total Cobalt (Co)	mg/kg	3	3	3	3	4	1	3271409
Total Copper (Cu)	mg/kg	7	7	6	7	9	5	3271409
Total Lead (Pb)	mg/kg	3	3	3	3	4	1	3271409
Total Nickel (Ni)	mg/kg	7	7	7	7	10	1	3271409
Total Zinc (Zn)	mg/kg	12	12	13	13	16	10	3271409

RDL = Reportable Detection Limit

Maxxam ID		P70028	P70029	P70030		P70031		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		2009/07/06		
COC Number		81181	81181	81181		81181		
	Units	09-368	09-369	09-370	QC Batch	09-371	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	5	2	3271409	2	1	3268318
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	3271409	<0.1	0.1	3268318
Total Chromium (Cr)	mg/kg	6	7	6	3271409	8	1	3268318
Total Cobalt (Co)	mg/kg	3	4	3	3271409	3	1	3268318
Total Copper (Cu)	mg/kg	6	9	6	3271409	6	5	3268318
Total Lead (Pb)	mg/kg	3	4	3	3271409	4	1	3268318
Total Nickel (Ni)	mg/kg	7	8	7	3271409	7	1	3268318
Total Zinc (Zn)	mg/kg	13	13	12	3271409	13	10	3268318

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P70032	P70033	P70034	P70035		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81181	81181	81181	81181		
	Units	09-372	09-373	09-374	09-375	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	2	3	2	3	1	3268318
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1	3268318
Total Chromium (Cr)	mg/kg	6	6	7	6	1	3268318
Total Cobalt (Co)	mg/kg	3	4	3	3	1	3268318
Total Copper (Cu)	mg/kg	12	8	7	9	5	3268318
Total Lead (Pb)	mg/kg	4	3	5	6	1	3268318
Total Nickel (Ni)	mg/kg	7	8	7	7	1	3268318
Total Zinc (Zn)	mg/kg	13	13	14	13	10	3268318
RDL = Reportable Detection Limit							

Maxxam ID		P70036		P70037	P70037	P70038		
Sampling Date		2009/07/06		2009/07/06	2009/07/06	2009/07/06		
COC Number		81181		81182	81182	81182		
	Units	09-376	QC Batch	09-377	09-377	09-378	RDL	QC Batch
					Lab-Dup			

Elements							
Total Arsenic (As)	mg/kg	2	3271553	3	3	2	3271114
Total Cadmium (Cd)	mg/kg	<0.1	3271553	<0.1	<0.1	<0.1	3271114
Total Chromium (Cr)	mg/kg	6	3271553	7	7	5	3271114
Total Cobalt (Co)	mg/kg	3	3271553	4	4	3	3271114
Total Copper (Cu)	mg/kg	6	3271553	7	7	6	3271114
Total Lead (Pb)	mg/kg	4	3271553	4	4	3	3271114
Total Nickel (Ni)	mg/kg	7	3271553	8	8	6	3271114
Total Zinc (Zn)	mg/kg	12	3271553	14	14	11	3271114
RDL = Reportable Detection Limit							



Maxxam Job #: A934996
 Report Date: 2009/07/21

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT/LOBE P STOCKPILE
 Sampler Initials: DAS

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P70039	P70040	P70041	P70042	P70043		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81182	81182	81182	81182	81182		
	Units	09-379	09-380	09-381	09-382	09-383	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	3	2	2	2	1	3271114
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3271114
Total Chromium (Cr)	mg/kg	5	5	5	6	5	1	3271114
Total Cobalt (Co)	mg/kg	3	3	3	3	3	1	3271114
Total Copper (Cu)	mg/kg	6	7	6	7	6	5	3271114
Total Lead (Pb)	mg/kg	3	4	3	3	3	1	3271114
Total Nickel (Ni)	mg/kg	6	7	7	7	7	1	3271114
Total Zinc (Zn)	mg/kg	11	12	12	12	12	10	3271114

RDL = Reportable Detection Limit

Maxxam ID		P70044	P70045	P70046	P70047	P70048		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81182	81182	81182	81182	81182		
	Units	09-384	09-385	09-386	09-387	09-388	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	2	2	2	1	3271114
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3271114
Total Chromium (Cr)	mg/kg	5	5	6	4	5	1	3271114
Total Cobalt (Co)	mg/kg	3	3	3	3	3	1	3271114
Total Copper (Cu)	mg/kg	6	7	7	6	7	5	3271114
Total Lead (Pb)	mg/kg	3	3	3	3	3	1	3271114
Total Nickel (Ni)	mg/kg	6	6	7	6	6	1	3271114
Total Zinc (Zn)	mg/kg	11	11	11	11	11	10	3271114

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P70053	P70054	P70055	P70056	P70057		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81184	81184	81184	81184	81184		
	Units	09-389	09-390	09-391	09-392	09-393	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	2	3	2	1	3271114
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3271114
Total Chromium (Cr)	mg/kg	5	7	6	6	5	1	3271114
Total Cobalt (Co)	mg/kg	3	3	3	3	3	1	3271114
Total Copper (Cu)	mg/kg	7	6	8	7	7	5	3271114
Total Lead (Pb)	mg/kg	3	4	4	3	12	1	3271114
Total Nickel (Ni)	mg/kg	6	6	7	7	7	1	3271114
Total Zinc (Zn)	mg/kg	12	11	12	12	12	10	3271114

RDL = Reportable Detection Limit

Maxxam ID		P70058	P70059	P70061		P70062		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		2009/07/06		
COC Number		81184	81184	81184		81184		
	Units	09-394	09-395	09-396	QC Batch	09-397	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	2	3271114	2	1	3271553
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	3271114	<0.1	0.1	3271553
Total Chromium (Cr)	mg/kg	6	5	6	3271114	7	1	3271553
Total Cobalt (Co)	mg/kg	3	3	4	3271114	3	1	3271553
Total Copper (Cu)	mg/kg	6	7	7	3271114	6	5	3271553
Total Lead (Pb)	mg/kg	4	4	5	3271114	4	1	3271553
Total Nickel (Ni)	mg/kg	7	7	7	3271114	7	1	3271553
Total Zinc (Zn)	mg/kg	14	14	16	3271114	14	10	3271553

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P70063	P70065	P70066	P70067	P70069		
Sampling Date		2009/07/06	2009/07/06	2009/07/07	2009/07/07	2009/07/07		
COC Number		81184	81184	81184	81185	81185		
	Units	09-398	09-399	09-400	09-401	09-402	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	3	3	3	2	3	1	3271553
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3271553
Total Chromium (Cr)	mg/kg	8	7	7	6	7	1	3271553
Total Cobalt (Co)	mg/kg	4	3	4	3	3	1	3271553
Total Copper (Cu)	mg/kg	6	6	7	7	9	5	3271553
Total Lead (Pb)	mg/kg	4	4	4	5	3	1	3271553
Total Nickel (Ni)	mg/kg	8	8	8	7	7	1	3271553
Total Zinc (Zn)	mg/kg	14	14	14	12	12	10	3271553

RDL = Reportable Detection Limit

Maxxam ID		P70070	P70071	P70072	P70073	P70074		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81185	81185	81185	81185	81185		
	Units	09-403	09-404	09-405	09-406	09-407	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	3	3	2	4	2	1	3271553
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3271553
Total Chromium (Cr)	mg/kg	7	7	6	7	6	1	3271553
Total Cobalt (Co)	mg/kg	3	3	3	4	3	1	3271553
Total Copper (Cu)	mg/kg	6	6	5	7	6	5	3271553
Total Lead (Pb)	mg/kg	4	5	3	4	4	1	3271553
Total Nickel (Ni)	mg/kg	7	8	6	8	7	1	3271553
Total Zinc (Zn)	mg/kg	13	13	11	15	13	10	3271553

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P70075		P70076	P70076	P70077		
Sampling Date		2009/07/07		2009/07/07	2009/07/07	2009/07/07		
COC Number		81185		81185	81185	81185		
	Units	09-408	QC Batch	09-409	09-409	09-410	RDL	QC Batch
					Lab-Dup			

Elements								
Total Arsenic (As)	mg/kg	3	3271553	3	3	3	1	3269018
Total Cadmium (Cd)	mg/kg	<0.1	3271553	<0.1	<0.1	<0.1	0.1	3269018
Total Chromium (Cr)	mg/kg	7	3271553	9	9	10	1	3269018
Total Cobalt (Co)	mg/kg	3	3271553	4	4	4	1	3269018
Total Copper (Cu)	mg/kg	6	3271553	8	7	8	5	3269018
Total Lead (Pb)	mg/kg	5	3271553	5	5	5	1	3269018
Total Nickel (Ni)	mg/kg	8	3271553	9	9	9	1	3269018
Total Zinc (Zn)	mg/kg	13	3271553	17	16	15	10	3269018

RDL = Reportable Detection Limit

Maxxam ID		P70078	P70079	P70080	P70081	P70082		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81185	81185	81183	81183	81183		
	Units	09-411	09-412	09-413	09-414	09-415	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	3	2	3	3	2	1	3269018
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3269018
Total Chromium (Cr)	mg/kg	12	8	8	8	7	1	3269018
Total Cobalt (Co)	mg/kg	5	3	4	4	3	1	3269018
Total Copper (Cu)	mg/kg	9	7	7	8	6	5	3269018
Total Lead (Pb)	mg/kg	5	5	4	5	4	1	3269018
Total Nickel (Ni)	mg/kg	11	8	8	9	7	1	3269018
Total Zinc (Zn)	mg/kg	18	14	15	17	13	10	3269018

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P70083	P70084	P70103	P70104	P70105		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81183	81183	81183	81183	81183		
	Units	09-416	09-417	09-418	09-419	09-420	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	2	2	2	2	1	3269018
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3269018
Total Chromium (Cr)	mg/kg	8	7	11	7	8	1	3269018
Total Cobalt (Co)	mg/kg	3	3	3	3	4	1	3269018
Total Copper (Cu)	mg/kg	7	6	7	7	7	5	3269018
Total Lead (Pb)	mg/kg	4	4	5	5	5	1	3269018
Total Nickel (Ni)	mg/kg	7	8	9	7	8	1	3269018
Total Zinc (Zn)	mg/kg	12	14	14	15	17	10	3269018

RDL = Reportable Detection Limit

Maxxam ID		P70106	P70107	P70108	P70109	P70110		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81183	81183	81183	81183	81186		
	Units	09-421	09-422	09-423	09-424	09-425	RDL	QC Batch

Elements								
Total Arsenic (As)	mg/kg	2	3	3	3	3	1	3269018
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3269018
Total Chromium (Cr)	mg/kg	6	7	7	7	5	1	3269018
Total Cobalt (Co)	mg/kg	3	4	3	3	2	1	3269018
Total Copper (Cu)	mg/kg	5	6	7	7	8	5	3269018
Total Lead (Pb)	mg/kg	4	4	4	4	2	1	3269018
Total Nickel (Ni)	mg/kg	7	8	8	8	6	1	3269018
Total Zinc (Zn)	mg/kg	13	14	14	13	21	10	3269018

RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P69850	P69850	P69851	P69852		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81174	81174	81174	81174		
	Units	09-270	09-270 Lab-Dup	09-271	09-272	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	1340	934	685	1010	10	3267508
Total hydrocarbons C5-C30	mg/kg	1520	N/A	748	1130	20	3263047
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	84	82	99	106	N/A	3267508
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69853	P69854	P69855	P69856		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81174	81174	81174	81174		
	Units	09-273	09-274	09-275	09-276	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	955	2070	618	799	10	3267508
Total hydrocarbons C5-C30	mg/kg	1010	2100	683	1030	20	3263047
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	106	105	103	103	N/A	3267508
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69857	P69858	P69859	P69860		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81174	81174	81174	81174		
	Units	09-277	09-278	09-279	09-280	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	977	264	416	667	10	3267508
Total hydrocarbons C5-C30	mg/kg	1030	281	477	732	20	3263047
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	97	105	108	103	N/A	3267508
N/A = Not Applicable RDL = Reportable Detection Limit							



Maxxam Job #: A934996
 Report Date: 2009/07/21

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT/LOBE P STOCKPILE
 Sampler Initials: DAS

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P69861	P69862	P69863	P69864		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81173	81173	81173	81173		
	Units	09-281	09-282	09-283	09-284	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	593	1190	1110	530	10	3267508
Total hydrocarbons C5-C30	mg/kg	645	1260	1260	639	20	3263047
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	105	103	102	106	N/A	3267508
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69865	P69866	P69867	P69868		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81173	81173	81173	81173		
	Units	09-285	09-286	09-287	09-288	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	591	246	310	334	10	3267508
Total hydrocarbons C5-C30	mg/kg	629	281	351	413	20	3263047
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	106	101	104	106	N/A	3267508
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69869	P69869	P69870	P69871		
Sampling Date		2009/07/05	2009/07/05	2009/07/05	2009/07/05		
COC Number		81173	81173	81173	81173		
	Units	09-289	09-289 Lab-Dup	09-290	09-291	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	1270	1540	429	222	10	3267325
Total hydrocarbons C5-C30	mg/kg	1460	N/A	555	263	20	3263047
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	94	102	96	96	N/A	3267325
N/A = Not Applicable RDL = Reportable Detection Limit							

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P69872	P69873	P69874		
Sampling Date		2009/07/05	2009/07/05	2009/07/06		
COC Number		81173	81175	81175		
	Units	09-292	09-293	09-294	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	420	463	450	10	3267325
Total hydrocarbons C5-C30	mg/kg	520	561	621	20	3266682
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	103	102	101	N/A	3267325
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P69875		P69876	P69877		
Sampling Date		2009/07/06		2009/07/06	2009/07/06		
COC Number		81175		81175	81175		
	Units	09-295	QC Batch	09-296	09-297	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	1680	3267930	1030	509	10	3267325
Total hydrocarbons C5-C30	mg/kg	1820	3266682	1160	587	20	3266682
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	109	3267930	93	104	N/A	3267325
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69878	P69918	P69928	P69929		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81175	81175	81175	81175		
	Units	09-298	09-299	09-300	09-301	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	358	734	514	432	10	3267325
Total hydrocarbons C5-C30	mg/kg	451	874	618	507	20	3266682
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	106	104	105	103	N/A	3267325
N/A = Not Applicable RDL = Reportable Detection Limit							

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P69930	P69931	P69932	P69933		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81175	81175	81175	81176		
	Units	09-302	09-303	09-304	09-305	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	432	280	355	259	10	3267325
Total hydrocarbons C5-C30	mg/kg	454	335	388	286	20	3266682
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	102	92	98	92	N/A	3267325
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69934	P69935	P69936		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		81176	81176	81176		
	Units	09-306	09-307	09-308	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	431	588	731	10	3267325	
Total hydrocarbons C5-C30	mg/kg	491	613	924	20	3266682	
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	94	90	98	N/A	3267325	
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69937	P69937	P69938	P69939		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81176	81176	81176	81176		
	Units	09-309	09-309 Lab-Dup	09-310	09-311	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	288	307	1150	645	10	3267329
Total hydrocarbons C5-C30	mg/kg	323	N/A	1170	688	20	3266682
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	69	77	92	94	N/A	3267329
N/A = Not Applicable RDL = Reportable Detection Limit							

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P69940	P69941	P69942	P69943		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81176	81176	81176	81176		
	Units	09-312	09-313	09-314	09-315	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	436	520	424	310	10	3267329
Total hydrocarbons C5-C30	mg/kg	471	567	503	326	20	3266682
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	93	98	89	92	N/A	3267329
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69944	P69945	P69946	P69947		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81176	81177	81177	81177		
	Units	09-316	09-317	09-318	09-319	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	403	454	431	290	10	3267329
Total hydrocarbons C5-C30	mg/kg	430	492	568	376	20	3266682
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	100	96	91	89	N/A	3267329
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69948	P69949		P69950		
Sampling Date		2009/07/06	2009/07/06		2009/07/06		
COC Number		81177	81177		81177		
	Units	09-320	09-321	QC Batch	09-322	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	530	644	3267329	340	10	3267329
Total hydrocarbons C5-C30	mg/kg	836	744	3266682	403	20	3266689
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	93	97	3267329	90	N/A	3267329
N/A = Not Applicable RDL = Reportable Detection Limit							

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P69951	P69952	P69953	P69954		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81177	81177	81177	81177		
	Units	09-323	09-324	09-325	09-326	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	472	431	444	257	10	3267329
Total hydrocarbons C5-C30	mg/kg	650	528	524	374	20	3266689
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	96	98	91	91	N/A	3267329
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69955	P69956		P69966		
Sampling Date		2009/07/06	2009/07/06		2009/07/06		
COC Number		81177	81177		81178		
	Units	09-327	09-328	QC Batch	09-329	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	339	200	3267329	348	10	3267327
Total hydrocarbons C5-C30	mg/kg	467	228	3266689	404	20	3266689
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	90	93	3267329	87	N/A	3267327
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69966	P69969	P69970	P69971		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81178	81178	81178	81178		
	Units	09-329	09-330	09-331	09-332	RDL	QC Batch
		Lab-Dup					

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	311	259	66	184	10	3267327
Total hydrocarbons C5-C30	mg/kg	N/A	275	66	184	20	3266689
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	90	88	91	99	N/A	3267327
N/A = Not Applicable RDL = Reportable Detection Limit							

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P69972	P69973	P69974	P69975		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81178	81178	81178	81178		
	Units	09-333	09-334	09-335	09-336	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	332	424	286	176	10	3267327
Total hydrocarbons C5-C30	mg/kg	352	438	286	177	20	3266689
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	96	93	97	94	N/A	3267327
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69976	P69977	P69978	P69979		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81178	81178	81178	81178		
	Units	09-337	09-338	09-339	09-340	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	124	228	529	283	10	3267327
Total hydrocarbons C5-C30	mg/kg	124	228	576	283	20	3266689
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	90	96	96	90	N/A	3267327
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69980	P69981	P69982	P69983		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81179	81179	81179	81179		
	Units	09-341	09-342	09-343	09-344	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	264	137	111	126	10	3267327
Total hydrocarbons C5-C30	mg/kg	277	137	111	126	20	3266689
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	95	95	89	91	N/A	3267327
N/A = Not Applicable RDL = Reportable Detection Limit							

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P69984	P69985	P69986	P69987		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81179	81179	81179	81179		
	Units	09-345	09-346	09-347	09-348	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	51	87	113	69	10	3267327
Total hydrocarbons C5-C30	mg/kg	51	87	113	69	20	3266689
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	92	90	93	89	N/A	3267327
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69988	P69988	P69989	P69990		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81179	81179	81179	81179		
	Units	09-349	09-349 Lab-Dup	09-350	09-351	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	368	349	180	1320	10	3267499
Total hydrocarbons C5-C30	mg/kg	393	N/A	180	1370	20	3266689
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	96	107	96	104	N/A	3267499
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P69991	P69992	P69993	P69994		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81179	81180	81180	81180		
	Units	09-352	09-353	09-354	09-355	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	171	288	138	201	10	3267499
Total hydrocarbons C5-C30	mg/kg	188	314	138	201	20	3266691
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	94	98	105	108	N/A	3267499
N/A = Not Applicable RDL = Reportable Detection Limit							

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P69995	P69996	P69997	P70019		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81180	81180	81180	81180		
	Units	09-356	09-357	09-358	09-359	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	173	335	93	127	10	3267499
Total hydrocarbons C5-C30	mg/kg	173	348	93	127	20	3266691
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	94	103	94	94	N/A	3267499
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70020	P70021	P70022	P70023		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81180	81180	81180	81180		
	Units	09-360	09-361	09-362	09-363	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	73	433	406	503	10	3267499
Total hydrocarbons C5-C30	mg/kg	73	480	479	550	20	3266691
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	101	93	103	95	N/A	3267499
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70024	P70025	P70026	P70027		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81180	81181	81181	81181		
	Units	09-364	09-365	09-366	09-367	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	120	336	149	1020	10	3267499
Total hydrocarbons C5-C30	mg/kg	132	369	149	1170	20	3266691
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	107	100	103	109	N/A	3267499
N/A = Not Applicable RDL = Reportable Detection Limit							

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P70028		P70029	P70029		
Sampling Date		2009/07/06		2009/07/06	2009/07/06		
COC Number		81181		81181	81181		
	Units	09-368	QC Batch	09-369	09-369 Lab-Dup	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	377	3267499	213	202	10	3267326
Total hydrocarbons C5-C30	mg/kg	430	3266691	260	N/A	20	3266691
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	109	3267499	89	106	N/A	3267326
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70030	P70031	P70032	P70033		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81181	81181	81181	81181		
	Units	09-370	09-371	09-372	09-373	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	127	316	752	227	10	3267326
Total hydrocarbons C5-C30	mg/kg	146	375	989	249	20	3266691
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	108	99	101	106	N/A	3267326
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70034	P70035	P70036	P70037		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81181	81181	81181	81182		
	Units	09-374	09-375	09-376	09-377	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	1120	41	409	878	10	3267326
Total hydrocarbons C5-C30	mg/kg	1550	53	436	985	20	3266691
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	108	98	110	116	N/A	3267326
N/A = Not Applicable RDL = Reportable Detection Limit							

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P70038	P70039	P70040	P70041		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81182	81182	81182	81182		
	Units	09-378	09-379	09-380	09-381	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	198	298	741	72	10	3267326
Total hydrocarbons C5-C30	mg/kg	226	338	1570	72	20	3266691
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	111	119	110	103	N/A	3267326
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70042	P70043	P70044	P70045		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81182	81182	81182	81182		
	Units	09-382	09-383	09-384	09-385	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	199	248	87	38	10	3267326
Total hydrocarbons C5-C30	mg/kg	320	281	87	38	20	3266692
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	102	110	107	110	N/A	3267326
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70046	P70047	P70048		
Sampling Date		2009/07/06	2009/07/06	2009/07/06		
COC Number		81182	81182	81182		
	Units	09-386	09-387	09-388	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	31	131	60	10	3267326
Total hydrocarbons C5-C30	mg/kg	31	131	60	20	3266692
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	112	112	103	N/A	3267326
N/A = Not Applicable RDL = Reportable Detection Limit						

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P70053	P70053	P70054	P70055		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81184	81184	81184	81184		
	Units	09-389	09-389 Lab-Dup	09-390	09-391	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	33	38	438	1850	10	3267328
Total hydrocarbons C5-C30	mg/kg	33	N/A	515	2280	20	3266692
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	89	94	95	94	N/A	3267328
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70056	P70057	P70058	P70059		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81184	81184	81184	81184		
	Units	09-392	09-393	09-394	09-395	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	570	297	860	1950	10	3267328
Total hydrocarbons C5-C30	mg/kg	720	350	994	3140	20	3266692
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	92	97	100	93	N/A	3267328
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70061	P70062	P70063	P70065		
Sampling Date		2009/07/06	2009/07/06	2009/07/06	2009/07/06		
COC Number		81184	81184	81184	81184		
	Units	09-396	09-397	09-398	09-399	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	772	296	270	550	10	3267328
Total hydrocarbons C5-C30	mg/kg	1110	316	362	729	20	3266692
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	91	89	91	98	N/A	3267328
N/A = Not Applicable RDL = Reportable Detection Limit							



Maxxam Job #: A934996
 Report Date: 2009/07/21

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT/LOBE P STOCKPILE
 Sampler Initials: DAS

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P70066	P70067	P70069	P70070		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81184	81185	81185	81185		
	Units	09-400	09-401	09-402	09-403	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	61	625	974	2430	10	3267328
Total hydrocarbons C5-C30	mg/kg	61	687	1910	3320	20	3266692
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	93	93	94	93	N/A	3267328
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70071	P70072	P70073	P70074		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81185	81185	81185	81185		
	Units	09-404	09-405	09-406	09-407	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	1930	2080	51	92	10	3267328
Total hydrocarbons C5-C30	mg/kg	3000	2790	51	92	20	3266692
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	95	102	90	90	N/A	3267328
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70075		P70076	P70076		
Sampling Date		2009/07/07		2009/07/07	2009/07/07		
COC Number		81185		81185	81185		
	Units	09-408	QC Batch	09-409	09-409 Lab-Dup	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	871	3267328	2130	2360	10	3267930
Total hydrocarbons C5-C30	mg/kg	1030	3266692	3500	N/A	20	3266692
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	96	3267328	95	111	N/A	3267930
N/A = Not Applicable RDL = Reportable Detection Limit							



Maxxam Job #: A934996
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TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P70077	P70078		P70079		
Sampling Date		2009/07/07	2009/07/07		2009/07/07		
COC Number		81185	81185		81185		
	Units	09-410	09-411	QC Batch	09-412	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	3530	610	3267930	861	10	3267930
Total hydrocarbons C5-C30	mg/kg	5020	853	3266692	1060	20	3266693
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	111	104	3267930	119	N/A	3267930
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70080	P70081	P70082	P70083		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81183	81183	81183	81183		
	Units	09-413	09-414	09-415	09-416	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	497	927	2790	3380	10	3267930
Total hydrocarbons C5-C30	mg/kg	760	1320	3280	5280	20	3266693
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	109	108	111	98	N/A	3267930
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70084	P70103	P70104	P70105		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81183	81183	81183	81183		
	Units	09-417	09-418	09-419	09-420	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	1650	916	1730	1960	10	3267930
Total hydrocarbons C5-C30	mg/kg	1910	1020	2210	2640	20	3266693
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	100	98	99	105	N/A	3267930
N/A = Not Applicable RDL = Reportable Detection Limit							

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P70106	P70107	P70108	P70109		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81183	81183	81183	81183		
	Units	09-421	09-422	09-423	09-424	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	730	495	457	343	10	3267930
Total hydrocarbons C5-C30	mg/kg	894	1580	525	404	20	3266693
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	105	108	104	103	N/A	3267930
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70110	P70182	P70209		
Sampling Date		2009/07/07	2009/07/07	2009/07/07		
COC Number		81186	81186	81186		
	Units	09-425	09-432	09-433	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	14200	<10	1040	10	3267930
Total hydrocarbons C5-C30	mg/kg	14300	<20	2590	20	3266693
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	102	105	97	N/A	3267930
N/A = Not Applicable RDL = Reportable Detection Limit						



Maxxam Job #: A934996
 Report Date: 2009/07/21

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT/LOBE P STOCKPILE
 Sampler Initials: DAS

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		P70173	P70177	P70178	P70179	P70180		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81186	81186	81186	81186	81186		
	Units	09-426	09-427	09-428	09-429	09-430	RDL	QC Batch

Misc. Inorganics								
pH	N/A	7.15	7.41	7.01	6.33	7.87	N/A	3267650

RDL = Reportable Detection Limit

Maxxam ID		P70181		
Sampling Date		2009/07/07		
COC Number		81186		
	Units	09-431	RDL	QC Batch

Misc. Inorganics				
pH	N/A	7.67	N/A	3267650

RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		P70173	P70177	P70178	P70179		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81186	81186	81186	81186		
	Units	09-426	09-427	09-428	09-429	RDL	QC Batch

Ext. Pet. Hydrocarbon							
EPH (C10-C19)	mg/L	<0.08	<0.08	<0.08	<0.08	0.08	3269928
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	103	107	99	102	N/A	3269928

N/A = Not Applicable
 RDL = Reportable Detection Limit

Maxxam ID		P70180	P70181		
Sampling Date		2009/07/07	2009/07/07		
COC Number		81186	81186		
	Units	09-430	09-431	RDL	QC Batch

Ext. Pet. Hydrocarbon					
EPH (C10-C19)	mg/L	1.70	19.3	0.08	3269928
Surrogate Recovery (%)					
O-TERPHENYL (sur.)	%	102	110	N/A	3269928

N/A = Not Applicable
 RDL = Reportable Detection Limit

VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		P70173	P70177	P70178	P70179		
Sampling Date		2009/07/07	2009/07/07	2009/07/07	2009/07/07		
COC Number		81186	81186	81186	81186		
	Units	09-426	09-427	09-428	09-429	RDL	QC Batch

Hydrocarbons							
LH (C5-C10)	ug/L	<300	<300	<300	<300	300	3269984
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	101	102	100	102	N/A	3269984
D4-1,2-DICHLOROETHANE (sur.)	%	101	106	108	107	N/A	3269984
D8-TOLUENE (sur.)	%	98	96	97	98	N/A	3269984
N/A = Not Applicable RDL = Reportable Detection Limit							

Maxxam ID		P70180	P70181		
Sampling Date		2009/07/07	2009/07/07		
COC Number		81186	81186		
	Units	09-430	09-431	RDL	QC Batch

Hydrocarbons					
LH (C5-C10)	ug/L	374	6480	300	3269984
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	102	102	N/A	3269984
D4-1,2-DICHLOROETHANE (sur.)	%	105	105	N/A	3269984
D8-TOLUENE (sur.)	%	97	97	N/A	3269984
N/A = Not Applicable RDL = Reportable Detection Limit					

Package 1	6.3°C
Package 2	5.3°C
Package 3	6.0°C
Package 4	6.0°C
Package 5	5.3°C
Package 6	6.0°C
Package 7	7.0°C
Package 8	7.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Sample P69875-01: Organic analyses conducted from bag as per client, as no jars were received.

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Location: JOHNSON POINT/LOBE P STOCKPILE

Quality Assurance Report
 Maxxam Job Number: EA934996

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3267301 DR3	MATRIX SPIKE [P70030-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/13		93	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/13		104	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/13		103	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/13		98	%	60 - 140	
		Benzene	2009/07/13		76	%	60 - 140	
		Toluene	2009/07/13		84	%	60 - 140	
		Ethylbenzene	2009/07/13		93	%	60 - 140	
		m & p-Xylene	2009/07/13		97	%	60 - 140	
		o-Xylene	2009/07/13		94	%	60 - 140	
		(C6-C10)	2009/07/13		98	%	60 - 140	
		SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/13		91	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/07/13		107	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/13		101	%	60 - 140
			D8-TOLUENE (sur.)	2009/07/13		99	%	60 - 140
			Benzene	2009/07/13		91	%	60 - 140
	Toluene		2009/07/13		96	%	60 - 140	
	Ethylbenzene		2009/07/13		101	%	60 - 140	
	m & p-Xylene		2009/07/13		105	%	60 - 140	
	o-Xylene		2009/07/13		100	%	60 - 140	
	(C6-C10)		2009/07/13		100	%	80 - 120	
	BLANK		4-BROMOFLUOROBENZENE (sur.)	2009/07/13		91	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/07/13		104	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/13		103	%	60 - 140
			D8-TOLUENE (sur.)	2009/07/13		102	%	60 - 140
			Benzene	2009/07/13	<0.0050			mg/kg
		Toluene	2009/07/13	<0.020			mg/kg	
		Ethylbenzene	2009/07/13	<0.010			mg/kg	
		Xylenes (Total)	2009/07/13	<0.040			mg/kg	
		m & p-Xylene	2009/07/13	<0.040			mg/kg	
		o-Xylene	2009/07/13	<0.020			mg/kg	
		F1 (C6-C10) - BTEX	2009/07/13	<12			mg/kg	
		(C6-C10)	2009/07/13	<12			mg/kg	
		RPD [P70029-01]	Benzene	2009/07/13	NC			%
Toluene	2009/07/13		NC			%	50	
Ethylbenzene	2009/07/13		NC			%	50	
Xylenes (Total)	2009/07/13		NC			%	50	
m & p-Xylene	2009/07/13		NC			%	50	
o-Xylene	2009/07/13		NC			%	50	
F1 (C6-C10) - BTEX	2009/07/13		NC			%	50	
LH (C5-C10)	2009/07/13		NC			%	50	
(C6-C10)	2009/07/13		NC			%	50	
3267304 DR3	MATRIX SPIKE [P70054-01]		4-BROMOFLUOROBENZENE (sur.)	2009/07/13		96	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/07/13		112	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/13		98	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/13		99	%	60 - 140	
		Benzene	2009/07/13		83	%	60 - 140	
		Toluene	2009/07/13		96	%	60 - 140	
		Ethylbenzene	2009/07/13		103	%	60 - 140	
		m & p-Xylene	2009/07/13		112	%	60 - 140	
		o-Xylene	2009/07/13		107	%	60 - 140	
		(C6-C10)	2009/07/13		84	%	60 - 140	
		SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/15		99	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/07/15		108	%	30 - 130



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Location: JOHNSON POINT/LOBE P STOCKPILE

Quality Assurance Report (Continued)

Maxxam Job Number: EA934996

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
3267304 DR3	SPIKE	D4-1,2-DICHLOROETHANE (sur.)	2009/07/15		97	%	60 - 140		
		D8-TOLUENE (sur.)	2009/07/15		102	%	60 - 140		
		Benzene	2009/07/15		91	%	60 - 140		
		Toluene	2009/07/15		89	%	60 - 140		
		Ethylbenzene	2009/07/15		104	%	60 - 140		
		m & p-Xylene	2009/07/15		117	%	60 - 140		
		o-Xylene	2009/07/15		92	%	60 - 140		
		(C6-C10)	2009/07/15		97	%	80 - 120		
		BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/13		92	%	60 - 140	
			D10-ETHYLBENZENE (sur.)	2009/07/13		103	%	30 - 130	
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/13		104	%	60 - 140	
			D8-TOLUENE (sur.)	2009/07/13		103	%	60 - 140	
			Benzene	2009/07/13	<0.0050		mg/kg		
			Toluene	2009/07/13	<0.020		mg/kg		
			Ethylbenzene	2009/07/13	<0.010		mg/kg		
			Xylenes (Total)	2009/07/13	<0.040		mg/kg		
	RPD [P70053-01]	m & p-Xylene	2009/07/13	<0.040		mg/kg			
		o-Xylene	2009/07/13	<0.020		mg/kg			
		F1 (C6-C10) - BTEX	2009/07/13	<12		mg/kg			
		(C6-C10)	2009/07/13	<12		mg/kg			
		Benzene	2009/07/13	NC		%	50		
		Toluene	2009/07/13	NC		%	50		
		Ethylbenzene	2009/07/13	NC		%	50		
		Xylenes (Total)	2009/07/13	NC		%	50		
		m & p-Xylene	2009/07/13	NC		%	50		
		o-Xylene	2009/07/13	NC		%	50		
		F1 (C6-C10) - BTEX	2009/07/13	NC		%	50		
		LH (C5-C10)	2009/07/13	NC		%	50		
		(C6-C10)	2009/07/13	NC		%	50		
		3267306 AN1	MATRIX SPIKE [P69969-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/13		96	%	60 - 140
				D10-ETHYLBENZENE (sur.)	2009/07/13		105	%	30 - 130
				D4-1,2-DICHLOROETHANE (sur.)	2009/07/13		108	%	60 - 140
D8-TOLUENE (sur.)	2009/07/13				90	%	60 - 140		
Benzene	2009/07/13				87	%	60 - 140		
Toluene	2009/07/13				84	%	60 - 140		
Ethylbenzene	2009/07/13				92	%	60 - 140		
m & p-Xylene	2009/07/13				85	%	60 - 140		
o-Xylene	2009/07/13				94	%	60 - 140		
(C6-C10)	2009/07/13				102	%	60 - 140		
SPIKE	4-BROMOFLUOROBENZENE (sur.)			2009/07/14		99	%	60 - 140	
	D10-ETHYLBENZENE (sur.)			2009/07/14		106	%	30 - 130	
	D4-1,2-DICHLOROETHANE (sur.)			2009/07/14		100	%	60 - 140	
	D8-TOLUENE (sur.)			2009/07/14		100	%	60 - 140	
	Benzene			2009/07/14		89	%	60 - 140	
	Toluene			2009/07/14		93	%	60 - 140	
	Ethylbenzene		2009/07/14		92	%	60 - 140		
	m & p-Xylene		2009/07/14		87	%	60 - 140		
BLANK	o-Xylene		2009/07/14		93	%	60 - 140		
	(C6-C10)		2009/07/14		83	%	80 - 120		
	4-BROMOFLUOROBENZENE (sur.)		2009/07/13		99	%	60 - 140		
	D10-ETHYLBENZENE (sur.)		2009/07/13		97	%	30 - 130		
	D4-1,2-DICHLOROETHANE (sur.)		2009/07/13		128	%	60 - 140		
	D8-TOLUENE (sur.)		2009/07/13		92	%	60 - 140		
	Benzene		2009/07/13	<0.0050		mg/kg			



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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3267306 AN1	BLANK	Toluene	2009/07/13	<0.020		mg/kg		
		Ethylbenzene	2009/07/13	<0.010		mg/kg		
		Xylenes (Total)	2009/07/13	<0.040		mg/kg		
		m & p-Xylene	2009/07/13	<0.040		mg/kg		
		o-Xylene	2009/07/13	<0.020		mg/kg		
		F1 (C6-C10) - BTEX	2009/07/13	<12		mg/kg		
		(C6-C10)	2009/07/13	<12		mg/kg		
		RPD [P69966-01]	Benzene	2009/07/13	NC		%	50
		Toluene	2009/07/13	NC		%	50	
		Ethylbenzene	2009/07/13	NC		%	50	
		Xylenes (Total)	2009/07/13	32.4		%	50	
		m & p-Xylene	2009/07/13	NC		%	50	
		o-Xylene	2009/07/13	22.1		%	50	
		F1 (C6-C10) - BTEX	2009/07/13	NC		%	50	
		LH (C5-C10)	2009/07/13	NC		%	50	
		(C6-C10)	2009/07/13	NC		%	50	
		3267307 CC6	MATRIX SPIKE [P69938-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/13		98	%
D10-ETHYLBENZENE (sur.)	2009/07/13				102	%	30 - 130	
D4-1,2-DICHLOROETHANE (sur.)	2009/07/13				89	%	60 - 140	
D8-TOLUENE (sur.)	2009/07/13				102	%	60 - 140	
Benzene	2009/07/13				75	%	60 - 140	
Toluene	2009/07/13				81	%	60 - 140	
Ethylbenzene	2009/07/13				93	%	60 - 140	
m & p-Xylene	2009/07/13				94	%	60 - 140	
o-Xylene	2009/07/13				98	%	60 - 140	
LH (C5-C10)	2009/07/13				101	%	60 - 140	
(C6-C10)	2009/07/13				94	%	60 - 140	
SPIKE	4-BROMOFLUOROBENZENE (sur.)			2009/07/13		101	%	60 - 140
D10-ETHYLBENZENE (sur.)	2009/07/13				105	%	30 - 130	
D4-1,2-DICHLOROETHANE (sur.)	2009/07/13				89	%	60 - 140	
D8-TOLUENE (sur.)	2009/07/13				101	%	60 - 140	
Benzene	2009/07/13			92	%	60 - 140		
Toluene	2009/07/13			90	%	60 - 140		
Ethylbenzene	2009/07/13			101	%	60 - 140		
m & p-Xylene	2009/07/13			100	%	60 - 140		
o-Xylene	2009/07/13			100	%	60 - 140		
LH (C5-C10)	2009/07/13			103	%	80 - 120		
(C6-C10)	2009/07/13			107	%	80 - 120		
BLANK	4-BROMOFLUOROBENZENE (sur.)		2009/07/13		97	%	60 - 140	
D10-ETHYLBENZENE (sur.)	2009/07/13			102	%	30 - 130		
D4-1,2-DICHLOROETHANE (sur.)	2009/07/13			90	%	60 - 140		
D8-TOLUENE (sur.)	2009/07/13			100	%	60 - 140		
Benzene	2009/07/13		<0.0050		mg/kg			
Toluene	2009/07/13		<0.020		mg/kg			
Ethylbenzene	2009/07/13		<0.010		mg/kg			
Xylenes (Total)	2009/07/13		<0.040		mg/kg			
m & p-Xylene	2009/07/13		<0.040		mg/kg			
o-Xylene	2009/07/13		<0.020		mg/kg			
F1 (C6-C10) - BTEX	2009/07/13		<12		mg/kg			
LH (C5-C10)	2009/07/13	<12		mg/kg				
(C6-C10)	2009/07/13	<12		mg/kg				
RPD [P69937-01]	Benzene	2009/07/13	NC		%	50		
Toluene	2009/07/13	NC		%	50			
Ethylbenzene	2009/07/13	NC		%	50			



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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3267307 CC6	RPD [P69937-01]	Xylenes (Total)	2009/07/13	NC		%	50	
		m & p-Xylene	2009/07/13	NC		%	50	
		o-Xylene	2009/07/13	NC		%	50	
		F1 (C6-C10) - BTEX	2009/07/13	NC		%	50	
		LH (C5-C10)	2009/07/13	NC		%	50	
		(C6-C10)	2009/07/13	NC		%	50	
3267312 JT7	MATRIX SPIKE [P69870-01]	O-TERPHENYL (sur.)	2009/07/13		92	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/13		97	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/07/13		97	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/07/13		103	%	50 - 130	
	SPIKE	O-TERPHENYL (sur.)	2009/07/13		88	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/13		99	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/13		106	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/13		112	%	80 - 120	
	BLANK	O-TERPHENYL (sur.)	2009/07/13		114	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/13	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/07/13	<10		mg/kg		
		F4 (C34-C50 Hydrocarbons)	2009/07/13	<10		mg/kg		
	RPD [P69869-01]	F2 (C10-C16 Hydrocarbons)	2009/07/13	24.5		%	50	
		F3 (C16-C34 Hydrocarbons)	2009/07/13	7.6		%	50	
		F4 (C34-C50 Hydrocarbons)	2009/07/13	NC		%	50	
	3267313 JT7	MATRIX SPIKE [P70030-01]	O-TERPHENYL (sur.)	2009/07/13		101	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2009/07/13		99	%	50 - 130
F3 (C16-C34 Hydrocarbons)			2009/07/13		110	%	50 - 130	
F4 (C34-C50 Hydrocarbons)			2009/07/13		122	%	50 - 130	
SPIKE		O-TERPHENYL (sur.)	2009/07/13		88	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/13		98	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/13		105	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/13		112	%	80 - 120	
BLANK		O-TERPHENYL (sur.)	2009/07/13		114	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/13	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/07/13	<10		mg/kg		
		F4 (C34-C50 Hydrocarbons)	2009/07/13	<10		mg/kg		
RPD [P70029-01]		F2 (C10-C16 Hydrocarbons)	2009/07/13	7.7		%	50	
		F3 (C16-C34 Hydrocarbons)	2009/07/13	2.0		%	50	
		F4 (C34-C50 Hydrocarbons)	2009/07/13	NC		%	50	
3267314 KW2		MATRIX SPIKE [P69969-01]	O-TERPHENYL (sur.)	2009/07/13		85	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2009/07/13		84	%	50 - 130
	F3 (C16-C34 Hydrocarbons)		2009/07/13		96	%	50 - 130	
	F4 (C34-C50 Hydrocarbons)		2009/07/13		102	%	50 - 130	
	SPIKE	O-TERPHENYL (sur.)	2009/07/13		99	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/13		103	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/13		111	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/13		117	%	80 - 120	
	BLANK	O-TERPHENYL (sur.)	2009/07/13		105	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/13	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/07/13	<10		mg/kg		
		F4 (C34-C50 Hydrocarbons)	2009/07/13	<10		mg/kg		
	RPD [P69966-01]	F2 (C10-C16 Hydrocarbons)	2009/07/13	9.9		%	50	
		F3 (C16-C34 Hydrocarbons)	2009/07/13	15.9		%	50	
		F4 (C34-C50 Hydrocarbons)	2009/07/13	NC		%	50	
	3267316 KW2	MATRIX SPIKE [P70054-01]	O-TERPHENYL (sur.)	2009/07/14		93	%	50 - 130



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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3267316 KW2	MATRIX SPIKE [P70054-01]	F2 (C10-C16 Hydrocarbons)	2009/07/14		NC	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/07/14		92	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/07/14		99	%	50 - 130	
	SPIKE	O-TERPHENYL (sur.)	2009/07/14		100	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/14		104	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/14		108	%	80 - 120	
	BLANK	F4 (C34-C50 Hydrocarbons)	2009/07/14		115	%	80 - 120	
		O-TERPHENYL (sur.)	2009/07/14		100	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/14		<10		mg/kg	
	RPD [P70053-01]	F3 (C16-C34 Hydrocarbons)	2009/07/14		<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/14		<10		mg/kg	
		F2 (C10-C16 Hydrocarbons)	2009/07/14		NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/14		NC		%	50
	3267319 KW2	MATRIX SPIKE [P69938-01]	F4 (C34-C50 Hydrocarbons)	2009/07/14		NC	%	50
O-TERPHENYL (sur.)			2009/07/13		93	%	50 - 130	
F2 (C10-C16 Hydrocarbons)			2009/07/13		96	%	50 - 130	
SPIKE		F3 (C16-C34 Hydrocarbons)	2009/07/13		NC	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/07/13		112	%	50 - 130	
		O-TERPHENYL (sur.)	2009/07/13		96	%	50 - 130	
BLANK		F2 (C10-C16 Hydrocarbons)	2009/07/13		99	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/13		104	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/13		110	%	80 - 120	
RPD [P69937-01]		O-TERPHENYL (sur.)	2009/07/13		102	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/13		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/13		<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/13		<10		mg/kg	
3267325 JT7		MATRIX SPIKE [P69870-01]	F2 (C10-C16 Hydrocarbons)	2009/07/13		1.2	%	50
	F3 (C16-C34 Hydrocarbons)		2009/07/13		10.3	%	50	
	F4 (C34-C50 Hydrocarbons)		2009/07/13		NC		%	50
	SPIKE	O-TERPHENYL (sur.)	2009/07/13		93	%	50 - 130	
		Total Extractables C10 to C30	2009/07/13		96	%	50 - 130	
		O-TERPHENYL (sur.)	2009/07/13		101	%	50 - 130	
	BLANK	Total Extractables C10 to C30	2009/07/13		111	%	60 - 130	
		O-TERPHENYL (sur.)	2009/07/13		114	%	50 - 130	
		Total Extractables C10 to C30	2009/07/13		12, RDL=10		mg/kg	
	RPD [P69869-01]	Total Extractables C10 to C30	2009/07/13		19.0	%	50	
	3267326 JT7	MATRIX SPIKE [P70029-01]	F2 (C10-C16 Hydrocarbons)	2009/07/13		101	%	50 - 130
			Total Extractables C10 to C30	2009/07/13		104	%	50 - 130
			O-TERPHENYL (sur.)	2009/07/13		95	%	50 - 130
		SPIKE	Total Extractables C10 to C30	2009/07/13		104	%	60 - 130
O-TERPHENYL (sur.)			2009/07/13		114	%	50 - 130	
Total Extractables C10 to C30			2009/07/13		<10		mg/kg	
BLANK		Total Extractables C10 to C30	2009/07/13		5.6	%	50	
		O-TERPHENYL (sur.)	2009/07/13					
RPD [P70029-01]		Total Extractables C10 to C30	2009/07/13					
3267327 KW2		MATRIX SPIKE [P69969-01]	F2 (C10-C16 Hydrocarbons)	2009/07/13		85	%	50 - 130
			Total Extractables C10 to C30	2009/07/13		89	%	50 - 130
			O-TERPHENYL (sur.)	2009/07/13		100	%	50 - 130
		SPIKE	Total Extractables C10 to C30	2009/07/13		106	%	60 - 130
			O-TERPHENYL (sur.)	2009/07/13		105	%	50 - 130
	Total Extractables C10 to C30		2009/07/13		<10		mg/kg	
	BLANK	Total Extractables C10 to C30	2009/07/13		11.1	%	50	
		O-TERPHENYL (sur.)	2009/07/13					
	RPD [P69966-01]	Total Extractables C10 to C30	2009/07/13					



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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3267328 KW2	MATRIX SPIKE [P70054-01]	O-TERPHENYL (sur.)	2009/07/14		93	%	50 - 130
		Total Extractables C10 to C30	2009/07/14		87	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/14		100	%	50 - 130
		Total Extractables C10 to C30	2009/07/14		105	%	60 - 130
	BLANK	O-TERPHENYL (sur.)	2009/07/14		100	%	50 - 130
		Total Extractables C10 to C30	2009/07/14		<10		mg/kg
3267329 KW2	MATRIX SPIKE [P69938-01]	O-TERPHENYL (sur.)	2009/07/13		93	%	50 - 130
		Total Extractables C10 to C30	2009/07/13		NC	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/13		96	%	50 - 130
		Total Extractables C10 to C30	2009/07/13		100	%	60 - 130
	RPD [P69937-01]	Total Extractables C10 to C30	2009/07/13		6.5	%	50
					NC		%
3267343 AN1	MATRIX SPIKE [P69850-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/14		97	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/14		111	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/14		116	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/14		97	%	60 - 140
		Benzene	2009/07/14		87	%	60 - 140
		Toluene	2009/07/14		89	%	60 - 140
		Ethylbenzene	2009/07/14		95	%	60 - 140
		m & p-Xylene	2009/07/14		93	%	60 - 140
		o-Xylene	2009/07/14		110	%	60 - 140
		(C6-C10)	2009/07/14		NC	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/14		91	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/14		107	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/14		100	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/14		100	%	60 - 140
		Benzene	2009/07/14		89	%	60 - 140
		Toluene	2009/07/14		93	%	60 - 140
		Ethylbenzene	2009/07/14		99	%	60 - 140
		m & p-Xylene	2009/07/14		103	%	60 - 140
		o-Xylene	2009/07/14		98	%	60 - 140
		(C6-C10)	2009/07/14		105	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/14		95	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/14		88	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/14		137	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/14		76	%	60 - 140
		Benzene	2009/07/14		<0.0050		mg/kg
		Toluene	2009/07/14		<0.020		mg/kg
		Ethylbenzene	2009/07/14		<0.010		mg/kg
		Xylenes (Total)	2009/07/14		<0.040		mg/kg
		m & p-Xylene	2009/07/14		<0.040		mg/kg
		o-Xylene	2009/07/14		<0.020		mg/kg
	RPD [P69851-01]	F1 (C6-C10) - BTEX	2009/07/14		<12		mg/kg
		(C6-C10)	2009/07/14		<12		mg/kg
		Benzene	2009/07/14		NC	%	50
		Toluene	2009/07/14		NC	%	50
Ethylbenzene		2009/07/14		NC	%	50	
Xylenes (Total)		2009/07/14		NC	%	50	
m & p-Xylene		2009/07/14		NC	%	50	
o-Xylene		2009/07/14		NC	%	50	
F1 (C6-C10) - BTEX		2009/07/14		NC	%	50	
LH (C5-C10)		2009/07/14		NC	%	50	



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Maxxam Job Number: EA934996

QA/QC Batch	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3267343 AN1	RPD [P69851-01]	(C6-C10)	2009/07/14	NC		%	50
3267347 CC6	MATRIX SPIKE [P69989-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/13		102	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/13		107	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/13		86	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/13		103	%	60 - 140
		Benzene	2009/07/13		95	%	60 - 140
		Toluene	2009/07/13		93	%	60 - 140
		Ethylbenzene	2009/07/13		106	%	60 - 140
		m & p-Xylene	2009/07/13		104	%	60 - 140
		o-Xylene	2009/07/13		102	%	60 - 140
		LH (C5-C10)	2009/07/13		109	%	60 - 140
		(C6-C10)	2009/07/13		89	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/13		103	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/13		105	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/13		87	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/13		100	%	60 - 140
		Benzene	2009/07/13		90	%	60 - 140
		Toluene	2009/07/13		88	%	60 - 140
		Ethylbenzene	2009/07/13		98	%	60 - 140
		m & p-Xylene	2009/07/13		98	%	60 - 140
		o-Xylene	2009/07/13		95	%	60 - 140
		LH (C5-C10)	2009/07/13		105	%	80 - 120
		(C6-C10)	2009/07/13		97	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/13		98	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/13		106	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/13		85	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/13		100	%	60 - 140
		Benzene	2009/07/13	<0.0050		mg/kg	
		Toluene	2009/07/13	<0.020		mg/kg	
		Ethylbenzene	2009/07/13	<0.010		mg/kg	
		Xylenes (Total)	2009/07/13	<0.040		mg/kg	
		m & p-Xylene	2009/07/13	<0.040		mg/kg	
		o-Xylene	2009/07/13	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/07/13	<12		mg/kg	
		LH (C5-C10)	2009/07/13	<12		mg/kg	
		(C6-C10)	2009/07/13	<12		mg/kg	
	RPD [P69988-01]	Benzene	2009/07/13	NC		%	50
		Toluene	2009/07/13	NC		%	50
		Ethylbenzene	2009/07/13	NC		%	50
		Xylenes (Total)	2009/07/13	NC		%	50
		m & p-Xylene	2009/07/13	NC		%	50
		o-Xylene	2009/07/13	3.3		%	50
		F1 (C6-C10) - BTEX	2009/07/13	NC		%	50
		LH (C5-C10)	2009/07/13	NC		%	50
		(C6-C10)	2009/07/13	NC		%	50
3267386 CL9	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/12		91	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/12		108	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/12		108	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/12		97	%	60 - 140
		Benzene	2009/07/12		93	%	60 - 140
		Toluene	2009/07/12		95	%	60 - 140
		Ethylbenzene	2009/07/12		100	%	60 - 140
		m & p-Xylene	2009/07/12		106	%	60 - 140
		o-Xylene	2009/07/12		99	%	60 - 140



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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
3267386 CL9	MATRIX SPIKE	(C6-C10)	2009/07/12		110	%	60 - 140		
		4-BROMOFLUOROBENZENE (sur.)	2009/07/12		90	%	60 - 140		
		D10-ETHYLBENZENE (sur.)	2009/07/12		101	%	30 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/12		103	%	60 - 140		
		D8-TOLUENE (sur.)	2009/07/12		97	%	60 - 140		
		Benzene	2009/07/12		88	%	60 - 140		
		Toluene	2009/07/12		92	%	60 - 140		
		Ethylbenzene	2009/07/12		98	%	60 - 140		
		m & p-Xylene	2009/07/12		104	%	60 - 140		
		o-Xylene	2009/07/12		97	%	60 - 140		
		(C6-C10)	2009/07/12		115	%	80 - 120		
		BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/12		93	%	60 - 140	
			D10-ETHYLBENZENE (sur.)	2009/07/12		99	%	30 - 130	
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/12		109	%	60 - 140	
			D8-TOLUENE (sur.)	2009/07/12		101	%	60 - 140	
	Benzene		2009/07/12	<0.0050			mg/kg		
	Toluene		2009/07/12	<0.020			mg/kg		
	Ethylbenzene		2009/07/12	<0.010			mg/kg		
	Xylenes (Total)		2009/07/12	<0.040			mg/kg		
	m & p-Xylene		2009/07/12	<0.040			mg/kg		
	o-Xylene		2009/07/12	<0.020			mg/kg		
	F1 (C6-C10) - BTEX		2009/07/12	<12			mg/kg		
	LH (C5-C10)		2009/07/12	<12			mg/kg		
	(C6-C10)		2009/07/12	<12			mg/kg		
	RPD		Benzene	2009/07/12	NC			%	50
			Toluene	2009/07/12	NC			%	50
		Ethylbenzene	2009/07/12	NC			%	50	
		Xylenes (Total)	2009/07/12	NC			%	50	
		m & p-Xylene	2009/07/12	NC			%	50	
		o-Xylene	2009/07/12	NC			%	50	
F1 (C6-C10) - BTEX		2009/07/12	NC			%	50		
(C6-C10)		2009/07/12	NC			%	50		
3267470 CC6		MATRIX SPIKE [P69870-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/14		99	%	60 - 140	
			D10-ETHYLBENZENE (sur.)	2009/07/14		106	%	30 - 130	
	D4-1,2-DICHLOROETHANE (sur.)		2009/07/14		84	%	60 - 140		
	D8-TOLUENE (sur.)		2009/07/14		104	%	60 - 140		
	Benzene		2009/07/14		94	%	60 - 140		
	Toluene		2009/07/14		94	%	60 - 140		
	Ethylbenzene		2009/07/14		102	%	60 - 140		
	m & p-Xylene		2009/07/14		91	%	60 - 140		
	o-Xylene		2009/07/14		93	%	60 - 140		
	LH (C5-C10)		2009/07/14		67	%	60 - 140		
	(C6-C10)		2009/07/14		72	%	60 - 140		
	SPIKE		4-BROMOFLUOROBENZENE (sur.)	2009/07/14		103	%	60 - 140	
			D10-ETHYLBENZENE (sur.)	2009/07/14		104	%	30 - 130	
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/14		85	%	60 - 140	
			D8-TOLUENE (sur.)	2009/07/14		102	%	60 - 140	
		Benzene	2009/07/14		92	%	60 - 140		
		Toluene	2009/07/14		90	%	60 - 140		
	Ethylbenzene	2009/07/14		102	%	60 - 140			
	m & p-Xylene	2009/07/14		100	%	60 - 140			
	o-Xylene	2009/07/14		98	%	60 - 140			
	LH (C5-C10)	2009/07/14		101	%	80 - 120			
(C6-C10)	2009/07/14		94	%	80 - 120				



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3267470	CC6	BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/14		100	%	60 - 140	
			D10-ETHYLBENZENE (sur.)	2009/07/14		101	%	30 - 130	
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/14		85	%	60 - 140	
			D8-TOLUENE (sur.)	2009/07/14		102	%	60 - 140	
			Benzene	2009/07/14	<0.0050			mg/kg	
			Toluene	2009/07/14	<0.020			mg/kg	
			Ethylbenzene	2009/07/14	<0.010			mg/kg	
			Xylenes (Total)	2009/07/14	<0.040			mg/kg	
			m & p-Xylene	2009/07/14	<0.040			mg/kg	
			o-Xylene	2009/07/14	<0.020			mg/kg	
			F1 (C6-C10) - BTEX	2009/07/14	<12			mg/kg	
			LH (C5-C10)	2009/07/14	<12			mg/kg	
			(C6-C10)	2009/07/14	<12			mg/kg	
			RPD [P69869-01]	Benzene	2009/07/14	NC		%	50
				Toluene	2009/07/14	NC		%	50
				Ethylbenzene	2009/07/14	NC		%	50
				Xylenes (Total)	2009/07/14	0.8		%	50
				m & p-Xylene	2009/07/14	16.3		%	50
				o-Xylene	2009/07/14	2.9		%	50
				F1 (C6-C10) - BTEX	2009/07/14	17.8		%	50
		LH (C5-C10)	2009/07/14	19.7		%	50		
		(C6-C10)	2009/07/14	17.7		%	50		
3267498	LD2	MATRIX SPIKE [P69989-01]	O-TERPHENYL (sur.)	2009/07/15		100	%	50 - 130	
			F2 (C10-C16 Hydrocarbons)	2009/07/15		113	%	50 - 130	
			F3 (C16-C34 Hydrocarbons)	2009/07/15		109	%	50 - 130	
			F4 (C34-C50 Hydrocarbons)	2009/07/15		108	%	50 - 130	
		SPIKE	O-TERPHENYL (sur.)	2009/07/15		94	%	50 - 130	
			F2 (C10-C16 Hydrocarbons)	2009/07/15		111	%	80 - 120	
			F3 (C16-C34 Hydrocarbons)	2009/07/15		107	%	80 - 120	
			F4 (C34-C50 Hydrocarbons)	2009/07/15		106	%	80 - 120	
		BLANK	O-TERPHENYL (sur.)	2009/07/15		106	%	50 - 130	
			F2 (C10-C16 Hydrocarbons)	2009/07/15	<10		mg/kg		
			F3 (C16-C34 Hydrocarbons)	2009/07/15	<10		mg/kg		
			F4 (C34-C50 Hydrocarbons)	2009/07/15	<10		mg/kg		
		RPD [P69988-01]	F2 (C10-C16 Hydrocarbons)	2009/07/15	5.5		%	50	
			F3 (C16-C34 Hydrocarbons)	2009/07/15	3.5		%	50	
		F4 (C34-C50 Hydrocarbons)	2009/07/15	NC		%	50		
3267499	LD2	MATRIX SPIKE [P69989-01]	O-TERPHENYL (sur.)	2009/07/14		100	%	50 - 130	
			Total Extractables C10 to C30	2009/07/14		107	%	50 - 130	
		SPIKE	O-TERPHENYL (sur.)	2009/07/14		94	%	50 - 130	
			Total Extractables C10 to C30	2009/07/14		103	%	60 - 130	
		BLANK	O-TERPHENYL (sur.)	2009/07/14		106	%	50 - 130	
			Total Extractables C10 to C30	2009/07/14	<10		mg/kg		
		RPD [P69988-01]	Total Extractables C10 to C30	2009/07/14	5.1		%	50	
3267500	KW2	MATRIX SPIKE [P69851-01]	O-TERPHENYL (sur.)	2009/07/14		100	%	50 - 130	
			F2 (C10-C16 Hydrocarbons)	2009/07/14		NC	%	50 - 130	
			F3 (C16-C34 Hydrocarbons)	2009/07/14		95	%	50 - 130	
			F4 (C34-C50 Hydrocarbons)	2009/07/14		107	%	50 - 130	
			SPIKE	O-TERPHENYL (sur.)	2009/07/14		100	%	50 - 130
				F2 (C10-C16 Hydrocarbons)	2009/07/14		104	%	80 - 120
				F3 (C16-C34 Hydrocarbons)	2009/07/14		108	%	80 - 120
				F4 (C34-C50 Hydrocarbons)	2009/07/14		115	%	80 - 120



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3267500 KW2	BLANK	O-TERPHENYL (sur.)	2009/07/14		104	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/14	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/14	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/14	<10		mg/kg	
	RPD [P69850-01]	F2 (C10-C16 Hydrocarbons)	2009/07/14	21.0		%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/14	19.4		%	50
		F4 (C34-C50 Hydrocarbons)	2009/07/14	NC		%	50
3267508 KW2	MATRIX SPIKE [P69851-01]	O-TERPHENYL (sur.)	2009/07/14		100	%	50 - 130
		Total Extractables C10 to C30	2009/07/14		NC	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/14		100	%	50 - 130
		Total Extractables C10 to C30	2009/07/14		104	%	60 - 130
	BLANK	O-TERPHENYL (sur.)	2009/07/14		104	%	50 - 130
		Total Extractables C10 to C30	2009/07/14	<10		mg/kg	
	RPD [P69850-01]	Total Extractables C10 to C30	2009/07/14	35.9		%	50
3267514 GG3	BLANK	Moisture	2009/07/11	<0.3		%	
	RPD [P70076-01]	Moisture	2009/07/11	8.3		%	20
3267520 GG3	BLANK	Moisture	2009/07/11	<0.3		%	
	RPD [P69988-01]	Moisture	2009/07/11	0		%	20
3267524 GG3	BLANK	Moisture	2009/07/11	<0.3		%	
	RPD [P69869-01]	Moisture	2009/07/11	2.0		%	20
3267538 GG3	BLANK	Moisture	2009/07/11	<0.3		%	
	RPD [P70029-01]	Moisture	2009/07/11	19.3		%	20
3267648 LD2	MATRIX SPIKE [P70077-01]	O-TERPHENYL (sur.)	2009/07/15		104	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/15		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/07/15		NC	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/07/15		112	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/15		94	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/15		111	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/07/15		108	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/07/15		106	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2009/07/15		99	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/15	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/15	10, RDL=10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/15	<10		mg/kg	
	RPD [P70076-01]	F2 (C10-C16 Hydrocarbons)	2009/07/15	11.7		%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/15	4.8		%	50
		F4 (C34-C50 Hydrocarbons)	2009/07/15	NC		%	50
3267650 SB8	Calibration Check	pH	2009/07/12		100	%	97 - 103
	RPD	pH	2009/07/12	0.2		%	5
3267930 LD2	MATRIX SPIKE [P70077-01]	O-TERPHENYL (sur.)	2009/07/15		104	%	50 - 130
		Total Extractables C10 to C30	2009/07/15		NC	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/15		94	%	50 - 130
		Total Extractables C10 to C30	2009/07/15		105	%	60 - 130
	BLANK	O-TERPHENYL (sur.)	2009/07/15		99	%	50 - 130
		Total Extractables C10 to C30	2009/07/15	15, RDL=10		mg/kg	
	RPD [P70076-01]	Total Extractables C10 to C30	2009/07/15	10.3		%	50
3267986 DR3	MATRIX SPIKE [P70077-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/15		88	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/15		113	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/15		99	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/15		102	%	60 - 140
		Benzene	2009/07/15		96	%	60 - 140



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3267986 DR3	MATRIX SPIKE [P70077-01]	Toluene	2009/07/15		91	%	60 - 140
		Ethylbenzene	2009/07/15		108	%	60 - 140
		m & p-Xylene	2009/07/15		NC	%	60 - 140
		o-Xylene	2009/07/15		NC	%	60 - 140
		(C6-C10)	2009/07/15		NC	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/15		105	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/15		105	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/15		100	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/15		102	%	60 - 140
		Benzene	2009/07/15		92	%	60 - 140
		Toluene	2009/07/15		96	%	60 - 140
		Ethylbenzene	2009/07/15		100	%	60 - 140
		m & p-Xylene	2009/07/15		104	%	60 - 140
		o-Xylene	2009/07/15		98	%	60 - 140
		(C6-C10)	2009/07/15		109	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/15		92	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/15		102	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/15		102	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/15		101	%	60 - 140
		Benzene	2009/07/15	<0.0050		mg/kg	
		Toluene	2009/07/15	<0.020		mg/kg	
		Ethylbenzene	2009/07/15	<0.010		mg/kg	
		Xylenes (Total)	2009/07/15	<0.040		mg/kg	
		m & p-Xylene	2009/07/15	<0.040		mg/kg	
		o-Xylene	2009/07/15	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/07/15	<12		mg/kg	
		(C6-C10)	2009/07/15	<12		mg/kg	
	RPD [P70076-01]	Benzene	2009/07/15	NC		%	50
		Toluene	2009/07/15	41.9		%	50
		Ethylbenzene	2009/07/15	38.3		%	50
		Xylenes (Total)	2009/07/15	26.6		%	50
		m & p-Xylene	2009/07/15	32.5		%	50
		o-Xylene	2009/07/15	21.0		%	50
		F1 (C6-C10) - BTEX	2009/07/15	8.3		%	50
		LH (C5-C10)	2009/07/15	8.7		%	50
		(C6-C10)	2009/07/15	8.6		%	50
3268170 JP6	BLANK	Moisture	2009/07/13	<0.3		%	
	RPD [P69850-01]	Moisture	2009/07/13	1		%	20
3268216 JP6	BLANK	Moisture	2009/07/13	<0.3		%	
	RPD [P70053-01]	Moisture	2009/07/13	0		%	20
3268253 JP6	BLANK	Moisture	2009/07/13	<0.3		%	
	RPD [P69966-01]	Moisture	2009/07/13	5.3		%	20
3268318 EO1	Calibration Check	Total Arsenic (As)	2009/07/13		87	%	80 - 120
		Total Cadmium (Cd)	2009/07/13		92	%	80 - 120
		Total Chromium (Cr)	2009/07/13		86	%	80 - 120
		Total Cobalt (Co)	2009/07/13		91	%	80 - 120
		Total Copper (Cu)	2009/07/13		88	%	80 - 120
		Total Lead (Pb)	2009/07/13		92	%	80 - 120
		Total Nickel (Ni)	2009/07/13		90	%	80 - 120
		Total Zinc (Zn)	2009/07/13		118	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2009/07/13		87	%	75 - 125
		Total Cadmium (Cd)	2009/07/13		91	%	75 - 125
		Total Chromium (Cr)	2009/07/13		97	%	75 - 125
		Total Cobalt (Co)	2009/07/13		92	%	75 - 125



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 Attention: DARA SCHMIDT
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Quality Assurance Report (Continued)

Maxxam Job Number: EA934996

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
3268318 EO1	MATRIX SPIKE	Total Copper (Cu)	2009/07/13		91	%	75 - 125		
		Total Lead (Pb)	2009/07/13		93	%	75 - 125		
		Total Nickel (Ni)	2009/07/13		99	%	75 - 125		
		Total Zinc (Zn)	2009/07/13		106	%	75 - 125		
	QC STANDARD	Total Arsenic (As)	2009/07/13		92	%	72 - 128		
		Total Chromium (Cr)	2009/07/13		69	%	50 - 150		
		Total Cobalt (Co)	2009/07/13		103	%	75 - 125		
		Total Copper (Cu)	2009/07/13		84	%	72 - 127		
		Total Lead (Pb)	2009/07/13		90	%	65 - 135		
		Total Nickel (Ni)	2009/07/13		94	%	75 - 125		
		Total Zinc (Zn)	2009/07/13		88	%	74 - 125		
		BLANK	Total Arsenic (As)	2009/07/13	<1			mg/kg	
	Total Cadmium (Cd)		2009/07/13	<0.1			mg/kg		
	Total Chromium (Cr)		2009/07/13	<1			mg/kg		
	Total Cobalt (Co)		2009/07/13	<1			mg/kg		
	Total Copper (Cu)		2009/07/13	<5			mg/kg		
	Total Lead (Pb)		2009/07/13	<1			mg/kg		
	Total Nickel (Ni)		2009/07/13	<1			mg/kg		
	Total Zinc (Zn)		2009/07/13	<10			mg/kg		
	RPD		Total Arsenic (As)	2009/07/13	1.9			%	35
			Total Cadmium (Cd)	2009/07/13	NC			%	35
			Total Chromium (Cr)	2009/07/13	1.9			%	35
			Total Cobalt (Co)	2009/07/13	2.1			%	35
			Total Copper (Cu)	2009/07/13	NC			%	35
			Total Lead (Pb)	2009/07/13	1.1			%	35
			Total Nickel (Ni)	2009/07/13	1.5			%	35
			Total Zinc (Zn)	2009/07/13	1.7			%	35
	3268593 EO1	Calibration Check	Total Arsenic (As)	2009/07/13		91	%	80 - 120	
			Total Cadmium (Cd)	2009/07/13		94	%	80 - 120	
			Total Chromium (Cr)	2009/07/13		91	%	80 - 120	
			Total Cobalt (Co)	2009/07/13		97	%	80 - 120	
			Total Copper (Cu)	2009/07/13		93	%	80 - 120	
Total Lead (Pb)			2009/07/13		96	%	80 - 120		
Total Nickel (Ni)			2009/07/13		96	%	80 - 120		
Total Zinc (Zn)			2009/07/13		104	%	80 - 120		
MATRIX SPIKE [P69966-01]		Total Arsenic (As)	2009/07/13		80	%	75 - 125		
		Total Cadmium (Cd)	2009/07/13		83	%	75 - 125		
		Total Chromium (Cr)	2009/07/13		89	%	75 - 125		
		Total Cobalt (Co)	2009/07/13		86	%	75 - 125		
		Total Copper (Cu)	2009/07/13		79	%	75 - 125		
		Total Lead (Pb)	2009/07/13		81	%	75 - 125		
		Total Nickel (Ni)	2009/07/13		87	%	75 - 125		
		Total Zinc (Zn)	2009/07/13		87	%	75 - 125		
QC STANDARD		Total Arsenic (As)	2009/07/13		87	%	72 - 128		
		Total Chromium (Cr)	2009/07/13		66	%	50 - 150		
		Total Cobalt (Co)	2009/07/13		100	%	75 - 125		
		Total Copper (Cu)	2009/07/13		82	%	72 - 127		
		Total Lead (Pb)	2009/07/13		85	%	65 - 135		
		Total Nickel (Ni)	2009/07/13		93	%	75 - 125		
		Total Zinc (Zn)	2009/07/13		79	%	74 - 125		
		BLANK	Total Arsenic (As)	2009/07/13	<1			mg/kg	
Total Cadmium (Cd)			2009/07/13	<0.1			mg/kg		
Total Chromium (Cr)			2009/07/13	<1			mg/kg		
Total Cobalt (Co)			2009/07/13	<1			mg/kg		



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Quality Assurance Report (Continued)

Maxxam Job Number: EA934996

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
3268593 EO1	BLANK	Total Copper (Cu)	2009/07/13	<5		mg/kg			
		Total Lead (Pb)	2009/07/13	<1		mg/kg			
		Total Nickel (Ni)	2009/07/13	<1		mg/kg			
		Total Zinc (Zn)	2009/07/13	<10		mg/kg			
	RPD [P69966-01]	Total Arsenic (As)	2009/07/13	NC		%	35		
		Total Cadmium (Cd)	2009/07/13	NC		%	35		
		Total Chromium (Cr)	2009/07/13	2.2		%	35		
		Total Cobalt (Co)	2009/07/13	NC		%	35		
		Total Copper (Cu)	2009/07/13	NC		%	35		
		Total Lead (Pb)	2009/07/13	NC		%	35		
		Total Nickel (Ni)	2009/07/13	0.05		%	35		
		Total Zinc (Zn)	2009/07/13	NC		%	35		
		3268810 EO1	Calibration Check	Total Arsenic (As)	2009/07/13		84	%	80 - 120
				Total Cadmium (Cd)	2009/07/13		86	%	80 - 120
Total Chromium (Cr)	2009/07/13				83	%	80 - 120		
Total Cobalt (Co)	2009/07/13				89	%	80 - 120		
Total Copper (Cu)	2009/07/13				85	%	80 - 120		
Total Lead (Pb)	2009/07/13				87	%	80 - 120		
Total Nickel (Ni)	2009/07/13				87	%	80 - 120		
Total Zinc (Zn)	2009/07/13				95	%	80 - 120		
MATRIX SPIKE [P69866-01]	Total Arsenic (As)		2009/07/13		80	%	75 - 125		
	Total Cadmium (Cd)		2009/07/13		80	%	75 - 125		
	Total Chromium (Cr)		2009/07/13		85	%	75 - 125		
	Total Cobalt (Co)		2009/07/13		84	%	75 - 125		
	Total Copper (Cu)		2009/07/13		76	%	75 - 125		
	Total Lead (Pb)		2009/07/13		78	%	75 - 125		
	Total Nickel (Ni)		2009/07/13		82	%	75 - 125		
	Total Zinc (Zn)		2009/07/13		83	%	75 - 125		
QC STANDARD	Total Arsenic (As)		2009/07/13		93	%	72 - 128		
	Total Chromium (Cr)		2009/07/13		65	%	50 - 150		
	Total Cobalt (Co)		2009/07/13		96	%	75 - 125		
	Total Copper (Cu)		2009/07/13		81	%	72 - 127		
	Total Lead (Pb)		2009/07/13		84	%	65 - 135		
	Total Nickel (Ni)		2009/07/13		92	%	75 - 125		
	Total Zinc (Zn)		2009/07/13		78	%	74 - 125		
	BLANK		Total Arsenic (As)	2009/07/13	<1			mg/kg	
Total Cadmium (Cd)			2009/07/13	<0.1			mg/kg		
Total Chromium (Cr)			2009/07/13	<1			mg/kg		
Total Cobalt (Co)		2009/07/13	<1			mg/kg			
Total Copper (Cu)		2009/07/13	<5			mg/kg			
Total Lead (Pb)		2009/07/13	<1			mg/kg			
Total Nickel (Ni)		2009/07/13	<1			mg/kg			
Total Zinc (Zn)		2009/07/13	<10			mg/kg			
RPD [P69866-01]		Total Arsenic (As)	2009/07/13	NC		%	35		
		Total Cadmium (Cd)	2009/07/13	NC		%	35		
	Total Chromium (Cr)	2009/07/13	0.9		%	35			
	Total Cobalt (Co)	2009/07/13	NC		%	35			
	Total Copper (Cu)	2009/07/13	NC		%	35			
	Total Lead (Pb)	2009/07/13	NC		%	35			
	Total Nickel (Ni)	2009/07/13	1.7		%	35			
	Total Zinc (Zn)	2009/07/13	NC		%	35			
	3269018 EO1	Calibration Check	Total Arsenic (As)	2009/07/13		86	%	80 - 120	
			Total Cadmium (Cd)	2009/07/13		90	%	80 - 120	
Total Chromium (Cr)			2009/07/13		85	%	80 - 120		



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Maxxam Job Number: EA934996

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
3269018 EO1	Calibration Check	Total Cobalt (Co)	2009/07/13		91	%	80 - 120		
		Total Copper (Cu)	2009/07/13		88	%	80 - 120		
		Total Lead (Pb)	2009/07/13		93	%	80 - 120		
		Total Nickel (Ni)	2009/07/13		89	%	80 - 120		
		Total Zinc (Zn)	2009/07/13		114	%	80 - 120		
	MATRIX SPIKE [P70076-01]	Total Arsenic (As)	2009/07/13		93	%	75 - 125		
		Total Cadmium (Cd)	2009/07/13		96	%	75 - 125		
		Total Chromium (Cr)	2009/07/13		98	%	75 - 125		
		Total Cobalt (Co)	2009/07/13		96	%	75 - 125		
		Total Copper (Cu)	2009/07/13		91	%	75 - 125		
		Total Lead (Pb)	2009/07/13		97	%	75 - 125		
		Total Nickel (Ni)	2009/07/13		97	%	75 - 125		
		Total Zinc (Zn)	2009/07/13		104	%	75 - 125		
		QC STANDARD	Total Arsenic (As)	2009/07/13		87	%	72 - 128	
			Total Chromium (Cr)	2009/07/13		62	%	50 - 150	
	Total Cobalt (Co)		2009/07/13		94	%	75 - 125		
	Total Copper (Cu)		2009/07/13		78	%	72 - 127		
	Total Lead (Pb)		2009/07/13		86	%	65 - 135		
	Total Nickel (Ni)		2009/07/13		86	%	75 - 125		
	Total Zinc (Zn)		2009/07/13		82	%	74 - 125		
	BLANK	Total Arsenic (As)	2009/07/13		<1		mg/kg		
		Total Cadmium (Cd)	2009/07/13		<0.1		mg/kg		
		Total Chromium (Cr)	2009/07/13		<1		mg/kg		
		Total Cobalt (Co)	2009/07/13		<1		mg/kg		
		Total Copper (Cu)	2009/07/13		<5		mg/kg		
		Total Lead (Pb)	2009/07/13		<1		mg/kg		
		Total Nickel (Ni)	2009/07/13		<1		mg/kg		
		Total Zinc (Zn)	2009/07/13		<10		mg/kg		
		RPD [P70076-01]	Total Arsenic (As)	2009/07/13		NC		%	35
			Total Cadmium (Cd)	2009/07/13		NC		%	35
	Total Chromium (Cr)		2009/07/13		6.7		%	35	
	Total Cobalt (Co)		2009/07/13		NC		%	35	
	Total Copper (Cu)		2009/07/13		NC		%	35	
	Total Lead (Pb)		2009/07/13		NC		%	35	
	Total Nickel (Ni)		2009/07/13		6.2		%	35	
3269064 JP6	BLANK	Moisture	2009/07/13	<0.3		%			
	RPD [P69937-01]	Moisture	2009/07/13	4.0		%	20		
3269928 IT1	SPIKE	O-TERPHENYL (sur.)	2009/07/14		100	%	50 - 130		
		EPH (C10-C19)	2009/07/14		117	%	50 - 130		
	BLANK	O-TERPHENYL (sur.)	2009/07/14		98	%	50 - 130		
3269984 MM5	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/14		103	%	70 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/14		108	%	70 - 130		
		D8-TOLUENE (sur.)	2009/07/14		95	%	70 - 130		
	QC STANDARD	4-BROMOFLUOROBENZENE (sur.)	2009/07/14		102	%	70 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/14		105	%	70 - 130		
		D8-TOLUENE (sur.)	2009/07/14		96	%	70 - 130		
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/14		101	%	70 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/14		106	%	70 - 130		
		D8-TOLUENE (sur.)	2009/07/14		95	%	70 - 130		
	BLANK	LH (C5-C10)	2009/07/14		<300		ug/L		
		4-BROMOFLUOROBENZENE (sur.)	2009/07/14			100	%	70 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/14			110	%	70 - 130	



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Maxxam Job Number: EA934996

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3269984 MM5	BLANK	D8-TOLUENE (sur.)	2009/07/14		96	%	70 - 130
3270229 EO1	Calibration Check	Total Arsenic (As)	2009/07/13		85	%	80 - 120
		Total Cadmium (Cd)	2009/07/13		89	%	80 - 120
		Total Chromium (Cr)	2009/07/13		84	%	80 - 120
		Total Cobalt (Co)	2009/07/13		89	%	80 - 120
		Total Copper (Cu)	2009/07/13		85	%	80 - 120
		Total Lead (Pb)	2009/07/13		92	%	80 - 120
		Total Nickel (Ni)	2009/07/13		87	%	80 - 120
		Total Zinc (Zn)	2009/07/13		111	%	80 - 120
	MATRIX SPIKE [P69869-01]	Total Arsenic (As)	2009/07/13		77	%	75 - 125
		Total Cadmium (Cd)	2009/07/13		80	%	75 - 125
		Total Chromium (Cr)	2009/07/13		80	%	75 - 125
		Total Cobalt (Co)	2009/07/13		78	%	75 - 125
		Total Copper (Cu)	2009/07/13		78	%	75 - 125
		Total Lead (Pb)	2009/07/13		82	%	75 - 125
		Total Nickel (Ni)	2009/07/13		79	%	75 - 125
		Total Zinc (Zn)	2009/07/13		86	%	75 - 125
	QC STANDARD	Total Arsenic (As)	2009/07/13		85	%	72 - 128
		Total Chromium (Cr)	2009/07/13		60	%	50 - 150
		Total Cobalt (Co)	2009/07/13		92	%	75 - 125
		Total Copper (Cu)	2009/07/13		76	%	72 - 127
		Total Lead (Pb)	2009/07/13		86	%	65 - 135
		Total Nickel (Ni)	2009/07/13		85	%	75 - 125
		Total Zinc (Zn)	2009/07/13		81	%	74 - 125
	BLANK	Total Arsenic (As)	2009/07/13	<1		mg/kg	
		Total Cadmium (Cd)	2009/07/13	<0.1		mg/kg	
		Total Chromium (Cr)	2009/07/13	<1		mg/kg	
		Total Cobalt (Co)	2009/07/13	<1		mg/kg	
		Total Copper (Cu)	2009/07/13	<5		mg/kg	
		Total Lead (Pb)	2009/07/13	<1		mg/kg	
		Total Nickel (Ni)	2009/07/13	<1		mg/kg	
		Total Zinc (Zn)	2009/07/13	<10		mg/kg	
	RPD [P69869-01]	Total Arsenic (As)	2009/07/13	NC		%	35
		Total Cadmium (Cd)	2009/07/13	NC		%	35
		Total Chromium (Cr)	2009/07/13	3.8		%	35
		Total Cobalt (Co)	2009/07/13	NC		%	35
		Total Copper (Cu)	2009/07/13	NC		%	35
		Total Lead (Pb)	2009/07/13	4.1		%	35
		Total Nickel (Ni)	2009/07/13	3.3		%	35
		Total Zinc (Zn)	2009/07/13	NC		%	35
3270289 EO1	Calibration Check	Total Arsenic (As)	2009/07/13		83	%	80 - 120
		Total Cadmium (Cd)	2009/07/13		88	%	80 - 120
		Total Chromium (Cr)	2009/07/13		81	%	80 - 120
		Total Cobalt (Co)	2009/07/13		86	%	80 - 120
		Total Copper (Cu)	2009/07/13		81	%	80 - 120
		Total Lead (Pb)	2009/07/13		90	%	80 - 120
		Total Nickel (Ni)	2009/07/13		83	%	80 - 120
		Total Zinc (Zn)	2009/07/13		100	%	80 - 120
	MATRIX SPIKE [P69850-01]	Total Arsenic (As)	2009/07/13		83	%	75 - 125
		Total Cadmium (Cd)	2009/07/13		84	%	75 - 125
		Total Chromium (Cr)	2009/07/13		83	%	75 - 125
		Total Cobalt (Co)	2009/07/13		82	%	75 - 125
		Total Copper (Cu)	2009/07/13		78	%	75 - 125



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Maxxam Job Number: EA934996

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
3270289 EO1	MATRIX SPIKE [P69850-01]	Total Lead (Pb)	2009/07/13		86	%	75 - 125		
		Total Nickel (Ni)	2009/07/13		84	%	75 - 125		
		Total Zinc (Zn)	2009/07/13		92	%	75 - 125		
	QC STANDARD	Total Arsenic (As)	2009/07/13		79	%	72 - 128		
		Total Chromium (Cr)	2009/07/13		60	%	50 - 150		
		Total Cobalt (Co)	2009/07/13		91	%	75 - 125		
		Total Copper (Cu)	2009/07/13		77	%	72 - 127		
		Total Lead (Pb)	2009/07/13		84	%	65 - 135		
		Total Nickel (Ni)	2009/07/13		84	%	75 - 125		
	BLANK	Total Zinc (Zn)	2009/07/13		80	%	74 - 125		
		Total Arsenic (As)	2009/07/13	<1		mg/kg			
		Total Cadmium (Cd)	2009/07/13	<0.1		mg/kg			
		Total Chromium (Cr)	2009/07/13	<1		mg/kg			
		Total Cobalt (Co)	2009/07/13	<1		mg/kg			
		Total Copper (Cu)	2009/07/13	<5		mg/kg			
		Total Lead (Pb)	2009/07/13	<1		mg/kg			
		Total Nickel (Ni)	2009/07/13	<1		mg/kg			
		Total Zinc (Zn)	2009/07/13	<10		mg/kg			
		RPD [P69850-01]	Total Arsenic (As)	2009/07/13	NC		%	35	
	Total Cadmium (Cd)		2009/07/13	NC		%	35		
	Total Chromium (Cr)		2009/07/13	2.3		%	35		
	Total Cobalt (Co)		2009/07/13	NC		%	35		
	Total Copper (Cu)		2009/07/13	NC		%	35		
	Total Lead (Pb)		2009/07/13	NC		%	35		
	Total Nickel (Ni)		2009/07/13	1.6		%	35		
	Total Zinc (Zn)		2009/07/13	NC		%	35		
	3271114 EO1		Calibration Check	Total Arsenic (As)	2009/07/14		82	%	80 - 120
				Total Cadmium (Cd)	2009/07/14		85	%	80 - 120
		Total Chromium (Cr)		2009/07/14		81	%	80 - 120	
		Total Cobalt (Co)		2009/07/14		87	%	80 - 120	
		Total Copper (Cu)		2009/07/14		83	%	80 - 120	
		Total Lead (Pb)		2009/07/14		85	%	80 - 120	
Total Nickel (Ni)		2009/07/14			86	%	80 - 120		
Total Zinc (Zn)		2009/07/14			106	%	80 - 120		
MATRIX SPIKE [P70037-01]		Total Arsenic (As)	2009/07/14		84	%	75 - 125		
		Total Cadmium (Cd)	2009/07/14		85	%	75 - 125		
		Total Chromium (Cr)	2009/07/14		85	%	75 - 125		
		Total Cobalt (Co)	2009/07/14		87	%	75 - 125		
		Total Copper (Cu)	2009/07/14		82	%	75 - 125		
		Total Lead (Pb)	2009/07/14		84	%	75 - 125		
		Total Nickel (Ni)	2009/07/14		86	%	75 - 125		
		Total Zinc (Zn)	2009/07/14		91	%	75 - 125		
QC STANDARD		Total Arsenic (As)	2009/07/14		82	%	72 - 128		
		Total Chromium (Cr)	2009/07/14		59	%	50 - 150		
		Total Cobalt (Co)	2009/07/14		94	%	75 - 125		
		Total Copper (Cu)	2009/07/14		77	%	72 - 127		
		Total Lead (Pb)	2009/07/14		83	%	65 - 135		
		Total Nickel (Ni)	2009/07/14		86	%	75 - 125		
		Total Zinc (Zn)	2009/07/14		81	%	74 - 125		
		BLANK	Total Arsenic (As)	2009/07/14	<1		mg/kg		
Total Cadmium (Cd)			2009/07/14	<0.1		mg/kg			
Total Chromium (Cr)			2009/07/14	<1		mg/kg			
Total Cobalt (Co)			2009/07/14	<1		mg/kg			



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Quality Assurance Report (Continued)

Maxxam Job Number: EA934996

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
3271114 EO1	BLANK	Total Copper (Cu)	2009/07/14	<5		mg/kg			
		Total Lead (Pb)	2009/07/14	<1		mg/kg			
		Total Nickel (Ni)	2009/07/14	<1		mg/kg			
		Total Zinc (Zn)	2009/07/14	<10		mg/kg			
	RPD [P70037-01]	Total Arsenic (As)	2009/07/14	NC		%	35		
		Total Cadmium (Cd)	2009/07/14	NC		%	35		
		Total Chromium (Cr)	2009/07/14	2.5		%	35		
		Total Cobalt (Co)	2009/07/14	NC		%	35		
		Total Copper (Cu)	2009/07/14	NC		%	35		
		Total Lead (Pb)	2009/07/14	NC		%	35		
		Total Nickel (Ni)	2009/07/14	2.8		%	35		
		Total Zinc (Zn)	2009/07/14	NC		%	35		
		3271115 CC6	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/15		93	%	60 - 140
				D10-ETHYLBENZENE (sur.)	2009/07/15		103	%	30 - 130
D4-1,2-DICHLOROETHANE (sur.)	2009/07/15				97	%	60 - 140		
D8-TOLUENE (sur.)	2009/07/15				97	%	60 - 140		
Benzene	2009/07/15				85	%	60 - 140		
Toluene	2009/07/15				86	%	60 - 140		
SPIKE	Ethylbenzene		2009/07/15		96	%	60 - 140		
	m & p-Xylene		2009/07/15		98	%	60 - 140		
	o-Xylene		2009/07/15		97	%	60 - 140		
	(C6-C10)		2009/07/15		125	%	60 - 140		
	4-BROMOFLUOROBENZENE (sur.)		2009/07/15		95	%	60 - 140		
	D10-ETHYLBENZENE (sur.)		2009/07/15		103	%	30 - 130		
	D4-1,2-DICHLOROETHANE (sur.)		2009/07/15		93	%	60 - 140		
	D8-TOLUENE (sur.)		2009/07/15		99	%	60 - 140		
BLANK	Benzene	2009/07/15		84	%	60 - 140			
	Toluene	2009/07/15		87	%	60 - 140			
	Ethylbenzene	2009/07/15		97	%	60 - 140			
	m & p-Xylene	2009/07/15		98	%	60 - 140			
	o-Xylene	2009/07/15		95	%	60 - 140			
	(C6-C10)	2009/07/15		106	%	80 - 120			
	4-BROMOFLUOROBENZENE (sur.)	2009/07/16		99	%	60 - 140			
	D10-ETHYLBENZENE (sur.)	2009/07/16		104	%	30 - 130			
	D4-1,2-DICHLOROETHANE (sur.)	2009/07/16		100	%	60 - 140			
	D8-TOLUENE (sur.)	2009/07/16		108	%	60 - 140			
RPD	Benzene	2009/07/16	<0.0050			mg/kg			
	Toluene	2009/07/16	<0.020			mg/kg			
	Ethylbenzene	2009/07/16	<0.010			mg/kg			
	Xylenes (Total)	2009/07/16	<0.040			mg/kg			
	m & p-Xylene	2009/07/16	<0.040			mg/kg			
	o-Xylene	2009/07/16	<0.020			mg/kg			
	F1 (C6-C10) - BTEX	2009/07/16	<12			mg/kg			
	(C6-C10)	2009/07/16	<12			mg/kg			
	Benzene	2009/07/15	NC			%	50		
	Toluene	2009/07/15	NC			%	50		
	Ethylbenzene	2009/07/15	NC			%	50		
	Xylenes (Total)	2009/07/15	NC			%	50		
	m & p-Xylene	2009/07/15	NC			%	50		
	o-Xylene	2009/07/15	NC			%	50		
F1 (C6-C10) - BTEX	2009/07/15	NC			%	50			
(C6-C10)	2009/07/15	NC			%	50			
3271394 JP6	BLANK	Moisture	2009/07/14	<0.3		%			
	RPD	Moisture	2009/07/14	2.5		%	20		
3271409 AS7	Calibration Check	Total Arsenic (As)	2009/07/15		99	%	80 - 120		



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Location: JOHNSON POINT/LOBE P STOCKPILE

Quality Assurance Report (Continued)

Maxxam Job Number: EA934996

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3271409 AS7	Calibration Check	Total Cadmium (Cd)	2009/07/15		102	%	80 - 120
		Total Chromium (Cr)	2009/07/15		99	%	80 - 120
		Total Cobalt (Co)	2009/07/15		104	%	80 - 120
		Total Copper (Cu)	2009/07/15		100	%	80 - 120
		Total Lead (Pb)	2009/07/15		103	%	80 - 120
		Total Nickel (Ni)	2009/07/15		102	%	80 - 120
		Total Zinc (Zn)	2009/07/15		116	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2009/07/15		91	%	75 - 125
		Total Cadmium (Cd)	2009/07/15		94	%	75 - 125
		Total Chromium (Cr)	2009/07/15		97	%	75 - 125
		Total Cobalt (Co)	2009/07/15		94	%	75 - 125
		Total Copper (Cu)	2009/07/15		95	%	75 - 125
		Total Lead (Pb)	2009/07/15		95	%	75 - 125
		Total Nickel (Ni)	2009/07/15		101	%	75 - 125
	QC STANDARD	Total Zinc (Zn)	2009/07/15		112	%	75 - 125
		Total Arsenic (As)	2009/07/14		89	%	72 - 128
		Total Chromium (Cr)	2009/07/14		63	%	50 - 150
		Total Cobalt (Co)	2009/07/14		93	%	75 - 125
		Total Copper (Cu)	2009/07/14		77	%	72 - 127
		Total Lead (Pb)	2009/07/14		80	%	65 - 135
		Total Nickel (Ni)	2009/07/14		88	%	75 - 125
	BLANK	Total Zinc (Zn)	2009/07/14		77	%	74 - 125
		Total Arsenic (As)	2009/07/14	<1		mg/kg	
		Total Cadmium (Cd)	2009/07/14	<0.1		mg/kg	
		Total Chromium (Cr)	2009/07/14	<1		mg/kg	
		Total Cobalt (Co)	2009/07/14	<1		mg/kg	
		Total Copper (Cu)	2009/07/14	<5		mg/kg	
		Total Lead (Pb)	2009/07/14	<1		mg/kg	
	RPD	Total Nickel (Ni)	2009/07/14	<1		mg/kg	
		Total Zinc (Zn)	2009/07/14	<10		mg/kg	
		Total Arsenic (As)	2009/07/14	NC		%	35
		Total Cadmium (Cd)	2009/07/14	NC		%	35
		Total Chromium (Cr)	2009/07/14	4.5		%	35
		Total Cobalt (Co)	2009/07/14	NC		%	35
		Total Copper (Cu)	2009/07/14	NC		%	35
3271553 AS7	Calibration Check	Total Lead (Pb)	2009/07/14	3.4		%	35
		Total Nickel (Ni)	2009/07/14	4.6		%	35
		Total Zinc (Zn)	2009/07/14	NC		%	35
		Total Arsenic (As)	2009/07/14		92	%	80 - 120
		Total Cadmium (Cd)	2009/07/14		93	%	80 - 120
		Total Chromium (Cr)	2009/07/14		85	%	80 - 120
		Total Cobalt (Co)	2009/07/14		91	%	80 - 120
	MATRIX SPIKE [P69938-01]	Total Copper (Cu)	2009/07/14		87	%	80 - 120
		Total Lead (Pb)	2009/07/14		91	%	80 - 120
		Total Nickel (Ni)	2009/07/14		90	%	80 - 120
3271553 AS7	Calibration Check	Total Zinc (Zn)	2009/07/14		105	%	80 - 120
		Total Arsenic (As)	2009/07/14		81	%	75 - 125
		Total Cadmium (Cd)	2009/07/14		81	%	75 - 125
		Total Chromium (Cr)	2009/07/14		81	%	75 - 125
		Total Cobalt (Co)	2009/07/14		80	%	75 - 125
		Total Copper (Cu)	2009/07/14		80	%	75 - 125
		Total Lead (Pb)	2009/07/14		78	%	75 - 125
Total Nickel (Ni)	2009/07/14		79	%	75 - 125		
Total Zinc (Zn)	2009/07/14		86	%	75 - 125		



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Location: JOHNSON POINT/LOBE P STOCKPILE

Quality Assurance Report (Continued)

Maxxam Job Number: EA934996

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3271553 AS7	QC STANDARD	Total Arsenic (As)	2009/07/14		87	%	72 - 128	
		Total Chromium (Cr)	2009/07/14		70	%	50 - 150	
		Total Cobalt (Co)	2009/07/14		91	%	75 - 125	
		Total Copper (Cu)	2009/07/14		78	%	72 - 127	
		Total Lead (Pb)	2009/07/14		80	%	65 - 135	
		Total Nickel (Ni)	2009/07/14		88	%	75 - 125	
		Total Zinc (Zn)	2009/07/14		77	%	74 - 125	
	BLANK	Total Arsenic (As)	2009/07/14	<1			mg/kg	
		Total Cadmium (Cd)	2009/07/14	<0.1			mg/kg	
		Total Chromium (Cr)	2009/07/14	<1			mg/kg	
		Total Cobalt (Co)	2009/07/14	<1			mg/kg	
		Total Copper (Cu)	2009/07/14	<5			mg/kg	
		Total Lead (Pb)	2009/07/14	<1			mg/kg	
		Total Nickel (Ni)	2009/07/14	<1			mg/kg	
	RPD [P69938-01]	Total Zinc (Zn)	2009/07/14	<10			mg/kg	
		Total Arsenic (As)	2009/07/14	NC			%	35
		Total Cadmium (Cd)	2009/07/14	NC			%	35
		Total Chromium (Cr)	2009/07/14	2.2			%	35
		Total Cobalt (Co)	2009/07/14	NC			%	35
		Total Copper (Cu)	2009/07/14	NC			%	35
Total Lead (Pb)		2009/07/14	NC			%	35	
3274308 EO1	Calibration Check	Total Nickel (Ni)	2009/07/14	2.2		%	35	
		Total Zinc (Zn)	2009/07/14	NC		%	35	
		Total Arsenic (As)	2009/07/15		93	%	80 - 120	
		Total Cadmium (Cd)	2009/07/15		97	%	80 - 120	
		Total Chromium (Cr)	2009/07/15		94	%	80 - 120	
		Total Cobalt (Co)	2009/07/15		98	%	80 - 120	
		Total Copper (Cu)	2009/07/15		95	%	80 - 120	
	MATRIX SPIKE [P69875-01]	Total Lead (Pb)	2009/07/15		97	%	80 - 120	
		Total Nickel (Ni)	2009/07/15		97	%	80 - 120	
		Total Zinc (Zn)	2009/07/15		101	%	80 - 120	
		Total Arsenic (As)	2009/07/15		94	%	75 - 125	
		Total Cadmium (Cd)	2009/07/15		97	%	75 - 125	
		Total Chromium (Cr)	2009/07/15		98	%	75 - 125	
		Total Cobalt (Co)	2009/07/15		96	%	75 - 125	
	QC STANDARD	Total Copper (Cu)	2009/07/15		91	%	75 - 125	
		Total Lead (Pb)	2009/07/15		96	%	75 - 125	
		Total Nickel (Ni)	2009/07/15		97	%	75 - 125	
		Total Zinc (Zn)	2009/07/15		105	%	75 - 125	
		Total Arsenic (As)	2009/07/15		97	%	72 - 128	
		Total Chromium (Cr)	2009/07/15		74	%	50 - 150	
Total Cobalt (Co)		2009/07/15		108	%	75 - 125		
BLANK	Total Copper (Cu)	2009/07/15		89	%	72 - 127		
	Total Lead (Pb)	2009/07/15		94	%	65 - 135		
	Total Nickel (Ni)	2009/07/15		101	%	75 - 125		
	Total Zinc (Zn)	2009/07/15		93	%	74 - 125		
	Total Arsenic (As)	2009/07/15	<1			mg/kg		
	Total Cadmium (Cd)	2009/07/15	<0.1			mg/kg		
	Total Chromium (Cr)	2009/07/15	<1			mg/kg		
BLANK	Total Cobalt (Co)	2009/07/15	<1			mg/kg		
	Total Copper (Cu)	2009/07/15	<5			mg/kg		
	Total Lead (Pb)	2009/07/15	<1			mg/kg		
	Total Nickel (Ni)	2009/07/15	<1			mg/kg		
	Total Zinc (Zn)	2009/07/15	<10			mg/kg		



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Location: JOHNSON POINT/LOBE P STOCKPILE

Quality Assurance Report (Continued)

Maxxam Job Number: EA934996

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3274308 EO1	RPD [P69875-01]	Total Arsenic (As)	2009/07/15	NC		%	35
		Total Cadmium (Cd)	2009/07/15	NC		%	35
		Total Chromium (Cr)	2009/07/15	1.2		%	35
		Total Cobalt (Co)	2009/07/15	NC		%	35
		Total Copper (Cu)	2009/07/15	NC		%	35
		Total Lead (Pb)	2009/07/15	NC		%	35
		Total Nickel (Ni)	2009/07/15	1.8		%	35
		Total Zinc (Zn)	2009/07/15	NC		%	35

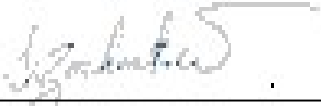
NC = Non-calculable
 RPD = Relative Percent Difference

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780)577-7100 FAX(780)450-4187

Validation Signature Page

Maxxam Job #: A934996

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



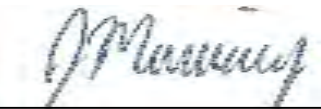
DIANE ZACHARKIW, Scientific Specialist



DAVE HUANG, BBY Scientific Specialist



LISA CUMMINGS, Extractables Supervisor



JOSHUA MORRISEY,

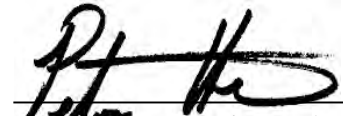


HUA WO,

Validation Signature Page

Maxxam Job #: A934996

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



PETER CHOW, Senior Analyst

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

099(10)



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077

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81174 CHAIN OF CUSTODY

Page: 1 of 14

A934996

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue (accounting)

Address: ana.galue@aecom.com
Prov: Calgary, AB PC: E

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
Dara Schmidt - AECOM
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3
Ph: 403-450-9926 **Fax:** 403-270-4822
(Site Office)

PO # / AFE #:

Quotation #: COS-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: Lobe P Stockpile

Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1

CGME

OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.nanda@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required:

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)						OTHER TEST(S)			*HOLD for 60 Days # of Containers Submitted			
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)*	Assessment (CP Metals)	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved		Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	
1 09-400 09-270	S	2009/07/05 17:30				X														3
2 09-270		17:35																		
3 -271		17:40																		
4 -272		17:45																		
5 -273		17:50																		
6 -274		17:55																		
7 -275		18:00																		
8 -276		18:00																		
9 -277																				
10 -278																				
11 -279																				
12 09-280	S	2009/07/05				X														3

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Dara Schmidt Date/Time: 18:00 July 7
Sign and Print: D Schmidt

COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL RPTS PLEASE.
*Metals - Cu, Co, Cd, Pb, Zn, Cr, As, Ni

# JARS USED & NOT SUBMITTED	09/07/09	Received By	Temperature			Ice
	11:45h	RT	7/6/6	6/6/4	5/7/6	
	CUSTODY SEAL YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		6/6/6	6/6/4	6/6/6	

099(10)



Calgary: 4000 19st St. NE, T2E 6P8
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81173 CHAIN OF CUSTODY

Page: 2 of 14

Invoice To: Require Report? Yes No

Company Name: ANA GALUE (AECOM)

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: Calgary AB **PC:**

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To: Dara Schmidt - AECOM
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3

Ph: 403-450-9926 **Fax:** 403-270-4823
(site) office

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: LOBE P Stockpile

Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
cara.schmidt@
aecom.com
priya.handa@
aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)							WATERS (footnotes defined on back)							OTHER TEST(S)			# of Containers Submitted				
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)*	Assessment (CP Metals) ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC						
09-281	S	2009/07/05				X													X				3	
-282																								
-283																								
-284																								
-285																								
-286																								
-287																								
-288																								
-289																								
-290																								
-291																								
09-292	S	2009/07/05				X																		3

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to page 1 Date/Time: _____

Sign and Print: _____

# JARS USED & NOT SUBMITTED	Received By		Temperature			Ice
	09/07/09 11:45h	RT	7/6/6	6/6/4	5/7/6	
CUSTODY SEAL		YES	NO	bags	bags	7/6/8
				8/6/7		

COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL RPTS - PLEASE
see page 1 for inorganics.

099(10)



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

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Ph: (780) 465-1212

Fax: (780) 450-4187

Toll free: (877) 465-8889

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81176 CHAIN OF CUSTODY

Page: 4 of 14

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: Ana Galue
Address: ana.galue@aecom.com
Prov: Calgary, AB **PC:** T6
Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
 AECOM - Dara Schmidt
 2540 Kensington Rd NW
 Calgary
Prov: AB **PC:** T2N 3S3
Ph: 403-450-9926 **Fax:** 403-270-4822
 (5 site) Office

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location:
Sampler's Initials: refer to pg 1

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 priya.handa@aecom.com

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)						WATERS (footnotes defined on back)						OTHER TEST(S)																										
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	REGULATED METALS (CCME / AT1) ³	Mercury	Total	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Ammonia	TKN	COD	TOC	DOC	*HOLD for 60 Days	# of Containers Submitted						
1 09-305	S	2009/07/06				X																											X								
2 306																																									
3 307																																									
4 308																																									
5 309																																									
6 310																																									
7 311																																									
8 312																																									
9 313																																									
10 314																																									
11 315																																									
12 09-316	S	2009/07/06				X																																			

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to pg 1 Date/Time: _____
 Sign and Print: _____

JARS USED & NOT SUBMITTED: 09/07/09
 Received By: RT
 11:45h
 Temperature: 7/6/6, 6/6/4, 5/7/6, 6/6/6, 6/6/6, 6/6/6
 Ice: _____
 CUSTODY SEAL YES (NO) 8/6/7

COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL RPTS. PLEASE
 * see metals note pg 1

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: Ana Galuc
Address: ana.galuc@aecom.com
Prov: Calgary AB **PC:** _____
Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM - Dara Schmidt
2540 Kensington Rd NW
Calgary
Prov: AB **PC:** T2N 3S3
 Ph: 403-450-9926 Fax: 403-270-4822
 office

PO # / AFE #: _____
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: _____
Sampler's Initials: Refer to pg 1

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.bandla@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)							OTHER TEST(S)																	
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)*	Assessment (CP Metals) <input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1) <input type="checkbox"/> TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	PCB	TPH	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved <input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia	TKN	COD	TOC	DOC	HOLD for 60 Days	# of Containers Submitted								
1 <u>09-317</u>	<u>S</u>	<u>2009/07/06</u>				<u>X</u>																										
2 <u>318</u>																																
3 <u>319</u>																																
4 <u>320</u>																																
5 <u>321</u>																																
6 <u>322</u>																																
7 <u>323</u>																																
8 <u>324</u>																																
9 <u>325</u>																																
10 <u>326</u>																																
11 <u>327</u>																																
12 <u>09-328</u>	<u>S</u>	<u>2009/07/06</u>				<u>X</u>																										

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager. Maxxam Job #: _____

Relinquished By: see page 1 Date/Time: _____
 Sign and Print: _____
 COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL RPTS PLEASE

# JARS USED & NOT SUBMITTED	Received By		Temperature			Ice
	<u>09/07/09</u>	<u>RT</u>	<u>7/6/6</u>	<u>6/6/4</u>	<u>5/7/6</u>	
	<u>11:45h</u>		<u>6/6/6</u>	<u>6/6/4</u>	<u>6/6/6</u>	
CUSTODY SEAL		YES	<u>(NO)</u>			

bags bags 7/6/8
8/8/7

099(10)



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81178 CHAIN OF CUSTODY

Page: 6 of 14

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: _____ PC: _____

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:

AECOM - Dara Schmidt

2540 Kensington Rd NW

Calgary

Prov: AB PC: T2N 3S3

Ph: 403-270-9926 (site) 450 Fax: 403-270-4822 office

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: refer to pg 1

Sampler's Initials: PG

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

- AT1 _____
- CCME _____
- OTHER _____

SERVICE REQUESTED: RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

 REGULAR Turnaround (5 to 7 Days)**REPORT DISTRIBUTION:**

EMAIL ADDRESS(S):
clara.schmidt@aecom.com
priya.handa@aecom.com

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)						WATERS (footnotes defined on back)						OTHER TEST(S)	*HOLD for 60 Days	# of Containers Submitted					
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved <input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered				Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC		
1 09-329	S	2009/07/06				X																
2 330																						
3 331																						
4 332																						
5 333																						
6 334																						
7 335																						
8 336																						
9 337																						
10 338																						
11 339																						
12 09-340	S	2009/07/06				X																3

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____

Sign and Print: See pg 1COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL RPTS. PLEASESee pg 1

Page 112 of 120

# JARS USED & NOT SUBMITTED	Received By	Temperature			Ice
	<u>09/07/09</u> <u>11:45h</u>	<u>RT</u>	<u>7/6/6</u>	<u>6/6/4</u>	
CUSTODY SEAL		YES	NO		
			<u>bags</u>	<u>bags</u>	<u>7/6/8</u>
			<u>8/6/7</u>		

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALUE

Address: ana.galue@aecom.com

Prov: Calgary, AB **PC:**

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:

Dara Schmidt (AECOM)

2540 Kensington Rd NW

Calgary

Prov: AB **PC:** T2N 3S3

Ph: 403-450-9926 Fax: 403-270-4822

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: refer to pg 1

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1

CCME

OTHER

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

dara.schmidt@aecom.com

priya.handa@aecom.com

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)							WATERS (footnotes defined on back)						OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment (CP Metals) ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC		
1 09-365	S	2009/07/06				X														3
2 366																				
3 367																				
4 368																				
5 369																				
6 370																				
7 371																				
8 372																				
9 373																				
10 374																				
11 375																				
12 09-376	S	2009/07/06				X														3

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS

refer to 1
pg 1

JARS USED & NOT SUBMITTED: 09/07/09 11:45h

Received By: RT

Temperature			Ice
7/6/6	6/6/4	5/3/6	
6/6/6	6/6/4	6/6/6	
bags	bags	7/6/8	

CUSTODY SEAL YES NO

8/6/7

099 (10)



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Edmonton: 9331 - 48 Street, T6B 2R4

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www.maxxamanalytics.com

81182 CHAIN OF CUSTODY

Page: 10 of 14

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALUE

Address: ana.galue@aecom.com

Prov: algary AB **PC:**

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:

DARA SCHMIDT (AECOM)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3

Ph: 403-450-9926 **Fax:** 403-270-4822
(office)

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: refer to page 1

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1

CCME

OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

		SOILS (footnotes defined on back)					WATERS (footnotes defined on back)					OTHER TEST(S)																								
Sample Identification		BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment (CP Metals) ²	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total Preserved	Not Preserved	Dissolved Preserved	Not Preserved	Filtered	Not Filtered	Total	Dissolved	Mercury	Ammonia	TKN	COD	TOC	DOC	*HOLD for 60 Days	# of Containers Submitted	
1	09-317				X																															3
2	318																																			
3	319																																			
4	380																																			
5	381																																			
6	382																																			
7	383																																			
8	384																																			
9	385																																			
10	386																																			
11	387																																			
12	09-388				X																															X

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: refer to page 1

# JARS USED & NOT SUBMITTED	09/07/09	Received By	Temperature			Ice
	11:45h	RT	7/6/6	6/6/4	5/7/6	
			6/6/6	6/6/4	6/6/6	
CUSTODY SEAL		YES	NO			
			bags	bags	7/6/8	
			8/6/7			

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: ANA GALUE
Address: ana.galue@aecom.com
Prov: Calgary AB **PC:**
Contact #s: Ph: 403-270-9200 Fax: 403-270-6399

Report To:
 Dara Schmidt (AECOM)
 2540 Kensington Rd NW
 Calgary
Prov: AB **PC:** T
 Ph: 403-450-9926 Fax: 403-270-4822
 (Site) office

PO # / AFE #:
Quotation #: C08-329 (Amise)
Project #: 2977-371-00
Project Name: Johnson Point
Location:
Sampler's Initials: refer to pg 1

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 pnja.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required:
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)												WATERS (footnotes defined on back)						OTHER TEST(S)																			
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter	<input type="checkbox"/> Flashpoint	<input type="checkbox"/> pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC	*HOLD for 60 Days	# of Containers Submitted		
1	09-389	S	2009/07/06				X																														X			
2	389																																							
3	391																																							
4	392																																							
5	393																																							
6	394																																							
7	395																																							
8	396																																							
9	397																																							
10	398																																							
11	399		2009/07/06																																					
12	09-400	S	2009/07/07				X																																X	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ **Date/Time:** _____
Sign and Print: _____
COMMENTS/SPECIAL INSTRUCTIONS: refer to page 1

# JARS USED & NOT SUBMITTED	Received By	Temperature			Ice
		7/6/6	6/6/4	5/7/6	
		6/6/6	6/6/4	6/6/6	
09/07/09	RT				
11:45h					
CUSTODY SEAL YES (NO)		bag's	bag's	7/6/8	
		8/6/7			

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: ana Galue
Address: ana.galue@aecom.com
Prov: Calgary AB **PC:** _____
Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
Dara Schmidt (AECOM)
2540 Kensington Rd NW
Calgary
Prov: AB **PC:** T2N 3S3
 Ph: 403-450-9926 Fax: 403-270-4822
 (Site Office)

PO # / AFE #: _____
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: _____
Sampler's Initials: refer to pgs 1

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use
 AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
pnaya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)								WATERS (footnotes defined on back)							OTHER TEST(S)		*HOLD for 60 Days # of Containers Submitted		
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	PCB	TPH	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved <input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC			
1 <u>09-401</u>	<u>S</u>	<u>2009/07/07</u>				<u>X</u>			<u>X</u>	<u>X</u>											<u>3</u>	
2 <u>402</u>																						
3 <u>403</u>																						
4 <u>404</u>																						
5 <u>405</u>																						
6 <u>406</u>																						
7 <u>407</u>																						
8 <u>408</u>																						
9 <u>409</u>																						
10 <u>410</u>																						
11 <u>411</u>																						
12 <u>09-412</u>	<u>S</u>	<u>2009/07/07</u>				<u>X</u>			<u>X</u>	<u>X</u>												<u>3</u>

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #: _____

Relinquished By: refer to pgs 1 Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: 1

# JARS USED & NOT SUBMITTED	Received By		Temperature			Ice
	<u>09/07/09</u> <u>11:45h</u>	<u>RT</u>	<u>7/6/6</u>	<u>6/6/4</u>	<u>5/7/6</u>	
			<u>6/6/6</u>	<u>6/6/4</u>	<u>6/6/6</u>	
CUSTODY SEAL	YES	<u>NO</u>	<u>bags</u>	<u>bags</u>	<u>7/6/8</u>	

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALUE

Address: ana.galue@aecom.com

Prov: _____ **PC:** _____

Contact #s: **Ph:** 403-270-9200 **Fax:** 403-270-0399

Report To:
Dara Schmidt (AECOM)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3

Ph: 403-450-9926 **Fax:** _____

PO # / AFE #: _____

Quotation #: C08-329

Project #: 2977371-00

Project Name: Johnson Point

Location: _____

Sampler's Initials: refer to pg 1

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)					OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted		
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment (CP Metals) ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved		Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC
1 <u>09-413</u>	<u>S</u>	<u>2009/07/07</u>				X													<u>3</u>
2 <u>414</u>																			
3 <u>415</u>																			
4 <u>416</u>																			
5 <u>417</u>																			
6 <u>418</u>																			
7 <u>419</u>																			
8 <u>420</u>																			
9 <u>421</u>																			
10 <u>422</u>																			
11 <u>423</u>																			
12 <u>09-424</u>	<u>S</u>	<u>2009/07/07</u>				X													<u>3</u>

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

refer to page 1

# JARS USED & NOT SUBMITTED	<u>09/07/09</u> <u>11:45h</u>	Received By			Temperature			Ice
		<u>RT</u>	<u>7/6/6</u>	<u>6/6/4</u>	<u>5/7/6</u>			
CUSTODY SEAL		YES	<input checked="" type="radio"/> NO	<u>bags</u>	<u>bags</u>	<u>7/6/8</u>		

099(10)



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Edmonton: 9331 - 48 Street, T6B 2R4

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www.maxxamanalytics.com

81186 CHAIN OF CUSTODY

Page: 14 of 14

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALUE

Address: ana.galue@aecom.com

Prov: Calgary, AB **PC:**

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:

Dara Schmidt (AECOM)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3

Ph: 403-450-9926 **Fax:** 403-270-4822

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: refer to pg 1

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)											WATERS (footnotes defined on back)											OTHER TEST(S)											
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment (CP Metals)	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	PCB	TPH	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	NOBTEX	Routine Water Package	Turb	F	Total Preserved	Not Preserved	Dissolved Preserved	Not Preserved	Filtered	Not Filtered	Total Dissolved	Mercury	Ammonia	TKN	COD	TOC	DOC
1	S	2009/07/07				X						X	X			X	X	X	X																	
2	W	2009/07/07														X	X	X	X																	
3																X	X	X	X																	
4																X	X	X	X																	
5																X	X	X	X																	
6																X	X	X	X																	
7	W															X	X	X	X																	
8	S																X	X																		
9	S	2009/07/07																																		
10																																				
11																																				
12																																				

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to pg 1 **Date/Time:** _____

Sign and Print: _____

JARS USED & NOT SUBMITTED: _____

Received By: RT

09/07/09 11:45h

Temperature: 7/6/6, 6/6/4, 5/7/6, 6/6/6, 6/6/4, 6/6/6

CUSTODY SEAL YES NO

bags 8/6/7

COMMENTS/SPECIAL INSTRUCTIONS:
Water - C5-10 & W-10-19 NO BTEX

Page 120 of 120

Task Order#:
 Site#:
 Site Location:
 Project #: A934996
 Your C.O.C. #: na

Attention: Erin Anderson

Maxxam Analytics
 Edmonton - ENV
 9331-48 St
 Edmonton, AB
 T6B 2R4

Report Date: 2009/07/21

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A988385

Received: 2009/07/15, 09:13

Sample Matrix: Soil
 # Samples Received: 2

Analyses	Quantity	Laboratory Method	Method Primary reference
Sample Disposal Charge	2		
MOISTURE	2	CAM SOP-00445	McKeague 2nd ed 1978
Polychlorinated Biphenyl in Soil	2	CAM SOP-00309	SW846 8082

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ELORA DI BRATTO, Project Manager
 Email: Elora.DiBratto@maxxamanalytics.com
 Phone# (905) 817-5700

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

Maxxam Job #: A988385
 Report Date: 2009/07/21

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DB8167	DB8168		
Sampling Date		2009/07/06	2009/07/06		
COC Number		na	na		
	Units	P69937-02R\09-309	P69938-02R\09-310	RDL	QC Batch

Moisture	%	8.9	9.6	0.2	1882725
----------	---	-----	-----	-----	---------

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A988385
 Report Date: 2009/07/21

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DB8167	DB8168		
Sampling Date		2009/07/06	2009/07/06		
COC Number		na	na		
	Units	P69937-02R109-309	P69938-02R109-310	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	0.01	1880386
Aroclor 1016	ug/g	<0.01	<0.01	0.01	1880386
Aroclor 1221	ug/g	<0.01	<0.01	0.01	1880386
Aroclor 1232	ug/g	<0.01	<0.01	0.01	1880386
Aroclor 1242	ug/g	<0.01	<0.01	0.01	1880386
Aroclor 1248	ug/g	<0.01	<0.01	0.01	1880386
Aroclor 1254	ug/g	<0.01	<0.01	0.01	1880386
Aroclor 1260	ug/g	<0.01	<0.01	0.01	1880386
Aroclor 1268	ug/g	<0.01	<0.01	0.01	1880386
Total PCB	ug/g	<0.01	<0.01	0.01	1880386
Extraction Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	68	69		1880386
Decachlorobiphenyl	%	102	97		1880386
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: A988385
 Report Date: 2009/07/21

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A934996

Test Summary

Maxxam ID DB8167
Sample ID P69937-02R\09-309
Matrix Soil

Collected 2009/07/06
Shipped
Received 2009/07/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1882725	N/A	2009/07/20	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1880386	2009/07/16	2009/07/17	LPG

Maxxam ID DB8168
Sample ID P69938-02R\09-310
Matrix Soil

Collected 2009/07/06
Shipped
Received 2009/07/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1882725	N/A	2009/07/20	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1880386	2009/07/16	2009/07/17	LPG

Maxxam Job #: A988385
Report Date: 2009/07/21

Maxxam Analytics
Task Order#:
Site#:

Project #: A934996

Package 1	2.7°C
-----------	-------

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
 Task Order#:
 Site#:
 Site Location:
 Project #: A934996

Quality Assurance Report

Maxxam Job Number: A988385

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1880386	LPG	Method Blank	2009/07/17		78	%	40 - 130
		Decachlorobiphenyl	2009/07/17		104	%	40 - 130
		Aroclor 1262	2009/07/17	<0.01		ug/g	
		Aroclor 1016	2009/07/17	<0.01		ug/g	
		Aroclor 1221	2009/07/17	<0.01		ug/g	
		Aroclor 1232	2009/07/17	<0.01		ug/g	
		Aroclor 1242	2009/07/17	<0.01		ug/g	
		Aroclor 1248	2009/07/17	<0.01		ug/g	
		Aroclor 1254	2009/07/17	<0.01		ug/g	
		Aroclor 1260	2009/07/17	<0.01		ug/g	
		Aroclor 1268	2009/07/17	<0.01		ug/g	
		Total PCB	2009/07/17	<0.01		ug/g	
	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/17		78	%	40 - 130
		Decachlorobiphenyl	2009/07/17		104	%	40 - 130
		Aroclor 1260	2009/07/17		102	%	30 - 130
		Total PCB	2009/07/17		102	%	30 - 130

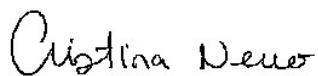
Validation Signature Page

Maxxam Job #: A988385

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CHARLES ANCKER, B.Sc., M.Sc., C.Chem, Senior Analyst



CRISTINA NERVO, Scientific Services

=====

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RUSH

MAXXAM ANALYTICS
9331 - 48th Street
Edmonton, Alberta, T6B 2R4
Phone: (780) 577-7100
Fax: (780) 450-4187

Page #: 4

AECOM - CALGARY
Maxxam PM Erin Maxxam

Maxxam
Analytics

SUBCONTRACTING REQUEST FORM

To: Maxxam Ontario (From Edmonton)

*** Job# A934996 ***

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Received @ Subcontract Lab by (sign) ZOFIA (print) ZOFIA ZENETA

Received @ Subcontract Lab (Date) 09/07/15 (Time) 9:13

Received Lab's Job # _____ Inspected by (print) _____ SIF Yes No

Upon receipt, record 3 temperatures for **each** package/cooler. If required by contract or legal sample, indicate if custody sealed.

Temp1 3°C Temp2 3°C Temp3 2°C Custody sealed YES

<u>Sample ID</u>	<u>MATRIX</u>	<u>Test(s) Required</u>	<u>Container</u>	<u>Date Sampled</u>	<u>Date Required</u>
P69931-02R \ 09-303	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69932-02R \ 09-304	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69933-02R \ 09-305	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69934-02R \ 09-306	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69935-02R \ 09-307	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69936-02R \ 09-308	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
✓ P69937-02R \ 09-309	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
✓ P69938-02R \ 09-310	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69939-02R \ 09-311	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69940-02R \ 09-312	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15
P69941-02R \ 09-313	S	Miscellaneous Organics Test	1	2009/07/06	2009/07/15

09 JUL 15 9:13

2 x 60ml glass jar

TD

JUL 13 2009

15-Jul-09 09:13
ANTONELLA BRASIL
A988385
J_L ENV-842

Urgent - ATTENTION
+ 2 missing samples

Continued...

099 (10)



Calgary: 403-270-1212
Edmonton: 781-44-5000, 1-877-414

Ph: (403) 270-1212 Fax: (781) 44-5187
Ph: (403) 270-1212 Fax: (781) 44-5187
Toll-free: (877) 855-3389

81176 CHAIN OF CUSTODY
Page 4 of 4

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galuc
Address: ana.galuc@aecom.com
Prov: Calgary, AB **PC:** T0
Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM - Dara Schmidt
2540 Kensington Rd NW
Calgary
Prov: AB **PC:** T2N 3S3
Ph: 403-450-9426 **Fax:** 403-270-4822
SITE CLIENT

NO. 1 AFE #:
Collection #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: refer to pg 1
Sampler's Initials: pg 1

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate limit use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
ana.galuc@aecom.com
praja.harada@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix SW	Date & Time Sampled Year-Month-Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)					OTHER TEST(S)	HOLD for 60 Days # of Containers Submitted		
			BTEX F1-F4 Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	BTEX F1	VOCs	BTEX F1-F4	BTEX F1-F2	Routine Water Package			Turb	F
1' 09-305	S	2009/07/06	X												3
2' 306															
3' 307															
4' 308															
5' 309															
6' 310															
7' 311															
8' 312															
9' 313															
10' 314															
11' 315															
12' 09-316	S	2009/07/06	X												3

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Relinquished By: refer to pg 1 Date/Time: _____
Sign and Print: _____
COMMENTS/SPECIAL INSTRUCTIONS: NO PARTIAL RPTS. PLEASE
* see metals note pg 1

# JARS USED & NOT SUBMITTED	Received By:	Temperature	Ice
	09/07/09 11:45h	RT	7/6/6 6/6/4 6/6/6 6/6/6 6/6/4 6/6/6
	CUSTODY SEAL YES (NO)	7/6/5 5/6/7	7/6/5



Your Project #: 2977-371-00
 Site Location: JOHNSON POINT, LOBE P-STOCKPILE
 Your C.O.C. #: 81168, 81169, 81171, 81172, 80837,
 80839, 80838, 174083

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/07/27

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A936987
Received: 2009/07/17, 16:50

Sample Matrix: Soil
 # Samples Received: 47

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	1	2009/07/19	2009/07/21	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	45	2009/07/19	2009/07/23	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	1	2009/07/19	2009/07/24	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	1	2009/07/19	2009/07/20	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	9	2009/07/19	2009/07/21	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	17	2009/07/19	2009/07/22	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	19	2009/07/19	2009/07/23	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	1	2009/07/23	2009/07/23	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Elements by ICPMS - Soils	6	2009/07/22	2009/07/22	CAL SOP-00191	EPA SW-846-6020A
Elements by ICPMS - Soils	10	2009/07/23	2009/07/23	CAL SOP-00191	EPA SW-846-6020A
Elements by ICPMS - Soils	3	2009/07/23	2009/07/24	CAL SOP-00191	EPA SW-846-6020A
Moisture	28	N/A	2009/07/21	EENVSOP-00139	Carter SSMA 51.2
Moisture	19	N/A	2009/07/27	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	1	2009/07/19	2009/07/20	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Hydrocarbons (C10-C30) in Soil By GC/FID	2	2009/07/19	2009/07/21	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Hydrocarbons (C10-C30) in Soil By GC/FID	19	2009/07/19	2009/07/23	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Hydrocarbons (C10-C30) in Soil By GC/FID	1	2009/07/23	2009/07/23	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
TPH (C6-C30) Soil Calc	1	N/A	2009/07/21		
TPH (C6-C30) Soil Calc	22	N/A	2009/07/24		

Sample Matrix: Water
 # Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/MTBE LH, VH, F1 SIM/MS	3	2009/07/21	2009/07/21	BRN-SOP-00304 R10.0	Based on EPA 8260B



Your Project #: 2977-371-00
 Site Location: JOHNSON POINT, LOBE P-STOCKPILE
 Your C.O.C. #: 81168, 81169, 81171, 81172, 80837,
 80839, 80838, 174083

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/07/27

CERTIFICATE OF ANALYSIS

-2-

Sample Matrix: Water
 # Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH	3	N/A	2009/07/21	EENVSOP-00054	SM 4500-H B
Urgent Extrac. HC in Water by GC/FID (1)	3	2009/07/21	2009/07/21	BRN SOP-00341 R14	Based BCCSR Method 4

- (1) This test was performed by Maxxam Vancouver
- (2) SCC/CAEAL

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
 Email: eanderson@maxxamanalytics.com
 Phone# (780) 577-7113 Ext:7113

=====
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For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82924	P82924	P82926		
Sampling Date		2009/07/11 09:30	2009/07/11 09:30	2009/07/12 09:20		
COC Number		81168	81168	81168		
	Units	09-440	09-440 Lab-Dup	09-441	RDL	QC Batch

Physical Properties						
Moisture	%	12	12	9.2	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	660	540	2600	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	200	140	420	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	41	34	31	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3283888
Toluene	mg/kg	<0.020	<0.020	0.046	0.020	3283888
Ethylbenzene	mg/kg	<0.010	<0.010	0.27	0.010	3283888
Xylenes (Total)	mg/kg	5.7	4.4	4.6	0.040	3283888
m & p-Xylene	mg/kg	3.3	2.5	1.3	0.040	3283888
o-Xylene	mg/kg	2.4	1.9	3.3	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	720	660	420	12	3283888
LH (C5-C10)	mg/kg	760	N/A	460	12	3283888
(C6-C10)	mg/kg	730	670	430	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	110	103	108	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	90	97	91	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	89	86	89	N/A	3283888
D8-TOLUENE (sur.)	%	81	85	83	N/A	3283888
O-TERPHENYL (sur.)	%	103	100	99	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82927	P82928	P82929		
Sampling Date		2009/07/12 16:15	2009/07/12 16:20	2009/07/12 16:25		
COC Number		81168	81168	81168		
	Units	09-442	09-443	09-444	RDL	QC Batch

Physical Properties						
Moisture	%	14	15	14	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	540	910	570	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	180	320	210	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	15	24	14	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	0.37	1.4	0.33	0.0050	3283888
Toluene	mg/kg	1.4	8.0	1.5	0.020	3283888
Ethylbenzene	mg/kg	0.94	4.3	1.0	0.010	3283888
Xylenes (Total)	mg/kg	5.8	24	7.7	0.040	3283888
m & p-Xylene	mg/kg	3.8	17	4.9	0.040	3283888
o-Xylene	mg/kg	2.1	7.7	2.8	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	290	990	290	12	3283888
LH (C5-C10)	mg/kg	330	1100	340	12	3283888
(C6-C10)	mg/kg	300	1000	300	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	108	85	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	85	101	97	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	88	86	77	N/A	3283888
D8-TOLUENE (sur.)	%	86	98	80	N/A	3283888
O-TERPHENYL (sur.)	%	110	107	98	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82930	P82931	P82932		
Sampling Date		2009/07/12 16:30	2009/07/12 16:35	2009/07/12 16:40		
COC Number		81168	81168	81168		
	Units	09-445	09-446	09-447	RDL	QC Batch

Physical Properties						
Moisture	%	14	15	15	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	480	640	1400	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	160	200	380	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	11	18	36	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	0.23	0.75	1.3	0.0050	3283888
Toluene	mg/kg	1.1	4.4	7.1	0.020	3283888
Ethylbenzene	mg/kg	0.69	2.5	4.1	0.010	3283888
Xylenes (Total)	mg/kg	4.4	14	26	0.040	3283888
m & p-Xylene	mg/kg	2.9	9.3	18	0.040	3283888
o-Xylene	mg/kg	1.4	4.4	8.6	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	51	550	1100	12	3283888
LH (C5-C10)	mg/kg	54	590	1100	12	3283888
(C6-C10)	mg/kg	57	570	1100	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	122	114	96	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	102	104	105	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	83	84	88	N/A	3283888
D8-TOLUENE (sur.)	%	110	87	92	N/A	3283888
O-TERPHENYL (sur.)	%	106	101	113	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82934	P82937	P82942		
Sampling Date		2009/07/12 16:45	2009/07/12 16:50	2009/07/12 16:55		
COC Number		81168	81168	81168		
	Units	09-448	09-449	09-450	RDL	QC Batch

Physical Properties						
Moisture	%	14	14	16	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1000	1500	1600	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	290	570	410	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	17	19	48	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	1.1	1.8	5.7	0.0050	3283888
Toluene	mg/kg	4.8	9.3	27	0.020	3283888
Ethylbenzene	mg/kg	2.7	4.7	13	0.010	3283888
Xylenes (Total)	mg/kg	17	34	68	0.040	3283888
m & p-Xylene	mg/kg	12	23	45	0.040	3283888
o-Xylene	mg/kg	5.8	11	22	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	580	1200	2600	12	3283888
LH (C5-C10)	mg/kg	640	1300	2800	12	3283888
(C6-C10)	mg/kg	610	1200	2700	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	115	109	114	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	99	114	103	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	126	87	94	N/A	3283888
D8-TOLUENE (sur.)	%	87	87	91	N/A	3283888
O-TERPHENYL (sur.)	%	102	115	109	N/A	3283604
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82946	P82947	P82949		
Sampling Date		2009/07/12 17:00	2009/07/12 17:05	2009/07/12 17:10		
COC Number		81169	81169	81169		
	Units	09-451	09-452	09-453	RDL	QC Batch

Physical Properties						
Moisture	%	13	13	14	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1500	1100	1100	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	450	360	340	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	26	40	49	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	0.79	0.84	1.3	0.0050	3283888
Toluene	mg/kg	3.7	5.6	8.7	0.020	3283888
Ethylbenzene	mg/kg	3.3	1.9	3.7	0.010	3283888
Xylenes (Total)	mg/kg	25	23	19	0.040	3283888
m & p-Xylene	mg/kg	16	16	14	0.040	3283888
o-Xylene	mg/kg	8.5	7.4	5.8	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	920	880	300	12	3283888
LH (C5-C10)	mg/kg	970	940	340	12	3283888
(C6-C10)	mg/kg	950	920	330	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	92	93	107	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	104	108	111	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	82	82	89	N/A	3283888
D8-TOLUENE (sur.)	%	92	90	109	N/A	3283888
O-TERPHENYL (sur.)	%	106	106	106	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82950	P82951	P82952		
Sampling Date		2009/07/12 17:15	2009/07/12 17:20	2009/07/12 17:25		
COC Number		81169	81169	81169		
	Units	09-454	09-455	09-456	RDL	QC Batch

Physical Properties						
Moisture	%	14	15	16	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1100	1600	620	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	200	370	160	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	32	55	37	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	1.1	1.7	1.7	0.0050	3283888
Toluene	mg/kg	7.4	7.7	8.0	0.020	3283888
Ethylbenzene	mg/kg	3.0	4.5	3.3	0.010	3283888
Xylenes (Total)	mg/kg	20	28	17	0.040	3283888
m & p-Xylene	mg/kg	14	18	12	0.040	3283888
o-Xylene	mg/kg	6.2	9.6	5.7	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	560	630	440	12	3283888
LH (C5-C10)	mg/kg	620	710	510	12	3283888
(C6-C10)	mg/kg	590	670	470	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	103	117	112	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	110	108	110	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	86	90	89	N/A	3283888
D8-TOLUENE (sur.)	%	92	99	98	N/A	3283888
O-TERPHENYL (sur.)	%	103	103	115	N/A	3283604
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82953	P82954		
Sampling Date		2009/07/12 17:30	2009/07/12 17:35		
COC Number		81169	81169		
	Units	09-457	09-458	RDL	QC Batch

Physical Properties					
Moisture	%	15	15	0.3	3283888
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	990	580	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	280	190	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	50	39	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3283604
Volatiles					
Benzene	mg/kg	1.2	0.82	0.0050	3283888
Toluene	mg/kg	5.7	4.5	0.020	3283888
Ethylbenzene	mg/kg	3.0	2.0	0.010	3283888
Xylenes (Total)	mg/kg	16	11	0.040	3283888
m & p-Xylene	mg/kg	11	7.2	0.040	3283888
o-Xylene	mg/kg	5.1	3.6	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	440	280	12	3283888
LH (C5-C10)	mg/kg	500	340	12	3283888
(C6-C10)	mg/kg	470	300	12	3283888
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	124	113	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	106	111	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	85	89	N/A	3283888
D8-TOLUENE (sur.)	%	93	97	N/A	3283888
O-TERPHENYL (sur.)	%	116	105	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82968		P82969		
Sampling Date		2009/07/13		2009/07/13		
		14:05		14:05		
COC Number		81169		81169		
	Units	09-460	QC Batch	09-461	RDL	QC Batch

Physical Properties						
Moisture	%	23	3287469	21	0.3	3286626
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	3283604	<10	10	3283605
F3 (C16-C34 Hydrocarbons)	mg/kg	13	3283604	<10	10	3283605
F4 (C34-C50 Hydrocarbons)	mg/kg	21	3283604	<10	10	3283605
Reached Baseline at C50	mg/kg	Yes	3283604	Yes	N/A	3283605
Volatiles						
Benzene	mg/kg	<0.0050	3283888	<0.0050	0.0050	3286624
Toluene	mg/kg	<0.020	3283888	<0.020	0.020	3286624
Ethylbenzene	mg/kg	<0.010	3283888	<0.010	0.010	3286624
Xylenes (Total)	mg/kg	<0.040	3283888	<0.040	0.040	3286624
m & p-Xylene	mg/kg	<0.040	3283888	<0.040	0.040	3286624
o-Xylene	mg/kg	<0.020	3283888	<0.020	0.020	3286624
F1 (C6-C10) - BTEX	mg/kg	<12	3283888	<12	12	3286624
LH (C5-C10)	mg/kg	36	3283888	<12	12	3286624
(C6-C10)	mg/kg	<12	3283888	<12	12	3286624
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	79	3283888	92	N/A	3286624
D10-ETHYLBENZENE (sur.)	%	94	3283888	56	N/A	3286624
D4-1,2-DICHLOROETHANE (sur.)	%	95	3283888	93	N/A	3286624
D8-TOLUENE (sur.)	%	99	3283888	104	N/A	3286624
O-TERPHENYL (sur.)	%	101	3283604	94	N/A	3283605

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82970	P82971	P82974		
Sampling Date		2009/07/13 14:10	2009/07/13 14:15	2009/07/13 14:30		
COC Number		81169	81171	81171		
	Units	09-462	09-463	09-466	RDL	QC Batch

Physical Properties						
Moisture	%	16	18	14	0.3	3286626
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	330	10	3283605
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	20	10	3283605
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3283605
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283605
Volatiles						
Benzene	mg/kg	0.17	0.084	<0.0050	0.0050	3286624
Toluene	mg/kg	0.39	<0.020	0.71	0.020	3286624
Ethylbenzene	mg/kg	0.12	0.14	0.21	0.010	3286624
Xylenes (Total)	mg/kg	1.2	0.90	52	0.040	3286624
m & p-Xylene	mg/kg	0.75	0.35	35	0.040	3286624
o-Xylene	mg/kg	0.42	0.55	17	0.020	3286624
F1 (C6-C10) - BTEX	mg/kg	<12	<12	1000	12	3286624
LH (C5-C10)	mg/kg	<12	<12	1100	12	3286624
(C6-C10)	mg/kg	<12	<12	1000	12	3286624
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	91	90	112	N/A	3286624
D10-ETHYLBENZENE (sur.)	%	55	54	58	N/A	3286624
D4-1,2-DICHLOROETHANE (sur.)	%	90	92	88	N/A	3286624
D8-TOLUENE (sur.)	%	106	104	106	N/A	3286624
O-TERPHENYL (sur.)	%	103	100	92	N/A	3283605
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82976	P82978	P82979		
Sampling Date		2009/07/13 14:40	2009/07/13 14:50	2009/07/13 14:50		
COC Number		81171	81171	81171		
	Units	09-468	09-470	09-471	RDL	QC Batch

Physical Properties						
Moisture	%	14	9.5	11	0.3	3286626
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3283605
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	<10	10	3283605
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3283605
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283605
Volatiles						
Benzene	mg/kg	0.63	<0.0050	<0.0050	0.0050	3286624
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3286624
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3286624
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3286624
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3286624
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3286624
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3286624
LH (C5-C10)	mg/kg	<12	<12	<12	12	3286624
(C6-C10)	mg/kg	<12	<12	<12	12	3286624
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	87	90	87	N/A	3286624
D10-ETHYLBENZENE (sur.)	%	55	34	55	N/A	3286624
D4-1,2-DICHLOROETHANE (sur.)	%	94	88	92	N/A	3286624
D8-TOLUENE (sur.)	%	104	106	106	N/A	3286624
O-TERPHENYL (sur.)	%	95	89	88	N/A	3283605
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82982	P82985		
Sampling Date		2009/07/13 15:05	2009/07/13 15:20		
COC Number		81171	81172		
	Units	09-474	09-477	RDL	QC Batch

Physical Properties					
Moisture	%	13	21	0.3	3286626
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	10	3283605
F3 (C16-C34 Hydrocarbons)	mg/kg	17	24	10	3283605
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3283605
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3283605
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3283898
Toluene	mg/kg	<0.020	0.034	0.020	3283898
Ethylbenzene	mg/kg	<0.010	0.018	0.010	3283898
Xylenes (Total)	mg/kg	<0.040	0.11	0.040	3283898
m & p-Xylene	mg/kg	<0.040	0.074	0.040	3283898
o-Xylene	mg/kg	<0.020	0.034	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	<12	<12	12	3283898
LH (C5-C10)	mg/kg	<12	<12	12	3283898
(C6-C10)	mg/kg	<12	<12	12	3283898
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	96	98	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	107	103	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	90	95	N/A	3283898
D8-TOLUENE (sur.)	%	102	100	N/A	3283898
O-TERPHENYL (sur.)	%	89	67	N/A	3283605

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82988	P82988	P82989		
Sampling Date		2009/07/13 15:35	2009/07/13 15:35	2009/07/13 15:35		
COC Number		81172	81172	81172		
	Units	09-480	09-480 Lab-Dup	09-481	RDL	QC Batch

Physical Properties						
Moisture	%	13	13	13	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	250	270	220	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	28	36	27	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	12	<10	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	0.058	0.075	0.054	0.0050	3283898
Toluene	mg/kg	68	83	79	0.020	3283898
Ethylbenzene	mg/kg	37	42	43	0.010	3283898
Xylenes (Total)	mg/kg	230	250	250	0.40	3283898
m & p-Xylene	mg/kg	180	190	190	0.40	3283898
o-Xylene	mg/kg	55	62	65	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	3200	3600	3400	12	3283898
LH (C5-C10)	mg/kg	3600	N/A	3700	12	3283898
(C6-C10)	mg/kg	3600	3900	3700	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	99	98	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	105	114	106	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	96	96	95	N/A	3283898
D8-TOLUENE (sur.)	%	107	108	107	N/A	3283898
O-TERPHENYL (sur.)	%	64	76	65	N/A	3283603

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82994	P83013	P83015		
Sampling Date		2009/07/13	2009/07/15	2009/07/15		
		15:55	15:40	14:00		
COC Number		80837	80837	80839		
	Units	09-487	09-518	09-494	RDL	QC Batch

Physical Properties						
Moisture	%	15	12	4.4	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	13	<10	15	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	29	35	<10	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3283898
Toluene	mg/kg	1.0	0.23	<0.020	0.020	3283898
Ethylbenzene	mg/kg	0.67	0.073	0.035	0.010	3283898
Xylenes (Total)	mg/kg	4.7	0.42	<0.040	0.040	3283898
m & p-Xylene	mg/kg	3.2	0.29	<0.040	0.040	3283898
o-Xylene	mg/kg	1.5	0.13	0.024	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	48	<12	<12	12	3283898
LH (C5-C10)	mg/kg	60	<12	<12	12	3283898
(C6-C10)	mg/kg	55	<12	<12	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	96	97	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	104	106	102	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	97	93	95	N/A	3283898
D8-TOLUENE (sur.)	%	100	101	99	N/A	3283898
O-TERPHENYL (sur.)	%	76	72	68	N/A	3283603

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P83016	P83018	P83020		
Sampling Date		2009/07/15 14:05	2009/07/15 14:15	2009/07/15 14:25		
COC Number		80839	80839	80839		
	Units	09-495	09-497	09-499	RDL	QC Batch

Physical Properties						
Moisture	%	10	12	14	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	320	140	19	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	73	60	38	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	0.036	0.090	0.20	0.0050	3283898
Toluene	mg/kg	0.28	0.037	0.053	0.020	3283898
Ethylbenzene	mg/kg	3.3	1.5	0.11	0.010	3283898
Xylenes (Total)	mg/kg	9.0	1.4	0.14	0.040	3283898
m & p-Xylene	mg/kg	5.7	1.3	0.11	0.040	3283898
o-Xylene	mg/kg	3.3	0.083	0.030	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	610	230	<12	12	3283898
LH (C5-C10)	mg/kg	620	250	<12	12	3283898
(C6-C10)	mg/kg	620	230	<12	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	109	94	97	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	108	106	101	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	93	97	93	N/A	3283898
D8-TOLUENE (sur.)	%	105	103	101	N/A	3283898
O-TERPHENYL (sur.)	%	68	83	80	N/A	3283603

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P83023	P83024	P83026		
Sampling Date		2009/07/15 14:35	2009/07/15 14:45	2009/07/15 14:55		
COC Number		80839	80839	80839		
	Units	09-502	09-503	09-505	RDL	QC Batch

Physical Properties						
Moisture	%	11	20	8.6	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	16	18	19	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	47	190	36	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	23	<10	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	0.24	<0.0050	0.29	0.0050	3283898
Toluene	mg/kg	<0.020	0.089	0.079	0.020	3283898
Ethylbenzene	mg/kg	0.65	0.028	1.1	0.010	3283898
Xylenes (Total)	mg/kg	0.49	0.13	3.9	0.040	3283898
m & p-Xylene	mg/kg	0.49	0.094	3.2	0.040	3283898
o-Xylene	mg/kg	<0.020	0.040	0.77	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	<12	<12	55	12	3283898
LH (C5-C10)	mg/kg	<12	<12	64	12	3283898
(C6-C10)	mg/kg	<12	<12	61	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	99	98	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	101	104	107	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	99	95	93	N/A	3283898
D8-TOLUENE (sur.)	%	100	99	103	N/A	3283898
O-TERPHENYL (sur.)	%	79	81	72	N/A	3283603

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P83031	P83032	P83033		
Sampling Date		2009/07/15	2009/07/15	2009/07/15		
		15:00	15:05	15:05		
COC Number		80838	80838	80838		
	Units	09-509	09-510	09-511	RDL	QC Batch

Physical Properties						
Moisture	%	12	11	10	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	12	21	15	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	24	61	40	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3283898
Toluene	mg/kg	<0.020	<0.020	0.049	0.020	3283898
Ethylbenzene	mg/kg	<0.010	<0.010	0.013	0.010	3283898
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3283898
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3283898
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3283898
LH (C5-C10)	mg/kg	<12	<12	<12	12	3283898
(C6-C10)	mg/kg	<12	<12	<12	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	96	99	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	103	105	98	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	93	92	101	N/A	3283898
D8-TOLUENE (sur.)	%	101	102	99	N/A	3283898
O-TERPHENYL (sur.)	%	71	72	74	N/A	3283603

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P83044	P83045	P83047		
Sampling Date		2009/07/15 15:25	2009/07/15 15:30	2009/07/15 15:35		
COC Number		80838	80838	80838		
	Units	09-515	09-516	09-517	RDL	QC Batch

Physical Properties						
Moisture	%	11	9.7	11	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	10	130	90	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	43	120	85	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	13	11	14	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3283898
Toluene	mg/kg	<0.020	<0.020	0.39	0.020	3283898
Ethylbenzene	mg/kg	<0.010	<0.010	1.1	0.010	3283898
Xylenes (Total)	mg/kg	<0.040	<0.040	6.1	0.040	3283898
m & p-Xylene	mg/kg	<0.040	<0.040	3.9	0.040	3283898
o-Xylene	mg/kg	<0.020	<0.020	2.2	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	<12	<12	68	12	3283898
LH (C5-C10)	mg/kg	<12	<12	77	12	3283898
(C6-C10)	mg/kg	<12	<12	75	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	95	97	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	100	104	105	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	97	94	94	N/A	3283898
D8-TOLUENE (sur.)	%	99	101	101	N/A	3283898
O-TERPHENYL (sur.)	%	69	73	71	N/A	3283603

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P83075		
Sampling Date		2009/07/12		
COC Number		174083		
	Units	09-523	RDL	QC Batch

Physical Properties				
Moisture	%	16	0.3	3286886
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/kg	520	10	3283420
F3 (C16-C34 Hydrocarbons)	mg/kg	150	10	3283420
F4 (C34-C50 Hydrocarbons)	mg/kg	20	10	3283420
Reached Baseline at C50	mg/kg	Yes	N/A	3283420
Volatiles				
Benzene	mg/kg	0.035	0.0050	3286357
Toluene	mg/kg	0.49	0.020	3286357
Ethylbenzene	mg/kg	0.79	0.010	3286357
Xylenes (Total)	mg/kg	14	0.040	3286357
m & p-Xylene	mg/kg	8.0	0.040	3286357
o-Xylene	mg/kg	6.1	0.020	3286357
F1 (C6-C10) - BTEX	mg/kg	1200	12	3286357
LH (C5-C10)	mg/kg	1200	12	3286357
(C6-C10)	mg/kg	1200	12	3286357
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	110	N/A	3286357
D10-ETHYLBENZENE (sur.)	%	106	N/A	3286357
D4-1,2-DICHLOROETHANE (sur.)	%	98	N/A	3286357
D8-TOLUENE (sur.)	%	107	N/A	3286357
O-TERPHENYL (sur.)	%	105	N/A	3283420
N/A = Not Applicable RDL = Reportable Detection Limit				

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P82924	P82926	P82927	P82928		
Sampling Date		2009/07/11 09:30	2009/07/12 09:20	2009/07/12 16:15	2009/07/12 16:20		
COC Number		81168	81168	81168	81168		
	Units	09-440	09-441	09-442	09-443	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	3	3	4	3	1	3292762
Total Cadmium (Cd)	mg/kg	0.1	<0.1	0.1	<0.1	0.1	3292762
Total Chromium (Cr)	mg/kg	9	9	8	8	1	3292762
Total Cobalt (Co)	mg/kg	3	3	5	4	1	3292762
Total Copper (Cu)	mg/kg	11	7	10	9	5	3292762
Total Lead (Pb)	mg/kg	8	4	9	8	1	3292762
Total Nickel (Ni)	mg/kg	10	9	10	9	1	3292762
Total Zinc (Zn)	mg/kg	39	14	24	23	10	3292762

RDL = Reportable Detection Limit

Maxxam ID		P82929	P82930		P82931		
Sampling Date		2009/07/12 16:25	2009/07/12 16:30		2009/07/12 16:35		
COC Number		81168	81168		81168		
	Units	09-444	09-445	QC Batch	09-446	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	3	3	3292762	3	1	3294918
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	3292762	<0.1	0.1	3294918
Total Chromium (Cr)	mg/kg	9	8	3292762	9	1	3294918
Total Cobalt (Co)	mg/kg	4	4	3292762	4	1	3294918
Total Copper (Cu)	mg/kg	9	12	3292762	8	5	3294918
Total Lead (Pb)	mg/kg	6	8	3292762	7	1	3294918
Total Nickel (Ni)	mg/kg	10	10	3292762	9	1	3294918
Total Zinc (Zn)	mg/kg	21	20	3292762	27	10	3294918

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P82931	P82932	P82934	P82937		
Sampling Date		2009/07/12 16:35	2009/07/12 16:40	2009/07/12 16:45	2009/07/12 16:50		
COC Number		81168	81168	81168	81168		
	Units	09-446 Lab-Dup	09-447	09-448	09-449	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	3	3	3	3	1	3294918
Total Cadmium (Cd)	mg/kg	<0.1	0.1	<0.1	<0.1	0.1	3294918
Total Chromium (Cr)	mg/kg	9	9	9	10	1	3294918
Total Cobalt (Co)	mg/kg	4	4	4	4	1	3294918
Total Copper (Cu)	mg/kg	8	9	9	8	5	3294918
Total Lead (Pb)	mg/kg	7	11	8	7	1	3294918
Total Nickel (Ni)	mg/kg	9	9	9	9	1	3294918
Total Zinc (Zn)	mg/kg	20	24	21	20	10	3294918

RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

Maxxam ID		P82942	P82946	P82947	P82949		
Sampling Date		2009/07/12 16:55	2009/07/12 17:00	2009/07/12 17:05	2009/07/12 17:10		
COC Number		81168	81169	81169	81169		
	Units	09-450	09-451	09-452	09-453	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	4	3	3	3	1	3294918
Total Cadmium (Cd)	mg/kg	0.2	<0.1	<0.1	0.1	0.1	3294918
Total Chromium (Cr)	mg/kg	10	9	9	10	1	3294918
Total Cobalt (Co)	mg/kg	5	4	4	4	1	3294918
Total Copper (Cu)	mg/kg	11	8	7	14	5	3294918
Total Lead (Pb)	mg/kg	10	14	5	9	1	3294918
Total Nickel (Ni)	mg/kg	10	9	9	10	1	3294918
Total Zinc (Zn)	mg/kg	31	20	17	24	10	3294918

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P82950	P82951		P82952		
Sampling Date		2009/07/12 17:15	2009/07/12 17:20		2009/07/12 17:25		
COC Number		81169	81169		81169		
	Units	09-454	09-455	RDL	09-456	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	3	3	1	<2	2	3294918
Total Cadmium (Cd)	mg/kg	0.1	0.1	0.1	<0.2	0.2	3294918
Total Chromium (Cr)	mg/kg	9	11	1	6	2	3294918
Total Cobalt (Co)	mg/kg	4	4	1	2	2	3294918
Total Copper (Cu)	mg/kg	8	9	5	<10	10	3294918
Total Lead (Pb)	mg/kg	8	7	1	4	2	3294918
Total Nickel (Ni)	mg/kg	9	10	1	6	2	3294918
Total Zinc (Zn)	mg/kg	20	26	10	<20	20	3294918

RDL = Reportable Detection Limit

Maxxam ID		P82953	P82954		
Sampling Date		2009/07/12 17:30	2009/07/12 17:35		
COC Number		81169	81169		
	Units	09-457	09-458	RDL	QC Batch

Elements					
Total Arsenic (As)	mg/kg	<2	<2	2	3294918
Total Cadmium (Cd)	mg/kg	<0.2	<0.2	0.2	3294918
Total Chromium (Cr)	mg/kg	6	5	2	3294918
Total Cobalt (Co)	mg/kg	2	2	2	3294918
Total Copper (Cu)	mg/kg	<10	<10	10	3294918
Total Lead (Pb)	mg/kg	5	4	2	3294918
Total Nickel (Ni)	mg/kg	5	5	2	3294918
Total Zinc (Zn)	mg/kg	<20	<20	20	3294918

RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P82924	P82924	P82926		
Sampling Date		2009/07/11	2009/07/11	2009/07/12		
		09:30	09:30	09:20		
COC Number		81168	81168	81168		
	Units	09-440	09-440 Lab-Dup	09-441	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	842	668	3000	10	3297309
Total hydrocarbons C5-C30	mg/kg	1600	N/A	3460	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	103	100	99	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

Maxxam ID		P82927	P82928	P82929		
Sampling Date		2009/07/12	2009/07/12	2009/07/12		
		16:15	16:20	16:25		
COC Number		81168	81168	81168		
	Units	09-442	09-443	09-444	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	712	1210	772	10	3297309
Total hydrocarbons C5-C30	mg/kg	1040	2270	1110	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	110	108	98	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P82930	P82931	P82932		
Sampling Date		2009/07/12	2009/07/12	2009/07/12		
		16:30	16:35	16:40		
COC Number		81168	81168	81168		
	Units	09-445	09-446	09-447	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	625	834	1800	10	3297309
Total hydrocarbons C5-C30	mg/kg	680	1420	2930	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	106	101	113	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P82934	P82937	P82942		
Sampling Date		2009/07/12 16:45	2009/07/12 16:50	2009/07/12 16:55		
COC Number		81168	81168	81168		
	Units	09-448	09-449	09-450	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	1280	2050	2100	10	3297309
Total hydrocarbons C5-C30	mg/kg	1910	3300	4860	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	102	115	109	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P82946	P82947	P82949		
Sampling Date		2009/07/12 17:00	2009/07/12 17:05	2009/07/12 17:10		
COC Number		81169	81169	81169		
	Units	09-451	09-452	09-453	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	1970	1440	1430	10	3297309
Total hydrocarbons C5-C30	mg/kg	2940	2380	1770	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	107	106	106	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P82950	P82951	P82952		
Sampling Date		2009/07/12 17:15	2009/07/12 17:20	2009/07/12 17:25		
COC Number		81169	81169	81169		
	Units	09-454	09-455	09-456	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	1290	1970	775	10	3297309
Total hydrocarbons C5-C30	mg/kg	1910	2680	1290	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	103	103	115	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P82953	P82954	P82968		
Sampling Date		2009/07/12 17:30	2009/07/12 17:35	2009/07/13 14:05		
COC Number		81169	81169	81169		
	Units	09-457	09-458	09-460	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	1250	758	<10	10	3297309
Total hydrocarbons C5-C30	mg/kg	1750	1100	36	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	116	105	101	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P82969	P82970		P83075		
Sampling Date		2009/07/13 14:05	2009/07/13 14:10		2009/07/12		
COC Number		81169	81169		174083		
	Units	09-461	09-462	QC Batch	09-523	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	16	21	3297319	663	10	3287795
Total hydrocarbons C5-C30	mg/kg	<20	21	3284731	1850	20	3284731
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	94	103	3297319	105	N/A	3287795
N/A = Not Applicable RDL = Reportable Detection Limit							



Maxxam Job #: A936987
 Report Date: 2009/07/27

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT, LOBE P-STOCKPILE
 Sampler Initials: DAS

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		P83070	P83073	P83074		
Sampling Date		2009/07/16	2009/07/16	2009/07/16		
		09:10	09:15	09:20		
COC Number		174083	174083	174083		
	Units	09-520	09-521	09-522	RDL	QC Batch

Misc. Inorganics						
pH	N/A	8.16	7.44	8.04	N/A	3286366

RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		P83070	P83073	P83074		
Sampling Date		2009/07/16	2009/07/16	2009/07/16		
		09:10	09:15	09:20		
COC Number		174083	174083	174083		
	Units	09-520	09-521	09-522	RDL	QC Batch

Ext. Pet. Hydrocarbon						
EPH (C10-C19)	mg/L	1.18	4.14	<0.08	0.08	3289106
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	114	112	115	N/A	3289106

N/A = Not Applicable
 RDL = Reportable Detection Limit

VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		P83070	P83070	P83073		
Sampling Date		2009/07/16 09:10	2009/07/16 09:10	2009/07/16 09:15		
COC Number		174083	174083	174083		
	Units	09-520	09-520 Lab-Dup	09-521	RDL	QC Batch

Hydrocarbons						
LH (C5-C10)	ug/L	724	858	1580	300	3287873
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	101	102	N/A	3287873
D4-1,2-DICHLOROETHANE (sur.)	%	96	97	95	N/A	3287873
D8-TOLUENE (sur.)	%	100	100	100	N/A	3287873

N/A = Not Applicable
 RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

Maxxam ID		P83074		
Sampling Date		2009/07/16 09:20		
COC Number		174083		
	Units	09-522	RDL	QC Batch

Hydrocarbons				
LH (C5-C10)	ug/L	<300	300	3287873
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	101	N/A	3287873
D4-1,2-DICHLOROETHANE (sur.)	%	97	N/A	3287873
D8-TOLUENE (sur.)	%	100	N/A	3287873

N/A = Not Applicable
 RDL = Reportable Detection Limit

Package 1	4.0°C
Package 2	6.3°C
Package 3	14.3°C
Package 4	6.7°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Sample P82952-01: Detection limits raised due to matrix interference.
Parameters affected are As, Cr, Co, Cu, Pb, Ni, Zn, Cd.

Sample P82953-01: Detection limits raised due to matrix interference.
Parameters affected are As, Cr, Co, Cu, Pb, Ni, Zn, Cd.

Sample P82954-01: Detection limits raised due to matrix interference.
Parameters affected are As, Cr, Co, Cu, Pb, Ni, Zn, Cd.

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Location: JOHNSON POINT, LOBE P-STOCKPILE

Quality Assurance Report
 Maxxam Job Number: EA936987

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3283420 JT7	MATRIX SPIKE	O-TERPHENYL (sur.)	2009/07/20		104	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/20		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/07/20		NC	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/07/20		NC	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/20		77	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/20		118	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/07/20		112	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/07/20		107	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2009/07/20		125	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/20		<10		mg/kg
		F3 (C16-C34 Hydrocarbons)	2009/07/20		<10		mg/kg
		F4 (C34-C50 Hydrocarbons)	2009/07/20		<10		mg/kg
	RPD	F2 (C10-C16 Hydrocarbons)	2009/07/20		11.5	%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/20		9.2	%	50
		F4 (C34-C50 Hydrocarbons)	2009/07/20		1.9	%	50
3283603 LD2	MATRIX SPIKE [P82989-01]	O-TERPHENYL (sur.)	2009/07/22		70	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/22		85	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/07/22		76	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/07/22		75	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/22		74	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/22		92	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/07/22		91	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/07/22		88	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2009/07/22		80	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/22		<10		mg/kg
		F3 (C16-C34 Hydrocarbons)	2009/07/22		17, RDL=10		mg/kg
		F4 (C34-C50 Hydrocarbons)	2009/07/22		<10		mg/kg
	RPD [P82988-01]	F2 (C10-C16 Hydrocarbons)	2009/07/22		7.8	%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/22		NC	%	50
		F4 (C34-C50 Hydrocarbons)	2009/07/22		NC	%	50
3283604 KO	MATRIX SPIKE [P82926-01]	O-TERPHENYL (sur.)	2009/07/23		100	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/23		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/07/23		101	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/07/23		109	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/23		97	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/23		107	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/07/23		109	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/07/23		114	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2009/07/23		104	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/23		<10		mg/kg
		F3 (C16-C34 Hydrocarbons)	2009/07/23		<10		mg/kg
		F4 (C34-C50 Hydrocarbons)	2009/07/23		<10		mg/kg
	RPD [P82924-01]	F2 (C10-C16 Hydrocarbons)	2009/07/23		19.1	%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/23		38.1	%	50
		F4 (C34-C50 Hydrocarbons)	2009/07/23		NC	%	50
3283605 AN4	MATRIX SPIKE	O-TERPHENYL (sur.)	2009/07/21		98	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/21		107	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/07/21		108	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/07/21		114	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/21		99	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/21		108	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/07/21		111	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/07/21		118	%	80 - 120



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3283605 AN4	BLANK	O-TERPHENYL (sur.)	2009/07/21		89	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/21	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/21	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/21	<10		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2009/07/21	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/21	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2009/07/21	NC		%	50
3283888 AN1	MATRIX SPIKE [P82926-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/24		106	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/24		100	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/24		109	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/24		90	%	60 - 140
		Benzene	2009/07/24		95	%	60 - 140
		Toluene	2009/07/24		95	%	60 - 140
		Ethylbenzene	2009/07/24		107	%	60 - 140
		m & p-Xylene	2009/07/24		138	%	60 - 140
		o-Xylene	2009/07/24		NC	%	60 - 140
		(C6-C10)	2009/07/24		NC	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		104	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/23		94	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		100	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/23		101	%	60 - 140
		Benzene	2009/07/23		91	%	60 - 140
		Toluene	2009/07/23		85	%	60 - 140
		Ethylbenzene	2009/07/23		87	%	60 - 140
		m & p-Xylene	2009/07/23		90	%	60 - 140
		o-Xylene	2009/07/23		95	%	60 - 140
		(C6-C10)	2009/07/23		99	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		107	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/23		91	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		103	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/23		98	%	60 - 140
		Benzene	2009/07/23	<0.0050		mg/kg	
		Toluene	2009/07/23	<0.020		mg/kg	
		Ethylbenzene	2009/07/23	<0.010		mg/kg	
		Xylenes (Total)	2009/07/23	<0.040		mg/kg	
		m & p-Xylene	2009/07/23	<0.040		mg/kg	
		o-Xylene	2009/07/23	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/07/23	<12		mg/kg	
		(C6-C10)	2009/07/23	<12		mg/kg	
	RPD [P82924-01]	Benzene	2009/07/23	NC		%	50
		Toluene	2009/07/23	NC		%	50
		Ethylbenzene	2009/07/23	NC		%	50
		Xylenes (Total)	2009/07/23	25.2		%	50
		m & p-Xylene	2009/07/23	27.3		%	50
		o-Xylene	2009/07/23	22.4		%	50
		F1 (C6-C10) - BTEX	2009/07/23	8.8		%	50
		(C6-C10)	2009/07/23	8.9		%	50
3283898 CC6	MATRIX SPIKE [P82989-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		122	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/23		108	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		94	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/23		106	%	60 - 140
		Benzene	2009/07/23		89	%	60 - 140
		Toluene	2009/07/23		NC	%	60 - 140



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3283898 CC6	MATRIX SPIKE [P82989-01]	Ethylbenzene	2009/07/23		NC	%	60 - 140	
		m & p-Xylene	2009/07/23		NC	%	60 - 140	
		o-Xylene (C6-C10)	2009/07/23		NC	%	60 - 140	
			2009/07/23		NC	%	60 - 140	
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		99	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/23		106	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		93	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/23		102	%	60 - 140	
		Benzene	2009/07/23		93	%	60 - 140	
		Toluene	2009/07/23		94	%	60 - 140	
		Ethylbenzene	2009/07/23		104	%	60 - 140	
		m & p-Xylene	2009/07/23		102	%	60 - 140	
		o-Xylene (C6-C10)	2009/07/23		103	%	60 - 140	
			2009/07/23		93	%	80 - 120	
		BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		96	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/07/23		108	%	30 - 130
	D4-1,2-DICHLOROETHANE (sur.)		2009/07/23		96	%	60 - 140	
	D8-TOLUENE (sur.)		2009/07/23		99	%	60 - 140	
	Benzene		2009/07/23	<0.0050			mg/kg	
	Toluene		2009/07/23	<0.020			mg/kg	
	Ethylbenzene		2009/07/23	<0.010			mg/kg	
	Xylenes (Total)		2009/07/23	<0.040			mg/kg	
	m & p-Xylene		2009/07/23	<0.040			mg/kg	
	o-Xylene		2009/07/23	<0.020			mg/kg	
	F1 (C6-C10) - BTEX		2009/07/23	<12			mg/kg	
	LH (C5-C10)		2009/07/23	<12			mg/kg	
	(C6-C10)		2009/07/23	<12			mg/kg	
	RPD [P82988-01]		Benzene	2009/07/23	26.0		%	50
		Toluene	2009/07/23	18.9		%	50	
		Ethylbenzene	2009/07/23	12.8		%	50	
		Xylenes (Total)	2009/07/23	7.3		%	50	
		m & p-Xylene	2009/07/23	5.9		%	50	
		o-Xylene	2009/07/23	11.7		%	50	
		F1 (C6-C10) - BTEX	2009/07/23	9.4		%	50	
		(C6-C10)	2009/07/23	9.5		%	50	
	3286357 DR3	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/21		98	%	60 - 140
D10-ETHYLBENZENE (sur.)			2009/07/21		104	%	30 - 130	
D4-1,2-DICHLOROETHANE (sur.)			2009/07/21		99	%	60 - 140	
D8-TOLUENE (sur.)			2009/07/21		102	%	60 - 140	
SPIKE		Benzene	2009/07/21		97	%	60 - 140	
		Toluene	2009/07/21		100	%	60 - 140	
		Ethylbenzene	2009/07/21		110	%	60 - 140	
		m & p-Xylene	2009/07/21		109	%	60 - 140	
		o-Xylene (C6-C10)	2009/07/21		106	%	60 - 140	
			2009/07/21		93	%	60 - 140	
		4-BROMOFLUOROBENZENE (sur.)	2009/07/21		97	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/21		110	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		94	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/21		103	%	60 - 140	
		Benzene	2009/07/21		93	%	60 - 140	
		Toluene	2009/07/21		98	%	60 - 140	
		Ethylbenzene	2009/07/21		107	%	60 - 140	
		m & p-Xylene	2009/07/21		106	%	60 - 140	
		o-Xylene	2009/07/21		104	%	60 - 140	



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3286357 DR3	SPIKE	(C6-C10)	2009/07/21		94	%	80 - 120		
		4-BROMOFLUOROBENZENE (sur.)	2009/07/21		109	%	60 - 140		
	BLANK	D10-ETHYLBENZENE (sur.)	2009/07/21		93	%	30 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		108	%	60 - 140		
		D8-TOLUENE (sur.)	2009/07/21		91	%	60 - 140		
		Benzene	2009/07/21	<0.0050			mg/kg		
		Toluene	2009/07/21	<0.020			mg/kg		
		Ethylbenzene	2009/07/21	<0.010			mg/kg		
		Xylenes (Total)	2009/07/21	<0.040			mg/kg		
		m & p-Xylene	2009/07/21	<0.040			mg/kg		
		o-Xylene	2009/07/21	<0.020			mg/kg		
		F1 (C6-C10) - BTEX	2009/07/21	<12			mg/kg		
		(C6-C10)	2009/07/21	<12			mg/kg		
		RPD	Benzene	2009/07/21	NC			%	50
			Toluene	2009/07/21	NC			%	50
			Ethylbenzene	2009/07/21	NC			%	50
			Xylenes (Total)	2009/07/21	NC			%	50
			m & p-Xylene	2009/07/21	NC			%	50
			o-Xylene	2009/07/21	NC			%	50
			F1 (C6-C10) - BTEX	2009/07/21	NC			%	50
	(C6-C10)		2009/07/21	NC			%	50	
	3286366 SB8		Calibration Check	pH	2009/07/21		100	%	97 - 103
		RPD	pH	2009/07/21	1.2		%	5	
3286624 DR3	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		91	%	60 - 140		
		D10-ETHYLBENZENE (sur.)	2009/07/23		56	%	30 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		80	%	60 - 140		
		D8-TOLUENE (sur.)	2009/07/23		101	%	60 - 140		
		Benzene	2009/07/23		NC	%	60 - 140		
		Toluene	2009/07/23		NC	%	60 - 140		
		Ethylbenzene	2009/07/23		NC	%	60 - 140		
		m & p-Xylene	2009/07/23		NC	%	60 - 140		
		o-Xylene	2009/07/23		NC	%	60 - 140		
		(C6-C10)	2009/07/23		NC	%	60 - 140		
		SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		92	%	60 - 140	
			D10-ETHYLBENZENE (sur.)	2009/07/23		56	%	30 - 130	
	D4-1,2-DICHLOROETHANE (sur.)		2009/07/23		89	%	60 - 140		
	D8-TOLUENE (sur.)		2009/07/23		105	%	60 - 140		
	Benzene		2009/07/23		86	%	60 - 140		
	Toluene		2009/07/23		92	%	60 - 140		
	Ethylbenzene		2009/07/23		96	%	60 - 140		
	m & p-Xylene		2009/07/23		97	%	60 - 140		
	o-Xylene		2009/07/23		99	%	60 - 140		
	(C6-C10)		2009/07/23		102	%	80 - 120		
	BLANK		4-BROMOFLUOROBENZENE (sur.)	2009/07/23		91	%	60 - 140	
			D10-ETHYLBENZENE (sur.)	2009/07/23		52	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		101	%	60 - 140		
		D8-TOLUENE (sur.)	2009/07/23		103	%	60 - 140		
		Benzene	2009/07/23	<0.0050			mg/kg		
		Toluene	2009/07/23	<0.020			mg/kg		
		Ethylbenzene	2009/07/23	<0.010			mg/kg		
		Xylenes (Total)	2009/07/23	<0.040			mg/kg		
		m & p-Xylene	2009/07/23	<0.040			mg/kg		
		o-Xylene	2009/07/23	<0.020			mg/kg		
		F1 (C6-C10) - BTEX	2009/07/23	<12			mg/kg		
		(C6-C10)	2009/07/23	<12			mg/kg		



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3286624 DR3	RPD	Benzene	2009/07/23	NC		%	50
		Toluene	2009/07/23	NC		%	50
		Ethylbenzene	2009/07/23	NC		%	50
		Xylenes (Total)	2009/07/23	NC		%	50
		m & p-Xylene	2009/07/23	NC		%	50
		o-Xylene	2009/07/23	NC		%	50
		F1 (C6-C10) - BTEX	2009/07/23	NC		%	50
		(C6-C10)	2009/07/23	NC		%	50
3286626 JP6	BLANK	Moisture	2009/07/21	<0.3		%	
	RPD	Moisture	2009/07/21	0.6		%	20
3286886 JP6	BLANK	Moisture	2009/07/21	<0.3		%	
	RPD [P82988-01]	Moisture	2009/07/21	1.6		%	20
3287469 JP6	BLANK	Moisture	2009/07/21	<0.3		%	
	RPD	Moisture	2009/07/21	4.4		%	20
3287795 JT7	SPIKE	O-TERPHENYL (sur.)	2009/07/20		77	%	50 - 130
		Total Extractables C10 to C30	2009/07/20		113	%	60 - 130
	BLANK	O-TERPHENYL (sur.)	2009/07/20		125	%	50 - 130
		Total Extractables C10 to C30	2009/07/20	15, RDL=10		mg/kg	
3287873 MM5	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/21		97	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		97	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/21		100	%	70 - 130
	QC STANDARD	4-BROMOFLUOROBENZENE (sur.)	2009/07/21		101	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		91	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/21		103	%	70 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/21		100	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		96	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/21		101	%	70 - 130
	BLANK	LH (C5-C10)	2009/07/21	<300		ug/L	
		4-BROMOFLUOROBENZENE (sur.)	2009/07/21		101	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		98	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/21		101	%	70 - 130
	RPD [P83070-01]	LH (C5-C10)	2009/07/21	NC		%	30
3289106 JP1	BLANK	O-TERPHENYL (sur.)	2009/07/21		105	%	50 - 130
		EPH (C10-C19)	2009/07/21	<0.08		mg/L	
3292762 EO1	Calibration Check	Total Arsenic (As)	2009/07/22		94	%	80 - 120
		Total Cadmium (Cd)	2009/07/22		99	%	80 - 120
		Total Chromium (Cr)	2009/07/22		94	%	80 - 120
		Total Cobalt (Co)	2009/07/22		101	%	80 - 120
		Total Copper (Cu)	2009/07/22		98	%	80 - 120
		Total Lead (Pb)	2009/07/22		99	%	80 - 120
		Total Nickel (Ni)	2009/07/22		100	%	80 - 120
		Total Zinc (Zn)	2009/07/22		103	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2009/07/22		100	%	75 - 125
		Total Cadmium (Cd)	2009/07/22		100	%	75 - 125
		Total Chromium (Cr)	2009/07/22		110	%	75 - 125
		Total Cobalt (Co)	2009/07/22		106	%	75 - 125
		Total Copper (Cu)	2009/07/22		107	%	75 - 125
		Total Lead (Pb)	2009/07/22		104	%	75 - 125
		Total Nickel (Ni)	2009/07/22		118	%	75 - 125
		Total Zinc (Zn)	2009/07/22		NC	%	75 - 125
	QC STANDARD	Total Arsenic (As)	2009/07/22		96	%	72 - 128
		Total Chromium (Cr)	2009/07/22		71	%	50 - 150
		Total Cobalt (Co)	2009/07/22		107	%	75 - 125
		Total Copper (Cu)	2009/07/22		90	%	72 - 127
		Total Lead (Pb)	2009/07/22		93	%	65 - 135



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3292762 EO1	QC STANDARD	Total Nickel (Ni)	2009/07/22		100	%	75 - 125	
		Total Zinc (Zn)	2009/07/22		92	%	74 - 125	
	BLANK	Total Arsenic (As)	2009/07/22	<1			mg/kg	
		Total Cadmium (Cd)	2009/07/22	<0.1			mg/kg	
		Total Chromium (Cr)	2009/07/22	<1			mg/kg	
		Total Cobalt (Co)	2009/07/22	<1			mg/kg	
		Total Copper (Cu)	2009/07/22	<5			mg/kg	
		Total Lead (Pb)	2009/07/22	<1			mg/kg	
		Total Nickel (Ni)	2009/07/22	<1			mg/kg	
		Total Zinc (Zn)	2009/07/22	<10			mg/kg	
	RPD	Total Arsenic (As)	2009/07/22	0.4			%	35
		Total Cadmium (Cd)	2009/07/22	NC			%	35
		Total Chromium (Cr)	2009/07/22	13.8			%	35
		Total Cobalt (Co)	2009/07/22	2.9			%	35
		Total Copper (Cu)	2009/07/22	NC			%	35
		Total Lead (Pb)	2009/07/22	0.4			%	35
		Total Nickel (Ni)	2009/07/22	3.0			%	35
		Total Zinc (Zn)	2009/07/22	5.5			%	35
	3294918 EO1	Calibration Check	Total Arsenic (As)	2009/07/23		91	%	80 - 120
			Total Cadmium (Cd)	2009/07/23		94	%	80 - 120
Total Chromium (Cr)			2009/07/23		90	%	80 - 120	
Total Cobalt (Co)			2009/07/23		95	%	80 - 120	
Total Copper (Cu)			2009/07/23		92	%	80 - 120	
Total Lead (Pb)			2009/07/23		95	%	80 - 120	
Total Nickel (Ni)			2009/07/23		95	%	80 - 120	
Total Zinc (Zn)			2009/07/23		117	%	80 - 120	
MATRIX SPIKE [P82931-01]		Total Arsenic (As)	2009/07/23		99	%	75 - 125	
		Total Cadmium (Cd)	2009/07/23		96	%	75 - 125	
		Total Chromium (Cr)	2009/07/23		105	%	75 - 125	
		Total Cobalt (Co)	2009/07/23		104	%	75 - 125	
		Total Copper (Cu)	2009/07/23		93	%	75 - 125	
		Total Lead (Pb)	2009/07/23		96	%	75 - 125	
		Total Nickel (Ni)	2009/07/23		103	%	75 - 125	
		Total Zinc (Zn)	2009/07/23		107	%	75 - 125	
QC STANDARD		Total Arsenic (As)	2009/07/23		101	%	72 - 128	
		Total Chromium (Cr)	2009/07/23		81	%	50 - 150	
		Total Cobalt (Co)	2009/07/23		115	%	75 - 125	
		Total Copper (Cu)	2009/07/23		91	%	72 - 127	
		Total Lead (Pb)	2009/07/23		92	%	65 - 135	
		Total Nickel (Ni)	2009/07/23		106	%	75 - 125	
		Total Zinc (Zn)	2009/07/23		82	%	74 - 125	
		BLANK	Total Arsenic (As)	2009/07/23	<1			mg/kg
Total Cadmium (Cd)			2009/07/23	<0.1			mg/kg	
Total Chromium (Cr)			2009/07/23	<1			mg/kg	
Total Cobalt (Co)			2009/07/23	<1			mg/kg	
Total Copper (Cu)			2009/07/23	<5			mg/kg	
Total Lead (Pb)			2009/07/23	<1			mg/kg	
Total Nickel (Ni)			2009/07/23	<1			mg/kg	
Total Zinc (Zn)			2009/07/23	<10			mg/kg	
RPD [P82931-01]		Total Arsenic (As)	2009/07/23	NC			%	35
		Total Cadmium (Cd)	2009/07/23	NC			%	35
		Total Chromium (Cr)	2009/07/23	1.5			%	35
		Total Cobalt (Co)	2009/07/23	NC			%	35
		Total Copper (Cu)	2009/07/23	NC			%	35



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Location: JOHNSON POINT, LOBE P-STOCKPILE

Quality Assurance Report (Continued)

Maxxam Job Number: EA936987

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3294918 EO1	RPD [P82931-01]	Total Lead (Pb)	2009/07/23	0.4		%	35
		Total Nickel (Ni)	2009/07/23	1.5		%	35
		Total Zinc (Zn)	2009/07/23	NC		%	35
3297309 KO	MATRIX SPIKE [P82926-01]	O-TERPHENYL (sur.)	2009/07/23		100	%	50 - 130
		Total Extractables C10 to C30	2009/07/23		84	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/23		97	%	50 - 130
		Total Extractables C10 to C30	2009/07/23		107	%	60 - 130
	BLANK	O-TERPHENYL (sur.)	2009/07/23		104	%	50 - 130
		Total Extractables C10 to C30	2009/07/23	<10		mg/kg	
3297319 KO	RPD [P82924-01]	Total Extractables C10 to C30	2009/07/23	23.1		%	50
	SPIKE	O-TERPHENYL (sur.)	2009/07/20		90	%	50 - 130
		Total Extractables C10 to C30	2009/07/20		103	%	60 - 130
	BLANK	O-TERPHENYL (sur.)	2009/07/20		78	%	50 - 130
		Total Extractables C10 to C30	2009/07/20	<10		mg/kg	
3304021 JP6	BLANK	Moisture	2009/07/27	<0.3		%	
	RPD [P82924-01]	Moisture	2009/07/27	0.9		%	20

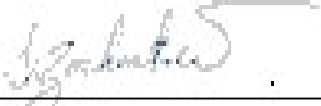
NC = Non-calculable
 RPD = Relative Percent Difference

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780)577-7100 FAX(780)450-4187

Validation Signature Page

Maxxam Job #: A936987


The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



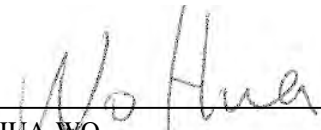
DIANE ZACHARKIW, Scientific Specialist



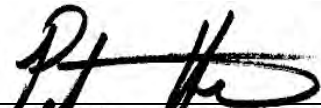
DAVE HUANG, BBY Scientific Specialist



LISA CUMMINGS, Extractables Supervisor



HUA WO,



PETER CHOW, Senior Analyst

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.



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81168 CHAIN OF CUSTODY

1936987/PW/RT/JM/GH Page: 1 of 8

PO # / AFE #:
Quotation #: C08-329
Project #: 297-371-00
Project Name: JOHNSON POINT
Location: LOBE P - STOCKPILE
Sampler's Initials: DAS

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: ANA GALUE
Address: ana.galue@aecom.com
Prov: AB PC:
Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To: DARA SCHMIDT (AECOM)
2540 Kensington Rd NW
Calgary
Prov: AB PC: TAN 353
Ph: 403-450-9926 Fax: 403-270-4822
(SITE) Office

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)								OTHER TEST(S)																								
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ^{NOPE}	Assessment (ICP Metals)	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	TPH	PCB	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Total	Dissolved	Mercury	Ammonia	TKN	COD	TOC	DOC	VH (W5-10)	EH (W10-19)	PH	Pb (lead)	Cd (cadmium)	Cr (Chromium)	*HOLD for 60 Days
1	09-200	NO	2009/07/11 9:35																																											1
2	09-440	S	2009/07/11 9:30	X			X																																							3
3	09-441	S	2009/07/12 9:20	X			X																																						3	
4	09-442	S	2009/07/12 16:15	X			X																																							
5	09-443		16:20																																											
6	09-444		16:25																																											
7	09-445		16:30																																											
8	09-446		16:35																																											
9	09-447		16:40																																											
10	09-448		16:45																																											
11	09-449	↓	16:50																																											
12	09-450	S	2009/07/12 16:55	X			X																																					3		

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Relinquished By: DARA SCHMIDT Date/Time: 16-Jul-09 11:15
Sign and Print: D. Schmidt

COMMENTS/SPECIAL INSTRUCTIONS: *metals = AS, Co, Cu, Cr, Cd, Ni, Pb, Zn (only)
Page 39 of 46

# JARS USED & NOT SUBMITTED	Received By	Temperature			Ice
17/07/09 16:50h	RT	4	6	2	
CUSTODY SEAL YES <input checked="" type="checkbox"/>		8	8	3	
		16	14	13	Y
		7	6	7	

483(4)



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81169 CHAIN OF CUSTODY

A936987/pw/RT/JH/GH Page: 2 of 8

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALUE

Address: ana.galue@aecom.com

Prov: PC: **Contact #s:** Ph: 403-270-9200 Fax: 403-270-0399

Report To: Dara Schmidt @ (AECOM)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3
Ph: 403-450-9926 Fax: 403-270-4822
(Site) office

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: LOBE P Stack pile

Sampler's Initials: DRS

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted	
			BTEX F1-F4 Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) *	Assessment ICP Metals ² <input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1) <input type="checkbox"/> TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4 Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD TOC <input type="checkbox"/> DOC	VH (W5-10) EH (W10-19) PH				
1 09-451	S	2009/07/12 17:00	X		X											3
2 09-452		17:05														
3 09-453		17:10														
4 09-454		17:15														
5 09-455		17:20														
6 09-456		17:25														
7 09-457		17:30														
8 09-458	S	2009/07/12 17:35	X		X											3
9 09-459	S	2009/07/13 14:00													X	2
10 09-460	S	14:05	X													2
11 09-461	S	14:05	X													2
12 09-462	S	2009/07/13 14:10	X													2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to pg 1 Date/Time: _____
Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:
* see metals note pg 1

# JARS USED & NOT SUBMITTED	Received By			Temperature			Ice
	17/07/09 16:50h	RT		4	6	2	
CUSTODY SEAL YES (NO)		7	8	14	13	7	Y

483(4)



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81171 CHAIN OF CUSTODY

A936987/dw/RT/MS/GH Page: 3 of 8

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALUE

Address: ana.galue@aecom.com

Prov: Calgary AB PC:

Contact #: Ph: 403-270-9200 Fax: 403-270-0399

Report To: Dara Schmidt (AECOM)

2540 Kensington Rd NW

Calgary

Prov: AB PC: T2V 6A 3S3

Ph: 403-270-4822 Fax: 403-450-9926 office

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-329 371-00

Project Name: Johnson Point

Location: Lobe P

Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1

CCME

OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification			Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	SOILS (footnotes defined on back)	WATERS (footnotes defined on back)	OTHER TEST(S)	HOLD for 60 Days	# of Containers Submitted
					<input type="checkbox"/>	<input type="checkbox"/> Sieve (75 micron) <input type="checkbox"/> Salinity 4 <input type="checkbox"/> Regulated Metals (CCME / AT1) ¹ <input type="checkbox"/> Assessment ICP Metals ² <input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1) <input type="checkbox"/> TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs <input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4 Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved <input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved <input type="checkbox"/> Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD <input type="checkbox"/> TOC <input type="checkbox"/> DOC	VH(W5-10) EH(WID-19) PH		
1	09-463	S	2009/07/13	14:15	X					2
2	09-464	↓	↓	14:20					X	2
3	09-465	↓	↓	14:25					X	2
4	09-466	↓	↓	14:30	X					2
5	09-467	↓	↓	14:35					X	2
6	09-468	↓	↓	14:40	X					2
7	09-469	↓	↓	14:45					X	2
8	09-470	↓	↓	14:50	X					2
9	09-471	↓	↓	14:50	X					2
10	09-472	↓	↓	14:55					X	2
11	09-473	↓	↓	15:00					X	2
12	09-474	S	2009/07/13	15:05	X					2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By	Temperature			Ice	
	17/07/09 16:50h	RT	4	6	2	Y
			8	8	3	
		16	14	13		
CUSTODY SEAL YES (NO)			7	6	7	

483(4)



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81172 CHAIN OF CUSTODY

Page: 4 of 8
A936987/GW RT ASB/DW

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: Ana Galue
Address: ana.galue@aecom.com
Prov: AB PC:
Contact #: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
Dara Schmidt (AECOM)
2540 Kensington Rd NW
Calgary
Prov: AB PC: T2N 3S3
Ph: 403-450-9926 Fax: 403-270-4822
(Site) office

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: Lobe P
Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required:
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)											WATERS (footnotes defined on back)									OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted															
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	TPH	PCB	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total Preserved	Not Preserved	Dissolved Preserved	Not Preserved		Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC	EAH (W5-10)	VH (W10-19)	pH		
1 09-475	S	2009/07/13 15:10																																						X	2	
2 09-476		15:15																																						X	2	
3 09-477		15:20	X																																					X	2	
4 09-478		15:25																																						X	2	
5 09-479		15:30																																						X	2	
6 09-480		15:35	X																																					X	2	
7 09-481		15:35	X																																					X	2	
8 09-482		15:40 NO	X																																					X	2	
9 09-483		2009/07/13 15:45																																						X	2	
10 09-484																																									X	2
11 09-485																																									X	2
12 09-486	S																																								X	2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

refer to pg 1

# JARS USED & NOT SUBMITTED	17/07/09	Received By RT	Temperature			Ice
	16:50h		4	6	2	
CUSTODY SEAL YES/NO	(NO)	8	8	3		
		7	6	7		

A936987 / CH / RT / JH / DW
Page: 5 of 8
PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: JOHNSON POINT
Location: LOBE P
Sampler's Initials: DAS

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: ANA GALUE
Address: ana.galue@aecom.com
Prov: PC:
Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM (Dara Schmidt)
2540 Kensington Rd NW
Calgary
Prov: AB **PC:** TAN 353
Ph: 403-450-9426 (Site) Fax: 403-270-4822 (office)

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handal@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	SOILS (footnotes defined on back)						WATERS (footnotes defined on back)											OTHER TEST(S)			*HOLD for 60 Days	# of Containers Submitted						
				Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	VH (W5-10)	EH (W10-19)	PH								
1 09-487	S	2009/07/13 15:55	X																										X	2	
2 09-488	S	2009/07/13 16:00																												X	2
3 09-489																															
4 09-490																															
5 09-491																															
6 09-492																															
7 09-493																															
8 09-494	V																														
9 09-495	S																														
10 09-486	S	2009/07/13 15:50																												X	2
11 09-518	S	2009/07/15 15:40	X																											X	2
12 09-519	S	2009/07/15 15:45																												X	2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #: _____

Relinquished By: refer to pg 1 Date/Time: _____
Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: *NO PARTIAL RPTS please. Page 43 of 46

JARS USED & NOT SUBMITTED: 17/07/09 16:50h Received By: RT
Temperature: 4 6 2 8 8 3 16 14 13 7 6 7 Ice: Y
CUSTODY SEAL YES (NO)

A936987 / GH RT / JLY / DW
 Page: 6 of 8
 PO # / AFE #:

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: Ana Galwe
Address: ana.galwe@aecom.com
Prov: Calgary AB **PC:**
Contact #s: Ph: 270-9200 Fax: 270-0399

Report To:
 AECOM (Para Schmidt)
 2540 Kensington Rd NW
 Calgary
Prov: AB **PC:** TAN 3S3
 Ph: 403-450-9926 Fax: 403-270-4822
 (Site) office

Quotation #: C08-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location: LOBE Y & PART 2
 Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 priya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required:
 REGULAR Turnaround (5 to 7 Days)

SOILS (footnotes defined on back)		WATERS (footnotes defined on back)								OTHER TEST(S)																												
BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	TPH	PCB	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total Preserved	Not Preserved	Dissolved Preserved	Not Preserved	Filtered	Not Filtered	Total	Dissolved	Mercury	Ammonia	TKN	COD	TOC	DOC	VH (W5-10)	EH (W10-19)	pH	*HOLD for 60 Days	# of Containers Submitted
1	09-494	S	2009/15/05	14:00	X																																	
2	495			14:05	X																																	
3	496			14:10																																		
4	497			14:15	X																																	
5	498			14:20																																		
6	499			14:25	X																																	
7	500			14:30																																		
8	501			14:30																																		
9	502			14:35	X																																	
10	503			14:45	X																																	
11	504			14:50																																		
12	09-505	S	2009/07/15	14:55	X																																	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____
 Sign and Print: _____
 COMMENTS/SPECIAL INSTRUCTIONS: refer to pg 1

# JARS USED & NOT SUBMITTED	Received By			Temperature			Ice
	17/07/09	RT		4	6	2	
	16:50h			8	6	3	Y
				16	14	13	
		CUSTODY SEAL YES / NO		7	6	7	

483(4)



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

80838 CHAIN OF CUSTODY

Page: 7 of 8
A936987/GA/RT/Julg/DW
PO # / AFE #:

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galwe
Address: ana.galwe@aecom.com
Prov: AB PC: TAN353
Contact #s: Ph: 403-270-9200 Fax: 270-0399

Report To:
AECOM (Dara Schmidt)
2540 Kensington Road NW
Calgary
Prov: AB PC: TAN353
Ph: 403-450-9926 Fax: 270-4822
(Site) office

Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: LDBEY
Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@
aecom.com
prya.handa@
aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)														WATERS (footnotes defined on back)				OTHER TEST(S)		# of Containers Submitted				
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ^a	Assessment ICP Metals ^a	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	<input type="checkbox"/> TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Total <input type="checkbox"/> Dissolved	Mercury <input type="checkbox"/> TKN <input type="checkbox"/> COD	Ammonia <input type="checkbox"/> DOC	TOC	VH (W5-10)		EH (W10-19)	pH	*HOLD for 60 Days	
1 09-506		2009/07/15 15:50																								X	2
2 507		15:55																								X	
3 508		16:00																								X	
4 509		15:00																								X	
5 510		15:05																								X	
6 511		15:05																								X	
7 512		15:10																								X	
8 513		15:15																								X	
9 514		15:20																								X	
10 515		15:25																								X	
11 516		15:30																								X	
12 09-517		2009/07/15 15:35																								X	2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____
Sign and Print: refer to pg 1

# JARS USED & NOT SUBMITTED	Received By <u>RT</u> 17/07/09 16:50h	Temperature			Ice
		4	6	2	
		8	8	3	
		16	14	13	
CUSTODY SEAL YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		7	6	7	Y

A936987
IGH/RT/MS/DW

Invoice To: Require Report? Yes No

Report To:

Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 PC:
 Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-0399

AECOM (Dara Schmidt)
2540 Kensington Rd NW
Calgary, AB
 PC: T2N3S3
 Ph: 403-450-9926 Fax: 270-4822
 (site) office

PO # / AFE #: _____
 Quotation #: C08-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location: LOBEY
 Sampler's Initials: DAS

REGULATORY REQUIREMENTS:

- AT1 - Soil Contamination PST
 CCME CDWQG
 CCME FWAL G50
 Regulatory Limits to appear on Final report

REPORT DISTRIBUTION:

- Mail Fax
 PDF Excel Other: Equis
 Email: dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
 Date Required: MONDAY JULY 19
 REGULAR Turnaround

METALS: (WATERS):

- Total Extractable Dissolved

ANALYSIS REQUESTED

Sample Identification	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	BTEX F1-F4 & TEH	BTEX F1-F4	VH (W5-10)	EHT (W10-19)	PH
1 09-520	W	2009/07/16 9:10			RUSH			X	X	X
2 09-521	W	2009/07/16 9:15			RUSH			X	X	X
3 09-522	W	2009/07/16 9:20			RUSH			X	X	X
4 09-523	S	2009/07/12			RUSH	X				
5										
6										
7										
8										
9										
10										
11										
12										
**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).								P	P	

Relinquished By: _____
 Signature: _____

Date/Time: _____

Received
17/07/09
16:50h RT

Temperature
4/6/2 °C
8/8/3 °C
16/14/13 °C
7/6/7 °C
 C of C # **174083**

COMMENTS/SPECIAL INSTRUCTIONS: * RUSH SAMPLES 09-520, 09-521 & 09-522 & 09-523

Task Order#:
 Site#:
 Site Location:
 Project #: A936987
 Your C.O.C. #: na

Attention: Erin Anderson

Maxxam Analytics
 Edmonton - ENV
 9331-48 St
 Edmonton, AB
 T6B 2R4

Report Date: 2009/07/27

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A991560
Received: 2009/07/21, 09:00

Sample Matrix: OIL
 # Samples Received: 1

Analyses	Quantity	Laboratory Method	Method Primary reference
Polychlorinated Biphenyl in Solids (l)	1	CAM SOP-00307	EPA 8082

Sample Matrix: Soil
 # Samples Received: 19

Analyses	Quantity	Laboratory Method	Method Primary reference
MOISTURE	19	CAM SOP-00445	McKeague 2nd ed 1978
Polychlorinated Biphenyl in Soil	19	CAM SOP-00309	SW846 8082

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Sample(s) analyzed using methodologies that have not been subjected to Maxxam's standard validation process for the submitted matrix and is not an Accredited method. Analysis performed with client consent, however results should be viewed with discretion

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ELORA DI BRATTO, Project Manager
 Email: Elora.DiBratto@maxxamanalytics.com
 Phone# (905) 817-5700

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page
 Total cover pages: 1

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (OIL)

Maxxam ID		DD2473		
Sampling Date		2009/07/11		
COC Number		na		
	Units	P82884-01R\09-200	RDL	QC Batch

Aroclor 1262	ug/g	<1	1	1890289
Aroclor 1016	ug/g	<1	1	1890289
Aroclor 1221	ug/g	<1	1	1890289
Aroclor 1232	ug/g	<1	1	1890289
Aroclor 1242	ug/g	<1	1	1890289
Aroclor 1248	ug/g	<1	1	1890289
Aroclor 1254	ug/g	<1	1	1890289
Aroclor 1260	ug/g	<1	1	1890289
Aroclor 1268	ug/g	<1	1	1890289
Total PCB	ug/g	<1	1	1890289
Extraction Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	74		1890289
Decachlorobiphenyl	%	95		1890289

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DD2474	DD2475	DD2476		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82924-02R\09-440	P82926-02R\09-441	P82927-02R\09-442	RDL	QC Batch

Moisture	%	11	8.5	13	0.2	1885480
----------	---	----	-----	----	-----	---------

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DD2477	DD2478	DD2479		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82928-02R\09-443	P82929-02R\09-444	P82930-02R\09-445	RDL	QC Batch

Moisture	%	14	14	13	0.2	1885480
----------	---	----	----	----	-----	---------

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DD2480	DD2481	DD2482		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82931-02R\09-446	P82932-02R\09-447	P82934-02R\09-448	RDL	QC Batch

Moisture	%	14	14	13	0.2	1885480
----------	---	----	----	----	-----	---------

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DD2483	DD2484	DD2485		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82937-02R\09-449	P82942-02R\09-450	P82946-02R\09-451	RDL	QC Batch

Moisture	%	13	15	14	0.2	1885480
----------	---	----	----	----	-----	---------

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DD2486	DD2487	DD2488		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82947-02R\09-452	P82949-02R\09-453	P82950-02R\09-454	RDL	QC Batch

Moisture	%	12	14	13	0.2	1885480
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DD2489	DD2490	DD2491		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82951-02R\09-455	P82952-02R\09-456	P82953-02R\09-457	RDL	QC Batch

Moisture	%	13	14	14	0.2	1885480
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DD2492	DD2492		
Sampling Date		2009/07/11	2009/07/11		
COC Number		na	na		
	Units	P82954-02R\09-458	P82954-02R\09-458	RDL	QC Batch
			Lab-Dup		

Moisture	%	14	14	0.2	1885480
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2474	DD2475	DD2476		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82924-02R\09-440	P82926-02R\09-441	P82927-02R\09-442	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	86	77	69		1885870
Decachlorobiphenyl	%	103	92	85		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2477	DD2478	DD2479		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82928-02R\09-443	P82929-02R\09-444	P82930-02R\09-445	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	79	69	85		1885870
Decachlorobiphenyl	%	95	85	105		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2480	DD2480	DD2481		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82931-02R\09-446	P82931-02R\09-446 Lab-Dup	P82932-02R\09-447	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	80	78	77		1885870
Decachlorobiphenyl	%	98	97	91		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2482	DD2483	DD2484		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82934-02R\09-448	P82937-02R\09-449	P82942-02R\09-450	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	83	77	78		1885870
Decachlorobiphenyl	%	96	91	94		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2485	DD2486	DD2487		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82946-02R\09-451	P82947-02R\09-452	P82949-02R\09-453	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	81	80	98		1885870
Decachlorobiphenyl	%	98	93	114		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2488	DD2489	DD2490		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82950-02R\09-454	P82951-02R\09-455	P82952-02R\09-456	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	85	90	87		1885870
Decachlorobiphenyl	%	105	102	107		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2491	DD2492		
Sampling Date		2009/07/11	2009/07/11		
COC Number		na	na		
	Units	P82953-02R109-457	P82954-02R109-458	RDL	QC Batch

Aroclor 1262	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	88	85		1885870
Decachlorobiphenyl	%	102	106		1885870

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

Test Summary

Maxxam ID DD2473
Sample ID P82884-01R\09-200
Matrix OIL
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Solids	GC/ECD	1890289	2009/07/27	2009/07/27	LGA

Maxxam ID DD2474
Sample ID P82924-02R\09-440
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2475
Sample ID P82926-02R\09-441
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2476
Sample ID P82927-02R\09-442
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2477
Sample ID P82928-02R\09-443
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2478
Sample ID P82929-02R\09-444
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

Test Summary

Maxxam ID DD2479 **Collected** 2009/07/11
Sample ID P82930-02R\09-445 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2480 **Collected** 2009/07/11
Sample ID P82931-02R\09-446 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2480 Dup **Collected** 2009/07/11
Sample ID P82931-02R\09-446 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2481 **Collected** 2009/07/11
Sample ID P82932-02R\09-447 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2482 **Collected** 2009/07/11
Sample ID P82934-02R\09-448 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2483 **Collected** 2009/07/11
Sample ID P82937-02R\09-449 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

Test Summary

Maxxam ID DD2484
Sample ID P82942-02R\09-450
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2485
Sample ID P82946-02R\09-451
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2486
Sample ID P82947-02R\09-452
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2487
Sample ID P82949-02R\09-453
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2488
Sample ID P82950-02R\09-454
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2489
Sample ID P82951-02R\09-455
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

Test Summary

Maxxam ID DD2490 **Collected** 2009/07/11
Sample ID P82952-02R\09-456 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2491 **Collected** 2009/07/11
Sample ID P82953-02R\09-457 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2492 **Collected** 2009/07/11
Sample ID P82954-02R\09-458 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2492 Dup **Collected** 2009/07/11
Sample ID P82954-02R\09-458 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC

Maxxam Job #: A991560
Report Date: 2009/07/27

Maxxam Analytics
Task Order#:
Site#:

Project #: A936987

Package 1	1.7°C
-----------	-------

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
 Task Order#:
 Site#:
 Site Location:
 Project #: A936987

Quality Assurance Report
 Maxxam Job Number: A991560

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
1885870 JZ	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/07/23		87	%	40 - 130		
		Decachlorobiphenyl	2009/07/23		102	%	40 - 130		
		Aroclor 1262	2009/07/23	<0.01			ug/g		
		Aroclor 1016	2009/07/23	<0.01			ug/g		
		Aroclor 1221	2009/07/23	<0.01			ug/g		
		Aroclor 1232	2009/07/23	<0.01			ug/g		
		Aroclor 1242	2009/07/23	<0.01			ug/g		
		Aroclor 1248	2009/07/23	<0.01			ug/g		
		Aroclor 1254	2009/07/23	<0.01			ug/g		
		Aroclor 1260	2009/07/23	<0.01			ug/g		
		Aroclor 1268	2009/07/23	<0.01			ug/g		
		Total PCB	2009/07/23	<0.01			ug/g		
		1890289 LGA	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/07/27		104	%	40 - 130
Decachlorobiphenyl	2009/07/27				94	%	40 - 130		
Aroclor 1262	2009/07/27			<1			ug/g		
Aroclor 1016	2009/07/27			<1			ug/g		
Aroclor 1221	2009/07/27			<1			ug/g		
Aroclor 1232	2009/07/27			<1			ug/g		
Aroclor 1242	2009/07/27			<1			ug/g		
Aroclor 1248	2009/07/27			<1			ug/g		
Aroclor 1254	2009/07/27			<1			ug/g		
Aroclor 1260	2009/07/27			<1			ug/g		
Aroclor 1268	2009/07/27			<1			ug/g		
Total PCB	2009/07/27			<1			ug/g		
1885870 JZ	RPD			Aroclor 1260	2009/07/27	10.9		%	50
		Total PCB	2009/07/27	10.9		%	50		
1885870 JZ	RPD [DD2480-01]	Aroclor 1262	2009/07/23	NC		%	50		
		Aroclor 1016	2009/07/23	NC		%	50		
		Aroclor 1221	2009/07/23	NC		%	50		
		Aroclor 1232	2009/07/23	NC		%	50		
		Aroclor 1242	2009/07/23	NC		%	50		
		Aroclor 1248	2009/07/23	NC		%	50		
		Aroclor 1254	2009/07/23	NC		%	50		
		Aroclor 1260	2009/07/23	NC		%	50		
		Aroclor 1268	2009/07/23	NC		%	50		
		Total PCB	2009/07/23	NC		%	50		
		1885480 MYG	RPD [DD2492-01]	Moisture	2009/07/22	2.1		%	50
		1885870 JZ	MATRIX SPIKE [DD2480-01]	2,4,5,6-Tetrachloro-m-xylene	2009/07/23		87	%	40 - 130
				Decachlorobiphenyl	2009/07/23		108	%	40 - 130
Aroclor 1260	2009/07/23				107	%	30 - 130		
Total PCB	2009/07/23				107	%	30 - 130		
LCS	2,4,5,6-Tetrachloro-m-xylene		2009/07/23		82	%	40 - 130		
	Decachlorobiphenyl		2009/07/23		109	%	40 - 130		
	Aroclor 1260		2009/07/23		111	%	30 - 130		
	Total PCB		2009/07/23		111	%	30 - 130		
	1890289 LGA		LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/27		109	%	40 - 130
			Decachlorobiphenyl	2009/07/27		98	%	40 - 130	
			Aroclor 1260	2009/07/27		115	%	30 - 130	
			Total PCB	2009/07/27		115	%	30 - 130	

NC = Non-calculable
 RPD = Relative Percent Difference

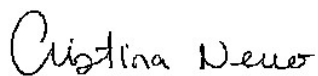
Validation Signature Page

Maxxam Job #: A991560

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CHARLES ANCKER, B.Sc., M.Sc., C.Chem, Senior Analyst

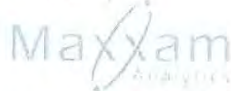


CRISTINA NERVO, Scientific Services

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

483 (4)



Company: 4001 102nd St NE 12E 6P9
 Brampton, ONT L6R 0A5

PH: (905) 201-3077 Fax: (905) 235-2241
 PH: (781) 485-1217 Fax: (781) 430-2185
 www.maxxaminternational.com

81168 CHAIN OF CUSTODY

1936987/AN/RT/MJ/GH Page 1 of 8
 PC: AFE

Invoice To: Require Report? Yes No
 Company Name: AECOM
 Contact Name: ANA GALUE
 Address: ana.galue@aecom.com
 Prov: AB PC:
 Contact #: Ph: 403 270 9200 Fax: 403 270 0919

Report To:
 DARA SCHMIDT (AECOM)
 2540 Kensington Rd NW
 Calgary
 Prov: AB PC: T4N 3S3
 Ph: 403 450 9926 Fax: 403 270 4822
 Office

Quotation #: COS-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location: LOBE P - STOCKPILE
 Sampler's initials: DAS

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate (and use)
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
 EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 priya.nanda@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
 Date Required:
 REGULAR Turnaround (5 to 7 Days)

SOILS (subtrates defined on back)				WATERS (subtrates defined on back)				OTHER TEST(S)													
<input type="checkbox"/> BTEX F1-F4	<input type="checkbox"/> TPH	<input type="checkbox"/> PCB	<input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1	<input type="checkbox"/> BTEX F1-F2	<input type="checkbox"/> BTEX F1-F4	<input type="checkbox"/> Turb	<input type="checkbox"/> F	REGULATED METALS (CCME / AT1)*	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved <input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	VH (W5-10)	EH (W10-19)	pH	Pb (chromium)	Pb (lead)	Cd (chromium)	Cr (chromium)	*HOLD for 80 Days	# of Containers Submitted
<input type="checkbox"/> Sieve (75 micron)	<input type="checkbox"/> Salinity 4	<input type="checkbox"/> Regulated Metals (CCME / AT1) at Site	<input type="checkbox"/> Assessment ICP Metals	<input type="checkbox"/> Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	<input type="checkbox"/> Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	<input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	<input type="checkbox"/> Total <input type="checkbox"/> Dissolved														

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	TPH	PCB
1 09-200	ND	2009/07/11 9:35			
2 09-440	S	2009/07/11 9:30	X	X	X
3 09-441	S	2009/07/12 9:20	X	X	X
4 09-442	S	2009/07/12 16:15	X	X	X
5 09-443		16:20			
6 09-444		16:25			
7 09-445		16:30			
8 09-446		16:35			
9 09-447		16:40			
10 09-448		16:45			
11 09-449	V	16:50	V	V	V
12 09-450	S	2009/07/12 16:55	X	X	X

*All samples are held for 80 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: DARA SCHMIDT Date/Time: 16 JUL 09 11:15
 Sign and Print: [Signature]

JARS USED & NOT SUBMITTED: 17/07/09 16:50h
 Received By: RT
 CUSTODY SEAL: YES (NO)

Temperature	Ice
4 6 2	
8 6 3	
16 14 13	Y
7 6 7	

COMMENTS/SPECIAL INSTRUCTIONS:
 *Metals: AS, CO, CU, CR, CD, NI, PIS ZD (only)

483/4)



1400 395-3077 Fax: (905) 735-2336
1750 365-1212 Fax: (905) 628-4195
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1400 395-3077 Fax: (905) 735-2336
1750 365-1212 Fax: (905) 628-4195
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81169 CHAIN OF CUSTODY

A936987/14/RT/11/11/11

Invoice To: Require Report? Yes No

Company Name: AECOM
 Contact Name: ANA GALVE
 Address: ana.galve@aecom.com
 Prov: PC:
 Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
 Dara Schmidt @ (AECOM)
 2540 Kensington Rd NW
 Calgary
 Prov: AB PC: T2N 3S3
 Ph: 403-450-9926 Fax: 403-270-4822
 Site: office

POY / AFE:
 Quotation #: COS-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location: LOBE P Street
 Sampler's Initials: DNS

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate (and use)
 ATI
 CCME
 OTHER

REPORT DISTRIBUTION:
 EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 priya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
 Date Required:
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)			*HOLD for 60 Days # of Containers Submitted	
			BTEX F1-F4 Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / ATI) *	Assessment (CP Metals) <input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1-11) <input type="checkbox"/> TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	REGULATED METALS (CCME / ATI) * Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC		VH (W5-10) EH (W10-19) pH
1 09-451	S	2009/07/12 17:00	X	X	X										3
2 09-452		17:05													
3 09-453		17:10													
4 09-454		17:15													
5 09-455		17:20													
6 09-456		17:25													
7 09-457	V	17:30	V	V	V										V
8 09-458	S	2009/07/12 17:35	X	X	X										3
9 09-459	S	2009/07/13 14:00													X 2
10 09-460	S	14:05	X												2
11 09-461	S	14:05	X												2
12 09-462	S	2009/07/13 14:10	X												2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Relinquished By: refer to pg 1 Date/Time: _____
 Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:
* See metals note pg 1

# JARS USED & NOT SUBMITTED	Received By:	Temperature	Ice	
	17/07/09			RT
	16:50h			
	17/07/09			
FOOTPRINT SEAL	YES	NO		

A936987/su/RT/1/1/1
 Page 3 of 8
 PO # AFE #
 Quotation # 008-329
 Project # 2977-300 311-00
 Project Name Johnson Point
 Location Loixe P
 Sampler's Initials DAS

Invoice To: Require Report? Yes No
 Company Name: AECOM
 Contact Name: ANA GALVE
 Address: ana.galve@aecom.com
 Prov: Calgary AB PC:
 Contact #: Ph: 403-270-4200 Fax: 403-270-0399

Report To:
 Dana Schmidt (AECOM)
 2540 Kensington Rd NW
 Calgary
 Prov: AB PC: T2V 1K9 3S3
 Ph: 403-270-4822 Fax: 403-480-9926
 Office (date)

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate (and use)
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
 EMAIL ADDRESS(S):
 dana.schmidt@aecom.com
 priya.handal@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
 Date Required:
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	SOILS (Footnotes defined on back)						WATERS (Footnotes defined on back)						OTHER TEST(S)		*HOLD for 60 Days # of Containers Submitted							
				Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment TCP Metals*	Paint Filter	Flashpoint	pH (1:1)	Total	Preserved	Not Preserved	Dissolved	Filtered	Not Filtered	Mercury		Total	Dissolved	Ammonia	TKN	COD	TOC	DOC
1	09-463	S	2009/07/13 14:15	X																					
2	09-464		14:20																					X	2
3	09-465		14:25																				X	2	
4	09-466		14:30	X																					2
5	09-467		14:35																						2
6	09-468		14:40	X																			X	2	
7	09-469		14:45																				X	2	
8	09-470		14:50	X																					2
9	09-471		14:50	X																					2
10	09-472		14:55																				X	2	
11	09-473		15:00																				X	2	
12	09-474	S	2009/07/13 15:05	X																					2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager

Relinquished By: Refer to pg 1 Date/Time:
 Sign and Print: _____
 COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By: 17/07/09 16:50h RT	Temperature		Ice	
		4	6		2
		8	8		3
		16	14		13
CUSTOMER SEAL	VPS	(NO)	7	5	3

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Company: 8001 1st St. NE, 12E-170
 Edmonton, Alberta T6C 2B4

Phone: (91) 317-1111 Fax: (403) 256-2540
 Toll Free: (800) 366-7217
 Fax: (780) 466-1777 Fax: (780) 450-4167 Toll Free: (877) 365-6046

www.maxxamanalytics.com

81172 CHAIN OF CUSTODY

PU # - GFE #
 A936987/64 RT 4/8
 1/13/09

Invoice To: Require Report? Yes No

Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 Prov: AB PC:
 Contact #: Pk: 403-270-4200 Fax: 403-270-0359

Report To:
 Dana Schmidt (AECOM)
 2540 Kensington Rd NW
 Calgary
 Prov: AB PC: T2N 3S3
 Pk: 403-450-9426 Fax: 403-270-4832
 Office

Quotation #: COS-339
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location: Lobe P
 Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:
 Check the applicable column and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
 EMAIL ADDRESS(S):
 dana.schmidt@aecom.com
 priya.nanda@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

SOILS (footnotes defined on back)
 BTEX F1-F4
 SVOCs (CCME / AT1)
 Paint Filter Flashpoint pH (1:1)
 TCLP BTEX Metals
 TPH
 PCBs

WATERS (footnotes defined on back)
 BTEX F1 VOCs
 BTEX F1-F2 BTEX F1-F4
 Routine Water Package Turb F
 Total Preserved Not Preserved
 Dissolved Not Preserved
 Filtered Not Filtered
 Mercury Total Dissolved
 Ammonia TKN COD
 TOC DOC

OTHER TEST(S)
 EH (W5-10)
 VH (W10-19)
 pH

Sample Identification	Matrix S/W	Date & Time Sampled Year-Month-Day	BTEX F1-F4	SVOCs (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	TPH	PCBs	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Not Preserved	Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC	EH (W5-10)	VH (W10-19)	pH	HOLD for 60 Days	# of Containers Submitted			
1 09-475	S	2009/07/13 15:10																																						X	2				
2 09-476		15:15																																							X	2			
3 09-477		15:20	X																																										
4 09-478		15:25																																								X	2		
5 09-479		15:30																																								X	2		
6 09-480		15:35	X																																										
7 09-481		15:35	X																																										
8 09-482		15:40	X																																										
9 09-483		2009/07/13 15:45																																											
10 09-484																																													
11 09-485																																													
12 09-486	S																																												

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____
 Sign and Print: _____

# JARS USED & NOT SUBMITTED	17/07/09	Received By: RT	Temperature		Ice
	16:50h		4	6	2
			8	8	3
			16	14	13
CUSTODY SEAL	YES	(NO)	7	6	7

COMMENTS/SPECIAL INSTRUCTIONS:

refer to pg 1

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Maxxam
ANALYTICS

Georgina: 400N 15th St. No. 125-018
Edmonton: 9331 - 48 Street, T6H 2P4

PH: (403) 291-3407 FAX: (403) 735-2240 Toll Free: (800) 389-2247
PH: (781) 455-1212 FAX: (781) 459-4180 Toll Free: (877) 465-1885
www.maxxaminternational.com

80837 CHAIN OF CUSTODY

A936987 / GH / RT / 10/1/09
Page: 5 of 8

Invoice To: Required Report? Yes No X

Company Name: AECOM
 Contact Name: ANA GALLIE
 Address: ana.gallie@aecom.com
 Prov: PC:
 Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To: AECOM (Dara Schmidt)
 2540 Kensington Rd NW
 Calgary
 Prov: AB PC: T2N 3S3
 Ph: 403-450-9126 Fax: 403-270-4822
 (Stk) office

PO # / A L #:
 Quotation #: C08-329
 Project #: 2477-371-00
 Project Name: Johnson Point
 Location: Lobe P
 Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use:

- AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 priya.handa@aecom.com

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) Assessment (CP Metals)	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	WATERS (testnotes defined on back)		OTHER TEST(S)	# of Containers Submitted			
											REGULATED METALS (CCME / AT1)	REGULATED METALS (CCME / AT1)					
1 09-487	S	2009/07/13 15:55	X								<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs <input type="checkbox"/> BTEX F1-F4 <input type="checkbox"/> BTEX F1-F4 Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD <input type="checkbox"/> TOC <input type="checkbox"/> DOC VH (W5-10) EH (W10-19) PH	X	2		
2 09-488	S	2009/07/13 16:00															
3 09-489																	
4 09-490																	
5 09-491				X													
6 09-492				X													
7 09-493																	
8 09-494	V																
9 09-495	S																
10 09-486	S	2009/07/13 15:50														X	2
11 09-518	S	2009/07/15 15:40	X														2
12 09-519	S	2009/07/15 15:45														X	2

All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: *refer to pg 1* Date/Time: _____
 Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: * NO PARTIAL RPTS please.

# JARS USED & NOT SUBMITTED	Received By:	Temperature	Ice
	17/07/09	4 6 2	
	16:50h	8 8 3	
	RT	16 14 13	Y
	CLUSTDY SEAL: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	7 6 7	

483(4)



Maxxam Analytics
1500 West Beaver Creek Rd
Unit 100, Richmond Hill, ON L4B 3N2

Ph: (905) 291-8077 Fax: (905) 705-0230 Toll free (800) 368-2477
Ph: (705) 465-1212 Fax: (705) 450-4107 Toll free (800) 468-1301
www.maxxamanalytics.com

80839 CHAIN OF CUSTODY

9936987/64/RT/1/1 DW
Page 6 of 8

PC # / AFE #
Quotation # C08-329
Project # 2977-371-00
Project Name Johnson Point
Location LOBEY + PART 2
Sampler's Initials DAS

Invoice To: Requires Report? Yes No

Company Name: AECOM
Contact Name: Ana Galwe
Address: ana.galwe@aecom.com
Prov: Calgary AB PC:
Contact #: Ph: 270-9200 Fax: 270-0399

Report To:
AECOM (Dara Schmidt)
2540 Kensington Rd NW
Calgary
Prov: AB PC: TAN 353
Ph: 403-450-9926 Fax: 403-270-4822
office

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate (and use)
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priva.nanda@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix SW	Date & Time Sampled Year/Month/Day	BTEX F1-F4 Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) Assessment ICP Metals*	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1-1) TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH PCB	BTEX F1 <input type="checkbox"/> VOCs BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4 Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD TOC <input type="checkbox"/> DOC	OTHER TEST(S) VH (W5-10) EH (W10-19) PH	*HOLD for 60 Days # of Containers Submitted
1 09-494	S	2009/07/15 14:00	X										2
2 495		14:05	X										2
3 496		14:10											X 2
4 497		14:15	X										2
5 498		14:20	X										X 2
6 499		14:25	X										2
7 500		14:30											X 2
8 501		14:30											X 2
9 502		14:35	X										2
10 503		14:45	X										2
11 504		14:50											X 2
12 09-505	S	2009/07/15 14:55	X										2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

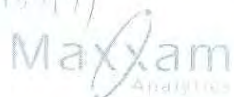
Maxxam Job #:

Relinquished By: _____ Date/Time: _____
Sign and Print: _____
COMMENTS/SPECIAL INSTRUCTIONS:

refer to pg 1

JARS USED & NOT SUBMITTED: 17/07/09
Received By: RT
Temperature: 4 6 2
8 8 3
16 14 3
7 6 7
ICB: 1

487(4)



Calgary (403) 465-4100
Edmonton (780) 465-4102

Phoenix (602) 746-3077
Houston (281) 450-4107
London (416) 450-4107
Vancouver (604) 450-4107
Winnipeg (204) 450-4107

80838 CHAIN OF CUSTODY

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: _____ PC: _____

Contact #: Ph: 403-270-9200 Fax: 270-0399

Report To: AECOM (Dara Schmidt)

2540 Kensington Road NW
Calgary

Prov: AB PC: TAN 353

Ph: 403-450-9926 Fax: 270-4822

(Site) Office

1936987/GM Page 7 of 8
RT/JJJ/bw

Customer #: 008-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: LOBEY

Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use:

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

SOILS	WATERS	OTHER TEST(S)
<input type="checkbox"/> Sieve (75 micron) <input type="checkbox"/> Salinity & <input type="checkbox"/> Regulated Metals (CCME / AT1) <input type="checkbox"/> Assessment (CP Metals) <input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1-11) <input type="checkbox"/> TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals <input type="checkbox"/> TPH <input type="checkbox"/> PCB	<input type="checkbox"/> VOCs <input type="checkbox"/> BTEX F1-F4 <input type="checkbox"/> Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F <input type="checkbox"/> Not Preserved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved <input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered <input type="checkbox"/> Total <input type="checkbox"/> Dissolved <input type="checkbox"/> Mercury <input type="checkbox"/> Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD <input type="checkbox"/> TOC <input type="checkbox"/> DOC	<input type="checkbox"/> VH (W15-10) <input type="checkbox"/> EH (W10-19) <input type="checkbox"/> pH

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity &	Regulated Metals (CCME / AT1)	Assessment (CP Metals)	Paint Filter	Flashpoint	pH (1-11)	TCLP	BTEX	Metals	TPH	PCB	BTEX F1	VOCs	BTEX F1-F4	Routine Water Package	Turb	F	Not Preserved	Preserved	Not Preserved	Filtered	Not Filtered	Total	Dissolved	Mercury	Ammonia	TKN	COD	TOC	DOC	VH (W15-10)	EH (W10-19)	pH	HOLD for 60 Days	# of Containers Submitted	
1 09-506		2009/07/15 15:50																																				X	2	
2 507		15:55																																				X		
3 508		16:00																																				X		
4 509		15:00	X																																			X		
5 510		15:05	X																																			X		
6 511		15:05	X																																			X		
7 512		15:40																																				X		
8 513		15:15																																				X		
9 514		15:20																																				X		
10 515		15:25	X																																			X		
11 ✓ 516		15:30	X																																			X		
12 09-517		2009/07/15 15:35	X																																				X	2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to pg 1 Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By	Temperature	Ice
17/07/09	<u>RT</u>	4 6 2	
16-504		8 8 3	Y
		16 14 13	
		7 6 7	
DUPLICATE SEAL	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	

A936987 Page 8 of 8

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: Ana Galuc
Address: ana.galuc@aecom.com
PC:
Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM (Data Schmidt)
2540 Kensington Rd NW
Calgary, AB
PC: TAN353
(SITE)
Ph: 403-450-9926 Fax: 270-4822
office

PO # / AFE #: 16H/RT/VG/DW
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: LOBEY
Sampler's Initials: DAS

REGULATORY REQUIREMENTS:

- AT1 - Soil Contamination
 CCME
 CCME FWAL
 Regulatory Limits to appear on Final report
- PST
 CDWOG
 GSO

REPORT DISTRIBUTION:

- Mail Fax
 PDF Excel Other: Excel
 Email: data.schmidt@aecom.com
praja.handa@aecom.com

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
Date Required: MONDAY JULY 19
 REGULAR Turnaround

METALS: (WATERS):

- Total Extractable Dissolved

ANALYSIS REQUESTED

Sample Identification	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	BTEX F1-F4 & TEH	BTEX F1-F4	VH (W5-10)	EH (W10-19)	PH
1 09-520	W	2009/07/16 9:10	RUSH				X	X	X	
2 09-521	W	2009/07/16 9:15	RUSH				X	X	X	
3 09-522	W	2009/07/16 9:20	RUSH				X	X	X	
4 09-523	S	2009/07/12	RUSH			X				
5										
6										
7										
8										
9										
10										
11										
12										

*For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: refer to page 1 Date/Time: 17/07/09
Signature: _____
COMMENTS/SPECIAL INSTRUCTIONS: * RUSH SAMPLES 09-520, 09-521 & 09-522 & 09-523

Received
17/07/09
16:50h RT

Temperature
4/1/2°C
8/8/3°C
16/14/15°C
7/6/2°C
CofC# 174093

Task Order#:
 Site#:
 Site Location:
 Project #: A936987
 Your C.O.C. #: na

Attention: Erin Anderson

Maxxam Analytics
 Edmonton - ENV
 9331-48 St
 Edmonton, AB
 T6B 2R4

Report Date: 2009/07/27

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A991560
Received: 2009/07/21, 09:00

Sample Matrix: OIL
 # Samples Received: 1

Analyses	Quantity	Laboratory Method	Method Primary reference
Polychlorinated Biphenyl in Solids (l)	1	CAM SOP-00307	EPA 8082

Sample Matrix: Soil
 # Samples Received: 19

Analyses	Quantity	Laboratory Method	Method Primary reference
MOISTURE	19	CAM SOP-00445	McKeague 2nd ed 1978
Polychlorinated Biphenyl in Soil	19	CAM SOP-00309	SW846 8082

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Sample(s) analyzed using methodologies that have not been subjected to Maxxam's standard validation process for the submitted matrix and is not an Accredited method. Analysis performed with client consent, however results should be viewed with discretion

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ELORA DI BRATTO, Project Manager
 Email: Elora.DiBratto@maxxamanalytics.com
 Phone# (905) 817-5700

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page
 Total cover pages: 1

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (OIL)

Maxxam ID		DD2473		
Sampling Date		2009/07/11		
COC Number		na		
	Units	P82884-01R\09-200	RDL	QC Batch

Aroclor 1262	ug/g	<1	1	1890289
Aroclor 1016	ug/g	<1	1	1890289
Aroclor 1221	ug/g	<1	1	1890289
Aroclor 1232	ug/g	<1	1	1890289
Aroclor 1242	ug/g	<1	1	1890289
Aroclor 1248	ug/g	<1	1	1890289
Aroclor 1254	ug/g	<1	1	1890289
Aroclor 1260	ug/g	<1	1	1890289
Aroclor 1268	ug/g	<1	1	1890289
Total PCB	ug/g	<1	1	1890289
Extraction Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	74		1890289
Decachlorobiphenyl	%	95		1890289

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DD2474	DD2475	DD2476		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82924-02R\09-440	P82926-02R\09-441	P82927-02R\09-442	RDL	QC Batch

Moisture	%	11	8.5	13	0.2	1885480
----------	---	----	-----	----	-----	---------

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DD2477	DD2478	DD2479		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82928-02R\09-443	P82929-02R\09-444	P82930-02R\09-445	RDL	QC Batch

Moisture	%	14	14	13	0.2	1885480
----------	---	----	----	----	-----	---------

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DD2480	DD2481	DD2482		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82931-02R\09-446	P82932-02R\09-447	P82934-02R\09-448	RDL	QC Batch

Moisture	%	14	14	13	0.2	1885480
----------	---	----	----	----	-----	---------

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam ID		DD2483	DD2484	DD2485		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82937-02R\09-449	P82942-02R\09-450	P82946-02R\09-451	RDL	QC Batch

Moisture	%	13	15	14	0.2	1885480
----------	---	----	----	----	-----	---------

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DD2486	DD2487	DD2488		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82947-02R\09-452	P82949-02R\09-453	P82950-02R\09-454	RDL	QC Batch

Moisture	%	12	14	13	0.2	1885480
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DD2489	DD2490	DD2491		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82951-02R\09-455	P82952-02R\09-456	P82953-02R\09-457	RDL	QC Batch

Moisture	%	13	14	14	0.2	1885480
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam ID		DD2492	DD2492		
Sampling Date		2009/07/11	2009/07/11		
COC Number		na	na		
	Units	P82954-02R\09-458	P82954-02R\09-458	RDL	QC Batch
			Lab-Dup		

Moisture	%	14	14	0.2	1885480
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2474	DD2475	DD2476		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82924-02R\09-440	P82926-02R\09-441	P82927-02R\09-442	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	86	77	69		1885870
Decachlorobiphenyl	%	103	92	85		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2477	DD2478	DD2479		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82928-02R\09-443	P82929-02R\09-444	P82930-02R\09-445	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	79	69	85		1885870
Decachlorobiphenyl	%	95	85	105		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2480	DD2480	DD2481		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82931-02R\09-446	P82931-02R\09-446 Lab-Dup	P82932-02R\09-447	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	80	78	77		1885870
Decachlorobiphenyl	%	98	97	91		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2482	DD2483	DD2484		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82934-02R\09-448	P82937-02R\09-449	P82942-02R\09-450	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	83	77	78		1885870
Decachlorobiphenyl	%	96	91	94		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2485	DD2486	DD2487		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82946-02R\09-451	P82947-02R\09-452	P82949-02R\09-453	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	81	80	98		1885870
Decachlorobiphenyl	%	98	93	114		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2488	DD2489	DD2490		
Sampling Date		2009/07/11	2009/07/11	2009/07/11		
COC Number		na	na	na		
	Units	P82950-02R\09-454	P82951-02R\09-455	P82952-02R\09-456	RDL	QC Batch
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	85	90	87		1885870
Decachlorobiphenyl	%	105	102	107		1885870
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DD2491	DD2492		
Sampling Date		2009/07/11	2009/07/11		
COC Number		na	na		
	Units	P82953-02R109-457	P82954-02R109-458	RDL	QC Batch

Aroclor 1262	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1016	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1221	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1232	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1242	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1248	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1254	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1260	ug/g	<0.01	<0.01	0.01	1885870
Aroclor 1268	ug/g	<0.01	<0.01	0.01	1885870
Total PCB	ug/g	<0.01	<0.01	0.01	1885870
Extraction Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	88	85		1885870
Decachlorobiphenyl	%	102	106		1885870

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

Test Summary

Maxxam ID DD2473
 Sample ID P82884-01R\09-200
 Matrix OIL
 Collected 2009/07/11
 Shipped
 Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Solids	GC/ECD	1890289	2009/07/27	2009/07/27	LGA

Maxxam ID DD2474
 Sample ID P82924-02R\09-440
 Matrix Soil
 Collected 2009/07/11
 Shipped
 Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2475
 Sample ID P82926-02R\09-441
 Matrix Soil
 Collected 2009/07/11
 Shipped
 Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2476
 Sample ID P82927-02R\09-442
 Matrix Soil
 Collected 2009/07/11
 Shipped
 Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2477
 Sample ID P82928-02R\09-443
 Matrix Soil
 Collected 2009/07/11
 Shipped
 Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2478
 Sample ID P82929-02R\09-444
 Matrix Soil
 Collected 2009/07/11
 Shipped
 Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

Test Summary

Maxxam ID DD2479 **Collected** 2009/07/11
Sample ID P82930-02R\09-445 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2480 **Collected** 2009/07/11
Sample ID P82931-02R\09-446 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2480 Dup **Collected** 2009/07/11
Sample ID P82931-02R\09-446 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2481 **Collected** 2009/07/11
Sample ID P82932-02R\09-447 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2482 **Collected** 2009/07/11
Sample ID P82934-02R\09-448 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2483 **Collected** 2009/07/11
Sample ID P82937-02R\09-449 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

Test Summary

Maxxam ID DD2484
Sample ID P82942-02R\09-450
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2485
Sample ID P82946-02R\09-451
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2486
Sample ID P82947-02R\09-452
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2487
Sample ID P82949-02R\09-453
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2488
Sample ID P82950-02R\09-454
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2489
Sample ID P82951-02R\09-455
Matrix Soil
Collected 2009/07/11
Shipped
Received 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam Job #: A991560
 Report Date: 2009/07/27

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A936987

Test Summary

Maxxam ID DD2490 **Collected** 2009/07/11
Sample ID P82952-02R\09-456 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2491 **Collected** 2009/07/11
Sample ID P82953-02R\09-457 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2492 **Collected** 2009/07/11
Sample ID P82954-02R\09-458 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1885870	2009/07/22	2009/07/23	JZ

Maxxam ID DD2492 Dup **Collected** 2009/07/11
Sample ID P82954-02R\09-458 **Shipped**
Matrix Soil **Received** 2009/07/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1885480	N/A	2009/07/22	AC

Maxxam Job #: A991560
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Maxxam Analytics
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Package 1	1.7°C
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Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
 Task Order#:
 Site#:
 Site Location:
 Project #: A936987

Quality Assurance Report
 Maxxam Job Number: A991560

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
1885870 JZ	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/07/23		87	%	40 - 130		
		Decachlorobiphenyl	2009/07/23		102	%	40 - 130		
		Aroclor 1262	2009/07/23	<0.01			ug/g		
		Aroclor 1016	2009/07/23	<0.01			ug/g		
		Aroclor 1221	2009/07/23	<0.01			ug/g		
		Aroclor 1232	2009/07/23	<0.01			ug/g		
		Aroclor 1242	2009/07/23	<0.01			ug/g		
		Aroclor 1248	2009/07/23	<0.01			ug/g		
		Aroclor 1254	2009/07/23	<0.01			ug/g		
		Aroclor 1260	2009/07/23	<0.01			ug/g		
		Aroclor 1268	2009/07/23	<0.01			ug/g		
		Total PCB	2009/07/23	<0.01			ug/g		
		1890289 LGA	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/07/27		104	%	40 - 130
Decachlorobiphenyl	2009/07/27				94	%	40 - 130		
Aroclor 1262	2009/07/27			<1			ug/g		
Aroclor 1016	2009/07/27			<1			ug/g		
Aroclor 1221	2009/07/27			<1			ug/g		
Aroclor 1232	2009/07/27			<1			ug/g		
Aroclor 1242	2009/07/27			<1			ug/g		
Aroclor 1248	2009/07/27			<1			ug/g		
Aroclor 1254	2009/07/27			<1			ug/g		
Aroclor 1260	2009/07/27			<1			ug/g		
Aroclor 1268	2009/07/27			<1			ug/g		
Total PCB	2009/07/27			<1			ug/g		
1885870 JZ	RPD			Aroclor 1260	2009/07/27	10.9		%	50
		Total PCB	2009/07/27	10.9		%	50		
1885870 JZ	RPD [DD2480-01]	Aroclor 1262	2009/07/23	NC		%	50		
		Aroclor 1016	2009/07/23	NC		%	50		
		Aroclor 1221	2009/07/23	NC		%	50		
		Aroclor 1232	2009/07/23	NC		%	50		
		Aroclor 1242	2009/07/23	NC		%	50		
		Aroclor 1248	2009/07/23	NC		%	50		
		Aroclor 1254	2009/07/23	NC		%	50		
		Aroclor 1260	2009/07/23	NC		%	50		
		Aroclor 1268	2009/07/23	NC		%	50		
		Total PCB	2009/07/23	NC		%	50		
		1885480 MYG	RPD [DD2492-01]	Moisture	2009/07/22	2.1		%	50
		1885870 JZ	MATRIX SPIKE [DD2480-01]	2,4,5,6-Tetrachloro-m-xylene	2009/07/23		87	%	40 - 130
				Decachlorobiphenyl	2009/07/23		108	%	40 - 130
Aroclor 1260	2009/07/23				107	%	30 - 130		
Total PCB	2009/07/23				107	%	30 - 130		
LCS	2,4,5,6-Tetrachloro-m-xylene		2009/07/23		82	%	40 - 130		
	Decachlorobiphenyl		2009/07/23		109	%	40 - 130		
	Aroclor 1260		2009/07/23		111	%	30 - 130		
	Total PCB		2009/07/23		111	%	30 - 130		
	1890289 LGA		LCS	2,4,5,6-Tetrachloro-m-xylene	2009/07/27		109	%	40 - 130
			Decachlorobiphenyl	2009/07/27		98	%	40 - 130	
			Aroclor 1260	2009/07/27		115	%	30 - 130	
			Total PCB	2009/07/27		115	%	30 - 130	

NC = Non-calculable
 RPD = Relative Percent Difference

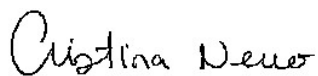
Validation Signature Page

Maxxam Job #: A991560

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CHARLES ANCKER, B.Sc., M.Sc., C.Chem, Senior Analyst



CRISTINA NERVO, Scientific Services

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

483(4)



Calgary 3490 (403) NE 135 Ave
 Edmonton 5021 - 48 Street, Old 284

PH (403) 291-3077 FAX (905) 735-2336 Job Free (800) 896-2247
 PH (780) 365-1212 FAX (780) 328-4185 Toll Free (877) 465-3889
 www.maxxamanalytics.com

81169 CHAIN OF CUSTODY

A936987/PP/RT/2/8
 POY/APE

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: ANA GALVE
Address: ana.galve@aecom.com
Prov: PC: **Contact #s:** Ph: 403-270-9200 Fax: 403-270-0399

Report To:
 Dara Schmidt @ (AECOM)
 2540 Kensington Rd NW
 Calgary
Prov: AB **PC:** T2N 3S3
 Ph: 403-450-9926 Fax: 403-270-4822
 Site: office

Quotation #: COS-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: LOBE P Street pile
Sampler's Initials: DNS

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate (and use)
 ATI
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 priya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)			WATERS (footnotes defined on back)				OTHER TEST(S)		*HOLD for 60 Days # of Containers Submitted
			BTEX F1-F4 & TPH Sieve (75 micron) Salinity 4	Regulated Metals (CCME / ATI) *	Assessment (CP Metals) <input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1-11) <input type="checkbox"/> TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH PCB	BTEX F1 <input type="checkbox"/> VOCs BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4 Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD TOC <input type="checkbox"/> DOC	VH (W5-10) EH (W10-19) PH	
1 09-451	S	2009/07/12 17:00	X	X								3
2 09-452		17:05										
3 09-453		17:10										
4 09-454		17:15										
5 09-455		17:20										
6 09-456		17:25										
7 09-457	V	17:30										
8 09-458	S	2009/07/12 17:35	X	X								3
9 09-459	S	2009/07/13 14:00										2
10 09-460	S	14:05	X									2
11 09-461	S	14:05	X									2
12 09-462	S	2009/07/13 14:10	X									2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Relinquished By: refer to pg 1
Sign and Print: _____
Comments/Special Instructions:
 * See metals note pg 1

JARS USED & NOT SUBMITTED: 17/07/09
 Received By: RT
 Temperature: 4 6 2
 8 8 3
 10 14 13
 7 6 2
 Ice: Y
 CUSTODY SEAL: YES (NO)

483/4)

Maxxam
ANALYTICS

Calgary: (403) 270-4822 Fax: (403) 270-4926
Edmonton: (780) 483-4182 Fax: (780) 483-4182
www.maxxamanalytics.com

Phoenix: (480) 297-1077 Fax: (480) 297-2348
Portland: (503) 485-1212 Fax: (503) 485-4182
Toll-free: (877) 483-5969

81171 CHAIN OF CUSTODY

A936987/ew/RT/1/16/09 Page 3 of 8

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALVE

Address: ana.galve@aecom.com

Prov: Calgary AB PC:

Contact #s: Ph: 403-270-4200 Fax: 403-270-0349

Report To: Data Schmidt (AECOM)
2540 Kensington Rd NW
Calgary

Prov: AB PC: T2V 1K9 3S3

Ph: 403-270-4822 Fax: 403-450-9926
Office Date:

PO # / AFE #

Quotation # CO8-329

Project # 2977-000 311-00

Project Name Johnson Point

Location Lohx P

Sampler's Initials DAS

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate (and use)

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@
aecom.com
priya.handal@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)	*HOLD for 60 Days # of Containers Submitted		
				Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) Assessment TCP Metals*	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1-1)	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	ROUTINE WATER PACKAGE <input type="checkbox"/> Turb <input type="checkbox"/> F	REGULATED METALS (CCME / AT1)*	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved			Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	
1 09-463	S	2009/07/13 14:15	X												
2 09-464		14:20													X 2
3 09-465		14:25													X 2
4 09-466		14:30	X												2
5 09-467		14:35													X 2
6 09-468		14:40	X												2
7 09-469		14:45													X 2
8 09-470		14:50	X												2
9 09-471		14:50	X												2
10 09-472		14:55													X 2
11 09-473		15:00													X 2
12 09-474	S	2009/07/13 15:05	X												2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager

Relinquished By: Refer to pg 1 Date/Time: _____

Sign and Print: _____
COMMENTS/SPECIAL INSTRUCTIONS:

JARS USED & NOT SUBMITTED

Received By: _____
17/07/09
16:50h

Temperature: 4 6 2
8 8 3
16 14 13
7 6 2

Ice: Y

CUSTOMER SEAL: _____

483(4)



Company: 8001 1st St. NE, 12E-170
 Edmonton, Alberta T6A 2B4

Phone: (905) 391-3197 Fax: (416) 735-2590
 Tel: (780) 468-1777 Fax: (780) 450-4167 Toll-Free: (877) 355-8048

www.maxxamanalytics.com

81172 CHAIN OF CUSTODY

A956987/64 RT 4/8
 PU # - GFE #

Invoice To: Require Report? Yes No

Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 Prov: AB PC:
 Contact #: Pk: 703-270-9200 Fax: 403-270-0359

Report To:
 Dana Schmidt (AECOM)
 2540 Kensington Rd NW
 Calgary
 Prov: AB PC: T2N 3S3
 Pk: 403-450-9726 Fax: 403-270-4832
 (Site) Office

Quotation #: COS-339
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location: Lobe P
 Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
 dana.schmidt@aecom.com
 priya.nanda@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

SOILS (footnotes defined on back)

WATERS (footnotes defined on back)

OTHER TEST(S)

Sample Identification	Matrix S/W	Date & Time Sampled Year-Month-Day	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals*	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	<input type="checkbox"/> TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	REGULATED METALS (CCME / AT1)				Mercury	Total	Ammonia	TKN	COD	TOC	DOC	EH (W5-10)	VH (W10-19)	pH	*HOLD for 60 Days	# of Containers Submitted		
															Total	Preserved	Not Preserved	Dissolved														
1 09-475	S	2009/07/13 15:10																												X	2	
2 09-476		15:15																												X	2	
3 09-477		15:20	X																												2	
4 09-478		15:25																												X	2	
5 09-479		15:30																												X	2	
6 09-480		15:35	X																												2	
7 09-481		15:35	X																												2	
8 09-482		15:40	X																											X	2	
9 09-483		2009/07/13 15:45																												X	2	
10 09-484																																
11 09-485																																
12 09-486	S																													X	2	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to pg 1 Date/Time: _____
 Sign and Print: _____
 COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	17/07/09 16:50h	Received By: <u>RT</u>	Temperature			Ice
			4	6	2	
			8	8	3	
			16	14	13	
CUSTODY SEAL: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>			7	6	7	

483 (4)

Maxxam
ANALYTICS

Georgina: 400N 15th St. No. 125-018
Edmonton: 9331 - 48 Street, T6H 2R4

Calgary: 400-291-3447 Fax: 403-735-2240
Edmonton: 933-1212 Fax: 780-450-4100
www.maxxaminternational.com

80837 CHAIN OF CUSTODY

A936987 / GH / RT / 10/1/09
Page: 5 of 8

Invoice To: Required Report? Yes No X
 Company Name: AECOM
 Contact Name: ANA GALLIE
 Address: ana.gallie@aecom.com
 Prov: PC:
 Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To: AECOM (Dara Schmidt)
 2540 Kensington Rd NW
 Calgary
 Prov: AB PC: T2N 3S3
 Ph: 403-450-9126 Fax: 403-270-4822
 (Stk) office

PO # / ALE #
 Quotation #: C08-329
 Project #: 2477-371-00
 Project Name: Johnson Point
 Location: Lobe P
 Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use:
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 priya.handa@aecom.com
 bccom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) Assessment (CP Metals)	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	WATERS (testnotes defined on back)		OTHER TEST(S)	# of Containers Submitted
											REGULATED METALS (CCME / AT1)	REGULATED METALS (CCME / AT1)		
1 09-487	S	2009/07/13 15:55	X								<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs <input type="checkbox"/> BTEX F1-F4 Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	<input type="checkbox"/> Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved <input type="checkbox"/> Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved <input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	VH (W5-10) EH (W10-19) PH	X 2
2 09-488	S	2009/07/13 16:00												X 2
3 09-489														
4 09-490														
5 09-491														
6 09-492														
7 09-493														
8 09-494	V													
9 09-495	S													
10 09-486	S	2009/07/13 15:50												X 2
11 09-518	S	2009/07/15 15:40	X											X 2
12 09-519	S	2009/07/15 15:45												X 2

All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

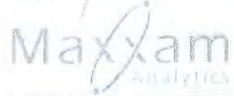
Maxxam Job #:

Relinquished By: *refer to p91* Date/Time: _____
 Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: * NO PARTIAL RPTS please.

# JARS USED & NOT SUBMITTED	Received By:	Temperature	Ice
	17/07/09	4 6 2	
	16:50h	8 8 3	
	RT	16 14 13	Y
	CLUSTDY SEAL: YES (NO)	7 6 7	

483(4)



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 (514) 465-1212 (Toll Free)
 www.maxxamanalytics.com

USA 800 291 8077 (Toll Free)
 (708) 465-1212 (Toll Free)
 www.maxxamanalytics.com

80839 CHAIN OF CUSTODY

9936987/6/RT/1/1 DW
 Page 6 of 8
 PC # / AFE #
 Quotation # C08-329
 Project # 2977-371-00
 Project Name Johnson Point
 Location LOBEY + PART 2
 Sampler's Initials DAS

Invoice To: Require Report? Yes No
 Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 Prov: Calgary AB PC:
 Contact #s: Ph: 270-9200 Fax: 270-0399

Report To:
 AECOM (Dara Schmidt)
 2540 Kensington Rd NW
 Calgary
 Prov: AB PC: T2N 3S3
 Ph: 403-450-9926 Fax: 403-270-4822
 Office

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate (and use)
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
 EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 prina.nanda@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix SW	Date & Time Sampled Year/Month/Day	BTEX F1-F4 Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) Assessment ICP Metals*	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1-1)	TCCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH PCB	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	REGULATED METALS (CCME / AT1) Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	OTHER TEST(S) VH (W15-10) EH (W10-19) PH	*HOLD for 60 Days	# of Containers Submitted
1 09-494	S	2009/07/15 14:00	X															
2 495		14:05	X															
3 496		14:10																X
4 497		14:15	X															X
5 498		14:20																X
6 499		14:25	X															X
7 500		14:30																X
8 501		14:30																X
9 502		14:35	X															X
10 503		14:45	X															X
11 504		14:50																X
12 09-505	S	2009/07/15 14:55	X															X

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Relinquished By: _____ Date/Time: _____
 Sign and Print: _____
 COMMENTS/SPECIAL INSTRUCTIONS: refer to pg 1

# JARS USED & NOT SUBMITTED	Received By	Temperature	ICE
17/07/09 16:50h	RT	4 6 2 8 8 3 16 14 3 7 6 7	✓

483(4)



Calgary (905) 441-0100, Fax: (403) 450-1000, Edmonton (780) 465-1000, Fax: (780) 450-4100, Toronto (416) 497-4100, Fax: (416) 497-4100

Ph: (905) 441-0100, Fax: (905) 450-1000, Ph: (780) 465-1000, Fax: (780) 450-4100, Ph: (416) 497-4100, Fax: (416) 497-4100

80838 CHAIN OF CUSTODY

1936987/GM/RT/July/10w
Page 7 of 8
NO # - APE #

Invoice To: Require Report? Yes No
Company Name: AE.COM
Contact Name: Ana Galwe
Address: ana.galwe@aecom.com
Prov: PC:
Contact #: Ph: 403-270-9200 Fax: 270-0399

Report To:
AE.COM (Dara Schmidt)
2540 Kensington Road NW
Calgary
Prov: AB PC: TAN353
Ph: 403-450-9926 Fax: 270-4822
Office

Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: LOBEY
Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required:
 REGULAR Turnaround (5 to 7 Days)

SOILS (footnotes defined on back) WATERS (footnotes defined on back) OTHER TEST(S)
Regulated Metals (CCME / AT1)
Assessment ICP Metals
pH (1-11)
TPH
PCB
REGULATED METALS (CCME / AT1)
Mercury
Ammonia
TKN
COD
TOC
DOC
VH (W15-10)
EH (W10-19)
pH
*HOLD for 60 Days
of Containers Submitted

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity &	Regulated Metals (CCME / AT1)	Assessment ICP Metals	pH (1-11)	TPH	PCB	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	REGULATED METALS (CCME / AT1)	Mercury	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC	VH (W15-10)	EH (W10-19)	pH	*HOLD for 60 Days	# of Containers Submitted	
09-506		2009/07/15 15:50																																				X	2	
507		15:55																																				X		
508		16:00																																				X		
509		15:00	X																																				X	
510		15:05	X																																				X	
511		15:05	X																																				X	
512		15:40																																				X		
513		15:15																																				X		
514		15:20																																				X		
515		15:25	X																																			X		
516		15:30	X																																			X		
09-517		2009/07/15 15:35	X																																			X	2	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to Date/Time:
Sign and Print: [Signature]
COMMENTS/SPECIAL INSTRUCTIONS:

JARS USED & NOT SUBMITTED: 17/07/09 16:504
Received By: RT
Temperature: 4, 6, 2, 8, 2, 3, 16, 14, 13, 7, 6, 7
DUSTY SEAL: YES NO
Ice: Y

A936987 Page 8 of 8

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: Ana Galuc
Address: ana.galuc@aecom.com
PC:
Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM (Data Schmidt)
2540 Kensington Rd NW
Calgary, AB
PC: TAN353
(SITE)
Ph: 403-450-9926 Fax: 270-4822
office

PO # / AFE #: 16H/RT/VG/DW
Quotation #: COS-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: LOBEY
Sampler's Initials: DAS

REGULATORY REQUIREMENTS:

- AT1 - Soil Contamination
 CCME
 CCME FWAL
 Regulatory Limits to appear on Final report
- PST
 CDWOG
 GSO

REPORT DISTRIBUTION:

- Mail Fax
 PDF Excel Other: EMAILS
 Email: data.schmidt@aecom.com
praja.handa@aecom.com

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
Date Required: MONDAY JULY 19
 REGULAR Turnaround

METALS: (WATERS):

- Total Extractable Dissolved

ANALYSIS REQUESTED

Sample Identification	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	BTEX F1-F4 & TEH	BTEX F1-F4	VH (W5-10)	EH (W10-19)	PH
1 09-520	W	2009/07/16 9:10	RUSH				X	X	X	
2 09-521	W	2009/07/16 9:15	RUSH				X	X	X	
3 09-522	W	2009/07/16 9:20	RUSH				X	X	X	
4 09-523	S	2009/07/12	RUSH			X				
5										
6										
7										
8										
9										
10										
11										
12										

*For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: refer to page 1 Date/Time: 17/07/09
Signature: _____
COMMENTS/SPECIAL INSTRUCTIONS: * RUSH SAMPLES 09-520, 09-521 & 09-522 & 09-523

Received
17/07/09
16:50h RT

Temperature
4/1/2°C
8/8/3°C
16/14/15°C
7/6/2°C
CofC# 174093



Your Project #: 2977-371-00
Site: JOHNSON POINT
Your C.O.C. #: 174091

Attention: DARA SCHMIDT
AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/07/28

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A938376

Received: 2009/07/24, 12:40

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/MTBE LH, VH, F1 SIM/MS (1)	5	2009/07/27	2009/07/27	BRN-SOP-00304 R10.0	Based on EPA 8260B
pH	5	N/A	2009/07/27	EENVSOP-00054	SM 4500-H B
Urgent Extrac. HC in Water by GC/FID (1)	5	2009/07/27	2009/07/27	BRN SOP-00341 R14	Based BCCSR Method 4

- (1) This test was performed by Maxxam Vancouver
- (2) SCC/CAEAL

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
Email: eanderson@maxxamanalytics.com
Phone# (780) 577-7113 Ext:7113

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		P91924	P91924	P91932	P91933		
Sampling Date		2009/07/21 15:25	2009/07/21 15:25	2009/07/21 15:33	2009/07/21 15:38		
COC Number		174091	174091	174091	174091		
	Units	09-597	09-597 Lab-Dup	09-598	09-599	RDL	QC Batch

Misc. Inorganics							
pH	N/A	7.64	7.76	8.25	7.61	N/A	3302875

RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

Maxxam ID		P91934	P91935		
Sampling Date		2009/07/21 15:57	2009/07/21 15:57		
COC Number		174091	174091		
	Units	09-600	09-601	RDL	QC Batch

Misc. Inorganics					
pH	N/A	8.14	8.12	N/A	3302875

RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		P91924	P91932	P91933		
Sampling Date		2009/07/21 15:25	2009/07/21 15:33	2009/07/21 15:38		
COC Number		174091	174091	174091		
	Units	09-597	09-598	09-599	RDL	QC Batch

Ext. Pet. Hydrocarbon						
EPH (C10-C19)	mg/L	0.15	3.39	3.86	0.08	3303521
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	111	113	118	N/A	3303521

N/A = Not Applicable
 RDL = Reportable Detection Limit

Maxxam ID		P91934	P91935		
Sampling Date		2009/07/21 15:57	2009/07/21 15:57		
COC Number		174091	174091		
	Units	09-600	09-601	RDL	QC Batch

Ext. Pet. Hydrocarbon					
EPH (C10-C19)	mg/L	6.09	6.40	0.08	3303521
Surrogate Recovery (%)					
O-TERPHENYL (sur.)	%	107	124	N/A	3303521

N/A = Not Applicable
 RDL = Reportable Detection Limit

VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		P91924	P91932	P91933		
Sampling Date		2009/07/21 15:25	2009/07/21 15:33	2009/07/21 15:38		
COC Number		174091	174091	174091		
	Units	09-597	09-598	09-599	RDL	QC Batch

Hydrocarbons						
LH (C5-C10)	ug/L	<300	1100	995	300	3303916
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96	98	99	N/A	3303916
D4-1,2-DICHLOROETHANE (sur.)	%	99	98	100	N/A	3303916
D8-TOLUENE (sur.)	%	99	98	98	N/A	3303916
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P91934	P91935		
Sampling Date		2009/07/21 15:57	2009/07/21 15:57		
COC Number		174091	174091		
	Units	09-600	09-601	RDL	QC Batch

Hydrocarbons						
LH (C5-C10)	ug/L	1400	1050	300	3303916	
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	98	N/A	3303916	
D4-1,2-DICHLOROETHANE (sur.)	%	100	98	N/A	3303916	
D8-TOLUENE (sur.)	%	98	99	N/A	3303916	
N/A = Not Applicable RDL = Reportable Detection Limit						

Package 1	9.7°C
Package 2	12.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference: JOHNSON POINT

Quality Assurance Report
 Maxxam Job Number: EA938376

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3302875 SB8	Calibration Check	pH	2009/07/27		100	%	97 - 103
	RPD [P91924-01]	pH	2009/07/27	1.6		%	5
3303521 JP1	BLANK	O-TERPHENYL (sur.)	2009/07/27		107	%	50 - 130
		EPH (C10-C19)	2009/07/27	<0.08		mg/L	
3303916 KL	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/28		99	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/28		100	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/28		100	%	70 - 130
	QC STANDARD	4-BROMOFLUOROBENZENE (sur.)	2009/07/27		100	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/27		98	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/27		100	%	70 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/27		101	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/27		100	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/27		100	%	70 - 130
	BLANK	LH (C5-C10)	2009/07/27	<300		ug/L	
		4-BROMOFLUOROBENZENE (sur.)	2009/07/27		95	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/27		102	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/27		100	%	70 - 130

RPD = Relative Percent Difference

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780)577-7100 FAX(780)450-4187

Validation Signature Page

Maxxam Job #: A938376

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



DAVE HUANG, BBY Scientific Specialist



DIANE ZACHARKIW, Scientific Specialist

=====

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A938376

Invoice To: Require Report? Yes No

Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 PC:
 Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM
(Dara Schmidt)
2540 Kensington Rd NW
Calgary AB PC: T2N3S3
 Ph: 403-270-9926 Fax: 403-270-4822
 (516) (office)

PO # / AFE #:
 Quotation #: C08-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location:
 Sampler's Initials:

REGULATORY REQUIREMENTS:

AT1 - Soil Contamination PST
 CCME CDWQG
 CCME FWAL G50
 Regulatory Limits to appear on Final report

REPORT DISTRIBUTION:

Mail Fax
 PDF Excel Other: Equs
 Email: dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab)
 Date Required: _____
 REGULAR Turnaround

METALS: (WATERS):

Total Extractable Dissolved

ANALYSIS REQUESTED										
Sample ID	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	BTEX FI-FY * TET	BTEX FI-FY	VH (W5-10)	EH (W10-19)	PH
1 09-588	Soil	2009/07/21	9:24		2					
2 09-589			9:30				✓			
3 09-590			9:32				✓			
4 09-591			9:32							
5 09-592			9:34							
6 09-593			9:42							
7 09-594	↓		9:46		↓		✓			
8 09-597	Water		15:25	RUSH	6		✓	✓	✓	
9 09-598			15:33	RUSH			✓	✓	✓	
10 09-599			15:38	RUSH			✓	✓	✓	
11 09-600 09-600			15:57	RUSH			✓	✓	✓	
12 09-601	↓	↓	15:57	RUSH	↓		✓	✓	✓	

**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: Refer to Pg. 1 Date/Time: _____

Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: * Water samples (09-597 to 09-601) are

Received
July 24 '09
MW 12:40

Temperature
9.10, 10
11.12, 13



Your Project #: 2977-371-00
 Site Location: JOHNSON POINT, LOBE P-STOCKPILE
 Your C.O.C. #: 81168, 81169, 81171, 81172, 80837,
 80839, 80838, 174083

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/08/04

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A936987

Received: 2009/07/17, 16:50

Sample Matrix: Soil
 # Samples Received: 50

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	1	2009/07/19	2009/07/21	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	45	2009/07/19	2009/07/23	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	1	2009/07/19	2009/07/24	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	3	2009/07/30	2009/08/01	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	1	2009/07/19	2009/07/20	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	9	2009/07/19	2009/07/21	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	17	2009/07/19	2009/07/22	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	19	2009/07/19	2009/07/23	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	1	2009/07/23	2009/07/23	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	3	2009/07/30	2009/07/31	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Elements by ICPMS - Soils	6	2009/07/22	2009/07/22	CAL SOP-00191	EPA SW-846-6020A
Elements by ICPMS - Soils	10	2009/07/23	2009/07/23	CAL SOP-00191	EPA SW-846-6020A
Elements by ICPMS - Soils	3	2009/07/23	2009/07/24	CAL SOP-00191	EPA SW-846-6020A
Moisture	28	N/A	2009/07/21	EENVSOP-00139	Carter SSMA 51.2
Moisture	19	N/A	2009/07/27	EENVSOP-00139	Carter SSMA 51.2
Moisture	3	N/A	2009/07/31	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	1	2009/07/19	2009/07/20	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Hydrocarbons (C10-C30) in Soil By GC/FID	2	2009/07/19	2009/07/21	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Hydrocarbons (C10-C30) in Soil By GC/FID	19	2009/07/19	2009/07/23	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Hydrocarbons (C10-C30) in Soil By GC/FID	1	2009/07/23	2009/07/23	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
TPH (C6-C30) Soil Calc	1	N/A	2009/07/21		
TPH (C6-C30) Soil Calc	22	N/A	2009/07/24		



Your Project #: 2977-371-00
 Site Location: JOHNSON POINT, LOBE P-STOCKPILE
 Your C.O.C. #: 81168, 81169, 81171, 81172, 80837,
 80839, 80838, 174083

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/08/04

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

-2-

Sample Matrix: Water
 # Samples Received: 3

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/MTBE LH, VH, F1 SIM/MS 0	3	2009/07/21	2009/07/21	BRN-SOP-00304 R10.0	Based on EPA 8260B
pH	3	N/A	2009/07/21	EENVSOP-00054	SM 4500-H B
Urgent Extrac. HC in Water by GC/FID (12)	3	2009/07/21	2009/07/21	BRN SOP-00341 R14	Based BCCSR Method 4

- (1) This test was performed by Maxxam Vancouver
- (2) SCC/CAEAL

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
 Email: eanderson@maxxamanalytics.com
 Phone# (780) 577-7113 Ext:7113

=====
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For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82924	P82924	P82926		
Sampling Date		2009/07/11 09:30	2009/07/11 09:30	2009/07/12 09:20		
COC Number		81168	81168	81168		
	Units	09-440	09-440 Lab-Dup	09-441	RDL	QC Batch

Physical Properties						
Moisture	%	12	12	9.2	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	660	540	2600	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	200	140	420	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	41	34	31	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3283888
Toluene	mg/kg	<0.020	<0.020	0.046	0.020	3283888
Ethylbenzene	mg/kg	<0.010	<0.010	0.27	0.010	3283888
Xylenes (Total)	mg/kg	5.7	4.4	4.6	0.040	3283888
m & p-Xylene	mg/kg	3.3	2.5	1.3	0.040	3283888
o-Xylene	mg/kg	2.4	1.9	3.3	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	720	660	420	12	3283888
LH (C5-C10)	mg/kg	760	N/A	460	12	3283888
(C6-C10)	mg/kg	730	670	430	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	110	103	108	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	90	97	91	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	89	86	89	N/A	3283888
D8-TOLUENE (sur.)	%	81	85	83	N/A	3283888
O-TERPHENYL (sur.)	%	103	100	99	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82927	P82928	P82929		
Sampling Date		2009/07/12 16:15	2009/07/12 16:20	2009/07/12 16:25		
COC Number		81168	81168	81168		
	Units	09-442	09-443	09-444	RDL	QC Batch

Physical Properties						
Moisture	%	14	15	14	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	540	910	570	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	180	320	210	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	15	24	14	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	0.37	1.4	0.33	0.0050	3283888
Toluene	mg/kg	1.4	8.0	1.5	0.020	3283888
Ethylbenzene	mg/kg	0.94	4.3	1.0	0.010	3283888
Xylenes (Total)	mg/kg	5.8	24	7.7	0.040	3283888
m & p-Xylene	mg/kg	3.8	17	4.9	0.040	3283888
o-Xylene	mg/kg	2.1	7.7	2.8	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	290	990	290	12	3283888
LH (C5-C10)	mg/kg	330	1100	340	12	3283888
(C6-C10)	mg/kg	300	1000	300	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	108	85	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	85	101	97	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	88	86	77	N/A	3283888
D8-TOLUENE (sur.)	%	86	98	80	N/A	3283888
O-TERPHENYL (sur.)	%	110	107	98	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82930	P82931	P82932		
Sampling Date		2009/07/12 16:30	2009/07/12 16:35	2009/07/12 16:40		
COC Number		81168	81168	81168		
	Units	09-445	09-446	09-447	RDL	QC Batch

Physical Properties						
Moisture	%	14	15	15	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	480	640	1400	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	160	200	380	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	11	18	36	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	0.23	0.75	1.3	0.0050	3283888
Toluene	mg/kg	1.1	4.4	7.1	0.020	3283888
Ethylbenzene	mg/kg	0.69	2.5	4.1	0.010	3283888
Xylenes (Total)	mg/kg	4.4	14	26	0.040	3283888
m & p-Xylene	mg/kg	2.9	9.3	18	0.040	3283888
o-Xylene	mg/kg	1.4	4.4	8.6	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	51	550	1100	12	3283888
LH (C5-C10)	mg/kg	54	590	1100	12	3283888
(C6-C10)	mg/kg	57	570	1100	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	122	114	96	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	102	104	105	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	83	84	88	N/A	3283888
D8-TOLUENE (sur.)	%	110	87	92	N/A	3283888
O-TERPHENYL (sur.)	%	106	101	113	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82934	P82937	P82942		
Sampling Date		2009/07/12 16:45	2009/07/12 16:50	2009/07/12 16:55		
COC Number		81168	81168	81168		
	Units	09-448	09-449	09-450	RDL	QC Batch

Physical Properties						
Moisture	%	14	14	16	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1000	1500	1600	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	290	570	410	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	17	19	48	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	1.1	1.8	5.7	0.0050	3283888
Toluene	mg/kg	4.8	9.3	27	0.020	3283888
Ethylbenzene	mg/kg	2.7	4.7	13	0.010	3283888
Xylenes (Total)	mg/kg	17	34	68	0.040	3283888
m & p-Xylene	mg/kg	12	23	45	0.040	3283888
o-Xylene	mg/kg	5.8	11	22	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	580	1200	2600	12	3283888
LH (C5-C10)	mg/kg	640	1300	2800	12	3283888
(C6-C10)	mg/kg	610	1200	2700	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	115	109	114	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	99	114	103	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	126	87	94	N/A	3283888
D8-TOLUENE (sur.)	%	87	87	91	N/A	3283888
O-TERPHENYL (sur.)	%	102	115	109	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82946	P82947	P82949		
Sampling Date		2009/07/12 17:00	2009/07/12 17:05	2009/07/12 17:10		
COC Number		81169	81169	81169		
	Units	09-451	09-452	09-453	RDL	QC Batch

Physical Properties						
Moisture	%	13	13	14	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1500	1100	1100	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	450	360	340	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	26	40	49	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	0.79	0.84	1.3	0.0050	3283888
Toluene	mg/kg	3.7	5.6	8.7	0.020	3283888
Ethylbenzene	mg/kg	3.3	1.9	3.7	0.010	3283888
Xylenes (Total)	mg/kg	25	23	19	0.040	3283888
m & p-Xylene	mg/kg	16	16	14	0.040	3283888
o-Xylene	mg/kg	8.5	7.4	5.8	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	920	880	300	12	3283888
LH (C5-C10)	mg/kg	970	940	340	12	3283888
(C6-C10)	mg/kg	950	920	330	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	92	93	107	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	104	108	111	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	82	82	89	N/A	3283888
D8-TOLUENE (sur.)	%	92	90	109	N/A	3283888
O-TERPHENYL (sur.)	%	106	106	106	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82950	P82951	P82952		
Sampling Date		2009/07/12 17:15	2009/07/12 17:20	2009/07/12 17:25		
COC Number		81169	81169	81169		
	Units	09-454	09-455	09-456	RDL	QC Batch

Physical Properties						
Moisture	%	14	15	16	0.3	3304021
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1100	1600	620	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	200	370	160	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	32	55	37	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283604
Volatiles						
Benzene	mg/kg	1.1	1.7	1.7	0.0050	3283888
Toluene	mg/kg	7.4	7.7	8.0	0.020	3283888
Ethylbenzene	mg/kg	3.0	4.5	3.3	0.010	3283888
Xylenes (Total)	mg/kg	20	28	17	0.040	3283888
m & p-Xylene	mg/kg	14	18	12	0.040	3283888
o-Xylene	mg/kg	6.2	9.6	5.7	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	560	630	440	12	3283888
LH (C5-C10)	mg/kg	620	710	510	12	3283888
(C6-C10)	mg/kg	590	670	470	12	3283888
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	103	117	112	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	110	108	110	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	86	90	89	N/A	3283888
D8-TOLUENE (sur.)	%	92	99	98	N/A	3283888
O-TERPHENYL (sur.)	%	103	103	115	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82953	P82954		
Sampling Date		2009/07/12 17:30	2009/07/12 17:35		
COC Number		81169	81169		
	Units	09-457	09-458	RDL	QC Batch

Physical Properties					
Moisture	%	15	15	0.3	3283888
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	990	580	10	3283604
F3 (C16-C34 Hydrocarbons)	mg/kg	280	190	10	3283604
F4 (C34-C50 Hydrocarbons)	mg/kg	50	39	10	3283604
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3283604
Volatiles					
Benzene	mg/kg	1.2	0.82	0.0050	3283888
Toluene	mg/kg	5.7	4.5	0.020	3283888
Ethylbenzene	mg/kg	3.0	2.0	0.010	3283888
Xylenes (Total)	mg/kg	16	11	0.040	3283888
m & p-Xylene	mg/kg	11	7.2	0.040	3283888
o-Xylene	mg/kg	5.1	3.6	0.020	3283888
F1 (C6-C10) - BTEX	mg/kg	440	280	12	3283888
LH (C5-C10)	mg/kg	500	340	12	3283888
(C6-C10)	mg/kg	470	300	12	3283888
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	124	113	N/A	3283888
D10-ETHYLBENZENE (sur.)	%	106	111	N/A	3283888
D4-1,2-DICHLOROETHANE (sur.)	%	85	89	N/A	3283888
D8-TOLUENE (sur.)	%	93	97	N/A	3283888
O-TERPHENYL (sur.)	%	116	105	N/A	3283604

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82968		P82969		
Sampling Date		2009/07/13 14:05		2009/07/13 14:05		
COC Number		81169		81169		
	Units	09-460	QC Batch	09-461	RDL	QC Batch

Physical Properties						
Moisture	%	23	3287469	21	0.3	3286626
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	3283604	<10	10	3283605
F3 (C16-C34 Hydrocarbons)	mg/kg	13	3283604	<10	10	3283605
F4 (C34-C50 Hydrocarbons)	mg/kg	21	3283604	<10	10	3283605
Reached Baseline at C50	mg/kg	Yes	3283604	Yes	N/A	3283605
Volatiles						
Benzene	mg/kg	<0.0050	3283888	<0.0050	0.0050	3286624
Toluene	mg/kg	<0.020	3283888	<0.020	0.020	3286624
Ethylbenzene	mg/kg	<0.010	3283888	<0.010	0.010	3286624
Xylenes (Total)	mg/kg	<0.040	3283888	<0.040	0.040	3286624
m & p-Xylene	mg/kg	<0.040	3283888	<0.040	0.040	3286624
o-Xylene	mg/kg	<0.020	3283888	<0.020	0.020	3286624
F1 (C6-C10) - BTEX	mg/kg	<12	3283888	<12	12	3286624
LH (C5-C10)	mg/kg	36	3283888	<12	12	3286624
(C6-C10)	mg/kg	<12	3283888	<12	12	3286624
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	79	3283888	92	N/A	3286624
D10-ETHYLBENZENE (sur.)	%	94	3283888	56	N/A	3286624
D4-1,2-DICHLOROETHANE (sur.)	%	95	3283888	93	N/A	3286624
D8-TOLUENE (sur.)	%	99	3283888	104	N/A	3286624
O-TERPHENYL (sur.)	%	101	3283604	94	N/A	3283605
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82970	P82971	P82974		
Sampling Date		2009/07/13 14:10	2009/07/13 14:15	2009/07/13 14:30		
COC Number		81169	81171	81171		
	Units	09-462	09-463	09-466	RDL	QC Batch

Physical Properties						
Moisture	%	16	18	14	0.3	3286626
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	330	10	3283605
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	20	10	3283605
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3283605
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283605
Volatiles						
Benzene	mg/kg	0.17	0.084	<0.0050	0.0050	3286624
Toluene	mg/kg	0.39	<0.020	0.71	0.020	3286624
Ethylbenzene	mg/kg	0.12	0.14	0.21	0.010	3286624
Xylenes (Total)	mg/kg	1.2	0.90	52	0.040	3286624
m & p-Xylene	mg/kg	0.75	0.35	35	0.040	3286624
o-Xylene	mg/kg	0.42	0.55	17	0.020	3286624
F1 (C6-C10) - BTEX	mg/kg	<12	<12	1000	12	3286624
LH (C5-C10)	mg/kg	<12	<12	1100	12	3286624
(C6-C10)	mg/kg	<12	<12	1000	12	3286624
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	91	90	112	N/A	3286624
D10-ETHYLBENZENE (sur.)	%	55	54	58	N/A	3286624
D4-1,2-DICHLOROETHANE (sur.)	%	90	92	88	N/A	3286624
D8-TOLUENE (sur.)	%	106	104	106	N/A	3286624
O-TERPHENYL (sur.)	%	103	100	92	N/A	3283605

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82975		P82976		
Sampling Date		2009/07/13 14:35		2009/07/13 14:40		
COC Number		81171		81171		
	Units	09-467	QC Batch	09-468	RDL	QC Batch

Physical Properties						
Moisture	%	14	3316401	14	0.3	3286626
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	11	3315686	<10	10	3283605
F3 (C16-C34 Hydrocarbons)	mg/kg	20	3315686	<10	10	3283605
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3315686	<10	10	3283605
Reached Baseline at C50	mg/kg	Yes	3315686	Yes	N/A	3283605
Volatiles						
Benzene	mg/kg	<0.0050	3315747	0.63	0.0050	3286624
Toluene	mg/kg	<0.020	3315747	<0.020	0.020	3286624
Ethylbenzene	mg/kg	0.094	3315747	<0.010	0.010	3286624
Xylenes (Total)	mg/kg	0.39	3315747	<0.040	0.040	3286624
m & p-Xylene	mg/kg	0.24	3315747	<0.040	0.040	3286624
o-Xylene	mg/kg	0.15	3315747	<0.020	0.020	3286624
F1 (C6-C10) - BTEX	mg/kg	<12	3315747	<12	12	3286624
LH (C5-C10)	mg/kg	N/A	N/A	<12	12	3286624
(C6-C10)	mg/kg	<12	3315747	<12	12	3286624
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	3315747	87	N/A	3286624
D10-ETHYLBENZENE (sur.)	%	105	3315747	55	N/A	3286624
D4-1,2-DICHLOROETHANE (sur.)	%	99	3315747	94	N/A	3286624
D8-TOLUENE (sur.)	%	102	3315747	104	N/A	3286624
O-TERPHENYL (sur.)	%	76	3315686	95	N/A	3283605
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82978	P82979		
Sampling Date		2009/07/13 14:50	2009/07/13 14:50		
COC Number		81171	81171		
	Units	09-470	09-471	RDL	QC Batch

Physical Properties					
Moisture	%	9.5	11	0.3	3286626
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	10	3283605
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	10	3283605
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3283605
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3283605
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3286624
Toluene	mg/kg	<0.020	<0.020	0.020	3286624
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	3286624
Xylenes (Total)	mg/kg	<0.040	<0.040	0.040	3286624
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	3286624
o-Xylene	mg/kg	<0.020	<0.020	0.020	3286624
F1 (C6-C10) - BTEX	mg/kg	<12	<12	12	3286624
LH (C5-C10)	mg/kg	<12	<12	12	3286624
(C6-C10)	mg/kg	<12	<12	12	3286624
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	90	87	N/A	3286624
D10-ETHYLBENZENE (sur.)	%	34	55	N/A	3286624
D4-1,2-DICHLOROETHANE (sur.)	%	88	92	N/A	3286624
D8-TOLUENE (sur.)	%	106	106	N/A	3286624
O-TERPHENYL (sur.)	%	89	88	N/A	3283605

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82982		P82983		
Sampling Date		2009/07/13 15:05		2009/07/13 15:10		
COC Number		81171		81172		
	Units	09-474	QC Batch	09-475	RDL	QC Batch

Physical Properties						
Moisture	%	13	3286626	16	0.3	3316401
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	3283605	14	10	3315686
F3 (C16-C34 Hydrocarbons)	mg/kg	17	3283605	11	10	3315686
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3283605	<10	10	3315686
Reached Baseline at C50	mg/kg	Yes	3283605	Yes	N/A	3315686
Volatiles						
Benzene	mg/kg	<0.0050	3283898	<0.0050	0.0050	3315747
Toluene	mg/kg	<0.020	3283898	0.23	0.020	3315747
Ethylbenzene	mg/kg	<0.010	3283898	0.26	0.010	3315747
Xylenes (Total)	mg/kg	<0.040	3283898	7.7	0.040	3315747
m & p-Xylene	mg/kg	<0.040	3283898	5.1	0.040	3315747
o-Xylene	mg/kg	<0.020	3283898	2.6	0.020	3315747
F1 (C6-C10) - BTEX	mg/kg	<12	3283898	340	12	3315747
LH (C5-C10)	mg/kg	<12	3283898	N/A	12	N/A
(C6-C10)	mg/kg	<12	3283898	350	12	3315747
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96	3283898	119	N/A	3315747
D10-ETHYLBENZENE (sur.)	%	107	3283898	108	N/A	3315747
D4-1,2-DICHLOROETHANE (sur.)	%	90	3283898	104	N/A	3315747
D8-TOLUENE (sur.)	%	102	3283898	103	N/A	3315747
O-TERPHENYL (sur.)	%	89	3283605	80	N/A	3315686

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82984		P82985		
Sampling Date		2009/07/13 15:15		2009/07/13 15:20		
COC Number		81172		81172		
	Units	09-476	QC Batch	09-477	RDL	QC Batch

Physical Properties						
Moisture	%	12	3316401	21	0.3	3286626
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	3315686	<10	10	3283605
F3 (C16-C34 Hydrocarbons)	mg/kg	14	3315686	24	10	3283605
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3315686	<10	10	3283605
Reached Baseline at C50	mg/kg	Yes	3315686	Yes	N/A	3283605
Volatiles						
Benzene	mg/kg	<0.0050	3315747	<0.0050	0.0050	3283898
Toluene	mg/kg	<0.020	3315747	0.034	0.020	3283898
Ethylbenzene	mg/kg	<0.010	3315747	0.018	0.010	3283898
Xylenes (Total)	mg/kg	<0.040	3315747	0.11	0.040	3283898
m & p-Xylene	mg/kg	<0.040	3315747	0.074	0.040	3283898
o-Xylene	mg/kg	<0.020	3315747	0.034	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	<12	3315747	<12	12	3283898
LH (C5-C10)	mg/kg	N/A	N/A	<12	12	3283898
(C6-C10)	mg/kg	<12	3315747	<12	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	101	3315747	98	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	106	3315747	103	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	100	3315747	95	N/A	3283898
D8-TOLUENE (sur.)	%	103	3315747	100	N/A	3283898
O-TERPHENYL (sur.)	%	81	3315686	67	N/A	3283605
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82988	P82988	P82989		
Sampling Date		2009/07/13 15:35	2009/07/13 15:35	2009/07/13 15:35		
COC Number		81172	81172	81172		
	Units	09-480	09-480 Lab-Dup	09-481	RDL	QC Batch

Physical Properties						
Moisture	%	13	13	13	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	250	270	220	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	28	36	27	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	12	<10	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	0.058	0.075	0.054	0.0050	3283898
Toluene	mg/kg	68	83	79	0.020	3283898
Ethylbenzene	mg/kg	37	42	43	0.010	3283898
Xylenes (Total)	mg/kg	230	250	250	0.40	3283898
m & p-Xylene	mg/kg	180	190	190	0.40	3283898
o-Xylene	mg/kg	55	62	65	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	3200	3600	3400	12	3283898
LH (C5-C10)	mg/kg	3600	N/A	3700	12	3283898
(C6-C10)	mg/kg	3600	3900	3700	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	99	98	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	105	114	106	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	96	96	95	N/A	3283898
D8-TOLUENE (sur.)	%	107	108	107	N/A	3283898
O-TERPHENYL (sur.)	%	64	76	65	N/A	3283603

N/A = Not Applicable
 RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P82994	P83013	P83015		
Sampling Date		2009/07/13	2009/07/15	2009/07/15		
		15:55	15:40	14:00		
COC Number		80837	80837	80839		
	Units	09-487	09-518	09-494	RDL	QC Batch

Physical Properties						
Moisture	%	15	12	4.4	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	13	<10	15	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	29	35	<10	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3283898
Toluene	mg/kg	1.0	0.23	<0.020	0.020	3283898
Ethylbenzene	mg/kg	0.67	0.073	0.035	0.010	3283898
Xylenes (Total)	mg/kg	4.7	0.42	<0.040	0.040	3283898
m & p-Xylene	mg/kg	3.2	0.29	<0.040	0.040	3283898
o-Xylene	mg/kg	1.5	0.13	0.024	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	48	<12	<12	12	3283898
LH (C5-C10)	mg/kg	60	<12	<12	12	3283898
(C6-C10)	mg/kg	55	<12	<12	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	96	97	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	104	106	102	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	97	93	95	N/A	3283898
D8-TOLUENE (sur.)	%	100	101	99	N/A	3283898
O-TERPHENYL (sur.)	%	76	72	68	N/A	3283603

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P83016	P83018	P83020		
Sampling Date		2009/07/15 14:05	2009/07/15 14:15	2009/07/15 14:25		
COC Number		80839	80839	80839		
	Units	09-495	09-497	09-499	RDL	QC Batch

Physical Properties						
Moisture	%	10	12	14	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	320	140	19	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	73	60	38	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	0.036	0.090	0.20	0.0050	3283898
Toluene	mg/kg	0.28	0.037	0.053	0.020	3283898
Ethylbenzene	mg/kg	3.3	1.5	0.11	0.010	3283898
Xylenes (Total)	mg/kg	9.0	1.4	0.14	0.040	3283898
m & p-Xylene	mg/kg	5.7	1.3	0.11	0.040	3283898
o-Xylene	mg/kg	3.3	0.083	0.030	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	610	230	<12	12	3283898
LH (C5-C10)	mg/kg	620	250	<12	12	3283898
(C6-C10)	mg/kg	620	230	<12	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	109	94	97	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	108	106	101	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	93	97	93	N/A	3283898
D8-TOLUENE (sur.)	%	105	103	101	N/A	3283898
O-TERPHENYL (sur.)	%	68	83	80	N/A	3283603

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P83023	P83024	P83026		
Sampling Date		2009/07/15 14:35	2009/07/15 14:45	2009/07/15 14:55		
COC Number		80839	80839	80839		
	Units	09-502	09-503	09-505	RDL	QC Batch

Physical Properties						
Moisture	%	11	20	8.6	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	16	18	19	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	47	190	36	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	23	<10	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	0.24	<0.0050	0.29	0.0050	3283898
Toluene	mg/kg	<0.020	0.089	0.079	0.020	3283898
Ethylbenzene	mg/kg	0.65	0.028	1.1	0.010	3283898
Xylenes (Total)	mg/kg	0.49	0.13	3.9	0.040	3283898
m & p-Xylene	mg/kg	0.49	0.094	3.2	0.040	3283898
o-Xylene	mg/kg	<0.020	0.040	0.77	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	<12	<12	55	12	3283898
LH (C5-C10)	mg/kg	<12	<12	64	12	3283898
(C6-C10)	mg/kg	<12	<12	61	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	99	98	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	101	104	107	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	99	95	93	N/A	3283898
D8-TOLUENE (sur.)	%	100	99	103	N/A	3283898
O-TERPHENYL (sur.)	%	79	81	72	N/A	3283603

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P83031	P83032	P83033		
Sampling Date		2009/07/15 15:00	2009/07/15 15:05	2009/07/15 15:05		
COC Number		80838	80838	80838		
	Units	09-509	09-510	09-511	RDL	QC Batch

Physical Properties						
Moisture	%	12	11	10	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	12	21	15	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	24	61	40	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3283898
Toluene	mg/kg	<0.020	<0.020	0.049	0.020	3283898
Ethylbenzene	mg/kg	<0.010	<0.010	0.013	0.010	3283898
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3283898
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3283898
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3283898
LH (C5-C10)	mg/kg	<12	<12	<12	12	3283898
(C6-C10)	mg/kg	<12	<12	<12	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	96	99	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	103	105	98	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	93	92	101	N/A	3283898
D8-TOLUENE (sur.)	%	101	102	99	N/A	3283898
O-TERPHENYL (sur.)	%	71	72	74	N/A	3283603

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P83044	P83045	P83047		
Sampling Date		2009/07/15 15:25	2009/07/15 15:30	2009/07/15 15:35		
COC Number		80838	80838	80838		
	Units	09-515	09-516	09-517	RDL	QC Batch

Physical Properties						
Moisture	%	11	9.7	11	0.3	3286886
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	10	130	90	10	3283603
F3 (C16-C34 Hydrocarbons)	mg/kg	43	120	85	10	3283603
F4 (C34-C50 Hydrocarbons)	mg/kg	13	11	14	10	3283603
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3283603
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3283898
Toluene	mg/kg	<0.020	<0.020	0.39	0.020	3283898
Ethylbenzene	mg/kg	<0.010	<0.010	1.1	0.010	3283898
Xylenes (Total)	mg/kg	<0.040	<0.040	6.1	0.040	3283898
m & p-Xylene	mg/kg	<0.040	<0.040	3.9	0.040	3283898
o-Xylene	mg/kg	<0.020	<0.020	2.2	0.020	3283898
F1 (C6-C10) - BTEX	mg/kg	<12	<12	68	12	3283898
LH (C5-C10)	mg/kg	<12	<12	77	12	3283898
(C6-C10)	mg/kg	<12	<12	75	12	3283898
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	95	97	N/A	3283898
D10-ETHYLBENZENE (sur.)	%	100	104	105	N/A	3283898
D4-1,2-DICHLOROETHANE (sur.)	%	97	94	94	N/A	3283898
D8-TOLUENE (sur.)	%	99	101	101	N/A	3283898
O-TERPHENYL (sur.)	%	69	73	71	N/A	3283603

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P83075		
Sampling Date		2009/07/12		
COC Number		174083		
	Units	09-523	RDL	QC Batch

Physical Properties				
Moisture	%	16	0.3	3286886
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/kg	520	10	3283420
F3 (C16-C34 Hydrocarbons)	mg/kg	150	10	3283420
F4 (C34-C50 Hydrocarbons)	mg/kg	20	10	3283420
Reached Baseline at C50	mg/kg	Yes	N/A	3283420
Volatiles				
Benzene	mg/kg	0.035	0.0050	3286357
Toluene	mg/kg	0.49	0.020	3286357
Ethylbenzene	mg/kg	0.79	0.010	3286357
Xylenes (Total)	mg/kg	14	0.040	3286357
m & p-Xylene	mg/kg	8.0	0.040	3286357
o-Xylene	mg/kg	6.1	0.020	3286357
F1 (C6-C10) - BTEX	mg/kg	1200	12	3286357
LH (C5-C10)	mg/kg	1200	12	3286357
(C6-C10)	mg/kg	1200	12	3286357
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	110	N/A	3286357
D10-ETHYLBENZENE (sur.)	%	106	N/A	3286357
D4-1,2-DICHLOROETHANE (sur.)	%	98	N/A	3286357
D8-TOLUENE (sur.)	%	107	N/A	3286357
O-TERPHENYL (sur.)	%	105	N/A	3283420
N/A = Not Applicable RDL = Reportable Detection Limit				

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P82924	P82926	P82927	P82928		
Sampling Date		2009/07/11 09:30	2009/07/12 09:20	2009/07/12 16:15	2009/07/12 16:20		
COC Number		81168	81168	81168	81168		
	Units	09-440	09-441	09-442	09-443	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	3	3	4	3	1	3292762
Total Cadmium (Cd)	mg/kg	0.1	<0.1	0.1	<0.1	0.1	3292762
Total Chromium (Cr)	mg/kg	9	9	8	8	1	3292762
Total Cobalt (Co)	mg/kg	3	3	5	4	1	3292762
Total Copper (Cu)	mg/kg	11	7	10	9	5	3292762
Total Lead (Pb)	mg/kg	8	4	9	8	1	3292762
Total Nickel (Ni)	mg/kg	10	9	10	9	1	3292762
Total Zinc (Zn)	mg/kg	39	14	24	23	10	3292762

RDL = Reportable Detection Limit

Maxxam ID		P82929	P82930		P82931		
Sampling Date		2009/07/12 16:25	2009/07/12 16:30		2009/07/12 16:35		
COC Number		81168	81168		81168		
	Units	09-444	09-445	QC Batch	09-446	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	3	3	3292762	3	1	3294918
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	3292762	<0.1	0.1	3294918
Total Chromium (Cr)	mg/kg	9	8	3292762	9	1	3294918
Total Cobalt (Co)	mg/kg	4	4	3292762	4	1	3294918
Total Copper (Cu)	mg/kg	9	12	3292762	8	5	3294918
Total Lead (Pb)	mg/kg	6	8	3292762	7	1	3294918
Total Nickel (Ni)	mg/kg	10	10	3292762	9	1	3294918
Total Zinc (Zn)	mg/kg	21	20	3292762	27	10	3294918

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P82931	P82932	P82934	P82937		
Sampling Date		2009/07/12 16:35	2009/07/12 16:40	2009/07/12 16:45	2009/07/12 16:50		
COC Number		81168	81168	81168	81168		
	Units	09-446 Lab-Dup	09-447	09-448	09-449	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	3	3	3	3	1	3294918
Total Cadmium (Cd)	mg/kg	<0.1	0.1	<0.1	<0.1	0.1	3294918
Total Chromium (Cr)	mg/kg	9	9	9	10	1	3294918
Total Cobalt (Co)	mg/kg	4	4	4	4	1	3294918
Total Copper (Cu)	mg/kg	8	9	9	8	5	3294918
Total Lead (Pb)	mg/kg	7	11	8	7	1	3294918
Total Nickel (Ni)	mg/kg	9	9	9	9	1	3294918
Total Zinc (Zn)	mg/kg	20	24	21	20	10	3294918

RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

Maxxam ID		P82942	P82946	P82947	P82949		
Sampling Date		2009/07/12 16:55	2009/07/12 17:00	2009/07/12 17:05	2009/07/12 17:10		
COC Number		81168	81169	81169	81169		
	Units	09-450	09-451	09-452	09-453	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	4	3	3	3	1	3294918
Total Cadmium (Cd)	mg/kg	0.2	<0.1	<0.1	0.1	0.1	3294918
Total Chromium (Cr)	mg/kg	10	9	9	10	1	3294918
Total Cobalt (Co)	mg/kg	5	4	4	4	1	3294918
Total Copper (Cu)	mg/kg	11	8	7	14	5	3294918
Total Lead (Pb)	mg/kg	10	14	5	9	1	3294918
Total Nickel (Ni)	mg/kg	10	9	9	10	1	3294918
Total Zinc (Zn)	mg/kg	31	20	17	24	10	3294918

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P82950	P82951		P82952		
Sampling Date		2009/07/12 17:15	2009/07/12 17:20		2009/07/12 17:25		
COC Number		81169	81169		81169		
	Units	09-454	09-455	RDL	09-456	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	3	3	1	<2	2	3294918
Total Cadmium (Cd)	mg/kg	0.1	0.1	0.1	<0.2	0.2	3294918
Total Chromium (Cr)	mg/kg	9	11	1	6	2	3294918
Total Cobalt (Co)	mg/kg	4	4	1	2	2	3294918
Total Copper (Cu)	mg/kg	8	9	5	<10	10	3294918
Total Lead (Pb)	mg/kg	8	7	1	4	2	3294918
Total Nickel (Ni)	mg/kg	9	10	1	6	2	3294918
Total Zinc (Zn)	mg/kg	20	26	10	<20	20	3294918

RDL = Reportable Detection Limit

Maxxam ID		P82953	P82954		
Sampling Date		2009/07/12 17:30	2009/07/12 17:35		
COC Number		81169	81169		
	Units	09-457	09-458	RDL	QC Batch

Elements					
Total Arsenic (As)	mg/kg	<2	<2	2	3294918
Total Cadmium (Cd)	mg/kg	<0.2	<0.2	0.2	3294918
Total Chromium (Cr)	mg/kg	6	5	2	3294918
Total Cobalt (Co)	mg/kg	2	2	2	3294918
Total Copper (Cu)	mg/kg	<10	<10	10	3294918
Total Lead (Pb)	mg/kg	5	4	2	3294918
Total Nickel (Ni)	mg/kg	5	5	2	3294918
Total Zinc (Zn)	mg/kg	<20	<20	20	3294918

RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P82924	P82924	P82926		
Sampling Date		2009/07/11 09:30	2009/07/11 09:30	2009/07/12 09:20		
COC Number		81168	81168	81168		
	Units	09-440	09-440 Lab-Dup	09-441	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	842	668	3000	10	3297309
Total hydrocarbons C5-C30	mg/kg	1600	N/A	3460	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	103	100	99	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

Maxxam ID		P82927	P82928	P82929		
Sampling Date		2009/07/12 16:15	2009/07/12 16:20	2009/07/12 16:25		
COC Number		81168	81168	81168		
	Units	09-442	09-443	09-444	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	712	1210	772	10	3297309
Total hydrocarbons C5-C30	mg/kg	1040	2270	1110	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	110	108	98	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P82930	P82931	P82932		
Sampling Date		2009/07/12 16:30	2009/07/12 16:35	2009/07/12 16:40		
COC Number		81168	81168	81168		
	Units	09-445	09-446	09-447	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	625	834	1800	10	3297309
Total hydrocarbons C5-C30	mg/kg	680	1420	2930	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	106	101	113	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P82934	P82937	P82942		
Sampling Date		2009/07/12 16:45	2009/07/12 16:50	2009/07/12 16:55		
COC Number		81168	81168	81168		
	Units	09-448	09-449	09-450	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	1280	2050	2100	10	3297309
Total hydrocarbons C5-C30	mg/kg	1910	3300	4860	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	102	115	109	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P82946	P82947	P82949		
Sampling Date		2009/07/12 17:00	2009/07/12 17:05	2009/07/12 17:10		
COC Number		81169	81169	81169		
	Units	09-451	09-452	09-453	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	1970	1440	1430	10	3297309
Total hydrocarbons C5-C30	mg/kg	2940	2380	1770	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	107	106	106	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P82950	P82951	P82952		
Sampling Date		2009/07/12 17:15	2009/07/12 17:20	2009/07/12 17:25		
COC Number		81169	81169	81169		
	Units	09-454	09-455	09-456	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	1290	1970	775	10	3297309
Total hydrocarbons C5-C30	mg/kg	1910	2680	1290	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	103	103	115	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P82953	P82954	P82968		
Sampling Date		2009/07/12 17:30	2009/07/12 17:35	2009/07/13 14:05		
COC Number		81169	81169	81169		
	Units	09-457	09-458	09-460	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	1250	758	<10	10	3297309
Total hydrocarbons C5-C30	mg/kg	1750	1100	36	20	3284731
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	116	105	101	N/A	3297309
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P82969	P82970		P83075		
Sampling Date		2009/07/13 14:05	2009/07/13 14:10		2009/07/12		
COC Number		81169	81169		174083		
	Units	09-461	09-462	QC Batch	09-523	RDL	QC Batch

Hydrocarbons							
Total Extractables C10 to C30	mg/kg	16	21	3297319	663	10	3287795
Total hydrocarbons C5-C30	mg/kg	<20	21	3284731	1850	20	3284731
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	94	103	3297319	105	N/A	3287795
N/A = Not Applicable RDL = Reportable Detection Limit							



Maxxam Job #: A936987
 Report Date: 2009/08/04

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT, LOBE P-STOCKPILE
 Sampler Initials: DAS

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		P83070	P83073	P83074		
Sampling Date		2009/07/16	2009/07/16	2009/07/16		
		09:10	09:15	09:20		
COC Number		174083	174083	174083		
	Units	09-520	09-521	09-522	RDL	QC Batch

Misc. Inorganics						
pH	N/A	8.16	7.44	8.04	N/A	3286366

RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		P83070	P83073	P83074		
Sampling Date		2009/07/16	2009/07/16	2009/07/16		
		09:10	09:15	09:20		
COC Number		174083	174083	174083		
	Units	09-520	09-521	09-522	RDL	QC Batch

Ext. Pet. Hydrocarbon						
EPH (C10-C19)	mg/L	1.18	4.14	<0.08	0.08	3289106
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	114	112	115	N/A	3289106

N/A = Not Applicable
 RDL = Reportable Detection Limit



Maxxam Job #: A936987
 Report Date: 2009/08/04

AECOM
 Client Project #: 2977-371-00
 Site Reference: JOHNSON POINT, LOBE P-STOCKPILE
 Sampler Initials: DAS

VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		P83070	P83070	P83073		
Sampling Date		2009/07/16 09:10	2009/07/16 09:10	2009/07/16 09:15		
COC Number		174083	174083	174083		
	Units	09-520	09-520 Lab-Dup	09-521	RDL	QC Batch

Hydrocarbons						
LH (C5-C10)	ug/L	724	858	1580	300	3287873
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	101	102	N/A	3287873
D4-1,2-DICHLOROETHANE (sur.)	%	96	97	95	N/A	3287873
D8-TOLUENE (sur.)	%	100	100	100	N/A	3287873

N/A = Not Applicable
 RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

Maxxam ID		P83074		
Sampling Date		2009/07/16 09:20		
COC Number		174083		
	Units	09-522	RDL	QC Batch

Hydrocarbons				
LH (C5-C10)	ug/L	<300	300	3287873
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	101	N/A	3287873
D4-1,2-DICHLOROETHANE (sur.)	%	97	N/A	3287873
D8-TOLUENE (sur.)	%	100	N/A	3287873

N/A = Not Applicable
 RDL = Reportable Detection Limit

Package 1	4.0°C
Package 2	6.3°C
Package 3	14.3°C
Package 4	6.7°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Sample P82952-01: Detection limits raised due to matrix interference.
Parameters affected are As, Cr, Co, Cu, Pb, Ni, Zn, Cd.

Sample P82953-01: Detection limits raised due to matrix interference.
Parameters affected are As, Cr, Co, Cu, Pb, Ni, Zn, Cd.

Sample P82954-01: Detection limits raised due to matrix interference.
Parameters affected are As, Cr, Co, Cu, Pb, Ni, Zn, Cd.

Results relate only to the items tested.



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 Site Location: JOHNSON POINT, LOBE P-STOCKPILE

Quality Assurance Report
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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3283420 JT7	MATRIX SPIKE	O-TERPHENYL (sur.)	2009/07/20		104	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/20		NC	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/07/20		NC	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/07/20		NC	%	50 - 130	
	SPIKE	O-TERPHENYL (sur.)	2009/07/20		77	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/20		118	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/20		112	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/20		107	%	80 - 120	
	BLANK	O-TERPHENYL (sur.)	2009/07/20			125	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/20		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/20		<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/20		<10		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2009/07/20		11.5		%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/20		9.2		%	50
F4 (C34-C50 Hydrocarbons)		2009/07/20		1.9		%	50	
3283603 LD2	MATRIX SPIKE [P82989-01]	O-TERPHENYL (sur.)	2009/07/22		70	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/22		85	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/07/22		76	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/07/22		75	%	50 - 130	
	SPIKE	O-TERPHENYL (sur.)	2009/07/22		74	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/22		92	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/22		91	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/22		88	%	80 - 120	
	BLANK	O-TERPHENYL (sur.)	2009/07/22			80	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/22		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/22		17, RDL=10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/22		<10		mg/kg	
	RPD [P82988-01]	F2 (C10-C16 Hydrocarbons)	2009/07/22		7.8		%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/22		NC		%	50
F4 (C34-C50 Hydrocarbons)		2009/07/22		NC		%	50	
3283604 KO	MATRIX SPIKE [P82926-01]	O-TERPHENYL (sur.)	2009/07/23		100	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/23		NC	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/07/23		101	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/07/23		109	%	50 - 130	
	SPIKE	O-TERPHENYL (sur.)	2009/07/23		97	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/23		107	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/23		109	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/23		114	%	80 - 120	
	BLANK	O-TERPHENYL (sur.)	2009/07/23			104	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/23		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/23		<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/23		<10		mg/kg	
	RPD [P82924-01]	F2 (C10-C16 Hydrocarbons)	2009/07/23		19.1		%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/23		38.1		%	50
F4 (C34-C50 Hydrocarbons)		2009/07/23		NC		%	50	
3283605 AN4	MATRIX SPIKE	O-TERPHENYL (sur.)	2009/07/21		98	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/21		107	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/07/21		108	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/07/21		114	%	50 - 130	
	SPIKE	O-TERPHENYL (sur.)	2009/07/21		99	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/21		108	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/21		111	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/21		118	%	80 - 120	



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3283605 AN4	BLANK	O-TERPHENYL (sur.)	2009/07/21		89	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/21	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/21	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/21	<10		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2009/07/21	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/21	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2009/07/21	NC		%	50
3283888 AN1	MATRIX SPIKE [P82926-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/24		106	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/24		100	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/24		109	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/24		90	%	60 - 140
		Benzene	2009/07/24		95	%	60 - 140
		Toluene	2009/07/24		95	%	60 - 140
		Ethylbenzene	2009/07/24		107	%	60 - 140
		m & p-Xylene	2009/07/24		138	%	60 - 140
		o-Xylene	2009/07/24		NC	%	60 - 140
		(C6-C10)	2009/07/24		NC	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		104	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/23		94	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		100	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/23		101	%	60 - 140
		Benzene	2009/07/23		91	%	60 - 140
		Toluene	2009/07/23		85	%	60 - 140
		Ethylbenzene	2009/07/23		87	%	60 - 140
		m & p-Xylene	2009/07/23		90	%	60 - 140
		o-Xylene	2009/07/23		95	%	60 - 140
		(C6-C10)	2009/07/23		99	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		107	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/23		91	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		103	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/23		98	%	60 - 140
		Benzene	2009/07/23	<0.0050		mg/kg	
		Toluene	2009/07/23	<0.020		mg/kg	
		Ethylbenzene	2009/07/23	<0.010		mg/kg	
		Xylenes (Total)	2009/07/23	<0.040		mg/kg	
		m & p-Xylene	2009/07/23	<0.040		mg/kg	
		o-Xylene	2009/07/23	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/07/23	<12		mg/kg	
		(C6-C10)	2009/07/23	<12		mg/kg	
	RPD [P82924-01]	Benzene	2009/07/23	NC		%	50
		Toluene	2009/07/23	NC		%	50
		Ethylbenzene	2009/07/23	NC		%	50
		Xylenes (Total)	2009/07/23	25.2		%	50
		m & p-Xylene	2009/07/23	27.3		%	50
		o-Xylene	2009/07/23	22.4		%	50
		F1 (C6-C10) - BTEX	2009/07/23	8.8		%	50
		(C6-C10)	2009/07/23	8.9		%	50
3283898 CC6	MATRIX SPIKE [P82989-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		122	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/23		108	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		94	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/23		106	%	60 - 140
		Benzene	2009/07/23		89	%	60 - 140
		Toluene	2009/07/23		NC	%	60 - 140



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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
3283898 CC6	MATRIX SPIKE [P82989-01]	Ethylbenzene	2009/07/23		NC	%	60 - 140		
		m & p-Xylene	2009/07/23		NC	%	60 - 140		
		o-Xylene	2009/07/23		NC	%	60 - 140		
		(C6-C10)	2009/07/23		NC	%	60 - 140		
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		99	%	60 - 140		
		D10-ETHYLBENZENE (sur.)	2009/07/23		106	%	30 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		93	%	60 - 140		
		D8-TOLUENE (sur.)	2009/07/23		102	%	60 - 140		
		Benzene	2009/07/23		93	%	60 - 140		
		Toluene	2009/07/23		94	%	60 - 140		
		Ethylbenzene	2009/07/23		104	%	60 - 140		
		m & p-Xylene	2009/07/23		102	%	60 - 140		
		o-Xylene	2009/07/23		103	%	60 - 140		
		(C6-C10)	2009/07/23		93	%	80 - 120		
		BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		96	%	60 - 140	
			D10-ETHYLBENZENE (sur.)	2009/07/23		108	%	30 - 130	
	D4-1,2-DICHLOROETHANE (sur.)		2009/07/23		96	%	60 - 140		
	D8-TOLUENE (sur.)		2009/07/23		99	%	60 - 140		
	Benzene		2009/07/23	<0.0050			mg/kg		
	Toluene		2009/07/23	<0.020			mg/kg		
	Ethylbenzene		2009/07/23	<0.010			mg/kg		
	Xylenes (Total)		2009/07/23	<0.040			mg/kg		
	m & p-Xylene		2009/07/23	<0.040			mg/kg		
	o-Xylene		2009/07/23	<0.020			mg/kg		
	F1 (C6-C10) - BTEX		2009/07/23	<12			mg/kg		
	LH (C5-C10)		2009/07/23	<12			mg/kg		
	(C6-C10)		2009/07/23	<12			mg/kg		
	RPD [P82988-01]		Benzene	2009/07/23	26.0		%	50	
		Toluene	2009/07/23	18.9		%	50		
		Ethylbenzene	2009/07/23	12.8		%	50		
		Xylenes (Total)	2009/07/23	7.3		%	50		
		m & p-Xylene	2009/07/23	5.9		%	50		
		o-Xylene	2009/07/23	11.7		%	50		
		F1 (C6-C10) - BTEX	2009/07/23	9.4		%	50		
		(C6-C10)	2009/07/23	9.5		%	50		
		3286357 DR3	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/21		98	%	60 - 140
				D10-ETHYLBENZENE (sur.)	2009/07/21		104	%	30 - 130
				D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		99	%	60 - 140
				D8-TOLUENE (sur.)	2009/07/21		102	%	60 - 140
	SPIKE		Benzene	2009/07/21		97	%	60 - 140	
Toluene			2009/07/21		100	%	60 - 140		
Ethylbenzene			2009/07/21		110	%	60 - 140		
m & p-Xylene			2009/07/21		109	%	60 - 140		
o-Xylene			2009/07/21		106	%	60 - 140		
(C6-C10)			2009/07/21		93	%	60 - 140		
4-BROMOFLUOROBENZENE (sur.)			2009/07/21		97	%	60 - 140		
D10-ETHYLBENZENE (sur.)			2009/07/21		110	%	30 - 130		
D4-1,2-DICHLOROETHANE (sur.)			2009/07/21		94	%	60 - 140		
D8-TOLUENE (sur.)			2009/07/21		103	%	60 - 140		
Benzene			2009/07/21		93	%	60 - 140		
Toluene			2009/07/21		98	%	60 - 140		
Ethylbenzene			2009/07/21		107	%	60 - 140		
m & p-Xylene			2009/07/21		106	%	60 - 140		
o-Xylene			2009/07/21		104	%	60 - 140		



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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
3286357 DR3	SPIKE	(C6-C10)	2009/07/21		94	%	80 - 120		
		4-BROMOFLUOROBENZENE (sur.)	2009/07/21		109	%	60 - 140		
	BLANK	D10-ETHYLBENZENE (sur.)	2009/07/21		93	%	30 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		108	%	60 - 140		
		D8-TOLUENE (sur.)	2009/07/21		91	%	60 - 140		
		Benzene	2009/07/21	<0.0050			mg/kg		
		Toluene	2009/07/21	<0.020			mg/kg		
		Ethylbenzene	2009/07/21	<0.010			mg/kg		
		Xylenes (Total)	2009/07/21	<0.040			mg/kg		
		m & p-Xylene	2009/07/21	<0.040			mg/kg		
		o-Xylene	2009/07/21	<0.020			mg/kg		
		F1 (C6-C10) - BTEX	2009/07/21	<12			mg/kg		
		(C6-C10)	2009/07/21	<12			mg/kg		
		RPD	Benzene	2009/07/21	NC			%	50
			Toluene	2009/07/21	NC			%	50
			Ethylbenzene	2009/07/21	NC			%	50
			Xylenes (Total)	2009/07/21	NC			%	50
			m & p-Xylene	2009/07/21	NC			%	50
			o-Xylene	2009/07/21	NC			%	50
			F1 (C6-C10) - BTEX	2009/07/21	NC			%	50
	(C6-C10)		2009/07/21	NC			%	50	
	3286366 SB8		Calibration Check RPD	pH	2009/07/21		100	%	97 - 103
				pH	2009/07/21	1.2		%	5
3286624 DR3	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		91	%	60 - 140		
		D10-ETHYLBENZENE (sur.)	2009/07/23		56	%	30 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		80	%	60 - 140		
		D8-TOLUENE (sur.)	2009/07/23		101	%	60 - 140		
		Benzene	2009/07/23		NC	%	60 - 140		
		Toluene	2009/07/23		NC	%	60 - 140		
		Ethylbenzene	2009/07/23		NC	%	60 - 140		
		m & p-Xylene	2009/07/23		NC	%	60 - 140		
		o-Xylene	2009/07/23		NC	%	60 - 140		
		(C6-C10)	2009/07/23		NC	%	60 - 140		
		SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/23		92	%	60 - 140	
			D10-ETHYLBENZENE (sur.)	2009/07/23		56	%	30 - 130	
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		89	%	60 - 140	
			D8-TOLUENE (sur.)	2009/07/23		105	%	60 - 140	
			Benzene	2009/07/23		86	%	60 - 140	
	Toluene		2009/07/23		92	%	60 - 140		
	Ethylbenzene		2009/07/23		96	%	60 - 140		
	m & p-Xylene		2009/07/23		97	%	60 - 140		
	o-Xylene		2009/07/23		99	%	60 - 140		
	BLANK	(C6-C10)	2009/07/23		102	%	80 - 120		
		4-BROMOFLUOROBENZENE (sur.)	2009/07/23		91	%	60 - 140		
		D10-ETHYLBENZENE (sur.)	2009/07/23		52	%	30 - 130		
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/23		101	%	60 - 140		
		D8-TOLUENE (sur.)	2009/07/23		103	%	60 - 140		
		Benzene	2009/07/23	<0.0050			mg/kg		
		Toluene	2009/07/23	<0.020			mg/kg		
		Ethylbenzene	2009/07/23	<0.010			mg/kg		
		Xylenes (Total)	2009/07/23	<0.040			mg/kg		
		m & p-Xylene	2009/07/23	<0.040			mg/kg		
		o-Xylene	2009/07/23	<0.020			mg/kg		
		F1 (C6-C10) - BTEX	2009/07/23	<12			mg/kg		
		(C6-C10)	2009/07/23	<12			mg/kg		



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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3286624 DR3	RPD	Benzene	2009/07/23	NC		%	50
		Toluene	2009/07/23	NC		%	50
		Ethylbenzene	2009/07/23	NC		%	50
		Xylenes (Total)	2009/07/23	NC		%	50
		m & p-Xylene	2009/07/23	NC		%	50
		o-Xylene	2009/07/23	NC		%	50
		F1 (C6-C10) - BTEX	2009/07/23	NC		%	50
		(C6-C10)	2009/07/23	NC		%	50
3286626 JP6	BLANK	Moisture	2009/07/21	<0.3		%	
	RPD	Moisture	2009/07/21	0.6		%	20
3286886 JP6	BLANK	Moisture	2009/07/21	<0.3		%	
	RPD [P82988-01]	Moisture	2009/07/21	1.6		%	20
3287469 JP6	BLANK	Moisture	2009/07/21	<0.3		%	
	RPD	Moisture	2009/07/21	4.4		%	20
3287795 JT7	SPIKE	O-TERPHENYL (sur.)	2009/07/20		77	%	50 - 130
		Total Extractables C10 to C30	2009/07/20		113	%	60 - 130
	BLANK	O-TERPHENYL (sur.)	2009/07/20		125	%	50 - 130
		Total Extractables C10 to C30	2009/07/20	15, RDL=10		mg/kg	
3287873 MM5	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/21		97	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		97	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/21		100	%	70 - 130
	QC STANDARD	4-BROMOFLUOROBENZENE (sur.)	2009/07/21		101	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		91	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/21		103	%	70 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/07/21		100	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		96	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/21		101	%	70 - 130
	BLANK	LH (C5-C10)	2009/07/21	<300		ug/L	
		4-BROMOFLUOROBENZENE (sur.)	2009/07/21		101	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/21		98	%	70 - 130
		D8-TOLUENE (sur.)	2009/07/21		101	%	70 - 130
	RPD [P83070-01]	LH (C5-C10)	2009/07/21	NC		%	30
3289106 JP1	BLANK	O-TERPHENYL (sur.)	2009/07/21		105	%	50 - 130
		EPH (C10-C19)	2009/07/21	<0.08		mg/L	
3292762 EO1	Calibration Check	Total Arsenic (As)	2009/07/22		94	%	80 - 120
		Total Cadmium (Cd)	2009/07/22		99	%	80 - 120
		Total Chromium (Cr)	2009/07/22		94	%	80 - 120
		Total Cobalt (Co)	2009/07/22		101	%	80 - 120
		Total Copper (Cu)	2009/07/22		98	%	80 - 120
		Total Lead (Pb)	2009/07/22		99	%	80 - 120
		Total Nickel (Ni)	2009/07/22		100	%	80 - 120
		Total Zinc (Zn)	2009/07/22		103	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2009/07/22		100	%	75 - 125
		Total Cadmium (Cd)	2009/07/22		100	%	75 - 125
		Total Chromium (Cr)	2009/07/22		110	%	75 - 125
		Total Cobalt (Co)	2009/07/22		106	%	75 - 125
		Total Copper (Cu)	2009/07/22		107	%	75 - 125
		Total Lead (Pb)	2009/07/22		104	%	75 - 125
		Total Nickel (Ni)	2009/07/22		118	%	75 - 125
		Total Zinc (Zn)	2009/07/22		NC	%	75 - 125
	QC STANDARD	Total Arsenic (As)	2009/07/22		96	%	72 - 128
		Total Chromium (Cr)	2009/07/22		71	%	50 - 150
		Total Cobalt (Co)	2009/07/22		107	%	75 - 125
		Total Copper (Cu)	2009/07/22		90	%	72 - 127
		Total Lead (Pb)	2009/07/22		93	%	65 - 135



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Location: JOHNSON POINT, LOBE P-STOCKPILE

Quality Assurance Report (Continued)

Maxxam Job Number: EA936987

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3292762 EO1	QC STANDARD	Total Nickel (Ni)	2009/07/22		100	%	75 - 125	
		Total Zinc (Zn)	2009/07/22		92	%	74 - 125	
	BLANK	Total Arsenic (As)	2009/07/22	<1			mg/kg	
		Total Cadmium (Cd)	2009/07/22	<0.1			mg/kg	
		Total Chromium (Cr)	2009/07/22	<1			mg/kg	
		Total Cobalt (Co)	2009/07/22	<1			mg/kg	
		Total Copper (Cu)	2009/07/22	<5			mg/kg	
		Total Lead (Pb)	2009/07/22	<1			mg/kg	
		Total Nickel (Ni)	2009/07/22	<1			mg/kg	
		Total Zinc (Zn)	2009/07/22	<10			mg/kg	
	RPD	Total Arsenic (As)	2009/07/22	0.4			%	35
		Total Cadmium (Cd)	2009/07/22	NC			%	35
		Total Chromium (Cr)	2009/07/22	13.8			%	35
		Total Cobalt (Co)	2009/07/22	2.9			%	35
		Total Copper (Cu)	2009/07/22	NC			%	35
		Total Lead (Pb)	2009/07/22	0.4			%	35
		Total Nickel (Ni)	2009/07/22	3.0			%	35
		Total Zinc (Zn)	2009/07/22	5.5			%	35
	3294918 EO1	Calibration Check	Total Arsenic (As)	2009/07/23		91	%	80 - 120
			Total Cadmium (Cd)	2009/07/23		94	%	80 - 120
Total Chromium (Cr)			2009/07/23		90	%	80 - 120	
Total Cobalt (Co)			2009/07/23		95	%	80 - 120	
Total Copper (Cu)			2009/07/23		92	%	80 - 120	
Total Lead (Pb)			2009/07/23		95	%	80 - 120	
Total Nickel (Ni)			2009/07/23		95	%	80 - 120	
Total Zinc (Zn)			2009/07/23		117	%	80 - 120	
MATRIX SPIKE [P82931-01]		Total Arsenic (As)	2009/07/23		99	%	75 - 125	
		Total Cadmium (Cd)	2009/07/23		96	%	75 - 125	
		Total Chromium (Cr)	2009/07/23		105	%	75 - 125	
		Total Cobalt (Co)	2009/07/23		104	%	75 - 125	
		Total Copper (Cu)	2009/07/23		93	%	75 - 125	
		Total Lead (Pb)	2009/07/23		96	%	75 - 125	
		Total Nickel (Ni)	2009/07/23		103	%	75 - 125	
		Total Zinc (Zn)	2009/07/23		107	%	75 - 125	
QC STANDARD		Total Arsenic (As)	2009/07/23		101	%	72 - 128	
		Total Chromium (Cr)	2009/07/23		81	%	50 - 150	
		Total Cobalt (Co)	2009/07/23		115	%	75 - 125	
		Total Copper (Cu)	2009/07/23		91	%	72 - 127	
		Total Lead (Pb)	2009/07/23		92	%	65 - 135	
		Total Nickel (Ni)	2009/07/23		106	%	75 - 125	
		Total Zinc (Zn)	2009/07/23		82	%	74 - 125	
		BLANK	Total Arsenic (As)	2009/07/23	<1			mg/kg
Total Cadmium (Cd)			2009/07/23	<0.1			mg/kg	
Total Chromium (Cr)			2009/07/23	<1			mg/kg	
Total Cobalt (Co)			2009/07/23	<1			mg/kg	
Total Copper (Cu)			2009/07/23	<5			mg/kg	
Total Lead (Pb)			2009/07/23	<1			mg/kg	
Total Nickel (Ni)			2009/07/23	<1			mg/kg	
Total Zinc (Zn)			2009/07/23	<10			mg/kg	
RPD [P82931-01]		Total Arsenic (As)	2009/07/23	NC			%	35
		Total Cadmium (Cd)	2009/07/23	NC			%	35
		Total Chromium (Cr)	2009/07/23	1.5			%	35
		Total Cobalt (Co)	2009/07/23	NC			%	35
		Total Copper (Cu)	2009/07/23	NC			%	35



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Location: JOHNSON POINT, LOBE P-STOCKPILE

Quality Assurance Report (Continued)

Maxxam Job Number: EA936987

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3294918 EO1	RPD [P82931-01]	Total Lead (Pb)	2009/07/23	0.4		%	35
		Total Nickel (Ni)	2009/07/23	1.5		%	35
		Total Zinc (Zn)	2009/07/23	NC		%	35
3297309 KO	MATRIX SPIKE [P82926-01]	O-TERPHENYL (sur.)	2009/07/23		100	%	50 - 130
		Total Extractables C10 to C30	2009/07/23		84	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/23		97	%	50 - 130
		Total Extractables C10 to C30	2009/07/23		107	%	60 - 130
	BLANK	O-TERPHENYL (sur.)	2009/07/23		104	%	50 - 130
		Total Extractables C10 to C30	2009/07/23	<10		mg/kg	
3297319 KO	RPD [P82924-01]	Total Extractables C10 to C30	2009/07/23	23.1		%	50
	SPIKE	O-TERPHENYL (sur.)	2009/07/20		90	%	50 - 130
		Total Extractables C10 to C30	2009/07/20		103	%	60 - 130
	BLANK	O-TERPHENYL (sur.)	2009/07/20		78	%	50 - 130
		Total Extractables C10 to C30	2009/07/20	<10		mg/kg	
3304021 JP6	BLANK	Moisture	2009/07/27	<0.3		%	
	RPD [P82924-01]	Moisture	2009/07/27	0.9		%	20
3315686 LD2	MATRIX SPIKE	O-TERPHENYL (sur.)	2009/07/31		83	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/31		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/07/31		NC	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/07/31		114	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2009/07/31		77	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/31		97	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/07/31		106	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/07/31		118	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2009/07/31		82	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/31	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/31	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/31	<10		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2009/07/31	35.2		%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/31	31.5		%	50
		F4 (C34-C50 Hydrocarbons)	2009/07/31	32.8		%	50
3315747 DR3	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/08/01		105	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/01		109	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/01		99	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/01		100	%	60 - 140
		Benzene	2009/08/01		95	%	60 - 140
		Toluene	2009/08/01		98	%	60 - 140
		Ethylbenzene	2009/08/01		104	%	60 - 140
		m & p-Xylene	2009/08/01		105	%	60 - 140
		o-Xylene	2009/08/01		104	%	60 - 140
		(C6-C10)	2009/08/01		103	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2009/08/01		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/01		113	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/01		101	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/01		99	%	60 - 140
		Benzene	2009/08/01		100	%	60 - 140
		Toluene	2009/08/01		101	%	60 - 140
		Ethylbenzene	2009/08/01		105	%	60 - 140
		m & p-Xylene	2009/08/01		108	%	60 - 140
		o-Xylene	2009/08/01		105	%	60 - 140
		(C6-C10)	2009/08/01		87	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2009/08/01		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/01		102	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/01		99	%	60 - 140



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Location: JOHNSON POINT, LOBE P-STOCKPILE

Quality Assurance Report (Continued)

Maxxam Job Number: EA936987

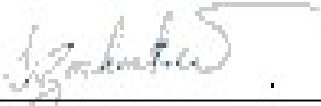
QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3315747 DR3	BLANK	D8-TOLUENE (sur.)	2009/08/01		103	%	60 - 140
		Benzene	2009/08/01	<0.0050		mg/kg	
		Toluene	2009/08/01	<0.020		mg/kg	
		Ethylbenzene	2009/08/01	<0.010		mg/kg	
		Xylenes (Total)	2009/08/01	<0.040		mg/kg	
		m & p-Xylene	2009/08/01	<0.040		mg/kg	
		o-Xylene	2009/08/01	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/08/01	<12		mg/kg	
		(C6-C10)	2009/08/01	<12		mg/kg	
	RPD	Benzene	2009/08/01	6.7		%	50
		Toluene	2009/08/01	NC		%	50
		Ethylbenzene	2009/08/01	35.0		%	50
		Xylenes (Total)	2009/08/01	39.6		%	50
		m & p-Xylene	2009/08/01	39.5		%	50
		o-Xylene	2009/08/01	39.7		%	50
		F1 (C6-C10) - BTEX	2009/08/01	40.1		%	50
		(C6-C10)	2009/08/01	40.1		%	50
3316401 SR7	BLANK	Moisture	2009/07/31	<0.3		%	
	RPD	Moisture	2009/07/31	6.7		%	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Validation Signature Page

Maxxam Job #: A936987

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



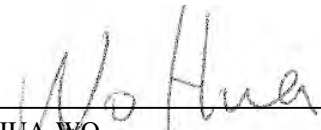
DIANE ZACHARKIW, Scientific Specialist



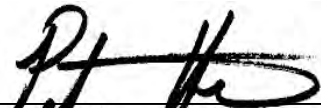
DAVE HUANG, BBY Scientific Specialist



LISA CUMMINGS, Extractables Supervisor



HUA WO,



PETER CHOW, Senior Analyst

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

483 (4)



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

81168 CHAIN OF CUSTODY

1936987/PW/RT/MG/GH Page: 1 of 8

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALUE

Address: ana.galue@aecom.com

Prov: AB **PC:** _____

Contact #'s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
DARA SCHMIDT (AECOM)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** TAN3S3

Ph: 403-450-9926 **Fax:** 403-270-4822
(Site) Office

PO # / AFE #: _____

Quotation #: C08-329

Project #: 297-371-00

Project Name: JOHNSON POINT

Location: LOBE P-STOCKPILE

Sampler's Initials: DAS

- DETECTION LIMIT REQUIREMENTS:**
Check the applicable criterion and indicate land use
- AT1 _____
 - CCME _____
 - OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

- SERVICE REQUESTED:**
- RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 - REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)							WATERS (footnotes defined on back)							OTHER TEST(S)																										
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ²	Assessment ICP Metals ²	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	TPH	PCB	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total Preserved	Not Preserved	Dissolved Preserved	Not Preserved	Filtered	Not Filtered	Mercury	Total Dissolved	Ammonia	TKN	COD	TOC	DOC	VH (W5-10)	EH (W10-19)	PH	RES-Cr (chromium)	Pb (lead)	Cd (cadmium)	Cr (chromium)	*HOLD for 60 Days
1	NO	2009/07/11 9:35				X																																					1
2	S	2009/07/11 9:30	X			X																																					3
3	S	2009/07/12 9:20	X			X																																					3
4	S	2009/07/12 16:15	X			X																																					
5		16:20																																									
6		16:25																																									
7		16:30																																									
8		16:35																																									
9		16:40																																									
10		16:45																																									
11		16:50																																									
12	S	2009/07/12 16:55	X			X																																					3

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: DARA SCHMIDT Date/Time: 16-JUL-09 11:15

Sign and Print: D Schmidt

COMMENTS/SPECIAL INSTRUCTIONS:

*metals : AS, CO, CU, CR, CD, NI, PB, ZN (only)

# JARS USED & NOT SUBMITTED	Received By	Temperature			Ice
	17/07/09	4	6	2	
	16:50h	8	8	3	
CUSTODY SEAL		YES	(NO)	7	6
				7	7

483(4)



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
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81169 CHAIN OF CUSTODY

A936987/pw/RT/JH/GH Page: 2 of 8

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALVE

Address: ana.galve@aecom.com

Prov: PC: **Contact #s:** Ph: 403-270-9200 Fax: 403-270-0399

Report To: Dara Schmidt @ (AECOM)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3
Ph: 403-450-9926 Fax: 403-270-4822
(Site) office

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: LOBE P Stack pile

Sampler's Initials: DRS

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted			
			BTEX F1-F4 Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) *	Assessment ICP Metals ²	BTEX F1	BTEX F1-F2	Routine Water Package	REGULATED METALS (CCME / AT1) ³	Mercury	Ammonia	TKN	DOC		VH (W5-10)	EH (W10-19)	pH
1 09-451	S	2009/07/12 17:00	X		X													3
2 09-452		17:05																
3 09-453		17:10																
4 09-454		17:15																
5 09-455		17:20																
6 09-456		17:25																
7 09-457		17:30																
8 09-458	S	2009/07/12 17:35	X		X													3
9 09-459	S	2009/07/13 14:00																2
10 09-460	S	14:05	X															2
11 09-461	S	14:05	X															2
12 09-462	S	2009/07/13 14:10	X															2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to pg 1 Date/Time: _____
Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:
* see metals note pg 1

# JARS USED & NOT SUBMITTED	Received By			Temperature			Ice
	17/07/09 16:50h	RT		4	6	2	
CUSTODY SEAL YES (NO)		7	8	16	14	13	Y
		7	6	7	7	7	

483(4)

Maxxam
Analytics

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81171 CHAIN OF CUSTODY

 PO # / AFE #: A936987/dw/RT/MS/CH
 Page: 3 of 8
 Quotation #: C08-329
 Project #: 2977-330 371-00
 Project Name: Johnson Point
 Location: Lobe P
 Sampler's Initials: DAS
Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: ANA GALUE
Address: ana.galue@aecom.com
Prov: Calgary/AB **PC:**
Contact #s: Ph: 403-270-9200 Fax: 403-270-0399
Report To:
Dara Schmidt (AECOM)
2540 Kensington Rd NW
Calgary
Prov: AB **PC:** T2N 6P3
Ph: 403-270-4822 **Fax:** 403-450-9926
 office (site)
DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

-
- AT1 _____
-
-
- CCME _____
-
-
- OTHER _____

SERVICE REQUESTED: RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

 REGULAR Turnaround (5 to 7 Days)**REPORT DISTRIBUTION:**

EMAIL ADDRESS(S):

dara.schmidt@aecom.com
aecom.com
priya.handa@aecom.com

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	SOILS (footnotes defined on back)							WATERS (footnotes defined on back)							OTHER TEST(S)		*HOLD for 60 Days	# of Containers Submitted									
				Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	<input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	<input type="checkbox"/> Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD			<input type="checkbox"/> TOC <input type="checkbox"/> DOC	VH (W5-10)	EH (WID-19)	PH					
1 09-463	S	2009/07/13 14:15	X																									X	2	
2 09-464		14:20																										X	2	
3 09-465		14:25																									X	2		
4 09-466		14:30	X																											
5 09-467		14:35																									X	2		
6 09-468		14:40	X																											
7 09-469		14:45																									X	2		
8 09-470		14:50	X																											
9 09-471		14:50	X																											
10 09-472		14:55																									X	2		
11 09-473		15:00																									X	2		
12 09-474	S	2009/07/13 15:05	X																											

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____

Sign and Print: refer to pg 1

COMMENTS/SPECIAL INSTRUCTIONS:

Page 45 of 50

# JARS USED & NOT SUBMITTED	Received By			Temperature			Ice
	17/07/09 16:50h	RT		4 8 16 7	6 8 14 6	2 3 13 7	
CUSTODY SEAL				YES <input checked="" type="radio"/> NO <input type="radio"/>			

483 (4)



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
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81172 CHAIN OF CUSTODY

Page: 4 of 8
A936987/GW RT ASB/DW

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: AB **PC:**

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
Dara Schmidt (AECOM)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** T2N 3S3

Ph: 403-450-9926 **Fax:** 403-270-4822
(Site) office

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: Lobe P

Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

		SOILS (footnotes defined on back)							WATERS (footnotes defined on back)							OTHER TEST(S)											
Sample ID	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	<input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	<input type="checkbox"/> Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	<input type="checkbox"/> TOC <input type="checkbox"/> DOC	EH (W5-10)	VH (W10-19)	pH	*HOLD for 60 Days	# of Containers Submitted		
																										REGULATED METALS (CCME / AT1) ³	
1		2009/07/13 15:10																						X	2		
2		15:15																							X	2	
3		15:20	X																						X	2	
4		15:25																							X	2	
5		15:30																							X	2	
6		15:35	X																						X	2	
7		15:35	X																						X	2	
8		15:40	X																						X	2	
9		2009/07/13 15:45																							X	2	
10																											
11																											
12	S																								X	2	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

refer to pg 1

# JARS USED & NOT SUBMITTED	Received By			Temperature			Ice
	17/07/09	RT		4	6	2	
16:50h			8	8	3		
			16	14	13		
			7	6	7		
CUSTODY SEAL		YES	(NO)				

483 (4)



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Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

80837 CHAIN OF CUSTODY

A936987 / LH / RT / JH / DW Page: 5 of 8

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALUE

Address: ana.galue@aecom.com

Prov: PC:

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To: AECOM (Dara Schmidt)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** TAN 353

Ph: 403-450-9426 **Fax:** 403-270-4822
(Site) office

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: JOHNSON POINT

Location: LOBE P

Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1

CCME

OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handal@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required:

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)				*HOLD for 60 Days	# of Containers Submitted							
				Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved			Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC		
1 09-487	S	2009/07/13 15:55	X																			X	2	
2 09-488	S	2009/07/13 16:00																					X	2
3 09-489																								
4 09-490																								
5 09-491																								
6 09-492																								
7 09-493																								
8 09-494																								
9 09-495	S																							
10 09-486	S	2009/07/13 15:50																					X	2
11 09-518	S	2009/07/15 15:40	X																				X	2
12 09-519	S	2009/07/15 15:45																					X	2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to pg 1 **Date/Time:**

Sign and Print:

COMMENTS/SPECIAL INSTRUCTIONS: *NO PARTIAL RPTS please. Page 47 of 50

# JARS USED & NOT SUBMITTED	Received By		Temperature			Ice
	17/07/09 16:50h		RT			
	CUSTODY SEAL		YES	(NO)		
	7		6	2	7	

483(4)



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

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80839 CHAIN OF CUSTODY

A936987 / G/H RT/JW/DW
Page: 6 of 8
PO # / AFE #:

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galwe

Address: ana.galwe@aecom.com

Prov: Calgary AB **PC:**

Contact #s: Ph: 270-9200 Fax: 270-0399

Report To:
AECOM (Para Schmidt)
2540 Kensington Rd NW
Calgary

Prov: AB **PC:** TAN 3S3

Ph: 403-450-9926 **Fax:** 403-270-4822
(Site) office

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: LOBE Y & PART 2

Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:

- Check the applicable criterion and indicate land use
- AT1
 - CCME
 - OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab to reserve)
- Date Required:** _____
- REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)						WATERS (footnotes defined on back)						OTHER TEST(S)																
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	VH (W5-10)	EH (W10-19)	pH	*HOLD for 60 Days	# of Containers Submitted						
1	09-494	S	2009/05/05	14:00	X																										
2	495			14:05	X																										
3	496			14:10	X																										
4	497			14:15	X																										
5	498			14:20	X																										
6	499			14:25	X																										
7	500			14:30	X																										
8	501			14:30	X																										
9	502			14:35	X																										
10	503			14:45	X																										
11	504			14:50	X																										
12	09-505	S	2009/07/15	14:55	X																										

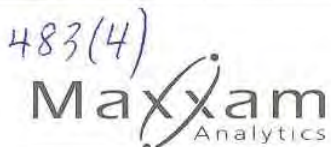
*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager. Maxxam Job #:

Relinquished By: _____ Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: refer to pg 1

# JARS USED & NOT SUBMITTED	Received By			Temperature			Ice
	17/07/09 16:50h	RT		4 8 16 7	6 8 14 6	2 3 13 7	
CUSTODY SEAL YES / (NO)							



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
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80838 CHAIN OF CUSTODY

Page: 7 of 8
A936987/GAI RT/JJG/DW
PO # / AFE #:

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ana Galue

Address: ana.galue@aecom.com

Prov: _____ **PC:** _____

Contact #s: Ph: 403-270-9200 Fax: 270-0399

Report To: AECOM (Dara Schmidt)

2540 Kensington Road NW

Calgary

Prov: AB **PC:** TAN 3S3

Ph: 403-450-9926 **Fax:** 270-4822
(Site) office

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: LDBEY

Sampler's Initials: DAS

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
pritya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals ^a	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	TPH	PCB	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	REGULATED METALS (CCME / AT1) ^a	Mercury	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Ammonia	TKN	COD	TOC	DOC	VH (W5-10)	EH (W10-19)	pH	HOLD for 60 Days	# of Containers Submitted	
1		<u>2009/07/15 15:50</u>																																						X	2		
2		<u>15:55</u>																																								X	
3		<u>16:00</u>																																								X	
4		<u>15:00</u>																																							X		
5		<u>15:05</u>																																								X	
6		<u>15:05</u>																																								X	
7		<u>15:10</u>																																							X		
8		<u>15:15</u>																																							X		
9		<u>15:20</u>																																							X		
10		<u>15:25</u>																																							X		
11		<u>15:30</u>																																							X		
12	<u>09-517</u>	<u>2009/07/15 15:35</u>																																								X	2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: refer to pg 1 Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

# JARS USED & NOT SUBMITTED	Received By <u>RT</u> 16:50h	Temperature			Ice
		4	6	2	
		8	8	3	
		16	14	13	Y
		7	6	7	

CUSTODY SEAL YES NO

A936987
IGH/RT/√M/dw

Invoice To: Require Report? Yes No

Report To:
AECOM (Dara Schmidt)
2540 Kensington Rd NW
Calgary, AB
 PC: T2N3S3
 Ph: 403-450-9926 Fax: 270-4822
 (site) office

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: LOBEY
Sampler's Initials: DAS

Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 PC:
 Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-0399

REGULATORY REQUIREMENTS:

- AT1 - Soil Contamination PST
 CCME CDWQG
 CCME FWAL G50
 Regulatory Limits to appear on Final report

REPORT DISTRIBUTION:

- Mail Fax
 PDF Excel Other: Equis
 Email: dara.schmidt@aecom.com
priya.handa@aecom.com

ANALYSIS REQUESTED

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
 Date Required: MONDAY JULY 19
 REGULAR Turnaround

METALS: (WATERS):

- Total Extractable Dissolved

Sample ID	Matrix	Date/Time	Sample Type	Hold > 60 Days	Sample Container #	BTEX F1-F4 & TEH	BTEX F1-F4	VH (W5-10)	EH (W10-19)	PH
1	W	2009/07/16 9:10	RUSH					X	X	X
2	W	2009/07/16 9:15	RUSH					X	X	X
3	W	2009/07/16 9:20	RUSH					X	X	X
4	S	2009/07/12	RUSH			X				
5										
6										
7										
8										
9										
10										
11										
12										
								P	P	

**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: _____
 Signature: _____

Date/Time: _____

Received
17/07/09
16:50h RT

Temperature
4/6/2 °C
8/8/3 °C
16/14/13 °C
7/6/7 °C
 C of C # **174083**

COMMENTS/SPECIAL INSTRUCTIONS: * RUSH SAMPLES 09-520, 09-521 & 09-522 & 09-523



Your Project #: 2977-371-00 JOHNSON POINT
 Your C.O.C. #: 174085, 174086, 174087, 174088,
 174089, 174090, 174091, 174092

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/08/06

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A938629

Received: 2009/07/24, 12:40

Sample Matrix: Soil
 # Samples Received: 49

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	2	2009/07/26	2009/07/27	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	30	2009/07/26	2009/07/30	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	4	2009/07/27	2009/07/29	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	2	2009/07/27	2009/07/30	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	2	2009/07/27	2009/07/31	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	9	2009/08/04	2009/08/06	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	36	2009/07/26	2009/07/29	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	6	2009/07/26	2009/08/05	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	4	2009/07/27	2009/07/28	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	3	2009/08/04	2009/08/05	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	20	N/A	2009/07/27	EENVSOP-00139	Carter SSMA 51.2
Moisture	20	N/A	2009/07/28	EENVSOP-00139	Carter SSMA 51.2
Moisture	9	N/A	2009/08/05	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	20	2009/07/26	2009/07/29	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1

./2



Your Project #: 2977-371-00 JOHNSON POINT
Your C.O.C. #: 174085, 174086, 174087, 174088,
174089, 174090, 174091, 174092

Attention: DARA SCHMIDT

AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/08/06

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
Email: eanderson@maxxamanalytics.com
Phone# (780) 577-7113 Ext:7113

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94135	P94138		
Sampling Date		2009/07/20 18:52	2009/07/20 18:50		
COC Number		174085	174085		
	Units	09-485	09-490	RDL	QC Batch

Physical Properties					
Moisture	%	14	13	0.3	3306306
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	950	25	10	3306600
F3 (C16-C34 Hydrocarbons)	mg/kg	280	85	10	3306600
F4 (C34-C50 Hydrocarbons)	mg/kg	38	40	10	3306600
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3306600
Volatiles					
Benzene	mg/kg	0.022	<0.0050	0.0050	3305703
Toluene	mg/kg	2.6	<0.020	0.020	3305703
Ethylbenzene	mg/kg	3.3	<0.010	0.010	3305703
Xylenes (Total)	mg/kg	28	<0.040	0.040	3305703
m & p-Xylene	mg/kg	20	<0.040	0.040	3305703
o-Xylene	mg/kg	7.7	<0.020	0.020	3305703
F1 (C6-C10) - BTEX	mg/kg	1300	<12	12	3305703
(C6-C10)	mg/kg	1300	<12	12	3305703
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	99	101	N/A	3305703
D10-ETHYLBENZENE (sur.)	%	96	99	N/A	3305703
D4-1,2-DICHLOROETHANE (sur.)	%	117	118	N/A	3305703
D8-TOLUENE (sur.)	%	99	96	N/A	3305703
O-TERPHENYL (sur.)	%	115	100	N/A	3306600
N/A = Not Applicable RDL = Reportable Detection Limit					

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94139	P94141		
Sampling Date		2009/07/20 18:50	2009/07/20 18:47		
COC Number		174085	174085		
	Units	09-491	09-493	RDL	QC Batch

Physical Properties					
Moisture	%	13	11	0.3	3306306
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	19	<10	10	3306600
F3 (C16-C34 Hydrocarbons)	mg/kg	110	16	10	3306600
F4 (C34-C50 Hydrocarbons)	mg/kg	62	<10	10	3306600
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3306600
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3305706
Toluene	mg/kg	<0.020	<0.020	0.020	3305706
Ethylbenzene	mg/kg	<0.010	0.073	0.010	3305706
Xylenes (Total)	mg/kg	<0.040	0.39	0.040	3305706
m & p-Xylene	mg/kg	<0.040	0.26	0.040	3305706
o-Xylene	mg/kg	<0.020	0.14	0.020	3305706
F1 (C6-C10) - BTEX	mg/kg	<12	<12	12	3305706
(C6-C10)	mg/kg	<12	<12	12	3305706
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	99	102	N/A	3305706
D10-ETHYLBENZENE (sur.)	%	94	98	N/A	3305706
D4-1,2-DICHLOROETHANE (sur.)	%	105	98	N/A	3305706
D8-TOLUENE (sur.)	%	101	102	N/A	3305706
O-TERPHENYL (sur.)	%	101	97	N/A	3306600
N/A = Not Applicable RDL = Reportable Detection Limit					

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94142	P94142		
Sampling Date		2009/07/20 09:10	2009/07/20 09:10		
COC Number		174085	174085		
	Units	09-524	09-524 Lab-Dup	RDL	QC Batch

Physical Properties					
Moisture	%	7.6	6.8	0.3	3305878
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	15	<10	10	3302224
F3 (C16-C34 Hydrocarbons)	mg/kg	17	11	10	3302224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3302224
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3302224
Volatiles					
Benzene	mg/kg	<0.0050	N/A	0.0050	3305676
Toluene	mg/kg	<0.020	N/A	0.020	3305676
Ethylbenzene	mg/kg	<0.010	N/A	0.010	3305676
Xylenes (Total)	mg/kg	<0.040	N/A	0.040	3305676
m & p-Xylene	mg/kg	<0.040	N/A	0.040	3305676
o-Xylene	mg/kg	<0.020	N/A	0.020	3305676
F1 (C6-C10) - BTEX	mg/kg	<12	N/A	12	3305676
(C6-C10)	mg/kg	<12	N/A	12	3305676
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	112	N/A	N/A	3305676
D10-ETHYLBENZENE (sur.)	%	93	N/A	N/A	3305676
D4-1,2-DICHLOROETHANE (sur.)	%	104	N/A	N/A	3305676
D8-TOLUENE (sur.)	%	100	N/A	N/A	3305676
O-TERPHENYL (sur.)	%	76	78	N/A	3302224
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate					

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94143		P94144		
Sampling Date		2009/07/20 09:12		2009/07/20 09:14		
COC Number		174085		174085		
	Units	09-525	QC Batch	09-526	RDL	QC Batch

Physical Properties						
Moisture	%	10	3323272	10	0.3	3305878
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	950	3323315	3200	10	3302224
F3 (C16-C34 Hydrocarbons)	mg/kg	240	3323315	430	10	3302224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3323315	<10	10	3302224
Reached Baseline at C50	mg/kg	Yes	3323315	Yes	N/A	3302224
Volatiles						
Benzene	mg/kg	<0.0050	3323166	<0.0050	0.0050	3305676
Toluene	mg/kg	<0.020	3323166	0.024	0.020	3305676
Ethylbenzene	mg/kg	0.015	3323166	0.11	0.010	3305676
Xylenes (Total)	mg/kg	0.30	3323166	4.6	0.040	3305676
m & p-Xylene	mg/kg	0.15	3323166	2.3	0.040	3305676
o-Xylene	mg/kg	0.15	3323166	2.4	0.020	3305676
F1 (C6-C10) - BTEX	mg/kg	150	3323166	1500	12	3305676
(C6-C10)	mg/kg	150	3323166	1500	12	3305676
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	109	3323166	105	N/A	3305676
D10-ETHYLBENZENE (sur.)	%	110	3323166	111	N/A	3305676
D4-1,2-DICHLOROETHANE (sur.)	%	97	3323166	110	N/A	3305676
D8-TOLUENE (sur.)	%	102	3323166	94	N/A	3305676
O-TERPHENYL (sur.)	%	69	3323315	80	N/A	3302224

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94145		P94151		
Sampling Date		2009/07/20 09:16		2009/07/20 09:26		
COC Number		174085		174086		
	Units	09-527	QC Batch	09-533	RDL	QC Batch

Physical Properties						
Moisture	%	12	3323272	12	0.3	3305878
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	3700	3323315	21	10	3302224
F3 (C16-C34 Hydrocarbons)	mg/kg	270	3323315	19	10	3302224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3323315	<10	10	3302224
Reached Baseline at C50	mg/kg	Yes	3323315	Yes	N/A	3302224
Volatiles						
Benzene	mg/kg	<0.0050	3323166	<0.0050	0.0050	3305676
Toluene	mg/kg	<0.020	3323166	<0.020	0.020	3305676
Ethylbenzene	mg/kg	0.016	3323166	0.017	0.010	3305676
Xylenes (Total)	mg/kg	5.6	3323166	0.25	0.040	3305676
m & p-Xylene	mg/kg	2.3	3323166	0.071	0.040	3305676
o-Xylene	mg/kg	3.2	3323166	0.18	0.020	3305676
F1 (C6-C10) - BTEX	mg/kg	680	3323166	<12	12	3305676
(C6-C10)	mg/kg	680	3323166	<12	12	3305676
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	94	3323166	100	N/A	3305676
D10-ETHYLBENZENE (sur.)	%	107	3323166	94	N/A	3305676
D4-1,2-DICHLOROETHANE (sur.)	%	97	3323166	111	N/A	3305676
D8-TOLUENE (sur.)	%	111	3323166	92	N/A	3305676
O-TERPHENYL (sur.)	%	83	3323315	84	N/A	3302224

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94154		P94157		
Sampling Date		2009/07/20 09:36		2009/07/20 09:42		
COC Number		174086		174086		
	Units	09-536	QC Batch	09-539	RDL	QC Batch

Physical Properties						
Moisture	%	14	3305878	16	0.3	3305878
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	18	3302224	790	10	3302224
F3 (C16-C34 Hydrocarbons)	mg/kg	25	3302224	170	10	3302224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3302224	<10	10	3302224
Reached Baseline at C50	mg/kg	Yes	3302224	Yes	N/A	3302224
Volatiles						
Benzene	mg/kg	<0.0050	3305676	<0.0050	0.0050	3304333
Toluene	mg/kg	<0.020	3305676	0.035	0.020	3304333
Ethylbenzene	mg/kg	<0.010	3305676	<0.010	0.010	3304333
Xylenes (Total)	mg/kg	<0.040	3305676	1.9	0.040	3304333
m & p-Xylene	mg/kg	<0.040	3305676	0.37	0.040	3304333
o-Xylene	mg/kg	<0.020	3305676	1.5	0.020	3304333
F1 (C6-C10) - BTEX	mg/kg	<12	3305676	270	12	3304333
(C6-C10)	mg/kg	<12	3305676	270	12	3304333
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	108	3305676	91	N/A	3304333
D10-ETHYLBENZENE (sur.)	%	108	3305676	95	N/A	3304333
D4-1,2-DICHLOROETHANE (sur.)	%	110	3305676	122	N/A	3304333
D8-TOLUENE (sur.)	%	99	3305676	95	N/A	3304333
O-TERPHENYL (sur.)	%	91	3302224	80	N/A	3302224

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94158	P94159	P94161		
Sampling Date		2009/07/20 09:44	2009/07/20 09:44	2009/07/20 09:50		
COC Number		174087	174087	174087		
	Units	09-540	09-541	09-543	RDL	QC Batch

Physical Properties						
Moisture	%	14	13	14	0.3	3305878
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	120	83	1600	10	3302224
F3 (C16-C34 Hydrocarbons)	mg/kg	36	30	430	10	3302224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3302224
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3302224
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3304333
Toluene	mg/kg	0.037	0.044	0.035	0.020	3304333
Ethylbenzene	mg/kg	0.022	<0.010	0.31	0.010	3304333
Xylenes (Total)	mg/kg	0.35	0.47	2.5	0.040	3304333
m & p-Xylene	mg/kg	0.19	0.22	1.8	0.040	3304333
o-Xylene	mg/kg	0.16	0.25	0.76	0.020	3304333
F1 (C6-C10) - BTEX	mg/kg	<12	<12	220	12	3304333
(C6-C10)	mg/kg	<12	<12	220	12	3304333
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	118	100	79	N/A	3304333
D10-ETHYLBENZENE (sur.)	%	95	94	92	N/A	3304333
D4-1,2-DICHLOROETHANE (sur.)	%	127	132	135	N/A	3304333
D8-TOLUENE (sur.)	%	101	100	94	N/A	3304333
O-TERPHENYL (sur.)	%	79	82	84	N/A	3302224

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94162		
Sampling Date		2009/07/20 11:12		
COC Number		174087		
	Units	09-544	RDL	QC Batch

Physical Properties				
Moisture	%	17	0.3	3305878
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/kg	5700	10	3302224
F3 (C16-C34 Hydrocarbons)	mg/kg	820	10	3302224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	3302224
Reached Baseline at C50	mg/kg	Yes	N/A	3302224
Volatiles				
Benzene	mg/kg	<0.0050	0.0050	3304333
Toluene	mg/kg	0.96	0.020	3304333
Ethylbenzene	mg/kg	170	0.10	3304333
Xylenes (Total)	mg/kg	940	0.40	3304333
m & p-Xylene	mg/kg	680	0.40	3304333
o-Xylene	mg/kg	250	0.20	3304333
F1 (C6-C10) - BTEX	mg/kg	16000	12	3304333
(C6-C10)	mg/kg	18000	12	3304333
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	98	N/A	3304333
D10-ETHYLBENZENE (sur.)	%	98	N/A	3304333
D4-1,2-DICHLOROETHANE (sur.)	%	108	N/A	3304333
D8-TOLUENE (sur.)	%	80	N/A	3304333
O-TERPHENYL (sur.)	%	83	N/A	3302224
N/A = Not Applicable RDL = Reportable Detection Limit				

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94163		P94164		
Sampling Date		2009/07/20 11:14		2009/07/20 11:18		
COC Number		174087		174087		
	Units	09-545	QC Batch	09-546	RDL	QC Batch

Physical Properties						
Moisture	%	11	3323272	14	0.3	3305878
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	5500	3323315	3100	10	3302224
F3 (C16-C34 Hydrocarbons)	mg/kg	920	3323315	590	10	3302224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3323315	<10	10	3302224
Reached Baseline at C50	mg/kg	Yes	3323315	Yes	N/A	3302224
Volatiles						
Benzene	mg/kg	<0.0050	3323166	<0.0050	0.0050	3304333
Toluene	mg/kg	0.11	3323166	<0.020	0.020	3304333
Ethylbenzene	mg/kg	0.061	3323166	2.1	0.010	3304333
Xylenes (Total)	mg/kg	9.2	3323166	12	0.040	3304333
m & p-Xylene	mg/kg	1.1	3323166	4.4	0.040	3304333
o-Xylene	mg/kg	8.1	3323166	7.7	0.020	3304333
F1 (C6-C10) - BTEX	mg/kg	950	3323166	540	12	3304333
(C6-C10)	mg/kg	960	3323166	560	12	3304333
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	123	3323166	119	N/A	3304333
D10-ETHYLBENZENE (sur.)	%	105	3323166	104	N/A	3304333
D4-1,2-DICHLOROETHANE (sur.)	%	96	3323166	127	N/A	3304333
D8-TOLUENE (sur.)	%	110	3323166	98	N/A	3304333
O-TERPHENYL (sur.)	%	83	3323315	95	N/A	3302224

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94166	P94168	P94169		
Sampling Date		2009/07/20 11:20	2009/07/20 11:26	2009/07/20 11:26		
COC Number		174087	174087	174087		
	Units	09-548	09-550	09-551	RDL	QC Batch

Physical Properties						
Moisture	%	17	7.0	9.3	0.3	3305878
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	12	<10	<10	10	3302224
F3 (C16-C34 Hydrocarbons)	mg/kg	17	13	11	10	3302224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3302224
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3302224
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3304333
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3304333
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3304333
Xylenes (Total)	mg/kg	<0.040	0.099	0.058	0.040	3304333
m & p-Xylene	mg/kg	<0.040	0.056	0.058	0.040	3304333
o-Xylene	mg/kg	<0.020	0.042	<0.020	0.020	3304333
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3304333
(C6-C10)	mg/kg	<12	<12	<12	12	3304333
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	110	100	116	N/A	3304333
D10-ETHYLBENZENE (sur.)	%	96	96	100	N/A	3304333
D4-1,2-DICHLOROETHANE (sur.)	%	130	129	118	N/A	3304333
D8-TOLUENE (sur.)	%	95	103	96	N/A	3304333
O-TERPHENYL (sur.)	%	86	80	88	N/A	3302224

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94171		P94172		
Sampling Date		2009/07/20 11:30		2009/07/20 11:32		
COC Number		174088		174088		
	Units	09-553	QC Batch	09-554	RDL	QC Batch

Physical Properties						
Moisture	%	12	3323272	9.9	0.3	3305878
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	5300	3323317	2800	10	3302224
F3 (C16-C34 Hydrocarbons)	mg/kg	870	3323317	440	10	3302224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3323317	<10	10	3302224
Reached Baseline at C50	mg/kg	Yes	3323317	Yes	N/A	3302224
Volatiles						
Benzene	mg/kg	<0.0050	3323166	<0.0050	0.0050	3304333
Toluene	mg/kg	<0.020	3323166	0.031	0.020	3304333
Ethylbenzene	mg/kg	0.088	3323166	0.073	0.010	3304333
Xylenes (Total)	mg/kg	12	3323166	18	0.040	3304333
m & p-Xylene	mg/kg	1.9	3323166	2.9	0.040	3304333
o-Xylene	mg/kg	9.6	3323166	15	0.020	3304333
F1 (C6-C10) - BTEX	mg/kg	1200	3323166	2300	12	3304333
(C6-C10)	mg/kg	1300	3323166	2400	12	3304333
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	119	3323166	85	N/A	3304333
D10-ETHYLBENZENE (sur.)	%	104	3323166	99	N/A	3304333
D4-1,2-DICHLOROETHANE (sur.)	%	99	3323166	121	N/A	3304333
D8-TOLUENE (sur.)	%	109	3323166	97	N/A	3304333
O-TERPHENYL (sur.)	%	102	3323317	89	N/A	3302224
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94176	P94178		
Sampling Date		2009/07/20 11:40	2009/07/20 11:48		
COC Number		174088	174088		
	Units	09-558	09-560	RDL	QC Batch

Physical Properties					
Moisture	%	8.8	9.1	0.3	3305878
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	51	2100	10	3302224
F3 (C16-C34 Hydrocarbons)	mg/kg	25	360	10	3302224
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3302224
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3302224
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3302249
Toluene	mg/kg	<0.020	<0.020	0.020	3302249
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	3302249
Xylenes (Total)	mg/kg	<0.040	3.0	0.040	3302249
m & p-Xylene	mg/kg	<0.040	0.24	0.040	3302249
o-Xylene	mg/kg	0.024	2.8	0.020	3302249
F1 (C6-C10) - BTEX	mg/kg	38	510	12	3302249
(C6-C10)	mg/kg	38	510	12	3302249
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	83	105	N/A	3302249
D10-ETHYLBENZENE (sur.)	%	105	95	N/A	3302249
D4-1,2-DICHLOROETHANE (sur.)	%	83	95	N/A	3302249
D8-TOLUENE (sur.)	%	95	69	N/A	3302249
O-TERPHENYL (sur.)	%	86	78	N/A	3302224
N/A = Not Applicable RDL = Reportable Detection Limit					

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94179	P94179	P94180		
Sampling Date		2009/07/20 11:48	2009/07/20 11:48	2009/07/20 11:50		
COC Number		174088	174088	174088		
	Units	09-561	09-561 Lab-Dup	09-562	RDL	QC Batch

Physical Properties						
Moisture	%	8.9	9.1	11	0.3	3302515
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	2900	3000	<10	10	3302220
F3 (C16-C34 Hydrocarbons)	mg/kg	470	490	11	10	3302220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3302220
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3302220
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3302280
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3302280
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3302280
Xylenes (Total)	mg/kg	7.8	9.4	0.093	0.040	3302280
m & p-Xylene	mg/kg	1.2	1.4	<0.040	0.040	3302280
o-Xylene	mg/kg	6.6	8.0	0.093	0.020	3302280
F1 (C6-C10) - BTEX	mg/kg	550	570	<12	12	3302280
(C6-C10)	mg/kg	560	580	<12	12	3302280
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	111	113	101	N/A	3302280
D10-ETHYLBENZENE (sur.)	%	101	101	94	N/A	3302280
D4-1,2-DICHLOROETHANE (sur.)	%	98	99	101	N/A	3302280
D8-TOLUENE (sur.)	%	106	103	103	N/A	3302280
O-TERPHENYL (sur.)	%	104	110	112	N/A	3302220

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94181	P94182		
Sampling Date		2009/07/20 19:14	2009/07/20 19:16		
COC Number		174088	174089		
	Units	09-563	09-564	RDL	QC Batch

Physical Properties					
Moisture	%	4.7	12	0.3	3323272
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	57	37	10	3323317
F3 (C16-C34 Hydrocarbons)	mg/kg	39	68	10	3323317
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	12	10	3323317
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3323317
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3323166
Toluene	mg/kg	<0.020	<0.020	0.020	3323166
Ethylbenzene	mg/kg	<0.010	0.050	0.010	3323166
Xylenes (Total)	mg/kg	0.25	0.10	0.040	3323166
m & p-Xylene	mg/kg	0.045	0.057	0.040	3323166
o-Xylene	mg/kg	0.21	0.044	0.020	3323166
F1 (C6-C10) - BTEX	mg/kg	72	220	12	3323166
(C6-C10)	mg/kg	72	220	12	3323166
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	91	103	N/A	3323166
D10-ETHYLBENZENE (sur.)	%	105	108	N/A	3323166
D4-1,2-DICHLOROETHANE (sur.)	%	95	94	N/A	3323166
D8-TOLUENE (sur.)	%	111	111	N/A	3323166
O-TERPHENYL (sur.)	%	92	112	N/A	3323317
N/A = Not Applicable RDL = Reportable Detection Limit					

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94184	P94185		
Sampling Date		2009/07/20 19:12	2009/07/20 19:14		
COC Number		174089	174089		
	Units	09-566	09-567	RDL	QC Batch

Physical Properties					
Moisture	%	3.8	6.8	0.3	3302515
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	420	10	3302220
F3 (C16-C34 Hydrocarbons)	mg/kg	36	100	10	3302220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3302220
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3302220
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3302280
Toluene	mg/kg	<0.020	<0.020	0.020	3302280
Ethylbenzene	mg/kg	<0.010	0.24	0.010	3302280
Xylenes (Total)	mg/kg	<0.040	1.1	0.040	3302280
m & p-Xylene	mg/kg	<0.040	0.81	0.040	3302280
o-Xylene	mg/kg	<0.020	0.31	0.020	3302280
F1 (C6-C10) - BTEX	mg/kg	<12	320	12	3302280
(C6-C10)	mg/kg	<12	320	12	3302280
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	98	113	N/A	3302280
D10-ETHYLBENZENE (sur.)	%	93	97	N/A	3302280
D4-1,2-DICHLOROETHANE (sur.)	%	102	102	N/A	3302280
D8-TOLUENE (sur.)	%	101	97	N/A	3302280
O-TERPHENYL (sur.)	%	100	100	N/A	3302220
N/A = Not Applicable RDL = Reportable Detection Limit					

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94186		P94188		
Sampling Date		2009/07/20 19:24		2009/07/20 19:28		
COC Number		174089		174089		
	Units	09-568	QC Batch	09-570	RDL	QC Batch

Physical Properties						
Moisture	%	4.9	3323272	4.1	0.3	3302515
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	2000	3323317	15	10	3302220
F3 (C16-C34 Hydrocarbons)	mg/kg	150	3323317	79	10	3302220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3323317	<10	10	3302220
Reached Baseline at C50	mg/kg	Yes	3323317	Yes	N/A	3302220
Volatiles						
Benzene	mg/kg	<0.0050	3323166	<0.0050	0.0050	3302280
Toluene	mg/kg	<0.020	3323166	<0.020	0.020	3302280
Ethylbenzene	mg/kg	<0.010	3323166	0.068	0.010	3302280
Xylenes (Total)	mg/kg	<0.040	3323166	0.18	0.040	3302280
m & p-Xylene	mg/kg	<0.040	3323166	0.18	0.040	3302280
o-Xylene	mg/kg	<0.020	3323166	<0.020	0.020	3302280
F1 (C6-C10) - BTEX	mg/kg	<12	3323166	<12	12	3302280
(C6-C10)	mg/kg	<12	3323166	<12	12	3302280
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	92	3323166	98	N/A	3302280
D10-ETHYLBENZENE (sur.)	%	109	3323166	100	N/A	3302280
D4-1,2-DICHLOROETHANE (sur.)	%	95	3323166	102	N/A	3302280
D8-TOLUENE (sur.)	%	109	3323166	101	N/A	3302280
O-TERPHENYL (sur.)	%	95	3323317	96	N/A	3302220

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94189	P94190	P94191		
Sampling Date		2009/07/20 19:28	2009/07/21 09:18	2009/07/21 09:20		
COC Number		174089	174089	174089		
	Units	09-571	09-572	09-573	RDL	QC Batch

Physical Properties						
Moisture	%	3.6	4.7	12	0.3	3302515
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	15	1600	350	10	3302220
F3 (C16-C34 Hydrocarbons)	mg/kg	39	320	92	10	3302220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3302220
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3302220
Volatiles						
Benzene	mg/kg	0.066	<0.0050	<0.0050	0.0050	3302280
Toluene	mg/kg	0.45	<0.020	<0.020	0.020	3302280
Ethylbenzene	mg/kg	0.43	<0.010	<0.010	0.010	3302280
Xylenes (Total)	mg/kg	1.5	<0.040	<0.040	0.040	3302280
m & p-Xylene	mg/kg	1.4	<0.040	<0.040	0.040	3302280
o-Xylene	mg/kg	0.17	<0.020	<0.020	0.020	3302280
F1 (C6-C10) - BTEX	mg/kg	<12	68	32	12	3302280
(C6-C10)	mg/kg	13	68	32	12	3302280
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	95	96	N/A	3302280
D10-ETHYLBENZENE (sur.)	%	94	93	94	N/A	3302280
D4-1,2-DICHLOROETHANE (sur.)	%	98	98	100	N/A	3302280
D8-TOLUENE (sur.)	%	101	100	99	N/A	3302280
O-TERPHENYL (sur.)	%	109	110	100	N/A	3302220

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94192	P94193		
Sampling Date		2009/07/21 09:24	2009/07/21 09:26		
COC Number		174089	174089		
	Units	09-574	09-575	RDL	QC Batch

Physical Properties					
Moisture	%	6.2	12	0.3	3323272
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	10	<10	10	3323317
F3 (C16-C34 Hydrocarbons)	mg/kg	19	23	10	3323317
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3323317
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3323317
Volatiles					
Benzene	mg/kg	<0.0050	0.017	0.0050	3323166
Toluene	mg/kg	<0.020	0.028	0.020	3323166
Ethylbenzene	mg/kg	<0.010	0.45	0.010	3323166
Xylenes (Total)	mg/kg	<0.040	0.51	0.040	3323166
m & p-Xylene	mg/kg	<0.040	0.51	0.040	3323166
o-Xylene	mg/kg	<0.020	<0.020	0.020	3323166
F1 (C6-C10) - BTEX	mg/kg	<12	<12	12	3323166
(C6-C10)	mg/kg	<12	<12	12	3323166
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	102	106	N/A	3323166
D10-ETHYLBENZENE (sur.)	%	106	104	N/A	3323166
D4-1,2-DICHLOROETHANE (sur.)	%	95	99	N/A	3323166
D8-TOLUENE (sur.)	%	106	105	N/A	3323166
O-TERPHENYL (sur.)	%	102	100	N/A	3323317
N/A = Not Applicable RDL = Reportable Detection Limit					

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94197	P94198	P94199		
Sampling Date		2009/07/20 19:26	2009/07/20 19:28	2009/07/20 19:28		
COC Number		174090	174090	174090		
	Units	09-579	09-580	09-581	RDL	QC Batch

Physical Properties						
Moisture	%	5.6	12	14	0.3	3302515
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	120	25	20	10	3302220
F3 (C16-C34 Hydrocarbons)	mg/kg	81	61	45	10	3302220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3302220
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3302220
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3302280
Toluene	mg/kg	<0.020	0.091	<0.020	0.020	3302280
Ethylbenzene	mg/kg	<0.010	0.27	0.21	0.010	3302280
Xylenes (Total)	mg/kg	0.12	2.5	2.5	0.040	3302280
m & p-Xylene	mg/kg	<0.040	1.7	1.7	0.040	3302280
o-Xylene	mg/kg	0.12	0.76	0.76	0.020	3302280
F1 (C6-C10) - BTEX	mg/kg	28	14	13	12	3302280
(C6-C10)	mg/kg	28	16	15	12	3302280
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	101	99	102	N/A	3302280
D10-ETHYLBENZENE (sur.)	%	95	100	97	N/A	3302280
D4-1,2-DICHLOROETHANE (sur.)	%	102	98	101	N/A	3302280
D8-TOLUENE (sur.)	%	99	100	99	N/A	3302280
O-TERPHENYL (sur.)	%	112	104	111	N/A	3302220

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94201	P94202	P94203		
Sampling Date		2009/07/21 09:20	2009/07/21 09:34	2009/07/21 09:36		
COC Number		174090	174090	174090		
	Units	09-583	09-584	09-585	RDL	QC Batch

Physical Properties						
Moisture	%	12	3.6	11	0.3	3302515
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	13	3100	180	10	3302220
F3 (C16-C34 Hydrocarbons)	mg/kg	43	470	70	10	3302220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3302220
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3302220
Volatiles						
Benzene	mg/kg	0.063	<0.0050	<0.0050	0.0050	3302280
Toluene	mg/kg	0.15	<0.020	<0.020	0.020	3302280
Ethylbenzene	mg/kg	0.89	<0.010	1.1	0.010	3302280
Xylenes (Total)	mg/kg	5.4	6.9	1.9	0.040	3302280
m & p-Xylene	mg/kg	3.9	2.7	1.8	0.040	3302280
o-Xylene	mg/kg	1.5	4.2	0.12	0.020	3302280
F1 (C6-C10) - BTEX	mg/kg	29	2400	91	12	3302280
(C6-C10)	mg/kg	35	2400	94	12	3302280
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	101	113	110	N/A	3302280
D10-ETHYLBENZENE (sur.)	%	98	105	100	N/A	3302280
D4-1,2-DICHLOROETHANE (sur.)	%	98	100	101	N/A	3302280
D8-TOLUENE (sur.)	%	99	98	98	N/A	3302280
O-TERPHENYL (sur.)	%	112	119	103	N/A	3302220

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94204	P94205	P94207		
Sampling Date		2009/07/21 09:42	2009/07/21 09:44	2009/07/21 09:30		
COC Number		174090	174090	174091		
	Units	09-586	09-587	09-589	RDL	QC Batch

Physical Properties						
Moisture	%	6.8	7.0	6.4	0.3	3302515
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1300	960	46	10	3302220
F3 (C16-C34 Hydrocarbons)	mg/kg	210	170	96	10	3302220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3302220
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3302220
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3302280
Toluene	mg/kg	<0.020	<0.020	1.7	0.020	3302280
Ethylbenzene	mg/kg	<0.010	0.33	0.87	0.010	3302280
Xylenes (Total)	mg/kg	0.34	2.6	8.2	0.040	3302280
m & p-Xylene	mg/kg	<0.040	1.8	5.8	0.040	3302280
o-Xylene	mg/kg	0.34	0.77	2.4	0.020	3302280
F1 (C6-C10) - BTEX	mg/kg	580	600	51	12	3302280
(C6-C10)	mg/kg	580	610	61	12	3302280
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	91	98	104	N/A	3302280
D10-ETHYLBENZENE (sur.)	%	99	100	102	N/A	3302280
D4-1,2-DICHLOROETHANE (sur.)	%	101	101	98	N/A	3302280
D8-TOLUENE (sur.)	%	101	100	100	N/A	3302280
O-TERPHENYL (sur.)	%	102	104	115	N/A	3302220

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P94212	P94245	P94246		
Sampling Date		2009/07/21 09:46	2009/07/21 11:15	2009/07/21 12:10		
COC Number		174091	174092	174092		
	Units	09-594	09-602	09-603	RDL	QC Batch

Physical Properties						
Moisture	%	12	12	10	0.3	3302515
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	27	2700	2000	10	3302220
F3 (C16-C34 Hydrocarbons)	mg/kg	40	350	430	10	3302220
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3302220
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3302220
Volatiles						
Benzene	mg/kg	0.089	<0.0050	<0.0050	0.0050	3302280
Toluene	mg/kg	2.9	0.23	<0.020	0.020	3302280
Ethylbenzene	mg/kg	1.1	0.97	<0.010	0.010	3302280
Xylenes (Total)	mg/kg	7.0	35	5.9	0.040	3302280
m & p-Xylene	mg/kg	5.0	18	2.8	0.040	3302280
o-Xylene	mg/kg	2.1	17	3.1	0.020	3302280
F1 (C6-C10) - BTEX	mg/kg	59	2700	590	12	3302280
(C6-C10)	mg/kg	71	2800	590	12	3302280
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	106	108	103	N/A	3302280
D10-ETHYLBENZENE (sur.)	%	99	109	104	N/A	3302280
D4-1,2-DICHLOROETHANE (sur.)	%	101	99	100	N/A	3302280
D8-TOLUENE (sur.)	%	99	99	99	N/A	3302280
O-TERPHENYL (sur.)	%	117	103	112	N/A	3302220

N/A = Not Applicable
RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P94142	P94142	P94144		
Sampling Date		2009/07/20 09:10	2009/07/20 09:10	2009/07/20 09:14		
COC Number		174085	174085	174085		
	Units	09-524	09-524 Lab-Dup	09-526	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	30	16	3760	10	3305747
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	76	78	80	N/A	3305747

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Maxxam ID		P94151	P94154	P94157		
Sampling Date		2009/07/20 09:26	2009/07/20 09:36	2009/07/20 09:42		
COC Number		174086	174086	174086		
	Units	09-533	09-536	09-539	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	38	40	970	10	3305747
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	84	91	80	N/A	3305747

N/A = Not Applicable
RDL = Reportable Detection Limit

Maxxam ID		P94158	P94159	P94161		
Sampling Date		2009/07/20 09:44	2009/07/20 09:44	2009/07/20 09:50		
COC Number		174087	174087	174087		
	Units	09-540	09-541	09-543	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	158	153	2040	10	3305747
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	79	82	84	N/A	3305747

N/A = Not Applicable
RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P94162	P94164	P94166		
Sampling Date		2009/07/20 11:12	2009/07/20 11:18	2009/07/20 11:20		
COC Number		174087	174087	174087		
	Units	09-544	09-546	09-548	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	6660	3870	28	10	3305747
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	83	96	86	N/A	3305747
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P94168	P94169	P94172		
Sampling Date		2009/07/20 11:26	2009/07/20 11:26	2009/07/20 11:32		
COC Number		174087	174087	174088		
	Units	09-550	09-551	09-554	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	20	16	3400	10	3305747
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	80	88	89	N/A	3305747
N/A = Not Applicable RDL = Reportable Detection Limit						

Maxxam ID		P94176	P94178	P94179		
Sampling Date		2009/07/20 11:40	2009/07/20 11:48	2009/07/20 11:48		
COC Number		174088	174088	174088		
	Units	09-558	09-560	09-561	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	76	2530	3500	10	3305747
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	86	78	104	N/A	3305747
N/A = Not Applicable RDL = Reportable Detection Limit						

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P94180	P94245	P94246		
Sampling Date		2009/07/20 11:50	2009/07/21 11:15	2009/07/21 12:10		
COC Number		174088	174092	174092		
	Units	09-562	09-602	09-603	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	10	3180	2460	10	3305747
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	112	103	112	N/A	3305747

N/A = Not Applicable
 RDL = Reportable Detection Limit

Package 1	9.7°C
Package 2	12.0°C
Package 3	9.7°C
Package 4	9.7°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Results relate only to the items tested.

Quality Assurance Report
 Maxxam Job Number: EA938629

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3302220 LD2	Matrix Spike [P94180-01]	O-TERPHENYL (sur.)	2009/07/29		104	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/29		111	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/07/29		112	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/07/29		114	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/07/29		109	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/29		106	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/29		103	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/29		112	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/07/29			109	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/29		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/29		<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/29		<10		mg/kg	
	RPD [P94179-01]	F2 (C10-C16 Hydrocarbons)	2009/07/29		3.4		%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/29		4.2		%	50
		F4 (C34-C50 Hydrocarbons)	2009/07/29		NC		%	50
3302224 MB7	Matrix Spike [P94144-01]	O-TERPHENYL (sur.)	2009/07/29		93	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/29		NC	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/07/29		111	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/07/29		116	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/07/29		72	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/29		88	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/29		100	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/29		111	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/07/29			82	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/29		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/29		<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/29		<10		mg/kg	
	RPD [P94142-01]	F2 (C10-C16 Hydrocarbons)	2009/07/29		NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/07/29		NC		%	50
		F4 (C34-C50 Hydrocarbons)	2009/07/29		NC		%	50
3302249 AN1	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/07/27		98	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/27		97	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/27		82	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/27		90	%	60 - 140	
		Benzene	2009/07/27		97	%	60 - 140	
		Toluene	2009/07/27		91	%	60 - 140	
		Ethylbenzene	2009/07/27		88	%	60 - 140	
		m & p-Xylene	2009/07/27		98	%	60 - 140	
		o-Xylene	2009/07/27		105	%	60 - 140	
		(C6-C10)	2009/07/27		81	%	60 - 140	
		4-BROMOFLUOROBENZENE (sur.)	2009/07/27		81	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/27		94	%	30 - 130	
	Spiked Blank	D4-1,2-DICHLOROETHANE (sur.)	2009/07/27		81	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/27		91	%	60 - 140	
		Benzene	2009/07/27		94	%	60 - 140	
		Toluene	2009/07/27		97	%	60 - 140	
		Ethylbenzene	2009/07/27		80	%	60 - 140	
		m & p-Xylene	2009/07/27		101	%	60 - 140	
		o-Xylene	2009/07/27		102	%	60 - 140	
		(C6-C10)	2009/07/27		98	%	80 - 120	
		4-BROMOFLUOROBENZENE (sur.)	2009/07/27		100	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/27		102	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/27		84	%	60 - 140	
		Method Blank						



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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3302249 AN1	Method Blank	D8-TOLUENE (sur.)	2009/07/27		94	%	60 - 140	
		Benzene	2009/07/27	<0.0050		mg/kg		
		Toluene	2009/07/27	<0.020		mg/kg		
		Ethylbenzene	2009/07/27	<0.010		mg/kg		
		Xylenes (Total)	2009/07/27	<0.040		mg/kg		
		m & p-Xylene	2009/07/27	<0.040		mg/kg		
		o-Xylene	2009/07/27	<0.020		mg/kg		
	RPD	F1 (C6-C10) - BTEX (C6-C10)	2009/07/27	<12		mg/kg		
		Benzene	2009/07/27	27.9		%	50	
		Toluene	2009/07/27	NC		%	50	
		Ethylbenzene	2009/07/27	NC		%	50	
		Xylenes (Total)	2009/07/27	2.6		%	50	
		m & p-Xylene	2009/07/27	NC		%	50	
		o-Xylene	2009/07/27	NC		%	50	
		F1 (C6-C10) - BTEX (C6-C10)	2009/07/27	NC		%	50	
			2009/07/27	NC		%	50	
3302280 DR3	Matrix Spike [P94180-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/30		100	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/30		98	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/30		100	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/30		100	%	60 - 140	
		Benzene	2009/07/30		73	%	60 - 140	
		Toluene	2009/07/30		80	%	60 - 140	
		Ethylbenzene	2009/07/30		84	%	60 - 140	
		m & p-Xylene	2009/07/30		87	%	60 - 140	
		o-Xylene	2009/07/30		86	%	60 - 140	
		(C6-C10)	2009/07/30		93	%	60 - 140	
		Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/07/30		98	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/07/30		97	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/30		106	%	60 - 140
	D8-TOLUENE (sur.)		2009/07/30		99	%	60 - 140	
	Benzene		2009/07/30		86	%	60 - 140	
	Toluene		2009/07/30		89	%	60 - 140	
	Ethylbenzene		2009/07/30		93	%	60 - 140	
	m & p-Xylene		2009/07/30		94	%	60 - 140	
	o-Xylene		2009/07/30		96	%	60 - 140	
	(C6-C10)		2009/07/30		109	%	80 - 120	
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/07/30		99	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/30		91	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/30		103	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/30		100	%	60 - 140	
		Benzene	2009/07/30	<0.0050		mg/kg		
		Toluene	2009/07/30	<0.020		mg/kg		
		Ethylbenzene	2009/07/30	<0.010		mg/kg		
		Xylenes (Total)	2009/07/30	<0.040		mg/kg		
		m & p-Xylene	2009/07/30	<0.040		mg/kg		
		o-Xylene	2009/07/30	<0.020		mg/kg		
	RPD [P94179-01]	F1 (C6-C10) - BTEX (C6-C10)	2009/07/30	<12		mg/kg		
		Benzene	2009/07/30	NC		%	50	
		Toluene	2009/07/30	NC		%	50	
Ethylbenzene		2009/07/30	NC		%	50		
Xylenes (Total)		2009/07/30	18.2		%	50		
m & p-Xylene		2009/07/30	9.2		%	50		



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3302280 DR3	RPD [P94179-01]	o-Xylene	2009/07/30	19.8		%	50
		F1 (C6-C10) - BTEX	2009/07/30	4.0		%	50
		(C6-C10)	2009/07/30	4.2		%	50
3302515 JP6	Method Blank	Moisture	2009/07/27	<0.3		%	
	RPD [P94179-01]	Moisture	2009/07/27	2.2		%	20
3304333 CC6	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/07/30		112	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/30		86	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/30		116	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/30		104	%	60 - 140
		Benzene	2009/07/30		67	%	60 - 140
		Toluene	2009/07/30		62	%	60 - 140
		Ethylbenzene	2009/07/30		94	%	60 - 140
		m & p-Xylene	2009/07/30		111	%	60 - 140
		o-Xylene	2009/07/30		118	%	60 - 140
		(C6-C10)	2009/07/30		NC	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/07/30		89	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/30		78	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/30		117	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/30		87	%	60 - 140
		Benzene	2009/07/30		76	%	60 - 140
		Toluene	2009/07/30		68	%	60 - 140
		Ethylbenzene	2009/07/30		75	%	60 - 140
		m & p-Xylene	2009/07/30		82	%	60 - 140
		o-Xylene	2009/07/30		78	%	60 - 140
		(C6-C10)	2009/07/30		120	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/07/30		104	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/30		94	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/30		114	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/30		100	%	60 - 140
		Benzene	2009/07/30	<0.0050		mg/kg	
		Toluene	2009/07/30	<0.020		mg/kg	
		Ethylbenzene	2009/07/30	<0.010		mg/kg	
		Xylenes (Total)	2009/07/30	<0.040		mg/kg	
		m & p-Xylene	2009/07/30	<0.040		mg/kg	
		o-Xylene	2009/07/30	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/07/30	<12		mg/kg	
		(C6-C10)	2009/07/30	<12		mg/kg	
	RPD	Benzene	2009/07/30	5.7		%	50
		Toluene	2009/07/30	NC		%	50
		Ethylbenzene	2009/07/30	NC		%	50
		Xylenes (Total)	2009/07/30	NC		%	50
		m & p-Xylene	2009/07/30	NC		%	50
		o-Xylene	2009/07/30	NC		%	50
		F1 (C6-C10) - BTEX	2009/07/30	1.9		%	50
		(C6-C10)	2009/07/30	1.9		%	50
3305676 DR3	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/07/28		102	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/28		110	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/28		111	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/28		105	%	60 - 140
		Benzene	2009/07/28		91	%	60 - 140
		Toluene	2009/07/28		92	%	60 - 140
		Ethylbenzene	2009/07/28		98	%	60 - 140
		m & p-Xylene	2009/07/28		104	%	60 - 140
		o-Xylene	2009/07/28		98	%	60 - 140
		(C6-C10)	2009/07/28		110	%	60 - 140



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3305676 DR3	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/07/28		107	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/28		102	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/28		105	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/28		103	%	60 - 140
		Benzene	2009/07/28		91	%	60 - 140
		Toluene	2009/07/28		92	%	60 - 140
		Ethylbenzene	2009/07/28		101	%	60 - 140
		m & p-Xylene	2009/07/28		102	%	60 - 140
		o-Xylene	2009/07/28		95	%	60 - 140
		(C6-C10)	2009/07/28		100	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/07/28		105	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/28		105	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/28		111	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/28		101	%	60 - 140
		Benzene	2009/07/28	<0.0050		mg/kg	
		Toluene	2009/07/28	<0.020		mg/kg	
		Ethylbenzene	2009/07/28	<0.010		mg/kg	
		Xylenes (Total)	2009/07/28	<0.040		mg/kg	
		m & p-Xylene	2009/07/28	<0.040		mg/kg	
		o-Xylene	2009/07/28	<0.020		mg/kg	
	RPD	F1 (C6-C10) - BTEX (C6-C10)	2009/07/28	<12		mg/kg	
		Benzene	2009/07/28	<12		mg/kg	
		Toluene	2009/07/28	NC		%	50
		Ethylbenzene	2009/07/28	NC		%	50
		Xylenes (Total)	2009/07/28	NC		%	50
		m & p-Xylene	2009/07/28	NC		%	50
		o-Xylene	2009/07/28	NC		%	50
		F1 (C6-C10) - BTEX (C6-C10)	2009/07/28	NC		%	50
		Benzene	2009/07/28	NC		%	50
		Toluene	2009/07/28	NC		%	50
		Ethylbenzene	2009/07/28	NC		%	50
		Xylenes (Total)	2009/07/28	NC		%	50
		3305703 CC6	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/07/29		106
D10-ETHYLBENZENE (sur.)	2009/07/29				101	%	30 - 130
D4-1,2-DICHLOROETHANE (sur.)	2009/07/29				110	%	60 - 140
D8-TOLUENE (sur.)	2009/07/29				99	%	60 - 140
Benzene	2009/07/29				93	%	60 - 140
Toluene	2009/07/29				91	%	60 - 140
Ethylbenzene	2009/07/29				101	%	60 - 140
m & p-Xylene	2009/07/29				104	%	60 - 140
o-Xylene	2009/07/29				93	%	60 - 140
(C6-C10)	2009/07/29				120	%	60 - 140
Spiked Blank	4-BROMOFLUOROBENZENE (sur.)		2009/07/29		103	%	60 - 140
	D10-ETHYLBENZENE (sur.)		2009/07/29		97	%	30 - 130
	D4-1,2-DICHLOROETHANE (sur.)		2009/07/29		111	%	60 - 140
	D8-TOLUENE (sur.)		2009/07/29		102	%	60 - 140
	Benzene		2009/07/29		90	%	60 - 140
	Toluene		2009/07/29		90	%	60 - 140
	Ethylbenzene		2009/07/29		100	%	60 - 140
	m & p-Xylene		2009/07/29		103	%	60 - 140
	o-Xylene		2009/07/29		93	%	60 - 140
	(C6-C10)		2009/07/29		115	%	80 - 120
Method Blank	4-BROMOFLUOROBENZENE (sur.)		2009/07/29		107	%	60 - 140
	D10-ETHYLBENZENE (sur.)		2009/07/29		108	%	30 - 130
	D4-1,2-DICHLOROETHANE (sur.)		2009/07/29		112	%	60 - 140
	D8-TOLUENE (sur.)		2009/07/29		103	%	60 - 140
	Benzene		2009/07/29	<0.0050		mg/kg	

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3305703 CC6	Method Blank	Toluene	2009/07/29	<0.020		mg/kg		
		Ethylbenzene	2009/07/29	<0.010		mg/kg		
		Xylenes (Total)	2009/07/29	<0.040		mg/kg		
		m & p-Xylene	2009/07/29	<0.040		mg/kg		
		o-Xylene	2009/07/29	<0.020		mg/kg		
		F1 (C6-C10) - BTEX (C6-C10)	2009/07/29	<12		mg/kg		
		RPD	Benzene	2009/07/29	NC		%	50
			Toluene	2009/07/29	NC		%	50
			Ethylbenzene	2009/07/29	NC		%	50
			Xylenes (Total)	2009/07/29	NC		%	50
	m & p-Xylene		2009/07/29	NC		%	50	
	o-Xylene		2009/07/29	NC		%	50	
	F1 (C6-C10) - BTEX (C6-C10)		2009/07/29	NC		%	50	
			2009/07/29	NC		%	50	
			2009/07/29	NC		%	50	
			2009/07/29	NC		%	50	
	3305706 DR3	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/07/31		102	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/07/31		104	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/07/31		99	%	60 - 140
			D8-TOLUENE (sur.)	2009/07/31		101	%	60 - 140
Benzene			2009/07/31		96	%	60 - 140	
Toluene			2009/07/31		100	%	60 - 140	
Ethylbenzene			2009/07/31		103	%	60 - 140	
m & p-Xylene			2009/07/31		105	%	60 - 140	
o-Xylene			2009/07/31		102	%	60 - 140	
(C6-C10)			2009/07/31		111	%	60 - 140	
Spiked Blank		4-BROMOFLUOROBENZENE (sur.)	2009/07/31		99	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/31		105	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/31		97	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/31		100	%	60 - 140	
		Benzene	2009/07/31		90	%	60 - 140	
		Toluene	2009/07/31		94	%	60 - 140	
		Ethylbenzene	2009/07/31		97	%	60 - 140	
		m & p-Xylene	2009/07/31		99	%	60 - 140	
		o-Xylene	2009/07/31		96	%	60 - 140	
		(C6-C10)	2009/07/31		107	%	80 - 120	
Method Blank		4-BROMOFLUOROBENZENE (sur.)	2009/07/31		97	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/07/31		98	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/31		101	%	60 - 140	
		D8-TOLUENE (sur.)	2009/07/31		102	%	60 - 140	
		Benzene	2009/07/31	<0.0050		mg/kg		
		Toluene	2009/07/31	<0.020		mg/kg		
		Ethylbenzene	2009/07/31	<0.010		mg/kg		
		Xylenes (Total)	2009/07/31	<0.040		mg/kg		
		m & p-Xylene	2009/07/31	<0.040		mg/kg		
		o-Xylene	2009/07/31	<0.020		mg/kg		
RPD		F1 (C6-C10) - BTEX (C6-C10)	2009/07/31	<12		mg/kg		
		Benzene	2009/07/31	NC		%	50	
		Toluene	2009/07/31	NC		%	50	
		Ethylbenzene	2009/07/31	NC		%	50	
		Xylenes (Total)	2009/07/31	NC		%	50	
		m & p-Xylene	2009/07/31	NC		%	50	
		o-Xylene	2009/07/31	NC		%	50	
		F1 (C6-C10) - BTEX (C6-C10)	2009/07/31	NC		%	50	
			2009/07/31	NC		%	50	
			2009/07/31	NC		%	50	

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3305747 MB7	Matrix Spike [P94144-01]	O-TERPHENYL (sur.)	2009/07/29		93	%	50 - 130	
		Total Extractables C10 to C30	2009/07/29		NC	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/07/29		72	%	50 - 130	
		Total Extractables C10 to C30	2009/07/29		93	%	60 - 130	
	Method Blank	O-TERPHENYL (sur.)	2009/07/29		82	%	50 - 130	
3305878 JP6	RPD [P94142-01]	Total Extractables C10 to C30	2009/07/29	<10		mg/kg		
		Total Extractables C10 to C30	2009/07/29	NC		%	50	
	Method Blank	Moisture	2009/07/28	<0.3		%		
	RPD [P94142-01]	Moisture	2009/07/28	11.1		%	20	
	Method Blank	Moisture	2009/07/28	<0.3		%		
3306306 JP6	RPD	Moisture	2009/07/28	8.2		%	20	
		Moisture	2009/07/28			%		
3306600 JT7	Matrix Spike	O-TERPHENYL (sur.)	2009/07/28		105	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/28		85	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/07/28		97	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/07/28		104	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/07/28		102	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/28		94	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/07/28		110	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/07/28		116	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/07/28		105	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/07/28	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/07/28	<10		mg/kg		
		F4 (C34-C50 Hydrocarbons)	2009/07/28	<10		mg/kg		
		RPD	F2 (C10-C16 Hydrocarbons)	2009/07/28	NC		%	50
			F3 (C16-C34 Hydrocarbons)	2009/07/28	21.3		%	50
			F4 (C34-C50 Hydrocarbons)	2009/07/28	24.9		%	50
3323166 AN1	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/06		101	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/06		109	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/06		96	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/06		100	%	60 - 140	
		Benzene	2009/08/06		86	%	60 - 140	
		Toluene	2009/08/06		84	%	60 - 140	
		Ethylbenzene	2009/08/06		82	%	60 - 140	
		m & p-Xylene	2009/08/06		81	%	60 - 140	
		o-Xylene	2009/08/06		80	%	60 - 140	
		(C6-C10)	2009/08/06		109	%	60 - 140	
		Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/06		82	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/08/06		110	%	30 - 130
	D4-1,2-DICHLOROETHANE (sur.)		2009/08/06		96	%	60 - 140	
	D8-TOLUENE (sur.)		2009/08/06		100	%	60 - 140	
	Benzene		2009/08/06		91	%	60 - 140	
	Toluene		2009/08/06		84	%	60 - 140	
	Ethylbenzene		2009/08/06		84	%	60 - 140	
	m & p-Xylene		2009/08/06		83	%	60 - 140	
	o-Xylene		2009/08/06		82	%	60 - 140	
	(C6-C10)		2009/08/06		100	%	80 - 120	
	Method Blank		4-BROMOFLUOROBENZENE (sur.)	2009/08/06		94	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/08/06		114	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/06		96	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/06		99	%	60 - 140	
		Benzene	2009/08/06	<0.0050		mg/kg		
		Toluene	2009/08/06	<0.020		mg/kg		
		Ethylbenzene	2009/08/06	<0.010		mg/kg		
		Xylenes (Total)	2009/08/06	<0.040		mg/kg		



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)
 Maxxam Job Number: EA938629

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3323166 AN1	Method Blank	m & p-Xylene	2009/08/06	<0.040		mg/kg	
		o-Xylene	2009/08/06	<0.020		mg/kg	
	RPD	F1 (C6-C10) - BTEX (C6-C10)	2009/08/06	<12		mg/kg	
		Benzene	2009/08/06	NC		%	50
		Toluene	2009/08/06	NC		%	50
		Ethylbenzene	2009/08/06	NC		%	50
		Xylenes (Total)	2009/08/06	NC		%	50
		m & p-Xylene	2009/08/06	NC		%	50
		o-Xylene	2009/08/06	NC		%	50
		F1 (C6-C10) - BTEX (C6-C10)	2009/08/06	NC		%	50
3323272 SR7	Method Blank	Moisture	2009/08/05	<0.3		%	
	RPD	Moisture	2009/08/05	5.0		%	20
3323315 LD2	Matrix Spike	O-TERPHENYL (sur.)	2009/08/05		91	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/05		93	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/05		98	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/05		98	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/05		96	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/05		104	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/05		102	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/08/05		99	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/08/05		111	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/05	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/05	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/05	<10		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2009/08/05	8.7		%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/05	13.7		%	50
		F4 (C34-C50 Hydrocarbons)	2009/08/05	NC		%	50
		3323317 YT	Matrix Spike	O-TERPHENYL (sur.)	2009/08/05		111
F2 (C10-C16 Hydrocarbons)	2009/08/05				96	%	50 - 130
F3 (C16-C34 Hydrocarbons)	2009/08/05				105	%	50 - 130
F4 (C34-C50 Hydrocarbons)	2009/08/05				115	%	50 - 130
Spiked Blank	O-TERPHENYL (sur.)		2009/08/05		99	%	50 - 130
	F2 (C10-C16 Hydrocarbons)		2009/08/05		98	%	80 - 120
	F3 (C16-C34 Hydrocarbons)		2009/08/05		106	%	80 - 120
	F4 (C34-C50 Hydrocarbons)		2009/08/05		116	%	80 - 120
Method Blank	O-TERPHENYL (sur.)		2009/08/05		110	%	50 - 130
	F2 (C10-C16 Hydrocarbons)		2009/08/05	<10		mg/kg	
	F3 (C16-C34 Hydrocarbons)		2009/08/05	<10		mg/kg	
	F4 (C34-C50 Hydrocarbons)		2009/08/05	<10		mg/kg	
RPD	F2 (C10-C16 Hydrocarbons)		2009/08/05	22.8		%	50
	F3 (C16-C34 Hydrocarbons)		2009/08/05	27.6		%	50
	F4 (C34-C50 Hydrocarbons)		2009/08/05	26.0		%	50

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

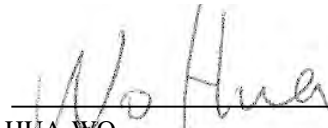
Validation Signature Page

Maxxam Job #: A938629

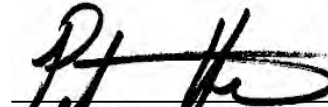
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



LISA CUMMINGS, Extractables Supervisor



HUA WO,



PETER CHOW, Senior Analyst

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Invoice To: Require Report? Yes No
 Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 PC:
 Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM
(Dara Schmidt)
2540 Kensington Rd NW
Calgary, AB PC: TAN3S3
 Ph: 403 (SIR) Fax: 403-270-4822 office

PO # / AFE #:
Quotation #: CD8-329
Project #: 2977-371-00
Project Name: Johnson Point
Location:
Sampler's Initials:

REGULATORY REQUIREMENTS:

- AT1 - Soil Contamination PST
 CCME CDWQG
 CCME FWAL G50
 Regulatory Limits to appear on Final report

REPORT DISTRIBUTION:

- Mail Fax
 PDF Excel Other: Equis
 Email: dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
 Date Required: _____
 REGULAR Turnaround

METALS: (WATERS):

- Total Extractable Dissolved

ANALYSIS REQUESTED

Sample Identification	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	BTEX F1-F4 & TOC	BTEX F1-F4	VH (W5-10)	EH (W10-19)	PH	* HOLD
1 09-484	Soil	2009/07/20 18:54	grab		2						✓
2 09-485		2009/07/20 18:52			2	✓					
3 09-486		2009/07/20 18:54			2						✓
4 09-489		2009/07/20 8:52			2						✓
5 09-490		2009/07/20 18:50			2	✓					
6 09-491		2009/07/20 18:50			2	✓					
7 09-492		2009/07/20 18:45			2						✓
8 09-493		2009/07/20 18:47			2	✓					
9 09-524		2009/07/20 9:10			2	✓					
10 09-525		2009/07/20 9:12			2	✓					✓
11 09-526		2009/07/20 9:14			2	✓					
12 09-527		2009/07/20 9:16			2						✓

**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: Priya Handa
 Signature: [Signature]

Date/Time: 2009/07/21 @ 18:00

COMMENTS/SPECIAL INSTRUCTIONS: _____

Received
July 24/09
MU 12:40

Temperature
9/10/10 9/9/11°C
11/12/13 9/9/11°C

AO checked organics

Invoice To: Require Report? Yes No
 Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 PC:
 Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-0399

Report To: A938629 /pw/
AECOM
(Dara Schmidt)
2540 Kensington Rd NW
Calgary AB PC: T2N3S3
 Ph: 403-450-9926 Fax: 403-270-4822
 (SIR) office

PO # / AFE #: _____
 Quotation #: C08-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location: _____
 Sampler's Initials: _____

REGULATORY REQUIREMENTS:

- AT1 - Soil Contamination
- CCME
- CCME FWAL
- Regulatory Limits to appear on Final report
- PST
- CDWQG
- G50

REPORT DISTRIBUTION:

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priya.handa@aecom.com
- Fax
- Excel
- Other: Equs

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
Date Required: _____
- REGULAR Turnaround

METALS: (WATERS):

- Total
- Extractable
- Dissolved

ANALYSIS REQUESTED

Sample ID	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	Analysis Requested	Notes
1 09-528	Soil	2009/07/20	9:20		2		
2 09-529			9:20				
3 09-530			9:22				
4 09-531			9:22				
5 09-532			9:24				
6 09-533			9:26				
7 09-534			9:28				
8 09-535			9:34				
9 09-536			9:36				
10 09-537			9:38				
11 09-538			9:40				
12 09-539			9:42				

BTX FI-FY 2TET
 BTX FI-FY
 VH (W5-10)
 FH (W10-19)
 PH

*HOLD

**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: Refer to Pg. 1 Date/Time: _____
 Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

Received
 July 24 09
 MR 12:40

Temperature
 9.10, 10 9/9/11°C
 11, 12, 13 9/9/11°C

Invoice To: Require Report? Yes No

Company Name: AECOM
 Contact Name: Ara Galue
 Address: ara.galue@aecom.com
 PC:
 Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-8399

Report To: A938629/DW/
AECOM
(Dara Schmidt)
2540 Kensington Rd NW
Calgary AB PC: TAN353
 Ph: 403-450-9926 Fax: 403-270-4822
 (Site) office

PO # / AFE #:
 Quotation #: C08-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location:
 Sampler's Initials:

REGULATORY REQUIREMENTS:

- AT1 - Soil Contamination PST
 CCME CDWQG
 CCME FWAL G50
 Regulatory Limits to appear on Final report

REPORT DISTRIBUTION:

- Mail Fax
 PDF Excel Other: Equis
 Email: dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
 Date Required: _____
 REGULAR Turnaround

METALS: (WATERS):

- Total Extractable Dissolved

ANALYSIS REQUESTED

Sample Identification	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	BTEX FI-FY + TEH	BTEX FI-FY	VH (W5-10)	EH (W10-19)	PH	* HOLD
1 09-540	Soil	2009/07/20	9:44		2	✓					
2 09-541			9:44			✓					
3 09-542			9:48								✓
4 09-543			9:50			✓					
5 09-544			11:12			✓					
6 09-545			11:14								✓
7 09-546			11:18			✓					
8 09-547			11:16								✓
9 09-548			11:20			✓					
10 09-549			11:24								✓
11 09-550			11:26			✓					
12 09-551			11:26			✓					

**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: Refer to Pg.1 Date/Time: _____

Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

Received
 July 24 '09
 MG 12:40

Temperature
 9, 10, 10 9/9/11°C
 11, 12, 13 9/9/11°C

C of C # **174087**

Invoice To: Require Report? Yes No
 Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 PC: _____
 Phone / Fax #: Ph: 270-9200 Fax: 270-0399

Report To:
AECOM
(Dara Schmidt)
2540 Kensington Rd NW
Calgary AB PC: TAN 353
 Ph: 403-270 Fax: 403-270-4821
 (site) 403-450-9926 office

PO # / AFE #: _____
 Quotation #: C08-329
 Project #: 2077-371-00
 Project Name: Johnson Point
 Location: _____
 Sampler's Initials: _____

REGULATORY REQUIREMENTS:
 AT1 - Soil Contamination PST
 CCME CDWQG
 CCME FWAL G50
 Regulatory Limits to appear on Final report

REPORT DISTRIBUTION:
 Mail Fax
 PDF Excel Other: Equs
 Email: dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab)
 Date Required: _____
 REGULAR Turnaround

METALS: (WATERS):
 Total Extractable Dissolved

ANALYSIS REQUESTED

Sample Identification	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	BTEX FI-FY & TEH	BTEX FI-FY	VH (W5-10)	FH (W10-19)	PH	* HOLD
1 09-552	Soil	2009/07/20	11:28		2						✓
2 09-553			11:30								✓
3 09-554			11:32			✓					
4 09-555			11:36								✓
5 09-556			11:54								✓
6 09-557			11:38								✓
7 09-558			11:40			✓					
8 09-559			11:42								✓
9 09-560			11:48			✓					
10 09-561			11:48			✓					
11 09-562			11:50			✓					
12 09-563			19:14								✓

**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: Refer to Pg. 1 Date/Time: _____
 Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

Received
 July 24 '09
 MG-12:40

Temperature
 9/10/10 9/9/11°C
 11/12/13 9/9/11°C

C of C # **174088**

Invoice To: Require Report? Yes No

Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 PC:
 Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM
(Dara Schmidt)
2540 Kensington Rd NW
Calgary AB PC: TAN353
 Ph: 403-450-9926 Fax: 403-270-4822
 (Site) (Office)

PO # / AFE #: A938629/BW
 Quotation #: C08-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location:
 Sampler's Initials:

REGULATORY REQUIREMENTS:

AT1 - Soil Contamination PST
 CCME CDWQG
 CCME FWAL G50
 Regulatory Limits to appear on Final report

REPORT DISTRIBUTION:

Mail Fax
 PDF Excel Other: Equis
 Email: dara.schmidt@aecom.com
priya.harda@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab)
 Date Required:
 REGULAR Turnaround

METALS: (WATERS):

Total Extractable Dissolved

ANALYSIS REQUESTED											
Sample ID	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	BTEX FI-F4 & TEH	BTEX FI-F4	VH (W5-10)	FH (W10-16)	PH	* HOLD
1	09-564	Soil	2009/07/20	19:16	2	W/N					✓
2	09-565			19:06							✓
3	09-566			19:12		✓					
4	09-567			19:14		✓					
5	09-568			19:24							✓
6	09-569			19:26							✓
7	09-570			19:28		✓					
8	09-571		2009/07/20	19:28		✓					
9	09-572		2009/07/21	19:18		✓					
10	09-573			9:20		✓					
11	09-574			9:24		W/N					✓
12	09-575			9:26							✓

**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: Refer to Pg. 1 Date/Time: _____

Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

Received
July 24 '09
MG-12:40

Temperature
9.10, 10 9/9/11°C
11.2, 13 9/9/11°C

C of C # **174089**

Invoice To: Require Report? Yes No

Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 PC:
 Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-4822

Report To:
AECOM
(Dara Schmidt)
2540 Kensington Rd NW
Calgary AB PC: T2N 3S3
 Ph: 403-450-9926 Fax: 403-270-4822
(site) office

PO # / AFE #: A938629/diw
 Quotation #: C08-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location:
 Sampler's Initials:

REGULATORY REQUIREMENTS:

- AT1 - Soil Contamination PST
 CCME CDWQG
 CCME FWAL G50
 Regulatory Limits to appear on Final report

REPORT DISTRIBUTION:

- Mail Fax
 PDF Excel Other: Equis
 Email: dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
 Date Required: _____
 REGULAR Turnaround

METALS: (WATERS):

- Total Extractable Dissolved

ANALYSIS REQUESTED

Sample Identification	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	BTEX F1-F4	BTEX F1-F4	VH (W5-10)	EH (W10-19)	PH	HOLD
1 09-576	Soil	2009/07/20	19:24		2						✓
2 09-577			19:20								✓
3 09-578			19:22								✓
4 09-579			19:26			✓					
5 09-580			19:28			✓					
6 09-581			19:28			✓					
7 09-582		2009/07/21	9:18								✓
8 09-583			9:20			✓					
9 09-584			9:34			✓					
10 09-585			9:36			✓					
11 09-586			9:42			✓					
12 09-587			9:44			✓					

**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: Refer to Pg. 1 Date/Time: _____

Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

Received
July 24 09
MG 12:40

Temperature
9/10/10 9/9/11°C
1/12/13 9/9/11°C

C of C # **174090**

Invoice To: Require Report? Yes No

Company Name: AECOM
 Contact Name: Ana Galue
 Address: ana.galue@aecom.com
 PC: _____
 Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM
(Dara Schmidt)
2540 Kensington Rd NW
Calgary AB PC: T2N3S3
 Ph: 403-270-9926 Fax: 403-270-4822
 (Site) (Office)

PO # / AFE #: A938629/DW
 Quotation #: C08-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location: _____
 Sampler's Initials: _____

REGULATORY REQUIREMENTS:

AT1 - Soil Contamination PST
 CCME CDWQG
 CCME FWAL G50
 Regulatory Limits to appear on Final report

REPORT DISTRIBUTION:

Mail Fax
 PDF Excel Other: Equs
 Email: dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab)
 Date Required: _____
 REGULAR Turnaround

METALS: (WATERS):

Total Extractable Dissolved

ANALYSIS REQUESTED											
Sample ID	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	BTEX FI-F4	BTEX FI-F4	VH (W5-10)	EH (W10-19)	PH	Other
1 09-588	Soil	2009/07/21	9:24		2						
2 09-589			9:30			✓					✓
3 09-590			9:32			✓					✓
4 09-591			9:32								✓
5 09-592			9:34								✓
6 09-593			9:42								✓
7 09-594	↓		9:46			✓					
8 09-597	Water		15:25	RUSH	6		✓	✓	✓		
9 09-598			15:33	RUSH			✓	✓	✓		
10 09-599			15:38	RUSH			✓	✓	✓		
11 09-600 09-600			15:57	RUSH			✓	✓	✓		
12 09-601	↓	↓	15:57	RUSH	↓		✓	✓	✓		

**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: Refer to Pg. 1 Date/Time: _____
 Signature: _____

COMMENTS/SPECIAL INSTRUCTIONS: * Water Samples (09-597 to 09-601) Are RUSH

Received
July 24 '09
16:40

Temperature
9/10/10 9/9/11°C
11/12/13 9/9/11°C

C of C # **174091**



Calgary: 4000 19st St. NE, T2E 6P8
 Edmonton: 9619 - 42 Ave., T6E 5R2

Ph: (403) 291-3077 Fax: (403) 735-2240
 Ph: (780) 465-1212 Fax: (780) 450-4187
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 Toll-free: (877) 465-8889

As checked by anrcs

ANALYTICAL REQUEST FORM

Page: 8 of 8

A938629/du

Invoice To: Require Report? Yes No
 Company Name: AECOM
 Contact Name: ana Galue
 Address: ana.galue@aecom.com
 PC:
 Phone / Fax #: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM
(Dara Schmidt)
2540 Kensington Rd N
Calgary AB PC: T2N3S3
 Ph: 403-450-9926 Fax: 403-270-4822
 (site) office

PO # / AFE #:
 Quotation #: CO8-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location:
 Sampler's Initials:

REGULATORY REQUIREMENTS:

- AT1 - Soil Contamination
- CCME
- CCME FWAL
- Regulatory Limits to appear on Final report
- PST
- CDWQG
- G50

REPORT DISTRIBUTION:

- Mail
- PDF
- Email: dara.schmidt@aecom.com
priya.nanda@aecom.com
- Fax
- Excel
- Other: Egus

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab)
Date Required:
- REGULAR Turnaround

METALS: (WATERS):

- Total
- Extractable
- Dissolved

ANALYSIS REQUESTED

Sample ID	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	BTEX F1-F4	BTEX F1-F4	VH (W5-10)	FH (W10-19)	PH	Other
1 <u>09-602</u>	<u>Soil</u>	<u>2009/07/21</u>	<u>11:15</u>		<u>1</u>	<input checked="" type="checkbox"/>					
2 <u>09-603</u>	<u>↓</u>	<u>↓</u>	<u>12:10</u>		<u>1</u>	<input checked="" type="checkbox"/>					
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: Refer to Pg.1
 Signature:

Date/Time:

COMMENTS/SPECIAL INSTRUCTIONS:

Received
July 24 '09
MG 12:40

Temperature
9.10, 10
11, 12, 13 9/9/11

C of C # 174092



Your Project #: 2977-371-00
 Site: JOHNSON POINT
 Your C.O.C. #: 80840, 80966

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/08/06

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A939346

Received: 2009/07/29, 9:30

Sample Matrix: Soil
 # Samples Received: 16

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	12	2009/07/29	2009/07/30	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	4	2009/08/05	2009/08/06	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	8	2009/07/29	2009/07/29	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	1	2009/08/05	2009/06/08	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	3	2009/08/05	2009/08/06	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	12	N/A	2009/07/29	EENVSOP-00139	Carter SSMA 51.2
Moisture	4	N/A	2009/08/06	EENVSOP-00139	Carter SSMA 51.2
Lead	4	2009/07/30	2009/07/30	CAL SOP-00191	EPA SW846/6020B
Hydrocarbons (C10-C30) in Soil By GC/FID	4	2009/07/29	2009/07/29	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
TPH (C6-C30) Soil Calc	4	N/A	2009/07/30		

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
 Email: eanderson@maxxamanalytics.com
 Phone# (780) 577-7113 Ext:7113

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page
 Total cover pages: 1

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P98676	P98676		
Sampling Date		2009/07/27	2009/07/27		
		16:15	16:15		
COC Number		80840	80840		
	Units	09-609	09-609 Lab-Dup	RDL	QC Batch

Physical Properties					
Moisture	%	9.8	N/A	0.3	3329028
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	18	10	3326423
F3 (C16-C34 Hydrocarbons)	mg/kg	41	45	10	3326423
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3326423
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3326423
Volatiles					
Benzene	mg/kg	0.035	N/A	0.0050	3321085
Toluene	mg/kg	0.12	N/A	0.020	3321085
Ethylbenzene	mg/kg	0.023	N/A	0.010	3321085
Xylenes (Total)	mg/kg	0.12	N/A	0.040	3321085
m & p-Xylene	mg/kg	0.081	N/A	0.040	3321085
o-Xylene	mg/kg	0.035	N/A	0.020	3321085
F1 (C6-C10) - BTEX	mg/kg	<12	N/A	12	3321085
(C6-C10)	mg/kg	<12	N/A	12	3321085
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	97	N/A	N/A	3321085
D10-ETHYLBENZENE (sur.)	%	106	N/A	N/A	3321085
D4-1,2-DICHLOROETHANE (sur.)	%	82	N/A	N/A	3321085
D8-TOLUENE (sur.)	%	105	N/A	N/A	3321085
O-TERPHENYL (sur.)	%	74	86	N/A	3326423
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate					

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P98677	P98678		
Sampling Date		2009/07/27	2009/07/27		
		16:06	16:06		
COC Number		80840	80840		
	Units	09-610	09-611	RDL	QC Batch

Physical Properties					
Moisture	%	17	14	0.3	3312136
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	78	180	10	3311633
F3 (C16-C34 Hydrocarbons)	mg/kg	33	40	10	3311633
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3311633
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3311633
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3311618
Toluene	mg/kg	5.7	17	0.020	3311618
Ethylbenzene	mg/kg	1.8	6.8	0.010	3311618
Xylenes (Total)	mg/kg	9.5	38	0.040	3311618
m & p-Xylene	mg/kg	7.4	28	0.040	3311618
o-Xylene	mg/kg	2.1	10	0.020	3311618
F1 (C6-C10) - BTEX	mg/kg	1000	1100	12	3311618
(C6-C10)	mg/kg	1000	1200	12	3311618
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	114	92	N/A	3311618
D10-ETHYLBENZENE (sur.)	%	109	107	N/A	3311618
D4-1,2-DICHLOROETHANE (sur.)	%	90	99	N/A	3311618
D8-TOLUENE (sur.)	%	107	102	N/A	3311618
O-TERPHENYL (sur.)	%	102	96	N/A	3311633
N/A = Not Applicable RDL = Reportable Detection Limit					

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P98679		P98680		
Sampling Date		2009/07/27 16:28		2009/07/27 13:30		
COC Number		80840		80840		
	Units	09-612	QC Batch	09-613	RDL	QC Batch

Physical Properties						
Moisture	%	11	3329028	11	0.3	3312136
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	72	3326423	20	10	3311633
F3 (C16-C34 Hydrocarbons)	mg/kg	41	3326423	54	10	3311633
F4 (C34-C50 Hydrocarbons)	mg/kg	12	3326423	<10	10	3311633
Reached Baseline at C50	mg/kg	Yes	3326423	Yes	N/A	3311633
Volatiles						
Benzene	mg/kg	0.17	3321085	<0.0050	0.0050	3311618
Toluene	mg/kg	22	3321085	<0.020	0.020	3311618
Ethylbenzene	mg/kg	8.1	3321085	<0.010	0.010	3311618
Xylenes (Total)	mg/kg	45	3321085	<0.040	0.040	3311618
m & p-Xylene	mg/kg	33	3321085	<0.040	0.040	3311618
o-Xylene	mg/kg	13	3321085	<0.020	0.020	3311618
F1 (C6-C10) - BTEX	mg/kg	580	3321085	<12	12	3311618
(C6-C10)	mg/kg	650	3321085	<12	12	3311618
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	112	3321085	96	N/A	3311618
D10-ETHYLBENZENE (sur.)	%	112	3321085	99	N/A	3311618
D4-1,2-DICHLOROETHANE (sur.)	%	80	3321085	93	N/A	3311618
D8-TOLUENE (sur.)	%	108	3321085	105	N/A	3311618
O-TERPHENYL (sur.)	%	77	3326423	99	N/A	3311633

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P98681		P98682		
Sampling Date		2009/07/27 13:34		2009/07/27 13:40		
COC Number		80966		80966		
	Units	09-614	QC Batch	09-615	RDL	QC Batch

Physical Properties						
Moisture	%	14	3312136	6.4	0.3	3329028
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	34	3311633	2800	10	3326423
F3 (C16-C34 Hydrocarbons)	mg/kg	64	3311633	270	10	3326423
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3311633	<10	10	3326423
Reached Baseline at C50	mg/kg	Yes	3311633	Yes	N/A	3326423
Volatiles						
Benzene	mg/kg	0.15	3311618	0.011	0.0050	3321085
Toluene	mg/kg	4.5	3311618	<0.020	0.020	3321085
Ethylbenzene	mg/kg	3.5	3311618	3.5	0.010	3321085
Xylenes (Total)	mg/kg	13	3311618	26	0.040	3321085
m & p-Xylene	mg/kg	7.4	3311618	14	0.040	3321085
o-Xylene	mg/kg	5.1	3311618	12	0.020	3321085
F1 (C6-C10) - BTEX	mg/kg	110	3311618	590	12	3321085
(C6-C10)	mg/kg	130	3311618	620	12	3321085
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	106	3311618	106	N/A	3321085
D10-ETHYLBENZENE (sur.)	%	108	3311618	110	N/A	3321085
D4-1,2-DICHLOROETHANE (sur.)	%	94	3311618	81	N/A	3321085
D8-TOLUENE (sur.)	%	101	3311618	112	N/A	3321085
O-TERPHENYL (sur.)	%	97	3311633	96	N/A	3326423
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P98685	P98686	P98687		
Sampling Date		2009/07/27 13:45	2009/07/27 13:47	2009/07/27 16:44		
COC Number		80966	80966	80966		
	Units	09-618	09-619	09-620	RDL	QC Batch

Physical Properties						
Moisture	%	9.6	15	15	0.3	3312136
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	850	120	<10	10	3311633
F3 (C16-C34 Hydrocarbons)	mg/kg	81	37	19	10	3311633
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3311633
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3311633
Volatiles						
Benzene	mg/kg	<0.0050	0.072	<0.0050	0.0050	3311618
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3311618
Ethylbenzene	mg/kg	0.26	0.024	<0.010	0.010	3311618
Xylenes (Total)	mg/kg	26	1.6	<0.040	0.040	3311618
m & p-Xylene	mg/kg	15	0.88	<0.040	0.040	3311618
o-Xylene	mg/kg	11	0.76	<0.020	0.020	3311618
F1 (C6-C10) - BTEX	mg/kg	870	130	<12	12	3311618
(C6-C10)	mg/kg	900	130	<12	12	3311618
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	106	94	N/A	3311618
D10-ETHYLBENZENE (sur.)	%	106	101	98	N/A	3311618
D4-1,2-DICHLOROETHANE (sur.)	%	95	93	93	N/A	3311618
D8-TOLUENE (sur.)	%	108	101	104	N/A	3311618
O-TERPHENYL (sur.)	%	97	97	98	N/A	3311633

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		P98688		P98689		
Sampling Date		2009/07/27 16:44		2009/07/27 13:50		
COC Number		80966		80966		
	Units	09-621	QC Batch	09-622	RDL	QC Batch

Physical Properties						
Moisture	%	13	3312136	12	0.3	3329028
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	3311633	16	10	3326423
F3 (C16-C34 Hydrocarbons)	mg/kg	25	3311633	52	10	3326423
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3311633	10	10	3326423
Reached Baseline at C50	mg/kg	Yes	3311633	Yes	N/A	3326423
Volatiles						
Benzene	mg/kg	<0.0050	3311618	0.024	0.0050	3321085
Toluene	mg/kg	<0.020	3311618	0.036	0.020	3321085
Ethylbenzene	mg/kg	<0.010	3311618	<0.010	0.010	3321085
Xylenes (Total)	mg/kg	<0.040	3311618	<0.040	0.040	3321085
m & p-Xylene	mg/kg	<0.040	3311618	<0.040	0.040	3321085
o-Xylene	mg/kg	<0.020	3311618	<0.020	0.020	3321085
F1 (C6-C10) - BTEX	mg/kg	<12	3311618	100	12	3321085
(C6-C10)	mg/kg	<12	3311618	100	12	3321085
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	3311618	104	N/A	3321085
D10-ETHYLBENZENE (sur.)	%	97	3311618	107	N/A	3321085
D4-1,2-DICHLOROETHANE (sur.)	%	94	3311618	83	N/A	3321085
D8-TOLUENE (sur.)	%	103	3311618	105	N/A	3321085
O-TERPHENYL (sur.)	%	95	3311633	97	N/A	3326423

N/A = Not Applicable
RDL = Reportable Detection Limit

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		P98671	P98671	P98672	P98673		
Sampling Date		2009/07/26 17:13	2009/07/26 17:13	2009/07/26 17:34	2009/07/26 17:30		
COC Number		80840	80840	80840	80840		
	Units	09-604	09-604 Lab-Dup	09-605	09-606	RDL	QC Batch

Physical Properties							
Moisture	%	8.8	8.7	10	10	0.3	3312136

RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

Maxxam ID		P98674		
Sampling Date		2009/07/26 17:22		
COC Number		80840		
	Units	09-607	RDL	QC Batch

Physical Properties				
Moisture	%	11	0.3	3312136

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		P98671	P98671	P98672	P98673		
Sampling Date		2009/07/26 17:13	2009/07/26 17:13	2009/07/26 17:34	2009/07/26 17:30		
COC Number		80840	80840	80840	80840		
	Units	09-604	09-604 Lab-Dup	09-605	09-606	RDL	QC Batch

Elements							
Total Lead (Pb)	mg/kg	4	4	4	4	1	3312900

RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

Maxxam ID		P98674		
Sampling Date		2009/07/26 17:22		
COC Number		80840		
	Units	09-607	RDL	QC Batch

Elements				
Total Lead (Pb)	mg/kg	6	1	3312900

RDL = Reportable Detection Limit

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		P98671	P98671	P98672		
Sampling Date		2009/07/26 17:13	2009/07/26 17:13	2009/07/26 17:34		
COC Number		80840	80840	80840		
	Units	09-604	09-604 Lab-Dup	09-605	RDL	QC Batch

Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3311618
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3311618
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3311618
Xylenes (Total)	mg/kg	6.8	6.2	6.6	0.040	3311618
m & p-Xylene	mg/kg	2.3	2.1	3.8	0.040	3311618
o-Xylene	mg/kg	4.5	4.1	2.9	0.020	3311618
LH (C5-C10)	mg/kg	1000	900	490	12	3311618
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	113	111	88	N/A	3311618
D10-ETHYLBENZENE (sur.)	%	111	110	106	N/A	3311618
D4-1,2-DICHLOROETHANE (sur.)	%	91	93	96	N/A	3311618
D8-TOLUENE (sur.)	%	98	97	107	N/A	3311618

N/A = Not Applicable
 RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		P98673	P98674		
Sampling Date		2009/07/26 17:30	2009/07/26 17:22		
COC Number		80840	80840		
	Units	09-606	09-607	RDL	QC Batch

Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3311618
Toluene	mg/kg	0.16	0.19	0.020	3311618
Ethylbenzene	mg/kg	<0.010	0.16	0.010	3311618
Xylenes (Total)	mg/kg	14	3.7	0.040	3311618
m & p-Xylene	mg/kg	8.1	2.1	0.040	3311618
o-Xylene	mg/kg	5.5	1.6	0.020	3311618
LH (C5-C10)	mg/kg	680	220	12	3311618
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	79	107	N/A	3311618
D10-ETHYLBENZENE (sur.)	%	111	107	N/A	3311618
D4-1,2-DICHLOROETHANE (sur.)	%	97	94	N/A	3311618
D8-TOLUENE (sur.)	%	98	96	N/A	3311618

N/A = Not Applicable
 RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		P98671	P98671	P98672		
Sampling Date		2009/07/26	2009/07/26	2009/07/26		
		17:13	17:13	17:34		
COC Number		80840	80840	80840		
	Units	09-604	09-604 Lab-Dup	09-605	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	4190	4260	457	10	3311723
Total hydrocarbons C5-C30	mg/kg	5200	N/A	944	20	3311455
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	96	118	101	N/A	3311723
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

Maxxam ID		P98673	P98674		
Sampling Date		2009/07/26	2009/07/26		
		17:30	17:22		
COC Number		80840	80840		
	Units	09-606	09-607	RDL	QC Batch

Hydrocarbons						
Total Extractables C10 to C30	mg/kg	1610	4330	10	3311723	
Total hydrocarbons C5-C30	mg/kg	2290	4550	20	3311455	
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	98	99	N/A	3311723	
N/A = Not Applicable RDL = Reportable Detection Limit						



Maxxam Job #: A939346
Report Date: 2009/08/06

AECOM
Client Project #: 2977-371-00
Site Reference: JOHNSON POINT
Sampler Initials: PH

Package 1	9.0°C
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Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference: JOHNSON POINT

Quality Assurance Report
 Maxxam Job Number: EA939346

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3311618 DR3	Matrix Spike [P98672-01]	4-BROMOFLUOROBENZENE (sur.)	2009/07/30		107	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/30		110	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/30		105	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/30		97	%	60 - 140
		Benzene	2009/07/30		103	%	60 - 140
		Toluene	2009/07/30		108	%	60 - 140
		Ethylbenzene	2009/07/30		107	%	60 - 140
		m & p-Xylene	2009/07/30		NC	%	60 - 140
		o-Xylene	2009/07/30		NC	%	60 - 140
		(C6-C10)	2009/07/30		NC	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/07/30		97	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/30		109	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/30		100	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/30		102	%	60 - 140
		Benzene	2009/07/30		99	%	60 - 140
		Toluene	2009/07/30		97	%	60 - 140
		Ethylbenzene	2009/07/30		101	%	60 - 140
		m & p-Xylene	2009/07/30		102	%	60 - 140
		o-Xylene	2009/07/30		99	%	60 - 140
		(C6-C10)	2009/07/30		108	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/07/30		95	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/07/30		110	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/07/30		94	%	60 - 140
		D8-TOLUENE (sur.)	2009/07/30		104	%	60 - 140
		Benzene	2009/07/30	<0.0050		mg/kg	
		Toluene	2009/07/30	<0.020		mg/kg	
		Ethylbenzene	2009/07/30	<0.010		mg/kg	
		Xylenes (Total)	2009/07/30	<0.040		mg/kg	
		m & p-Xylene	2009/07/30	<0.040		mg/kg	
		o-Xylene	2009/07/30	<0.020		mg/kg	
	RPD [P98671-01]	F1 (C6-C10) - BTEX	2009/07/30	<12		mg/kg	
		(C6-C10)	2009/07/30	<12		mg/kg	
		Benzene	2009/07/30	NC		%	50
Toluene		2009/07/30	NC		%	50	
Ethylbenzene		2009/07/30	NC		%	50	
Xylenes (Total)		2009/07/30	8.3		%	50	
m & p-Xylene		2009/07/30	8.8		%	50	
o-Xylene		2009/07/30	8.1		%	50	
LH (C5-C10)		2009/07/30	12.5		%	50	
3311633 AN4		Spiked Blank	O-TERPHENYL (sur.)	2009/07/29		96	%
	F2 (C10-C16 Hydrocarbons)		2009/07/29		106	%	80 - 120
	F3 (C16-C34 Hydrocarbons)		2009/07/29		106	%	80 - 120
	F4 (C34-C50 Hydrocarbons)		2009/07/29		113	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/07/29		96	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/07/29	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/07/29	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/07/29	<10		mg/kg	
3311723 AN4	Matrix Spike [P98672-01]	O-TERPHENYL (sur.)	2009/07/29		103	%	50 - 130
		Total Extractables C10 to C30	2009/07/29		NC	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/07/29		97	%	50 - 130
		Total Extractables C10 to C30	2009/07/29		101	%	60 - 130
	Method Blank	O-TERPHENYL (sur.)	2009/07/29		96	%	50 - 130
		Total Extractables C10 to C30	2009/07/29	<10		mg/kg	

Quality Assurance Report (Continued)

Maxxam Job Number: EA939346

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3311723 AN4	RPD [P98671-01]	Total Extractables C10 to C30	2009/07/29	1.7		%	50
3312136 JP6	Method Blank	Moisture	2009/07/29	<0.3		%	
	RPD [P98671-01]	Moisture	2009/07/29	1.1		%	20
3312900 EO1	Calibration Check	Total Lead (Pb)	2009/07/30		88	%	80 - 120
	Matrix Spike						
	[P98671-01]	Total Lead (Pb)	2009/07/30		87	%	75 - 125
	QC Standard	Total Lead (Pb)	2009/07/30		93	%	65 - 135
	Method Blank	Total Lead (Pb)	2009/07/30	<1		mg/kg	
	RPD [P98671-01]	Total Lead (Pb)	2009/07/30	NC		%	35
3321085 CC6	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/06		98	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/06		116	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/06		82	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/06		107	%	60 - 140
		Benzene	2009/08/06		93	%	60 - 140
		Toluene	2009/08/06		100	%	60 - 140
		Ethylbenzene	2009/08/06		112	%	60 - 140
		m & p-Xylene	2009/08/06		114	%	60 - 140
		o-Xylene	2009/08/06		110	%	60 - 140
		(C6-C10)	2009/08/06		105	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/06		96	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/06		114	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/06		80	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/06		105	%	60 - 140
		Benzene	2009/08/06		94	%	60 - 140
		Toluene	2009/08/06		99	%	60 - 140
		Ethylbenzene	2009/08/06		111	%	60 - 140
		m & p-Xylene	2009/08/06		109	%	60 - 140
		o-Xylene	2009/08/06		106	%	60 - 140
		(C6-C10)	2009/08/06		109	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/06		97	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/06		122	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/06		81	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/06		107	%	60 - 140
		Benzene	2009/08/06	<0.0050		mg/kg	
		Toluene	2009/08/06	<0.020		mg/kg	
		Ethylbenzene	2009/08/06	<0.010		mg/kg	
		Xylenes (Total)	2009/08/06	<0.040		mg/kg	
		m & p-Xylene	2009/08/06	<0.040		mg/kg	
		o-Xylene	2009/08/06	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/08/06	<12		mg/kg	
		(C6-C10)	2009/08/06	<12		mg/kg	
	RPD	Benzene	2009/08/06	NC		%	50
		Toluene	2009/08/06	NC		%	50
		Ethylbenzene	2009/08/06	NC		%	50
		Xylenes (Total)	2009/08/06	NC		%	50
		m & p-Xylene	2009/08/06	NC		%	50
		o-Xylene	2009/08/06	NC		%	50
		F1 (C6-C10) - BTEX	2009/08/06	NC		%	50
		(C6-C10)	2009/08/06	NC		%	50
3326423 KW2	Matrix Spike						
	[P98679-01]	O-TERPHENYL (sur.)	2009/08/06		75	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/06		90	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/06		82	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/06		87	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/05		97	%	50 - 130

Quality Assurance Report (Continued)

Maxxam Job Number: EA939346

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3326423 KW2	Spiked Blank	F2 (C10-C16 Hydrocarbons)	2009/08/05		112	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/05		107	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/08/05		108	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/08/05		95	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/05	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/05	<10		mg/kg	
	RPD [P98676-01]	F4 (C34-C50 Hydrocarbons)	2009/08/05	<10		mg/kg	
		F2 (C10-C16 Hydrocarbons)	2009/06/08	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/06/08	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2009/06/08	NC		%	50
3329028 SR7	Method Blank	Moisture	2009/08/06	<0.3		%	
	RPD	Moisture	2009/08/06	1.7		%	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

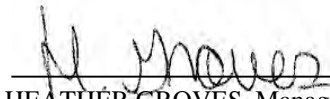
Validation Signature Page

Maxxam Job #: A939346

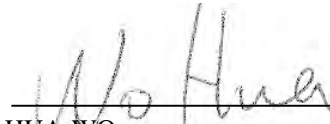
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



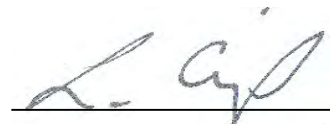
DINA TLEUGABULOVA, Ph.D., Project Manager



HEATHER GROVES, Manager Inorganics Edmonton



HUA WO,



LISA CUMMINGS, Extractables Supervisor

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

80840 CHAIN OF CUSTODY

A939346/AM/JN Page: 1 of 2

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galue
Address: ana.galue@aecom.com
Prov: _____ PC: _____
Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM (Dara Schmidt)
2540 Kensington Rd NW
Calgary
Prov: AB PC: TAN 353
Ph: 403-450-9926 Fax: 403-270-4822
(site) Office

PO # / AFE #: _____
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location: _____
Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: ASAP
 REGULAR Turnaround (5 to 7 Days)

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)													WATERS (footnotes defined on back)								OTHER TEST(S)					*HOLD for 60 Days	# of Containers Submitted	
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment (CP Metals) ²	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	Lead (Pb)	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	<input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	<input type="checkbox"/> Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	<input type="checkbox"/> TOC <input type="checkbox"/> DOC	VH (V5-10)	EA (W10-19)	PH							
1	09-595	S	27-Jul-09 10:20																											✓	2	
2	09-596	S	↓ 10:23																											✓	2	
3	09-604	S	26-Jul-09 17:13									✓																				3
4	09-605	S	↓ 17:34									✓																				3
5	09-606	S	↓ 17:30									✓																				3
6	09-607	S	↓ 17:22									✓																				3
7	09-608	S	27-Jul-09 16:20																											✓	2	
8	09-609	S	↓ 16:15																											✓	2	
9	09-610	S	↓ 16:06	✓																												2
10	09-611	S	↓ 16:06	✓																												2
11	09-612	S	↓ 16:28																											✓	2	
12	09-613	S	↓ 13:30	✓																												2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Priya Handa Date/Time: 27-Jul-09
Sign and Print: *[Signature]*

JARS USED & NOT SUBMITTED _____

Received By: July 29, 09 MLR
9:30

Temperature: 8 8 11 Ice _____

CUSTODY SEAL YES / NO _____



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
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80966 CHAIN OF CUSTODY

Page: 2 of 2

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galue
Address: ana.galue@aecom.com
Prov: _____ PC: _____
Contact #: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM (Dara Schmidt)
2540 Kensington Road NW
Calgary
Prov: AB PC: T2N 3S3
Ph: 403-450-9923 Fax: 403-270-4822
(Site) apec

PO # / AFE #: _____
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Park
Location: _____
Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:

- Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@
aecom.com
priya.handa@
aecom.com

SERVICE REQUESTED:

- RUSH** (Please ensure you contact the lab to reserve)
Date Required: ASAP
 REGULAR Turnaround (5 to 7 Days)

SOILS (footnotes defined on back)

WATERS (footnotes defined on back)

OTHER TEST(S)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment (P Metals)	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	<u>TPH</u>	<u>PCB</u>	<u>Lead (pb)</u>	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	<input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	<input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Mercury <input type="checkbox"/> Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	<input type="checkbox"/> TOC <input type="checkbox"/> DOC	<u>VH (W5-10)</u>	<u>EH (W10-19)</u>	<u>PH</u>	*HOLD for 60 Days	# of Containers Submitted	
1 09-614	S	27-Jul-09 13:34	<input checked="" type="checkbox"/>																								2
2 09-615	S	13:40																									2
3 09-616	S	13:42																									2
4 09-617	S	16:38																									2
5 09-618	S	13:45	<input checked="" type="checkbox"/>																								2
6 09-619	S	13:47	<input checked="" type="checkbox"/>																								2
7 09-620	S	16:44	<input checked="" type="checkbox"/>																								2
8 09-621	S	16:44	<input checked="" type="checkbox"/>																								2
9 09-622	S	13:50																									2
10 09-623	S	13:52																									2
11																											
12																											

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Priya Handa Date/Time: 27 Jul-09

Sign and Print: [Signature]

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By	Temperature		Ice
	<u>July 29, 09 MG</u>	<u>8</u>	<u>8</u>	<u>11</u>
CUSTODY SEAL YES / NO				



Your Project #: 2977-371-00
 Site: JOHNSON POINT
 Your C.O.C. #: 80967, 80968, 80969, 80970, 80971

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/08/14

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A941528

Received: 2009/08/05, 9:30

Sample Matrix: Soil
 # Samples Received: 50

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	33	2009/08/07	2009/08/08	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	17	2009/08/07	2009/08/09	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	40	2009/08/07	2009/08/08	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	10	2009/08/08	2009/08/09	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Elements by ICPMS - Soils	1	2009/08/10	2009/08/10	CAL SOP-00191	EPA SW-846-6020A
Moisture	50	N/A	2009/08/08	EENVSOP-00139	Carter SSMA 51.2

Sample Matrix: Water
 # Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Organic Halogen (Adsorbable) (1)	2	N/A	2009/08/10	EINDSOP-00056	Coulometric - Titr.
Flash Point	1	2009/08/10	2009/08/10		
Ethylene, Di, Tri & Tetraethylene glycol (2)	2	N/A	2009/08/09	CAL SOP-00093	EPA 8015 D
Elements by ICPMS - Total	1	2009/08/10	2009/08/10	CAL SOP-00191	EPA SW-846 6020A
ICP Scan - Full, dissolved (1)	1	N/A	2009/08/10		

(1) This test was performed by Maxxam Edmonton Industrial

(2) This test was performed by Maxxam Calgary



Your Project #: 2977-371-00
Site: JOHNSON POINT
Your C.O.C. #: 80967, 80968, 80969, 80970, 80971

Attention: DARA SCHMIDT
AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/08/14

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
Email: eanderson@maxxamanalytics.com
Phone# (780) 577-7113 Ext:7113

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13831	Q13831	Q13833		
Sampling Date		2009/07/31 12:30	2009/07/31 12:30	2009/07/31 12:32		
COC Number		80967	80967	80967		
	Units	09-624	09-624 Lab-Dup	09-625	RDL	QC Batch

Physical Properties						
Moisture	%	5.2	4.5	13	0.3	3333037
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	5300	4900	5500	10	3332975
F3 (C16-C34 Hydrocarbons)	mg/kg	280	200	250	10	3332975
F4 (C34-C50 Hydrocarbons)	mg/kg	23	<10	20	10	3332975
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332975
Volatiles						
Benzene	mg/kg	0.011	0.011	0.024	0.0050	3332974
Toluene	mg/kg	0.043	0.043	0.037	0.020	3332974
Ethylbenzene	mg/kg	0.043	0.043	0.33	0.010	3332974
Xylenes (Total)	mg/kg	2.4	2.4	14	0.040	3332974
m & p-Xylene	mg/kg	0.52	0.48	4.5	0.040	3332974
o-Xylene	mg/kg	1.9	2.0	9.2	0.020	3332974
F1 (C6-C10) - BTEX	mg/kg	1000	1200	3100	12	3332974
(C6-C10)	mg/kg	1000	1200	3100	12	3332974
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	108	102	90	N/A	3332974
D10-ETHYLBENZENE (sur.)	%	109	111	114	N/A	3332974
D4-1,2-DICHLOROETHANE (sur.)	%	79	79	80	N/A	3332974
D8-TOLUENE (sur.)	%	104	106	102	N/A	3332974
O-TERPHENYL (sur.)	%	96	112	103	N/A	3332975
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13834	Q13835	Q13836		
Sampling Date		2009/07/31 12:35	2009/07/31 12:38	2009/07/31 12:40		
COC Number		80967	80967	80967		
	Units	09-626	09-627	09-628	RDL	QC Batch

Physical Properties						
Moisture	%	16	20	29	0.3	3333037
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	82	3800	19	10	3332975
F3 (C16-C34 Hydrocarbons)	mg/kg	58	190	73	10	3332975
F4 (C34-C50 Hydrocarbons)	mg/kg	28	17	29	10	3332975
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332975
Volatiles						
Benzene	mg/kg	0.013	0.027	<0.0050	0.0050	3332974
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3332974
Ethylbenzene	mg/kg	0.17	4.6	<0.010	0.010	3332974
Xylenes (Total)	mg/kg	0.36	6.1	0.24	0.040	3332974
m & p-Xylene	mg/kg	0.22	5.3	0.096	0.040	3332974
o-Xylene	mg/kg	0.14	0.80	0.14	0.020	3332974
F1 (C6-C10) - BTEX	mg/kg	280	2100	410	12	3332974
(C6-C10)	mg/kg	280	2100	410	12	3332974
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	106	114	102	N/A	3332974
D10-ETHYLBENZENE (sur.)	%	103	109	104	N/A	3332974
D4-1,2-DICHLOROETHANE (sur.)	%	80	79	81	N/A	3332974
D8-TOLUENE (sur.)	%	97	104	100	N/A	3332974
O-TERPHENYL (sur.)	%	112	106	113	N/A	3332975

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13837	Q13838	Q13839		
Sampling Date		2009/07/31 18:00	2009/07/31 18:03	2009/07/31 18:06		
COC Number		80967	80967	80967		
	Units	09-629	09-630	09-631	RDL	QC Batch

Physical Properties						
Moisture	%	15	13	13	0.3	3333037
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	29	<10	<10	10	3332975
F3 (C16-C34 Hydrocarbons)	mg/kg	47	23	28	10	3332975
F4 (C34-C50 Hydrocarbons)	mg/kg	11	<10	<10	10	3332975
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332975
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3332974
Toluene	mg/kg	<0.020	0.024	<0.020	0.020	3332974
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3332974
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3332974
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3332974
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3332974
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3332974
(C6-C10)	mg/kg	<12	<12	<12	12	3332974
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	96	93	N/A	3332974
D10-ETHYLBENZENE (sur.)	%	96	109	106	N/A	3332974
D4-1,2-DICHLOROETHANE (sur.)	%	106	78	82	N/A	3332974
D8-TOLUENE (sur.)	%	94	103	101	N/A	3332974
O-TERPHENYL (sur.)	%	115	110	110	N/A	3332975

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13840	Q13841	Q13842		
Sampling Date		2009/07/31 18:12	2009/07/31 18:15	2009/07/31 18:18		
COC Number		80967	80967	80967		
	Units	09-632	09-633	09-634	RDL	QC Batch

Physical Properties						
Moisture	%	14	17	13	0.3	3333037
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	16	45	10	3332975
F3 (C16-C34 Hydrocarbons)	mg/kg	24	56	33	10	3332975
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	13	<10	10	3332975
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332975
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	0.012	0.0050	3332974
Toluene	mg/kg	0.025	<0.020	1.0	0.020	3332974
Ethylbenzene	mg/kg	0.012	<0.010	<0.010	0.010	3332974
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3332974
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3332974
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3332974
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3332974
(C6-C10)	mg/kg	<12	<12	<12	12	3332974
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	94	92	92	N/A	3332974
D10-ETHYLBENZENE (sur.)	%	107	105	105	N/A	3332974
D4-1,2-DICHLOROETHANE (sur.)	%	78	79	79	N/A	3332974
D8-TOLUENE (sur.)	%	103	101	103	N/A	3332974
O-TERPHENYL (sur.)	%	109	111	110	N/A	3332975

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13843	Q13844	Q13845		
Sampling Date		2009/07/31 18:21	2009/07/31 18:24	2009/07/31 18:27		
COC Number		80967	80968	80968		
	Units	09-635	09-636	09-637	RDL	QC Batch

Physical Properties						
Moisture	%	14	13	12	0.3	3333037
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	99	59	12	10	3332975
F3 (C16-C34 Hydrocarbons)	mg/kg	47	42	19	10	3332975
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	14	10	3332975
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332975
Volatiles						
Benzene	mg/kg	<0.0050	0.062	0.024	0.0050	3332974
Toluene	mg/kg	0.049	0.26	0.25	0.020	3332974
Ethylbenzene	mg/kg	0.025	0.11	0.14	0.010	3332974
Xylenes (Total)	mg/kg	0.26	0.63	0.83	0.040	3332974
m & p-Xylene	mg/kg	0.19	0.43	0.60	0.040	3332974
o-Xylene	mg/kg	0.074	0.20	0.23	0.020	3332974
F1 (C6-C10) - BTEX	mg/kg	20	15	21	12	3332974
(C6-C10)	mg/kg	20	16	22	12	3332974
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	90	91	92	N/A	3332974
D10-ETHYLBENZENE (sur.)	%	107	108	108	N/A	3332974
D4-1,2-DICHLOROETHANE (sur.)	%	78	78	78	N/A	3332974
D8-TOLUENE (sur.)	%	102	104	103	N/A	3332974
O-TERPHENYL (sur.)	%	115	107	101	N/A	3332975

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13848	Q13849	Q13850		
Sampling Date		2009/08/02 18:15	2009/07/31	2009/08/02		
COC Number		80968	80968	80968		
	Units	09-641	09-638	09-642	RDL	QC Batch

Physical Properties						
Moisture	%	13	15	11	0.3	3333037
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	450	<10	250	10	3332975
F3 (C16-C34 Hydrocarbons)	mg/kg	740	20	78	10	3332975
F4 (C34-C50 Hydrocarbons)	mg/kg	88	<10	<10	10	3332975
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332975
Volatiles						
Benzene	mg/kg	0.012	N/A	N/A	0.0050	3332974
Toluene	mg/kg	0.38	N/A	N/A	0.020	3332974
Ethylbenzene	mg/kg	0.62	N/A	N/A	0.010	3332974
Xylenes (Total)	mg/kg	14	N/A	N/A	0.040	3332974
m & p-Xylene	mg/kg	9.9	N/A	N/A	0.040	3332974
o-Xylene	mg/kg	4.3	N/A	N/A	0.020	3332974
F1 (C6-C10) - BTEX	mg/kg	440	N/A	N/A	12	3332974
(C6-C10)	mg/kg	460	86	340	12	3332974
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	104	97	91	N/A	3332974
D10-ETHYLBENZENE (sur.)	%	111	111	112	N/A	3332974
D4-1,2-DICHLOROETHANE (sur.)	%	78	79	78	N/A	3332974
D8-TOLUENE (sur.)	%	102	102	104	N/A	3332974
O-TERPHENYL (sur.)	%	113	102	106	N/A	3332975

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13852	Q13853		
Sampling Date		2009/08/03 11:20	2009/08/03 11:24		
COC Number		80968	80968		
	Units	09-644	09-645	RDL	QC Batch

Physical Properties					
Moisture	%	17	14	0.3	3333037
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	54	<10	10	3332975
F3 (C16-C34 Hydrocarbons)	mg/kg	97	26	10	3332975
F4 (C34-C50 Hydrocarbons)	mg/kg	12	<10	10	3332975
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3332975
Volatiles					
Benzene	mg/kg	0.026	0.013	0.0050	3332974
Toluene	mg/kg	0.26	0.78	0.020	3332974
Ethylbenzene	mg/kg	1.3	0.53	0.010	3332974
Xylenes (Total)	mg/kg	20	2.9	0.040	3332974
m & p-Xylene	mg/kg	14	1.9	0.040	3332974
o-Xylene	mg/kg	6.3	1.0	0.020	3332974
F1 (C6-C10) - BTEX	mg/kg	51	<12	12	3332974
(C6-C10)	mg/kg	73	<12	12	3332974
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	91	92	N/A	3332974
D10-ETHYLBENZENE (sur.)	%	112	107	N/A	3332974
D4-1,2-DICHLOROETHANE (sur.)	%	77	81	N/A	3332974
D8-TOLUENE (sur.)	%	104	102	N/A	3332974
O-TERPHENYL (sur.)	%	107	109	N/A	3332975
N/A = Not Applicable RDL = Reportable Detection Limit					

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13854	Q13854	Q13855		
Sampling Date		2009/08/03 11:27	2009/08/03 11:27	2009/08/03 11:30		
COC Number		80968	80968	80968		
	Units	09-646	09-646 Lab-Dup	09-647	RDL	QC Batch

Physical Properties						
Moisture	%	3.7	3.5	7.6	0.3	3333048
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	11	10	3332982
F3 (C16-C34 Hydrocarbons)	mg/kg	15	<10	29	10	3332982
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3332982
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332982
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3332979
Toluene	mg/kg	0.021	0.021	0.034	0.020	3332979
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3332979
Xylenes (Total)	mg/kg	<0.040	<0.040	0.10	0.040	3332979
m & p-Xylene	mg/kg	<0.040	<0.040	0.067	0.040	3332979
o-Xylene	mg/kg	0.021	0.021	0.034	0.020	3332979
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3332979
(C6-C10)	mg/kg	<12	<12	<12	12	3332979
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	91	92	92	N/A	3332979
D10-ETHYLBENZENE (sur.)	%	102	105	104	N/A	3332979
D4-1,2-DICHLOROETHANE (sur.)	%	83	82	81	N/A	3332979
D8-TOLUENE (sur.)	%	101	103	102	N/A	3332979
O-TERPHENYL (sur.)	%	129	112	109	N/A	3332982
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13856		Q13857		
Sampling Date		2009/08/03 11:33		2009/08/03 11:36		
COC Number		80969		80969		
	Units	09-648	QC Batch	09-649	RDL	QC Batch

Physical Properties						
Moisture	%	15	3333048	16	0.3	3333048
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	21	3332975	28	10	3332982
F3 (C16-C34 Hydrocarbons)	mg/kg	50	3332975	36	10	3332982
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3332975	<10	10	3332982
Reached Baseline at C50	mg/kg	Yes	3332975	Yes	N/A	3332982
Volatiles						
Benzene	mg/kg	0.013	3332979	0.026	0.0050	3332979
Toluene	mg/kg	0.32	3332979	1.4	0.020	3332979
Ethylbenzene	mg/kg	0.38	3332979	0.96	0.010	3332979
Xylenes (Total)	mg/kg	8.2	3332979	11	0.040	3332979
m & p-Xylene	mg/kg	5.7	3332979	8.0	0.040	3332979
o-Xylene	mg/kg	2.5	3332979	3.2	0.020	3332979
F1 (C6-C10) - BTEX	mg/kg	<12	3332979	30	12	3332979
(C6-C10)	mg/kg	21	3332979	44	12	3332979
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	92	3332979	90	N/A	3332979
D10-ETHYLBENZENE (sur.)	%	104	3332979	107	N/A	3332979
D4-1,2-DICHLOROETHANE (sur.)	%	82	3332979	79	N/A	3332979
D8-TOLUENE (sur.)	%	101	3332979	102	N/A	3332979
O-TERPHENYL (sur.)	%	111	3332975	117	N/A	3332982

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13858	Q13859	Q13860		
Sampling Date		2009/08/03 11:39	2009/08/03 11:41	2009/08/03 11:45		
COC Number		80969	80969	80969		
	Units	09-650	09-651	09-652	RDL	QC Batch

Physical Properties						
Moisture	%	4.8	5.1	4.3	0.3	3333048
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	12	13	10	3332982
F3 (C16-C34 Hydrocarbons)	mg/kg	31	32	22	10	3332982
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3332982
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332982
Volatiles						
Benzene	mg/kg	0.24	0.22	0.13	0.0050	3332979
Toluene	mg/kg	2.7	2.4	1.8	0.020	3332979
Ethylbenzene	mg/kg	0.24	0.26	0.34	0.010	3332979
Xylenes (Total)	mg/kg	1.5	1.4	1.8	0.040	3332979
m & p-Xylene	mg/kg	1.0	1.0	1.3	0.040	3332979
o-Xylene	mg/kg	0.54	0.43	0.50	0.020	3332979
F1 (C6-C10) - BTEX	mg/kg	<12	<12	15	12	3332979
(C6-C10)	mg/kg	<12	<12	19	12	3332979
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	92	92	93	N/A	3332979
D10-ETHYLBENZENE (sur.)	%	106	108	106	N/A	3332979
D4-1,2-DICHLOROETHANE (sur.)	%	81	79	81	N/A	3332979
D8-TOLUENE (sur.)	%	102	103	102	N/A	3332979
O-TERPHENYL (sur.)	%	112	119	120	N/A	3332982

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13861	Q13862	Q13863		
Sampling Date		2009/08/03 12:00	2009/08/03 12:04	2009/08/03 12:07		
COC Number		80969	80969	80969		
	Units	09-653	09-654	09-655	RDL	QC Batch

Physical Properties						
Moisture	%	6.0	16	15	0.3	3333048
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	860	1100	540	10	3332982
F3 (C16-C34 Hydrocarbons)	mg/kg	69	180	80	10	3332982
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3332982
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332982
Volatiles						
Benzene	mg/kg	0.35	0.35	0.28	0.0050	3332979
Toluene	mg/kg	3.7	5.7	6.5	0.020	3332979
Ethylbenzene	mg/kg	0.42	0.56	2.6	0.010	3332979
Xylenes (Total)	mg/kg	1.8	59	50	0.040	3332979
m & p-Xylene	mg/kg	1.4	38	34	0.040	3332979
o-Xylene	mg/kg	0.44	20	16	0.020	3332979
F1 (C6-C10) - BTEX	mg/kg	43	1100	750	12	3332979
(C6-C10)	mg/kg	49	1200	810	12	3332979
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	87	99	91	N/A	3332979
D10-ETHYLBENZENE (sur.)	%	104	102	113	N/A	3332979
D4-1,2-DICHLOROETHANE (sur.)	%	80	79	79	N/A	3332979
D8-TOLUENE (sur.)	%	102	101	97	N/A	3332979
O-TERPHENYL (sur.)	%	115	114	98	N/A	3332982

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13864	Q13865	Q13866		
Sampling Date		2009/08/03 12:10	2009/08/03 12:13	2009/08/03 12:16		
COC Number		80969	80969	80969		
	Units	09-656	09-657	09-658	RDL	QC Batch

Physical Properties						
Moisture	%	14	16	5.0	0.3	3333048
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	20	<10	<10	10	3332982
F3 (C16-C34 Hydrocarbons)	mg/kg	33	<10	11	10	3332982
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3332982
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332982
Volatiles						
Benzene	mg/kg	0.27	0.10	0.23	0.0050	3332979
Toluene	mg/kg	1.9	0.30	2.7	0.020	3332979
Ethylbenzene	mg/kg	0.087	0.013	0.41	0.010	3332979
Xylenes (Total)	mg/kg	9.6	0.39	1.7	0.040	3332979
m & p-Xylene	mg/kg	6.6	0.090	1.3	0.040	3332979
o-Xylene	mg/kg	3.1	0.30	0.41	0.020	3332979
F1 (C6-C10) - BTEX	mg/kg	38	<12	<12	12	3332979
(C6-C10)	mg/kg	50	<12	<12	12	3332979
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	90	93	94	N/A	3332979
D10-ETHYLBENZENE (sur.)	%	103	106	106	N/A	3332979
D4-1,2-DICHLOROETHANE (sur.)	%	78	78	78	N/A	3332979
D8-TOLUENE (sur.)	%	99	102	102	N/A	3332979
O-TERPHENYL (sur.)	%	106	96	105	N/A	3332982

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13867	Q13868	Q13869		
Sampling Date		2009/08/03 12:19	2009/08/03 12:22	2009/08/03 12:25		
COC Number		80970	80970	80970		
	Units	09-659	09-660	09-661	RDL	QC Batch

Physical Properties						
Moisture	%	6.0	14	15	0.3	3333048
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	13	49	48	10	3332982
F3 (C16-C34 Hydrocarbons)	mg/kg	33	37	25	10	3332982
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3332982
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332982
Volatiles						
Benzene	mg/kg	0.20	0.16	0.038	0.0050	3332979
Toluene	mg/kg	2.0	0.71	0.18	0.020	3332979
Ethylbenzene	mg/kg	0.19	0.29	0.21	0.010	3332979
Xylenes (Total)	mg/kg	1.0	6.8	6.3	0.040	3332979
m & p-Xylene	mg/kg	0.69	4.3	4.0	0.040	3332979
o-Xylene	mg/kg	0.33	2.4	2.3	0.020	3332979
F1 (C6-C10) - BTEX	mg/kg	<12	63	91	12	3332979
(C6-C10)	mg/kg	<12	71	97	12	3332979
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	93	94	95	N/A	3332979
D10-ETHYLBENZENE (sur.)	%	105	108	104	N/A	3332979
D4-1,2-DICHLOROETHANE (sur.)	%	78	76	77	N/A	3332979
D8-TOLUENE (sur.)	%	102	104	100	N/A	3332979
O-TERPHENYL (sur.)	%	128	120	108	N/A	3332982

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13870	Q13871	Q13872		
Sampling Date		2009/08/03 12:27	2009/08/03 12:30	2009/08/03 15:30		
COC Number		80970	80970	80970		
	Units	09-662	09-663	09-664	RDL	QC Batch

Physical Properties						
Moisture	%	13	9.7	6.0	0.3	3333048
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	160	620	<10	10	3332982
F3 (C16-C34 Hydrocarbons)	mg/kg	40	110	38	10	3332982
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3332982
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332982
Volatiles						
Benzene	mg/kg	0.097	0.023	0.20	0.0050	3332979
Toluene	mg/kg	3.2	1.9	2.4	0.020	3332979
Ethylbenzene	mg/kg	1.4	1.6	0.36	0.010	3332979
Xylenes (Total)	mg/kg	11	25	2.0	0.040	3332979
m & p-Xylene	mg/kg	7.4	17	1.5	0.040	3332979
o-Xylene	mg/kg	3.2	8.3	0.52	0.020	3332979
F1 (C6-C10) - BTEX	mg/kg	210	490	17	12	3332979
(C6-C10)	mg/kg	220	520	22	12	3332979
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	90	102	93	N/A	3332979
D10-ETHYLBENZENE (sur.)	%	109	110	107	N/A	3332979
D4-1,2-DICHLOROETHANE (sur.)	%	78	78	78	N/A	3332979
D8-TOLUENE (sur.)	%	101	99	102	N/A	3332979
O-TERPHENYL (sur.)	%	112	108	104	N/A	3332982

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13873		Q13874		
Sampling Date		2009/08/03 15:30		2009/08/03 15:30		
COC Number		80970		80970		
	Units	09-665	QC Batch	09-666	RDL	QC Batch

Physical Properties						
Moisture	%	12	3333048	13	0.3	3333075
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	19	3332982	38	10	3332984
F3 (C16-C34 Hydrocarbons)	mg/kg	38	3332982	100	10	3332984
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3332982	14	10	3332984
Reached Baseline at C50	mg/kg	Yes	3332982	Yes	N/A	3332984
Volatiles						
Benzene	mg/kg	0.048	3332979	0.11	0.0050	3333040
Toluene	mg/kg	0.13	3332979	0.36	0.020	3333040
Ethylbenzene	mg/kg	0.012	3332979	0.021	0.010	3333040
Xylenes (Total)	mg/kg	<0.040	3332979	0.093	0.040	3333040
m & p-Xylene	mg/kg	<0.040	3332979	0.068	0.040	3333040
o-Xylene	mg/kg	<0.020	3332979	0.025	0.020	3333040
F1 (C6-C10) - BTEX	mg/kg	<12	3332979	<12	12	3333040
(C6-C10)	mg/kg	<12	3332979	<12	12	3333040
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	91	3332979	100	N/A	3333040
D10-ETHYLBENZENE (sur.)	%	103	3332979	104	N/A	3333040
D4-1,2-DICHLOROETHANE (sur.)	%	80	3332979	95	N/A	3333040
D8-TOLUENE (sur.)	%	102	3332979	102	N/A	3333040
O-TERPHENYL (sur.)	%	122	3332982	98	N/A	3332984

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13874	Q13875	Q13876		
Sampling Date		2009/08/03 15:30	2009/08/03 15:30	2009/08/03 15:30		
COC Number		80970	80970	80970		
	Units	09-666 Lab-Dup	09-667	09-668	RDL	QC Batch

Physical Properties						
Moisture	%	13	5.3	5.3	0.3	3333075
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	42	16	100	10	3332984
F3 (C16-C34 Hydrocarbons)	mg/kg	130	75	93	10	3332984
F4 (C34-C50 Hydrocarbons)	mg/kg	24	15	17	10	3332984
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332984
Volatiles						
Benzene	mg/kg	N/A	0.18	0.24	0.0050	3333040
Toluene	mg/kg	N/A	1.5	2.2	0.020	3333040
Ethylbenzene	mg/kg	N/A	0.11	0.24	0.010	3333040
Xylenes (Total)	mg/kg	N/A	0.73	1.2	0.040	3333040
m & p-Xylene	mg/kg	N/A	0.46	0.88	0.040	3333040
o-Xylene	mg/kg	N/A	0.27	0.29	0.020	3333040
F1 (C6-C10) - BTEX	mg/kg	N/A	<12	36	12	3333040
(C6-C10)	mg/kg	N/A	<12	40	12	3333040
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	N/A	100	104	N/A	3333040
D10-ETHYLBENZENE (sur.)	%	N/A	102	104	N/A	3333040
D4-1,2-DICHLOROETHANE (sur.)	%	N/A	94	94	N/A	3333040
D8-TOLUENE (sur.)	%	N/A	100	101	N/A	3333040
O-TERPHENYL (sur.)	%	97	94	94	N/A	3332984

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13877	Q13878	Q13879		
Sampling Date		2009/08/03	2009/08/03	2009/08/03		
		15:30	15:30	15:30		
COC Number		80970	80970	80971		
	Units	09-669	09-670	09-671	RDL	QC Batch

Physical Properties						
Moisture	%	16	13	11	0.3	3333075
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	25	26	42	10	3332984
F3 (C16-C34 Hydrocarbons)	mg/kg	83	100	130	10	3332984
F4 (C34-C50 Hydrocarbons)	mg/kg	12	17	23	10	3332984
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332984
Volatiles						
Benzene	mg/kg	0.23	0.23	0.24	0.0050	3333040
Toluene	mg/kg	0.71	1.1	1.4	0.020	3333040
Ethylbenzene	mg/kg	0.040	0.11	0.15	0.010	3333040
Xylenes (Total)	mg/kg	0.19	0.57	0.74	0.040	3333040
m & p-Xylene	mg/kg	0.13	0.41	0.54	0.040	3333040
o-Xylene	mg/kg	0.059	0.16	0.20	0.020	3333040
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3333040
(C6-C10)	mg/kg	<12	<12	<12	12	3333040
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	104	99	98	N/A	3333040
D10-ETHYLBENZENE (sur.)	%	90	107	105	N/A	3333040
D4-1,2-DICHLOROETHANE (sur.)	%	95	93	93	N/A	3333040
D8-TOLUENE (sur.)	%	92	101	102	N/A	3333040
O-TERPHENYL (sur.)	%	106	101	102	N/A	3332984

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13880	Q13881	Q13882		
Sampling Date		2009/08/03	2009/08/03	2009/08/03		
		15:30	15:30	15:30		
COC Number		80971	80971	80971		
	Units	09-672	09-673	09-674	RDL	QC Batch

Physical Properties						
Moisture	%	9.3	4.4	4.5	0.3	3333075
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	520	920	1100	10	3332984
F3 (C16-C34 Hydrocarbons)	mg/kg	110	140	240	10	3332984
F4 (C34-C50 Hydrocarbons)	mg/kg	15	20	34	10	3332984
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3332984
Volatiles						
Benzene	mg/kg	0.46	0.77	0.55	0.0050	3333040
Toluene	mg/kg	6.1	10	7.3	0.020	3333040
Ethylbenzene	mg/kg	0.90	1.9	2.2	0.010	3333040
Xylenes (Total)	mg/kg	9.2	42	27	0.040	3333040
m & p-Xylene	mg/kg	5.8	26	16	0.040	3333040
o-Xylene	mg/kg	3.4	16	11	0.020	3333040
F1 (C6-C10) - BTEX	mg/kg	1000	1700	1200	12	3333040
(C6-C10)	mg/kg	1000	1800	1200	12	3333040
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	127	100	112	N/A	3333040
D10-ETHYLBENZENE (sur.)	%	109	109	103	N/A	3333040
D4-1,2-DICHLOROETHANE (sur.)	%	94	91	93	N/A	3333040
D8-TOLUENE (sur.)	%	102	102	100	N/A	3333040
O-TERPHENYL (sur.)	%	92	103	105	N/A	3332984

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q13883		Q13884		
Sampling Date		2009/08/03 15:30		2009/08/03 15:30		
COC Number		80971		80971		
	Units	09-675	QC Batch	09-676	RDL	QC Batch

Physical Properties						
Moisture	%	8.9	3333075	3.7	0.3	3333075
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	620	3332984	1700	10	3332982
F3 (C16-C34 Hydrocarbons)	mg/kg	88	3332984	150	10	3332982
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3332984	<10	10	3332982
Reached Baseline at C50	mg/kg	Yes	3332984	Yes	N/A	3332982
Volatiles						
Benzene	mg/kg	0.58	3333040	1.5	0.0050	3332974
Toluene	mg/kg	12	3333040	15	0.020	3332974
Ethylbenzene	mg/kg	6.5	3333040	18	0.010	3332974
Xylenes (Total)	mg/kg	63	3333040	140	0.040	3332974
m & p-Xylene	mg/kg	45	3333040	100	0.040	3332974
o-Xylene	mg/kg	18	3333040	42	0.020	3332974
F1 (C6-C10) - BTEX	mg/kg	1800	3333040	3700	12	3332974
(C6-C10)	mg/kg	1900	3333040	3900	12	3332974
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	108	3333040	102	N/A	3332974
D10-ETHYLBENZENE (sur.)	%	110	3333040	117	N/A	3332974
D4-1,2-DICHLOROETHANE (sur.)	%	92	3333040	84	N/A	3332974
D8-TOLUENE (sur.)	%	100	3333040	110	N/A	3332974
O-TERPHENYL (sur.)	%	102	3332984	107	N/A	3332982

N/A = Not Applicable
RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		Q13848		
Sampling Date		2009/08/02 18:15		
COC Number		80968		
	Units	09-641	RDL	QC Batch

Elements				
Total Arsenic (As)	mg/kg	3	1	3333555
Total Cadmium (Cd)	mg/kg	0.1	0.1	3333555
Total Chromium (Cr)	mg/kg	8	1	3333555
Total Cobalt (Co)	mg/kg	4	1	3333555
Total Copper (Cu)	mg/kg	10	5	3333555
Total Lead (Pb)	mg/kg	20	1	3333555
Total Mercury (Hg)	mg/kg	<0.05	0.05	3333555
Total Nickel (Ni)	mg/kg	9	1	3333555
Total Zinc (Zn)	mg/kg	27	10	3333555

RDL = Reportable Detection Limit

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		Q13846	Q13847	Q13847		
Sampling Date		2009/08/02	2009/08/02	2009/08/02		
		17:00	17:30	17:30		
COC Number		80968	80968	80968		
	Units	09-639	09-640	09-640 Lab-Dup	RDL	QC Batch

FOR OIL ANALYSES						
Flash point	°C	N/A	<61 (1)	<61	23	3335885
Elements						
Dissolved Cadmium (Cd)	mg/L	N/A	<0.03	N/A	0.03	3336025
Dissolved Chromium (Cr)	mg/L	N/A	<1	N/A	1	3336025
Dissolved Lead (Pb)	mg/L	N/A	<1	N/A	1	3336025
Misc. Organics						
Adsorbable Organic halogen	mg/L	0.6	0.6	N/A	0.1	3306112

N/A = Not Applicable
 RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate
 (1) Sample flashed at 61°C, but not flashed at 23°C.

GLYCOLS BY GC-FID (WATER)

Maxxam ID		Q13846	Q13846		Q13847		
Sampling Date		2009/08/02	2009/08/02		2009/08/02		
		17:00	17:00		17:30		
COC Number		80968	80968		80968		
	Units	09-639	09-639 Lab-Dup	RDL	09-640	RDL	QC Batch

Glycols							
Ethylene Glycol	mg/L	<10	<10	10	<100	100	3333485
Diethylene Glycol	mg/L	<10	<10	10	<100	100	3333485
Triethylene Glycol	mg/L	<10	<10	10	<100	100	3333485
Tetraethylene Glycol	mg/L	<10	<10	10	<100	100	3333485
Propylene Glycol	mg/L	<10	<10	10	<100	100	3333485
Surrogate Recovery (%)							
Methyl Sulfone (sur.)	%	111	109	N/A	105	N/A	3333485

N/A = Not Applicable
 RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		Q13846		
Sampling Date		2009/08/02 17:00		
COC Number		80968		
	Units	09-639	RDL	QC Batch

Elements				
Total Cadmium (Cd)	mg/L	0.000010	0.000005	3331189
Total Chromium (Cr)	mg/L	<0.001	0.001	3331189
Total Lead (Pb)	mg/L	0.0016	0.0002	3331189

RDL = Reportable Detection Limit

Package 1	8.3°C
Package 2	9.7°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GLYCOLS BY GC-FID (WATER) Comments

Sample Q13847-02 Ethylene, Di, Tri & Tetraethylene glycol: Detection limits raised due to matrix interference

Results relate only to the items tested.

Quality Assurance Report
 Maxxam Job Number: EA941528

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3306112 MN2	QC Standard	Adsorbable Organic halogen	2009/08/10		85	%	84 - 111
	Method Blank	Adsorbable Organic halogen	2009/08/10	0.015, RDL=0.002		mg/L	
3331189 AS7	Calibration Check	Total Cadmium (Cd)	2009/08/07		116	%	80 - 120
		Total Chromium (Cr)	2009/08/07		105	%	80 - 120
		Total Lead (Pb)	2009/08/07		98	%	80 - 120
	Matrix Spike	Total Cadmium (Cd)	2009/08/07		98	%	80 - 120
		Total Chromium (Cr)	2009/08/07		86	%	80 - 120
		Total Lead (Pb)	2009/08/07		96	%	80 - 120
	Method Blank	Total Cadmium (Cd)	2009/08/07	<0.000005		mg/L	
		Total Chromium (Cr)	2009/08/07	<0.001		mg/L	
		Total Lead (Pb)	2009/08/07	<0.0002		mg/L	
3332974 DR3	Matrix Spike [Q13833-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/08		92	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/08		101	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/08		104	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/08		94	%	60 - 140
		Benzene	2009/08/08		89	%	60 - 140
		Toluene	2009/08/08		87	%	60 - 140
		Ethylbenzene	2009/08/08		92	%	60 - 140
		m & p-Xylene	2009/08/08		NC	%	60 - 140
		o-Xylene	2009/08/08		NC	%	60 - 140
		(C6-C10)	2009/08/08		NC	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/08		106	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/08		113	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/08		79	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/08		102	%	60 - 140
		Benzene	2009/08/08		86	%	60 - 140
		Toluene	2009/08/08		91	%	60 - 140
		Ethylbenzene	2009/08/08		102	%	60 - 140
		m & p-Xylene	2009/08/08		107	%	60 - 140
		o-Xylene	2009/08/08		105	%	60 - 140
		(C6-C10)	2009/08/08		103	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/08		93	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/08		115	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/08		80	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/08		103	%	60 - 140
		Benzene	2009/08/08	<0.0050		mg/kg	
		Toluene	2009/08/08	<0.020		mg/kg	
		Ethylbenzene	2009/08/08	<0.010		mg/kg	
		Xylenes (Total)	2009/08/08	<0.040		mg/kg	
		m & p-Xylene	2009/08/08	<0.040		mg/kg	
		o-Xylene	2009/08/08	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/08/08	<12		mg/kg	
		(C6-C10)	2009/08/08	<12		mg/kg	
	RPD [Q13831-01]	Benzene	2009/08/08	NC		%	50
		Toluene	2009/08/08	NC		%	50
		Ethylbenzene	2009/08/08	NC		%	50
		Xylenes (Total)	2009/08/08	1.8		%	50
		m & p-Xylene	2009/08/08	8.7		%	50
		o-Xylene	2009/08/08	4.5		%	50
		F1 (C6-C10) - BTEX	2009/08/08	12.1		%	50
		(C6-C10)	2009/08/08	12.1		%	50
3332975 KW2	Matrix Spike [Q13833-01]	O-TERPHENYL (sur.)	2009/08/08		105	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/08		NC	%	50 - 130

Quality Assurance Report (Continued)
 Maxxam Job Number: EA941528

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3332975 KW2	Matrix Spike [Q13833-01]	F3 (C16-C34 Hydrocarbons)	2009/08/08		100	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/08/08		105	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/08		84	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/08		104	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/08		107	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/08/08		114	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/08/08		115	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/08		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/08		14, RDL=10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/08		12, RDL=10		mg/kg	
	RPD [Q13831-01]	F2 (C10-C16 Hydrocarbons)	2009/08/08		7.7	%	50	
		F3 (C16-C34 Hydrocarbons)	2009/08/08		32.6	%	50	
		F4 (C34-C50 Hydrocarbons)	2009/08/08		NC	%	50	
3332979 DR3	Matrix Spike [Q13855-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/08		92	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/08		104	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/08		82	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/08		99	%	60 - 140	
		Benzene	2009/08/08		95	%	60 - 140	
		Toluene	2009/08/08		100	%	60 - 140	
		Ethylbenzene	2009/08/08		113	%	60 - 140	
		m & p-Xylene	2009/08/08		111	%	60 - 140	
		o-Xylene	2009/08/08		107	%	60 - 140	
		(C6-C10)	2009/08/08		116	%	60 - 140	
		Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/08		91	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/08/08		114	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/08/08		81	%	60 - 140
			D8-TOLUENE (sur.)	2009/08/08		99	%	60 - 140
	Benzene		2009/08/08		80	%	60 - 140	
	Toluene		2009/08/08		86	%	60 - 140	
	Ethylbenzene		2009/08/08		99	%	60 - 140	
	m & p-Xylene		2009/08/08		96	%	60 - 140	
	o-Xylene		2009/08/08		91	%	60 - 140	
	(C6-C10)		2009/08/08		104	%	80 - 120	
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/08		92	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/08		120	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/08		80	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/08		101	%	60 - 140	
		Benzene	2009/08/08		<0.0050		mg/kg	
		Toluene	2009/08/08		<0.020		mg/kg	
		Ethylbenzene	2009/08/08		<0.010		mg/kg	
		Xylenes (Total)	2009/08/08		<0.040		mg/kg	
		m & p-Xylene	2009/08/08		<0.040		mg/kg	
		o-Xylene	2009/08/08		<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/08/08		<12		mg/kg	
		(C6-C10)	2009/08/08		<12		mg/kg	
		RPD [Q13854-01]	Benzene	2009/08/08		NC	%	50
			Toluene	2009/08/08		NC	%	50
			Ethylbenzene	2009/08/08		NC	%	50
			Xylenes (Total)	2009/08/08		NC	%	50
			m & p-Xylene	2009/08/08		NC	%	50
			o-Xylene	2009/08/08		NC	%	50
	F1 (C6-C10) - BTEX		2009/08/08		NC	%	50	
	(C6-C10)		2009/08/08		NC	%	50	



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference: JOHNSON POINT

Quality Assurance Report (Continued)
 Maxxam Job Number: EA941528

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3332982 KW2	Matrix Spike [Q13855-01]	O-TERPHENYL (sur.)	2009/08/08		109	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/08		112	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/08/08		107	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/08/08		105	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/08		98	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/08		111	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/08		106	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/08/08		105	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/08/08			108	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/08		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/08		<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/08		<10		mg/kg	
RPD [Q13854-01]	F2 (C10-C16 Hydrocarbons)	2009/08/08		NC		%	50	
	F3 (C16-C34 Hydrocarbons)	2009/08/08		NC		%	50	
	F4 (C34-C50 Hydrocarbons)	2009/08/08		NC		%	50	
3332984 YT	Matrix Spike [Q13875-01]	O-TERPHENYL (sur.)	2009/08/09		98	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/09		109	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/08/09		108	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/08/09		106	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/09		97	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/09		119	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/09		118	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/08/09		115	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/08/09			109	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/09		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/09		11, RDL=10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/09		<10		mg/kg	
RPD [Q13874-01]	F2 (C10-C16 Hydrocarbons)	2009/08/09		NC		%	50	
	F3 (C16-C34 Hydrocarbons)	2009/08/09		22.7		%	50	
	F4 (C34-C50 Hydrocarbons)	2009/08/09		NC		%	50	
3333037 SR7	Method Blank	Moisture	2009/08/08		<0.3	%		
	RPD [Q13831-01]	Moisture	2009/08/08		14.4	%	20	
3333040 CL9	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/08		103	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/08		114	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/08		102	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/08		97	%	60 - 140	
		Benzene	2009/08/08		76	%	60 - 140	
		Toluene	2009/08/08		74	%	60 - 140	
		Ethylbenzene	2009/08/08		78	%	60 - 140	
		m & p-Xylene	2009/08/08		78	%	60 - 140	
		o-Xylene (C6-C10)	2009/08/08		73	%	60 - 140	
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/08		118	%	60 - 140	
		4-BROMOFLUOROBENZENE (sur.)	2009/08/08		104	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/08		108	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/08		92	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/08		100	%	60 - 140	
		Benzene	2009/08/08		86	%	60 - 140	
		Toluene	2009/08/08		89	%	60 - 140	
		Ethylbenzene	2009/08/08		96	%	60 - 140	
		m & p-Xylene	2009/08/08		94	%	60 - 140	
Method Blank	o-Xylene (C6-C10)	2009/08/08		87	%	60 - 140		
	4-BROMOFLUOROBENZENE (sur.)	2009/08/08		111	%	80 - 120		
	4-BROMOFLUOROBENZENE (sur.)	2009/08/08		97	%	60 - 140		



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference: JOHNSON POINT

Quality Assurance Report (Continued)

Maxxam Job Number: EA941528

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3333040	CL9	Method Blank	D10-ETHYLBENZENE (sur.)	2009/08/08		107 %	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/08/08		93 %	60 - 140
			D8-TOLUENE (sur.)	2009/08/08		102 %	60 - 140
			Benzene	2009/08/08	<0.0050	mg/kg	
			Toluene	2009/08/08	<0.020	mg/kg	
			Ethylbenzene	2009/08/08	<0.010	mg/kg	
			Xylenes (Total)	2009/08/08	<0.040	mg/kg	
			m & p-Xylene	2009/08/08	<0.040	mg/kg	
			o-Xylene	2009/08/08	<0.020	mg/kg	
			F1 (C6-C10) - BTEX	2009/08/08	<12	mg/kg	
			(C6-C10)	2009/08/08	<12	mg/kg	
	RPD		Benzene	2009/08/08	NC	%	50
			Toluene	2009/08/08	NC	%	50
			Ethylbenzene	2009/08/08	NC	%	50
			Xylenes (Total)	2009/08/08	NC	%	50
			m & p-Xylene	2009/08/08	NC	%	50
			o-Xylene	2009/08/08	NC	%	50
			F1 (C6-C10) - BTEX	2009/08/08	NC	%	50
			(C6-C10)	2009/08/08	NC	%	50
3333048	SR7	Method Blank	Moisture	2009/08/08	<0.3	%	
		RPD [Q13854-01]	Moisture	2009/08/08	5.6	%	20
3333075	SR7	Method Blank	Moisture	2009/08/08	<0.3	%	
		RPD [Q13874-01]	Moisture	2009/08/08	6.9	%	20
3333485	LQ	Matrix Spike [Q13846-02]	Methyl Sulfone (sur.)	2009/08/09		110 %	70 - 130
			Ethylene Glycol	2009/08/09		109 %	70 - 130
			Diethylene Glycol	2009/08/09		85 %	70 - 130
			Triethylene Glycol	2009/08/09		84 %	70 - 130
			Tetraethylene Glycol	2009/08/09		92 %	70 - 130
			Propylene Glycol	2009/08/09		108 %	70 - 130
	Spiked Blank		Methyl Sulfone (sur.)	2009/08/09		113 %	70 - 130
			Ethylene Glycol	2009/08/09		117 %	70 - 130
			Diethylene Glycol	2009/08/09		109 %	70 - 130
			Triethylene Glycol	2009/08/09		113 %	70 - 130
			Tetraethylene Glycol	2009/08/09		117 %	70 - 130
			Propylene Glycol	2009/08/09		116 %	70 - 130
	Method Blank		Methyl Sulfone (sur.)	2009/08/09		107 %	70 - 130
			Ethylene Glycol	2009/08/09	<10	mg/L	
			Diethylene Glycol	2009/08/09	<10	mg/L	
			Triethylene Glycol	2009/08/09	<10	mg/L	
			Tetraethylene Glycol	2009/08/09	<10	mg/L	
			Propylene Glycol	2009/08/09	<10	mg/L	
	RPD [Q13846-02]		Ethylene Glycol	2009/08/09	NC	%	20
			Diethylene Glycol	2009/08/09	NC	%	20
			Triethylene Glycol	2009/08/09	NC	%	20
			Tetraethylene Glycol	2009/08/09	NC	%	20
			Propylene Glycol	2009/08/09	NC	%	20
3333555	EO1	Calibration Check	Total Arsenic (As)	2009/08/09		98 %	80 - 120
			Total Cadmium (Cd)	2009/08/09		99 %	80 - 120
			Total Chromium (Cr)	2009/08/09		95 %	80 - 120
			Total Cobalt (Co)	2009/08/09		100 %	80 - 120
			Total Copper (Cu)	2009/08/09		94 %	80 - 120
			Total Lead (Pb)	2009/08/09		97 %	80 - 120
			Total Mercury (Hg)	2009/08/09		100 %	80 - 120
			Total Nickel (Ni)	2009/08/09		97 %	80 - 120

Quality Assurance Report (Continued)

Maxxam Job Number: EA941528

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3333555 EO1	Calibration Check	Total Zinc (Zn)	2009/08/09		96	%	80 - 120	
		Matrix Spike						
	QC Standard	Total Arsenic (As)	2009/08/09		104	%	75 - 125	
		Total Cadmium (Cd)	2009/08/09		97	%	75 - 125	
		Total Chromium (Cr)	2009/08/09		108	%	75 - 125	
		Total Cobalt (Co)	2009/08/09		105	%	75 - 125	
		Total Copper (Cu)	2009/08/09		105	%	75 - 125	
		Total Lead (Pb)	2009/08/09		102	%	75 - 125	
		Total Mercury (Hg)	2009/08/09		86	%	75 - 125	
		Total Nickel (Ni)	2009/08/09		120	%	75 - 125	
		Total Zinc (Zn)	2009/08/09		NC	%	75 - 125	
		Total Arsenic (As)	2009/08/09		106	%	72 - 128	
		Total Chromium (Cr)	2009/08/09		80	%	50 - 150	
		Total Cobalt (Co)	2009/08/09		118	%	75 - 125	
		Total Copper (Cu)	2009/08/09		96	%	72 - 127	
		Total Lead (Pb)	2009/08/09		103	%	65 - 135	
		Total Mercury (Hg)	2009/08/09		110	%	75 - 125	
	Total Nickel (Ni)	2009/08/09		108	%	75 - 125		
	Total Zinc (Zn)	2009/08/09		92	%	74 - 125		
	Method Blank	Total Arsenic (As)	2009/08/09	<1			mg/kg	
		Total Cadmium (Cd)	2009/08/09	<0.1			mg/kg	
		Total Chromium (Cr)	2009/08/09	<1			mg/kg	
		Total Cobalt (Co)	2009/08/09	<1			mg/kg	
		Total Copper (Cu)	2009/08/09	<5			mg/kg	
		Total Lead (Pb)	2009/08/09	<1			mg/kg	
		Total Mercury (Hg)	2009/08/09	<0.05			mg/kg	
		Total Nickel (Ni)	2009/08/09	<1			mg/kg	
		Total Zinc (Zn)	2009/08/09	<10			mg/kg	
		RPD	Total Arsenic (As)	2009/08/09	0			%
	Total Cadmium (Cd)		2009/08/09	NC			%	35
	Total Chromium (Cr)		2009/08/09	0.6			%	35
	Total Cobalt (Co)		2009/08/09	1.0			%	35
	Total Copper (Cu)		2009/08/09	NC			%	35
Total Lead (Pb)	2009/08/09		2.0			%	35	
Total Mercury (Hg)	2009/08/09		NC			%	35	
Total Nickel (Ni)	2009/08/09		2.0			%	35	
Total Zinc (Zn)	2009/08/09		1.1			%	35	
3335885 JB9	RPD [Q13847-01]		Flash point	2009/08/10	NC		%	N/A

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Validation Signature Page

Maxxam Job #: A941528

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



DIANE ZACHARKIW, Scientific Specialist



DINA TLEUGABULOVA, Ph.D., Project Manager



LISA CUMMINGS, Extractables Supervisor



CAMELIA ROATIS, Senior Analyst, Organics Department



MATTHEW CHORNEY, Senior Analyst

Validation Signature Page

Maxxam Job #: A941528

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



HUA WO,



MARISAANN-NOEL,

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ang Galue

Address: ana.galue@aecom.com

Prov: _____ **PC:** _____

Contact #s: Ph: 403.270.9200 Fax: 403.270.0399

Report To: A941528 MB/KW

AECOM (Dara Schmidt)

2540 Kensington Road NW

Calgary, AB

Prov: _____ **PC:** T2N 3S3

Ph: 403.450.9923 **Fax:** 403.270.4822

(Site) office

PO # / AFE #: _____

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: _____

Sampler's Initials: KS

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

dara.schmidt@aecom.com

priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: 09-AUG-7

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)							OTHER TEST(S)																											
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	TPH	PCB	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC	VH (W5-W10)	EH (W10-19)	*HOLD for 60 Days	# of Containers Submitted					
1 09-624	S	09-JUL-31 12:30	X																																												
2 09-625		12:32	X																																												
3 09-626		12:35	X																																												
4 09-627		12:38	X																																												
5 09-628		12:40	X																																												
6 09-629	S	09-JUL-31 6:00	X																																										X		
7 09-630		6:03	X																																												
8 09-631		6:06	X																																												
9 09-632		6:12	X																																												
10 09-633		6:15	X																																												
11 09-634		6:16	X																																												
12 09-635		6:21	X																																											X	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Katie Scott Date/Time: 09-AUG-3

Sign and Print: K Scott

# JARS USED & NOT SUBMITTED	Received By		Temperature		Ice
	<u>Aug 5 '09 MG</u>		<u>8</u>	<u>9</u>	
CUSTODY SEAL YES / NO		<u>9:30</u>	<u>13</u>	<u>8</u>	<u>8</u>

COMMENTS/SPECIAL INSTRUCTIONS:
METALS ANALYSIS: Cd, Cr, Pb, As, Co, Cu, Hg, Ni, Zn (total)



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: _____ **PC:** _____

Contact #s: Ph: 403.270.9200 Fax: 403.270.0399

Report To: AECOM (Dara Schmidt)

2540 Kensington Road NW
Calgary, AB

Prov: _____ **PC:** T2N 3S3

Ph: 403.450.9923 (site) Fax: 403.270.4822 (office)

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: KS

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)							OTHER TEST(S)				# HOLD for 60 Days	# of Containers Submitted			
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	VH (W5-10)	FH (W10-19)						
1																												
2	S	09-Aug-31																										
3		11:36																										X
4		11:39																										
5		11:41																										
6		11:45																										X
7		12:00																										X
8		12:04																										
9		12:07																										X
10		12:10																										
11		12:13																										X
12		12:16																										

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: PG 1 Date/Time: _____
Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By Aug 5 '09 9:30 MG		Temperature			Ice
			8	9	8	
			13	8	8	
CUSTODY SEAL YES / NO						



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8888
www.maxxamanalytics.com

80971 CHAIN OF CUSTODY

Page: 5 of 5

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: PC: **PC:**

Contact #s: Ph: 403.270.9200 Fax: 403.270.6399

Report To: AECOM (Dara Schmidt)

2540 Kensington Road NW
Calgary, AB

Prov: PC: T2N 3S3

Ph: 403.450.9923 Fax: 403.270.4822

(site) (office)

AO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: KS

DETECTION LIMIT REQUIREMENTS:

- Check the applicable criterion and indicate land use
- AT1
 - CCME
 - OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
 clara.schmidt@aecom.com
 priya.harada@aecom.com

SERVICE REQUESTED:

- RUSH** (Please ensure you contact the lab to reserve)
 - REGULAR** Turnaround (5 to 7 Days)
- Date Required: _____

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)					OTHER TEST(S)		*HOLD for 60 Days # of Containers Submitted	
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals ² <input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	TPH	PCB	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved		Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved <input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered
1	09-671	S	09-Aug-3 3:30	X													2
2	09-672																
3	09-673																
4	09-674																X
5	09-675																
6	09-676																X
7																	
8																	
9																	
10																	
11																	
12																	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #: _____

Relinquished By: PG.1 Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

# JARS USED & NOT SUBMITTED	Received By	Temperature	Ice
	CUSTODY SEAL YES / NO		

Task Order#:
Site#:
Site Location:
Project #: A941528
Your C.O.C. #: n/a

Attention: Erin Anderson

Maxxam Analytics
Edmonton - ENV
9331-48 St
Edmonton, AB
T6B 2R4

Report Date: 2009/08/14

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9A2804

Received: 2009/08/12, 11:02

Sample Matrix: Petroleum Product
Samples Received: 1

Analyses	Quantity	Laboratory Method	Method Primary reference
Polychlorinated Biphenyl in Liquids 0	1	CAM SOP-00307	EPA 8081 modified

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Laboratory Method	Method Primary reference
Polychlorinated Biphenyl in Water	1	CAM SOP-00309	SW846 8082

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Sample(s) analyzed using methodologies that have not been subjected to Maxxam's standard validation process for the submitted matrix and is not an Accredited method. Analysis performed with client consent, however results should be viewed with discretion

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ELORA DI BRATTO, Project Manager
Email: Elora.DiBratto@maxxamanalytics.com
Phone# (905) 817-5700

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

Maxxam Job #: A9A2804
 Report Date: 2009/08/14

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A941528

POLYCHLORINATED BIPHENYLS BY GC-ECD (PETROLEUM PRODUCT)

Maxxam ID		DI6837		
Sampling Date		2009/08/02		
COC Number		n/a		
	Units	Q13847-04R	RDL	QC Batch
		\ 09-640		

Aroclor 1016	ug/L	<1	1	1905700
Aroclor 1221	ug/L	<1	1	1905700
Aroclor 1232	ug/L	<1	1	1905700
Aroclor 1242	ug/L	<1	1	1905700
Aroclor 1248	ug/L	<1	1	1905700
Aroclor 1254	ug/L	<1	1	1905700
Aroclor 1260	ug/L	<1	1	1905700
Aroclor 1262	ug/L	<1	1	1905700
Aroclor 1268	ug/L	<1	1	1905700
Total PCB	ug/L	<1	1	1905700
Extraction				
Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	88		1905700
Decachlorobiphenyl	%	124		1905700

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9A2804
 Report Date: 2009/08/14

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A941528

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		DI6836		
Sampling Date		2009/08/02		
COC Number		n/a		
	Units	Q13846-04R	RDL	QC Batch
		\ 09-639		

Aroclor 1016	ug/L	<0.05	0.05	1905637
Aroclor 1221	ug/L	<0.05	0.05	1905637
Aroclor 1232	ug/L	<0.05	0.05	1905637
Aroclor 1242	ug/L	<0.05	0.05	1905637
Aroclor 1248	ug/L	<0.05	0.05	1905637
Aroclor 1254	ug/L	<0.05	0.05	1905637
Aroclor 1260	ug/L	<0.05	0.05	1905637
Aroclor 1262	ug/L	<0.05	0.05	1905637
Aroclor 1268	ug/L	<0.05	0.05	1905637
Total PCB	ug/L	<0.05	0.05	1905637
Extraction				
Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	72		1905637
Decachlorobiphenyl	%	115		1905637

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9A2804
 Report Date: 2009/08/14

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A941528

Test Summary

Maxxam ID	DI6836	Collected	2009/08/02
Sample ID	Q13846-04R \ 09-639	Shipped	
Matrix	Water	Received	2009/08/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Water	GC/ECD	1905637	2009/08/12	2009/08/13	JZ

Maxxam ID	DI6837	Collected	2009/08/02
Sample ID	Q13847-04R \ 09-640	Shipped	
Matrix	Petroleum Product	Received	2009/08/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Liquids	GC/ECD	1905700	2009/08/13	2009/08/13	ART

Maxxam Job #: A9A2804
Report Date: 2009/08/14

Maxxam Analytics
Task Order#:
Site#:

Project #: A941528

Package 1	16.3°C
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Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
 Task Order#:
 Site#:
 Site Location:
 Project #: A941528

Quality Assurance Report
 Maxxam Job Number: A9A2804

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits		
1905637 JZ	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/08/13		75	%	40 - 130		
		Decachlorobiphenyl	2009/08/13		107	%	40 - 130		
		Aroclor 1016	2009/08/13	<0.05			ug/L		
		Aroclor 1221	2009/08/13	<0.05			ug/L		
		Aroclor 1232	2009/08/13	<0.05			ug/L		
		Aroclor 1242	2009/08/13	<0.05			ug/L		
		Aroclor 1248	2009/08/13	<0.05			ug/L		
		Aroclor 1254	2009/08/13	<0.05			ug/L		
		Aroclor 1260	2009/08/13	<0.05			ug/L		
		Aroclor 1262	2009/08/13	<0.05			ug/L		
1905700 ART	Method Blank	Total PCB	2009/08/13	<0.05		ug/L			
		2,4,5,6-Tetrachloro-m-xylene	2009/08/13		98	%	30 - 150		
		Decachlorobiphenyl	2009/08/13		105	%	29 - 139		
		Aroclor 1016	2009/08/13	<1			ug/L		
		Aroclor 1221	2009/08/13	<1			ug/L		
		Aroclor 1232	2009/08/13	<1			ug/L		
		Aroclor 1242	2009/08/13	<1			ug/L		
		Aroclor 1248	2009/08/13	<1			ug/L		
		Aroclor 1254	2009/08/13	<1			ug/L		
		Aroclor 1260	2009/08/13	<1			ug/L		
1905637 JZ	RPD	Aroclor 1260	2009/08/13	0.7		%	40		
		Total PCB	2009/08/13	0.7		%	40		
1905700 ART	RPD	Aroclor 1260	2009/08/13	0.7		%	40		
		Total PCB	2009/08/13	0.7		%	40		
1905637 JZ	Matrix Spike [DI6836-01]	2,4,5,6-Tetrachloro-m-xylene	2009/08/13		67	%	40 - 130		
		Decachlorobiphenyl	2009/08/13		108	%	40 - 130		
		Aroclor 1260	2009/08/13		95	%	30 - 130		
		Total PCB	2009/08/13		95	%	30 - 130		
	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/08/13		78	%	40 - 130		
		Decachlorobiphenyl	2009/08/13		111	%	40 - 130		
		Aroclor 1260	2009/08/13		100	%	30 - 130		
		Total PCB	2009/08/13		100	%	30 - 130		
		1905700 ART	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/08/13		104	%	30 - 150
				Decachlorobiphenyl	2009/08/13		113	%	29 - 139
Aroclor 1260	2009/08/13				113	%	30 - 130		
Total PCB	2009/08/13				113	%	30 - 130		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 LCS: A blank matrix sample to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

Validation Signature Page

Maxxam Job #: A9A2804

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CHARLES ANCKER, B.Sc., M.Sc., C.Chem, Senior Analyst

=====

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Your Project #: 2977-371-00 JOHNSON POINT
Your C.O.C. #: 80981

Attention: DARA SCHMIDT
AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/08/17

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A943260
Received: 2009/08/15, 10:15

Sample Matrix: Soil
Samples Received: 12

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	12	2009/08/15	2009/08/15	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	12	2009/08/15	2009/08/16	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	12	N/A	2009/08/17	EENVSOP-00139	Carter SSMA 51.2

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
Email: eanderson@maxxamanalytics.com
Phone# (780) 577-7113 Ext:7113

=====
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Total cover pages: 1

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q25972	Q25982	Q25983		
Sampling Date		2009/08/13 09:00	2009/08/13 09:05	2009/08/13 09:20		
COC Number		80981	80981	80981		
	Units	09-818	09-819	09-820	RDL	QC Batch

Physical Properties						
Moisture	%	2.8	4.0	8.9	0.3	3352033
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	2200	2100	<10	10	3350838
F3 (C16-C34 Hydrocarbons)	mg/kg	190	320	10	10	3350838
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3350838
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3350838
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3350194
Toluene	mg/kg	0.25	<0.020	<0.020	0.020	3350194
Ethylbenzene	mg/kg	0.069	<0.010	<0.010	0.010	3350194
Xylenes (Total)	mg/kg	75	4.4	0.18	0.040	3350194
m & p-Xylene	mg/kg	38	0.42	0.064	0.040	3350194
o-Xylene	mg/kg	37	4.0	0.12	0.020	3350194
F1 (C6-C10) - BTEX	mg/kg	1600	500	<12	12	3350194
(C6-C10)	mg/kg	1600	510	<12	12	3350194
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	113	97	104	N/A	3350194
D10-ETHYLBENZENE (sur.)	%	93	95	95	N/A	3350194
D4-1,2-DICHLOROETHANE (sur.)	%	98	94	93	N/A	3350194
D8-TOLUENE (sur.)	%	108	108	107	N/A	3350194
O-TERPHENYL (sur.)	%	85	88	87	N/A	3350838

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q25984		Q25985		
Sampling Date		2009/08/13 09:23		2009/08/13 09:30		
COC Number		80981		80981		
	Units	09-821	QC Batch	09-822	RDL	QC Batch

Physical Properties						
Moisture	%	8.9	3352033	6.8	0.3	3351349
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	3350838	<10	10	3350838
F3 (C16-C34 Hydrocarbons)	mg/kg	12	3350838	32	10	3350838
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3350838	<10	10	3350838
Reached Baseline at C50	mg/kg	Yes	3350838	Yes	N/A	3350838
Volatiles						
Benzene	mg/kg	<0.0050	3350194	0.012	0.0050	3350194
Toluene	mg/kg	<0.020	3350194	<0.020	0.020	3350194
Ethylbenzene	mg/kg	<0.010	3350194	0.30	0.010	3350194
Xylenes (Total)	mg/kg	<0.040	3350194	0.29	0.040	3350194
m & p-Xylene	mg/kg	<0.040	3350194	0.27	0.040	3350194
o-Xylene	mg/kg	0.034	3350194	0.022	0.020	3350194
F1 (C6-C10) - BTEX	mg/kg	<12	3350194	14	12	3350194
(C6-C10)	mg/kg	<12	3350194	15	12	3350194
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	102	3350194	109	N/A	3350194
D10-ETHYLBENZENE (sur.)	%	94	3350194	94	N/A	3350194
D4-1,2-DICHLOROETHANE (sur.)	%	93	3350194	96	N/A	3350194
D8-TOLUENE (sur.)	%	104	3350194	102	N/A	3350194
O-TERPHENYL (sur.)	%	86	3350838	84	N/A	3350838
N/A = Not Applicable RDL = Reportable Detection Limit						

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q25986	Q25987	Q25988		
Sampling Date		2009/08/13 09:45	2009/08/13 11:00	2009/08/13 11:05		
COC Number		80981	80981	80981		
	Units	09-823	09-824	09-825	RDL	QC Batch

Physical Properties						
Moisture	%	13	9.8	18	0.3	3351349
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	110	53	41	10	3350838
F3 (C16-C34 Hydrocarbons)	mg/kg	60	52	58	10	3350838
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3350838
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3350838
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3350194
Toluene	mg/kg	<0.020	0.028	0.027	0.020	3350194
Ethylbenzene	mg/kg	0.029	0.016	0.013	0.010	3350194
Xylenes (Total)	mg/kg	1.4	0.14	0.12	0.040	3350194
m & p-Xylene	mg/kg	0.32	0.092	0.076	0.040	3350194
o-Xylene	mg/kg	1.1	0.052	0.043	0.020	3350194
F1 (C6-C10) - BTEX	mg/kg	790	23	15	12	3350194
(C6-C10)	mg/kg	800	23	15	12	3350194
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	119	121	115	N/A	3350194
D10-ETHYLBENZENE (sur.)	%	96	98	98	N/A	3350194
D4-1,2-DICHLOROETHANE (sur.)	%	95	91	96	N/A	3350194
D8-TOLUENE (sur.)	%	106	106	103	N/A	3350194
O-TERPHENYL (sur.)	%	90	86	87	N/A	3350838

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q25989	Q25990		
Sampling Date		2009/08/13 11:10	2009/08/13 11:15		
COC Number		80981	80981		
	Units	09-826	09-827	RDL	QC Batch

Physical Properties					
Moisture	%	6.9	16	0.3	3351349
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	36	120	10	3350838
F3 (C16-C34 Hydrocarbons)	mg/kg	42	48	10	3350838
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3350838
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3350838
Volatiles					
Benzene	mg/kg	<0.0050	0.019	0.0050	3350194
Toluene	mg/kg	<0.020	1.5	0.020	3350194
Ethylbenzene	mg/kg	<0.010	0.89	0.010	3350194
Xylenes (Total)	mg/kg	0.064	9.6	0.040	3350194
m & p-Xylene	mg/kg	0.041	6.6	0.040	3350194
o-Xylene	mg/kg	0.023	3.0	0.020	3350194
F1 (C6-C10) - BTEX	mg/kg	<12	360	12	3350194
(C6-C10)	mg/kg	<12	370	12	3350194
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	116	110	N/A	3350194
D10-ETHYLBENZENE (sur.)	%	97	98	N/A	3350194
D4-1,2-DICHLOROETHANE (sur.)	%	93	94	N/A	3350194
D8-TOLUENE (sur.)	%	103	105	N/A	3350194
O-TERPHENYL (sur.)	%	80	83	N/A	3350838
N/A = Not Applicable RDL = Reportable Detection Limit					

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q25991	Q25991	Q25992		
Sampling Date		2009/08/13 14:20	2009/08/13 14:20	2009/08/13 14:25		
COC Number		80981	80981	80981		
	Units	09-828	09-828 Lab-Dup	09-829	RDL	QC Batch

Physical Properties						
Moisture	%	11	11	10	0.3	3352033
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	110	N/A	89	10	3350838
F3 (C16-C34 Hydrocarbons)	mg/kg	63	N/A	48	10	3350838
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	N/A	<10	10	3350838
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	3350838
Volatiles						
Benzene	mg/kg	0.061	N/A	0.046	0.0050	3350194
Toluene	mg/kg	6.3	N/A	3.6	0.020	3350194
Ethylbenzene	mg/kg	2.4	N/A	2.9	0.010	3350194
Xylenes (Total)	mg/kg	13	N/A	16	0.040	3350194
m & p-Xylene	mg/kg	9.8	N/A	12	0.040	3350194
o-Xylene	mg/kg	3.5	N/A	4.3	0.020	3350194
F1 (C6-C10) - BTEX	mg/kg	300	N/A	390	12	3350194
(C6-C10)	mg/kg	330	N/A	410	12	3350194
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	117	N/A	106	N/A	3350194
D10-ETHYLBENZENE (sur.)	%	97	N/A	97	N/A	3350194
D4-1,2-DICHLOROETHANE (sur.)	%	94	N/A	92	N/A	3350194
D8-TOLUENE (sur.)	%	105	N/A	104	N/A	3350194
O-TERPHENYL (sur.)	%	83	N/A	85	N/A	3350838
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						



Maxxam Job #: A943260
Report Date: 2009/08/17

AECOM
Client Project #: 2977-371-00 JOHNSON POINT

Sampler Initials: KS

Package 1	2.7°C
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Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report
 Maxxam Job Number: EA943260

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3350194 AN1	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/15		115	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/15		105	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/15		96	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/15		101	%	60 - 140
		Benzene	2009/08/15		90	%	60 - 140
		Toluene	2009/08/15		97	%	60 - 140
		Ethylbenzene	2009/08/15		100	%	60 - 140
		m & p-Xylene	2009/08/15		100	%	60 - 140
		o-Xylene	2009/08/15		98	%	60 - 140
		(C6-C10)	2009/08/15		113	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/15		105	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/15		102	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/15		94	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/15		101	%	60 - 140
		Benzene	2009/08/15		90	%	60 - 140
		Toluene	2009/08/15		96	%	60 - 140
		Ethylbenzene	2009/08/15		101	%	60 - 140
		m & p-Xylene	2009/08/15		99	%	60 - 140
		o-Xylene	2009/08/15		96	%	60 - 140
		(C6-C10)	2009/08/15		114	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/15		115	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/15		101	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/15		98	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/15		100	%	60 - 140
		Benzene	2009/08/15	<0.0050		mg/kg	
		Toluene	2009/08/15	<0.020		mg/kg	
		Ethylbenzene	2009/08/15	<0.010		mg/kg	
		Xylenes (Total)	2009/08/15	<0.040		mg/kg	
		m & p-Xylene	2009/08/15	<0.040		mg/kg	
		o-Xylene	2009/08/15	<0.020		mg/kg	
	RPD	F1 (C6-C10) - BTEX (C6-C10)	2009/08/15	<12		mg/kg	
		Benzene	2009/08/15	<12		mg/kg	
		Toluene	2009/08/15	NC		%	50
Ethylbenzene		2009/08/15	NC		%	50	
Xylenes (Total)		2009/08/15	NC		%	50	
m & p-Xylene		2009/08/15	NC		%	50	
o-Xylene		2009/08/15	NC		%	50	
F1 (C6-C10) - BTEX (C6-C10)		2009/08/15	NC		%	50	
Benzene		2009/08/15	NC		%	50	
Toluene		2009/08/15	NC		%	50	
Ethylbenzene		2009/08/15	NC		%	50	
Xylenes (Total)		2009/08/15	NC		%	50	
m & p-Xylene		2009/08/15	NC		%	50	
3350838 KO	Matrix Spike	O-TERPHENYL (sur.)	2009/08/16		85	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/16		97	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/16		91	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/16		103	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/16		81	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/16		89	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/16		90	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/08/16		101	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/08/16		89	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/16	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/16	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/16	<10		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2009/08/16	38.8		%	50
F3 (C16-C34 Hydrocarbons)		2009/08/16	NC		%	50	
F4 (C34-C50 Hydrocarbons)		2009/08/16	NC		%	50	



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)
 Maxxam Job Number: EA943260

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3351349 JP6	Method Blank	Moisture	2009/08/17	<0.3		%	
	RPD	Moisture	2009/08/17	0.7		%	20
3352033 JP6	Method Blank	Moisture	2009/08/17	<0.3		%	
	RPD [Q25991-01]	Moisture	2009/08/17	5.6		%	20

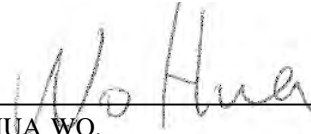
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780)577-7100 FAX(780)450-4187


Validation Signature Page

Maxxam Job #: A943260

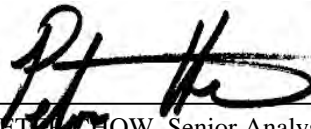
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



HUA WO,



LISA CUMMINGS, Extractables Supervisor



PETER CHOW, Senior Analyst

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Invoice To: Require Report? Yes No
Company Name: AECOM
Contact Name: Ana Galwe
Address: ana.galwe@aecom.com
Prov: _____ PC: _____
Contact #: _____ Ph: _____ Fax: _____

Report To:
Dara Schmidt
25 40 Kensington Rd NW
Calgary
Prov: AB PC: T2N 3S3
Ph: 403-450-9923 Fax: 403-270-4822

PO # / AFE #:
Quotation #:
Project #: 2977-371-00
Project Name: Johnson Point
Location:
Sampler's Initials: KS

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

				SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)																
BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ²	Assessment ICP Metals ²	Paint Filter	Flashpoint	pH (1:1)	TCLP	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	REGULATED METALS (CCME / AT1) ³	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC	*HOLD for 60 Days	# of Containers Submitted	
1	<u>09-818</u>	<u>S</u>	<u>09-Aug-13</u>	<u>9:00</u>	X																						<u>2</u>	
2	<u>09-819</u>			<u>9:05</u>																								
3	<u>09-820</u>			<u>9:20</u>																								
4	<u>09-821</u>			<u>9:23</u>																								
5	<u>09-822</u>			<u>9:30</u>																								
6	<u>09-823</u>			<u>9:45</u>																								
7	<u>09-824</u>			<u>11:00</u>																								
8	<u>09-825</u>			<u>11:05</u>																								
9	<u>09-826</u>			<u>11:10</u>																								
10	<u>09-827</u>			<u>11:15</u>																								
11	<u>09-828</u>			<u>2:20</u>																								
12	<u>09-829</u>			<u>2:25</u>																								

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Relinquished By: Katie Scott Date/Time: 09-Aug-13
Sign and Print: K Scott
COMMENTS/SPECIAL INSTRUCTIONS:

JARS USED & NOT SUBMITTED: _____ Received By: Aug 15 10 09 MR
Temperature: 2 3 3 Ice: _____
CUSTODY SEAL YES / NO



Your Project #: 2977-371-00 JOHNSON POINT
 Your C.O.C. #: 80972, 80973, 80974, 80975, 81135,
 81136, 81137, 80976, 80977, 81134

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/08/18

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A942080

Received: 2009/08/11, 8:15

Sample Matrix: Soil
 # Samples Received: 69

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	36	2009/08/11	2009/08/12	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	28	2009/08/11	2009/08/13	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	5	2009/08/17	2009/08/18	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil) (1)	33	2009/08/12	2009/08/12	CAL SOP-00086	CCME PHC-CWS
CCME Hydrocarbons (F2-F4 in soil) (1)	31	2009/08/12	2009/08/13	CAL SOP-00086	CCME PHC-CWS
CCME Hydrocarbons (F2-F4 in soil)	5	2009/08/17	2009/08/18	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F4G in soil) (1)	4	2009/08/12	2009/08/13	CAL SOP-00086	CCME PHC-CWS
Moisture	64	N/A	2009/08/12	EENVSOP-00139	Carter SSMA 51.2
Moisture	5	N/A	2009/08/18	EENVSOP-00139	Carter SSMA 51.2

Sample Matrix: Water
 # Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/MTBE LH, VH, F1 SIM/MS (2)	3	2009/08/12	2009/08/13	BRN-SOP-00304 R10.0	Based on EPA 8260B
pH	3	N/A	2009/08/12	EENVSOP-00054	SM 4500-H B
Urgent Extrac. HC in Water by GC/FID (3)	3	2009/08/13	2009/08/13	BRN SOP-00341 R14	Based BCCSR Method 4

- (1) This test was performed by Maxxam Calgary
- (2) This test was performed by Maxxam Vancouver
- (3) SCC/CAEAL

../2



Your Project #: 2977-371-00 JOHNSON POINT
Your C.O.C. #: 80972, 80973, 80974, 80975, 81135,
81136, 81137, 80976, 80977, 81134

Attention: DARA SCHMIDT

AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/08/18

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
Email: eanderson@maxxamanalytics.com
Phone# (780) 577-7113 Ext:7113

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18067	Q18067	Q18084		
Sampling Date		2009/08/04 07:00	2009/08/04 07:00	2009/08/04 07:05		
COC Number		80972	80972	80972		
	Units	09-677	09-677 Lab-Dup	09-678	RDL	QC Batch

Physical Properties						
Moisture	%	4.6	4.8	10	0.3	3342179
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	N/A	<10	10	3340763
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	N/A	<10	10	3340763
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	N/A	<10	10	3340763
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	3340763
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340371
Toluene	mg/kg	0.043	0.043	0.023	0.020	3340371
Ethylbenzene	mg/kg	0.021	0.021	0.012	0.010	3340371
Xylenes (Total)	mg/kg	0.075	0.075	<0.040	0.040	3340371
m & p-Xylene	mg/kg	0.043	0.043	<0.040	0.040	3340371
o-Xylene	mg/kg	0.032	0.032	0.035	0.020	3340371
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3340371
(C6-C10)	mg/kg	<12	<12	<12	12	3340371
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	101	99	N/A	3340371
D10-ETHYLBENZENE (sur.)	%	89	85	89	N/A	3340371
D4-1,2-DICHLOROETHANE (sur.)	%	86	93	86	N/A	3340371
D8-TOLUENE (sur.)	%	105	102	104	N/A	3340371
O-TERPHENYL (sur.)	%	81	N/A	85	N/A	3340763
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18086	Q18086	Q18087		
Sampling Date		2009/08/05 10:03	2009/08/05 10:03	2009/08/05 10:06		
COC Number		80972	80972	80972		
	Units	09-680	09-680 Lab-Dup	09-681	RDL	QC Batch

Physical Properties						
Moisture	%	25	N/A	26	0.3	3342179
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340763
F3 (C16-C34 Hydrocarbons)	mg/kg	150	130	150	10	3340763
F4 (C34-C50 Hydrocarbons)	mg/kg	63	61	48	10	3340763
Reached Baseline at C50	mg/kg	Yes	Yes	No	N/A	3340763
Volatiles						
Benzene	mg/kg	<0.0050	N/A	<0.0050	0.0050	3340371
Toluene	mg/kg	<0.020	N/A	<0.020	0.020	3340371
Ethylbenzene	mg/kg	<0.010	N/A	<0.010	0.010	3340371
Xylenes (Total)	mg/kg	<0.040	N/A	<0.040	0.040	3340371
m & p-Xylene	mg/kg	<0.040	N/A	<0.040	0.040	3340371
o-Xylene	mg/kg	<0.020	N/A	<0.020	0.020	3340371
F1 (C6-C10) - BTEX	mg/kg	<12	N/A	<12	12	3340371
(C6-C10)	mg/kg	<12	N/A	<12	12	3340371
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	N/A	100	N/A	3340371
D10-ETHYLBENZENE (sur.)	%	92	N/A	92	N/A	3340371
D4-1,2-DICHLOROETHANE (sur.)	%	83	N/A	88	N/A	3340371
D8-TOLUENE (sur.)	%	105	N/A	102	N/A	3340371
O-TERPHENYL (sur.)	%	82	79	79	N/A	3340763

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18089	Q18092	Q18093		
Sampling Date		2009/08/05 10:12	2009/08/05 10:21	2009/08/05 10:24		
COC Number		80972	80972	80972		
	Units	09-683	09-686	09-687	RDL	QC Batch

Physical Properties						
Moisture	%	22	39	37	0.3	3342179
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340763
F3 (C16-C34 Hydrocarbons)	mg/kg	150	310	230	10	3340763
F4 (C34-C50 Hydrocarbons)	mg/kg	64	110	66	10	3340763
Reached Baseline at C50	mg/kg	No	No	No	N/A	3340763
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340371
Toluene	mg/kg	<0.020	0.14	0.038	0.020	3340371
Ethylbenzene	mg/kg	<0.010	0.039	<0.010	0.010	3340371
Xylenes (Total)	mg/kg	<0.040	0.20	<0.040	0.040	3340371
m & p-Xylene	mg/kg	<0.040	0.14	<0.040	0.040	3340371
o-Xylene	mg/kg	<0.020	0.059	<0.020	0.020	3340371
F1 (C6-C10) - BTEX	mg/kg	<12	14	<12	12	3340371
(C6-C10)	mg/kg	<12	15	<12	12	3340371
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	100	96	N/A	3340371
D10-ETHYLBENZENE (sur.)	%	96	89	105	N/A	3340371
D4-1,2-DICHLOROETHANE (sur.)	%	89	86	95	N/A	3340371
D8-TOLUENE (sur.)	%	102	102	100	N/A	3340371
O-TERPHENYL (sur.)	%	76	85	84	N/A	3340763

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18094		Q18096		
Sampling Date		2009/08/05 10:27		2009/08/05 11:15		
COC Number		80972		80973		
	Units	09-688	QC Batch	09-690	RDL	QC Batch

Physical Properties						
Moisture	%	14	3353837	11	0.3	3342179
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	15	3353886	<10	10	3340763
F3 (C16-C34 Hydrocarbons)	mg/kg	30	3353886	<10	10	3340763
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3353886	<10	10	3340763
Reached Baseline at C50	mg/kg	Yes	3353886	Yes	N/A	3340763
Volatiles						
Benzene	mg/kg	0.029	3353787	0.11	0.0050	3340371
Toluene	mg/kg	0.52	3353787	0.18	0.020	3340371
Ethylbenzene	mg/kg	0.10	3353787	0.094	0.010	3340371
Xylenes (Total)	mg/kg	0.53	3353787	0.57	0.040	3340371
m & p-Xylene	mg/kg	0.38	3353787	0.40	0.040	3340371
o-Xylene	mg/kg	0.15	3353787	0.16	0.020	3340371
F1 (C6-C10) - BTEX	mg/kg	14	3353787	17	12	3340371
(C6-C10)	mg/kg	16	3353787	18	12	3340371
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	102	3353787	98	N/A	3340371
D10-ETHYLBENZENE (sur.)	%	109	3353787	88	N/A	3340371
D4-1,2-DICHLOROETHANE (sur.)	%	123	3353787	86	N/A	3340371
D8-TOLUENE (sur.)	%	96	3353787	99	N/A	3340371
O-TERPHENYL (sur.)	%	93	3353886	83	N/A	3340763

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18097	Q18101	Q18102		
Sampling Date		2009/08/05 11:18	2009/08/05 11:30	2009/08/05 11:33		
COC Number		80973	80973	80973		
	Units	09-691	09-695	09-696	RDL	QC Batch

Physical Properties						
Moisture	%	11	18	14	0.3	3342179
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340763
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	25	<10	10	3340763
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340763
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3340763
Volatiles						
Benzene	mg/kg	0.094	<0.0050	<0.0050	0.0050	3340371
Toluene	mg/kg	0.12	<0.020	<0.020	0.020	3340371
Ethylbenzene	mg/kg	0.082	<0.010	<0.010	0.010	3340371
Xylenes (Total)	mg/kg	0.40	<0.040	<0.040	0.040	3340371
m & p-Xylene	mg/kg	0.28	<0.040	<0.040	0.040	3340371
o-Xylene	mg/kg	0.12	<0.020	<0.020	0.020	3340371
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3340371
(C6-C10)	mg/kg	<12	<12	<12	12	3340371
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	99	98	N/A	3340371
D10-ETHYLBENZENE (sur.)	%	89	92	88	N/A	3340371
D4-1,2-DICHLOROETHANE (sur.)	%	87	84	88	N/A	3340371
D8-TOLUENE (sur.)	%	101	103	100	N/A	3340371
O-TERPHENYL (sur.)	%	90	77	78	N/A	3340763
N/A = Not Applicable RDL = Reportable Detection Limit						

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18103	Q18104	Q18105		
Sampling Date		2009/08/05 14:00	2009/08/05 14:03	2009/08/05 14:06		
COC Number		80973	80973	80973		
	Units	09-697	09-698	09-699	RDL	QC Batch

Physical Properties						
Moisture	%	23	17	15	0.3	3342179
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	390	95	<10	10	3340763
F3 (C16-C34 Hydrocarbons)	mg/kg	120	39	18	10	3340763
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340763
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3340763
Volatiles						
Benzene	mg/kg	<0.0050	0.10	0.076	0.0050	3340371
Toluene	mg/kg	<0.020	1.8	1.9	0.020	3340371
Ethylbenzene	mg/kg	0.17	0.73	0.92	0.010	3340371
Xylenes (Total)	mg/kg	0.19	3.9	5.3	0.040	3340371
m & p-Xylene	mg/kg	0.19	2.8	3.8	0.040	3340371
o-Xylene	mg/kg	<0.020	1.1	1.4	0.020	3340371
F1 (C6-C10) - BTEX	mg/kg	68	140	160	12	3340371
(C6-C10)	mg/kg	69	140	170	12	3340371
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	105	105	105	N/A	3340371
D10-ETHYLBENZENE (sur.)	%	91	98	97	N/A	3340371
D4-1,2-DICHLOROETHANE (sur.)	%	86	84	85	N/A	3340371
D8-TOLUENE (sur.)	%	102	104	101	N/A	3340371
O-TERPHENYL (sur.)	%	90	74	81	N/A	3340763

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18108		Q18109		
Sampling Date		2009/08/05 14:15		2009/08/05 14:18		
COC Number		80974		80974		
	Units	09-702	QC Batch	09-703	RDL	QC Batch

Physical Properties						
Moisture	%	21	3342179	11	0.3	3353837
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1800	3340763	39	10	3353886
F3 (C16-C34 Hydrocarbons)	mg/kg	290	3340763	39	10	3353886
F4 (C34-C50 Hydrocarbons)	mg/kg	11	3340763	<10	10	3353886
Reached Baseline at C50	mg/kg	Yes	3340763	Yes	N/A	3353886
Volatiles						
Benzene	mg/kg	0.42	3340371	0.038	0.0050	3353787
Toluene	mg/kg	3.1	3340371	<0.020	0.020	3353787
Ethylbenzene	mg/kg	4.8	3340371	0.38	0.010	3353787
Xylenes (Total)	mg/kg	39	3340371	2.2	0.040	3353787
m & p-Xylene	mg/kg	28	3340371	1.3	0.040	3353787
o-Xylene	mg/kg	12	3340371	0.91	0.020	3353787
F1 (C6-C10) - BTEX	mg/kg	1100	3340371	35	12	3353787
(C6-C10)	mg/kg	1100	3340371	38	12	3353787
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	121	3340371	105	N/A	3353787
D10-ETHYLBENZENE (sur.)	%	100	3340371	109	N/A	3353787
D4-1,2-DICHLOROETHANE (sur.)	%	86	3340371	113	N/A	3353787
D8-TOLUENE (sur.)	%	106	3340371	100	N/A	3353787
O-TERPHENYL (sur.)	%	74	3340763	104	N/A	3353886
N/A = Not Applicable RDL = Reportable Detection Limit						

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18110		
Sampling Date		2009/08/05 14:21		
COC Number		80974		
	Units	09-704	RDL	QC Batch

Physical Properties				
Moisture	%	17	0.3	3353837
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/kg	3200	10	3353886
F3 (C16-C34 Hydrocarbons)	mg/kg	380	10	3353886
F4 (C34-C50 Hydrocarbons)	mg/kg	10	10	3353886
Reached Baseline at C50	mg/kg	Yes	N/A	3353886
Volatiles				
Benzene	mg/kg	2.8	0.0050	3353787
Toluene	mg/kg	77 (1)	0.20	3353787
Ethylbenzene	mg/kg	31	0.010	3353787
Xylenes (Total)	mg/kg	160	0.040	3353787
m & p-Xylene	mg/kg	120	0.040	3353787
o-Xylene	mg/kg	41	0.020	3353787
F1 (C6-C10) - BTEX	mg/kg	1700	12	3353787
(C6-C10)	mg/kg	1900	12	3353787
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	96	N/A	3353787
D10-ETHYLBENZENE (sur.)	%	115	N/A	3353787
D4-1,2-DICHLOROETHANE (sur.)	%	116	N/A	3353787
D8-TOLUENE (sur.)	%	105	N/A	3353787
O-TERPHENYL (sur.)	%	96	N/A	3353886

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18111		Q18112		
Sampling Date		2009/08/05 14:24		2009/08/05 14:27		
COC Number		80974		80974		
	Units	09-705	QC Batch	09-706	RDL	QC Batch

Physical Properties						
Moisture	%	13	3342179	14	0.3	3353837
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	310	3340763	22	10	3353886
F3 (C16-C34 Hydrocarbons)	mg/kg	21	3340763	39	10	3353886
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3340763	<10	10	3353886
Reached Baseline at C50	mg/kg	Yes	3340763	Yes	N/A	3353886
Volatiles						
Benzene	mg/kg	0.28	3340371	0.046	0.0050	3353787
Toluene	mg/kg	15	3340371	0.59	0.020	3353787
Ethylbenzene	mg/kg	7.6	3340371	1.0	0.010	3353787
Xylenes (Total)	mg/kg	43	3340371	6.7	0.040	3353787
m & p-Xylene	mg/kg	31	3340371	4.9	0.040	3353787
o-Xylene	mg/kg	12	3340371	1.9	0.020	3353787
F1 (C6-C10) - BTEX	mg/kg	1000	3340371	<12	12	3353787
(C6-C10)	mg/kg	1100	3340371	14	12	3353787
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	120	3340371	103	N/A	3353787
D10-ETHYLBENZENE (sur.)	%	98	3340371	123	N/A	3353787
D4-1,2-DICHLOROETHANE (sur.)	%	89	3340371	109	N/A	3353787
D8-TOLUENE (sur.)	%	105	3340371	100	N/A	3353787
O-TERPHENYL (sur.)	%	77	3340763	94	N/A	3353886

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18113		Q18116		
Sampling Date		2009/08/05 14:30		2009/08/05 14:36		
COC Number		80974		80974		
	Units	09-707	QC Batch	09-709	RDL	QC Batch

Physical Properties						
Moisture	%	15	3353837	12	0.3	3342179
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	240	3353886	<10	10	3340772
F3 (C16-C34 Hydrocarbons)	mg/kg	52	3353886	<10	10	3340772
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3353886	<10	10	3340772
Reached Baseline at C50	mg/kg	Yes	3353886	Yes	N/A	3340772
Volatiles						
Benzene	mg/kg	0.30	3353787	0.072	0.0050	3340371
Toluene	mg/kg	16	3353787	0.036	0.020	3340371
Ethylbenzene	mg/kg	6.3	3353787	2.1	0.010	3340371
Xylenes (Total)	mg/kg	37	3353787	7.9	0.040	3340371
m & p-Xylene	mg/kg	27	3353787	5.4	0.040	3340371
o-Xylene	mg/kg	10	3353787	2.5	0.020	3340371
F1 (C6-C10) - BTEX	mg/kg	650	3353787	110	12	3340371
(C6-C10)	mg/kg	710	3353787	120	12	3340371
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	92	3353787	97	N/A	3340371
D10-ETHYLBENZENE (sur.)	%	114	3353787	103	N/A	3340371
D4-1,2-DICHLOROETHANE (sur.)	%	106	3353787	84	N/A	3340371
D8-TOLUENE (sur.)	%	106	3353787	104	N/A	3340371
O-TERPHENYL (sur.)	%	95	3353886	72	N/A	3340772

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18117	Q18118	Q18119		
Sampling Date		2009/08/05 14:39	2009/08/05 14:42	2009/08/06 10:30		
COC Number		80974	80974	80974		
	Units	09-710	09-711	09-712	RDL	QC Batch

Physical Properties						
Moisture	%	11	10	12	0.3	3342179
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	550	10	3340772
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	45	10	3340772
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340772
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3340772
Volatiles						
Benzene	mg/kg	0.047	0.047	0.17	0.0050	3340371
Toluene	mg/kg	0.071	0.082	0.66	0.020	3340371
Ethylbenzene	mg/kg	1.1	1.1	3.6	0.010	3340371
Xylenes (Total)	mg/kg	1.5	1.5	18	0.040	3340371
m & p-Xylene	mg/kg	1.4	1.4	12	0.040	3340371
o-Xylene	mg/kg	0.11	0.12	5.5	0.020	3340371
F1 (C6-C10) - BTEX	mg/kg	22	22	540	12	3340371
(C6-C10)	mg/kg	25	24	560	12	3340371
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	99	111	N/A	3340371
D10-ETHYLBENZENE (sur.)	%	91	91	92	N/A	3340371
D4-1,2-DICHLOROETHANE (sur.)	%	91	87	88	N/A	3340371
D8-TOLUENE (sur.)	%	101	101	104	N/A	3340371
O-TERPHENYL (sur.)	%	71	88	78	N/A	3340772
N/A = Not Applicable RDL = Reportable Detection Limit						

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18119		Q18120		
Sampling Date		2009/08/06 10:30		2009/08/06 10:30		
COC Number		80974		80975		
	Units	09-712 Lab-Dup	QC Batch	09-713	RDL	QC Batch

Physical Properties						
Moisture	%	N/A	3342179	9.5	0.3	3342308
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	350	3340772	<10	10	3340772
F3 (C16-C34 Hydrocarbons)	mg/kg	40	3340772	<10	10	3340772
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3340772	<10	10	3340772
Reached Baseline at C50	mg/kg	Yes	3340772	Yes	N/A	3340772
Volatiles						
Benzene	mg/kg	N/A	3340371	0.029	0.0050	3340344
Toluene	mg/kg	N/A	3340371	<0.020	0.020	3340344
Ethylbenzene	mg/kg	N/A	3340371	0.16	0.010	3340344
Xylenes (Total)	mg/kg	N/A	3340371	0.13	0.040	3340344
m & p-Xylene	mg/kg	N/A	3340371	0.13	0.040	3340344
o-Xylene	mg/kg	N/A	3340371	<0.020	0.020	3340344
F1 (C6-C10) - BTEX	mg/kg	N/A	3340371	<12	12	3340344
(C6-C10)	mg/kg	N/A	3340371	<12	12	3340344
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	N/A	3340371	101	N/A	3340344
D10-ETHYLBENZENE (sur.)	%	N/A	3340371	94	N/A	3340344
D4-1,2-DICHLOROETHANE (sur.)	%	N/A	3340371	104	N/A	3340344
D8-TOLUENE (sur.)	%	N/A	3340371	97	N/A	3340344
O-TERPHENYL (sur.)	%	69	3340772	78	N/A	3340772
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18120	Q18121	Q18122		
Sampling Date		2009/08/06 10:30	2009/08/06 10:50	2009/08/06 14:30		
COC Number		80975	80975	80975		
	Units	09-713 Lab-Dup	09-714	09-715	RDL	QC Batch

Physical Properties						
Moisture	%	9.9	20	15	0.3	3342308
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	N/A	14	<10	10	3340772
F3 (C16-C34 Hydrocarbons)	mg/kg	N/A	32	<10	10	3340772
F4 (C34-C50 Hydrocarbons)	mg/kg	N/A	<10	<10	10	3340772
Reached Baseline at C50	mg/kg	N/A	Yes	Yes	N/A	3340772
Volatiles						
Benzene	mg/kg	0.027	<0.0050	<0.0050	0.0050	3340344
Toluene	mg/kg	<0.020	1.7	<0.020	0.020	3340344
Ethylbenzene	mg/kg	0.16	1.2	<0.010	0.010	3340344
Xylenes (Total)	mg/kg	0.14	7.5	<0.040	0.040	3340344
m & p-Xylene	mg/kg	0.14	5.4	<0.040	0.040	3340344
o-Xylene	mg/kg	<0.020	2.1	<0.020	0.020	3340344
F1 (C6-C10) - BTEX	mg/kg	<12	230	<12	12	3340344
(C6-C10)	mg/kg	<12	240	<12	12	3340344
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	93	116	102	N/A	3340344
D10-ETHYLBENZENE (sur.)	%	100	103	95	N/A	3340344
D4-1,2-DICHLOROETHANE (sur.)	%	103	104	106	N/A	3340344
D8-TOLUENE (sur.)	%	97	99	102	N/A	3340344
O-TERPHENYL (sur.)	%	N/A	89	67	N/A	3340772

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18123	Q18124	Q18126		
Sampling Date		2009/08/06 14:33	2009/08/06 14:36	2009/08/06 14:42		
COC Number		80975	80975	80975		
	Units	09-716	09-717	09-719	RDL	QC Batch

Physical Properties						
Moisture	%	15	13	13	0.3	3342308
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340772
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340772
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340772
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3340772
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340344
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3340344
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3340344
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3340344
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3340344
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3340344
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3340344
(C6-C10)	mg/kg	<12	<12	<12	12	3340344
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96	99	99	N/A	3340344
D10-ETHYLBENZENE (sur.)	%	88	95	93	N/A	3340344
D4-1,2-DICHLOROETHANE (sur.)	%	104	106	106	N/A	3340344
D8-TOLUENE (sur.)	%	102	97	100	N/A	3340344
O-TERPHENYL (sur.)	%	71	65	66	N/A	3340772

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18127	Q18128	Q18130		
Sampling Date		2009/08/06 14:45	2009/08/06 14:48	2009/08/06 14:54		
COC Number		80975	80975	80975		
	Units	09-720	09-721	09-723	RDL	QC Batch

Physical Properties						
Moisture	%	15	15	18	0.3	3342308
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	100	10	3340772
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	94	10	3340772
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340772
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3340772
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340344
Toluene	mg/kg	<0.020	<0.020	0.10	0.020	3340344
Ethylbenzene	mg/kg	<0.010	<0.010	0.54	0.010	3340344
Xylenes (Total)	mg/kg	<0.040	<0.040	3.2	0.040	3340344
m & p-Xylene	mg/kg	<0.040	<0.040	2.4	0.040	3340344
o-Xylene	mg/kg	<0.020	<0.020	0.83	0.020	3340344
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3340344
(C6-C10)	mg/kg	<12	<12	13	12	3340344
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	94	103	92	N/A	3340344
D10-ETHYLBENZENE (sur.)	%	97	95	100	N/A	3340344
D4-1,2-DICHLOROETHANE (sur.)	%	105	104	106	N/A	3340344
D8-TOLUENE (sur.)	%	92	104	98	N/A	3340344
O-TERPHENYL (sur.)	%	61	77	70	N/A	3340772

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18132	Q18134	Q18135		
Sampling Date		2009/08/06 15:00	2009/08/06 15:06	2009/08/06 15:09		
COC Number		81135	81135	81135		
	Units	09-725	09-727	09-728	RDL	QC Batch

Physical Properties						
Moisture	%	12	13	14	0.3	3342308
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	38	230	10	3340772
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340772
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340772
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3340772
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340344
Toluene	mg/kg	0.14	<0.020	<0.020	0.020	3340344
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3340344
Xylenes (Total)	mg/kg	0.20	<0.040	3.5	0.040	3340344
m & p-Xylene	mg/kg	0.12	<0.040	0.49	0.040	3340344
o-Xylene	mg/kg	0.074	<0.020	3.0	0.020	3340344
F1 (C6-C10) - BTEX	mg/kg	<12	<12	650	12	3340344
(C6-C10)	mg/kg	<12	<12	660	12	3340344
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	102	102	103	N/A	3340344
D10-ETHYLBENZENE (sur.)	%	99	87	104	N/A	3340344
D4-1,2-DICHLOROETHANE (sur.)	%	103	122	106	N/A	3340344
D8-TOLUENE (sur.)	%	91	97	96	N/A	3340344
O-TERPHENYL (sur.)	%	66	70	65	N/A	3340772

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18137	Q18138	Q18139		
Sampling Date		2009/08/07 10:10	2009/08/07 10:13	2009/08/07 10:16		
COC Number		81135	81135	81135		
	Units	09-730	09-731	09-732	RDL	QC Batch

Physical Properties						
Moisture	%	13	14	15	0.3	3342308
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340799
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340799
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340799
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3340799
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340344
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3340344
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3340344
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3340344
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3340344
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3340344
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3340344
(C6-C10)	mg/kg	<12	<12	<12	12	3340344
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	108	113	97	N/A	3340344
D10-ETHYLBENZENE (sur.)	%	108	97	93	N/A	3340344
D4-1,2-DICHLOROETHANE (sur.)	%	106	105	104	N/A	3340344
D8-TOLUENE (sur.)	%	102	104	102	N/A	3340344
O-TERPHENYL (sur.)	%	93	90	85	N/A	3340799

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18140	Q18140	Q18141		
Sampling Date		2009/08/07 10:19	2009/08/07 10:19	2009/08/07 10:21		
COC Number		81135	81135	81135		
	Units	09-733	09-733 Lab-Dup	09-734	RDL	QC Batch

Physical Properties						
Moisture	%	17	N/A	15	0.3	3342308
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340799
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340799
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340799
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3340799
Volatiles						
Benzene	mg/kg	<0.0050	N/A	<0.0050	0.0050	3340344
Toluene	mg/kg	<0.020	N/A	<0.020	0.020	3340344
Ethylbenzene	mg/kg	<0.010	N/A	<0.010	0.010	3340344
Xylenes (Total)	mg/kg	<0.040	N/A	<0.040	0.040	3340344
m & p-Xylene	mg/kg	<0.040	N/A	<0.040	0.040	3340344
o-Xylene	mg/kg	<0.020	N/A	<0.020	0.020	3340344
F1 (C6-C10) - BTEX	mg/kg	<12	N/A	<12	12	3340344
(C6-C10)	mg/kg	<12	N/A	<12	12	3340344
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	108	N/A	107	N/A	3340344
D10-ETHYLBENZENE (sur.)	%	97	N/A	88	N/A	3340344
D4-1,2-DICHLOROETHANE (sur.)	%	105	N/A	103	N/A	3340344
D8-TOLUENE (sur.)	%	100	N/A	86	N/A	3340344
O-TERPHENYL (sur.)	%	83	98	88	N/A	3340799

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18142	Q18143	Q18145		
Sampling Date		2009/08/08 09:00	2009/08/08 09:03	2009/08/08 09:49		
COC Number		81135	81135	81136		
	Units	09-735	09-736	09-738	RDL	QC Batch

Physical Properties						
Moisture	%	5.8	5.0	11	0.3	3342308
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	500	<10	10	3340799
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	55	<10	10	3340799
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340799
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3340799
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340344
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3340344
Ethylbenzene	mg/kg	<0.010	1.0	<0.010	0.010	3340344
Xylenes (Total)	mg/kg	<0.040	3.9	<0.040	0.040	3340344
m & p-Xylene	mg/kg	<0.040	1.8	<0.040	0.040	3340344
o-Xylene	mg/kg	<0.020	2.1	<0.020	0.020	3340344
F1 (C6-C10) - BTEX	mg/kg	<12	420	<12	12	3340344
(C6-C10)	mg/kg	<12	420	<12	12	3340344
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	110	82	113	N/A	3340344
D10-ETHYLBENZENE (sur.)	%	94	102	97	N/A	3340344
D4-1,2-DICHLOROETHANE (sur.)	%	104	104	105	N/A	3340344
D8-TOLUENE (sur.)	%	93	103	82	N/A	3340344
O-TERPHENYL (sur.)	%	90	85	94	N/A	3340799

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18147	Q18147	Q18148		
Sampling Date		2009/08/08 09:54	2009/08/08 09:54	2009/08/08 09:57		
COC Number		81136	81136	81136		
	Units	09-740	09-740 Lab-Dup	09-741	RDL	QC Batch

Physical Properties						
Moisture	%	13	11	11	0.3	3341312
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	N/A	<10	10	3340799
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	N/A	<10	10	3340799
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	N/A	<10	10	3340799
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	3340799
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340364
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3340364
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3340364
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3340364
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3340364
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3340364
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3340364
(C6-C10)	mg/kg	<12	<12	<12	12	3340364
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	88	87	N/A	3340364
D10-ETHYLBENZENE (sur.)	%	109	103	107	N/A	3340364
D4-1,2-DICHLOROETHANE (sur.)	%	95	96	95	N/A	3340364
D8-TOLUENE (sur.)	%	98	102	103	N/A	3340364
O-TERPHENYL (sur.)	%	92	N/A	89	N/A	3340799
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18150	Q18154	Q18157		
Sampling Date		2009/08/08 10:03	2009/08/08 10:14	2009/08/08 10:23		
COC Number		81136	81136	81137		
	Units	09-743	09-747	09-750	RDL	QC Batch

Physical Properties						
Moisture	%	11	15	13	0.3	3341312
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	450	<10	<10	10	3340799
F3 (C16-C34 Hydrocarbons)	mg/kg	250	<10	<10	10	3340799
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340799
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3340799
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340364
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3340364
Ethylbenzene	mg/kg	0.12	<0.010	<0.010	0.010	3340364
Xylenes (Total)	mg/kg	0.56	<0.040	<0.040	0.040	3340364
m & p-Xylene	mg/kg	0.35	<0.040	<0.040	0.040	3340364
o-Xylene	mg/kg	0.21	<0.020	<0.020	0.020	3340364
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3340364
(C6-C10)	mg/kg	<12	<12	<12	12	3340364
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	108	101	91	N/A	3340364
D10-ETHYLBENZENE (sur.)	%	110	108	107	N/A	3340364
D4-1,2-DICHLOROETHANE (sur.)	%	96	96	93	N/A	3340364
D8-TOLUENE (sur.)	%	102	104	103	N/A	3340364
O-TERPHENYL (sur.)	%	89	99	92	N/A	3340799

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18158	Q18161	Q18162		
Sampling Date		2009/08/08 10:26	2009/08/08 10:35	2009/08/08 10:49		
COC Number		81137	81137	81137		
	Units	09-751	09-754	09-755	RDL	QC Batch

Physical Properties						
Moisture	%	13	12	16	0.3	3341312
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	120	<10	10	3340799
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	18	<10	10	3340799
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3340799
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3340799
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340364
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3340364
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3340364
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3340364
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3340364
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3340364
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3340364
(C6-C10)	mg/kg	<12	<12	<12	12	3340364
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	102	92	N/A	3340364
D10-ETHYLBENZENE (sur.)	%	109	108	108	N/A	3340364
D4-1,2-DICHLOROETHANE (sur.)	%	95	97	92	N/A	3340364
D8-TOLUENE (sur.)	%	102	100	100	N/A	3340364
O-TERPHENYL (sur.)	%	90	92	100	N/A	3340799

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18164	Q18167	Q18168		
Sampling Date		2009/08/08 10:54	2009/08/08 11:03	2009/08/08 11:06		
COC Number		81137	81137	80976		
	Units	09-757	09-760	09-761	RDL	QC Batch

Physical Properties						
Moisture	%	13	16	16	0.3	3341312
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3341024
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	<10	10	3341024
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3341024
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3341024
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340364
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3340364
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3340364
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3340364
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3340364
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3340364
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3340364
(C6-C10)	mg/kg	<12	<12	<12	12	3340364
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96	91	91	N/A	3340364
D10-ETHYLBENZENE (sur.)	%	102	107	108	N/A	3340364
D4-1,2-DICHLOROETHANE (sur.)	%	93	95	95	N/A	3340364
D8-TOLUENE (sur.)	%	101	99	101	N/A	3340364
O-TERPHENYL (sur.)	%	71	77	78	N/A	3341024

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18170	Q18173	Q18176		
Sampling Date		2009/08/08 11:12	2009/08/08 11:21	2009/08/08 11:30		
COC Number		80976	80976	80976		
	Units	09-763	09-766	09-769	RDL	QC Batch

Physical Properties						
Moisture	%	16	15	16	0.3	3341312
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3341024
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	<10	10	3341024
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3341024
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3341024
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340364
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3340364
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3340364
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3340364
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3340364
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3340364
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3340364
(C6-C10)	mg/kg	<12	<12	<12	12	3340364
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	90	87	90	N/A	3340364
D10-ETHYLBENZENE (sur.)	%	111	107	106	N/A	3340364
D4-1,2-DICHLOROETHANE (sur.)	%	96	96	97	N/A	3340364
D8-TOLUENE (sur.)	%	102	104	102	N/A	3340364
O-TERPHENYL (sur.)	%	77	82	87	N/A	3341024

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18177	Q18178	Q18179		
Sampling Date		2009/08/09 09:15	2009/08/09 09:18	2009/08/09 09:21		
COC Number		80976	80976	80976		
	Units	09-770	09-771	09-772	RDL	QC Batch

Physical Properties						
Moisture	%	9.1	10	13	0.3	3341312
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	370	660	170	10	3341024
F3 (C16-C34 Hydrocarbons)	mg/kg	32	36	<10	10	3341024
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3341024
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3341024
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3340364
Toluene	mg/kg	<0.020	0.10	14	0.020	3340364
Ethylbenzene	mg/kg	0.52	0.14	30	0.010	3340364
Xylenes (Total)	mg/kg	11	4.0	150	0.040	3340364
m & p-Xylene	mg/kg	3.2	1.2	100	0.040	3340364
o-Xylene	mg/kg	8.2	2.8	44	0.020	3340364
F1 (C6-C10) - BTEX	mg/kg	730	270	2900	12	3340364
(C6-C10)	mg/kg	740	280	3100	12	3340364
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	98	116	N/A	3340364
D10-ETHYLBENZENE (sur.)	%	88	108	111	N/A	3340364
D4-1,2-DICHLOROETHANE (sur.)	%	96	94	93	N/A	3340364
D8-TOLUENE (sur.)	%	106	104	105	N/A	3340364
O-TERPHENYL (sur.)	%	87	76	76	N/A	3341024

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18180		Q18183		
Sampling Date		2009/08/09 09:24		2009/08/09 17:20		
COC Number		80977		80977		
	Units	09-773	RDL	09-776	RDL	QC Batch

Physical Properties						
Moisture	%	14	0.3	7.5	0.3	3341312
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	730	10	<10	10	3341024
F3 (C16-C34 Hydrocarbons)	mg/kg	180	10	<10	10	3341024
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	3341024
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	3341024
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	3340364
Toluene	mg/kg	85 (1)	0.20	<0.020	0.020	3340364
Ethylbenzene	mg/kg	46 (1)	0.10	<0.010	0.010	3340364
Xylenes (Total)	mg/kg	280 (1)	0.40	<0.040	0.040	3340364
m & p-Xylene	mg/kg	200 (1)	0.40	<0.040	0.040	3340364
o-Xylene	mg/kg	76 (1)	0.20	<0.020	0.020	3340364
F1 (C6-C10) - BTEX	mg/kg	4000	12	<12	12	3340364
(C6-C10)	mg/kg	4400	12	<12	12	3340364
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	106	N/A	98	N/A	3340364
D10-ETHYLBENZENE (sur.)	%	111	N/A	108	N/A	3340364
D4-1,2-DICHLOROETHANE (sur.)	%	97	N/A	95	N/A	3340364
D8-TOLUENE (sur.)	%	102	N/A	102	N/A	3340364
O-TERPHENYL (sur.)	%	78	N/A	83	N/A	3341024

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18185		Q18187		
Sampling Date		2009/08/09 17:26		2009/08/09 17:30		
COC Number		80977		80977		
	Units	09-778	QC Batch	09-780	RDL	QC Batch

Physical Properties						
Moisture	%	13	3341312	11	0.3	3341166
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	3341024	210	10	3341024
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	3341024	11	10	3341024
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3341024	<10	10	3341024
Reached Baseline at C50	mg/kg	Yes	3341024	Yes	N/A	3341024
Volatiles						
Benzene	mg/kg	0.022	3340364	<0.0050	0.0050	3340559
Toluene	mg/kg	0.049	3340364	1.4	0.020	3340559
Ethylbenzene	mg/kg	1.6	3340364	0.79	0.010	3340559
Xylenes (Total)	mg/kg	9.7	3340364	4.7	0.040	3340559
m & p-Xylene	mg/kg	6.8	3340364	3.4	0.040	3340559
o-Xylene	mg/kg	2.9	3340364	1.3	0.020	3340559
F1 (C6-C10) - BTEX	mg/kg	<12	3340364	97	12	3340559
(C6-C10)	mg/kg	16	3340364	100	12	3340559
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	88	3340364	100	N/A	3340559
D10-ETHYLBENZENE (sur.)	%	108	3340364	99	N/A	3340559
D4-1,2-DICHLOROETHANE (sur.)	%	95	3340364	96	N/A	3340559
D8-TOLUENE (sur.)	%	102	3340364	101	N/A	3340559
O-TERPHENYL (sur.)	%	81	3341024	80	N/A	3341024
N/A = Not Applicable RDL = Reportable Detection Limit						

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18187	Q18188	Q18191		
Sampling Date		2009/08/09 17:30	2009/08/09 17:33	2009/08/09 17:42		
COC Number		80977	80977	80977		
	Units	09-780 Lab-Dup	09-781	09-784	RDL	QC Batch

Physical Properties						
Moisture	%	10	11	15	0.3	3341166
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	N/A	290	210	10	3341024
F3 (C16-C34 Hydrocarbons)	mg/kg	N/A	22	<10	10	3341024
F4 (C34-C50 Hydrocarbons)	mg/kg	N/A	<10	<10	10	3341024
Reached Baseline at C50	mg/kg	N/A	Yes	Yes	N/A	3341024
Volatiles						
Benzene	mg/kg	N/A	<0.0050	0.025	0.0050	3340559
Toluene	mg/kg	N/A	2.1	5.2	0.020	3340559
Ethylbenzene	mg/kg	N/A	1.7	3.5	0.010	3340559
Xylenes (Total)	mg/kg	N/A	11	19	0.040	3340559
m & p-Xylene	mg/kg	N/A	7.9	14	0.040	3340559
o-Xylene	mg/kg	N/A	2.9	4.8	0.020	3340559
F1 (C6-C10) - BTEX	mg/kg	N/A	230	360	12	3340559
(C6-C10)	mg/kg	N/A	250	390	12	3340559
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	N/A	105	105	N/A	3340559
D10-ETHYLBENZENE (sur.)	%	N/A	94	95	N/A	3340559
D4-1,2-DICHLOROETHANE (sur.)	%	N/A	88	88	N/A	3340559
D8-TOLUENE (sur.)	%	N/A	107	104	N/A	3340559
O-TERPHENYL (sur.)	%	N/A	78	79	N/A	3341024
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

Sampler Initials: KS

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q18191	Q18193		
Sampling Date		2009/08/09 17:42	2009/08/09 17:48		
COC Number		80977	81134		
	Units	09-784 Lab-Dup	09-786	RDL	QC Batch

Physical Properties					
Moisture	%	N/A	8.0	0.3	3341166
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	130	<10	10	3341024
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	<10	10	3341024
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3341024
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3341024
Volatiles					
Benzene	mg/kg	N/A	<0.0050	0.0050	3340559
Toluene	mg/kg	N/A	0.12	0.020	3340559
Ethylbenzene	mg/kg	N/A	0.023	0.010	3340559
Xylenes (Total)	mg/kg	N/A	0.12	0.040	3340559
m & p-Xylene	mg/kg	N/A	0.090	0.040	3340559
o-Xylene	mg/kg	N/A	0.034	0.020	3340559
F1 (C6-C10) - BTEX	mg/kg	N/A	<12	12	3340559
(C6-C10)	mg/kg	N/A	<12	12	3340559
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	N/A	97	N/A	3340559
D10-ETHYLBENZENE (sur.)	%	N/A	93	N/A	3340559
D4-1,2-DICHLOROETHANE (sur.)	%	N/A	84	N/A	3340559
D8-TOLUENE (sur.)	%	N/A	104	N/A	3340559
O-TERPHENYL (sur.)	%	80	80	N/A	3341024
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate					

Sampler Initials: KS

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		Q18087	Q18089	Q18092		
Sampling Date		2009/08/05 10:06	2009/08/05 10:12	2009/08/05 10:21		
COC Number		80972	80972	80972		
	Units	09-681	09-683	09-686	RDL	QC Batch

OIL & GREASE						
F4SG (Heavy Hydrocarbons-Grav.)	mg/kg	<500	<500	<500	500	3340768
RDL = Reportable Detection Limit						

Maxxam ID		Q18093		
Sampling Date		2009/08/05 10:24		
COC Number		80972		
	Units	09-687	RDL	QC Batch

OIL & GREASE				
F4SG (Heavy Hydrocarbons-Grav.)	mg/kg	<500	500	3340768
RDL = Reportable Detection Limit				

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		Q18136	Q18181	Q18182		
Sampling Date		2009/08/07	2009/08/09	2009/08/09		
		10:00	17:00	17:15		
COC Number		81135	80977	80977		
	Units	09-729	09-774	09-775	RDL	QC Batch

Misc. Inorganics						
pH	N/A	7.84	7.92	7.85	N/A	3341259

RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		Q18136		Q18181	Q18182		
Sampling Date		2009/08/07		2009/08/09	2009/08/09		
		10:00		17:00	17:15		
COC Number		81135		80977	80977		
	Units	09-729	RDL	09-774	09-775	RDL	QC Batch

Ext. Pet. Hydrocarbon							
EPH (C10-C19)	mg/L	0.4 (1)	0.3	<0.08	0.31	0.08	3344972
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	115	N/A	116	111	N/A	3344972

N/A = Not Applicable
 RDL = Reportable Detection Limit
 (1) Detection limits raised due to insufficient sample volume.

VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		Q18136	Q18181	Q18181		
Sampling Date		2009/08/07 10:00	2009/08/09 17:00	2009/08/09 17:00		
COC Number		81135	80977	80977		
	Units	09-729	09-774	09-774 Lab-Dup	RDL	QC Batch

Hydrocarbons						
LH (C5-C10)	ug/L	<300	<300	<300	300	3345267
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	101	100	N/A	3345267
D4-1,2-DICHLOROETHANE (sur.)	%	101	105	104	N/A	3345267
D8-TOLUENE (sur.)	%	99	100	99	N/A	3345267

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Maxxam ID		Q18182		
Sampling Date		2009/08/09 17:15		
COC Number		80977		
	Units	09-775	RDL	QC Batch

Hydrocarbons				
LH (C5-C10)	ug/L	<300	300	3345267
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	101	N/A	3345267
D4-1,2-DICHLOROETHANE (sur.)	%	101	N/A	3345267
D8-TOLUENE (sur.)	%	100	N/A	3345267

N/A = Not Applicable
RDL = Reportable Detection Limit

Package 1	4.3°C
Package 2	2.7°C
Package 3	4.7°C
Package 4	3.7°C
Package 5	5.3°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Results relate only to the items tested.

Quality Assurance Report
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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3340344 DR3	Matrix Spike [Q18121-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/12		105	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/12		102	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/12		104	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/12		99	%	60 - 140	
		Benzene	2009/08/12		88	%	60 - 140	
		Toluene	2009/08/12		NC	%	60 - 140	
		Ethylbenzene	2009/08/12		NC	%	60 - 140	
		m & p-Xylene	2009/08/12		NC	%	60 - 140	
		o-Xylene	2009/08/12		NC	%	60 - 140	
		(C6-C10)	2009/08/12		NC	%	60 - 140	
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/12		88	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/12		97	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/12		104	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/12		97	%	60 - 140	
		Benzene	2009/08/12		88	%	60 - 140	
		Toluene	2009/08/12		91	%	60 - 140	
		Ethylbenzene	2009/08/12		99	%	60 - 140	
		m & p-Xylene	2009/08/12		102	%	60 - 140	
		o-Xylene	2009/08/12		103	%	60 - 140	
		(C6-C10)	2009/08/12		90	%	80 - 120	
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/12		95	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/12		94	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/12		102	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/12		99	%	60 - 140	
		Benzene	2009/08/12	<0.0050			mg/kg	
		Toluene	2009/08/12	<0.020			mg/kg	
		Ethylbenzene	2009/08/12	<0.010			mg/kg	
		Xylenes (Total)	2009/08/12	<0.040			mg/kg	
		m & p-Xylene	2009/08/12	<0.040			mg/kg	
		o-Xylene	2009/08/12	<0.020			mg/kg	
	RPD [Q18120-01]	F1 (C6-C10) - BTEX	2009/08/12	<12			mg/kg	
		(C6-C10)	2009/08/12	<12			mg/kg	
		Benzene	2009/08/12	5.4			%	50
Toluene		2009/08/12	NC			%	50	
Ethylbenzene		2009/08/12	2.5			%	50	
Xylenes (Total)		2009/08/12	NC			%	50	
m & p-Xylene		2009/08/12	NC			%	50	
o-Xylene		2009/08/12	NC			%	50	
F1 (C6-C10) - BTEX		2009/08/12	NC			%	50	
(C6-C10)		2009/08/12	NC			%	50	
3340364 CL9	Matrix Spike [Q18148-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/12		103	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/12		107	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/12		95	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/12		100	%	60 - 140	
		Benzene	2009/08/12		99	%	60 - 140	
		Toluene	2009/08/12		100	%	60 - 140	
		Ethylbenzene	2009/08/12		111	%	60 - 140	
		m & p-Xylene	2009/08/12		108	%	60 - 140	
		o-Xylene	2009/08/12		109	%	60 - 140	
		(C6-C10)	2009/08/12		98	%	60 - 140	
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/12		98	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/12		101	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/12		99	%	60 - 140	



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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3340364 CL9	Spiked Blank	D8-TOLUENE (sur.)	2009/08/12		100	%	60 - 140	
		Benzene	2009/08/12		96	%	60 - 140	
		Toluene	2009/08/12		94	%	60 - 140	
		Ethylbenzene	2009/08/12		103	%	60 - 140	
		m & p-Xylene	2009/08/12		102	%	60 - 140	
		o-Xylene	2009/08/12		102	%	60 - 140	
		(C6-C10)	2009/08/12		97	%	80 - 120	
		Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/12		89	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/08/12		104	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/08/12		93	%	60 - 140
	D8-TOLUENE (sur.)		2009/08/12		103	%	60 - 140	
	Benzene		2009/08/12	<0.0050		mg/kg		
	Toluene		2009/08/12	<0.020		mg/kg		
	Ethylbenzene		2009/08/12	<0.010		mg/kg		
	RPD [Q18147-01]	Xylenes (Total)	2009/08/12	<0.040		mg/kg		
		m & p-Xylene	2009/08/12	<0.040		mg/kg		
		o-Xylene	2009/08/12	<0.020		mg/kg		
		F1 (C6-C10) - BTEX	2009/08/12	<12		mg/kg		
		(C6-C10)	2009/08/12	<12		mg/kg		
		Benzene	2009/08/12	NC		%	50	
		Toluene	2009/08/12	NC		%	50	
		Ethylbenzene	2009/08/12	NC		%	50	
		Xylenes (Total)	2009/08/12	NC		%	50	
		m & p-Xylene	2009/08/12	NC		%	50	
	o-Xylene	2009/08/12	NC		%	50		
	F1 (C6-C10) - BTEX	2009/08/12	NC		%	50		
	(C6-C10)	2009/08/12	NC		%	50		
3340371 CC6	Matrix Spike [Q18084-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/12		101	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/12		89	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/12		89	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/12		104	%	60 - 140	
		Benzene	2009/08/12		85	%	60 - 140	
		Toluene	2009/08/12		88	%	60 - 140	
		Ethylbenzene	2009/08/12		94	%	60 - 140	
		m & p-Xylene	2009/08/12		96	%	60 - 140	
		o-Xylene	2009/08/12		94	%	60 - 140	
		(C6-C10)	2009/08/12		116	%	60 - 140	
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/12		98	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/12		86	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/12		90	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/12		104	%	60 - 140	
		Benzene	2009/08/12		88	%	60 - 140	
		Toluene	2009/08/12		91	%	60 - 140	
		Ethylbenzene	2009/08/12		95	%	60 - 140	
		m & p-Xylene	2009/08/12		98	%	60 - 140	
		o-Xylene	2009/08/12		95	%	60 - 140	
		(C6-C10)	2009/08/12		114	%	80 - 120	
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/13		100	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/13		97	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/13		87	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/13		105	%	60 - 140	
		Benzene	2009/08/13	<0.0050		mg/kg		
		Toluene	2009/08/13	<0.020		mg/kg		
		Ethylbenzene	2009/08/13	<0.010		mg/kg		

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits			
3340371	CC6	Method Blank	Xylenes (Total)	2009/08/13	<0.040	mg/kg				
			m & p-Xylene	2009/08/13	<0.040	mg/kg				
			o-Xylene	2009/08/13	<0.020	mg/kg				
			F1 (C6-C10) - BTEX	2009/08/13	<12	mg/kg				
			(C6-C10)	2009/08/13	<12	mg/kg				
		RPD [Q18067-01]	Benzene	2009/08/13	NC	%	50			
			Toluene	2009/08/13	NC	%	50			
			Ethylbenzene	2009/08/13	NC	%	50			
			Xylenes (Total)	2009/08/13	NC	%	50			
			m & p-Xylene	2009/08/13	NC	%	50			
			o-Xylene	2009/08/13	NC	%	50			
			F1 (C6-C10) - BTEX	2009/08/13	NC	%	50			
			(C6-C10)	2009/08/13	NC	%	50			
	3340559		CL9	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/12		100	%	60 - 140
					D10-ETHYLBENZENE (sur.)	2009/08/12		119	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)			2009/08/12		105	%	60 - 140	
		D8-TOLUENE (sur.)			2009/08/12		99	%	60 - 140	
Benzene		2009/08/12				127	%	60 - 140		
Toluene		2009/08/12				128	%	60 - 140		
Ethylbenzene		2009/08/12				133	%	60 - 140		
m & p-Xylene		2009/08/12				139	%	60 - 140		
o-Xylene		2009/08/12				138	%	60 - 140		
(C6-C10)		2009/08/12				113	%	60 - 140		
Spiked Blank		4-BROMOFLUOROBENZENE (sur.)			2009/08/12		101	%	60 - 140	
		D10-ETHYLBENZENE (sur.)			2009/08/12		103	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)			2009/08/12		96	%	60 - 140	
		D8-TOLUENE (sur.)			2009/08/12		100	%	60 - 140	
		Benzene	2009/08/12		106	%	60 - 140			
		Toluene	2009/08/12		104	%	60 - 140			
		Ethylbenzene	2009/08/12		114	%	60 - 140			
		m & p-Xylene	2009/08/12		112	%	60 - 140			
		o-Xylene	2009/08/12		112	%	60 - 140			
		(C6-C10)	2009/08/12		112	%	80 - 120			
Method Blank		4-BROMOFLUOROBENZENE (sur.)	2009/08/12		94	%	60 - 140			
		D10-ETHYLBENZENE (sur.)	2009/08/12		103	%	30 - 130			
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/12		92	%	60 - 140			
		D8-TOLUENE (sur.)	2009/08/12		105	%	60 - 140			
		Benzene	2009/08/12	<0.0050		mg/kg				
		Toluene	2009/08/12	<0.020		mg/kg				
		Ethylbenzene	2009/08/12	<0.010		mg/kg				
		Xylenes (Total)	2009/08/12	<0.040		mg/kg				
		m & p-Xylene	2009/08/12	<0.040		mg/kg				
		o-Xylene	2009/08/12	<0.020		mg/kg				
		F1 (C6-C10) - BTEX	2009/08/12	<12		mg/kg				
		(C6-C10)	2009/08/12	<12		mg/kg				
		RPD	Benzene	2009/08/12	NC		%	50		
	Toluene		2009/08/12	NC		%	50			
	Ethylbenzene		2009/08/12	NC		%	50			
	Xylenes (Total)		2009/08/12	NC		%	50			
	m & p-Xylene		2009/08/12	NC		%	50			
	o-Xylene		2009/08/12	NC		%	50			
	F1 (C6-C10) - BTEX		2009/08/12	NC		%	50			
(C6-C10)	2009/08/12		NC		%	50				
3340763	LSH		Matrix Spike [Q18086-02]	O-TERPHENYL (sur.)	2009/08/12		78	%	50 - 130	



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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3340763 LSH	Matrix Spike [Q18086-02]	F2 (C10-C16 Hydrocarbons)	2009/08/12		86	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/12		NC	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/12		78	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/12		73	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/12		88	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/12		106	%	80 - 120
	Method Blank	F4 (C34-C50 Hydrocarbons)	2009/08/12		83	%	80 - 120
		O-TERPHENYL (sur.)	2009/08/12		76	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/12		<10		mg/kg
	RPD [Q18086-02]	F3 (C16-C34 Hydrocarbons)	2009/08/12		<10		mg/kg
		F4 (C34-C50 Hydrocarbons)	2009/08/12		<10		mg/kg
		F2 (C10-C16 Hydrocarbons)	2009/08/12		NC	%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/12		16.1	%	50
		F4 (C34-C50 Hydrocarbons)	2009/08/12		3.2	%	50
3340768 JC7	Method Blank	F4SG (Heavy Hydrocarbons-Grav.)	2009/08/13	<500		mg/kg	
3340772 LSH	Matrix Spike [Q18119-02]	O-TERPHENYL (sur.)	2009/08/12		61	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/12		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/12		82	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/12		70	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/12		63	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/12		111	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/12		108	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/08/12		87	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/08/12		66	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/12		<10		mg/kg
		F3 (C16-C34 Hydrocarbons)	2009/08/12		<10		mg/kg
		F4 (C34-C50 Hydrocarbons)	2009/08/12		<10		mg/kg
	RPD [Q18119-02]	F2 (C10-C16 Hydrocarbons)	2009/08/12		43.8	%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/12		NC	%	50
F4 (C34-C50 Hydrocarbons)		2009/08/12		NC	%	50	
3340799 LSH	Matrix Spike [Q18140-02]	O-TERPHENYL (sur.)	2009/08/13		88	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/13		92	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/13		90	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/13		94	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/13		89	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/13		111	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/13		94	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/08/13		94	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/08/13		95	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/13		<10		mg/kg
		F3 (C16-C34 Hydrocarbons)	2009/08/13		<10		mg/kg
		F4 (C34-C50 Hydrocarbons)	2009/08/13		<10		mg/kg
	RPD [Q18140-02]	F2 (C10-C16 Hydrocarbons)	2009/08/13		NC	%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/13		NC	%	50
F4 (C34-C50 Hydrocarbons)		2009/08/13		NC	%	50	
3341024 AM7	Matrix Spike [Q18191-02]	O-TERPHENYL (sur.)	2009/08/12		84	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/12		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/12		67	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/12		75	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/12		80	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/12		91	%	80 - 120

Quality Assurance Report (Continued)

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3341024 AM7	Spiked Blank	F3 (C16-C34 Hydrocarbons)	2009/08/12		95	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/08/12		82	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/08/12			76	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/12	<10			mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/12	<10			mg/kg	
	RPD [Q18191-02]	F4 (C34-C50 Hydrocarbons)	2009/08/12	<10			mg/kg	
		F2 (C10-C16 Hydrocarbons)	2009/08/12	45.6			%	50
F3 (C16-C34 Hydrocarbons)		2009/08/12	NC			%	50	
3341166 SR7	Method Blank	Moisture	2009/08/12	<0.3		%		
		RPD [Q18187-01]	Moisture	2009/08/12	8.3		%	20
3341259 SB8	Calibration Check	pH	2009/08/12		100	%	97 - 103	
		RPD	pH	2009/08/12	0.3		%	5
3341312 SR7	Method Blank	Moisture	2009/08/12	<0.3		%		
		RPD [Q18147-01]	Moisture	2009/08/12	10.1		%	20
3342179 SR7	Method Blank	Moisture	2009/08/12	<0.3		%		
		RPD [Q18067-01]	Moisture	2009/08/12	4.3		%	20
3342308 SR7	Method Blank	Moisture	2009/08/12	<0.3		%		
		RPD [Q18120-01]	Moisture	2009/08/12	4.1		%	20
3344972 IT1	Method Blank	O-TERPHENYL (sur.)	2009/08/13		109	%	50 - 130	
		EPH (C10-C19)	2009/08/13	<0.08			mg/L	
3345267 MM5	Matrix Spike [Q18182-02]	4-BROMOFLUOROBENZENE (sur.)	2009/08/13		102	%	70 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/13		104	%	70 - 130	
		D8-TOLUENE (sur.)	2009/08/13		99	%	70 - 130	
	QC Standard	4-BROMOFLUOROBENZENE (sur.)	2009/08/13		100	%	70 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/13		109	%	70 - 130	
		D8-TOLUENE (sur.)	2009/08/13		97	%	70 - 130	
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/13		101	%	70 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/13		107	%	70 - 130	
		D8-TOLUENE (sur.)	2009/08/13		98	%	70 - 130	
	Method Blank	LH (C5-C10)	2009/08/13	<300			ug/L	
		4-BROMOFLUOROBENZENE (sur.)	2009/08/13		100	%	70 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/13		107	%	70 - 130	
	RPD [Q18181-02]	D8-TOLUENE (sur.)	2009/08/13		99	%	70 - 130	
		LH (C5-C10)	2009/08/13	NC			%	30
3353787 DR3	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/18		115	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/18		125	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/18		108	%	60 - 140	
	Spiked Blank	D8-TOLUENE (sur.)	2009/08/18		98	%	60 - 140	
		Benzene	2009/08/18		99	%	60 - 140	
		Toluene	2009/08/18		107	%	60 - 140	
		Ethylbenzene	2009/08/18		117	%	60 - 140	
		m & p-Xylene	2009/08/18		121	%	60 - 140	
		o-Xylene	2009/08/18		124	%	60 - 140	
		(C6-C10)	2009/08/18		101	%	60 - 140	
		4-BROMOFLUOROBENZENE (sur.)	2009/08/18		102	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/18		99	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/18		86	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/18		103	%	60 - 140	
		Benzene	2009/08/18		99	%	60 - 140	
		Toluene	2009/08/18		99	%	60 - 140	
		Ethylbenzene	2009/08/18		105	%	60 - 140	
		m & p-Xylene	2009/08/18		104	%	60 - 140	
o-Xylene	2009/08/18		99	%	60 - 140			

Quality Assurance Report (Continued)

Maxxam Job Number: EA942080

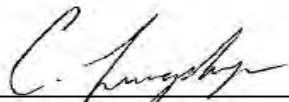
QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3353787 DR3	Spiked Blank	(C6-C10)	2009/08/18		118	%	80 - 120	
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/18		98	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/18		111	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/18		114	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/18		103	%	60 - 140	
		Benzene	2009/08/18	<0.0050		mg/kg		
		Toluene	2009/08/18	<0.020		mg/kg		
		Ethylbenzene	2009/08/18	<0.010		mg/kg		
		Xylenes (Total)	2009/08/18	<0.040		mg/kg		
		m & p-Xylene	2009/08/18	<0.040		mg/kg		
		o-Xylene	2009/08/18	<0.020		mg/kg		
		F1 (C6-C10) - BTEX	2009/08/18	<12		mg/kg		
		(C6-C10)	2009/08/18	<12		mg/kg		
		RPD	Benzene	2009/08/18	40.0		%	50
			Toluene	2009/08/18	NC		%	50
			Ethylbenzene	2009/08/18	36.4		%	50
			Xylenes (Total)	2009/08/18	40.0		%	50
			m & p-Xylene	2009/08/18	42.9		%	50
			o-Xylene	2009/08/18	NC		%	50
			F1 (C6-C10) - BTEX	2009/08/18	NC		%	50
		(C6-C10)	2009/08/18	NC		%	50	
3353837 SR7	Method Blank	Moisture	2009/08/18	<0.3		%		
	RPD	Moisture	2009/08/18	3.2		%	20	
3353886 MB7	Matrix Spike	O-TERPHENYL (sur.)	2009/08/18		84	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/18		86	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/08/18		85	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/08/18		85	%	50 - 130	
		Spiked Blank	O-TERPHENYL (sur.)	2009/08/18		97	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2009/08/18		102	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2009/08/18		104	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2009/08/18		118	%	80 - 120
		Method Blank	O-TERPHENYL (sur.)	2009/08/18		112	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2009/08/18	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2009/08/18	<10		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2009/08/18	<10		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2009/08/18	NC		%	50
			F3 (C16-C34 Hydrocarbons)	2009/08/18	14.9		%	50
		F4 (C34-C50 Hydrocarbons)	2009/08/18	3.4		%	50	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Validation Signature Page

Maxxam Job #: A942080

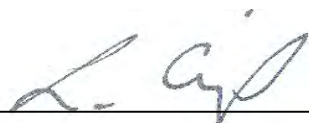
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



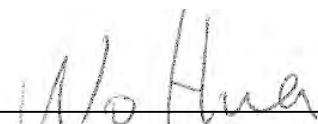
CORI LUCYSHYN, Analyst II



DIANE ZACHARKIW, Scientific Specialist



LISA CUMMINGS, Extractables Supervisor



HUA WO,

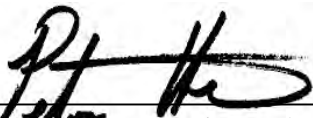


ORLA JORGENSEN, Organics Supervisor

Validation Signature Page

Maxxam Job #: A942080

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



PETER CHOW, Senior Analyst



ASHLEY NIVISON, BBY Customer Service

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

RT/JA

80972

CHAIN OF CUSTODY

A942080

Page: 1 of 10

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ANA GALVE

Address: ana.galve@aecom.com

Prov: _____ **PC:** _____

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:
AECOM (Dara Schmidt)
2540 Kensington Rd NW
Calgary, AB
Prov: _____ PC: T2N 3S3
Ph: 403-450-9921 Fax: 403-270-4822
(Site) (Office)

PO # / AFE #: _____

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: _____

Sampler's Initials: KS

DETECTION LIMIT REQUIREMENTS: Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER _____

REPORT DISTRIBUTION: EMAIL ADDRESS(S): _____

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: 09-Aug-13
 REGULAR Turnaround (5 to 7 Days)

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)	*HOLD for 60 Days	# of Containers Submitted			
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	BTEX F1	BTEX F1-F2	Routine Water Package	Turb				Total	Regulated METALS (CCME / AT1)	Mercury
1	09-677	S	09-Aug-4 7:00	X													
2	09-678		09-Aug-4 7:05	X													
3	09-679		09-Aug-5 10:00	X													
4	09-680		10:03	X													
5	09-681		10:06	X													
6	09-682		10:09	X													
7	09-683		10:12	X													
8	09-684		10:15	X													
9	09-685		10:18	X													
10	09-686		10:21	X													
11	09-687		10:24	X													
12	09-688		10:27	X													

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Kate Scott **Date/Time:** 09-Aug-9 10:27 KS

Sign and Print: K Scott KS

JARS USED & NOT SUBMITTED: 11/08/09 08:15h
Received By: RT
Temperature: 3, 4, 6, 4, 3, 4, 2, 3, 4, 2
Ice: Y
CUSTODY SEAL: YES (NO)

COMMENTS/SPECIAL INSTRUCTIONS:

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galue
Address: ana.galue@aecom.com
Prov: AB **PC:** T2N 3S3
Contact #s: Ph: 403.270.9200 Fax: 403.270.8399

Report To:
 Dara Schmidt
 2540 Kensington Rd NW
 Calgary
Prov: AB **PC:** T2N 3S3
 Ph: 403.450.9923 Fax: 403.270.4822
 31R office

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location:
Sampler's Initials: KS

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: 09 Aug 13
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)						OTHER TEST(S)																		
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment / CP Metals	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC	*HOLD for 60 Days
1 09-689	S	09 Aug 5 10:30	X																																X	2	
2 09-690		11:15 208	X																																		
3 09-691		11:18 206	X																																		
4 09-692		11:21 09	X																																		X
5 09-693		11:24 12	X																																		X
6 09-694		11:27 15	X																																		X
7 09-695		11:30 18	X																																		
8 09-696		11:33 21	X																																		
9 09-697		2:00 24	X																																		
10 09-698		2:03 27	X																																		
11 09-699		2:06 30	X																																	X	
12 09-700		2:09 33	X																																	X	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager. Maxxam Job #:

Relinquished By: PGA Date/Time: _____
 Sign and Print: _____
 COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By		Temperature			Ice
	11/08/09		RT			
	08:15h		3	4	6	
			2	3	5	
			4	4	4	
		4	3	4	Y	
		4	6	5		
CUSTODY SEAL YES / (NO)						

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galve
Address: Ana.galve@aecom.com
Prov: **PC:**
Contact #s: **Ph:** **Fax:**

Report To:
 Dara Schmidt
Prov: **PC:**
Ph: **Fax:**

PO # / AFE #:
Quotation #:
Project #: 2977-371-00
Project Name:
Location:
Sampler's Initials: KS

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: 09-Aug-13
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)					OTHER TEST(S)			*HOLD for 60 Days # of Containers Submitted		
			BTEX F1-F4 Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved		Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC
1 09-701	S	09-Aug-5 2:12	X														X	2
2 09-702		2:15	X														X	
3 09-703		2:18	X														X	
4 09-704		2:21	X														X	
5 09-705		2:24	X														X	
6 09-706		2:27	X														X	
7 09-707		2:30	X														X	
8 09-708		2:33	X														X	
9 09-709		2:36	X														X	
10 09-710		2:39	X														X	
11 09-711		2:42	X														X	
12 09-712	S	09-Aug-6 10:30	X														X	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: PG1 Date/Time: _____
 Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By	Temperature		Ice
	11/08/09 08:15h	RT	3 4 6 2 3 3 4 4 3 4 4 6	
CUSTODY SEAL YES / (NO)				

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galue
Address: ana.galue@aecom.com
Prov: _____ **PC:** _____
Contact #s: **Ph:** _____ **Fax:** _____

Report To: Dana Schmidt
Prov: _____ **PC:** _____
Ph: _____ **Fax:** _____

PO # / AFE #: _____
Quotation #: _____
Project #: _____
Project Name: _____
Location: _____
Sampler's Initials: _____

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use
 AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S): _____

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: 09-Aug-13
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)					OTHER TEST(S)																								
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals*	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC	HOLD for 60 Days
1 09-713	S	09-Aug-6 10:35	X																																	2	
2 09-714	S	09-Aug-6 10:50	X																																		
3 09-715	S	09-Aug-6 2:30	X																																		
4 09-716		2:33	X																																		
5 09-717		2:36	X																																		
6 09-718		2:39	X																																		X
7 09-719		2:42	X																																		
8 09-720		2:45	X																																		
9 09-721		2:48	X																																		
10 09-722		2:51	X																																		X
11 09-723		2:54	X																																		
12 09-724		2:57	X																																		X

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: PGI Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By	Temperature	Ice				
				11/08/09	RT	3	4
08:15h		4	3		4	3	
		4	3		4	3	
		4	3		4	3	
					4	3	Y

CUSTODY SEAL YES (NO)

Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (877) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

Invoice To: Require Report? Yes No

Company Name: AECom

Contact Name: _____

Address: ana.galwe@aecom.com

Prov: _____ PC: _____

Contact #: _____ Ph: _____ Fax: _____

Report To:

Prov: _____ PC: _____

Ph: _____ Fax: _____

PO # / AFE #:

Quotation #:

Project #:

Project Name:

Location:

Sampler's Initials:

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: 09-Aug-13

REGULAR Turnaround (5 to 7 Days)

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)						OTHER TEST(S)			*HOLD for 60 Days	# of Containers Submitted						
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered			Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	PH	TCH	TVH
1	09-725	S	09-Aug-6 3:00	X																			2	
2	09-726		09-Aug-6 3:03	X																				X
3	09-727		3:06	X																				
4	09-728		3:09	X																				
5	09-729	W	09-Aug-7 10:00															X	X	X				2
6	09-730	S	10:10	X																				
7	09-731		10:13																					
8	09-732		10:16																					
9	09-733		10:19																					
10	09-734		10:21																					
11	09-735	S	09-Aug-8 9:00	X																				
12	09-736		9:03	X																				

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: PHI Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	11/08/09	Received By <u>RT</u>	Temperature			Ice
	08:15h		3	4	5	
		4	3	3		
		4	4	5		
CUSTODY SEAL YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>						

Invoice To: Require Report? Yes No

Company Name: _____

Contact Name: _____

Address: ana.galve.com

Prov: _____ **PC:** _____

Contact #s: **Ph:** _____ **Fax:** _____

Report To:

Prov: _____ **PC:** _____

Ph: _____ **Fax:** _____

PO # / AFE #: _____

Quotation #: _____

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S): _____

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)							OTHER TEST(S)					
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	*HOLD for 60 Days	# of Containers Submitted
1 09-737	S	09 Aug-8 9:46																	X	2
2 09-738		9:49	X																	X
3 09-739		9:51																		X
4 09-740		9:54	X																	X
5 09-741		9:57	X																	X
6 09-742		10:00																		X
7 09-743		10:03	X																	X
8 09-744		10:06																		X
9 09-745		10:09																		X
10 09-746		10:11																		X
11 09-747		10:14	X																	X
12 09-748		10:17																		X

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager. Maxxam Job #:

Relinquished By: PGI Date/Time: _____

Sign and Print: _____

JARS USED & NOT SUBMITTED: 11/08/09 Received By: RT

08:15h

CUSTODY SEAL	YES	NO	Temperature			Ice
			3	4	6	
3			3	4	6	Y
2			3	3	3	
4			4	4	6	
4			3	3	4	
4			4	6	6	

COMMENTS/SPECIAL INSTRUCTIONS: _____

Invoice To: Require Report? Yes No

Company Name: _____
 Contact Name: _____
 Address: _____
 Prov: _____ PC: _____
 Contact #s: Ph: _____ Fax: _____

Report To:

Prov: _____ PC: _____
 Ph: _____ Fax: _____

PO # / AFE #: _____
 Quotation #: _____
 Project #: _____
 Project Name: _____
 Location: _____
 Sampler's Initials: _____

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
 Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

	SOILS (footnotes defined on back)							WATERS (footnotes defined on back)							OTHER TEST(S)			
	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	*HOLD for 60 Days	# of Containers Submitted
1																	X	2
2							X											
3							X											
4																		X
5																		X
6							X											
7							X											
8																		X
9							X											
10																		X
11																		X
12							X											X

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: PGI Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	11/08/09	Received By RT	Temperature			Ice
	08:15h		3	4	6	
CUSTODY SEAL YES / (NO)			4	4	3	Y
			4	6	5	

Invoice To: Require Report? Yes No

Company Name: _____

Contact Name: _____

Address: _____

Prov: _____ PC: _____

Contact #s: Ph: _____ Fax: _____

Report To:

Prov: _____ PC: _____

Ph: _____ Fax: _____

PO # / AFE #: _____

Quotation #: _____

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S): _____

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)				*HOLD for 60 Days	# of Containers Submitted		
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment (CP Metals) ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1) <input type="checkbox"/>	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved			Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved
09-761	S	09-Aug-8 11:06	X															2
09-762	S	11:09	X															X
09-763	S	11:12	X															X
09-764	S	11:15																X
09-765	S	11:18																X
09-766	S	11:21	X															X
09-767	S	11:24																X
09-768	S	11:27																X
09-769	S	11:30	X															X
09-770	S	09-Aug-9 9:15	X															2
09-771	S	9:18	X															1
09-772	S	9:21	X															1

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #: _____

Relinquished By: Ph1 Date/Time: _____

Sign and Print: _____

# JARS USED & NOT SUBMITTED	11/08/09 08:15h	Received By RT	Temperature	Ice
			3 4 4 4	3 3 3 3
			6 6 6 6	Y
CUSTODY SEAL	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>			

Invoice To: Require Report? Yes No
Company Name: _____
Contact Name: _____
Address: _____
Prov: _____ **PC:** _____
Contact #s: **Ph:** _____ **Fax:** _____

Report To:

Prov: _____ **PC:** _____
Ph: _____ **Fax:** _____

PO # / AFE #: _____
Quotation #: _____
Project #: _____
Project Name: _____
Location: _____
Sampler's Initials: _____

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

		SOILS (footnotes defined on back)										WATERS (footnotes defined on back)										OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted																						
Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment (CP Metals) ²	<input type="checkbox"/> Paint Filter	<input type="checkbox"/> Flashpoint	<input type="checkbox"/> pH (1:1)	TCLP	<input type="checkbox"/> BTEX	<input type="checkbox"/> Metals	<input type="checkbox"/> BTEX F1	<input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2	<input type="checkbox"/> BTEX F1-F4	Routine Water Package	<input type="checkbox"/> Turb	<input type="checkbox"/> F	Total	<input type="checkbox"/> Preserved	<input type="checkbox"/> Not Preserved	Dissolved	<input type="checkbox"/> Preserved		<input type="checkbox"/> Not Preserved	Filtered	<input type="checkbox"/> Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC	pH	RTK	TVH								
1	09-773	S	09-Aug-99:24	X																																								2				
2	09-774	W	09-Aug-9 5:00																																					XXX				6				
3	09-775	W	5:45																																						XXX				6			
4	09-774	S	5:20	X																																							2					
5	09-777		5:23																																								X	2				
6	09-778		5:20	X																																									X	1		
7	09-779		5:29																																										X			
8	09-780		5:30	X																																										X		
9	09-781		5:33	X																																										X		
10	09-782		5:36																																											X		
11	09-783		5:39																																												X	
12	09-784		5:42	X																																											X	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: PG1 Date/Time: _____
Sign and Print: _____
COMMENTS/SPECIAL INSTRUCTIONS: _____

JARS USED & NOT SUBMITTED: _____
Received By: _____
Temperature: 3 | 4 | 6
2 | 3 | 3
4 | 4 | 6
4 | 3 | 4
4 | 6 | 6
Ice: Y
CUSTODY SEAL: YES NO

Invoice To: Require Report? Yes No

Company Name: _____

Contact Name: _____

Address: _____

Prov: _____ **PC:** _____

Contact #s: **Ph:** _____ **Fax:** _____

Report To: _____

Prov: _____ **PC:** _____

Ph: _____ **Fax:** _____

PO # / AFE #: _____

Quotation #: _____

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S): _____

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: _____

REGULAR Turnaround (5 to 7 Days)

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)						WATERS (footnotes defined on back)						OTHER TEST(S)				
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	*HOLD for 60 Days
1	09-785	S	09-Aug-5 5:45																X	2
2	09-786	L	5:46	X																
3	09-787	H	5:51																X	1
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager. Maxxam Job #: _____

Relinquished By: PGI Date/Time: _____

Sign and Print: _____

# JARS USED & NOT SUBMITTED	Received By		Temperature			Ice
	11/08/09	RT	3	4	6	
	08:15h		2	3	3	
			4	4	3	
CUSTODY SEAL		YES	NO	4	6	6



Your Project #: 2977-371-00
 Your C.O.C. #: 80978, 80979, 80980

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/08/25

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A942959

Received: 2009/08/14, 9:00

Sample Matrix: Soil
 # Samples Received: 21

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	1	2009/08/14	2009/08/15	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	13	2009/08/14	2009/08/16	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	7	2009/08/17	2009/08/18	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	14	2009/08/14	2009/08/15	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	7	2009/08/17	2009/08/18	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	14	N/A	2009/08/17	EENVSOP-00139	Carter SSMA 51.2
Moisture	7	N/A	2009/08/18	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	1	2009/08/14	2009/08/15	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1

Sample Matrix: Water
 # Samples Received: 2

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/MTBE LH, VH, F1 SIM/MS (1)	2	2009/08/17	2009/08/17	BRN-SOP-00304 R10.0	Based on EPA 8260B
pH	2	N/A	2009/08/16	EENVSOP-00054	SM 4500-H B
Urgent Extrac. HC in Water by GC/FID (2)	2	2009/08/17	2009/08/17	BRN SOP-00341 R14	Based BCCSR Method 4

(1) This test was performed by Maxxam Vancouver
 (2) SCC/CAEAL



Your Project #: 2977-371-00
Your C.O.C. #: 80978, 80979, 80980

Attention: DARA SCHMIDT
AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/08/25

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
Email: eanderson@maxxamanalytics.com
Phone# (780) 577-7113 Ext:7113

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q23958	Q23958	Q23959		
Sampling Date		2009/08/11 09:00	2009/08/11 09:00	2009/08/11 09:05		
COC Number		80978	80978	80978		
	Units	788	788 Lab-Dup	789	RDL	QC Batch

Physical Properties						
Moisture	%	8.2	N/A	16	0.3	3351570
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	3200	4400	970	10	3350168
F3 (C16-C34 Hydrocarbons)	mg/kg	670	970	160 (1)	10	3350168
F4 (C34-C50 Hydrocarbons)	mg/kg	13	11	<10	10	3350168
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3350168
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	0.036	0.0050	3350169
Toluene	mg/kg	<0.020	<0.020	18	0.020	3350169
Ethylbenzene	mg/kg	0.094	0.24 (2)	10	0.010	3350169
Xylenes (Total)	mg/kg	4.4	10 (2)	66	0.040	3350169
m & p-Xylene	mg/kg	1.3	3.0 (2)	48	0.040	3350169
o-Xylene	mg/kg	3.2	7.3 (2)	18	0.020	3350169
F1 (C6-C10) - BTEX	mg/kg	720	1000	1300	12	3350169
(C6-C10)	mg/kg	730	1000	1400	12	3350169
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	87	94	N/A	3350169
D10-ETHYLBENZENE (sur.)	%	106	111	108	N/A	3350169
D4-1,2-DICHLOROETHANE (sur.)	%	125	105	97	N/A	3350169
D8-TOLUENE (sur.)	%	103	95	100	N/A	3350169
O-TERPHENYL (sur.)	%	91	106	105	N/A	3350168

N/A = Not Applicable
 RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate
 (1) Matrix Spike exceeds acceptance limits for F3, due to matrix interference. Reanalysis yields similar results.
 (Recovery: 140%, limits 130%)
 (2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q23960	Q23961	Q23962		
Sampling Date		2009/08/11 09:08	2009/08/11 09:11	2009/08/11 09:15		
COC Number		80978	80978	80978		
	Units	790	791	792	RDL	QC Batch

Physical Properties						
Moisture	%	22	22	17	0.3	3351570
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	15	670	10	3350168
F3 (C16-C34 Hydrocarbons)	mg/kg	40	34	130	10	3350168
F4 (C34-C50 Hydrocarbons)	mg/kg	15	13	<10	10	3350168
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3350168
Volatiles						
Benzene	mg/kg	0.028	0.027	<0.0050	0.0050	3350169
Toluene	mg/kg	0.68	1.2	6.3	0.020	3350169
Ethylbenzene	mg/kg	1.5	1.6	3.6	0.010	3350169
Xylenes (Total)	mg/kg	8.6	9.0	22	0.040	3350169
m & p-Xylene	mg/kg	6.4	6.8	15	0.040	3350169
o-Xylene	mg/kg	2.2	2.2	7.1	0.020	3350169
F1 (C6-C10) - BTEX	mg/kg	37	19	430	12	3350169
(C6-C10)	mg/kg	48	30	460	12	3350169
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	111	112	107	N/A	3350169
D10-ETHYLBENZENE (sur.)	%	101	130	100	N/A	3350169
D4-1,2-DICHLOROETHANE (sur.)	%	131	106	108	N/A	3350169
D8-TOLUENE (sur.)	%	98	108	100	N/A	3350169
O-TERPHENYL (sur.)	%	113	107	108	N/A	3350168

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q23977	Q23982	Q23987		
Sampling Date		2009/08/11 15:00	2009/08/11 15:20	2009/08/11 16:10		
COC Number		80978	80978	80979		
	Units	793	795	800	RDL	QC Batch

Physical Properties						
Moisture	%	13	12	11	0.3	3354018
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	93	420	180	10	3353886
F3 (C16-C34 Hydrocarbons)	mg/kg	41	72	54	10	3353886
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3353886
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3353886
Volatiles						
Benzene	mg/kg	0.20	<0.0050	<0.0050	0.0050	3353787
Toluene	mg/kg	6.9	33	7.2	0.020	3353787
Ethylbenzene	mg/kg	2.0	15	3.5	0.010	3353787
Xylenes (Total)	mg/kg	12	82	22	0.040	3353787
m & p-Xylene	mg/kg	8.7	61	16	0.040	3353787
o-Xylene	mg/kg	3.0	22	5.7	0.020	3353787
F1 (C6-C10) - BTEX	mg/kg	180	1300	440	12	3353787
(C6-C10)	mg/kg	200	1400	470	12	3353787
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	105	117	100	N/A	3353787
D10-ETHYLBENZENE (sur.)	%	119	123	108	N/A	3353787
D4-1,2-DICHLOROETHANE (sur.)	%	108	106	104	N/A	3353787
D8-TOLUENE (sur.)	%	95	102	95	N/A	3353787
O-TERPHENYL (sur.)	%	99	93	93	N/A	3353886

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q23990	Q23991	Q23994		
Sampling Date		2009/08/11 16:20	2009/08/11 16:30	2009/08/11 17:00		
COC Number		80979	80979	80979		
	Units	801	802	805	RDL	QC Batch

Physical Properties						
Moisture	%	14	11	12	0.3	3354018
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	84	540	19	10	3353886
F3 (C16-C34 Hydrocarbons)	mg/kg	44	110	33	10	3353886
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3353886
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3353886
Volatiles						
Benzene	mg/kg	<0.0050	0.072	<0.0050	0.0050	3353787
Toluene	mg/kg	2.8	45	0.26	0.020	3353787
Ethylbenzene	mg/kg	1.3	19	0.072	0.010	3353787
Xylenes (Total)	mg/kg	7.9	88	0.44	0.040	3353787
m & p-Xylene	mg/kg	5.9	65	0.32	0.040	3353787
o-Xylene	mg/kg	2.1	23	0.12	0.020	3353787
F1 (C6-C10) - BTEX	mg/kg	190	1600	17	12	3353787
(C6-C10)	mg/kg	200	1800	18	12	3353787
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	106	109	104	N/A	3353787
D10-ETHYLBENZENE (sur.)	%	129	106	102	N/A	3353787
D4-1,2-DICHLOROETHANE (sur.)	%	109	86	84	N/A	3353787
D8-TOLUENE (sur.)	%	98	108	106	N/A	3353787
O-TERPHENYL (sur.)	%	92	97	97	N/A	3353886

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q24003		
Sampling Date		2009/08/11 17:10		
COC Number		80979		
	Units	808	RDL	QC Batch

Physical Properties				
Moisture	%	6.9	0.3	3354018
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/kg	25	10	3353886
F3 (C16-C34 Hydrocarbons)	mg/kg	53	10	3353886
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	3353886
Reached Baseline at C50	mg/kg	Yes	N/A	3353886
Volatiles				
Benzene	mg/kg	<0.0050	0.0050	3353787
Toluene	mg/kg	0.044	0.020	3353787
Ethylbenzene	mg/kg	0.011	0.010	3353787
Xylenes (Total)	mg/kg	<0.040	0.040	3353787
m & p-Xylene	mg/kg	<0.040	0.040	3353787
o-Xylene	mg/kg	<0.020	0.020	3353787
F1 (C6-C10) - BTEX	mg/kg	<12	12	3353787
(C6-C10)	mg/kg	<12	12	3353787
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	105	N/A	3353787
D10-ETHYLBENZENE (sur.)	%	104	N/A	3353787
D4-1,2-DICHLOROETHANE (sur.)	%	97	N/A	3353787
D8-TOLUENE (sur.)	%	101	N/A	3353787
O-TERPHENYL (sur.)	%	96	N/A	3353886
N/A = Not Applicable RDL = Reportable Detection Limit				

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q24004		Q24005		
Sampling Date		2009/08/11 07:30		2009/08/11 07:33		
COC Number		80979		80979		
	Units	809	RDL	810	RDL	QC Batch

Physical Properties						
Moisture	%	12	0.3	12	0.3	3351570
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	630	10	14	10	3350168
F3 (C16-C34 Hydrocarbons)	mg/kg	130	10	41	10	3350168
F4 (C34-C50 Hydrocarbons)	mg/kg	15	10	14	10	3350168
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	3350168
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	0.025	0.0050	3350169
Toluene	mg/kg	75 (1)	0.20	16	0.020	3350169
Ethylbenzene	mg/kg	25	0.010	4.2	0.010	3350169
Xylenes (Total)	mg/kg	130	0.040	22	0.040	3350169
m & p-Xylene	mg/kg	97	0.040	16	0.040	3350169
o-Xylene	mg/kg	35	0.020	5.9	0.020	3350169
F1 (C6-C10) - BTEX	mg/kg	2900	12	140	12	3350169
(C6-C10)	mg/kg	3100	12	190	12	3350169
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	107	N/A	108	N/A	3350169
D10-ETHYLBENZENE (sur.)	%	107	N/A	107	N/A	3350169
D4-1,2-DICHLOROETHANE (sur.)	%	99	N/A	104	N/A	3350169
D8-TOLUENE (sur.)	%	92	N/A	102	N/A	3350169
O-TERPHENYL (sur.)	%	101	N/A	114	N/A	3350168

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q24006		Q24015		
Sampling Date		2009/08/11 07:36		2009/08/11 07:38		
COC Number		80979		80980		
	Units	811	RDL	09812	RDL	QC Batch

Physical Properties						
Moisture	%	11	0.3	14	0.3	3351570
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	260	10	460	10	3350168
F3 (C16-C34 Hydrocarbons)	mg/kg	71	10	110	10	3350168
F4 (C34-C50 Hydrocarbons)	mg/kg	12	10	11	10	3350168
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	3350168
Volatiles						
Benzene	mg/kg	<0.0050	0.0050	0.045	0.0050	3350169
Toluene	mg/kg	35	0.020	65 (1)	0.20	3350169
Ethylbenzene	mg/kg	12	0.010	28	0.010	3350169
Xylenes (Total)	mg/kg	65	0.040	150	0.040	3350169
m & p-Xylene	mg/kg	48	0.040	110	0.040	3350169
o-Xylene	mg/kg	17	0.020	38	0.020	3350169
F1 (C6-C10) - BTEX	mg/kg	900	12	2400	12	3350169
(C6-C10)	mg/kg	1000	12	2700	12	3350169
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	92	N/A	104	N/A	3350169
D10-ETHYLBENZENE (sur.)	%	109	N/A	109	N/A	3350169
D4-1,2-DICHLOROETHANE (sur.)	%	106	N/A	102	N/A	3350169
D8-TOLUENE (sur.)	%	100	N/A	83	N/A	3350169
O-TERPHENYL (sur.)	%	117	N/A	101	N/A	3350168

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q24020	Q24021	Q24022		
Sampling Date		2009/08/11 07:42	2009/08/11 07:45	2009/08/11 07:48		
COC Number		80980	80980	80980		
	Units	09-813	09-814	09-815	RDL	QC Batch

Physical Properties						
Moisture	%	6.3	4.8	4.9	0.3	3351570
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	330	29	22	10	3350168
F3 (C16-C34 Hydrocarbons)	mg/kg	86	56	69	10	3350168
F4 (C34-C50 Hydrocarbons)	mg/kg	12	16	17	10	3350168
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3350168
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3350169
Toluene	mg/kg	12	0.24	0.22	0.020	3350169
Ethylbenzene	mg/kg	6.3	0.040	0.032	0.010	3350169
Xylenes (Total)	mg/kg	34	0.18	0.18	0.040	3350169
m & p-Xylene	mg/kg	25	0.14	0.11	0.040	3350169
o-Xylene	mg/kg	8.8	0.043	0.075	0.020	3350169
F1 (C6-C10) - BTEX	mg/kg	700	<12	<12	12	3350169
(C6-C10)	mg/kg	750	<12	<12	12	3350169
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	103	103	N/A	3350169
D10-ETHYLBENZENE (sur.)	%	101	102	99	N/A	3350169
D4-1,2-DICHLOROETHANE (sur.)	%	104	100	120	N/A	3350169
D8-TOLUENE (sur.)	%	109	101	97	N/A	3350169
O-TERPHENYL (sur.)	%	100	120	112	N/A	3350168

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q24023	Q24024		
Sampling Date		2009/08/11 07:51	2009/08/11 07:54		
COC Number		80980	80980		
	Units	09-816	09-817	RDL	QC Batch

Physical Properties					
Moisture	%	7.1	5.2	0.3	3351570
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	10	3350168
F3 (C16-C34 Hydrocarbons)	mg/kg	39	49	10	3350168
F4 (C34-C50 Hydrocarbons)	mg/kg	11	12	10	3350168
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3350168
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3350169
Toluene	mg/kg	0.18	0.12	0.020	3350169
Ethylbenzene	mg/kg	0.021	0.029	0.010	3350169
Xylenes (Total)	mg/kg	0.084	0.23	0.040	3350169
m & p-Xylene	mg/kg	0.052	0.13	0.040	3350169
o-Xylene	mg/kg	0.032	0.10	0.020	3350169
F1 (C6-C10) - BTEX	mg/kg	<12	<12	12	3350169
(C6-C10)	mg/kg	<12	<12	12	3350169
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	99	78	N/A	3350169
D10-ETHYLBENZENE (sur.)	%	100	103	N/A	3350169
D4-1,2-DICHLOROETHANE (sur.)	%	103	89	N/A	3350169
D8-TOLUENE (sur.)	%	101	101	N/A	3350169
O-TERPHENYL (sur.)	%	100	103	N/A	3350168
N/A = Not Applicable RDL = Reportable Detection Limit					

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		Q23958		
Sampling Date		2009/08/11		
		09:00		
COC Number		80978		
	Units	788	RDL	QC Batch

Hydrocarbons				
Total Extractables C10 to C30	mg/kg	4030	10	3373001
Surrogate Recovery (%)				
O-TERPHENYL (sur.)	%	91	N/A	3373001

N/A = Not Applicable
 RDL = Reportable Detection Limit

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		Q23998	Q24002		
Sampling Date		2009/08/11 10:00	2009/08/11 10:30		
COC Number		80979	80979		
	Units	806	807	RDL	QC Batch

Misc. Inorganics					
pH	N/A	8.30	8.22	N/A	3350835

RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		Q23998	Q24002		
Sampling Date		2009/08/11 10:00	2009/08/11 10:30		
COC Number		80979	80979		
	Units	806	807	RDL	QC Batch

Ext. Pet. Hydrocarbon					
EPH (C10-C19)	mg/L	0.79	1.80	0.08	3352745
Surrogate Recovery (%)					
O-TERPHENYL (sur.)	%	113	112	N/A	3352745

N/A = Not Applicable
 RDL = Reportable Detection Limit

VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		Q23998	Q24002		
Sampling Date		2009/08/11 10:00	2009/08/11 10:30		
COC Number		80979	80979		
	Units	806	807	RDL	QC Batch

Hydrocarbons					
LH (C5-C10)	ug/L	736	3890	300	3352770
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	98	97	N/A	3352770
D4-1,2-DICHLOROETHANE (sur.)	%	89	85	N/A	3352770
D8-TOLUENE (sur.)	%	103	106	N/A	3352770

N/A = Not Applicable
 RDL = Reportable Detection Limit

Package 1	11.7°C
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Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Sample Q23958-01: Sample was not homogeneous. Re-analysis of duplicates gives the same results.

Sample Q23961-01: Jars received with headspace.

Sample Q23962-01: Jars received with headspace.

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference:

Quality Assurance Report
 Maxxam Job Number: EA942959

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3350168 KW2	Matrix Spike [Q23959-01]	O-TERPHENYL (sur.)	2009/08/15		83	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/15		NC	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/08/15		140 (1)	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/08/15		119	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/15		83	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/15		118	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/15		120	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/08/15		109	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/08/15			105	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/15		<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/15		12, RDL=10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/15		<10		mg/kg	
	RPD [Q23958-01]	F2 (C10-C16 Hydrocarbons)	2009/08/15		31.4		%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/15		36.7		%	50
		F4 (C34-C50 Hydrocarbons)	2009/08/15		NC		%	50
3350169 CL9	Matrix Spike [Q23959-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/15		95	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/15		101	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/15		103	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/15		90	%	60 - 140	
		Benzene	2009/08/15		88	%	60 - 140	
		Toluene	2009/08/15		NC	%	60 - 140	
		Ethylbenzene	2009/08/15		NC	%	60 - 140	
		m & p-Xylene	2009/08/15		NC	%	60 - 140	
		o-Xylene	2009/08/15		NC	%	60 - 140	
		(C6-C10)	2009/08/15		NC	%	60 - 140	
		Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/15		104	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/08/15		111	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/08/15		102	%	60 - 140
			D8-TOLUENE (sur.)	2009/08/15		102	%	60 - 140
	Benzene		2009/08/15		84	%	60 - 140	
	Toluene		2009/08/15		92	%	60 - 140	
	Ethylbenzene		2009/08/15		94	%	60 - 140	
	m & p-Xylene		2009/08/15		98	%	60 - 140	
	o-Xylene		2009/08/15		102	%	60 - 140	
	(C6-C10)		2009/08/15		103	%	80 - 120	
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/15		97	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/15		101	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/15		110	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/15		120	%	60 - 140	
		Benzene	2009/08/15		<0.0050		mg/kg	
		Toluene	2009/08/15		<0.020		mg/kg	
		Ethylbenzene	2009/08/15		<0.010		mg/kg	
		Xylenes (Total)	2009/08/15		<0.040		mg/kg	
		m & p-Xylene	2009/08/15		<0.040		mg/kg	
		o-Xylene	2009/08/15		<0.020		mg/kg	
		(C6-C10) - BTEX	2009/08/15		<12		mg/kg	
	RPD [Q23958-01]	(C6-C10)	2009/08/15		<12		mg/kg	
		Benzene	2009/08/16		NC		%	50
		Toluene	2009/08/16		NC		%	50
		Ethylbenzene	2009/08/16		87.2 (2)		%	50
Xylenes (Total)		2009/08/16		79.2 (2)		%	50	
m & p-Xylene		2009/08/16		78.7 (2)		%	50	
o-Xylene		2009/08/16		79.4 (2)		%	50	



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA942959

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3350169 CL9	RPD [Q23958-01]	F1 (C6-C10) - BTEX (C6-C10)	2009/08/16	33.1		%	50
			2009/08/16	33.5		%	50
3350835 SB8	Calibration Check	pH	2009/08/16		101	%	97 - 103
	RPD	pH	2009/08/16	0.2		%	5
3351570 JP6	Method Blank	Moisture	2009/08/17	<0.3		%	
	RPD	Moisture	2009/08/17	1.5		%	20
3352745 JP1	Method Blank	O-TERPHENYL (sur.)	2009/08/17		102	%	50 - 130
		EPH (C10-C19)	2009/08/17	<0.08		mg/L	
3352770 KL	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/17		99	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/17		90	%	70 - 130
		D8-TOLUENE (sur.)	2009/08/17		104	%	70 - 130
	QC Standard	4-BROMOFLUOROBENZENE (sur.)	2009/08/17		99	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/17		89	%	70 - 130
		D8-TOLUENE (sur.)	2009/08/17		105	%	70 - 130
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/17		96	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/17		88	%	70 - 130
		D8-TOLUENE (sur.)	2009/08/17		103	%	70 - 130
	Method Blank	LH (C5-C10)	2009/08/17	<300		ug/L	
		4-BROMOFLUOROBENZENE (sur.)	2009/08/17		96	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/17		88	%	70 - 130
		D8-TOLUENE (sur.)	2009/08/17		104	%	70 - 130
	RPD	LH (C5-C10)	2009/08/18	NC		%	30
3353787 DR3	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/18		115	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/18		125	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/18		108	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/18		98	%	60 - 140
		Benzene	2009/08/18		99	%	60 - 140
		Toluene	2009/08/18		107	%	60 - 140
		Ethylbenzene	2009/08/18		117	%	60 - 140
		m & p-Xylene	2009/08/18		121	%	60 - 140
		o-Xylene	2009/08/18		124	%	60 - 140
		(C6-C10)	2009/08/18		101	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/18		102	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/18		99	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/18		86	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/18		103	%	60 - 140
		Benzene	2009/08/18		99	%	60 - 140
		Toluene	2009/08/18		99	%	60 - 140
		Ethylbenzene	2009/08/18		105	%	60 - 140
		m & p-Xylene	2009/08/18		104	%	60 - 140
		o-Xylene	2009/08/18		99	%	60 - 140
		(C6-C10)	2009/08/18		118	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/18		98	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/18		111	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/18		114	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/18		103	%	60 - 140
		Benzene	2009/08/18	<0.0050		mg/kg	
		Toluene	2009/08/18	<0.020		mg/kg	
		Ethylbenzene	2009/08/18	<0.010		mg/kg	
		Xylenes (Total)	2009/08/18	<0.040		mg/kg	
		m & p-Xylene	2009/08/18	<0.040		mg/kg	
		o-Xylene	2009/08/18	<0.020		mg/kg	
		F1 (C6-C10) - BTEX (C6-C10)	2009/08/18	<12		mg/kg	
			2009/08/18	<12		mg/kg	
	RPD	Benzene	2009/08/18	40.0		%	50

Quality Assurance Report (Continued)

Maxxam Job Number: EA942959

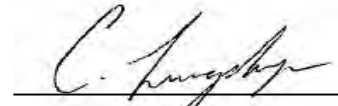
QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3353787 DR3	RPD	Toluene	2009/08/18	NC		%	50
		Ethylbenzene	2009/08/18	36.4		%	50
		Xylenes (Total)	2009/08/18	40.0		%	50
		m & p-Xylene	2009/08/18	42.9		%	50
		o-Xylene	2009/08/18	NC		%	50
		F1 (C6-C10) - BTEX (C6-C10)	2009/08/18	NC		%	50
3353886 MB7	Matrix Spike	O-TERPHENYL (sur.)	2009/08/18		84	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/18		86	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/18		85	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/18		85	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/18		97	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/18		102	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/18		104	%	80 - 120
	Method Blank	F4 (C34-C50 Hydrocarbons)	2009/08/18		118	%	80 - 120
		O-TERPHENYL (sur.)	2009/08/18		112	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/18	<10		mg/kg	
	RPD	F3 (C16-C34 Hydrocarbons)	2009/08/18	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/18	<10		mg/kg	
F2 (C10-C16 Hydrocarbons)		2009/08/18	NC		%	50	
F3 (C16-C34 Hydrocarbons)		2009/08/18	14.9		%	50	
3354018 SR7	Method Blank	Moisture	2009/08/18	<0.3		%	
		Moisture	2009/08/18	4.0		%	20
	RPD	Moisture	2009/08/18	4.0		%	20
3373001 YT	Spiked Blank	O-TERPHENYL (sur.)	2009/08/15		83	%	50 - 130
		Total Extractables C10 to C30	2009/08/15		120	%	60 - 130
	Method Blank	O-TERPHENYL (sur.)	2009/08/15		105	%	50 - 130
		Total Extractables C10 to C30	2009/08/15	15, RDL=10		mg/kg	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
 (1) Matrix Spike exceeds acceptance limits for F3, due to matrix interference. Reanalysis yields similar results. (Recovery:140%, limits 130%)
 (2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Validation Signature Page

Maxxam Job #: A942959

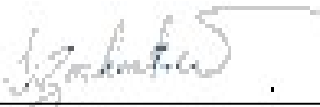
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



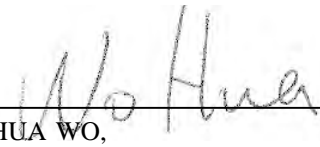
CORI LUCYSHYN, Analyst II



DAVE HUANG, BBY Scientific Specialist



DIANE ZACHARKIW, Scientific Specialist



HUA WO,

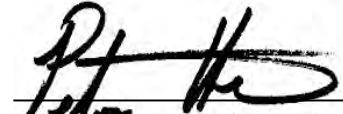


LISA CUMMINGS, Extractables Supervisor

Validation Signature Page

Maxxam Job #: A942959

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



PETER CHOW, Senior Analyst

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

A942959 / 16/DW Page: 1 of 3

Invoice To: Require Report? Yes No

Company Name: Aecom
Contact Name: Ana Galve
Address: ana.galve@aecom.com
Prov: AB **PC:** T2N 3S3
Contact #s: **Ph:** **Fax:**

Report To:
Dara Schmiat
2540 Kensington Rd. NW
Calgary
Prov: AB **PC:** T2N 3S3
Ph: 403-450-9923 ~~403-270-4822~~

PO # / AFE #:
Quotation #:
Project #: 2977-371-00
Project Name: Johnson Point
Location:
Sampler's Initials:

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required:
 REGULAR Turnaround (5 to 7 Days)

Sample ID	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)					OTHER TEST(S)			*HOLD for 60 Days # of Containers Submitted						
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) Assessment (CP Metals) <input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1) <input type="checkbox"/> TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals				BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved <input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	Total <input type="checkbox"/> Dissolved		Mercury <input type="checkbox"/> Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC				
1	S	09-Aug-11 9:00	X																			
2		9:05	X																			
3		9:08	X																			
4		9:11	X																			
5		9:15	X																			
6		3:00																				X
7		3:10																				X
8		3:20																				X
9		3:30																				X
10		3:40																				X
11		3:50																				X
12		4:00																				X

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Kate Scott Date/Time: 09-Aug-11
Sign and Print: KScott
COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By	Temperature		Ice
		12	11	

14108109
9:00 PW
CUSTODY SEAL YES / (NO)

Invoice To: Require Report? Yes No

Company Name: _____

Contact Name: ana.galwe@alcom.com

Address: _____

Prov: _____ **PC:** _____

Contact #s: **Ph:** _____ **Fax:** _____

Report To: _____

Prov: _____ **PC:** _____

Ph: _____ **Fax:** _____

PO # / AFE #: _____

Quotation #: _____

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S): _____

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)							OTHER TEST(S)			*HOLD for 60 Days	# of Containers Submitted		
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD			TOC <input type="checkbox"/> DOC	pH
1	800	S	08-Aug-11 4:10																		X	2
2	801		4:20																		X	1
3	802		4:30																		X	1
4	803		4:40																		X	1
5	804		4:50																		X	1
6	805	W	5:00																		X	1
7	806	W	10:00																		X	6
8	807	W	10:30																		X	6
9	808	S	5:10																		X	2
10	809		09-Aug-11 7:30	X																		1
11	810		7:33	X																		1
12	811	W	7:36	X																		1

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: PH **Date/Time:** _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

# JARS USED & NOT SUBMITTED	14/08/09 9:00 PH	Received By			Temperature			Ice
		CUSTODY SEAL YES / <input checked="" type="checkbox"/>			12	11	12	

Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

Invoice To: Require Report? Yes No

Company Name: _____
Contact Name: _____
Address: _____
Prov: _____ **PC:** _____
Contact #s: **Ph:** _____ **Fax:** _____

Report To: _____

Prov: _____ **PC:** _____
Ph: _____ **Fax:** _____

PO # / AFE #: _____
Quotation #: _____
Project #: _____
Project Name: _____
Location: _____
Sampler's Initials: _____

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use
 AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S): _____

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)							OTHER TEST(S)					
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	*HOLD for 60 Days
1 09-812	S	09-Aug-11 7:39																	2
2 09-813		7:42																	
3 09-814		7:45																	
4 09-815		7:48																	
5 09-816		7:51																	
6 09-817		7:54																	
7																			
8																			
9																			
10																			
11																			
12																			

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: _____ **Date/Time:** _____
Sign and Print: _____
COMMENTS/SPECIAL INSTRUCTIONS: _____

JARS USED & NOT SUBMITTED: 14/08/09 9:00
Received By: [Signature]
Temperature: 12 11 12
Ice: _____
CUSTODY SEAL YES / (NO)



Your Project #: 2977-371-00
Site: JOHNSON POINT
Your C.O.C. #: 80964, 80965

Attention: DARA SCHMIDT
AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/08/25

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A945095
Received: 2009/08/23, 9:45

Sample Matrix: Soil
Samples Received: 11

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	11	2009/08/23	2009/08/24	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	11	2009/08/23	2009/08/24	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	11	N/A	2009/08/24	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	1	2009/08/23	2009/08/24	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
Email: eanderson@maxxamanalytics.com
Phone# (780) 577-7113 Ext:7113

=====
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For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q37835	Q37835	Q37837		
Sampling Date		2009/08/20	2009/08/20	2009/08/20		
		16:57	16:57	17:00		
COC Number		80964	80964	80964		
	Units	09-906	09-906 Lab-Dup	09-908	RDL	QC Batch

Physical Properties						
Moisture	%	13	13	3.3	0.3	3366931
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	23	33	410	10	3366800
F3 (C16-C34 Hydrocarbons)	mg/kg	50	59	110	10	3366800
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	12	10	3366800
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3366800
Volatiles						
Benzene	mg/kg	0.013	N/A	<0.0050	0.0050	3366521
Toluene	mg/kg	0.20	N/A	1.6	0.020	3366521
Ethylbenzene	mg/kg	0.17	N/A	0.70	0.010	3366521
Xylenes (Total)	mg/kg	1.2	N/A	7.7	0.040	3366521
m & p-Xylene	mg/kg	0.80	N/A	5.6	0.040	3366521
o-Xylene	mg/kg	0.44	N/A	2.1	0.020	3366521
F1 (C6-C10) - BTEX	mg/kg	20	N/A	390	12	3366521
(C6-C10)	mg/kg	21	N/A	400	12	3366521
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	111	N/A	105	N/A	3366521
D10-ETHYLBENZENE (sur.)	%	91	N/A	103	N/A	3366521
D4-1,2-DICHLOROETHANE (sur.)	%	124	N/A	101	N/A	3366521
D8-TOLUENE (sur.)	%	99	N/A	95	N/A	3366521
O-TERPHENYL (sur.)	%	95	108	102	N/A	3366800

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q37839	Q37840	Q37841		
Sampling Date		2009/08/20 16:58	2009/08/20 16:58	2009/08/20 17:58		
COC Number		80964	80964	80964		
	Units	09-910	09-911	09-912	RDL	QC Batch

Physical Properties						
Moisture	%	5.3	3.7	11	0.3	3366931
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	47	36	280	10	3366800
F3 (C16-C34 Hydrocarbons)	mg/kg	79	71	110	10	3366800
F4 (C34-C50 Hydrocarbons)	mg/kg	11	<10	<10	10	3366800
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3366800
Volatiles						
Benzene	mg/kg	0.024	<0.0050	0.32	0.0050	3366521
Toluene	mg/kg	0.23	0.14	19	0.020	3366521
Ethylbenzene	mg/kg	0.052	0.029	10	0.010	3366521
Xylenes (Total)	mg/kg	1.3	0.96	59	0.040	3366521
m & p-Xylene	mg/kg	0.84	0.61	43	0.040	3366521
o-Xylene	mg/kg	0.44	0.35	15	0.020	3366521
F1 (C6-C10) - BTEX	mg/kg	25	18	1500	12	3366521
(C6-C10)	mg/kg	27	19	1600	12	3366521
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	106	105	97	N/A	3366521
D10-ETHYLBENZENE (sur.)	%	97	97	107	N/A	3366521
D4-1,2-DICHLOROETHANE (sur.)	%	100	100	96	N/A	3366521
D8-TOLUENE (sur.)	%	104	103	104	N/A	3366521
O-TERPHENYL (sur.)	%	101	99	101	N/A	3366800

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q37843	Q37845	Q37848		
Sampling Date		2009/08/20 18:02	2009/08/20 18:06	2009/08/20 18:15		
COC Number		80964	80964	80965		
	Units	09-914	09-916	09-919	RDL	QC Batch

Physical Properties						
Moisture	%	9.6	10	9.3	0.3	3366931
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	130	540	490	10	3366800
F3 (C16-C34 Hydrocarbons)	mg/kg	110	300	92	10	3366800
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	14	<10	10	3366800
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3366800
Volatiles						
Benzene	mg/kg	<0.0050	0.024	1.1	0.0050	3366521
Toluene	mg/kg	0.82	0.22	39	0.020	3366521
Ethylbenzene	mg/kg	0.66	2.8	16	0.010	3366521
Xylenes (Total)	mg/kg	5.0	23	86	0.040	3366521
m & p-Xylene	mg/kg	3.6	16	63	0.040	3366521
o-Xylene	mg/kg	1.4	7.1	23	0.020	3366521
F1 (C6-C10) - BTEX	mg/kg	250	400	1300	12	3366521
(C6-C10)	mg/kg	260	420	1500	12	3366521
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	103	108	115	N/A	3366521
D10-ETHYLBENZENE (sur.)	%	103	101	101	N/A	3366521
D4-1,2-DICHLOROETHANE (sur.)	%	99	97	96	N/A	3366521
D8-TOLUENE (sur.)	%	106	104	106	N/A	3366521
O-TERPHENYL (sur.)	%	98	99	98	N/A	3366800

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q37851	Q37853	Q37854		
Sampling Date		2009/08/20 18:02	2009/08/20 18:06	2009/08/20 18:45		
COC Number		80965	80965	80965		
	Units	09-922	09-924	09-925	RDL	QC Batch

Physical Properties						
Moisture	%	10	13	8.6	0.3	3366931
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	250	220	1100	10	3366800
F3 (C16-C34 Hydrocarbons)	mg/kg	120	64	200	10	3366800
F4 (C34-C50 Hydrocarbons)	mg/kg	27	<10	11	10	3366800
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3366800
Volatiles						
Benzene	mg/kg	0.017	0.66	<0.0050	0.0050	3366521
Toluene	mg/kg	1.2	38	0.60	0.020	3366521
Ethylbenzene	mg/kg	1.1	15	1.0	0.010	3366521
Xylenes (Total)	mg/kg	7.3	81	27	0.040	3366521
m & p-Xylene	mg/kg	4.9	59	18	0.040	3366521
o-Xylene	mg/kg	2.3	22	8.8	0.020	3366521
F1 (C6-C10) - BTEX	mg/kg	310	1700	740	12	3366521
(C6-C10)	mg/kg	320	1900	770	12	3366521
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	101	111	103	N/A	3366521
D10-ETHYLBENZENE (sur.)	%	102	106	100	N/A	3366521
D4-1,2-DICHLOROETHANE (sur.)	%	92	96	93	N/A	3366521
D8-TOLUENE (sur.)	%	105	102	97	N/A	3366521
O-TERPHENYL (sur.)	%	100	108	102	N/A	3366800

N/A = Not Applicable
RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		Q37854		
Sampling Date		2009/08/20		
		18:45		
COC Number		80965		
	Units	09-925	RDL	QC Batch

Hydrocarbons				
Total Extractables C10 to C30	mg/kg	1230	10	3371540
Surrogate Recovery (%)				
O-TERPHENYL (sur.)	%	101	N/A	3371540
N/A = Not Applicable RDL = Reportable Detection Limit				



Maxxam Job #: A945095
Report Date: 2009/08/25

AECOM
Client Project #: 2977-371-00
Site Reference: JOHNSON POINT
Sampler Initials: PH

Package 1	9.3°C
-----------	-------

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference: JOHNSON POINT

Quality Assurance Report
 Maxxam Job Number: EA945095

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3366521 CL9	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/23		92	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/23		99	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/23		90	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/23		100	%	60 - 140
		Benzene	2009/08/23		90	%	60 - 140
		Toluene	2009/08/23		85	%	60 - 140
		Ethylbenzene	2009/08/23		95	%	60 - 140
		m & p-Xylene	2009/08/23		103	%	60 - 140
		o-Xylene	2009/08/23		101	%	60 - 140
		(C6-C10)	2009/08/23		104	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/23		97	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/23		96	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/23		92	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/23		96	%	60 - 140
		Benzene	2009/08/23		93	%	60 - 140
		Toluene	2009/08/23		90	%	60 - 140
		Ethylbenzene	2009/08/23		92	%	60 - 140
		m & p-Xylene	2009/08/23		96	%	60 - 140
		o-Xylene	2009/08/23		99	%	60 - 140
		(C6-C10)	2009/08/23		103	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/23		102	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/23		87	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/23		95	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/23		94	%	60 - 140
		Benzene	2009/08/23	<0.0050		mg/kg	
		Toluene	2009/08/23	<0.020		mg/kg	
		Ethylbenzene	2009/08/23	<0.010		mg/kg	
		Xylenes (Total)	2009/08/23	<0.040		mg/kg	
		m & p-Xylene	2009/08/23	<0.040		mg/kg	
		o-Xylene	2009/08/23	<0.020		mg/kg	
	RPD	F1 (C6-C10) - BTEX (C6-C10)	2009/08/23	<12		mg/kg	
		Benzene	2009/08/23	<12		mg/kg	
Toluene		2009/08/23	NC		%	50	
Ethylbenzene		2009/08/23	NC		%	50	
Xylenes (Total)		2009/08/23	NC		%	50	
m & p-Xylene		2009/08/23	NC		%	50	
o-Xylene		2009/08/23	NC		%	50	
F1 (C6-C10) - BTEX (C6-C10)		2009/08/23	NC		%	50	
Benzene		2009/08/23	NC		%	50	
Toluene		2009/08/23	NC		%	50	
Ethylbenzene		2009/08/23	NC		%	50	
Xylenes (Total)		2009/08/23	NC		%	50	
3366800 KW2	Matrix Spike [Q37841-01]	O-TERPHENYL (sur.)	2009/08/24		105	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/24		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/24		117	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/24		125	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/24		70	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/24		83	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/24		85	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/08/24		89	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/08/24		101	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/24	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/24	15, RDL=10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/24	<10		mg/kg	
	RPD [Q37835-01]	F2 (C10-C16 Hydrocarbons)	2009/08/24	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/24	16.3		%	50



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference: JOHNSON POINT

Quality Assurance Report (Continued)

Maxxam Job Number: EA945095

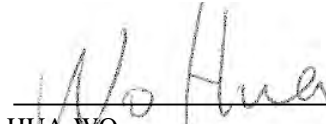
QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3366800 KW2	RPD [Q37835-01]	F4 (C34-C50 Hydrocarbons)	2009/08/24	NC		%	50
3366931 JP6	Method Blank	Moisture	2009/08/24	<0.3		%	
	RPD [Q37835-01]	Moisture	2009/08/24	3.1		%	20
3371540 KW2	Spiked Blank	O-TERPHENYL (sur.)	2009/08/24		114	%	50 - 130
		Total Extractables C10 to C30	2009/08/24		105	%	60 - 130
	Method Blank	O-TERPHENYL (sur.)	2009/08/24		101	%	50 - 130
		Total Extractables C10 to C30	2009/08/24	15, RDL=10		mg/kg	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.


Validation Signature Page

Maxxam Job #: A945095

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



HUA WO,



JIM TJATHAS, Analyst 1

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

458



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

80964 CHAIN OF CUSTODY
Page: 1 of 2

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: **PC:**

Contact #s: Ph: 403.270.9200 Fax: 403.270.0399

Report To: A945095 / JV/JN
AECOM (Dara Schmidt)
2540 Kensington Road NW
Calgary, AB

Prov: **PC:** T2N 3S3

Ph: 403.450.9923 **Fax:** 403.270.4822
(STEE) (office)

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@
aecom.com
priya.handa@
aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: ASAP

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)					OTHER TEST(S)			*HOLD for 60 Days # of Containers Submitted			
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered		Total <input type="checkbox"/> Dissolved	Mercury <input type="checkbox"/> TKN <input type="checkbox"/> COD	Ammonia <input type="checkbox"/> DOC
1	09-906	S	09-Aug-20	16:57	✓														2
2	09-907			16:59															2
3	09-908			17:00	✓														2
4	09-909			17:02															2
5	09-910			16:58	✓														2
6	09-911			16:58	✓														2
7	09-912			17:58	✓														2
8	09-913			18:00															2
9	09-914			18:02	✓														2
10	09-915			18:04															2
11	09-916			18:06	✓														2
12	09-917			18:09															2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Priya Handa Date/Time: 09-Aug-21

Sign and Print: *[Signature]*

# JARS USED & NOT SUBMITTED	Received By	Temperature	Ice
	23/08/09 09:45h RT	12 8 8 Y	
CUSTODY SEAL		YES / NO	

COMMENTS/SPECIAL INSTRUCTIONS: No Partial Reports please. Page 11 of 12

458



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

80965 CHAIN OF CUSTODY

Page: 2 of 2

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galic

Address: ana.galic@aecom.com

Prov: **PC:**

Contact #: Ph: 403.270.9200 Fax: 403.270.0399

Report To: A945095/JL/JN
AECOM (Dora Schmidt)

2540 Kensington Road NW
Calgary, AB

Prov: PC: T2N 3S3

Ph: 403.450.9923 Fax: 403.270.4822
(site) (office)

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

- AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dora.schmidt@aecom.com
praya.kanda@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: ASAP

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted															
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ³	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total Preserved		Not Preserved	Dissolved Preserved	Not Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC			
1 09-918	S	09-Aug-20 18:12																										✓	2	
2 09-919		18:15																												2
3 09-920		17:58																											✓	2
4 09-921		17:58																											✓	2
5 09-922		18:02																												2
6 09-923		18:04																											✓	2
7 09-924		18:06																												2
8 09-925	S	09-Aug-20 18:45																										✓	1	
9																														
10																														
11																														
12																														

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1. Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

Page 12 of 12

# JARS USED & NOT SUBMITTED	Received By	Temperature		Ice
	23/08/09 09:45h	12	8	
CUSTODY SEAL		YES	NO	

Your Project #: A944474
Your C.O.C. #: n/a

Attention: Erin Anderson

Maxxam Analytics
Edmonton - ENV
9331-48 St
Edmonton, AB
T6B 2R4

Report Date: 2009/08/25

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9A9205

Received: 2009/08/24, 11:21

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Polychlorinated Biphenyl in Water	2	2009/08/24	2009/08/25	CAM SOP-00309	SW846 8082

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ELORA DI BRATTO, Project Manager
Email: Elora.DiBratto@maxxamanalytics.com
Phone# (905) 817-5700

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

Maxxam Analytics - Partial/Rush Results

Maxxam Job #: A9A9205
 Report Date: 2009/08/25

Maxxam Analytics
 Client Project #: A944474

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		DL9066	DL9067		
Sampling Date		2009/08/17	2009/08/17		
COC Number		n/a	n/a		
Registration #					
	Units	Q33577 \ 09-897	Q33578 \ 09-898	RDL	QC Batch

PCBs					
Aroclor 1016	ug/L	<1	<1	1	1916993
Aroclor 1221	ug/L	<1	<1	1	1916993
Aroclor 1232	ug/L	<1	<1	1	1916993
Aroclor 1242	ug/L	<1	<1	1	1916993
Aroclor 1248	ug/L	<1	<1	1	1916993
Aroclor 1254	ug/L	<1	<1	1	1916993
Aroclor 1260	ug/L	<1	<1	1	1916993
Aroclor 1262	ug/L	<1	<1	1	1916993
Aroclor 1268	ug/L	<1	<1	1	1916993
Total PCB	ug/L	<1	<1	1	1916993
Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	35 (1)	85	N/A	1916993
Decachlorobiphenyl	%	124	137 (2)	N/A	1916993

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 (1) Surrogate recovery was below the lower control limit. This may represent a low bias in some results.
 (2) Surrogate recovery was above the upper control limit . This may represent a high bias in some results.

Maxxam Analytics - Partial/Rush Results

Maxxam Job #: A9A9205
Report Date: 2009/08/25

Maxxam Analytics
Client Project #: A944474

GENERAL COMMENTS

PCB Analysis: Due to limited amount of sample available for analysis, a smaller than usual portion of the sample was used. Detection limits were adjusted accordingly.

Results relate only to the items tested.

Maxxam Analytics - Partial/Rush Results

Maxxam Analytics
 Attention: Erin Anderson
 Client Project #: A944474
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: MA9A9205

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
1916993 JZ	Matrix Spike	2,4,5,6-Tetrachloro-m-xylene	2009/08/25		42	%	40 - 130	
		Decachlorobiphenyl	2009/08/25		126	%	40 - 130	
		Aroclor 1260	2009/08/25		121	%	30 - 130	
	Spiked Blank	Total PCB	2009/08/25		121	%	30 - 130	
		2,4,5,6-Tetrachloro-m-xylene	2009/08/25		50	%	40 - 130	
		Decachlorobiphenyl	2009/08/25		95	%	40 - 130	
	Method Blank	Aroclor 1260	2009/08/25		106	%	30 - 130	
		Total PCB	2009/08/25		106	%	30 - 130	
		2,4,5,6-Tetrachloro-m-xylene	2009/08/25		66	%	40 - 130	
		Decachlorobiphenyl	2009/08/25		119	%	40 - 130	
		Aroclor 1016	2009/08/25	<0.05		ug/L		
		Aroclor 1221	2009/08/25	<0.05		ug/L		
		Aroclor 1232	2009/08/25	<0.05		ug/L		
		Aroclor 1242	2009/08/25	<0.05		ug/L		
		Aroclor 1248	2009/08/25	<0.05		ug/L		
		Aroclor 1254	2009/08/25	<0.05		ug/L		
		Aroclor 1260	2009/08/25	<0.05		ug/L		
		Aroclor 1262	2009/08/25	<0.05		ug/L		
		Aroclor 1268	2009/08/25	<0.05		ug/L		
		Total PCB	2009/08/25	<0.05		ug/L		
		RPD	Aroclor 1016	2009/08/25	NC		%	40
			Aroclor 1221	2009/08/25	NC		%	40
			Aroclor 1232	2009/08/25	NC		%	40
	Aroclor 1242		2009/08/25	NC		%	40	
	Aroclor 1248		2009/08/25	NC		%	40	
	Aroclor 1254		2009/08/25	NC		%	40	
	Aroclor 1260		2009/08/25	NC		%	40	
	Aroclor 1262		2009/08/25	NC		%	40	
	Aroclor 1268	2009/08/25	NC		%	40		
	Total PCB	2009/08/25	NC		%	40		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Maxxam Analytics - Partial/Rush Results

Validation Signature Page

Maxxam Job #: A9A9205

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CHARLES ANCKER, B.Sc., M.Sc., C.Chem, Senior Analyst

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Maxxam Analytics - Partial/Rush Results

Task Order#:
 Site#:
 Site Location:
 Project #: A944474
 Your C.O.C. #: n/a

Attention: Erin Anderson

Maxxam Analytics
 Edmonton - ENV
 9331-48 St
 Edmonton, AB
 T6B 2R4

Report Date: 2009/08/26

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9A9205

Received: 2009/08/24, 11:21

Sample Matrix: Soil
 # Samples Received: 3

Analyses	Quantity	Laboratory Method	Method Primary reference
Polychlorinated Biphenyl in Solids (l)	3	CAM SOP-00307	EPA 8082

Sample Matrix: Water
 # Samples Received: 2

Analyses	Quantity	Laboratory Method	Method Primary reference
Polychlorinated Biphenyl in Water	2	CAM SOP-00309	SW846 8082

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Sample(s) analyzed using methodologies that have not been subjected to Maxxam's standard validation process for the submitted matrix and is not an Accredited method. Analysis performed with client consent, however results should be viewed with discretion

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ELORA DI BRATTO, Project Manager
 Email: Elora.DiBratto@maxxamanalytics.com
 Phone# (905) 817-5700

=====
 Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

Maxxam Job #: A9A9205
 Report Date: 2009/08/26

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A944474

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DL9063	DL9064	DL9065		
Sampling Date		2009/08/17	2009/08/17	2009/08/17		
COC Number		n/a	n/a	n/a		
	Units	Q33572	Q33575	Q33576	RDL	QC Batch
		\ 09-894	\ 09-895	\ 09-896		
Aroclor 1262	ug/g	<1	<1	<1	1	1917226
Aroclor 1016	ug/g	<1	<1	<1	1	1917226
Aroclor 1221	ug/g	<1	<1	<1	1	1917226
Aroclor 1232	ug/g	<1	<1	<1	1	1917226
Aroclor 1242	ug/g	<1	<1	<1	1	1917226
Aroclor 1248	ug/g	<1	<1	<1	1	1917226
Aroclor 1254	ug/g	<1	<1	<1	1	1917226
Aroclor 1260	ug/g	<1	<1	<1	1	1917226
Aroclor 1268	ug/g	<1	<1	<1	1	1917226
Total PCB	ug/g	<1	<1	<1	1	1917226
Extraction Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	72	59	76		1917226
Decachlorobiphenyl	%	92	89	108		1917226
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A9A9205
 Report Date: 2009/08/26

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A944474

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		DL9066	DL9067		
Sampling Date		2009/08/17	2009/08/17		
COC Number		n/a	n/a		
	Units	Q33577 \ 09-897	Q33578 \ 09-898	RDL	QC Batch

Aroclor 1016	ug/L	<1	<1	1	1916993
Aroclor 1221	ug/L	<1	<1	1	1916993
Aroclor 1232	ug/L	<1	<1	1	1916993
Aroclor 1242	ug/L	<1	<1	1	1916993
Aroclor 1248	ug/L	<1	<1	1	1916993
Aroclor 1254	ug/L	<1	<1	1	1916993
Aroclor 1260	ug/L	<1	<1	1	1916993
Aroclor 1262	ug/L	<1	<1	1	1916993
Aroclor 1268	ug/L	<1	<1	1	1916993
Total PCB	ug/L	<1	<1	1	1916993
Extraction Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	35 (1)	85		1916993
Decachlorobiphenyl	%	124	137 (2)		1916993

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 (1) Surrogate recovery was below the lower control limit. This may represent a low bias in some results.
 (2) Surrogate recovery was above the upper control limit . This may represent a high bias in some results.

Maxxam Job #: A9A9205
 Report Date: 2009/08/26

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A944474

Test Summary

Maxxam ID DL9063
Sample ID Q33572 \ 09-894
Matrix Soil
Collected 2009/08/17
Shipped
Received 2009/08/24

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Solids	GC/ECD	1917226	2009/08/24	2009/08/25	ART

Maxxam ID DL9064
Sample ID Q33575 \ 09-895
Matrix Soil
Collected 2009/08/17
Shipped
Received 2009/08/24

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Solids	GC/ECD	1917226	2009/08/24	2009/08/25	ART

Maxxam ID DL9065
Sample ID Q33576 \ 09-896
Matrix Soil
Collected 2009/08/17
Shipped
Received 2009/08/24

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Solids	GC/ECD	1917226	2009/08/24	2009/08/25	ART

Maxxam ID DL9066
Sample ID Q33577 \ 09-897
Matrix Water
Collected 2009/08/17
Shipped
Received 2009/08/24

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Water	GC/ECD	1916993	2009/08/24	2009/08/25	JZ

Maxxam ID DL9067
Sample ID Q33578 \ 09-898
Matrix Water
Collected 2009/08/17
Shipped
Received 2009/08/24

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Polychlorinated Biphenyl in Water	GC/ECD	1916993	2009/08/24	2009/08/25	JZ

Maxxam Job #: A9A9205
Report Date: 2009/08/26

Maxxam Analytics
Task Order#:
Site#:

Project #: A944474

Package 1	6.0°C
-----------	-------

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

PCB Analysis: Due to limited amount of sample available for analysis, a smaller than usual portion of the sample was used. Detection limits were adjusted accordingly.

Results relate only to the items tested.

Maxxam Analytics
 Task Order#:
 Site#:
 Site Location:
 Project #: A944474

Quality Assurance Report

Maxxam Job Number: A9A9205

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1916993 JZ	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/08/25		66	%	40 - 130
		Decachlorobiphenyl	2009/08/25		119	%	40 - 130
		Aroclor 1016	2009/08/25	<0.05		ug/L	
		Aroclor 1221	2009/08/25	<0.05		ug/L	
		Aroclor 1232	2009/08/25	<0.05		ug/L	
		Aroclor 1242	2009/08/25	<0.05		ug/L	
		Aroclor 1248	2009/08/25	<0.05		ug/L	
		Aroclor 1254	2009/08/25	<0.05		ug/L	
		Aroclor 1260	2009/08/25	<0.05		ug/L	
		Aroclor 1262	2009/08/25	<0.05		ug/L	
1917226 ART	Method Blank	Total PCB	2009/08/25	<0.05		ug/L	
		2,4,5,6-Tetrachloro-m-xylene	2009/08/25		89	%	40 - 130
		Decachlorobiphenyl	2009/08/25		81	%	40 - 130
		Aroclor 1262	2009/08/25	<1		ug/g	
		Aroclor 1016	2009/08/25	<1		ug/g	
		Aroclor 1221	2009/08/25	<1		ug/g	
		Aroclor 1232	2009/08/25	<1		ug/g	
		Aroclor 1242	2009/08/25	<1		ug/g	
		Aroclor 1248	2009/08/25	<1		ug/g	
		Aroclor 1254	2009/08/25	<1		ug/g	
1916993 JZ	RPD	Aroclor 1260	2009/08/25	4.7		%	50
		Total PCB	2009/08/25	4.7		%	50
		2,4,5,6-Tetrachloro-m-xylene	2009/08/25		50	%	40 - 130
		Decachlorobiphenyl	2009/08/25		95	%	40 - 130
1917226 ART	LCS	Aroclor 1260	2009/08/25		106	%	30 - 130
		Total PCB	2009/08/25		106	%	30 - 130
		2,4,5,6-Tetrachloro-m-xylene	2009/08/25		87	%	40 - 130
		Decachlorobiphenyl	2009/08/25		85	%	40 - 130
1916993 JZ	LCS	Aroclor 1260	2009/08/25		97	%	30 - 130
		Total PCB	2009/08/25		97	%	30 - 130
		2,4,5,6-Tetrachloro-m-xylene	2009/08/25		97	%	30 - 130

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 LCS: A blank matrix sample to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

Validation Signature Page

Maxxam Job #: A9A9205

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CHARLES ANCKER, B.Sc., M.Sc., C.Chem, Senior Analyst

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.



Your Project #: 2977-371-00
 Your C.O.C. #: 80982, 80983, 80984, 80985, 80961,
 80962, 80963

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/08/27

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A944474
Received: 2009/08/20, 10:10

Sample Matrix: Soil
 # Samples Received: 43

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	43	2009/08/21	2009/08/22	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	3	2009/08/21	2009/08/21	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	20	2009/08/21	2009/08/23	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	20	2009/08/21	2009/08/24	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	23	N/A	2009/08/21	EENVSOP-00139	Carter SSMA 51.2
Moisture	20	N/A	2009/08/22	EENVSOP-00139	Carter SSMA 51.2

Sample Matrix: Water
 # Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Organic Halogen (Adsorbable) (1)	2	N/A	2009/08/24	EINDSOP-00056	Coulometric - Titr.
Elements by ICPMS - Total	2	2009/08/23	2009/08/23	CAL SOP-00191	EPA SW-846 6020A
ICP Scan - Full, dissolved (ASTM D5708A) (1)	3	N/A	2009/08/25	EDM SOP-0199	ASTM D5708A
Flash Point (Closed Cup), ASTM D93 (1)	5	N/A	2009/08/24	EINDSOP-00082	ASTM D93
pH	5	N/A	2009/08/24	EENVSOP-00054	SM 4500-H B
Organic Halogen (1)	3	N/A	2009/08/24	EDM SOP# 0046	Coulometric-Titr.

(1) This test was performed by Maxxam Edmonton Industrial



Your Project #: 2977-371-00
Your C.O.C. #: 80982, 80983, 80984, 80985, 80961,
80962, 80963

Attention: DARA SCHMIDT
AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/08/27

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
Email: eanderson@maxxamanalytics.com
Phone# (780) 577-7113 Ext:7113

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33430	Q33430	Q33434	Q33436		
Sampling Date		2009/08/14	2009/08/14	2009/08/14	2009/08/14		
COC Number		80982	80982	80982	80982		
	Units	09-832	09-832 Lab-Dup	09-836	09-838	RDL	QC Batch

Physical Properties							
Moisture	%	5.5	5.8	11	12	0.3	3366190
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	17	15	<10	10	3366386
F3 (C16-C34 Hydrocarbons)	mg/kg	29	38	44	23	10	3366386
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	3366386
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3366386
Volatiles							
Benzene	mg/kg	0.10	0.11	<0.0050	<0.0050	0.0050	3364182
Toluene	mg/kg	0.61	0.60	<0.020	<0.020	0.020	3364182
Ethylbenzene	mg/kg	0.12	0.11	<0.010	<0.010	0.010	3364182
Xylenes (Total)	mg/kg	0.43	0.43	<0.040	<0.040	0.040	3364182
m & p-Xylene	mg/kg	0.34	0.34	<0.040	<0.040	0.040	3364182
o-Xylene	mg/kg	0.094	0.095	<0.020	<0.020	0.020	3364182
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	3364182
(C6-C10)	mg/kg	<12	<12	<12	<12	12	3364182
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	98	99	100	101	N/A	3364182
D10-ETHYLBENZENE (sur.)	%	109	108	104	108	N/A	3364182
D4-1,2-DICHLOROETHANE (sur.)	%	91	94	94	94	N/A	3364182
D8-TOLUENE (sur.)	%	101	98	100	102	N/A	3364182
O-TERPHENYL (sur.)	%	109	108	104	105	N/A	3366386
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33438	Q33439	Q33440	Q33441		
Sampling Date		2009/08/14	2009/08/14	2009/08/14	2009/08/14		
COC Number		80982	80982	80982	80982		
	Units	09-840	09-841	09-842	09-843	RDL	QC Batch

Physical Properties							
Moisture	%	11	11	12	12	0.3	3366190
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	43	15	150	<10	10	3366386
F3 (C16-C34 Hydrocarbons)	mg/kg	140	73	29	<10	10	3366386
F4 (C34-C50 Hydrocarbons)	mg/kg	33	<10	<10	<10	10	3366386
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3366386
Volatiles							
Benzene	mg/kg	0.20	0.21	0.048	<0.0050	0.0050	3364182
Toluene	mg/kg	0.62	0.52	29	<0.020	0.020	3364182
Ethylbenzene	mg/kg	0.070	0.056	11	<0.010	0.010	3364182
Xylenes (Total)	mg/kg	0.26	0.19	58	<0.040	0.040	3364182
m & p-Xylene	mg/kg	0.20	0.15	43	<0.040	0.040	3364182
o-Xylene	mg/kg	0.051	0.039	15	<0.020	0.020	3364182
F1 (C6-C10) - BTEX	mg/kg	16	13	1000	<12	12	3364182
(C6-C10)	mg/kg	17	14	1100	<12	12	3364182
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	102	100	93	101	N/A	3364182
D10-ETHYLBENZENE (sur.)	%	108	107	114	106	N/A	3364182
D4-1,2-DICHLOROETHANE (sur.)	%	95	95	97	96	N/A	3364182
D8-TOLUENE (sur.)	%	100	98	101	100	N/A	3364182
O-TERPHENYL (sur.)	%	124	94	91	94	N/A	3366386
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33444	Q33447	Q33450	Q33451		
Sampling Date		2009/08/14	2009/08/14	2009/08/14	2009/08/14		
COC Number		80983	80983	80983	80983		
	Units	09-846	09-849	09-852	09-853	RDL	QC Batch

Physical Properties							
Moisture	%	8.2	11	11	13	0.3	3366190
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	14	840	10	3366386
F3 (C16-C34 Hydrocarbons)	mg/kg	13	21	25	160	10	3366386
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	110	10	3366386
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3366386
Volatiles							
Benzene	mg/kg	0.15	0.16	0.29	0.23	0.0050	3364182
Toluene	mg/kg	0.47	0.53	0.57	1.1	0.020	3364182
Ethylbenzene	mg/kg	0.054	0.069	0.053	0.21	0.010	3364182
Xylenes (Total)	mg/kg	0.20	0.24	0.19	0.83	0.040	3364182
m & p-Xylene	mg/kg	0.16	0.19	0.15	0.66	0.040	3364182
o-Xylene	mg/kg	0.042	0.045	0.038	0.17	0.020	3364182
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	3364182
(C6-C10)	mg/kg	<12	<12	<12	12	12	3364182
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	99	101	97	101	N/A	3364182
D10-ETHYLBENZENE (sur.)	%	111	107	102	103	N/A	3364182
D4-1,2-DICHLOROETHANE (sur.)	%	94	94	97	93	N/A	3364182
D8-TOLUENE (sur.)	%	102	100	100	101	N/A	3364182
O-TERPHENYL (sur.)	%	74	75	79	77	N/A	3366386
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33452	Q33454	Q33456	Q33458		
Sampling Date		2009/08/14	2009/08/14	2009/08/15	2009/08/15		
COC Number		80983	80984	80984	80984		
	Units	09-854	09-856	09-858	09-860	RDL	QC Batch

Physical Properties							
Moisture	%	11	10	13	15	0.3	3366190
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	180	140	24	11	10	3366386
F3 (C16-C34 Hydrocarbons)	mg/kg	50	64	73	43	10	3366386
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	12	<10	10	3366386
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3366386
Volatiles							
Benzene	mg/kg	0.29	0.13	0.42	0.35	0.0050	3364182
Toluene	mg/kg	1.1	3.7	1.1	0.61	0.020	3364182
Ethylbenzene	mg/kg	0.22	2.6	0.12	0.077	0.010	3364182
Xylenes (Total)	mg/kg	1.5	16	0.55	0.32	0.040	3364182
m & p-Xylene	mg/kg	1.2	12	0.43	0.25	0.040	3364182
o-Xylene	mg/kg	0.24	4.3	0.12	0.075	0.020	3364182
F1 (C6-C10) - BTEX	mg/kg	580	300	14	<12	12	3364182
(C6-C10)	mg/kg	580	330	16	<12	12	3364182
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	107	116	103	99	N/A	3364182
D10-ETHYLBENZENE (sur.)	%	122	113	110	105	N/A	3364182
D4-1,2-DICHLOROETHANE (sur.)	%	95	95	93	97	N/A	3364182
D8-TOLUENE (sur.)	%	102	98	100	100	N/A	3364182
O-TERPHENYL (sur.)	%	86	88	83	79	N/A	3366386

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33459	Q33460	Q33462	Q33464		
Sampling Date		2009/08/15	2009/08/15	2009/08/15	2009/08/15		
COC Number		80984	80984	80984	80984		
	Units	09-861	09-862	09-864	09-866	RDL	QC Batch

Physical Properties							
Moisture	%	14	3.8	6.3	13	0.3	3366190
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	18	54	230	10	3366386
F3 (C16-C34 Hydrocarbons)	mg/kg	37	38	83	91	10	3366386
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	95	12	11	10	3366386
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3366386
Volatiles							
Benzene	mg/kg	0.41	<0.0050	<0.0050	0.50	0.0050	3364182
Toluene	mg/kg	0.75	2.1	1.6	5.1	0.020	3364182
Ethylbenzene	mg/kg	0.083	0.11	0.23	3.9	0.010	3364182
Xylenes (Total)	mg/kg	0.32	6.4	0.84	33	0.040	3364182
m & p-Xylene	mg/kg	0.25	0.64	0.64	24	0.040	3364182
o-Xylene	mg/kg	0.069	5.7	0.20	8.9	0.020	3364182
F1 (C6-C10) - BTEX	mg/kg	13	2200	630	810	12	3364182
(C6-C10)	mg/kg	15	2200	640	850	12	3364182
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	97	95	100	98	N/A	3364182
D10-ETHYLBENZENE (sur.)	%	107	95	111	114	N/A	3364182
D4-1,2-DICHLOROETHANE (sur.)	%	93	120	101	94	N/A	3364182
D8-TOLUENE (sur.)	%	99	95	99	100	N/A	3364182
O-TERPHENYL (sur.)	%	73	80	81	78	N/A	3366386

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33467		Q33470	Q33472		
Sampling Date		2009/08/15		2009/08/15	2009/08/15		
COC Number		80985		80985	80985		
	Units	09-869	QC Batch	09-872	09-874	RDL	QC Batch

Physical Properties							
Moisture	%	9.6	3366190	7.9	8.7	0.3	3365753
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	330	3366386	640	390	10	3366385
F3 (C16-C34 Hydrocarbons)	mg/kg	96	3366386	150	120	10	3366385
F4 (C34-C50 Hydrocarbons)	mg/kg	12	3366386	35	18	10	3366385
Reached Baseline at C50	mg/kg	Yes	3366386	Yes	Yes	N/A	3366385
Volatiles							
Benzene	mg/kg	0.14	3364182	0.33	0.19	0.0050	3364905
Toluene	mg/kg	2.7	3364182	11	2.4	0.020	3364905
Ethylbenzene	mg/kg	2.6	3364182	8.5	2.3	0.010	3364905
Xylenes (Total)	mg/kg	18	3364182	55	18	0.040	3364905
m & p-Xylene	mg/kg	12	3364182	40	13	0.040	3364905
o-Xylene	mg/kg	5.1	3364182	15	4.9	0.020	3364905
F1 (C6-C10) - BTEX	mg/kg	590	3364182	1500	370	12	3364905
(C6-C10)	mg/kg	610	3364182	1600	400	12	3364905
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	88	3364182	98	101	N/A	3364905
D10-ETHYLBENZENE (sur.)	%	114	3364182	115	113	N/A	3364905
D4-1,2-DICHLOROETHANE (sur.)	%	92	3364182	97	92	N/A	3364905
D8-TOLUENE (sur.)	%	102	3364182	99	101	N/A	3364905
O-TERPHENYL (sur.)	%	80	3366386	77	78	N/A	3366385
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33474	Q33475		Q33476		
Sampling Date		2009/08/15	2009/08/16		2009/08/16		
COC Number		80985	80985		80985		
	Units	09-876	09-877	RDL	09-878	RDL	QC Batch

Physical Properties							
Moisture	%	15	3.4	0.3	8.9	0.3	3365753
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	440	190	10	650	10	3366385
F3 (C16-C34 Hydrocarbons)	mg/kg	140	35	10	96	10	3366385
F4 (C34-C50 Hydrocarbons)	mg/kg	16	<10	10	<10	10	3366385
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	Yes	N/A	3366385
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	0.0050	0.40	0.0050	3364905
Toluene	mg/kg	0.88	0.75	0.020	44	0.020	3364905
Ethylbenzene	mg/kg	0.074	0.11	0.010	36	0.010	3364905
Xylenes (Total)	mg/kg	0.56	0.96	0.040	160	0.40	3364905
m & p-Xylene	mg/kg	0.32	0.44	0.040	120 (1)	0.40	3364905
o-Xylene	mg/kg	0.24	0.51	0.020	47 (1)	0.20	3364905
F1 (C6-C10) - BTEX	mg/kg	890	720	12	3700	12	3364905
(C6-C10)	mg/kg	890	720	12	3900	12	3364905
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	102	105	N/A	116	N/A	3364905
D10-ETHYLBENZENE (sur.)	%	119	110	N/A	120	N/A	3364905
D4-1,2-DICHLOROETHANE (sur.)	%	97	97	N/A	87	N/A	3364905
D8-TOLUENE (sur.)	%	100	98	N/A	102	N/A	3364905
O-TERPHENYL (sur.)	%	84	79	N/A	83	N/A	3366385

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33477		Q33480	Q33480		
Sampling Date		2009/08/16		2009/08/16	2009/08/16		
COC Number		80985		80961	80961		
	Units	09-879	QC Batch	09-882	09-882 Lab-Dup	RDL	QC Batch

Physical Properties							
Moisture	%	10	3365753	11	N/A	0.3	3365753
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	200	3366385	14	14	10	3366385
F3 (C16-C34 Hydrocarbons)	mg/kg	53	3366385	34	38	10	3366385
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	3366385	<10	<10	10	3366385
Reached Baseline at C50	mg/kg	Yes	3366385	Yes	Yes	N/A	3366385
Volatiles							
Benzene	mg/kg	0.33	3364905	0.058	N/A	0.0050	3365686
Toluene	mg/kg	8.7	3364905	0.065	N/A	0.020	3365686
Ethylbenzene	mg/kg	11	3364905	<0.010	N/A	0.010	3365686
Xylenes (Total)	mg/kg	63	3364905	<0.040	N/A	0.040	3365686
m & p-Xylene	mg/kg	46	3364905	<0.040	N/A	0.040	3365686
o-Xylene	mg/kg	17	3364905	<0.020	N/A	0.020	3365686
F1 (C6-C10) - BTEX	mg/kg	1200	3364905	<12	N/A	12	3365686
(C6-C10)	mg/kg	1300	3364905	<12	N/A	12	3365686
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	112	3364905	99	N/A	N/A	3365686
D10-ETHYLBENZENE (sur.)	%	120	3364905	95	N/A	N/A	3365686
D4-1,2-DICHLOROETHANE (sur.)	%	92	3364905	93	N/A	N/A	3365686
D8-TOLUENE (sur.)	%	101	3364905	97	N/A	N/A	3365686
O-TERPHENYL (sur.)	%	75	3366385	71	84	N/A	3366385

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33481	Q33481	Q33483		
Sampling Date		2009/08/16	2009/08/16	2009/08/16		
COC Number		80961	80961	80961		
	Units	09-883	09-883 Lab-Dup	09-885	RDL	QC Batch

Physical Properties						
Moisture	%	6.0	5.1	15	0.3	3365753
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	14	N/A	<10	10	3366385
F3 (C16-C34 Hydrocarbons)	mg/kg	36	N/A	18	10	3366385
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	N/A	<10	10	3366385
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	3366385
Volatiles						
Benzene	mg/kg	0.064	N/A	0.063	0.0050	3365686
Toluene	mg/kg	0.41	N/A	0.058	0.020	3365686
Ethylbenzene	mg/kg	0.10	N/A	0.22	0.010	3365686
Xylenes (Total)	mg/kg	0.42	N/A	0.60	0.040	3365686
m & p-Xylene	mg/kg	0.32	N/A	0.57	0.040	3365686
o-Xylene	mg/kg	0.10	N/A	0.027	0.020	3365686
F1 (C6-C10) - BTEX	mg/kg	19	N/A	<12	12	3365686
(C6-C10)	mg/kg	20	N/A	<12	12	3365686
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	105	N/A	100	N/A	3365686
D10-ETHYLBENZENE (sur.)	%	105	N/A	95	N/A	3365686
D4-1,2-DICHLOROETHANE (sur.)	%	84	N/A	90	N/A	3365686
D8-TOLUENE (sur.)	%	96	N/A	98	N/A	3365686
O-TERPHENYL (sur.)	%	83	N/A	76	N/A	3366385
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33485	Q33487	Q33488	Q33489		
Sampling Date		2009/08/16	2009/08/16	2009/08/16	2009/08/16		
COC Number		80961	80961	80961	80961		
	Units	09-887	09-889	09-890	09-891	RDL	QC Batch

Physical Properties							
Moisture	%	6.0	5.8	15	8.3	0.3	3365753
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	710	<10	<10	<10	10	3366385
F3 (C16-C34 Hydrocarbons)	mg/kg	110	28	52	38	10	3366385
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	3366385
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3366385
Volatiles							
Benzene	mg/kg	0.24	0.034	0.34	0.057	0.0050	3364905
Toluene	mg/kg	1.5	0.25	1.0	0.32	0.020	3364905
Ethylbenzene	mg/kg	2.3	0.035	0.35	0.056	0.010	3364905
Xylenes (Total)	mg/kg	29	0.20	1.2	0.36	0.040	3364905
m & p-Xylene	mg/kg	19	0.14	1.1	0.28	0.040	3364905
o-Xylene	mg/kg	9.9	0.062	0.097	0.083	0.020	3364905
F1 (C6-C10) - BTEX	mg/kg	1400	<12	25	<12	12	3364905
(C6-C10)	mg/kg	1500	<12	27	<12	12	3364905
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	113	98	106	98	N/A	3364905
D10-ETHYLBENZENE (sur.)	%	119	111	94	109	N/A	3364905
D4-1,2-DICHLOROETHANE (sur.)	%	94	91	126	92	N/A	3364905
D8-TOLUENE (sur.)	%	98	101	88	99	N/A	3364905
O-TERPHENYL (sur.)	%	81	78	77	74	N/A	3366385

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33490	Q33491	Q33579	Q33590		
Sampling Date		2009/08/16	2009/08/16	2009/08/18	2009/08/18		
COC Number		80962	80962	80962	80962		
	Units	09-892	09-893	09-899	09-900	RDL	QC Batch

Physical Properties							
Moisture	%	14	7.1	5.8	5.9	0.3	3365753
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	500	1100	51	63	10	3366385
F3 (C16-C34 Hydrocarbons)	mg/kg	79	160	81	58	10	3366385
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	3366385
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3366385
Volatiles							
Benzene	mg/kg	0.43	0.36	0.054	<0.0050	0.0050	3364905
Toluene	mg/kg	11	6.4	0.50	0.62	0.020	3364905
Ethylbenzene	mg/kg	8.7	11	0.20	0.066	0.010	3364905
Xylenes (Total)	mg/kg	57	68	0.95	0.96	0.040	3364905
m & p-Xylene	mg/kg	43	46	0.73	0.62	0.040	3364905
o-Xylene	mg/kg	14	22	0.22	0.34	0.020	3364905
F1 (C6-C10) - BTEX	mg/kg	1200	1700	45	560	12	3364905
(C6-C10)	mg/kg	1300	1800	47	560	12	3364905
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	111	107	99	102	N/A	3364905
D10-ETHYLBENZENE (sur.)	%	118	120	113	115	N/A	3364905
D4-1,2-DICHLOROETHANE (sur.)	%	90	91	90	93	N/A	3364905
D8-TOLUENE (sur.)	%	102	98	101	101	N/A	3364905
O-TERPHENYL (sur.)	%	80	82	85	81	N/A	3366385
N/A = Not Applicable RDL = Reportable Detection Limit							

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33591	Q33592	Q33593		
Sampling Date		2009/08/18	2009/08/18	2009/08/18		
COC Number		80962	80962	80962		
	Units	09-901	09-902	09-903	RDL	QC Batch

Physical Properties						
Moisture	%	5.4	7.1	11	0.3	3365753
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	57	200	340	10	3366385
F3 (C16-C34 Hydrocarbons)	mg/kg	52	87	75	10	3366385
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3366385
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3366385
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3364905
Toluene	mg/kg	0.76	0.88	3.2	0.020	3364905
Ethylbenzene	mg/kg	0.056	0.12	1.6	0.010	3364905
Xylenes (Total)	mg/kg	0.47	1.2	23	0.040	3364905
m & p-Xylene	mg/kg	0.27	0.53	16	0.040	3364905
o-Xylene	mg/kg	0.20	0.62	6.8	0.020	3364905
F1 (C6-C10) - BTEX	mg/kg	740	930	990	12	3364905
(C6-C10)	mg/kg	740	930	1000	12	3364905
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	105	86	N/A	3364905
D10-ETHYLBENZENE (sur.)	%	109	109	114	N/A	3364905
D4-1,2-DICHLOROETHANE (sur.)	%	98	96	99	N/A	3364905
D8-TOLUENE (sur.)	%	100	98	101	N/A	3364905
O-TERPHENYL (sur.)	%	80	83	79	N/A	3366385
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q33594	Q33594	Q33595	Q33596		
Sampling Date		2009/08/18	2009/08/18	2009/08/18	2009/08/18		
COC Number		80963	80963	80963	80963		
	Units	09-904	09-904 Lab-Dup	09-905	09-906	RDL	QC Batch

Physical Properties							
Moisture	%	13	12	14	7.5	0.3	3364931
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	22	2000	10	3364178
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	13	26	280	10	3364178
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	3364178
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	N/A	3364178
Volatiles							
Benzene	mg/kg	<0.0050	<0.0050	0.039	<0.0050	0.0050	3364905
Toluene	mg/kg	0.35	0.36	0.17	0.17	0.020	3364905
Ethylbenzene	mg/kg	0.099	0.11	0.036	<0.010	0.010	3364905
Xylenes (Total)	mg/kg	0.93	0.96	1.0	10	0.040	3364905
m & p-Xylene	mg/kg	0.62	0.64	0.69 (1)	2.5	0.040	3364905
o-Xylene	mg/kg	0.31	0.33	0.32 (2)	7.8	0.020	3364905
F1 (C6-C10) - BTEX	mg/kg	62	61	27	1300	12	3364905
(C6-C10)	mg/kg	63	63	28 (3)	1300	12	3364905
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	98	99	101	108	N/A	3364905
D10-ETHYLBENZENE (sur.)	%	108	110	112	117	N/A	3364905
D4-1,2-DICHLOROETHANE (sur.)	%	92	91	91	92	N/A	3364905
D8-TOLUENE (sur.)	%	97	100	98	97	N/A	3364905
O-TERPHENYL (sur.)	%	70	91	85	77	N/A	3364178

N/A = Not Applicable
 RDL = Reportable Detection Limit
 (1) Matrix Spike exceeds acceptance limits for m&p xylene ,due to matrix interference. Reanalysis yields similar results. (Recovery: 160%, limits 60 - 140%)
 (2) Matrix Spike exceeds acceptance limits for o-xylene ,due to matrix interference. Reanalysis yields similar results. (Recovery: 510%, limits 60 - 140%)
 (3) Matrix Spike exceeds acceptance limits for F1, due to matrix interference. Reanalysis yields similar results. (Recovery: 268.20%, Recovery limits: 60 - 140%)

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		Q33572	Q33572	Q33575	Q33576		
Sampling Date		2009/08/17	2009/08/17	2009/08/17	2009/08/17		
COC Number		80962	80962	80962	80962		
	Units	09-894	09-894 Lab-Dup	09-895	09-896	RDL	QC Batch

Elements							
Dissolved Cadmium (Cd)	mg/kg	<1	N/A	<1	<1	1	3370658
Dissolved Chromium (Cr)	mg/kg	<1	N/A	<1	<1	1	3370658
Dissolved Lead (Pb)	mg/kg	2	N/A	2	2	1	3370658
Misc. Inorganics							
pH	N/A	5.51	5.51	4.80	4.82	N/A	3367107
Misc. Organics							
Total Organic halogen	mg/kg	<2	N/A	<2	<2	2	3369126
Physical Properties							
Closed Cup Flash point	°C	-17.0	N/A	-17.0	-16.0	N/A	3368444

N/A = Not Applicable
RDL = Reportable Detection Limit

Maxxam ID		Q33577	Q33578		
Sampling Date		2009/08/17	2009/08/17		
COC Number		80962	80962		
	Units	09-897	09-898	RDL	QC Batch

Misc. Inorganics					
pH	N/A	7.29	7.19	N/A	3367107
Misc. Organics					
Adsorbable Organic halogen	mg/L	0.2	0.1	0.1	3354331
Physical Properties					
Closed Cup Flash point	°C	>100.0	>100.0	N/A	3368444

N/A = Not Applicable
RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		Q33577	Q33578		
Sampling Date		2009/08/17	2009/08/17		
COC Number		80962	80962		
	Units	09-897	09-898	RDL	QC Batch

Elements					
Total Cadmium (Cd)	mg/L	0.000011	0.000025	0.000005	3366700
Total Chromium (Cr)	mg/L	0.029	0.006	0.001	3366700
Total Lead (Pb)	mg/L	0.0018	0.0064	0.0002	3366700

RDL = Reportable Detection Limit

Package 1	7.3°C
Package 2	7.0°C
Package 3	11.3°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

- Sample Q33430-01: Jars received with headspace.
- Sample Q33451-01: Jars received with headspace.
- Sample Q33452-01: Jars received with headspace.
- Sample Q33454-01: Jars received with headspace.
- Sample Q33456-01: Jars received with headspace.
- Sample Q33458-01: Jars received with headspace.
- Sample Q33459-01: Jars received with headspace.
- Sample Q33464-01: Jars received with headspace.
- Sample Q33467-01: Jars received with headspace.
- Sample Q33470-01: Jars received with headspace.
- Sample Q33472-01: Jars received with headspace.
- Sample Q33474-01: Jars received with headspace.
- Sample Q33475-01: Jars received with headspace.
- Sample Q33476-01: Jars received with headspace.
- Sample Q33477-01: Jars received with headspace.
- Sample Q33595-01: Jars received with headspace.

Results relate only to the items tested.

Quality Assurance Report
 Maxxam Job Number: EA944474

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3354331 MN2	QC Standard	Adsorbable Organic halogen	2009/08/24		89	%	84 - 111
	Method Blank	Adsorbable Organic halogen	2009/08/24	<0.002		mg/L	
3364178 KO	Matrix Spike [Q33596-01]	O-TERPHENYL (sur.)	2009/08/21		78	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/21		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/21		92	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/21		88	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/21		91	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/21		100	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/21		96	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/08/21		96	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/08/21		92	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/21	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/21	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/21	<10		mg/kg	
	RPD [Q33594-01]	F2 (C10-C16 Hydrocarbons)	2009/08/21	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/21	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2009/08/21	NC		%	50
3364182 DR3	Matrix Spike [Q33434-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/21		99	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/21		112	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/21		91	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/21		98	%	60 - 140
		Benzene	2009/08/21		98	%	60 - 140
		Toluene	2009/08/21		90	%	60 - 140
		Ethylbenzene	2009/08/21		101	%	60 - 140
		m & p-Xylene	2009/08/21		102	%	60 - 140
		o-Xylene	2009/08/21		100	%	60 - 140
		(C6-C10)	2009/08/21		116	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/21		99	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/21		112	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/21		90	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/21		100	%	60 - 140
		Benzene	2009/08/21		89	%	60 - 140
		Toluene	2009/08/21		83	%	60 - 140
		Ethylbenzene	2009/08/21		93	%	60 - 140
		m & p-Xylene	2009/08/21		94	%	60 - 140
		o-Xylene	2009/08/21		91	%	60 - 140
		(C6-C10)	2009/08/21		105	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/21		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/21		102	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/21		94	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/21		100	%	60 - 140
		Benzene	2009/08/21	<0.0050		mg/kg	
		Toluene	2009/08/21	<0.020		mg/kg	
		Ethylbenzene	2009/08/21	<0.010		mg/kg	
		Xylenes (Total)	2009/08/21	<0.040		mg/kg	
		m & p-Xylene	2009/08/21	<0.040		mg/kg	
		o-Xylene	2009/08/21	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/08/21	<12		mg/kg	
		(C6-C10)	2009/08/21	<12		mg/kg	
	RPD [Q33430-01]	Benzene	2009/08/22	8.6		%	50
		Toluene	2009/08/22	2.4		%	50
		Ethylbenzene	2009/08/22	1.9		%	50
		Xylenes (Total)	2009/08/22	0.2		%	50

Quality Assurance Report (Continued)
 Maxxam Job Number: EA944474

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3364182 DR3	RPD [Q33430-01]	m & p-Xylene	2009/08/22	0.03		%	50
		o-Xylene	2009/08/22	NC		%	50
		F1 (C6-C10) - BTEX	2009/08/22	NC		%	50
		(C6-C10)	2009/08/22	NC		%	50
3364905 DR3	Matrix Spike [Q33595-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/22		111	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/22		123	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/22		94	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/22		99	%	60 - 140
		Benzene	2009/08/22		102	%	60 - 140
		Toluene	2009/08/22		90	%	60 - 140
		Ethylbenzene	2009/08/22		110	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/22		101	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/22		100	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/22		96	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/22		98	%	60 - 140
		Benzene	2009/08/22		101	%	60 - 140
		Toluene	2009/08/22		93	%	60 - 140
		Ethylbenzene	2009/08/22		103	%	60 - 140
		m & p-Xylene	2009/08/22		106	%	60 - 140
		o-Xylene	2009/08/22		106	%	60 - 140
		(C6-C10)	2009/08/22		99	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/22		99	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/22		102	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/22		91	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/22		101	%	60 - 140
		Benzene	2009/08/22	<0.0050		mg/kg	
		Toluene	2009/08/22	<0.020		mg/kg	
		Ethylbenzene	2009/08/22	<0.010		mg/kg	
		Xylenes (Total)	2009/08/22	<0.040		mg/kg	
		m & p-Xylene	2009/08/22	<0.040		mg/kg	
		o-Xylene	2009/08/22	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/08/22	<12		mg/kg	
		(C6-C10)	2009/08/22	<12		mg/kg	
	RPD [Q33594-01]	Benzene	2009/08/22	NC		%	50
		Toluene	2009/08/22	3.5		%	50
		Ethylbenzene	2009/08/22	10.2		%	50
		Xylenes (Total)	2009/08/22	3.9		%	50
		m & p-Xylene	2009/08/22	3.3		%	50
		o-Xylene	2009/08/22	5.1		%	50
		F1 (C6-C10) - BTEX	2009/08/22	1.0		%	50
		(C6-C10)	2009/08/22	0.9		%	50
3364931 JP6	Method Blank	Moisture	2009/08/21	<0.3		%	
	RPD [Q33594-01]	Moisture	2009/08/21	4.0		%	20
3365686 DR3	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/08/22		105	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/22		93	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/22		117	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/22		95	%	60 - 140
		Benzene	2009/08/22		98	%	60 - 140
		Toluene	2009/08/22		92	%	60 - 140
		Ethylbenzene	2009/08/22		85	%	60 - 140
		m & p-Xylene	2009/08/22		87	%	60 - 140
		o-Xylene	2009/08/22		88	%	60 - 140
		(C6-C10)	2009/08/22		104	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/22		107	%	60 - 140



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA944474

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3365686 DR3	Spiked Blank	D10-ETHYLBENZENE (sur.)	2009/08/22		105	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/22		87	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/22		99	%	60 - 140	
		Benzene	2009/08/22		102	%	60 - 140	
		Toluene	2009/08/22		84	%	60 - 140	
		Ethylbenzene	2009/08/22		97	%	60 - 140	
		m & p-Xylene	2009/08/22		98	%	60 - 140	
		o-Xylene	2009/08/22		94	%	60 - 140	
		(C6-C10)	2009/08/22		98	%	80 - 120	
		Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/22		108	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/08/22		99	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/08/22		84	%	60 - 140
			D8-TOLUENE (sur.)	2009/08/22		95	%	60 - 140
			Benzene	2009/08/22	<0.0050		mg/kg	
			Toluene	2009/08/22	<0.020		mg/kg	
	Ethylbenzene		2009/08/22	<0.010		mg/kg		
	Xylenes (Total)		2009/08/22	<0.040		mg/kg		
	m & p-Xylene		2009/08/22	<0.040		mg/kg		
	o-Xylene		2009/08/22	<0.020		mg/kg		
	F1 (C6-C10) - BTEX		2009/08/22	<12		mg/kg		
	(C6-C10)		2009/08/22	<12		mg/kg		
	RPD	Benzene	2009/08/22	NC		%	50	
		Toluene	2009/08/22	NC		%	50	
		Ethylbenzene	2009/08/22	NC		%	50	
		Xylenes (Total)	2009/08/22	NC		%	50	
		m & p-Xylene	2009/08/22	NC		%	50	
		o-Xylene	2009/08/22	NC		%	50	
F1 (C6-C10) - BTEX		2009/08/22	NC		%	50		
(C6-C10)		2009/08/22	NC		%	50		
3365753 JP6		Method Blank	Moisture	2009/08/21	<0.3		%	
		RPD [Q33481-01]	Moisture	2009/08/21	16.2		%	20
3366190 JP6	Method Blank	Moisture	2009/08/22	<0.3		%		
	RPD [Q33430-01]	Moisture	2009/08/22	5.3		%	20	
3366385 KO	Matrix Spike [Q33481-01]	O-TERPHENYL (sur.)	2009/08/23		80	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/23		79	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/08/23		82	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/08/23		91	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/23		75	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/23		90	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/23		94	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/08/23		106	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/08/23		91	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/23	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/08/23	<10		mg/kg		
		F4 (C34-C50 Hydrocarbons)	2009/08/23	<10		mg/kg		
	RPD [Q33480-01]	F2 (C10-C16 Hydrocarbons)	2009/08/23	NC		%	50	
		F3 (C16-C34 Hydrocarbons)	2009/08/23	NC		%	50	
		F4 (C34-C50 Hydrocarbons)	2009/08/23	NC		%	50	
	3366386 KW2	Matrix Spike [Q33434-01]	O-TERPHENYL (sur.)	2009/08/24		94	%	50 - 130
F2 (C10-C16 Hydrocarbons)			2009/08/24		102	%	50 - 130	
F3 (C16-C34 Hydrocarbons)			2009/08/24		96	%	50 - 130	
F4 (C34-C50 Hydrocarbons)			2009/08/24		94	%	50 - 130	
Spiked Blank		O-TERPHENYL (sur.)	2009/08/24		71	%	50 - 130	



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)
 Maxxam Job Number: EA944474

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3366386 KW2	Spiked Blank	F2 (C10-C16 Hydrocarbons)	2009/08/24		89	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/24		83	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/08/24		91	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/08/24		120	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/24	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/24	<10		mg/kg	
	RPD [Q33430-01]	F4 (C34-C50 Hydrocarbons)	2009/08/24	<10		mg/kg	
		F2 (C10-C16 Hydrocarbons)	2009/08/24	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/24	NC		%	50
	3366700 EO1	Calibration Check	F4 (C34-C50 Hydrocarbons)	2009/08/24	NC		%
Total Cadmium (Cd)			2009/08/23		89	%	80 - 120
Total Chromium (Cr)			2009/08/23		102	%	80 - 120
Matrix Spike		Total Lead (Pb)	2009/08/23		99	%	80 - 120
		Total Cadmium (Cd)	2009/08/23		90	%	80 - 120
		Total Chromium (Cr)	2009/08/23		105	%	80 - 120
Method Blank		Total Lead (Pb)	2009/08/23		91	%	80 - 120
		Total Cadmium (Cd)	2009/08/23	<0.000005		mg/L	
		Total Chromium (Cr)	2009/08/23	<0.001		mg/L	
RPD		Total Lead (Pb)	2009/08/23	<0.0002		mg/L	
	Total Cadmium (Cd)	2009/08/23	0		%	20	
	Total Chromium (Cr)	2009/08/23	NC		%	20	
3367107 MG5	Calibration Check	Total Lead (Pb)	2009/08/23	NC		%	20
	RPD [Q33572-01]	pH	2009/08/24		100	%	97 - 103
3369126 MN2	Calibration Check	pH	2009/08/24	0		%	5
	Method Blank	Total Organic halogen	2009/08/24		100	%	84 - 111
3370658 MC3	Method Blank	Total Organic halogen	2009/08/24	<2		mg/kg	
		Dissolved Cadmium (Cd)	2009/08/25	<1		mg/kg	
		Dissolved Chromium (Cr)	2009/08/25	<1		mg/kg	
	RPD	Dissolved Lead (Pb)	2009/08/25	<1		mg/kg	
		Dissolved Cadmium (Cd)	2009/08/25	NC		%	N/A
		Dissolved Chromium (Cr)	2009/08/25	NC		%	N/A
		Dissolved Lead (Pb)	2009/08/25	NC		%	N/A

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Validation Signature Page

Maxxam Job #: A944474

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



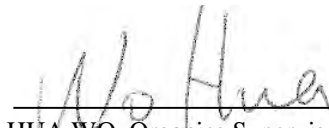
DINA TLEUGABULOVA, Ph.D., Scientific Specialist



LISA CUMMINGS, Extractables Supervisor



MATTHEW CHORNEY, Senior Analyst



HUA WO, Organics Supervisor

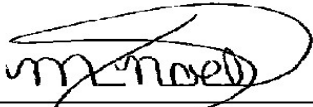


HEATHER GROVES, Manager Inorganics Edmonton

Validation Signature Page

Maxxam Job #: A944474

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



MARISAANN NOEL,

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: ana.galve@aecom.com
Address:
Prov: **PC:**
Contact #s: **Ph:** **Fax:**

Report To:
Prov: **PC:**
Ph: **Fax:**

PO # / AFE #:
Quotation #:
Project #:
Project Name:
Location:
Sampler's Initials:

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

- AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required:

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)						OTHER TEST(S)				
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Total <input type="checkbox"/> Dissolved	Mercury <input type="checkbox"/> Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	*HOLD for 60 Days	# of Containers Submitted			
1	S	09-Aug-14																			X	2	
2																						X	
3			X																			X	
4																						X	
5																						X	
6			X																			X	
7																						X	
8																						X	
9			X																			X	
10			X																			X	
11			X																			X	
12																						X	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: PG1 Date/Time:

Sign and Print:

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By <u>Aug 20 '09 MB</u>		Temperature		Ice
	10:10		7	8	
CUSTODY SEAL YES / NO			12	12	10

301

JWB/AACHU474
80984

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: ana.galwe@acem.com
Address: _____
Prov: _____ PC: _____
Contact #: _____ Ph: _____ Fax: _____

Report To: _____

Prov: _____ PC: _____
Ph: _____ Fax: _____

PO # / AFE #: _____
Quotation #: _____
Project #: _____
Project Name: _____
Location: _____
Sampler's Initials: _____

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

- AT1 _____
- CCME _____
- OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S): _____

SERVICE REQUESTED:

- RUSH** (Please ensure you contact the lab to reserve)
Date Required: _____
- REGULAR** Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)											WATERS (footnotes defined on back)							OTHER TEST(S)																	
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ²	Assessment ICP Metals ²	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Total	Dissolved	Mercury	Ammonia	TKN	COD	TOC	DOC	*HOLD for 60 Days	# of Containers Submitted
1 09-856	S	09-Aug-14	X																																		X	2
2 09-857		09-Aug-15	X																																		X	1
3 09-858			X																																		X	1
4 09-859			X																																		X	1
5 09-860			X																																		X	1
6 09-861			X																																		X	1
7 09-862			X																																		X	1
8 09-863			X																																		X	1
9 09-864			X																																		X	1
10 09-865			X																																		X	1
11 09-866			X																																		X	1
12 09-867			X																																		X	1

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #: _____

Relinquished By: PGI Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By <u>Aug 20 09 mg</u> <u>10:10</u>		Temperature			Ice
	CUSTODY SEAL YES / NO		7	8	7	
			8	6	7	
			12	12	10	

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ana-gallie@aecom.com

Address:

Prov: **PC:**

Contact #s: **Ph:** **Fax:**

Report To:

Prov: **PC:**

Ph: **Fax:**

PO # / AFE #:

Quotation #:

Project #:

Project Name:

Location:

Sampler's Initials:

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

- AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

SERVICE REQUESTED:

- RUSH** (Please ensure you contact the lab to reserve)
Date Required: _____
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)						OTHER TEST(S)																			
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Total	Dissolved	Mercury	Ammonia	TKN	COD	TOC	DOC	*HOLD for 60 Days	# of Containers Submitted
1 09-868	S	09-Aug-15																																	X	2		
2 09-869			X																																	X		
3 09-870																																				X		
4 09-871																																				X		
5 09-872			X																																	X		
6 09-873																																				X		
7 09-874			X																																	X		
8 09-875																																					X	
9 09-876			X																																		X	
10 09-877		09-Aug-16	X																																		X	
11 09-878			X																																		X	
12 09-879			X																																		X	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: PGI Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

JARS USED & NOT SUBMITTED

Received By

Aug 20 09 mg
 10:10

Temperature

7	8	7
8	6	7
12	12	10

Ice

CUSTODY SEAL YES / NO



Calgary: 4000 19st St. NE, T2E 6P8
 Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
 Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
 www.maxxamanalytics.com

PN/MBAC44474

80961 CHAIN OF CUSTODY

Page: 5 of 1

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: ana.galun@ecom.com
Address:
Prov: **PC:**
Contact #s: **Ph:** **Fax:**

Report To:
Prov: **PC:**
Ph: **Fax:**

PO # / AFE #:
Quotation #:
Project #:
Project Name:
Location:
Sampler's Initials:

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required:
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)					OTHER TEST(S)			*HOLD for 60 Days # of Containers Submitted			
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter: <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered		Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC
1 09-880	S	09-AUG-16																X	2
2 09-881																		X	
3 09-882			X																
4 09-883			X																
5 09-884																			X
6 09-885			X																
7 09-886																			X
8 09-887			X																
9 09-888																			X
10 09-889			X																
11 09-890			X																
12 09-891			X																

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: PG 1 Date/Time: _____
 Sign and Print: _____
 COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By	Temperature		Ice
	Aug 20 '09 MG 7:10	7	8	7
		8	6	7
		12	12	10
CUSTODY SEAL YES / NO				

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ana.galve@acom.com

Address:

Prov: **PC:**

Contact #s: **Ph:** **Fax:**

Report To:

Prov: **PC:**

Ph: **Fax:**

PO # / AFE #:

Quotation #:

Project #:

Project Name:

Location:

Sampler's Initials:

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

- AT1 _____
- CCME _____
- OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S): _____

SERVICE REQUESTED:

- RUSH** (Please ensure you contact the lab to reserve)
Date Required: _____
- REGULAR** Turnaround (5 to 7 Days)

SOILS (footnotes defined on back)

WATERS (footnotes defined on back)

OTHER TEST(S)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCPL <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	REGULATED METALS (CCME / AT1) ³		Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	<input type="checkbox"/> Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	<input type="checkbox"/> TOC <input type="checkbox"/> DOC	ToxChloride	Glycol	closed cup flashpoint	PCB	Ca, Cr, Pb (Total)	pH	*HOLD for 60 Days	# of Containers Submitted
													<input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	<input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved											
1 09-892	S	09-Aug-16	X																						2
2 09-893	↓	↓	X																						4
3 09-894	W/HC	09-Aug-17																	X	X	X	X	X		2
4 09-895	W/HC	↓																	X	X	X	X	X		1
5 09-896	W/HC	↓																	X	X	X	X	X		1
6 09-897	W/HC	↓																	X	X	X	X	X		1
7 09-898	W/HC	↓																	X	X	X	X	X		1
8 09-899	S	09-Aug-18	X																						2
9 09-900	↓	↓	X																						1
10 09-901	↓	↓	X																						1
11 09-902	↓	↓	X																						1
12 09-903	↓	↓	X																						1

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: PG1 Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By			Temperature			Ice
	Aug 20 '09 MG			7	8	7	
	10:10			6	8	7	
CUSTODY SEAL YES / NO				12	12	10	

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: ana.galwe@aecom.com

Address:

Prov: _____ **PC:** _____

Contact #s: **Ph:** _____ **Fax:** _____

Report To:

Prov: _____ **PC:** _____

Ph: _____ **Fax:** _____

PO # / AFE #: _____

Quotation #: _____

Project #: _____

Project Name: _____

Location: _____

Sampler's Initials: _____

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S): _____

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)						WATERS (footnotes defined on back)						OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	□ Paint Filter □ Flashpoint □ pH (1:1)	TCLP □ BTEX □ Metals	□ BTEX F1 □ VOCs	□ BTEX F1-F2 □ BTEX F1-F4	Routine Water Package □ Turb □ F	Total □ Preserved □ Not Preserved	Dissolved □ Preserved □ Not Preserved	Filtered □ Not Filtered	Mercury □ Total □ Dissolved	Ammonia □ TKN □ COD	□ TOC □ DOC	
1	09-904	S	09-Aug-18	X																2
2	09-905	S	09-Aug-18	X																2
3	09-906	S	09-Aug-18	X																2
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #: _____

Relinquished By: PGI **Date/Time:** _____

Sign and Print: _____

# JARS USED & NOT SUBMITTED	Received By <u>Aug 20 '09 Mr 70:10</u>			Temperature			Ice
	7	8	7	7	8	7	
CUSTODY SEAL YES / NO				12	12	10	

COMMENTS/SPECIAL INSTRUCTIONS:



Your Project #: 2977-371-00 JOHNSON POINT
 Your C.O.C. #: 80941, 80942, 80943, 80944, 80945,
 80946, 80947, 80948, 80949, 80950, 80951

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/09/01

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A946687
Received: 2009/08/28, 17:15

Sample Matrix: Soil
 # Samples Received: 127

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 by HS GC/MS (MeOH extract)	8	2009/08/29	2009/08/29	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	86	2009/08/29	2009/08/30	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	33	2009/08/29	2009/08/31	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	20	2009/08/29	2009/08/29	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	40	2009/08/29	2009/08/30	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	66	2009/08/29	2009/08/31	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	1	2009/08/29	2009/09/01	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Moisture	127	N/A	2009/08/30	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	1	2009/08/31	2009/08/31	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
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 Phone# (780) 577-7113 Ext:7113

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page
 Total cover pages: 1

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49390	Q49390	Q49391		
Sampling Date		2009/08/23 12:20	2009/08/23 12:20	2009/08/23 12:23		
COC Number		80941	80941	80941		
	Units	09-926	09-926 Lab-Dup	09-927	RDL	QC Batch

Physical Properties						
Moisture	%	8.6	7.5	5.5	0.3	3383504
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	65	50	560	10	3383181
F3 (C16-C34 Hydrocarbons)	mg/kg	63	64	120	10	3383181
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383181
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383181
Volatiles						
Benzene	mg/kg	0.020	0.014	<0.0050	0.0050	3383167
Toluene	mg/kg	0.37	0.32	1.1	0.020	3383167
Ethylbenzene	mg/kg	0.43	0.28	2.4	0.010	3383167
Xylenes (Total)	mg/kg	3.3	2.5	25	0.040	3383167
m & p-Xylene	mg/kg	2.4	1.7	18	0.040	3383167
o-Xylene	mg/kg	0.88	0.78	7.7	0.020	3383167
F1 (C6-C10) - BTEX	mg/kg	47	30	640	12	3383167
(C6-C10)	mg/kg	52	33	670	12	3383167
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	121	95	111	N/A	3383167
D10-ETHYLBENZENE (sur.)	%	98	90	108	N/A	3383167
D4-1,2-DICHLOROETHANE (sur.)	%	84	81	79	N/A	3383167
D8-TOLUENE (sur.)	%	95	118	103	N/A	3383167
O-TERPHENYL (sur.)	%	114	117	119	N/A	3383181

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49392	Q49393	Q49394		
Sampling Date		2009/08/23 12:26	2009/08/23 12:29	2009/08/23 12:31		
COC Number		80941	80941	80941		
	Units	09-928	09-929	09-930	RDL	QC Batch

Physical Properties						
Moisture	%	4.8	9.6	2.8	0.3	3383504
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	12	<10	14	10	3383181
F3 (C16-C34 Hydrocarbons)	mg/kg	40	30	55	10	3383181
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383181
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383181
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383167
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383167
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383167
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383167
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383167
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383167
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383167
(C6-C10)	mg/kg	<12	<12	<12	12	3383167
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	110	94	92	N/A	3383167
D10-ETHYLBENZENE (sur.)	%	83	91	88	N/A	3383167
D4-1,2-DICHLOROETHANE (sur.)	%	84	93	91	N/A	3383167
D8-TOLUENE (sur.)	%	86	105	100	N/A	3383167
O-TERPHENYL (sur.)	%	119	113	112	N/A	3383181

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49395	Q49396	Q49397		
Sampling Date		2009/08/23 12:31	2009/08/23 12:34	2009/08/23 12:36		
COC Number		80941	80941	80941		
	Units	09-931	09-932	09-933	RDL	QC Batch

Physical Properties						
Moisture	%	3.4	2.9	3.4	0.3	3383504
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	37	11	13	10	3383181
F3 (C16-C34 Hydrocarbons)	mg/kg	84	44	45	10	3383181
F4 (C34-C50 Hydrocarbons)	mg/kg	11	<10	<10	10	3383181
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383181
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383167
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383167
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383167
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383167
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383167
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383167
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383167
(C6-C10)	mg/kg	<12	<12	<12	12	3383167
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	95	116	79	N/A	3383167
D10-ETHYLBENZENE (sur.)	%	91	87	91	N/A	3383167
D4-1,2-DICHLOROETHANE (sur.)	%	97	91	78	N/A	3383167
D8-TOLUENE (sur.)	%	99	103	83	N/A	3383167
O-TERPHENYL (sur.)	%	124	116	122	N/A	3383181

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49398	Q49399	Q49400		
Sampling Date		2009/08/23 12:39	2009/08/23 12:41	2009/08/23 12:42		
COC Number		80941	80941	80941		
	Units	09-934	09-935	09-936	RDL	QC Batch

Physical Properties						
Moisture	%	2.2	3.3	5.0	0.3	3383504
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1000	920	<10	10	3383181
F3 (C16-C34 Hydrocarbons)	mg/kg	430	140	38	10	3383181
F4 (C34-C50 Hydrocarbons)	mg/kg	21	<10	<10	10	3383181
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383181
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383167
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383167
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383167
Xylenes (Total)	mg/kg	<0.040	5.7	<0.040	0.040	3383167
m & p-Xylene	mg/kg	<0.040	0.81	<0.040	0.040	3383167
o-Xylene	mg/kg	<0.020	4.9	<0.020	0.020	3383167
F1 (C6-C10) - BTEX	mg/kg	54	990	<12	12	3383167
(C6-C10)	mg/kg	54	1000	<12	12	3383167
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	84	112	98	N/A	3383167
D10-ETHYLBENZENE (sur.)	%	96	104	93	N/A	3383167
D4-1,2-DICHLOROETHANE (sur.)	%	78	93	88	N/A	3383167
D8-TOLUENE (sur.)	%	100	103	101	N/A	3383167
O-TERPHENYL (sur.)	%	122	118	110	N/A	3383181

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49401	Q49402	Q49403		
Sampling Date		2009/08/23 12:44	2009/08/23 15:47	2009/08/23 15:49		
COC Number		80941	80942	80942		
	Units	09-937	09-938	09-939	RDL	QC Batch

Physical Properties						
Moisture	%	6.2	9.5	5.8	0.3	3383504
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	20	22	<10	10	3383181
F3 (C16-C34 Hydrocarbons)	mg/kg	61	62	33	10	3383181
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383181
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383181
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383167
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383167
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383167
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383167
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383167
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383167
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383167
(C6-C10)	mg/kg	<12	<12	<12	12	3383167
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	91	106	107	N/A	3383167
D10-ETHYLBENZENE (sur.)	%	90	81	93	N/A	3383167
D4-1,2-DICHLOROETHANE (sur.)	%	92	98	89	N/A	3383167
D8-TOLUENE (sur.)	%	98	89	98	N/A	3383167
O-TERPHENYL (sur.)	%	122	127	117	N/A	3383181

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49404	Q49405	Q49406		
Sampling Date		2009/08/23	2009/08/23	2009/08/23		
		15:53	15:53	15:55		
COC Number		80942	80942	80942		
	Units	09-940	09-941	09-942	RDL	QC Batch

Physical Properties						
Moisture	%	7.1	5.4	9.8	0.3	3383504
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	100	130	51	10	3383181
F3 (C16-C34 Hydrocarbons)	mg/kg	96	100	59	10	3383181
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383181
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383181
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383167
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383167
Ethylbenzene	mg/kg	<0.010	0.013	<0.010	0.010	3383167
Xylenes (Total)	mg/kg	<0.040	0.13	<0.040	0.040	3383167
m & p-Xylene	mg/kg	<0.040	0.092	<0.040	0.040	3383167
o-Xylene	mg/kg	<0.020	0.041	<0.020	0.020	3383167
F1 (C6-C10) - BTEX	mg/kg	29	61	<12	12	3383167
(C6-C10)	mg/kg	29	61	<12	12	3383167
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	82	82	N/A	3383167
D10-ETHYLBENZENE (sur.)	%	105	93	98	N/A	3383167
D4-1,2-DICHLOROETHANE (sur.)	%	81	92	86	N/A	3383167
D8-TOLUENE (sur.)	%	98	116	102	N/A	3383167
O-TERPHENYL (sur.)	%	109	117	114	N/A	3383181

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49407	Q49408	Q49409		
Sampling Date		2009/08/23	2009/08/23	2009/08/24		
		15:57	15:59	11:47		
COC Number		80942	80942	80942		
	Units	09-943	09-944	09-945	RDL	QC Batch

Physical Properties						
Moisture	%	17	16	9.4	0.3	3383504
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	45	<10	<10	10	3383181
F3 (C16-C34 Hydrocarbons)	mg/kg	140	50	52	10	3383181
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383181
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383181
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383167
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383167
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383167
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383167
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383167
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383167
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383167
(C6-C10)	mg/kg	<12	<12	<12	12	3383167
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	93	98	94	N/A	3383167
D10-ETHYLBENZENE (sur.)	%	90	79	91	N/A	3383167
D4-1,2-DICHLOROETHANE (sur.)	%	92	90	88	N/A	3383167
D8-TOLUENE (sur.)	%	98	89	101	N/A	3383167
O-TERPHENYL (sur.)	%	114	111	109	N/A	3383181

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49410	Q49410	Q49411		
Sampling Date		2009/08/24 11:49	2009/08/24 11:49	2009/08/24 11:56		
COC Number		80942	80942	80942		
	Units	09-946	09-946 Lab-Dup	09-947	RDL	QC Batch

Physical Properties						
Moisture	%	13	12	7.0	0.3	3383558
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	65	58	32	10	3383470
F3 (C16-C34 Hydrocarbons)	mg/kg	30	24	37	10	3383470
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383470
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383470
Volatiles						
Benzene	mg/kg	0.22	0.19	<0.0050	0.0050	3383233
Toluene	mg/kg	15	14	<0.020	0.020	3383233
Ethylbenzene	mg/kg	5.8	5.6	<0.010	0.010	3383233
Xylenes (Total)	mg/kg	32	31	<0.040	0.040	3383233
m & p-Xylene	mg/kg	24	23	<0.040	0.040	3383233
o-Xylene	mg/kg	8.7	8.4	<0.020	0.020	3383233
F1 (C6-C10) - BTEX	mg/kg	540	590	21	12	3383233
(C6-C10)	mg/kg	600	640	21	12	3383233
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	109	110	105	N/A	3383233
D10-ETHYLBENZENE (sur.)	%	97	101	93	N/A	3383233
D4-1,2-DICHLOROETHANE (sur.)	%	83	83	90	N/A	3383233
D8-TOLUENE (sur.)	%	101	102	97	N/A	3383233
O-TERPHENYL (sur.)	%	94	97	92	N/A	3383470
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49412	Q49413	Q49414		
Sampling Date		2009/08/24	2009/08/24	2009/08/24		
		11:58	12:02	12:07		
COC Number		80942	80942	80943		
	Units	09-948	09-949	09-950	RDL	QC Batch

Physical Properties						
Moisture	%	10	8.1	12	0.3	3383558
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1600	140	150	10	3383470
F3 (C16-C34 Hydrocarbons)	mg/kg	180	100	110	10	3383470
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383470
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383470
Volatiles						
Benzene	mg/kg	0.035	<0.0050	0.030	0.0050	3383233
Toluene	mg/kg	5.5	0.28	8.9	0.020	3383233
Ethylbenzene	mg/kg	1.9	0.25	5.2	0.010	3383233
Xylenes (Total)	mg/kg	31	2.5	33	0.040	3383233
m & p-Xylene	mg/kg	15	1.7	23	0.040	3383233
o-Xylene	mg/kg	16	0.78	10	0.020	3383233
F1 (C6-C10) - BTEX	mg/kg	1200	170	880	12	3383233
(C6-C10)	mg/kg	1300	170	930	12	3383233
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	127	109	119	N/A	3383233
D10-ETHYLBENZENE (sur.)	%	96	99	99	N/A	3383233
D4-1,2-DICHLOROETHANE (sur.)	%	86	81	82	N/A	3383233
D8-TOLUENE (sur.)	%	102	105	101	N/A	3383233
O-TERPHENYL (sur.)	%	96	97	98	N/A	3383470

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49415	Q49416	Q49417		
Sampling Date		2009/08/24 12:07	2009/08/24 12:12	2009/08/24 12:14		
COC Number		80943	80943	80943		
	Units	09-951	09-952	09-953	RDL	QC Batch

Physical Properties						
Moisture	%	13	5.5	15	0.3	3383558
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	120	1500	1000	10	3383470
F3 (C16-C34 Hydrocarbons)	mg/kg	77	210	140	10	3383470
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383470
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383470
Volatiles						
Benzene	mg/kg	0.025	<0.0050	0.26	0.0050	3383233
Toluene	mg/kg	10	0.089	11	0.020	3383233
Ethylbenzene	mg/kg	7.3	0.084	8.0	0.010	3383233
Xylenes (Total)	mg/kg	47	1.8	55	0.040	3383233
m & p-Xylene	mg/kg	34	1.2	40	0.040	3383233
o-Xylene	mg/kg	13	0.61	15	0.020	3383233
F1 (C6-C10) - BTEX	mg/kg	910	250	980	12	3383233
(C6-C10)	mg/kg	980	250	1100	12	3383233
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	128	117	123	N/A	3383233
D10-ETHYLBENZENE (sur.)	%	98	95	96	N/A	3383233
D4-1,2-DICHLOROETHANE (sur.)	%	83	88	85	N/A	3383233
D8-TOLUENE (sur.)	%	102	104	103	N/A	3383233
O-TERPHENYL (sur.)	%	93	98	99	N/A	3383470

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49418	Q49419	Q49420		
Sampling Date		2009/08/24 12:18	2009/08/24 12:21	2009/08/24 12:25		
COC Number		80943	80943	80943		
	Units	09-954	09-955	09-956	RDL	QC Batch

Physical Properties						
Moisture	%	6.6	11	5.1	0.3	3383558
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	30	210	10	3383470
F3 (C16-C34 Hydrocarbons)	mg/kg	33	44	180	10	3383470
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	14	10	3383470
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383470
Volatiles						
Benzene	mg/kg	<0.0050	0.064	<0.0050	0.0050	3383233
Toluene	mg/kg	0.023	1.9	0.033	0.020	3383233
Ethylbenzene	mg/kg	0.014	0.56	0.023	0.010	3383233
Xylenes (Total)	mg/kg	0.13	4.2	0.15	0.040	3383233
m & p-Xylene	mg/kg	0.084	3.0	0.093	0.040	3383233
o-Xylene	mg/kg	0.044	1.2	0.053	0.020	3383233
F1 (C6-C10) - BTEX	mg/kg	<12	61	20	12	3383233
(C6-C10)	mg/kg	<12	68	21	12	3383233
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	110	111	113	N/A	3383233
D10-ETHYLBENZENE (sur.)	%	92	97	95	N/A	3383233
D4-1,2-DICHLOROETHANE (sur.)	%	84	82	84	N/A	3383233
D8-TOLUENE (sur.)	%	101	102	100	N/A	3383233
O-TERPHENYL (sur.)	%	100	96	97	N/A	3383470

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49421	Q49422	Q49423		
Sampling Date		2009/08/24 12:27	2009/08/24 15:37	2009/08/24 15:40		
COC Number		80943	80943	80943		
	Units	09-957	09-958	09-959	RDL	QC Batch

Physical Properties						
Moisture	%	9.1	9.1	10	0.3	3383558
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	180	20	14	10	3383470
F3 (C16-C34 Hydrocarbons)	mg/kg	64	48	30	10	3383470
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383470
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383470
Volatiles						
Benzene	mg/kg	0.11	<0.0050	<0.0050	0.0050	3383233
Toluene	mg/kg	18	0.024	<0.020	0.020	3383233
Ethylbenzene	mg/kg	9.9	0.016	<0.010	0.010	3383233
Xylenes (Total)	mg/kg	55	0.11	<0.040	0.040	3383233
m & p-Xylene	mg/kg	41	0.076	<0.040	0.040	3383233
o-Xylene	mg/kg	14	0.036	<0.020	0.020	3383233
F1 (C6-C10) - BTEX	mg/kg	1400	<12	<12	12	3383233
(C6-C10)	mg/kg	1400	<12	<12	12	3383233
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	122	111	107	N/A	3383233
D10-ETHYLBENZENE (sur.)	%	95	96	94	N/A	3383233
D4-1,2-DICHLOROETHANE (sur.)	%	83	83	84	N/A	3383233
D8-TOLUENE (sur.)	%	100	101	99	N/A	3383233
O-TERPHENYL (sur.)	%	94	97	99	N/A	3383470

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49424	Q49425	Q49426		
Sampling Date		2009/08/24	2009/08/24	2009/08/24		
		15:43	15:43	15:46		
COC Number		80943	80943	80944		
	Units	09-960	09-961	09-962	RDL	QC Batch

Physical Properties						
Moisture	%	9.3	8.6	8.6	0.3	3383558
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	11	<10	42	10	3383470
F3 (C16-C34 Hydrocarbons)	mg/kg	23	18	130	10	3383470
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	10	3383470
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383470
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383233
Toluene	mg/kg	<0.020	<0.020	0.041	0.020	3383233
Ethylbenzene	mg/kg	<0.010	<0.010	0.018	0.010	3383233
Xylenes (Total)	mg/kg	<0.040	<0.040	0.14	0.040	3383233
m & p-Xylene	mg/kg	<0.040	<0.040	0.096	0.040	3383233
o-Xylene	mg/kg	<0.020	<0.020	0.046	0.020	3383233
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383233
(C6-C10)	mg/kg	<12	<12	<12	12	3383233
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	107	107	105	N/A	3383233
D10-ETHYLBENZENE (sur.)	%	93	93	95	N/A	3383233
D4-1,2-DICHLOROETHANE (sur.)	%	84	84	84	N/A	3383233
D8-TOLUENE (sur.)	%	100	100	101	N/A	3383233
O-TERPHENYL (sur.)	%	95	100	97	N/A	3383470

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49427	Q49428	Q49429		
Sampling Date		2009/08/25 11:03	2009/08/25 11:08	2009/08/25 11:13		
COC Number		80944	80944	80944		
	Units	09-963	09-964	09-965	RDL	QC Batch

Physical Properties						
Moisture	%	15	20	14	0.3	3383558
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	110	770	29	10	3383470
F3 (C16-C34 Hydrocarbons)	mg/kg	49	85	42	10	3383470
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383470
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383470
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383233
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383233
Ethylbenzene	mg/kg	0.073	0.26	<0.010	0.010	3383233
Xylenes (Total)	mg/kg	0.12	0.81	0.39	0.040	3383233
m & p-Xylene	mg/kg	0.12	0.27	0.12	0.040	3383233
o-Xylene	mg/kg	<0.020	0.54	0.27	0.020	3383233
F1 (C6-C10) - BTEX	mg/kg	31	1500	1200	12	3383233
(C6-C10)	mg/kg	32	1500	1200	12	3383233
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	106	116	105	N/A	3383233
D10-ETHYLBENZENE (sur.)	%	96	96	98	N/A	3383233
D4-1,2-DICHLOROETHANE (sur.)	%	83	85	84	N/A	3383233
D8-TOLUENE (sur.)	%	99	102	101	N/A	3383233
O-TERPHENYL (sur.)	%	96	94	92	N/A	3383470

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49430	Q49430	Q49431		
Sampling Date		2009/08/25 11:18	2009/08/25 11:18	2009/08/25 12:40		
COC Number		80944	80944	80944		
	Units	09-966	09-966 Lab-Dup	09-967	RDL	QC Batch

Physical Properties						
Moisture	%	14	15	15	0.3	3383508
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	17	18	32	10	3383469
F3 (C16-C34 Hydrocarbons)	mg/kg	62	67	77	10	3383469
F4 (C34-C50 Hydrocarbons)	mg/kg	13	15	12	10	3383469
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383469
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383244
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383244
Ethylbenzene	mg/kg	0.018	0.016	<0.010	0.010	3383244
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383244
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383244
o-Xylene	mg/kg	0.036	0.039	<0.020	0.020	3383244
F1 (C6-C10) - BTEX	mg/kg	75	65	<12	12	3383244
(C6-C10)	mg/kg	75	65	<12	12	3383244
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	111	96	89	N/A	3383244
D10-ETHYLBENZENE (sur.)	%	92	89	95	N/A	3383244
D4-1,2-DICHLOROETHANE (sur.)	%	94	103	103	N/A	3383244
D8-TOLUENE (sur.)	%	94	95	121	N/A	3383244
O-TERPHENYL (sur.)	%	104	113	101	N/A	3383469

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49432	Q49433	Q49434		
Sampling Date		2009/08/25 11:23	2009/08/25 11:28	2009/08/25 11:31		
COC Number		80944	80944	80944		
	Units	09-968	09-969	09-970	RDL	QC Batch

Physical Properties						
Moisture	%	23	5.0	24	0.3	3383508
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	6600	31	20	10	3383469
F3 (C16-C34 Hydrocarbons)	mg/kg	360	69	46	10	3383469
F4 (C34-C50 Hydrocarbons)	mg/kg	12	10	<10	10	3383469
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383469
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383244
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383244
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383244
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383244
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383244
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383244
F1 (C6-C10) - BTEX	mg/kg	1700	<12	<12	12	3383244
(C6-C10)	mg/kg	1700	<12	<12	12	3383244
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	88	79	108	N/A	3383244
D10-ETHYLBENZENE (sur.)	%	91	87	88	N/A	3383244
D4-1,2-DICHLOROETHANE (sur.)	%	90	108	117	N/A	3383244
D8-TOLUENE (sur.)	%	118	101	104	N/A	3383244
O-TERPHENYL (sur.)	%	112	105	110	N/A	3383469

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49435	Q49436	Q49437		
Sampling Date		2009/08/25 11:31	2009/08/25 11:34	2009/08/25 11:37		
COC Number		80944	80944	80944		
	Units	09-971	09-972	09-973	RDL	QC Batch

Physical Properties						
Moisture	%	22	10	14	0.3	3383508
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	20	52	26	10	3383469
F3 (C16-C34 Hydrocarbons)	mg/kg	44	93	44	10	3383469
F4 (C34-C50 Hydrocarbons)	mg/kg	11	12	<10	10	3383469
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383469
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383244
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383244
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383244
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383244
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383244
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383244
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383244
(C6-C10)	mg/kg	<12	<12	<12	12	3383244
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96	76	97	N/A	3383244
D10-ETHYLBENZENE (sur.)	%	88	89	87	N/A	3383244
D4-1,2-DICHLOROETHANE (sur.)	%	109	107	93	N/A	3383244
D8-TOLUENE (sur.)	%	96	98	86	N/A	3383244
O-TERPHENYL (sur.)	%	97	104	102	N/A	3383469

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49438	Q49439	Q49440		
Sampling Date		2009/08/25 11:41	2009/08/25 11:44	2009/08/25 11:52		
COC Number		80945	80945	80945		
	Units	09-974	09-975	09-976	RDL	QC Batch

Physical Properties						
Moisture	%	2.9	24	9.5	0.3	3383508
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1900	21	15	10	3383469
F3 (C16-C34 Hydrocarbons)	mg/kg	230	58	44	10	3383469
F4 (C34-C50 Hydrocarbons)	mg/kg	29	21	<10	10	3383469
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383469
Volatiles						
Benzene	mg/kg	<0.0050	0.016	<0.0050	0.0050	3383244
Toluene	mg/kg	<0.020	0.052	<0.020	0.020	3383244
Ethylbenzene	mg/kg	<0.010	0.022	<0.010	0.010	3383244
Xylenes (Total)	mg/kg	<0.040	0.054	<0.040	0.040	3383244
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383244
o-Xylene	mg/kg	<0.020	0.054	<0.020	0.020	3383244
F1 (C6-C10) - BTEX	mg/kg	34	<12	<12	12	3383244
(C6-C10)	mg/kg	34	<12	<12	12	3383244
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96	96	92	N/A	3383244
D10-ETHYLBENZENE (sur.)	%	88	92	92	N/A	3383244
D4-1,2-DICHLOROETHANE (sur.)	%	97	86	93	N/A	3383244
D8-TOLUENE (sur.)	%	75	98	102	N/A	3383244
O-TERPHENYL (sur.)	%	109	107	102	N/A	3383469

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49441	Q49442	Q49443		
Sampling Date		2009/08/25 11:47	2009/08/25 11:56	2009/08/25 12:00		
COC Number		80945	80945	80945		
	Units	09-977	09-978	09-979	RDL	QC Batch

Physical Properties						
Moisture	%	6.6	8.4	26	0.3	3383508
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	24	13	<10	10	3383469
F3 (C16-C34 Hydrocarbons)	mg/kg	58	49	49	10	3383469
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383469
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383469
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383244
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383244
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383244
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383244
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383244
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383244
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383244
(C6-C10)	mg/kg	<12	<12	<12	12	3383244
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	92	95	95	N/A	3383244
D10-ETHYLBENZENE (sur.)	%	91	91	91	N/A	3383244
D4-1,2-DICHLOROETHANE (sur.)	%	81	93	89	N/A	3383244
D8-TOLUENE (sur.)	%	80	99	93	N/A	3383244
O-TERPHENYL (sur.)	%	103	104	109	N/A	3383469

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49444	Q49445	Q49446		
Sampling Date		2009/08/25 12:05	2009/08/25 12:05	2009/08/25 12:18		
COC Number		80945	80945	80945		
	Units	09-980	09-981	09-982	RDL	QC Batch

Physical Properties						
Moisture	%	20	19	16	0.3	3383508
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	7000	7800	29	10	3383469
F3 (C16-C34 Hydrocarbons)	mg/kg	260	250	46	10	3383469
F4 (C34-C50 Hydrocarbons)	mg/kg	15	14	<10	10	3383469
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383469
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383244
Toluene	mg/kg	2.9	2.2	<0.020	0.020	3383244
Ethylbenzene	mg/kg	3.5	3.2	<0.010	0.010	3383244
Xylenes (Total)	mg/kg	34	32	<0.040	0.040	3383244
m & p-Xylene	mg/kg	22	19	<0.040	0.040	3383244
o-Xylene	mg/kg	12	13	<0.020	0.020	3383244
F1 (C6-C10) - BTEX	mg/kg	2400	2000	<12	12	3383244
(C6-C10)	mg/kg	2400	2100	<12	12	3383244
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	89	118	88	N/A	3383244
D10-ETHYLBENZENE (sur.)	%	101	103	108	N/A	3383244
D4-1,2-DICHLOROETHANE (sur.)	%	91	90	73	N/A	3383244
D8-TOLUENE (sur.)	%	97	98	107	N/A	3383244
O-TERPHENYL (sur.)	%	101	101	95	N/A	3383469

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49447	Q49448	Q49449		
Sampling Date		2009/08/25 12:24	2009/08/25 12:28	2009/08/25 12:32		
COC Number		80945	80945	80945		
	Units	09-983	09-984	09-985	RDL	QC Batch

Physical Properties						
Moisture	%	24	21	25	0.3	3383508
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	16	25	15	10	3383469
F3 (C16-C34 Hydrocarbons)	mg/kg	44	52	60	10	3383469
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383469
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383469
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383244
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383244
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383244
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383244
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383244
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383244
F1 (C6-C10) - BTEX	mg/kg	<12	37	<12	12	3383244
(C6-C10)	mg/kg	<12	37	<12	12	3383244
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	100	76	N/A	3383244
D10-ETHYLBENZENE (sur.)	%	93	78	92	N/A	3383244
D4-1,2-DICHLOROETHANE (sur.)	%	91	94	86	N/A	3383244
D8-TOLUENE (sur.)	%	111	87	98	N/A	3383244
O-TERPHENYL (sur.)	%	108	97	107	N/A	3383469

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49450	Q49450		
Sampling Date		2009/08/25 18:20	2009/08/25 18:20		
COC Number		80946	80946		
	Units	09-986	09-986 Lab-Dup	RDL	QC Batch

Physical Properties					
Moisture	%	18	18	0.3	3383513
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	12	<10	10	3383472
F3 (C16-C34 Hydrocarbons)	mg/kg	83	70	10	3383472
F4 (C34-C50 Hydrocarbons)	mg/kg	17	29	10	3383472
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3383472
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3383258
Toluene	mg/kg	<0.020	<0.020	0.020	3383258
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	3383258
Xylenes (Total)	mg/kg	<0.040	<0.040	0.040	3383258
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	3383258
o-Xylene	mg/kg	<0.020	<0.020	0.020	3383258
F1 (C6-C10) - BTEX	mg/kg	<12	<12	12	3383258
(C6-C10)	mg/kg	<12	<12	12	3383258
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	98	102	N/A	3383258
D10-ETHYLBENZENE (sur.)	%	98	107	N/A	3383258
D4-1,2-DICHLOROETHANE (sur.)	%	95	100	N/A	3383258
D8-TOLUENE (sur.)	%	77	85	N/A	3383258
O-TERPHENYL (sur.)	%	103	109	N/A	3383472
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate					

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49451		Q49452		
Sampling Date		2009/08/25 18:26		2009/08/25 18:30		
COC Number		80946		80946		
	Units	09-987	RDL	09-988	RDL	QC Batch

Physical Properties						
Moisture	%	46	0.3	41	0.3	3383513
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	53	10	<10	10	3383472
F3 (C16-C34 Hydrocarbons)	mg/kg	180	10	96	10	3383472
F4 (C34-C50 Hydrocarbons)	mg/kg	28	10	18	10	3383472
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	3383472
Volatiles						
Benzene	mg/kg	<0.0090	0.0090	<0.0080	0.0080	3383258
Toluene	mg/kg	<0.040	0.040	<0.030	0.030	3383258
Ethylbenzene	mg/kg	<0.020	0.020	<0.020	0.020	3383258
Xylenes (Total)	mg/kg	<0.070	0.070	<0.070	0.070	3383258
m & p-Xylene	mg/kg	<0.070	0.070	<0.070	0.070	3383258
o-Xylene	mg/kg	<0.040	0.040	<0.030	0.030	3383258
F1 (C6-C10) - BTEX	mg/kg	24	22	<20	20	3383258
(C6-C10)	mg/kg	24	22	<20	20	3383258
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	74	N/A	74	N/A	3383258
D10-ETHYLBENZENE (sur.)	%	101	N/A	93	N/A	3383258
D4-1,2-DICHLOROETHANE (sur.)	%	103	N/A	101	N/A	3383258
D8-TOLUENE (sur.)	%	78	N/A	97	N/A	3383258
O-TERPHENYL (sur.)	%	103	N/A	111	N/A	3383472
N/A = Not Applicable RDL = Reportable Detection Limit						

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49453	Q49454	Q49455		
Sampling Date		2009/08/25 16:42	2009/08/25 16:44	2009/08/25 16:44		
COC Number		80946	80946	80946		
	Units	09-989	09-990	09-991	RDL	QC Batch

Physical Properties						
Moisture	%	5.8	6.9	12	0.3	3383513
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	28	520	160	10	3383472
F3 (C16-C34 Hydrocarbons)	mg/kg	71	110	57	10	3383472
F4 (C34-C50 Hydrocarbons)	mg/kg	14	11	<10	10	3383472
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383472
Volatiles						
Benzene	mg/kg	0.020	<0.0050	0.018	0.0050	3383258
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383258
Ethylbenzene	mg/kg	0.12	1.2	0.29	0.010	3383258
Xylenes (Total)	mg/kg	0.26	10	2.1	0.040	3383258
m & p-Xylene	mg/kg	0.21	7.1	1.5	0.040	3383258
o-Xylene	mg/kg	0.053	2.9	0.57	0.020	3383258
F1 (C6-C10) - BTEX	mg/kg	25	690	110	12	3383258
(C6-C10)	mg/kg	26	700	110	12	3383258
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	72	81	102	N/A	3383258
D10-ETHYLBENZENE (sur.)	%	118	112	107	N/A	3383258
D4-1,2-DICHLOROETHANE (sur.)	%	84	102	79	N/A	3383258
D8-TOLUENE (sur.)	%	97	101	95	N/A	3383258
O-TERPHENYL (sur.)	%	105	108	114	N/A	3383472

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49456	Q49457	Q49458		
Sampling Date		2009/08/25 16:48	2009/08/25 16:51	2009/08/25 17:02		
COC Number		80946	80946	80946		
	Units	09-992	09-993	09-994	RDL	QC Batch

Physical Properties						
Moisture	%	4.1	6.8	6.4	0.3	3383513
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1300	780	1200	10	3383472
F3 (C16-C34 Hydrocarbons)	mg/kg	280	160	540	10	3383472
F4 (C34-C50 Hydrocarbons)	mg/kg	22	18	73	10	3383472
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383472
Volatiles						
Benzene	mg/kg	0.041	0.036	<0.0050	0.0050	3383258
Toluene	mg/kg	<0.020	0.66	<0.020	0.020	3383258
Ethylbenzene	mg/kg	0.61	4.2	<0.010	0.010	3383258
Xylenes (Total)	mg/kg	6.2	22	<0.040	0.040	3383258
m & p-Xylene	mg/kg	3.6	15	<0.040	0.040	3383258
o-Xylene	mg/kg	2.6	6.8	<0.020	0.020	3383258
F1 (C6-C10) - BTEX	mg/kg	290	710	32	12	3383258
(C6-C10)	mg/kg	300	740	32	12	3383258
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	109	88	100	N/A	3383258
D10-ETHYLBENZENE (sur.)	%	111	102	111	N/A	3383258
D4-1,2-DICHLOROETHANE (sur.)	%	108	97	110	N/A	3383258
D8-TOLUENE (sur.)	%	93	94	117	N/A	3383258
O-TERPHENYL (sur.)	%	116	108	109	N/A	3383472

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49459	Q49460	Q49461		
Sampling Date		2009/08/25 17:06	2009/08/25 17:09	2009/08/25 17:22		
COC Number		80946	80946	80946		
	Units	09-995	09-996	09-997	RDL	QC Batch

Physical Properties						
Moisture	%	4.8	4.7	4.2	0.3	3383513
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	18	60	12	10	3383472
F3 (C16-C34 Hydrocarbons)	mg/kg	77	51	59	10	3383472
F4 (C34-C50 Hydrocarbons)	mg/kg	23	13	14	10	3383472
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383472
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383258
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383258
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383258
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383258
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383258
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383258
F1 (C6-C10) - BTEX	mg/kg	<12	18	<12	12	3383258
(C6-C10)	mg/kg	<12	18	<12	12	3383258
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	96	93	N/A	3383258
D10-ETHYLBENZENE (sur.)	%	125	122	127	N/A	3383258
D4-1,2-DICHLOROETHANE (sur.)	%	108	99	94	N/A	3383258
D8-TOLUENE (sur.)	%	75	95	106	N/A	3383258
O-TERPHENYL (sur.)	%	115	114	111	N/A	3383472

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49462	Q49463	Q49464		
Sampling Date		2009/08/25 18:02	2009/08/25 18:05	2009/08/25 18:39		
COC Number		80947	80947	80947		
	Units	09-998	09-999	09-1000	RDL	QC Batch

Physical Properties						
Moisture	%	9.1	7.8	7.9	0.3	3383513
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	240	<10	74	10	3383472
F3 (C16-C34 Hydrocarbons)	mg/kg	77	43	140	10	3383472
F4 (C34-C50 Hydrocarbons)	mg/kg	16	11	26	10	3383472
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383472
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383258
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383258
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383258
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383258
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383258
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383258
F1 (C6-C10) - BTEX	mg/kg	53	<12	<12	12	3383258
(C6-C10)	mg/kg	53	<12	<12	12	3383258
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	106	78	97	N/A	3383258
D10-ETHYLBENZENE (sur.)	%	109	100	116	N/A	3383258
D4-1,2-DICHLOROETHANE (sur.)	%	108	98	104	N/A	3383258
D8-TOLUENE (sur.)	%	79	102	93	N/A	3383258
O-TERPHENYL (sur.)	%	114	111	117	N/A	3383472

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49465	Q49466	Q49467		
Sampling Date		2009/08/25 18:39	2009/08/25 18:34	2009/08/25 18:41		
COC Number		80947	80947	80947		
	Units	09-1001	09-1002	09-1003	RDL	QC Batch

Physical Properties						
Moisture	%	8.1	9.1	17	0.3	3383513
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	78	620	14	10	3383472
F3 (C16-C34 Hydrocarbons)	mg/kg	140	220	110	10	3383472
F4 (C34-C50 Hydrocarbons)	mg/kg	26	19	27	10	3383472
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383472
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383258
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383258
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383258
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383258
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383258
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383258
F1 (C6-C10) - BTEX	mg/kg	<12	17	<12	12	3383258
(C6-C10)	mg/kg	<12	17	<12	12	3383258
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	94	97	113	N/A	3383258
D10-ETHYLBENZENE (sur.)	%	122	96	106	N/A	3383258
D4-1,2-DICHLOROETHANE (sur.)	%	110	95	93	N/A	3383258
D8-TOLUENE (sur.)	%	74	82	94	N/A	3383258
O-TERPHENYL (sur.)	%	115	107	118	N/A	3383472

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49468	Q49469		
Sampling Date		2009/08/26 14:22	2009/08/26 14:24		
COC Number		80947	80947		
	Units	09-1004	09-1005	RDL	QC Batch

Physical Properties					
Moisture	%	5.5	12	0.3	3383513
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	13	10	3383472
F3 (C16-C34 Hydrocarbons)	mg/kg	40	44	10	3383472
F4 (C34-C50 Hydrocarbons)	mg/kg	18	18	10	3383472
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3383472
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3383258
Toluene	mg/kg	<0.020	<0.020	0.020	3383258
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	3383258
Xylenes (Total)	mg/kg	<0.040	<0.040	0.040	3383258
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	3383258
o-Xylene	mg/kg	<0.020	<0.020	0.020	3383258
F1 (C6-C10) - BTEX	mg/kg	<12	<12	12	3383258
(C6-C10)	mg/kg	<12	<12	12	3383258
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	118	94	N/A	3383258
D10-ETHYLBENZENE (sur.)	%	127	118	N/A	3383258
D4-1,2-DICHLOROETHANE (sur.)	%	104	105	N/A	3383258
D8-TOLUENE (sur.)	%	117	99	N/A	3383258
O-TERPHENYL (sur.)	%	103	114	N/A	3383472
N/A = Not Applicable RDL = Reportable Detection Limit					

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49470	Q49470	Q49471		
Sampling Date		2009/08/26 14:28	2009/08/26 14:28	2009/08/26 14:30		
COC Number		80947	80947	80947		
	Units	09-1006	09-1006 Lab-Dup	09-1007	RDL	QC Batch

Physical Properties						
Moisture	%	2.9	2.9	6.5	0.3	3383571
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	73	10	3383471
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	51	38	10	3383471
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	30	<10	10	3383471
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383471
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383254
Toluene	mg/kg	<0.020	<0.020	0.20	0.020	3383254
Ethylbenzene	mg/kg	<0.010	<0.010	0.57	0.010	3383254
Xylenes (Total)	mg/kg	<0.040	<0.040	3.7	0.040	3383254
m & p-Xylene	mg/kg	<0.040	<0.040	2.3	0.040	3383254
o-Xylene	mg/kg	<0.020	<0.020	1.5	0.020	3383254
F1 (C6-C10) - BTEX	mg/kg	<12	<12	450	12	3383254
(C6-C10)	mg/kg	<12	<12	450	12	3383254
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	98	108	N/A	3383254
D10-ETHYLBENZENE (sur.)	%	92	92	100	N/A	3383254
D4-1,2-DICHLOROETHANE (sur.)	%	85	85	83	N/A	3383254
D8-TOLUENE (sur.)	%	103	102	96	N/A	3383254
O-TERPHENYL (sur.)	%	102	101	98	N/A	3383471
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49472	Q49473	Q49474		
Sampling Date		2009/08/26 14:33	2009/08/26 14:36	2009/08/26 14:48		
COC Number		80947	80947	80948		
	Units	09-1008	09-1009	09-1010	RDL	QC Batch

Physical Properties						
Moisture	%	8.0	12	5.4	0.3	3383571
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383471
F3 (C16-C34 Hydrocarbons)	mg/kg	89	22	32	10	3383471
F4 (C34-C50 Hydrocarbons)	mg/kg	56	<10	24	10	3383471
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383471
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383254
Toluene	mg/kg	<0.020	0.10	<0.020	0.020	3383254
Ethylbenzene	mg/kg	<0.010	0.066	<0.010	0.010	3383254
Xylenes (Total)	mg/kg	<0.040	0.91	<0.040	0.040	3383254
m & p-Xylene	mg/kg	<0.040	0.54	<0.040	0.040	3383254
o-Xylene	mg/kg	<0.020	0.37	<0.020	0.020	3383254
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383254
(C6-C10)	mg/kg	<12	<12	<12	12	3383254
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	98	96	N/A	3383254
D10-ETHYLBENZENE (sur.)	%	98	102	96	N/A	3383254
D4-1,2-DICHLOROETHANE (sur.)	%	90	84	84	N/A	3383254
D8-TOLUENE (sur.)	%	103	103	103	N/A	3383254
O-TERPHENYL (sur.)	%	94	101	94	N/A	3383471
N/A = Not Applicable RDL = Reportable Detection Limit						

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49475	Q49476	Q49477		
Sampling Date		2009/08/26 14:48	2009/08/26 14:51	2009/08/26 14:54		
COC Number		80948	80948	80948		
	Units	09-1011	09-1012	09-1013	RDL	QC Batch

Physical Properties						
Moisture	%	6.2	14	9.4	0.3	3383571
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	13	10	3383471
F3 (C16-C34 Hydrocarbons)	mg/kg	56	19	120	10	3383471
F4 (C34-C50 Hydrocarbons)	mg/kg	38	10	63	10	3383471
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383471
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383254
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383254
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383254
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383254
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383254
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383254
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383254
(C6-C10)	mg/kg	<12	<12	<12	12	3383254
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	97	99	N/A	3383254
D10-ETHYLBENZENE (sur.)	%	96	95	105	N/A	3383254
D4-1,2-DICHLOROETHANE (sur.)	%	88	85	90	N/A	3383254
D8-TOLUENE (sur.)	%	101	103	100	N/A	3383254
O-TERPHENYL (sur.)	%	95	98	97	N/A	3383471

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49478	Q49479	Q49480		
Sampling Date		2009/08/26 14:56	2009/08/26 14:59	2009/08/26 15:02		
COC Number		80948	80948	80948		
	Units	09-1014	09-1015	09-1016	RDL	QC Batch

Physical Properties						
Moisture	%	12	4.1	13	0.3	3383571
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	67	<10	37	10	3383471
F3 (C16-C34 Hydrocarbons)	mg/kg	230	24	130	10	3383471
F4 (C34-C50 Hydrocarbons)	mg/kg	110	<10	42	10	3383471
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383471
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383254
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383254
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383254
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383254
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383254
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383254
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383254
(C6-C10)	mg/kg	<12	<12	<12	12	3383254
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	99	98	N/A	3383254
D10-ETHYLBENZENE (sur.)	%	91	99	94	N/A	3383254
D4-1,2-DICHLOROETHANE (sur.)	%	84	101	85	N/A	3383254
D8-TOLUENE (sur.)	%	104	97	103	N/A	3383254
O-TERPHENYL (sur.)	%	105	103	110	N/A	3383471

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49481	Q49482	Q49483		
Sampling Date		2009/08/26 15:04	2009/08/26 15:07	2009/08/26 15:15		
COC Number		80948	80948	80948		
	Units	09-1017	09-1018	09-1019	RDL	QC Batch

Physical Properties						
Moisture	%	6.9	9.6	6.6	0.3	3383571
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383471
F3 (C16-C34 Hydrocarbons)	mg/kg	21	28	15	10	3383471
F4 (C34-C50 Hydrocarbons)	mg/kg	120	12	<10	10	3383471
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383471
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383254
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383254
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383254
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383254
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383254
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383254
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383254
(C6-C10)	mg/kg	<12	<12	<12	12	3383254
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	99	98	N/A	3383254
D10-ETHYLBENZENE (sur.)	%	94	99	97	N/A	3383254
D4-1,2-DICHLOROETHANE (sur.)	%	88	93	89	N/A	3383254
D8-TOLUENE (sur.)	%	102	99	102	N/A	3383254
O-TERPHENYL (sur.)	%	99	99	99	N/A	3383471

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49484	Q49485	Q49486		
Sampling Date		2009/08/26 15:12	2009/08/26 15:12	2009/08/26 15:27		
COC Number		80948	80948	80949		
	Units	09-1020	09-1021	09-1022	RDL	QC Batch

Physical Properties						
Moisture	%	10	13	4.1	0.3	3383571
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	10	28	10	3383471
F3 (C16-C34 Hydrocarbons)	mg/kg	44	41	15	10	3383471
F4 (C34-C50 Hydrocarbons)	mg/kg	10	<10	<10	10	3383471
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383471
Volatiles						
Benzene	mg/kg	0.025	0.027	<0.0050	0.0050	3383254
Toluene	mg/kg	0.19	0.081	<0.020	0.020	3383254
Ethylbenzene	mg/kg	<0.010	<0.010	0.019	0.010	3383254
Xylenes (Total)	mg/kg	<0.040	<0.040	0.17	0.040	3383254
m & p-Xylene	mg/kg	<0.040	<0.040	0.12	0.040	3383254
o-Xylene	mg/kg	<0.020	<0.020	0.056	0.020	3383254
F1 (C6-C10) - BTEX	mg/kg	<12	<12	47	12	3383254
(C6-C10)	mg/kg	<12	<12	47	12	3383254
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	98	102	N/A	3383254
D10-ETHYLBENZENE (sur.)	%	97	104	104	N/A	3383254
D4-1,2-DICHLOROETHANE (sur.)	%	88	95	89	N/A	3383254
D8-TOLUENE (sur.)	%	102	100	103	N/A	3383254
O-TERPHENYL (sur.)	%	103	105	101	N/A	3383471
N/A = Not Applicable RDL = Reportable Detection Limit						

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49487	Q49488	Q49489		
Sampling Date		2009/08/26 15:25	2009/08/26 15:40	2009/08/26 15:42		
COC Number		80949	80949	80949		
	Units	09-1023	09-1024	09-1025	RDL	QC Batch

Physical Properties						
Moisture	%	11	5.0	4.4	0.3	3383571
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	200	<10	12	10	3383471
F3 (C16-C34 Hydrocarbons)	mg/kg	57	35	49	10	3383471
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	11	10	3383471
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383471
Volatiles						
Benzene	mg/kg	0.0074	<0.0050	<0.0050	0.0050	3383254
Toluene	mg/kg	<0.020	0.025	<0.020	0.020	3383254
Ethylbenzene	mg/kg	0.072	0.020	<0.010	0.010	3383254
Xylenes (Total)	mg/kg	0.29	0.088	<0.040	0.040	3383254
m & p-Xylene	mg/kg	0.24	0.067	<0.040	0.040	3383254
o-Xylene	mg/kg	0.049	0.021	<0.020	0.020	3383254
F1 (C6-C10) - BTEX	mg/kg	220	13	<12	12	3383254
(C6-C10)	mg/kg	220	13	<12	12	3383254
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	109	101	98	N/A	3383254
D10-ETHYLBENZENE (sur.)	%	99	105	104	N/A	3383254
D4-1,2-DICHLOROETHANE (sur.)	%	85	92	87	N/A	3383254
D8-TOLUENE (sur.)	%	104	101	105	N/A	3383254
O-TERPHENYL (sur.)	%	108	95	103	N/A	3383471
N/A = Not Applicable RDL = Reportable Detection Limit						

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49490	Q49490	Q49491		
Sampling Date		2009/08/26 15:45	2009/08/26 15:45	2009/08/26 15:49		
COC Number		80949	80949	80949		
	Units	09-1026	09-1026 Lab-Dup	09-1027	RDL	QC Batch

Physical Properties						
Moisture	%	7.0	7.5	7.2	0.3	3383573
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383467
F3 (C16-C34 Hydrocarbons)	mg/kg	39	57	24	10	3383467
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	11	<10	10	3383467
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383467
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383486
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383486
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383486
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383486
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383486
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383486
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383486
(C6-C10)	mg/kg	<12	<12	<12	12	3383486
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	98	98	N/A	3383486
D10-ETHYLBENZENE (sur.)	%	106	103	99	N/A	3383486
D4-1,2-DICHLOROETHANE (sur.)	%	85	85	83	N/A	3383486
D8-TOLUENE (sur.)	%	104	104	103	N/A	3383486
O-TERPHENYL (sur.)	%	93	105	96	N/A	3383467
<p>N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate</p>						

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49492	Q49493	Q49494		
Sampling Date		2009/08/26	2009/08/26	2009/08/26		
		15:52	15:56	15:58		
COC Number		80949	80949	80949		
	Units	09-1028	09-1029	09-1030	RDL	QC Batch

Physical Properties						
Moisture	%	8.9	5.8	6.2	0.3	3383573
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383467
F3 (C16-C34 Hydrocarbons)	mg/kg	59	23	39	10	3383467
F4 (C34-C50 Hydrocarbons)	mg/kg	21	<10	22	10	3383467
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383467
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383486
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383486
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383486
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383486
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383486
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383486
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383486
(C6-C10)	mg/kg	<12	<12	<12	12	3383486
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	96	96	N/A	3383486
D10-ETHYLBENZENE (sur.)	%	113	105	100	N/A	3383486
D4-1,2-DICHLOROETHANE (sur.)	%	86	82	84	N/A	3383486
D8-TOLUENE (sur.)	%	100	104	102	N/A	3383486
O-TERPHENYL (sur.)	%	102	116	106	N/A	3383467

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49495	Q49496	Q49497		
Sampling Date		2009/08/26 15:58	2009/08/26 16:01	2009/08/26 16:04		
COC Number		80949	80949	80949		
	Units	09-1031	09-1032	09-1033	RDL	QC Batch

Physical Properties						
Moisture	%	6.6	14	8.4	0.3	3383573
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	27	<10	10	3383467
F3 (C16-C34 Hydrocarbons)	mg/kg	30	63	36	10	3383467
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	12	10	3383467
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383467
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383486
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383486
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383486
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383486
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383486
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383486
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383486
(C6-C10)	mg/kg	<12	<12	<12	12	3383486
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	98	97	N/A	3383486
D10-ETHYLBENZENE (sur.)	%	107	106	119	N/A	3383486
D4-1,2-DICHLOROETHANE (sur.)	%	87	88	93	N/A	3383486
D8-TOLUENE (sur.)	%	102	102	99	N/A	3383486
O-TERPHENYL (sur.)	%	106	109	98	N/A	3383467

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49498	Q49499	Q49500		
Sampling Date		2009/08/26 16:05	2009/08/26 16:03	2009/08/26 16:09		
COC Number		80950	80950	80950		
	Units	09-1034	09-1035	09-1036	RDL	QC Batch

Physical Properties						
Moisture	%	3.6	8.0	6.6	0.3	3383573
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	10	<10	10	3383467
F3 (C16-C34 Hydrocarbons)	mg/kg	24	58	<10	10	3383467
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	10	3383467
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383467
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383486
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383486
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383486
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3383486
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3383486
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3383486
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3383486
(C6-C10)	mg/kg	<12	<12	<12	12	3383486
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	98	99	N/A	3383486
D10-ETHYLBENZENE (sur.)	%	109	110	112	N/A	3383486
D4-1,2-DICHLOROETHANE (sur.)	%	89	89	101	N/A	3383486
D8-TOLUENE (sur.)	%	101	103	100	N/A	3383486
O-TERPHENYL (sur.)	%	100	100	113	N/A	3383467

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49501	Q49502	Q49503		
Sampling Date		2009/08/26 17:52	2009/08/26 17:59	2009/08/26 18:02		
COC Number		80950	80950	80950		
	Units	09-1037	09-1038	09-1039	RDL	QC Batch

Physical Properties						
Moisture	%	5.0	4.4	6.0	0.3	3383573
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	280	<10	<10	10	3383467
F3 (C16-C34 Hydrocarbons)	mg/kg	100	29	17	10	3383467
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383467
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383467
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383486
Toluene	mg/kg	0.030	<0.020	<0.020	0.020	3383486
Ethylbenzene	mg/kg	0.017	<0.010	<0.010	0.010	3383486
Xylenes (Total)	mg/kg	4.8	<0.040	<0.040	0.040	3383486
m & p-Xylene	mg/kg	0.87	<0.040	<0.040	0.040	3383486
o-Xylene	mg/kg	4.0	<0.020	<0.020	0.020	3383486
F1 (C6-C10) - BTEX	mg/kg	830	14	<12	12	3383486
(C6-C10)	mg/kg	830	14	<12	12	3383486
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	102	102	98	N/A	3383486
D10-ETHYLBENZENE (sur.)	%	116	103	109	N/A	3383486
D4-1,2-DICHLOROETHANE (sur.)	%	93	89	83	N/A	3383486
D8-TOLUENE (sur.)	%	97	104	106	N/A	3383486
O-TERPHENYL (sur.)	%	107	110	116	N/A	3383467

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49504	Q49505	Q49506		
Sampling Date		2009/08/26 18:08	2009/08/26 18:08	2009/08/26 18:12		
COC Number		80950	80950	80950		
	Units	09-1040	09-1041	09-1042	RDL	QC Batch

Physical Properties						
Moisture	%	2.7	2.8	2.8	0.3	3383573
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	72	57	26	10	3383467
F3 (C16-C34 Hydrocarbons)	mg/kg	86	74	62	10	3383467
F4 (C34-C50 Hydrocarbons)	mg/kg	11	<10	<10	10	3383467
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383467
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383486
Toluene	mg/kg	0.12	0.10	<0.020	0.020	3383486
Ethylbenzene	mg/kg	0.13	0.13	<0.010	0.010	3383486
Xylenes (Total)	mg/kg	1.2	1.6	<0.040	0.040	3383486
m & p-Xylene	mg/kg	0.86	1.1	<0.040	0.040	3383486
o-Xylene	mg/kg	0.36	0.47	<0.020	0.020	3383486
F1 (C6-C10) - BTEX	mg/kg	100	180	16	12	3383486
(C6-C10)	mg/kg	100	180	16	12	3383486
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	101	102	99	N/A	3383486
D10-ETHYLBENZENE (sur.)	%	117	117	116	N/A	3383486
D4-1,2-DICHLOROETHANE (sur.)	%	96	88	90	N/A	3383486
D8-TOLUENE (sur.)	%	101	106	100	N/A	3383486
O-TERPHENYL (sur.)	%	116	116	113	N/A	3383467

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49507	Q49508	Q49509		
Sampling Date		2009/08/26 18:17	2009/08/26 18:26	2009/08/26 18:31		
COC Number		80950	80950	80950		
	Units	09-1043	09-1044	09-1045	RDL	QC Batch

Physical Properties						
Moisture	%	2.0	6.0	6.7	0.3	3383573
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	21	17	45	10	3383467
F3 (C16-C34 Hydrocarbons)	mg/kg	72	47	74	10	3383467
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	14	31	10	3383467
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383467
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383486
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383486
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383486
Xylenes (Total)	mg/kg	0.042	<0.040	<0.040	0.040	3383486
m & p-Xylene	mg/kg	0.042	<0.040	<0.040	0.040	3383486
o-Xylene	mg/kg	<0.020	0.030	<0.020	0.020	3383486
F1 (C6-C10) - BTEX	mg/kg	16	<12	<12	12	3383486
(C6-C10)	mg/kg	16	<12	<12	12	3383486
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	98	99	N/A	3383486
D10-ETHYLBENZENE (sur.)	%	116	118	106	N/A	3383486
D4-1,2-DICHLOROETHANE (sur.)	%	84	92	88	N/A	3383486
D8-TOLUENE (sur.)	%	103	99	103	N/A	3383486
O-TERPHENYL (sur.)	%	109	106	114	N/A	3383467
N/A = Not Applicable RDL = Reportable Detection Limit						

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49510	Q49510	Q49511		
Sampling Date		2009/08/26 18:51	2009/08/26 18:51	2009/08/26 19:04		
COC Number		80951	80951	80951		
	Units	09-1046	09-1046 Lab-Dup	09-1047	RDL	QC Batch

Physical Properties						
Moisture	%	6.1	N/A	6.0	0.3	3383583
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	32	25	11	10	3383466
F3 (C16-C34 Hydrocarbons)	mg/kg	70	61	52	10	3383466
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3383466
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383466
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3383483
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3383483
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3383483
Xylenes (Total)	mg/kg	<0.040	<0.040	0.16	0.040	3383483
m & p-Xylene	mg/kg	<0.040	<0.040	0.055	0.040	3383483
o-Xylene	mg/kg	<0.020	<0.020	0.10	0.020	3383483
F1 (C6-C10) - BTEX	mg/kg	<12	<12	65	12	3383483
(C6-C10)	mg/kg	<12	<12	65	12	3383483
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	99	98	N/A	3383483
D10-ETHYLBENZENE (sur.)	%	114	115	107	N/A	3383483
D4-1,2-DICHLOROETHANE (sur.)	%	110	121	97	N/A	3383483
D8-TOLUENE (sur.)	%	97	92	96	N/A	3383483
O-TERPHENYL (sur.)	%	100	94	95	N/A	3383466

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49512	Q49513	Q49514		
Sampling Date		2009/08/26 19:08	2009/08/26 19:13	2009/08/26 19:17		
COC Number		80951	80951	80951		
	Units	09-1048	09-1049	09-1050	RDL	QC Batch

Physical Properties						
Moisture	%	6.1	3.7	3.8	0.3	3383583
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	21	570	26	10	3383466
F3 (C16-C34 Hydrocarbons)	mg/kg	69	180	49	10	3383466
F4 (C34-C50 Hydrocarbons)	mg/kg	11	27	<10	10	3383466
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3383466
Volatiles						
Benzene	mg/kg	<0.0050	0.020	<0.0050	0.0050	3383483
Toluene	mg/kg	<0.020	1.8	<0.020	0.020	3383483
Ethylbenzene	mg/kg	<0.010	1.8	<0.010	0.010	3383483
Xylenes (Total)	mg/kg	<0.040	15	<0.040	0.040	3383483
m & p-Xylene	mg/kg	<0.040	11	<0.040	0.040	3383483
o-Xylene	mg/kg	<0.020	4.1	<0.020	0.020	3383483
F1 (C6-C10) - BTEX	mg/kg	<12	540	<12	12	3383483
(C6-C10)	mg/kg	<12	560	<12	12	3383483
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	98	91	N/A	3383483
D10-ETHYLBENZENE (sur.)	%	110	108	111	N/A	3383483
D4-1,2-DICHLOROETHANE (sur.)	%	110	103	102	N/A	3383483
D8-TOLUENE (sur.)	%	97	98	97	N/A	3383483
O-TERPHENYL (sur.)	%	101	92	96	N/A	3383466

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q49515	Q49516		
Sampling Date		2009/08/26 19:17	2009/08/26 16:30		
COC Number		80951	80951		
	Units	09-1051	09-1052	RDL	QC Batch

Physical Properties					
Moisture	%	3.7	9.0	0.3	3383583
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	49	910	10	3383466
F3 (C16-C34 Hydrocarbons)	mg/kg	87	110	10	3383466
F4 (C34-C50 Hydrocarbons)	mg/kg	14	<10	10	3383466
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3383466
Volatiles					
Benzene	mg/kg	<0.0050	0.030	0.0050	3383483
Toluene	mg/kg	<0.020	2.7	0.020	3383483
Ethylbenzene	mg/kg	<0.010	1.2	0.010	3383483
Xylenes (Total)	mg/kg	0.13	24	0.040	3383483
m & p-Xylene	mg/kg	0.089	16	0.040	3383483
o-Xylene	mg/kg	0.042	7.5	0.020	3383483
F1 (C6-C10) - BTEX	mg/kg	37	710	12	3383483
(C6-C10)	mg/kg	37	730	12	3383483
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	99	117	N/A	3383483
D10-ETHYLBENZENE (sur.)	%	114	103	N/A	3383483
D4-1,2-DICHLOROETHANE (sur.)	%	104	109	N/A	3383483
D8-TOLUENE (sur.)	%	95	96	N/A	3383483
O-TERPHENYL (sur.)	%	93	96	N/A	3383466
N/A = Not Applicable RDL = Reportable Detection Limit					

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		Q49516		
Sampling Date		2009/08/26		
		16:30		
COC Number		80951		
	Units	09-1052	RDL	QC Batch

Hydrocarbons				
Total Extractables C10 to C30	mg/kg	1020	10	3386711
Surrogate Recovery (%)				
O-TERPHENYL (sur.)	%	96	N/A	3386711
N/A = Not Applicable RDL = Reportable Detection Limit				

Package 1	3.7°C
Package 2	5.3°C
Package 3	8.7°C
Package 4	5.7°C
Package 5	3.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Sample Q49451-01: Detection limits raised due to high moisture content for BTEX/F1.

Sample Q49452-01: Detection limits raised due to high moisture content for BTEX/F1.

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report
 Maxxam Job Number: EA946687

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3383167 CL9	Matrix Spike [Q49391-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/30		83	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/30		126	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/30		95	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/30		108	%	60 - 140	
		Benzene	2009/08/30		82	%	60 - 140	
		Toluene	2009/08/30		NC	%	60 - 140	
		Ethylbenzene	2009/08/30		NC	%	60 - 140	
		m & p-Xylene	2009/08/30		NC	%	60 - 140	
		o-Xylene	2009/08/30		NC	%	60 - 140	
		(C6-C10)	2009/08/30		NC	%	60 - 140	
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/30		114	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/30		94	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/30		87	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/30		99	%	60 - 140	
		Benzene	2009/08/30		79	%	60 - 140	
		Toluene	2009/08/30		87	%	60 - 140	
		Ethylbenzene	2009/08/30		95	%	60 - 140	
		m & p-Xylene	2009/08/30		99	%	60 - 140	
		o-Xylene	2009/08/30		96	%	60 - 140	
		(C6-C10)	2009/08/30		98	%	80 - 120	
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/31		94	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/31		85	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/31		94	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/31		76	%	60 - 140	
		Benzene	2009/08/31	<0.0050		mg/kg		
		Toluene	2009/08/31	<0.020		mg/kg		
		Ethylbenzene	2009/08/31	<0.010		mg/kg		
		Xylenes (Total)	2009/08/31	<0.040		mg/kg		
		m & p-Xylene	2009/08/31	<0.040		mg/kg		
		o-Xylene	2009/08/31	<0.020		mg/kg		
	RPD [Q49390-01]	F1 (C6-C10) - BTEX	2009/08/31	<12		mg/kg		
		(C6-C10)	2009/08/31	<12		mg/kg		
		Benzene	2009/08/30	NC		%	50	
Toluene		2009/08/30	14.5		%	50		
Ethylbenzene		2009/08/30	42.3		%	50		
Xylenes (Total)		2009/08/30	28.1		%	50		
m & p-Xylene		2009/08/30	34.2		%	50		
o-Xylene		2009/08/30	13.0		%	50		
F1 (C6-C10) - BTEX		2009/08/30	NC		%	50		
(C6-C10)		2009/08/30	NC		%	50		
3383181 MB7		Matrix Spike [Q49391-01]	O-TERPHENYL (sur.)	2009/08/29		114	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2009/08/29		NC	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2009/08/29		126	%	50 - 130
	F4 (C34-C50 Hydrocarbons)		2009/08/29		129	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/29		87	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/29		97	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/29		104	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/08/29		111	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/08/29		108	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/29	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/08/29	<10		mg/kg		
		F4 (C34-C50 Hydrocarbons)	2009/08/29	<10		mg/kg		
	RPD [Q49390-01]	F2 (C10-C16 Hydrocarbons)	2009/08/29	25.0		%	50	

Quality Assurance Report (Continued)

Maxxam Job Number: EA946687

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3383181 MB7	RPD [Q49390-01]	F3 (C16-C34 Hydrocarbons)	2009/08/29	1.0		%	50
		F4 (C34-C50 Hydrocarbons)	2009/08/29	NC		%	50
3383233 AN1	Matrix Spike [Q49411-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/29		104	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/29		96	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/29		84	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/29		101	%	60 - 140
		Benzene	2009/08/29		94	%	60 - 140
		Toluene	2009/08/29		89	%	60 - 140
		Ethylbenzene	2009/08/29		97	%	60 - 140
		m & p-Xylene	2009/08/29		97	%	60 - 140
		o-Xylene	2009/08/29		94	%	60 - 140
		(C6-C10)	2009/08/29		126	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/29		102	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/29		95	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/29		86	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/29		100	%	60 - 140
		Benzene	2009/08/29		96	%	60 - 140
		Toluene	2009/08/29		86	%	60 - 140
		Ethylbenzene	2009/08/29		94	%	60 - 140
		m & p-Xylene	2009/08/29		93	%	60 - 140
		o-Xylene	2009/08/29		92	%	60 - 140
		(C6-C10)	2009/08/29		100	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/29		105	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/29		96	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/29		94	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/29		98	%	60 - 140
		Benzene	2009/08/29	<0.0050		mg/kg	
		Toluene	2009/08/29	<0.020		mg/kg	
		Ethylbenzene	2009/08/29	<0.010		mg/kg	
		Xylenes (Total)	2009/08/29	<0.040		mg/kg	
		m & p-Xylene	2009/08/29	<0.040		mg/kg	
		o-Xylene	2009/08/29	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/08/29	<12		mg/kg	
		(C6-C10)	2009/08/29	<12		mg/kg	
	RPD [Q49410-01]	Benzene	2009/08/29	16.0		%	50
		Toluene	2009/08/29	8.7		%	50
		Ethylbenzene	2009/08/29	4.2		%	50
		Xylenes (Total)	2009/08/29	4.0		%	50
		m & p-Xylene	2009/08/29	4.2		%	50
		o-Xylene	2009/08/29	3.4		%	50
		F1 (C6-C10) - BTEX	2009/08/29	8.4		%	50
		(C6-C10)	2009/08/29	7.3		%	50
3383244 CL9	Matrix Spike [Q49431-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/30		79	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/08/30		81	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/30		82	%	60 - 140
		D8-TOLUENE (sur.)	2009/08/30		99	%	60 - 140
		Benzene	2009/08/30		72	%	60 - 140
		Toluene	2009/08/30		81	%	60 - 140
		Ethylbenzene	2009/08/30		76	%	60 - 140
		m & p-Xylene	2009/08/30		86	%	60 - 140
		o-Xylene	2009/08/30		83	%	60 - 140
		(C6-C10)	2009/08/30		101	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/30		101	%	60 - 140

Quality Assurance Report (Continued)

Maxxam Job Number: EA946687

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3383244 CL9	Spiked Blank	D10-ETHYLBENZENE (sur.)	2009/08/30		94	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/30		92	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/30		117	%	60 - 140	
		Benzene	2009/08/30		86	%	60 - 140	
		Toluene	2009/08/30		98	%	60 - 140	
		Ethylbenzene	2009/08/30		86	%	60 - 140	
		m & p-Xylene	2009/08/30		98	%	60 - 140	
		o-Xylene	2009/08/30		111	%	60 - 140	
		(C6-C10)	2009/08/30		97	%	80 - 120	
		Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/30		98	%	60 - 140
	D10-ETHYLBENZENE (sur.)		2009/08/30		102	%	30 - 130	
	D4-1,2-DICHLOROETHANE (sur.)		2009/08/30		91	%	60 - 140	
	D8-TOLUENE (sur.)		2009/08/30		117	%	60 - 140	
	Benzene		2009/08/30	<0.0050			mg/kg	
	Toluene		2009/08/30	<0.020			mg/kg	
	Ethylbenzene		2009/08/30	<0.010			mg/kg	
	Xylenes (Total)		2009/08/30	<0.040			mg/kg	
	m & p-Xylene		2009/08/30	<0.040			mg/kg	
	o-Xylene		2009/08/30	<0.020			mg/kg	
	RPD [Q49430-01]	F1 (C6-C10) - BTEX	2009/08/30	<12			mg/kg	
		(C6-C10)	2009/08/30	<12			mg/kg	
		Benzene	2009/08/30	NC			%	50
		Toluene	2009/08/30	NC			%	50
		Ethylbenzene	2009/08/30	NC			%	50
		Xylenes (Total)	2009/08/30	NC			%	50
		m & p-Xylene	2009/08/30	NC			%	50
		o-Xylene	2009/08/30	NC			%	50
		F1 (C6-C10) - BTEX	2009/08/30	15.2			%	50
		(C6-C10)	2009/08/30	15.2			%	50
	3383254 CC6	Matrix Spike [Q49471-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/31		106	%	60 - 140
D10-ETHYLBENZENE (sur.)			2009/08/31		99	%	30 - 130	
D4-1,2-DICHLOROETHANE (sur.)			2009/08/31		85	%	60 - 140	
D8-TOLUENE (sur.)			2009/08/31		105	%	60 - 140	
Benzene			2009/08/31		90	%	60 - 140	
Toluene			2009/08/31		97	%	60 - 140	
Ethylbenzene			2009/08/31		89	%	60 - 140	
m & p-Xylene			2009/08/31		NC	%	60 - 140	
o-Xylene			2009/08/31		NC	%	60 - 140	
(C6-C10)			2009/08/31		NC	%	60 - 140	
Spiked Blank		4-BROMOFLUOROBENZENE (sur.)	2009/08/31		98	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/31		97	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/31		84	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/31		103	%	60 - 140	
		Benzene	2009/08/31		83	%	60 - 140	
		Toluene	2009/08/31		86	%	60 - 140	
		Ethylbenzene	2009/08/31		91	%	60 - 140	
		m & p-Xylene	2009/08/31		91	%	60 - 140	
		o-Xylene	2009/08/31		88	%	60 - 140	
		(C6-C10)	2009/08/31		113	%	80 - 120	
Method Blank		4-BROMOFLUOROBENZENE (sur.)	2009/08/31		98	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/31		95	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/31		83	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/31		103	%	60 - 140	
		Benzene	2009/08/31	<0.0050			mg/kg	



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)
 Maxxam Job Number: EA946687

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3383254 CC6	Method Blank	Toluene	2009/08/31	<0.020		mg/kg		
		Ethylbenzene	2009/08/31	<0.010		mg/kg		
		Xylenes (Total)	2009/08/31	<0.040		mg/kg		
		m & p-Xylene	2009/08/31	<0.040		mg/kg		
		o-Xylene	2009/08/31	<0.020		mg/kg		
	RPD [Q49470-01]	F1 (C6-C10) - BTEX (C6-C10)		2009/08/31	<12		mg/kg	
				2009/08/31	<12		mg/kg	
			Benzene	2009/08/31	NC		%	50
			Toluene	2009/08/31	NC		%	50
			Ethylbenzene	2009/08/31	NC		%	50
		Xylenes (Total) m & p-Xylene o-Xylene F1 (C6-C10) - BTEX (C6-C10)		2009/08/31	NC		%	50
				2009/08/31	NC		%	50
				2009/08/31	NC		%	50
				2009/08/31	NC		%	50
				2009/08/31	NC		%	50
3383258 CL9	Matrix Spike [Q49451-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/30		102	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/30		110	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/30		107	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/30		104	%	60 - 140	
		Benzene	2009/08/30		66	%	60 - 140	
		Toluene	2009/08/30		65	%	60 - 140	
		Ethylbenzene	2009/08/30		88	%	60 - 140	
		m & p-Xylene	2009/08/30		89	%	60 - 140	
		o-Xylene	2009/08/30		87	%	60 - 140	
		(C6-C10)	2009/08/30		91	%	60 - 140	
		Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/30		118	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/08/30		114	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/08/30		94	%	60 - 140
			D8-TOLUENE (sur.)	2009/08/30		98	%	60 - 140
			Benzene	2009/08/30		88	%	60 - 140
	Method Blank	Toluene		2009/08/30		91	%	60 - 140
				2009/08/30		99	%	60 - 140
				2009/08/30		104	%	60 - 140
				2009/08/30		100	%	60 - 140
				2009/08/30		94	%	80 - 120
		4-BROMOFLUOROBENZENE (sur.) D10-ETHYLBENZENE (sur.) D4-1,2-DICHLOROETHANE (sur.) D8-TOLUENE (sur.)		2009/08/30		94	%	60 - 140
				2009/08/30		96	%	30 - 130
				2009/08/30		97	%	60 - 140
				2009/08/30		82	%	60 - 140
			Benzene	2009/08/30	<0.0050		mg/kg	
	RPD [Q49450-01]	Toluene		2009/08/30	<0.020		mg/kg	
				2009/08/30	<0.010		mg/kg	
				2009/08/30	<0.040		mg/kg	
				2009/08/30	<0.040		mg/kg	
				2009/08/30	<0.020		mg/kg	
F1 (C6-C10) - BTEX (C6-C10)			2009/08/30	<12		mg/kg		
			2009/08/30	<12		mg/kg		
		Benzene	2009/08/30	NC		%	50	
		Toluene	2009/08/30	NC		%	50	
		Ethylbenzene	2009/08/30	NC		%	50	
Xylenes (Total) m & p-Xylene o-Xylene F1 (C6-C10) - BTEX			2009/08/30	NC		%	50	
			2009/08/30	NC		%	50	
			2009/08/30	NC		%	50	
			2009/08/30	NC		%	50	
			2009/08/30	NC		%	50	



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)
 Maxxam Job Number: EA946687

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3383258 CL9	RPD [Q49450-01]	(C6-C10)	2009/08/30	NC		%	50
3383466 YT	Matrix Spike [Q49511-01]	O-TERPHENYL (sur.)	2009/08/31		95	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/31		97	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/31		92	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/31		102	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/31		95	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/31		103	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/31		97	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/08/31		108	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/08/31		95	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/31	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/31	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/31	<10		mg/kg	
	RPD [Q49510-01]	F2 (C10-C16 Hydrocarbons)	2009/08/31	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/31	14.1		%	50
		F4 (C34-C50 Hydrocarbons)	2009/08/31	NC		%	50
3383467 YT	Matrix Spike [Q49491-01]	O-TERPHENYL (sur.)	2009/08/30		98	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/30		95	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/30		99	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/30		108	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/30		106	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/30		105	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/30		110	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/08/30		119	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/08/30		103	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/30	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/30	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/30	<10		mg/kg	
	RPD [Q49490-01]	F2 (C10-C16 Hydrocarbons)	2009/08/30	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/30	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2009/08/30	NC		%	50
3383469 LD2	Matrix Spike [Q49431-01]	O-TERPHENYL (sur.)	2009/08/31		106	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/31		107	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/31		97	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/31		109	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/31		99	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/31		106	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/08/31		109	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/08/31		101	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/08/31		100	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/31	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/08/31	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/08/31	<10		mg/kg	
	RPD [Q49430-01]	F2 (C10-C16 Hydrocarbons)	2009/08/31	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/08/31	7.4		%	50
		F4 (C34-C50 Hydrocarbons)	2009/08/31	NC		%	50
3383470 MB7	Matrix Spike [Q49411-01]	O-TERPHENYL (sur.)	2009/08/31		96	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/08/31		93	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/08/31		96	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/08/31		100	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/31		95	%	50 - 130



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)
 Maxxam Job Number: EA946687

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3383470 MB7	Spiked Blank	F2 (C10-C16 Hydrocarbons)	2009/08/31		94	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/31		98	%	80 - 120	
		F4 (C34-C50 Hydrocarbons)	2009/08/31		104	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/08/31		104	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/31	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/08/31	<10		mg/kg		
	RPD [Q49410-01]	F4 (C34-C50 Hydrocarbons)	2009/08/31	<10		mg/kg		
		F2 (C10-C16 Hydrocarbons)	2009/08/31	11.5		%	50	
		F3 (C16-C34 Hydrocarbons)	2009/08/31	NC		%	50	
		F4 (C34-C50 Hydrocarbons)	2009/08/31	NC		%	50	
3383471 KO	Matrix Spike [Q49471-01]	O-TERPHENYL (sur.)	2009/08/31		109	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/31		113	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/08/31		116	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/08/31		116	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/31		95	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/31		103	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/31		110	%	80 - 120	
	Method Blank	F4 (C34-C50 Hydrocarbons)	2009/08/31		116	%	80 - 120	
		O-TERPHENYL (sur.)	2009/09/01		107	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/09/01	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/09/01	<10		mg/kg		
		F4 (C34-C50 Hydrocarbons)	2009/09/01	<10		mg/kg		
	RPD [Q49470-01]	F2 (C10-C16 Hydrocarbons)	2009/08/31	NC		%	50	
		F3 (C16-C34 Hydrocarbons)	2009/08/31	NC		%	50	
		F4 (C34-C50 Hydrocarbons)	2009/08/31	NC		%	50	
3383472 LD2	Matrix Spike [Q49451-01]	O-TERPHENYL (sur.)	2009/08/30		107	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/30		120	%	50 - 130	
		F3 (C16-C34 Hydrocarbons)	2009/08/30		122	%	50 - 130	
		F4 (C34-C50 Hydrocarbons)	2009/08/30		121	%	50 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/08/30		69	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/30		89	%	80 - 120	
		F3 (C16-C34 Hydrocarbons)	2009/08/30		91	%	80 - 120	
	Method Blank	F4 (C34-C50 Hydrocarbons)	2009/08/30		91	%	80 - 120	
		O-TERPHENYL (sur.)	2009/08/30		101	%	50 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/08/30	<10		mg/kg		
		F3 (C16-C34 Hydrocarbons)	2009/08/30	16, RDL=10		mg/kg		
		F4 (C34-C50 Hydrocarbons)	2009/08/30	<10		mg/kg		
	RPD [Q49450-01]	F2 (C10-C16 Hydrocarbons)	2009/08/30	NC		%	50	
		F3 (C16-C34 Hydrocarbons)	2009/08/30	16.8		%	50	
		F4 (C34-C50 Hydrocarbons)	2009/08/30	NC		%	50	
3383483 CC6	Matrix Spike [Q49511-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/31		99	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/31		100	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/31		92	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/31		100	%	60 - 140	
		Benzene	2009/08/31		93	%	60 - 140	
		Toluene	2009/08/31		96	%	60 - 140	
		Ethylbenzene	2009/08/31		98	%	60 - 140	
		m & p-Xylene	2009/08/31		98	%	60 - 140	
		o-Xylene	2009/08/31		90	%	60 - 140	
		(C6-C10)	2009/08/31		94	%	60 - 140	
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/31		98	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/31		106	%	30 - 130	



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)
 Maxxam Job Number: EA946687

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3383483 CC6	Spiked Blank	D4-1,2-DICHLOROETHANE (sur.)	2009/08/31		101	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/31		97	%	60 - 140	
		Benzene	2009/08/31		110	%	60 - 140	
		Toluene	2009/08/31		107	%	60 - 140	
		Ethylbenzene	2009/08/31		113	%	60 - 140	
		m & p-Xylene	2009/08/31		113	%	60 - 140	
		o-Xylene	2009/08/31		109	%	60 - 140	
		(C6-C10)	2009/08/31		113	%	80 - 120	
		Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/08/31		98	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/08/31		101	%	30 - 130
	D4-1,2-DICHLOROETHANE (sur.)		2009/08/31		86	%	60 - 140	
	D8-TOLUENE (sur.)		2009/08/31		102	%	60 - 140	
	Benzene		2009/08/31	<0.0050		mg/kg		
	Toluene		2009/08/31	<0.020		mg/kg		
	Ethylbenzene		2009/08/31	<0.010		mg/kg		
	Xylenes (Total)		2009/08/31	<0.040		mg/kg		
	m & p-Xylene		2009/08/31	<0.040		mg/kg		
	o-Xylene		2009/08/31	<0.020		mg/kg		
	RPD [Q49510-01]	F1 (C6-C10) - BTEX	2009/08/31	<12		mg/kg		
		(C6-C10)	2009/08/31	<12		mg/kg		
		Benzene	2009/08/31	NC		%	50	
		Toluene	2009/08/31	NC		%	50	
		Ethylbenzene	2009/08/31	NC		%	50	
		Xylenes (Total)	2009/08/31	NC		%	50	
		m & p-Xylene	2009/08/31	NC		%	50	
		o-Xylene	2009/08/31	NC		%	50	
		F1 (C6-C10) - BTEX	2009/08/31	NC		%	50	
		(C6-C10)	2009/08/31	NC		%	50	
	3383486 CC6	Matrix Spike [Q49491-01]	4-BROMOFLUOROBENZENE (sur.)	2009/08/30		98	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/08/30		107	%	30 - 130
D4-1,2-DICHLOROETHANE (sur.)			2009/08/30		86	%	60 - 140	
D8-TOLUENE (sur.)			2009/08/30		102	%	60 - 140	
Benzene			2009/08/30		96	%	60 - 140	
Toluene			2009/08/30		101	%	60 - 140	
Ethylbenzene			2009/08/30		107	%	60 - 140	
m & p-Xylene			2009/08/30		108	%	60 - 140	
o-Xylene			2009/08/30		102	%	60 - 140	
(C6-C10)			2009/08/30		120	%	60 - 140	
Spiked Blank		4-BROMOFLUOROBENZENE (sur.)	2009/08/30		99	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/30		105	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/30		86	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/30		105	%	60 - 140	
		Benzene	2009/08/30		95	%	60 - 140	
		Toluene	2009/08/30		102	%	60 - 140	
		Ethylbenzene	2009/08/30		104	%	60 - 140	
		m & p-Xylene	2009/08/30		107	%	60 - 140	
		o-Xylene	2009/08/30		102	%	60 - 140	
		(C6-C10)	2009/08/30		114	%	80 - 120	
Method Blank		4-BROMOFLUOROBENZENE (sur.)	2009/08/30		98	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/08/30		104	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/08/30		83	%	60 - 140	
		D8-TOLUENE (sur.)	2009/08/30		104	%	60 - 140	
		Benzene	2009/08/30	<0.0050		mg/kg		
		Toluene	2009/08/30	<0.020		mg/kg		



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)
 Maxxam Job Number: EA946687

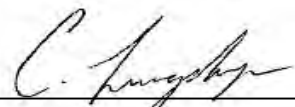
QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3383486 CC6	Method Blank	Ethylbenzene	2009/08/30	<0.010		mg/kg	
		Xylenes (Total)	2009/08/30	<0.040		mg/kg	
		m & p-Xylene	2009/08/30	<0.040		mg/kg	
		o-Xylene	2009/08/30	<0.020		mg/kg	
		F1 (C6-C10) - BTEX (C6-C10)	2009/08/30	<12		mg/kg	
	RPD [Q49490-01]	Benzene	2009/08/30	NC		%	50
		Toluene	2009/08/30	NC		%	50
		Ethylbenzene	2009/08/30	NC		%	50
		Xylenes (Total)	2009/08/30	NC		%	50
		m & p-Xylene	2009/08/30	NC		%	50
		o-Xylene	2009/08/30	NC		%	50
		F1 (C6-C10) - BTEX (C6-C10)	2009/08/30	NC		%	50
			2009/08/30	NC		%	50
			2009/08/30	NC		%	50
3383504 GG3	Method Blank	Moisture	2009/08/30	<0.3		%	
		RPD [Q49390-01]	Moisture	2009/08/30	13.7		%
3383508 SR7	Method Blank	Moisture	2009/08/30	<0.3		%	
		RPD [Q49430-01]	Moisture	2009/08/30	5.6		%
3383513 SR7	Method Blank	Moisture	2009/08/30	<0.3		%	
		RPD [Q49450-01]	Moisture	2009/08/30	2.8		%
3383558 SR7	Method Blank	Moisture	2009/08/30	<0.3		%	
		RPD [Q49410-01]	Moisture	2009/08/30	1.6		%
3383571 SR7	Method Blank	Moisture	2009/08/30	<0.3		%	
		RPD [Q49470-01]	Moisture	2009/08/30	0		%
3383573 SR7	Method Blank	Moisture	2009/08/30	<0.3		%	
		RPD [Q49490-01]	Moisture	2009/08/30	6.9		%
3383583 SR7	Method Blank	Moisture	2009/08/30	<0.3		%	
		RPD	Moisture	2009/08/30	9.6		%
3386711 YT	Spiked Blank	O-TERPHENYL (sur.)	2009/08/31		95	%	50 - 130
		Total Extractables C10 to C30	2009/08/31		97	%	60 - 130
	Method Blank	O-TERPHENYL (sur.)	2009/08/31		95	%	50 - 130
		Total Extractables C10 to C30	2009/08/31	11, RDL=10		mg/kg	


Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
 NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

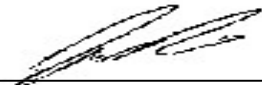
Validation Signature Page


Maxxam Job #: A946687

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).


CORI LUCYSHYN, Analyst 2


LISA CUMMINGS, Extractables Supervisor


JIM TJATHAS, Analyst 2


HUA WO, Organics Supervisor

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galuc

Address: ana.galuc@aecom.com

Prov: _____ **PC:** _____

Contact #s: Ph: 403.270.9200 Fax: 403.270.6399

Report To:

AECOM (Dara Schmidt)

2540 Kensington Road NW

Calgary

Prov: Alberta PC: T2N 3S3

Ph: 403.450.9923 Fax: 403.270.4822

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

dara.schmidt@aecom.com

priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: ASAP

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)							WATERS (footnotes defined on back)							OTHER TEST(S)				*HOLD for 60 Days	# of Containers Submitted			
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Total <input type="checkbox"/> Dissolved	Mercury <input type="checkbox"/> TKN <input type="checkbox"/> COD	<input type="checkbox"/> Ammonia <input type="checkbox"/> TOC <input type="checkbox"/> DOC							
1	09-926	S	23-Aug-09	12:20	✓																		2		
2	09-927			12:23	✓																			2	
3	09-928			12:26	✓																			2	
4	09-929			12:29	✓																			2	
5	09-930			12:31	✓																			2	
6	09-931			12:31	✓																			2	
7	09-932			12:34	✓																			2	
8	09-933			12:36	✓																			2	
9	09-934			12:39	✓																			2	
10	09-935			12:41	✓																			2	
11	09-936			15:42	✓																			2	
12	09-937	✓	✓	15:44	✓																			2	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Priya Handa Date/Time: 27-Aug-09

Sign and Print: *[Signature]*

# JARS USED & NOT SUBMITTED	28/08/09 17:15	Received By BW	Temperature	Ice
			CUSTODY SEAL (YES) / NO	

COMMENTS/SPECIAL INSTRUCTIONS: No Partial Reports Please

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Invoice To: Require Report? Yes No

Company Name: AECCOM

Contact Name: Ana Galue

Address: ana.galue@ae.com.com

Prov: PC:

Contact #s: Ph: 403.270.9200 Fax: 403.270.0299

Report To:
AECCOM (Dara Schmidt)
2540 Kensington Road NW
Calgary
Prov: Alberta PC: T2N 3S8
Ph: 403.450.9923 Fax: 403.270.4822
(site) (office)

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location:
Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@ae.com.com
priya.handq@ae.com.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: ASAP

REGULAR Turnaround (5 to 7 Days)

	Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)						WATERS (footnotes defined on back)						OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted		
				BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Total <input type="checkbox"/> Dissolved	Mercury <input type="checkbox"/> TKN <input type="checkbox"/> COD	Ammonia <input type="checkbox"/> TOC <input type="checkbox"/> DOC			
1	09-938	S	23-Aug-09 15:47	✓																	2	
2	09-939		15:49	✓																		2
3	09-940		15:53	✓																		2
4	09-941		15:53	✓																		2
5	09-942		15:55	✓																		2
6	09-943		15:57	✓																		2
7	09-944		15:59	✓																		2
8	09-945		24-Aug-09 11:47	✓																		2
9	09-946		11:49	✓																		2
10	09-947		11:56	✓																		2
11	09-948		11:58	✓																		2
12	09-949	✓	12:02	✓																		2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1 Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	28/08/09 Received By	Temperature	Ice
	17:15 ANW		
CUSTODY SEAL		YES	NO

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galve

Address: ana.galve@aecom.com

Prov: PC:

Contact #s: Ph: 403.270.9200 Fax: 403.270.0399

Report To:
 AECOM (Dara Schmidt)
 2540 Kensington Road NW
 Calgary
 Prov: AB PC: T2N 3S3
 Ph: 403.450.9923 Fax: 403.270.4822
 (site) (office)

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use

AT1

CCME

OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
 clara.schmidt@aecom.com
 priya.hardla@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
 Date Required: ASAP

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)						OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted														
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved		Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Total	Dissolved	Mercury	Ammonia	TKN	COD	TOC	DOC
1	09-950	S	24-Aug-09	12:07	✓																																2
2	09-951			12:07	✓																																2
3	09-952			12:12	✓																																2
4	09-953			12:14	✓																																2
5	09-954			12:18	✓																																2
6	09-955			12:21	✓																																2
7	09-956			12:25	✓																																2
8	09-957			12:27	✓																																2
9	09-958			15:37	✓																																2
10	09-959			15:40	✓																																2
11	09-960			15:43	✓																																2
12	09-961	✓	✓	15:43	✓																																2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1 Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	28/08/09	Received By 17:15 AN	Temperature		Ice
	CUSTODY SEAL		YES	NO	

MR/SW

80944 CHAIN OF CUSTODY
A946687 Page: 4 of 11

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galve
Address: ana.galve@aecom.com
Prov: Alberta **PC:** T2N 3S3
Contact #s: Ph: 403.270.9200 Fax: 403.270.0399

Report To: AECOM (Dara Schmidt)
2540 Kensington Road NW
Calgary
Prov: Alberta **PC:** T2N 3S3
Ph: 403.450.9923 **Fax:** 403.270.4822
(site) (office)

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location:
Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt@aecom.com
priya.handa@aecom.com
aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: ASAP
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	SOILS (footnotes defined on back)							WATERS (footnotes defined on back)				OTHER TEST(S)				*HOLD for 60 Days	# of Containers Submitted																				
				Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment (CP Metals)	Paint Filter <input type="checkbox"/>	Flashpoint <input type="checkbox"/>	pH (1:1) <input type="checkbox"/>	TCLP <input type="checkbox"/>	BTEX <input type="checkbox"/>	Metals <input type="checkbox"/>	BTEX F1 <input type="checkbox"/>	VOCs <input type="checkbox"/>	BTEX F1-F2 <input type="checkbox"/>	BTEX F1-F4 <input type="checkbox"/>	Routine Water Package <input type="checkbox"/>			Turb <input type="checkbox"/>	F <input type="checkbox"/>	Total <input type="checkbox"/>	Preserved <input type="checkbox"/>	Not Preserved <input type="checkbox"/>	Dissolved <input type="checkbox"/>	Preserved <input type="checkbox"/>	Not Preserved <input type="checkbox"/>	Filtered <input type="checkbox"/>	Not Filtered <input type="checkbox"/>	Total <input type="checkbox"/>	Dissolved <input type="checkbox"/>	Mercury <input type="checkbox"/>	Ammonia <input type="checkbox"/>	TKN <input type="checkbox"/>	COD <input type="checkbox"/>	TOC <input type="checkbox"/>	DOC <input type="checkbox"/>		
1	09-962	S	24-Aug-09 15:46	✓																																		2		
2	09-963		25-Aug-09 11:03	✓																																			2	
3	09-964		11:08	✓																																			2	
4	09-965		11:13	✓																																			2	
5	09-966		11:18	✓																																			2	
6	09-967		12:40	✓																																			2	
7	09-968		11:23	✓																																			2	
8	09-969		11:28	✓																																			2	
9	09-970		11:31	✓																																			2	
10	09-971		11:31	✓																																			2	
11	09-972		11:34	✓																																			2	
12	09-973	✓	11:37	✓																																			2	

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1 Date/Time: _____
Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	28/08/09	Received By 17:15 SW	Temperature		Ice
	CUSTODY SEAL YES / NO				

mr/pw

A946657

Invoice To: Require Report? Yes No

Company Name: AECOM
 Contact Name: Ana Galuc
 Address: ana.galuc@aecom.com
 Contact #: Ph: 403.270.9200 Fax: 403.270.0399

Report To:
AECOM (Dara Schmidt)
2540 Kensington Road NW
Calgary
 Prov: Alberta PC: T2N 3S3
 Ph: 403.450.9923 Fax: 403.270.4822
 (site) (office)

PO # / AFE #:
 Quotation #: C08-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location:
 Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use

AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
 EMAIL ADDRESS(S):
dara.schmidt
@aecom.com
prya.handa@
aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
 Date Required: ASAP
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)								WATERS (footnotes defined on back)								OTHER TEST(S)						*HOLD for 60 Days	# of Containers Submitted		
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	<input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC										
1	09-974	S	25-Aug-09 11:41	✓																							2	
2	09-975		11:44	✓																								2
3	09-976		11:52	✓																								2
4	09-977		11:47	✓																								2
5	09-978		11:56	✓																								2
6	09-979		12:00	✓																								2
7	09-980		12:05	✓																								2
8	09-981		12:05	✓																								2
9	09-982		12:18	✓																								2
10	09-983		12:24	✓																								2
11	09-984		12:28	✓																								2
12	09-985		12:32	✓																								2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1. Date/Time: _____
 Sign and Print: _____

JARS USED & NOT SUBMITTED: 28/8/09 Received By: _____
17:15 PW
 Temperature _____ Ice _____
 CUSTODY SEAL YES NO

COMMENTS/SPECIAL INSTRUCTIONS:

A 946681

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galue
Address: ana.galue@aecom.com
Prov: PC: **PC:**
Contact #s: Ph: 403.210.9200 Fax: 403.270.0399

Report To:
 AECOM (Dara Schmidt)
 2540 Kensington Road NW
 Calgary
 Prov: Alberta PC: T2N 3S3
 Ph: 403.450.9923 Fax: 403.270.4822
 (SITE)

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Park
Location:
Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:
 Check the applicable criterion and indicate land use
 AT1
 CCME
 OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 priya.handa@aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: ASAP
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)				WATERS (footnotes defined on back)				OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted																				
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1		VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD
1	09-986	S	25-Aug-09	18:20	✓																														2
2	09-987			18:26	✓																														2
3	09-988			18:30	✓																														2
4	09-989			16:41	✓																														2
5	09-990			16:44	✓																														2
6	09-991			16:44	✓																														2
7	09-992			16:48	✓																														2
8	09-993			16:51	✓																														2
9	09-994			17:02	✓																														2
10	09-995			17:06	✓																														2
11	09-996			17:09	✓																														2
12	09-997			17:22	✓																														2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1 Date/Time: _____
 Sign and Print: _____

# JARS USED & NOT SUBMITTED	28/08/09	Received By 17:15 MW	Temperature	Ice
	CUSTODY SEAL (ES) / NO			

COMMENTS/SPECIAL INSTRUCTIONS:

MR/SW

A946681

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galuc

Address: ana.galuc@aecom.com

Contact #s: Ph: 403.270.920 Fax: 403.270.0399

Report To:
 AECOM (Dara Schmidt)
 2540 Kensington Road NW
 Calgary
 Prov: Alberta PC: T2N 3S3
 Ph: 403.450.9923 Fax: 403.270.4822
 (site) (office)

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1

CCME

OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 priya.hansa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
 Date Required: ASAP

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)											WATERS (footnotes defined on back)							OTHER TEST(S)														
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC
1	09-998	S	25-Aug-09	18:02	✓																														2
2	09-999			18:05	✓																														2
3	09-1000			18:39	✓																														2
4	09-1001			18:39	✓																														2
5	09-1002			18:34	✓																														2
6	09-1003			18:41	✓																														2
7	09-1004		26-Aug-09	14:22	✓																														2
8	09-1005			14:24	✓																														2
9	09-1006			14:28	✓																														2
10	09-1007			14:30	✓																														2
11	09-1008			14:33	✓																														2
12	09-1009			14:36	✓																														2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1 Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

# JARS USED & NOT SUBMITTED	28/08/09	Received By	Temperature	Ice
	17:15 SW			
	CUSTODY SEAL (ES) / NO			

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galuc

Address: ana.galuc@aecom.com

Contact #s: Ph: 403.270.9200 Fax: 403.270.0399

Report To:
 AECOM (Dara Schmidt)
 2540 Kensington Road NW
 Calgary
 Prov: Alberta PC: T2N 3S3
 Ph: 403.950.9923 Fax: 403.270.4822
 (site) (office)

PO # / AFE #:
 Quotation #: C08-329
 Project #: 2977-371-00
 Project Name: Johnson Point
 Location:
 Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:

- Check the applicable criterion and indicate land use
- AT1
 - CCME
 - OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
 dara.schmidt@aecom.com
 priya.handa@aecom.com

SERVICE REQUESTED:

- RUSH (Please ensure you contact the lab to reserve)
 Date Required: ASAP
- REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)								OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted											
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment (CP Metals)	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F4	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved		Preserved	Not Preserved	Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC
1	09-1010	S	26-Aug-09	14:48	✓																															2
2	09-1011			14:48	✓																															2
3	09-1012			14:51	✓																															2
4	09-1013			14:54	✓																															2
5	09-1014			14:56	✓																															2
6	09-1015			14:59	✓																															2
7	09-1016			15:02	✓																															2
8	09-1017			15:04	✓																															2
9	09-1018			15:07	✓																															2
10	09-1019			15:15	✓																															2
11	09-1020			15:12	✓																															2
12	09-1021			15:12	✓																															2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1 Date/Time:

Sign and Print:

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	28/08/09 17:15 AN	Received By	Temperature		Ice
		CUSTODY SEAL	YES	NO	

Invoice To: Require Report? Yes No

Company Name: AECOM
Contact Name: Ana Galhe
Address: ana.galhe@aecom.com
Prov: PC: **PC:**
Contact #s: Ph: 403.270.9200 Fax: 403.270.0399

Report To:
AECOM (Dara Schmidt)
2540 Kensington Road NW
Calgary
Prov: Alberta PC: T2N 3S3
Ph: 403.450.9923 Fax: 403.270.4822
(Side) (office)

PO # / AFE #:
Quotation #: C08-329
Project #: 2977-371-00
Project Name: Johnson Point
Location:
Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1
 CCME
 OTHER

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
Dara.Schmidt@aecom.com
Priya.Handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: ASAP
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)					OTHER TEST(S)					*HOLD for 60 Days # of Containers Submitted
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	
1 09-1022	S	26 Aug-09 15:27	✓															2
2 09-1023		15:25	✓															2
3 09-1024		15:40	✓															2
4 09-1025		15:42	✓															2
5 09-1026		15:45	✓															2
6 09-1027		15:49	✓															2
7 09-1028		15:52	✓															2
8 09-1029		15:56	✓															2
9 09-1030		15:58	✓															2
10 09-1031		15:58	✓															2
11 09-1032		16:01	✓															2
12 09-1033		16:04	✓															2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1 Date/Time:

Sign and Print:

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	28/08/09	Received By 17:15 SW	Temperature	Ice
	CUSTODY SEAL YES / NO			

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: _____ **PC:** _____

Contact #s: **Ph:** 403.270.9200 **Fax:** 403.270.0399

Report To:
AECOM (Dara Schmidt)
2540 Kensington Road NW
Calgary

Prov: Alberta **PC:** T2N 3S3

Ph: 403.450.9923 **Fax:** 403.270.4822
(Site) *(Office)*

PO # / AFE #: _____

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: _____

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use
 AT1 _____
 CCME _____
 OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):
dara.schmidt @
aecom.com
priya.handa @
aecom.com

SERVICE REQUESTED:
 RUSH (Please ensure you contact the lab to reserve)
Date Required: ASAP
 REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)					WATERS (footnotes defined on back)					OTHER TEST(S)																							
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment: ICP Metals*	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved	Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC
1		09-1034	S	26-Aug-09	16:05	✓																														2
2		09-1035			16:03	✓																														2
3		09-1036			16:09	✓																														2
4		09-1037			17:52	✓																														2
5		09-1038			17:59	✓																														2
6		09-1039			18:02	✓																														2
7		09-1040			18:08	✓																														2
8		09-1041			18:08	✓																														2
9		09-1042			18:12	✓																														2
10		09-1043			18:17	✓																														2
11		09-1044			18:26	✓																														2
12		09-1045			18:31	✓																														2

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #: _____

Relinquished By: Refer to Pg. 1 Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS: _____

# JARS USED & NOT SUBMITTED	28/08/09	Received By	Temperature		Ice
	17:15 SW				
CUSTODY SEAL			YES	NO	

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galve

Address: ana.galve@aecom.com

Prov: PC: **PC:**

Contact #s: Ph: 403.270.9200 Fax: 403.270.0399

Report To:

AECOM (Dara Schmidt)

2540 Kensington Road NW

Calgary

Prov: Alberta **PC:** T2N 3S3

Ph: 403.450.9923 **Fax:** 403.270.4822
(office)

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1

CCME

OTHER

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):

dara.schmidt@aecom.com

pryga.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)
Date Required: ASAP

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)							OTHER TEST(S)																	
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)	Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter	<input type="checkbox"/> Flashpoint	<input type="checkbox"/> pH (1:1)	TCLP	<input type="checkbox"/> BTEX	Metals	BTEX F1	<input type="checkbox"/> VOCs	<input type="checkbox"/> BTEX F1-F2	<input type="checkbox"/> BTEX F1-F4	Routine Water Package	<input type="checkbox"/> Turb	<input type="checkbox"/> F	Total	<input type="checkbox"/> Preserved	<input type="checkbox"/> Not Preserved	Dissolved	<input type="checkbox"/> Preserved	<input type="checkbox"/> Not Preserved	<input type="checkbox"/> Filtered	<input type="checkbox"/> Not Filtered	Mercury	Total	Dissolved	Ammonia	TKN	COD	TOC	DOC	*HOLD for 60 Days
1 09-1046	S	26 Aug-09 18:51	✓																																		2
2 09-1047		19:04	✓																																		2
3 09-1048		19:08	✓																																		2
4 09-1049		19:13	✓																																		2
5 09-1050		19:17	✓																																		2
6 09-1051		19:17	✓																																		2
7 09-1052		26-Aug-09 16:30																																			2
8																																					
9																																					
10																																					
11																																					
12																																					

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1 Date/Time:

Sign and Print:

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	28/09/09	Received By	Temperature		Ice
	17:15 JW				
CUSTODY SEAL			YES NO		



Your Project #: 2977-371-00
 Site: JOHNSON POINT
 Your C.O.C. #: 80952, 80953, 80954, 80955

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/09/11

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A947638
Received: 2009/09/02, 10:40

Sample Matrix: Soil
 # Samples Received: 36

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	25	2009/09/03	2009/09/04	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 by HS GC/MS (MeOH extract)	11	2009/09/03	2009/09/05	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	16	2009/09/03	2009/09/06	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	20	2009/09/03	2009/09/08	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
CCME Hydrocarbons (F4G in soil)	1	2009/09/03	2009/09/08	EENVSOP-00121	CWS PHCS Tier 1
Elements by ICPMS - Soils	7	2009/09/08	2009/09/08	CAL SOP-00191	EPA SW-846-6020A
Elements by ICPMS - Soils	9	2009/09/09	2009/09/09	CAL SOP-00191	EPA SW-846-6020A
Moisture	36	N/A	2009/09/04	EENVSOP-00139	Carter SSMA 51.2
Polychlorinated Biphenyls (1)	16	2009/09/03	2009/09/03	CAL SOP-00149	EPA 3550B, EPA 8082A

Sample Matrix: Water
 # Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 in Water by HS GC/MS	1	N/A	2009/09/03	EENVSOP-00004 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 in Water by HS GC/MS	2	N/A	2009/09/04	EENVSOP-00004 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 in Water by HS GC/MS	1	N/A	2009/09/06	EENVSOP-00004 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons in Water (F2; C10-C16)	4	2009/09/04	2009/09/04	EENVSOP-00009 EENVSOP-00008	EPA 8015D/3510C

(1) This test was performed by Maxxam Calgary



Your Project #: 2977-371-00
Site: JOHNSON POINT
Your C.O.C. #: 80952, 80953, 80954, 80955

Attention: DARA SCHMIDT
AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/09/11

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
Email: eanderson@maxxamanalytics.com
Phone# (780) 577-7113 Ext:7113

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

AT1 BTEX AND F1-F2 (WATER)

Maxxam ID		Q56110		Q56111		
Sampling Date		2009/08/29		2009/08/29		
COC Number		80955		80955		
	Units	09-1089	RDL	09-1090	RDL	QC Batch

Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	mg/L	40.1	0.1	178	0.1	3393201
Volatiles						
Benzene	ug/L	21	0.4	130	4	3393188
Toluene	ug/L	590 (1)	4	2600	4	3393188
Ethylbenzene	ug/L	220	0.4	1500	4	3393188
o-Xylene	ug/L	340	0.4	3000	4	3393188
m & p-Xylene	ug/L	810	0.8	6600	8	3393188
Xylenes (Total)	ug/L	1200	0.8	9600	8	3393188
F1 (C6-C10) - BTEX	ug/L	3500	100	620	100	3393188
(C6-C10)	ug/L	5500	100	14000	100	3393188
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	105	N/A	93	N/A	3393188
D4-1,2-DICHLOROETHANE (sur.)	%	110	N/A	111	N/A	3393188
D8-TOLUENE (sur.)	%	97	N/A	94	N/A	3393188
O-TERPHENYL (sur.)	%	104	N/A	112	N/A	3393201

N/A = Not Applicable
 RDL = Reportable Detection Limit
 (1) Detection limits raised due to dilution to bring analyte within the calibrated range.

AT1 BTEX AND F1-F2 (WATER)

Maxxam ID		Q56112		Q56113		
Sampling Date		2009/08/29		2009/08/29		
COC Number		80955		80955		
	Units	09-1091	RDL	09-1092	RDL	QC Batch

Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	mg/L	106	0.1	65.8	0.1	3393201
Volatiles						
Benzene	ug/L	190	0.4	9.4	0.4	3393188
Toluene	ug/L	2400 (1)	4	190	0.4	3393188
Ethylbenzene	ug/L	980 (1)	4	41	0.4	3393188
o-Xylene	ug/L	1900 (1)	4	82	0.4	3393188
m & p-Xylene	ug/L	4000 (1)	8	180	0.8	3393188
Xylenes (Total)	ug/L	6000	8	260	0.8	3393188
F1 (C6-C10) - BTEX	ug/L	48000	100	1500	100	3393188
(C6-C10)	ug/L	58000	100	2000	100	3393188
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	N/A	106	N/A	3393188
D4-1,2-DICHLOROETHANE (sur.)	%	107	N/A	110	N/A	3393188
D8-TOLUENE (sur.)	%	95	N/A	87	N/A	3393188
O-TERPHENYL (sur.)	%	122	N/A	128	N/A	3393201

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q55991	Q55991	Q56017		
Sampling Date		2009/08/30 11:15	2009/08/30 11:15	2009/08/30 11:18		
COC Number		80952	80952	80952		
	Units	09-1053	09-1053 Lab-Dup	09-1054	RDL	QC Batch

Physical Properties						
Moisture	%	4.4	5.3	3.7	0.3	3396635
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395883
F3 (C16-C34 Hydrocarbons)	mg/kg	22	32	21	10	3395883
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395883
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3395883
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394924
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3394924
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394924
(C6-C10)	mg/kg	<12	<12	<12	12	3394924
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	103	107	102	N/A	3394924
D10-ETHYLBENZENE (sur.)	%	106	107	108	N/A	3394924
D4-1,2-DICHLOROETHANE (sur.)	%	89	90	89	N/A	3394924
D8-TOLUENE (sur.)	%	98	98	98	N/A	3394924
O-TERPHENYL (sur.)	%	102	108	110	N/A	3395883

N/A = Not Applicable
RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56018	Q56019	Q56020		
Sampling Date		2009/08/30 11:30	2009/08/30 11:33	2009/08/30 11:45		
COC Number		80952	80952	80952		
	Units	09-1055	09-1056	09-1057	RDL	QC Batch

Physical Properties						
Moisture	%	17	15	16	0.3	3396635
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395883
F3 (C16-C34 Hydrocarbons)	mg/kg	24	22	23	10	3395883
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395883
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3395883
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394924
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3394924
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394924
(C6-C10)	mg/kg	<12	<12	<12	12	3394924
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	104	113	104	N/A	3394924
D10-ETHYLBENZENE (sur.)	%	96	78	93	N/A	3394924
D4-1,2-DICHLOROETHANE (sur.)	%	87	127	89	N/A	3394924
D8-TOLUENE (sur.)	%	98	91	98	N/A	3394924
O-TERPHENYL (sur.)	%	105	98	103	N/A	3395883

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56021	Q56022	Q56023		
Sampling Date		2009/08/30 11:48	2009/08/30 12:00	2009/08/30 12:03		
COC Number		80952	80952	80952		
	Units	09-1058	09-1059	09-1060	RDL	QC Batch

Physical Properties						
Moisture	%	13	5.5	15	0.3	3396635
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395883
F3 (C16-C34 Hydrocarbons)	mg/kg	17	22	23	10	3395883
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395883
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3395883
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394924
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3394924
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394924
(C6-C10)	mg/kg	<12	<12	<12	12	3394924
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	101	102	102	N/A	3394924
D10-ETHYLBENZENE (sur.)	%	67	89	83	N/A	3394924
D4-1,2-DICHLOROETHANE (sur.)	%	92	90	90	N/A	3394924
D8-TOLUENE (sur.)	%	96	96	99	N/A	3394924
O-TERPHENYL (sur.)	%	103	118	105	N/A	3395883

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56024	Q56025	Q56026		
Sampling Date		2009/08/30 12:03	2009/08/30 12:15	2009/08/30 12:18		
COC Number		80952	80952	80952		
	Units	09-1061	09-1062	09-1063	RDL	QC Batch

Physical Properties						
Moisture	%	16	10	8.7	0.3	3396635
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395883
F3 (C16-C34 Hydrocarbons)	mg/kg	30	21	25	10	3395883
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395883
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3395883
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394924
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3394924
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394924
(C6-C10)	mg/kg	<12	<12	<12	12	3394924
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	100	97	N/A	3394924
D10-ETHYLBENZENE (sur.)	%	88	93	98	N/A	3394924
D4-1,2-DICHLOROETHANE (sur.)	%	90	90	90	N/A	3394924
D8-TOLUENE (sur.)	%	96	96	97	N/A	3394924
O-TERPHENYL (sur.)	%	117	105	121	N/A	3395883

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56028	Q56030	Q56031		
Sampling Date		2009/08/30 14:05	2009/08/30 14:08	2009/08/30 14:20		
COC Number		80952	80953	80953		
	Units	09-1064	09-1065	09-1066	RDL	QC Batch

Physical Properties						
Moisture	%	4.1	2.4	17	0.3	3396635
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395883
F3 (C16-C34 Hydrocarbons)	mg/kg	18	21	25	10	3395883
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395883
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3395883
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394924
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3394924
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394924
(C6-C10)	mg/kg	<12	<12	<12	12	3394924
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	99	97	N/A	3394924
D10-ETHYLBENZENE (sur.)	%	107	106	102	N/A	3394924
D4-1,2-DICHLOROETHANE (sur.)	%	88	89	91	N/A	3394924
D8-TOLUENE (sur.)	%	96	96	98	N/A	3394924
O-TERPHENYL (sur.)	%	103	112	102	N/A	3395883
N/A = Not Applicable RDL = Reportable Detection Limit						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56032	Q56033	Q56034		
Sampling Date		2009/08/30 14:23	2009/08/30 14:35	2009/08/30 14:38		
COC Number		80953	80953	80953		
	Units	09-1067	09-1068	09-1069	RDL	QC Batch

Physical Properties						
Moisture	%	20	17	25	0.3	3396635
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	22	<10	10	3395883
F3 (C16-C34 Hydrocarbons)	mg/kg	29	41	36	10	3395883
F4 (C34-C50 Hydrocarbons)	mg/kg	11	<10	12	10	3395883
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3395883
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394924
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3394924
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394924
(C6-C10)	mg/kg	<12	<12	<12	12	3394924
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	99	103	N/A	3394924
D10-ETHYLBENZENE (sur.)	%	106	105	108	N/A	3394924
D4-1,2-DICHLOROETHANE (sur.)	%	90	91	89	N/A	3394924
D8-TOLUENE (sur.)	%	98	96	97	N/A	3394924
O-TERPHENYL (sur.)	%	106	106	104	N/A	3395883

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56035	Q56036	Q56037		
Sampling Date		2009/08/30 14:50	2009/08/30 14:50	2009/08/30 14:53		
COC Number		80953	80953	80953		
	Units	09-1070	09-1071	09-1072	RDL	QC Batch

Physical Properties						
Moisture	%	16	16	14	0.3	3396635
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395883
F3 (C16-C34 Hydrocarbons)	mg/kg	28	29	37	10	3395883
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	11	10	3395883
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3395883
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394924
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3394924
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3394924
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3394924
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394924
(C6-C10)	mg/kg	<12	<12	<12	12	3394924
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	90	92	96	N/A	3394924
D10-ETHYLBENZENE (sur.)	%	108	105	104	N/A	3394924
D4-1,2-DICHLOROETHANE (sur.)	%	87	91	88	N/A	3394924
D8-TOLUENE (sur.)	%	100	100	97	N/A	3394924
O-TERPHENYL (sur.)	%	100	109	107	N/A	3395883

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56052	Q56052	Q56053		
Sampling Date		2009/08/30 15:15	2009/08/30 15:15	2009/08/30 15:18		
COC Number		80953	80953	80953		
	Units	09-1073	09-1073 Lab-Dup	09-1074	RDL	QC Batch

Physical Properties						
Moisture	%	14	14	16	0.3	3396436
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395884
F3 (C16-C34 Hydrocarbons)	mg/kg	18	19	20	10	3395884
F4 (C34-C50 Hydrocarbons)	mg/kg	24	<10	<10	10	3395884
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3395884
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394936
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3394936
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3394936
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3394936
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3394936
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3394936
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394936
(C6-C10)	mg/kg	<12	<12	<12	12	3394936
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	102	102	103	N/A	3394936
D10-ETHYLBENZENE (sur.)	%	91	91	100	N/A	3394936
D4-1,2-DICHLOROETHANE (sur.)	%	79	76	76	N/A	3394936
D8-TOLUENE (sur.)	%	99	100	102	N/A	3394936
O-TERPHENYL (sur.)	%	103	105	105	N/A	3395884
N/A = Not Applicable RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate						

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56054	Q56055	Q56056		
Sampling Date		2009/08/30 17:00	2009/08/30 17:03	2009/08/30 17:06		
COC Number		80953	80953	80954		
	Units	09-1075	09-1076	09-1077	RDL	QC Batch

Physical Properties						
Moisture	%	19	3.8	9.5	0.3	3396436
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	1900	<10	<10	10	3395884
F3 (C16-C34 Hydrocarbons)	mg/kg	2900	14	18	10	3395884
F4 (C34-C50 Hydrocarbons)	mg/kg	280	<10	<10	10	3395884
Reached Baseline at C50	mg/kg	No	Yes	Yes	N/A	3395884
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394936
Toluene	mg/kg	0.12	0.070	<0.020	0.020	3394936
Ethylbenzene	mg/kg	0.068	0.015	<0.010	0.010	3394936
Xylenes (Total)	mg/kg	0.27	<0.040	<0.040	0.040	3394936
m & p-Xylene	mg/kg	0.17	<0.040	<0.040	0.040	3394936
o-Xylene	mg/kg	0.11	0.025	<0.020	0.020	3394936
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394936
(C6-C10)	mg/kg	<12	<12	<12	12	3394936
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	110	108	112	N/A	3394936
D10-ETHYLBENZENE (sur.)	%	91	92	93	N/A	3394936
D4-1,2-DICHLOROETHANE (sur.)	%	80	80	79	N/A	3394936
D8-TOLUENE (sur.)	%	106	106	106	N/A	3394936
O-TERPHENYL (sur.)	%	103	105	113	N/A	3395884

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56057	Q56058	Q56059		
Sampling Date		2009/08/30 17:15	2009/08/30 17:18	2009/08/30 17:21		
COC Number		80954	80954	80954		
	Units	09-1078	09-1079	09-1080	RDL	QC Batch

Physical Properties						
Moisture	%	10	8.7	9.3	0.3	3396436
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395884
F3 (C16-C34 Hydrocarbons)	mg/kg	26	22	13	10	3395884
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395884
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3395884
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394936
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3394936
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3394936
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3394936
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3394936
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3394936
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394936
(C6-C10)	mg/kg	<12	<12	<12	12	3394936
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	110	116	113	N/A	3394936
D10-ETHYLBENZENE (sur.)	%	92	88	93	N/A	3394936
D4-1,2-DICHLOROETHANE (sur.)	%	82	77	78	N/A	3394936
D8-TOLUENE (sur.)	%	104	107	103	N/A	3394936
O-TERPHENYL (sur.)	%	102	112	105	N/A	3395884

N/A = Not Applicable
 RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56060	Q56061	Q56103		
Sampling Date		2009/08/30 17:21	2009/08/30 17:30	2009/08/30 17:33		
COC Number		80954	80954	80954		
	Units	09-1081	09-1082	09-1083	RDL	QC Batch

Physical Properties						
Moisture	%	9.7	14	16	0.3	3396436
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395884
F3 (C16-C34 Hydrocarbons)	mg/kg	10	23	17	10	3395884
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395884
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3395884
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394936
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3394936
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3394936
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3394936
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3394936
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3394936
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394936
(C6-C10)	mg/kg	<12	<12	<12	12	3394936
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	110	110	114	N/A	3394936
D10-ETHYLBENZENE (sur.)	%	97	90	96	N/A	3394936
D4-1,2-DICHLOROETHANE (sur.)	%	87	79	80	N/A	3394936
D8-TOLUENE (sur.)	%	102	104	102	N/A	3394936
O-TERPHENYL (sur.)	%	105	106	99	N/A	3395884

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56104	Q56105	Q56106		
Sampling Date		2009/08/30 18:00	2009/08/30 18:03	2009/08/30 18:15		
COC Number		80954	80954	80954		
	Units	09-1084	09-1085	09-1086	RDL	QC Batch

Physical Properties						
Moisture	%	15	15	11	0.3	3396436
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395884
F3 (C16-C34 Hydrocarbons)	mg/kg	15	23	50	10	3395884
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3395884
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3395884
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3394936
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3394936
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3394936
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3394936
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3394936
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3394936
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3394936
(C6-C10)	mg/kg	<12	<12	<12	12	3394936
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	113	115	112	N/A	3394936
D10-ETHYLBENZENE (sur.)	%	96	88	97	N/A	3394936
D4-1,2-DICHLOROETHANE (sur.)	%	84	78	79	N/A	3394936
D8-TOLUENE (sur.)	%	100	102	101	N/A	3394936
O-TERPHENYL (sur.)	%	104	102	106	N/A	3395884

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q56107	Q56108		
Sampling Date		2009/08/30 18:18	2009/08/30 18:21		
COC Number		80954	80954		
	Units	09-1087	09-1088	RDL	QC Batch

Physical Properties					
Moisture	%	14	10	0.3	3396436
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	10	3395884
F3 (C16-C34 Hydrocarbons)	mg/kg	23	15	10	3395884
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	3395884
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3395884
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3394936
Toluene	mg/kg	<0.020	<0.020	0.020	3394936
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	3394936
Xylenes (Total)	mg/kg	<0.040	<0.040	0.040	3394936
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	3394936
o-Xylene	mg/kg	<0.020	<0.020	0.020	3394936
F1 (C6-C10) - BTEX	mg/kg	<12	<12	12	3394936
(C6-C10)	mg/kg	<12	<12	12	3394936
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	112	107	N/A	3394936
D10-ETHYLBENZENE (sur.)	%	98	91	N/A	3394936
D4-1,2-DICHLOROETHANE (sur.)	%	80	78	N/A	3394936
D8-TOLUENE (sur.)	%	101	101	N/A	3394936
O-TERPHENYL (sur.)	%	111	102	N/A	3395884
N/A = Not Applicable RDL = Reportable Detection Limit					

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		Q56054		
Sampling Date		2009/08/30		
		17:00		
COC Number		80953		
	Units	09-1075	RDL	QC Batch

OIL & GREASE				
F4SG (Heavy Hydrocarbons-Grav.)	mg/kg	3000	500	3403381
RDL = Reportable Detection Limit				

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		Q55991	Q56018	Q56020		
Sampling Date		2009/08/30	2009/08/30	2009/08/30		
		11:15	11:30	11:45		
COC Number		80952	80952	80952		
	Units	09-1053	09-1055	09-1057	RDL	QC Batch

Polychlorinated Biphenyls						
Aroclor 1016	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1221	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1232	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1242	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1248	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1254	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1260	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1262	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1268	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Total Aroclors	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Surrogate Recovery (%)						
NONACHLOROBIPHENYL (sur.)	%	85	92	96	N/A	3393759

N/A = Not Applicable
 RDL = Reportable Detection Limit

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		Q56022	Q56025	Q56028		
Sampling Date		2009/08/30	2009/08/30	2009/08/30		
		12:00	12:15	14:05		
COC Number		80952	80952	80952		
	Units	09-1059	09-1062	09-1064	RDL	QC Batch

Polychlorinated Biphenyls						
Aroclor 1016	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1221	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1232	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1242	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1248	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1254	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1260	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1262	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1268	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Total Aroclors	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Surrogate Recovery (%)						
NONACHLOROBIPHENYL (sur.)	%	93	89	88	N/A	3393759

N/A = Not Applicable
 RDL = Reportable Detection Limit

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		Q56028	Q56031	Q56033		
Sampling Date		2009/08/30	2009/08/30	2009/08/30		
		14:05	14:20	14:35		
COC Number		80952	80953	80953		
	Units	09-1064 Lab-Dup	09-1066	09-1068	RDL	QC Batch

Polychlorinated Biphenyls						
Aroclor 1016	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1221	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1232	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1242	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1248	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1254	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1260	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1262	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1268	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Total Aroclors	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Surrogate Recovery (%)						
NONACHLOROBIPHENYL (sur.)	%	93	89	88	N/A	3393759

N/A = Not Applicable
 RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		Q56035	Q56036	Q56052		
Sampling Date		2009/08/30	2009/08/30	2009/08/30		
		14:50	14:50	15:15		
COC Number		80953	80953	80953		
	Units	09-1070	09-1071	09-1073	RDL	QC Batch

Polychlorinated Biphenyls						
Aroclor 1016	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1221	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1232	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1242	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1248	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1254	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1260	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1262	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1268	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Total Aroclors	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Surrogate Recovery (%)						
NONACHLOROBIPHENYL (sur.)	%	90	81	94	N/A	3393759

N/A = Not Applicable
 RDL = Reportable Detection Limit

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		Q56054	Q56057	Q56061		
Sampling Date		2009/08/30	2009/08/30	2009/08/30		
		17:00	17:15	17:30		
COC Number		80953	80954	80954		
	Units	09-1075	09-1078	09-1082	RDL	QC Batch

Polychlorinated Biphenyls						
Aroclor 1016	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1221	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1232	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1242	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1248	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1254	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1260	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1262	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Aroclor 1268	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Total Aroclors	mg/kg	<0.01	<0.01	<0.01	0.01	3393759
Surrogate Recovery (%)						
NONACHLOROBIPHENYL (sur.)	%	87	87	84	N/A	3393759

N/A = Not Applicable
 RDL = Reportable Detection Limit

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		Q56104	Q56106		
Sampling Date		2009/08/30 18:00	2009/08/30 18:15		
COC Number		80954	80954		
	Units	09-1084	09-1086	RDL	QC Batch

Polychlorinated Biphenyls					
Aroclor 1016	mg/kg	<0.01	<0.01	0.01	3393759
Aroclor 1221	mg/kg	<0.01	<0.01	0.01	3393759
Aroclor 1232	mg/kg	<0.01	<0.01	0.01	3393759
Aroclor 1242	mg/kg	<0.01	<0.01	0.01	3393759
Aroclor 1248	mg/kg	<0.01	<0.01	0.01	3393759
Aroclor 1254	mg/kg	<0.01	<0.01	0.01	3393759
Aroclor 1260	mg/kg	<0.01	<0.01	0.01	3393759
Aroclor 1262	mg/kg	<0.01	<0.01	0.01	3393759
Aroclor 1268	mg/kg	<0.01	<0.01	0.01	3393759
Total Aroclors	mg/kg	<0.01	<0.01	0.01	3393759
Surrogate Recovery (%)					
NONACHLOROBIPHENYL (sur.)	%	76	89	N/A	3393759

N/A = Not Applicable
 RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		Q55991	Q56018		Q56020		
Sampling Date		2009/08/30 11:15	2009/08/30 11:30		2009/08/30 11:45		
COC Number		80952	80952		80952		
	Units	09-1053	09-1055	QC Batch	09-1057	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	2	3	3403802	2	1	3402179
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	3403802	<0.1	0.1	3402179
Total Chromium (Cr)	mg/kg	10	7	3403802	7	1	3402179
Total Cobalt (Co)	mg/kg	3	3	3403802	3	1	3402179
Total Copper (Cu)	mg/kg	7	6	3403802	8	5	3402179
Total Lead (Pb)	mg/kg	2	3	3403802	3	1	3402179
Total Nickel (Ni)	mg/kg	8	7	3403802	6	1	3402179
Total Zinc (Zn)	mg/kg	<10	12	3403802	11	10	3402179

RDL = Reportable Detection Limit

Maxxam ID		Q56022	Q56025	Q56028	Q56031		
Sampling Date		2009/08/30 12:00	2009/08/30 12:15	2009/08/30 14:05	2009/08/30 14:20		
COC Number		80952	80952	80952	80953		
	Units	09-1059	09-1062	09-1064	09-1066	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	2	3	2	4	1	3402179
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1	3402179
Total Chromium (Cr)	mg/kg	5	11	7	5	1	3402179
Total Cobalt (Co)	mg/kg	3	3	2	3	1	3402179
Total Copper (Cu)	mg/kg	8	8	7	9	5	3402179
Total Lead (Pb)	mg/kg	2	3	2	3	1	3402179
Total Nickel (Ni)	mg/kg	6	9	6	6	1	3402179
Total Zinc (Zn)	mg/kg	<10	13	<10	11	10	3402179

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		Q56033		Q56035	Q56036		
Sampling Date		2009/08/30		2009/08/30	2009/08/30		
		14:35		14:50	14:50		
COC Number		80953		80953	80953		
	Units	09-1068	QC Batch	09-1070	09-1071	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	2	3403802	2	2	1	3402179
Total Cadmium (Cd)	mg/kg	<0.1	3403802	<0.1	<0.1	0.1	3402179
Total Chromium (Cr)	mg/kg	7	3403802	5	5	1	3402179
Total Cobalt (Co)	mg/kg	3	3403802	3	3	1	3402179
Total Copper (Cu)	mg/kg	<5	3403802	6	5	5	3402179
Total Lead (Pb)	mg/kg	3	3403802	3	3	1	3402179
Total Nickel (Ni)	mg/kg	7	3403802	6	6	1	3402179
Total Zinc (Zn)	mg/kg	<10	3403802	11	11	10	3402179
RDL = Reportable Detection Limit							

Maxxam ID		Q56052	Q56054	Q56057	Q56061		
Sampling Date		2009/08/30	2009/08/30	2009/08/30	2009/08/30		
		15:15	17:00	17:15	17:30		
COC Number		80953	80953	80954	80954		
	Units	09-1073	09-1075	09-1078	09-1082	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	2	4	2	2	1	3403802
Total Cadmium (Cd)	mg/kg	<0.1	0.1	<0.1	<0.1	0.1	3403802
Total Chromium (Cr)	mg/kg	6	20	7	6	1	3403802
Total Cobalt (Co)	mg/kg	3	3	3	3	1	3403802
Total Copper (Cu)	mg/kg	6	7	6	6	5	3403802
Total Lead (Pb)	mg/kg	2	50	3	3	1	3403802
Total Nickel (Ni)	mg/kg	7	10	7	7	1	3403802
Total Zinc (Zn)	mg/kg	<10	21	10	10	10	3403802
RDL = Reportable Detection Limit							

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		Q56104	Q56106		
Sampling Date		2009/08/30 18:00	2009/08/30 18:15		
COC Number		80954	80954		
	Units	09-1084	09-1086	RDL	QC Batch

Elements					
Total Arsenic (As)	mg/kg	3	2	1	3403802
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	0.1	3403802
Total Chromium (Cr)	mg/kg	7	6	1	3403802
Total Cobalt (Co)	mg/kg	3	3	1	3403802
Total Copper (Cu)	mg/kg	5	6	5	3403802
Total Lead (Pb)	mg/kg	3	3	1	3403802
Total Nickel (Ni)	mg/kg	7	7	1	3403802
Total Zinc (Zn)	mg/kg	11	11	10	3403802

RDL = Reportable Detection Limit

Package 1	9.3°C
Package 2	5.7°C
Package 3	6.3°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Sample Q56111-01: BTEX detection limits raised due to dilution to bring analyte within the calibrated range.

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00
 P.O. #:
 Site Reference: JOHNSON POINT

Quality Assurance Report
 Maxxam Job Number: EA947638

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3393188 DR3	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/09/04		97	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/04		84	%	70 - 130
		D8-TOLUENE (sur.)	2009/09/04		97	%	70 - 130
		Benzene	2009/09/04		110	%	70 - 130
		Toluene	2009/09/04		86	%	70 - 130
		Ethylbenzene	2009/09/04		92	%	70 - 130
		o-Xylene	2009/09/04		98	%	70 - 130
		m & p-Xylene	2009/09/04		117	%	70 - 130
		(C6-C10)	2009/09/04		NC	%	70 - 130
		Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/09/03		99	%
	D4-1,2-DICHLOROETHANE (sur.)		2009/09/03		102	%	70 - 130
	D8-TOLUENE (sur.)		2009/09/03		99	%	70 - 130
	Benzene		2009/09/03		99	%	70 - 130
	Toluene		2009/09/03		99	%	70 - 130
	Ethylbenzene		2009/09/03		101	%	70 - 130
	o-Xylene		2009/09/03		100	%	70 - 130
	m & p-Xylene		2009/09/03		101	%	70 - 130
	(C6-C10)		2009/09/03		86	%	80 - 120
	Method Blank		4-BROMOFLUOROBENZENE (sur.)	2009/09/03		98	%
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/03		104	%	70 - 130
		D8-TOLUENE (sur.)	2009/09/03		98	%	70 - 130
		Benzene	2009/09/03	<0.4		ug/L	
		Toluene	2009/09/03	<0.4		ug/L	
		Ethylbenzene	2009/09/03	<0.4		ug/L	
		o-Xylene	2009/09/03	<0.4		ug/L	
		m & p-Xylene	2009/09/03	<0.8		ug/L	
		Xylenes (Total)	2009/09/03	<0.8		ug/L	
		F1 (C6-C10) - BTEX	2009/09/03	<100		ug/L	
	RPD	(C6-C10)	2009/09/03	<100		ug/L	
		Benzene	2009/09/03	NC		%	40
		Toluene	2009/09/03	NC		%	40
		Ethylbenzene	2009/09/03	NC		%	40
		o-Xylene	2009/09/03	NC		%	40
m & p-Xylene		2009/09/03	NC		%	40	
Xylenes (Total)		2009/09/03	NC		%	40	
F1 (C6-C10) - BTEX		2009/09/03	NC		%	40	
(C6-C10)		2009/09/03	NC		%	40	
3393201 YT		Matrix Spike	O-TERPHENYL (sur.)	2009/09/04		110	%
	F2 (C10-C16 Hydrocarbons)		2009/09/04		99	%	70 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/09/04		111	%	70 - 130
		F2 (C10-C16 Hydrocarbons)	2009/09/04		101	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/09/04		108	%	70 - 130
		F2 (C10-C16 Hydrocarbons)	2009/09/04	<0.1		mg/L	
	RPD	F2 (C10-C16 Hydrocarbons)	2009/09/04	NC		%	40
3393759 JG5	Matrix Spike [Q56028-02]	NONACHLOROBIPHENYL (sur.)	2009/09/03		98	%	30 - 130
		Aroclor 1260	2009/09/03		102	%	30 - 130
	Spiked Blank	NONACHLOROBIPHENYL (sur.)	2009/09/03		85	%	30 - 130
		Aroclor 1260	2009/09/03		101	%	30 - 130
	Method Blank	NONACHLOROBIPHENYL (sur.)	2009/09/03		112	%	30 - 130
		Aroclor 1016	2009/09/03	<0.01		mg/kg	
		Aroclor 1221	2009/09/03	<0.01		mg/kg	
		Aroclor 1232	2009/09/03	<0.01		mg/kg	
		Aroclor 1242	2009/09/03	<0.01		mg/kg	
		Aroclor 1248	2009/09/03	<0.01		mg/kg	



AECOM
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Quality Assurance Report (Continued)
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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3393759 JG5	Method Blank	Aroclor 1254	2009/09/03	<0.01		mg/kg		
		Aroclor 1260	2009/09/03	<0.01		mg/kg		
		Aroclor 1262	2009/09/03	<0.01		mg/kg		
		Aroclor 1268	2009/09/03	<0.01		mg/kg		
		Total Aroclors	2009/09/03	<0.01		mg/kg		
	RPD [Q56028-02]	Aroclor 1016	2009/09/03	NC		%	50	
		Aroclor 1221	2009/09/03	NC		%	50	
		Aroclor 1232	2009/09/03	NC		%	50	
		Aroclor 1242	2009/09/03	NC		%	50	
		Aroclor 1248	2009/09/03	NC		%	50	
		Aroclor 1254	2009/09/03	NC		%	50	
		Aroclor 1260	2009/09/03	NC		%	50	
		Aroclor 1262	2009/09/03	NC		%	50	
		Aroclor 1268	2009/09/03	NC		%	50	
		Total Aroclors	2009/09/03	NC		%	50	
3394924 AK8	Matrix Spike [Q56017-01]	4-BROMOFLUOROBENZENE (sur.)	2009/09/04		105	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/09/04		105	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/04		91	%	60 - 140	
		D8-TOLUENE (sur.)	2009/09/04		96	%	60 - 140	
		Benzene	2009/09/04		91	%	60 - 140	
		Toluene	2009/09/04		85	%	60 - 140	
		Ethylbenzene	2009/09/04		91	%	60 - 140	
		m & p-Xylene	2009/09/04		92	%	60 - 140	
		o-Xylene	2009/09/04		86	%	60 - 140	
		(C6-C10)	2009/09/04		119	%	60 - 140	
		Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/09/04		105	%	60 - 140
			D10-ETHYLBENZENE (sur.)	2009/09/04		107	%	30 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/09/04		87	%	60 - 140
			D8-TOLUENE (sur.)	2009/09/04		101	%	60 - 140
			Benzene	2009/09/04		88	%	60 - 140
	Toluene		2009/09/04		84	%	60 - 140	
	Ethylbenzene		2009/09/04		93	%	60 - 140	
	m & p-Xylene		2009/09/04		90	%	60 - 140	
	o-Xylene		2009/09/04		91	%	60 - 140	
	(C6-C10)		2009/09/04		114	%	80 - 120	
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/09/04		108	%	60 - 140	
		D10-ETHYLBENZENE (sur.)	2009/09/04		108	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/04		90	%	60 - 140	
		D8-TOLUENE (sur.)	2009/09/04		97	%	60 - 140	
		Benzene	2009/09/04	<0.0050		mg/kg		
		Toluene	2009/09/04	<0.020		mg/kg		
		Ethylbenzene	2009/09/04	<0.010		mg/kg		
		Xylenes (Total)	2009/09/04	<0.040		mg/kg		
		m & p-Xylene	2009/09/04	<0.040		mg/kg		
		o-Xylene	2009/09/04	<0.020		mg/kg		
F1 (C6-C10) - BTEX		2009/09/04	<12		mg/kg			
(C6-C10)		2009/09/04	<12		mg/kg			
RPD [Q55991-01]		Benzene	2009/09/04	NC		%	50	
		Toluene	2009/09/04	NC		%	50	
		Ethylbenzene	2009/09/04	NC		%	50	
	Xylenes (Total)	2009/09/04	NC		%	50		
	m & p-Xylene	2009/09/04	NC		%	50		
	o-Xylene	2009/09/04	NC		%	50		
	F1 (C6-C10) - BTEX	2009/09/04	NC		%	50		

Quality Assurance Report (Continued)

Maxxam Job Number: EA947638

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3394924 AK8	RPD [Q55991-01]	(C6-C10)	2009/09/04	NC		%	50
3394936 AN1	Matrix Spike [Q56053-01]	4-BROMOFLUOROBENZENE (sur.)	2009/09/04		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/09/04		98	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/04		80	%	60 - 140
		D8-TOLUENE (sur.)	2009/09/04		98	%	60 - 140
		Benzene	2009/09/04		93	%	60 - 140
		Toluene	2009/09/04		87	%	60 - 140
		Ethylbenzene	2009/09/04		95	%	60 - 140
		m & p-Xylene	2009/09/04		93	%	60 - 140
		o-Xylene	2009/09/04		91	%	60 - 140
		(C6-C10)	2009/09/04		109	%	60 - 140
	Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/09/04		96	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/09/04		103	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/04		81	%	60 - 140
		D8-TOLUENE (sur.)	2009/09/04		97	%	60 - 140
		Benzene	2009/09/04		96	%	60 - 140
		Toluene	2009/09/04		88	%	60 - 140
		Ethylbenzene	2009/09/04		96	%	60 - 140
		m & p-Xylene	2009/09/04		94	%	60 - 140
		o-Xylene	2009/09/04		92	%	60 - 140
		(C6-C10)	2009/09/04		110	%	80 - 120
	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/09/04		107	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/09/04		95	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/04		77	%	60 - 140
		D8-TOLUENE (sur.)	2009/09/04		101	%	60 - 140
		Benzene	2009/09/04	<0.0050		mg/kg	
		Toluene	2009/09/04	<0.020		mg/kg	
		Ethylbenzene	2009/09/04	<0.010		mg/kg	
		Xylenes (Total)	2009/09/04	<0.040		mg/kg	
		m & p-Xylene	2009/09/04	<0.040		mg/kg	
		o-Xylene	2009/09/04	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2009/09/04	<12		mg/kg	
		(C6-C10)	2009/09/04	<12		mg/kg	
	RPD [Q56052-01]	Benzene	2009/09/04	NC		%	50
		Toluene	2009/09/04	NC		%	50
		Ethylbenzene	2009/09/04	NC		%	50
		Xylenes (Total)	2009/09/04	NC		%	50
		m & p-Xylene	2009/09/04	NC		%	50
		o-Xylene	2009/09/04	NC		%	50
		F1 (C6-C10) - BTEX	2009/09/04	NC		%	50
		(C6-C10)	2009/09/04	NC		%	50
3395883 MB7	Matrix Spike [Q56017-01]	O-TERPHENYL (sur.)	2009/09/08		108	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/09/08		108	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/09/08		96	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/09/08		92	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/09/08		105	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/09/08		117	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/09/08		106	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/09/08		101	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/09/08		104	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/09/08	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/09/08	12, RDL=10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/09/08	<10		mg/kg	



AECOM
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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3395883 MB7	RPD [Q55991-01]	F2 (C10-C16 Hydrocarbons)	2009/09/08	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/09/08	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2009/09/08	NC		%	50
3395884 YT	Matrix Spike [Q56053-01]	O-TERPHENYL (sur.)	2009/09/06		103	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/09/06		94	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2009/09/06		97	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2009/09/06		107	%	50 - 130
	Spiked Blank	O-TERPHENYL (sur.)	2009/09/06		93	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/09/06		100	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2009/09/06		104	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2009/09/06		114	%	80 - 120
	Method Blank	O-TERPHENYL (sur.)	2009/09/06		106	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2009/09/06	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2009/09/06	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2009/09/06	<10		mg/kg	
	RPD [Q56052-01]	F2 (C10-C16 Hydrocarbons)	2009/09/06	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2009/09/06	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2009/09/06	NC		%	50
3396436 JP6	Method Blank	Moisture	2009/09/04	<0.3		%	
	RPD [Q56052-01]	Moisture	2009/09/04	6.5		%	20
3396635 JP6	Method Blank	Moisture	2009/09/04	<0.3		%	
	RPD [Q55991-01]	Moisture	2009/09/04	18.6		%	20
3402179 EO1	Calibration Check	Total Arsenic (As)	2009/09/08		82	%	80 - 120
		Total Cadmium (Cd)	2009/09/08		82	%	80 - 120
		Total Chromium (Cr)	2009/09/08		91	%	80 - 120
		Total Cobalt (Co)	2009/09/08		90	%	80 - 120
		Total Copper (Cu)	2009/09/08		80	%	80 - 120
		Total Lead (Pb)	2009/09/08		83	%	80 - 120
		Total Nickel (Ni)	2009/09/08		90	%	80 - 120
		Total Zinc (Zn)	2009/09/08		83	%	80 - 120
	Matrix Spike	Total Arsenic (As)	2009/09/08		85	%	75 - 125
		Total Cadmium (Cd)	2009/09/08		79	%	75 - 125
		Total Chromium (Cr)	2009/09/08		76	%	75 - 125
		Total Cobalt (Co)	2009/09/08		85	%	75 - 125
		Total Copper (Cu)	2009/09/08		82	%	75 - 125
		Total Lead (Pb)	2009/09/08		77	%	75 - 125
		Total Nickel (Ni)	2009/09/08		NC	%	75 - 125
		Total Zinc (Zn)	2009/09/08		NC	%	75 - 125
	QC Standard	Total Arsenic (As)	2009/09/08		87	%	50 - 150
		Total Chromium (Cr)	2009/09/08		81	%	41 - 159
		Total Cobalt (Co)	2009/09/08		83	%	75 - 125
		Total Copper (Cu)	2009/09/08		74	%	72 - 127
		Total Lead (Pb)	2009/09/08		86	%	54 - 146
		Total Nickel (Ni)	2009/09/08		84	%	61 - 139
		Total Zinc (Zn)	2009/09/08		78	%	72 - 128
	Method Blank	Total Arsenic (As)	2009/09/08	<1		mg/kg	
		Total Cadmium (Cd)	2009/09/08	<0.1		mg/kg	
		Total Chromium (Cr)	2009/09/08	<1		mg/kg	
		Total Cobalt (Co)	2009/09/08	<1		mg/kg	
		Total Copper (Cu)	2009/09/08	<5		mg/kg	
		Total Lead (Pb)	2009/09/08	<1		mg/kg	
		Total Nickel (Ni)	2009/09/08	<1		mg/kg	
		Total Zinc (Zn)	2009/09/08	<10		mg/kg	
	RPD	Total Arsenic (As)	2009/09/08	3.6		%	35

Quality Assurance Report (Continued)

Maxxam Job Number: EA947638

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3402179 EO1	RPD	Total Cadmium (Cd)	2009/09/08	NC		%	35	
		Total Chromium (Cr)	2009/09/08	4.7		%	35	
		Total Cobalt (Co)	2009/09/08	2.6		%	35	
		Total Copper (Cu)	2009/09/08	NC		%	35	
		Total Lead (Pb)	2009/09/08	2.6		%	35	
		Total Nickel (Ni)	2009/09/08	3.9		%	35	
		Total Zinc (Zn)	2009/09/08	2.7		%	35	
3403381 AR6	Spiked Blank	F4SG (Heavy Hydrocarbons-Grav.)	2009/09/08		109	%	70 - 130	
	Method Blank	F4SG (Heavy Hydrocarbons-Grav.)	2009/09/08	<500		mg/kg		
	RPD	F4G (Heavy Hydrocarbons - Grav.)	2009/09/08	NC		%	50	
3403802 EO1	Calibration Check	Total Arsenic (As)	2009/09/09		86	%	80 - 120	
		Total Cadmium (Cd)	2009/09/09		82	%	80 - 120	
		Total Chromium (Cr)	2009/09/09		81	%	80 - 120	
		Total Cobalt (Co)	2009/09/09		83	%	80 - 120	
		Total Copper (Cu)	2009/09/09		82	%	80 - 120	
		Total Lead (Pb)	2009/09/09		83	%	80 - 120	
		Total Nickel (Ni)	2009/09/09		82	%	80 - 120	
		Total Zinc (Zn)	2009/09/09		83	%	80 - 120	
		Matrix Spike	Total Arsenic (As)	2009/09/09		76	%	75 - 125
			Total Cadmium (Cd)	2009/09/09		77	%	75 - 125
			Total Chromium (Cr)	2009/09/09		80	%	75 - 125
			Total Cobalt (Co)	2009/09/09		75	%	75 - 125
	Total Copper (Cu)		2009/09/09		76	%	75 - 125	
	Total Lead (Pb)		2009/09/09		80	%	75 - 125	
	QC Standard	Total Nickel (Ni)	2009/09/09		NC	%	75 - 125	
		Total Zinc (Zn)	2009/09/09		NC	%	75 - 125	
		Total Arsenic (As)	2009/09/09		87	%	50 - 150	
		Total Chromium (Cr)	2009/09/09		85	%	41 - 159	
		Total Cobalt (Co)	2009/09/09		82	%	75 - 125	
		Total Copper (Cu)	2009/09/09		76	%	72 - 127	
	Method Blank	Total Lead (Pb)	2009/09/09		82	%	54 - 146	
		Total Nickel (Ni)	2009/09/09		85	%	61 - 139	
		Total Zinc (Zn)	2009/09/09		82	%	72 - 128	
		Total Arsenic (As)	2009/09/09	<1		mg/kg		
		Total Cadmium (Cd)	2009/09/09	<0.1		mg/kg		
		Total Chromium (Cr)	2009/09/09	<1		mg/kg		
	RPD	Total Cobalt (Co)	2009/09/09		<1	mg/kg		
		Total Copper (Cu)	2009/09/09		<5	mg/kg		
		Total Lead (Pb)	2009/09/09		<1	mg/kg		
		Total Nickel (Ni)	2009/09/09		<1	mg/kg		
Total Zinc (Zn)		2009/09/09		<10	mg/kg			
Total Arsenic (As)		2009/09/09		7.5	%	35		
Total Cadmium (Cd)		2009/09/09		NC	%	35		
Total Chromium (Cr)		2009/09/09		0.9	%	35		
Total Cobalt (Co)		2009/09/09		12.1	%	35		
Total Copper (Cu)		2009/09/09		NC	%	35		
Total Lead (Pb)		2009/09/09		6.4	%	35		
Total Nickel (Ni)		2009/09/09		8.9	%	35		
Total Zinc (Zn)	2009/09/09		7.9	%	35			

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



AECOM
Attention: DARA SCHMIDT
Client Project #: 2977-371-00
P.O. #:
Site Reference: JOHNSON POINT

Quality Assurance Report (Continued)

Maxxam Job Number: EA947638

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780)577-7100 FAX(780)450-4187

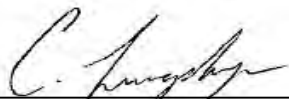
Validation Signature Page

Maxxam Job #: A947638


The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



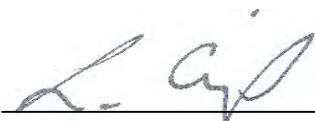
MATTHEW BARTEAU, Analyst 2



CORI LUCYSHYN, Analyst 2



DINA TLEUGABULOVA, Ph.D., Scientific Specialist



LISA CUMMINGS, Extractables Supervisor

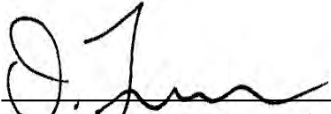


HUA WO, Organics Supervisor

Validation Signature Page

Maxxam Job #: A947638

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



ORLA JORGENSEN, Organics Supervisor

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

A947638 MB/JN

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: _____ PC: _____

Contact #s: Ph: 403-270-9200 Fax: 403-270-0399

Report To:

AECOM (Dara Schmidt)

2540 Kensington Road NW

Calgary

Prov: Alberta PC: T2N 3S3

Ph: 403-450-9923 Fax: 403-270-4822

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

dara.schmidt@aecom.com

priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)						OTHER TEST(S)														
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)*	Assessment ICP Metals ²	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total Preserved	Not Preserved	Dissolved Preserved	Not Preserved Filtered	Not Filtered	Mercury Total	Dissolved	Ammonia	TKN	COD	TOC	DOC	*HOLD for 60 Days
1 09-1053	S	30-Aug-09 11:15	✓			✓																											4
2 09-1054		11:18	✓			✓																											4
3 09-1055		11:30	✓			✓																											4
4 09-1056		11:33	✓			✓																											4
5 09-1057		11:45	✓			✓																											4
6 09-1058		11:48	✓			✓																											4
7 09-1059		12:00	✓			✓																											4
8 09-1060		12:03	✓			✓																											4
9 09-1061		12:03	✓			✓																											4
10 09-1062		12:15	✓			✓																											4
11 09-1063		12:18	✓			✓																											4
12 09-1064		14:05	✓			✓																											4

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Priya Handa Date/Time: _____

Sign and Print: [Signature]

COMMENTS/SPECIAL INSTRUCTIONS:

*Metals = As, Cd, Cr, Co, Cu, Pb, Ni, Zn.

# JARS USED & NOT SUBMITTED	Received By		Temperature			Ice Packs
	MEGAN VON SPRECKEN		8	10	10	
	10:40		4	7	6	
CUSTODY SEAL		YES	NO	6	6	7

A947638 MB/JN

www.maxxamanalytics.com

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: _____ **PC:** _____

Contact #s: Ph: 403.270.9200 Fax: 403.270.0399

Report To:

AECOM (Dara Schmidt)

2540 Kensington Road NW

Calgary

Prov: Alberta **PC:** 4822.

Ph: 403.450.9923 **Fax:** 403.270.0399
(811e) (office)

PO # / AFE #: _____

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: _____

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):

dara.schmidt@aecom.com

priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)							OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted														
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) *	Assessment / CP Metals	Paint Filter	Flashpoint	pH (1:1)	TCLP	BTEX	Metals	PCBS	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved		Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Total	Dissolved	Mercury	Ammonia	TKN	COD	TOC	DOC
1	09-1065	S	30-Aug-09	14:08	✓																																	4
2	09-1066			14:20	✓		✓																															4
3	09-1067			14:23	✓																																	4
4	09-1068			14:35	✓		✓																															4
5	09-1069			14:38	✓																																	4
6	09-1070			14:50	✓		✓																															4
7	09-1071			14:50	✓		✓																															4
8	09-1072			14:53	✓																																	4
9	09-1073			15:15	✓		✓																															4
10	09-1074			15:18	✓																																	4
11	09-1075			17:00	✓		✓																															4
12	09-1076			17:03	✓																																	4

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #: _____

Relinquished By: Refer to Pg. 1 **Date/Time:** _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:
*Metals = As, Cd, Cr, Co, Cu, Pb, Ni, Zn

# JARS USED & NOT SUBMITTED	Received By	Temperature	Ice
	CUSTODY SEAL YES / NO		

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: _____ **PC:** _____

Contact #s: Ph: 403.270.9200 Fax: 403.270.0399

Report To:
AECOM (Dara Schmidt)
2540 Kensington Road NW
Calgary

Prov: Alberta **PC:** _____

Ph: 403.450.9923 **Fax:** 403.270.4822
(site) (office)

PO # / AFE #: _____

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location: _____

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):
dara.schmidt@aecom.com
phya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)										WATERS (footnotes defined on back)					OTHER TEST(S)				*HOLD for 60 Days # of Containers Submitted													
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)*	Assessment ICP Metals?	Paint Filter	Flashpoint	pH (1:1)	TCLP	Metals	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine Water Package	Turb	F	Total	Preserved		Not Preserved	Dissolved	Preserved	Not Preserved	Filtered	Not Filtered	Total	Dissolved	Mercury	Ammonia	TKN	COD	TOC
1 09-1077	S	30-Aug-09 17:06	✓																																4
2 09-1078		17:15	✓			✓																													4
3 09-1079		17:18	✓																																4
4 09-1080		17:21	✓																																4
5 09-1081		17:21	✓																																4
6 09-1082		17:30	✓			✓																													4
7 09-1083		17:33	✓																																4
8 09-1084		18:00	✓			✓																													4
9 09-1085		18:03	✓																																4
10 09-1086		18:15	✓			✓																													4
11 09-1087		18:18	✓																																4
12 09-1088		18:21	✓																																4

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1 Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:
*Metals = As, Cd, Cr, Co, Cu, Pb, Ni, Zn.

# JARS USED & NOT SUBMITTED	Received By	Temperature		Ice
	CUSTODY SEAL YES / NO			



Calgary: 4000 19st St. NE, T2E 6P8
Edmonton: 9331 - 48 Street, T6B 2R4

Ph: (403) 291-3077 Fax: (403) 735-2240 Toll free: (800) 386-7247
Ph: (780) 465-1212 Fax: (780) 450-4187 Toll free: (877) 465-8889
www.maxxamanalytics.com

80955 CHAIN OF CUSTODY

Page: 4 of 4

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: _____ PC: _____

Contact #: Ph: 403.270.9200 Fax: 403.270.0399

Report To:

AECOM (Dara Schmidt)

2540 Kensington Road NW

Calgary

Prov: Alberta PC: _____

Ph: 403.450.9923 Fax: 403.270.4822

PO # / AFE #:

Quotation #: CO2-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:
EMAIL ADDRESS(S):

dara.schmidt@aecom.com

priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	SOILS (footnotes defined on back)			WATERS (footnotes defined on back)				OTHER TEST(S)			*HOLD for 60 Days	# of Containers Submitted	
			BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1) ¹	Assessment ICP Metals ²	□ Paint Filter □ Flashpoint □ pH (1:1)	TCLP □ BTEX □ Metals	□ BTEX F1 □ VOCs	<input checked="" type="checkbox"/> BTEX F1-F2 □ BTEX F1-F4	Routine Water Package □ Turb □ F			REGULATED METALS (CCME / AT1) ³
1 <u>09-1089</u>	<u>W</u>	<u>29-Aug-09</u>							<input checked="" type="checkbox"/>						
2 <u>09-1090</u>	<u>↓</u>	<u>↓</u>							<input checked="" type="checkbox"/>						
3 <u>09-1091</u>	<u>↓</u>	<u>↓</u>							<input checked="" type="checkbox"/>						
4 <u>09-1092</u>	<u>↓</u>	<u>↓</u>							<input checked="" type="checkbox"/>						
5															
6															
7															
8															
9															
10															
11															
12															

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1. Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By	Temperature		Ice
	CUSTODY SEAL YES / NO			

Task Order#:
Site#:
Site Location:
Project #: A948623
Your C.O.C. #: n/a

Attention: Erin Anderson

Maxxam Analytics
Edmonton - ENV
9331-48 St
Edmonton, AB
T6B 2R4

Report Date: 2009/09/11

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9B7680

Received: 2009/09/09, 10:41

Sample Matrix: Soil
Samples Received: 5

Analyses	Quantity	Laboratory Method	Method
MOISTURE	5	CAM SOP-00445	Primary reference McKeague 2nd ed 1978
Polychlorinated Biphenyl in Soil	5	CAM SOP-00309	SW846 8082

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ELORA DI BRATTO, Project Manager
Email: Elora.DiBratto@maxxamanalytics.com
Phone# (905) 817-5700

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

Maxxam Job #: A9B7680
 Report Date: 2009/09/11

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A948623

RESULTS OF ANALYSES OF SOIL

Maxxam ID		DQ2212	DQ2213	DQ2214	DQ2215	DQ2216		
Sampling Date		2009/09/02	2009/09/02	2009/09/02	2009/09/02	2009/09/02		
COC Number		n/a	n/a	n/a	n/a	n/a		
	Units	Q62260 \ 09-1093	Q62263 \ 09-1096	Q62266 \ 09-1099	Q62269 \ 09-1102	Q62271 \ 09-1104	RDL	QC Batch

Moisture	%	18	13	19	15	15	0.2	1934523
----------	---	----	----	----	----	----	-----	---------

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9B7680
 Report Date: 2009/09/11

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A948623

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DQ2212	DQ2213	DQ2214	DQ2215		
Sampling Date		2009/09/02	2009/09/02	2009/09/02	2009/09/02		
COC Number		n/a	n/a	n/a	n/a		
	Units	Q62260	Q62263	Q62266	Q62269	RDL	QC Batch
		\ 09-1093	\ 09-1096	\ 09-1099	\ 09-1102		
Aroclor 1262	ug/g	<0.01	<0.01	<0.01	<0.01	0.01	1933452
Aroclor 1016	ug/g	<0.01	<0.01	<0.01	<0.01	0.01	1933452
Aroclor 1221	ug/g	<0.01	<0.01	<0.01	<0.01	0.01	1933452
Aroclor 1232	ug/g	<0.01	<0.01	<0.01	<0.01	0.01	1933452
Aroclor 1242	ug/g	<0.01	<0.01	<0.01	<0.01	0.01	1933452
Aroclor 1248	ug/g	<0.01	<0.01	<0.01	<0.01	0.01	1933452
Aroclor 1254	ug/g	<0.01	<0.01	<0.01	<0.01	0.01	1933452
Aroclor 1260	ug/g	<0.01	<0.01	<0.01	<0.01	0.01	1933452
Aroclor 1268	ug/g	<0.01	<0.01	<0.01	<0.01	0.01	1933452
Total PCB	ug/g	<0.01	<0.01	<0.01	<0.01	0.01	1933452
Extraction Surrogate Recovery (%)							
2,4,5,6-Tetrachloro-m-xylene	%	86	78	88	71		1933452
Decachlorobiphenyl	%	94	87	98	81		1933452
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam Job #: A9B7680
 Report Date: 2009/09/11

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A948623

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		DQ2216		
Sampling Date		2009/09/02		
COC Number		n/a		
	Units	Q62271	RDL	QC Batch
		\ 09-1104		

Aroclor 1262	ug/g	<0.01	0.01	1933452
Aroclor 1016	ug/g	<0.01	0.01	1933452
Aroclor 1221	ug/g	<0.01	0.01	1933452
Aroclor 1232	ug/g	<0.01	0.01	1933452
Aroclor 1242	ug/g	<0.01	0.01	1933452
Aroclor 1248	ug/g	<0.01	0.01	1933452
Aroclor 1254	ug/g	<0.01	0.01	1933452
Aroclor 1260	ug/g	<0.01	0.01	1933452
Aroclor 1268	ug/g	<0.01	0.01	1933452
Total PCB	ug/g	<0.01	0.01	1933452
Extraction				
Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	76		1933452
Decachlorobiphenyl	%	84		1933452

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9B7680
 Report Date: 2009/09/11

Maxxam Analytics
 Task Order#:
 Site#:

Project #: A948623

Test Summary

Maxxam ID DQ2212
Sample ID Q62260 \ 09-1093
Matrix Soil
Collected 2009/09/02
Shipped
Received 2009/09/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1934523	N/A	2009/09/10	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1933452	2009/09/09	2009/09/10	JZ

Maxxam ID DQ2213
Sample ID Q62263 \ 09-1096
Matrix Soil
Collected 2009/09/02
Shipped
Received 2009/09/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1934523	N/A	2009/09/10	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1933452	2009/09/09	2009/09/10	JZ

Maxxam ID DQ2214
Sample ID Q62266 \ 09-1099
Matrix Soil
Collected 2009/09/02
Shipped
Received 2009/09/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1934523	N/A	2009/09/10	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1933452	2009/09/09	2009/09/10	JZ

Maxxam ID DQ2215
Sample ID Q62269 \ 09-1102
Matrix Soil
Collected 2009/09/02
Shipped
Received 2009/09/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1934523	N/A	2009/09/10	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1933452	2009/09/09	2009/09/10	JZ

Maxxam ID DQ2216
Sample ID Q62271 \ 09-1104
Matrix Soil
Collected 2009/09/02
Shipped
Received 2009/09/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1934523	N/A	2009/09/10	AC
Polychlorinated Biphenyl in Soil	GC/ECD	1933452	2009/09/09	2009/09/10	JZ

Maxxam Job #: A9B7680
Report Date: 2009/09/11

Maxxam Analytics
Task Order#:
Site#:

Project #: A948623

Package 1	1.7°C
-----------	-------

Each temperature is the average of up to three cooler temperatures taken at receipt

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Polychlorinated Biphenyl in Soil: The recovery in the matrix spike was not calculated (NC). Because of the high concentration of this analyte in the parent sample, the relative difference between the spiked and unspiked concentrations is not sufficiently significant to permit a reliable recovery calculation.

Results relate only to the items tested.

Maxxam Analytics
 Task Order#:
 Site#:
 Site Location:
 Project #: A948623

Quality Assurance Report

Maxxam Job Number: A9B7680

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1933452 JZ	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2009/09/09		112	%	40 - 130
		Decachlorobiphenyl	2009/09/09		124	%	40 - 130
		Aroclor 1262	2009/09/09	<0.01		ug/g	
		Aroclor 1016	2009/09/09	<0.01		ug/g	
		Aroclor 1221	2009/09/09	<0.01		ug/g	
		Aroclor 1232	2009/09/09	<0.01		ug/g	
		Aroclor 1242	2009/09/09	<0.01		ug/g	
		Aroclor 1248	2009/09/09	<0.01		ug/g	
		Aroclor 1254	2009/09/09	<0.01		ug/g	
		Aroclor 1260	2009/09/09	<0.01		ug/g	
		Aroclor 1268	2009/09/09	<0.01		ug/g	
		Total PCB	2009/09/09	<0.01		ug/g	
	LCS	2,4,5,6-Tetrachloro-m-xylene	2009/09/09		97	%	40 - 130
		Decachlorobiphenyl	2009/09/09		93	%	40 - 130
		Aroclor 1260	2009/09/09		114	%	30 - 130
		Total PCB	2009/09/09		114	%	30 - 130

LCS: A blank matrix sample to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

Validation Signature Page

Maxxam Job #: A9B7680

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CHARLES ANCKER, B.Sc., M.Sc., C.Chem, Senior Analyst



CRISTINA CARRIERE, Scientific Services

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.



Your Project #: 2977-371-00 JOHNSON POINT
 Your C.O.C. #: 80956, 80957

Attention: DARA SCHMIDT
 AECOM
 2540 KENSINGTON RD N.W.
 CALGARY, AB
 CANADA T2N 3S3

Report Date: 2009/09/15

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A948623
Received: 2009/09/05, 9:50

Sample Matrix: Soil
 # Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	14	2009/09/05	2009/09/09	EENVSOP-00005 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons (F2-F4 in soil)	14	2009/09/05	2009/09/10	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1
Elements by ICPMS - Soils	4	2009/09/09	2009/09/09	CAL SOP-00191	EPA SW-846-6020A
Elements by ICPMS - Soils	1	2009/09/10	2009/09/10	CAL SOP-00191	EPA SW-846-6020A
Moisture	14	N/A	2009/09/08	EENVSOP-00139	Carter SSMA 51.2
Hydrocarbons (C10-C30) in Soil By GC/FID	2	2009/09/08	2009/09/10	EENVSOP-00007 EENVSOP-00006	CWS PHCS Tier 1

Sample Matrix: Water
 # Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 in Water by HS GC/MS	4	N/A	2009/09/10	EENVSOP-00004 EENVSOP-00002	EPA 8260C/CCME
BTEX/F1 in Water by HS GC/MS	4	N/A	2009/09/11	EENVSOP-00004 EENVSOP-00002	EPA 8260C/CCME
CCME Hydrocarbons in Water (F2; C10-C16)	8	2009/09/08	2009/09/10	EENVSOP-00009 EENVSOP-00008	EPA 8015D/3510C



Your Project #: 2977-371-00 JOHNSON POINT
Your C.O.C. #: 80956, 80957

Attention: DARA SCHMIDT
AECOM
2540 KENSINGTON RD N.W.
CALGARY, AB
CANADA T2N 3S3

Report Date: 2009/09/15

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ERIN ANDERSON, B.Sc., Project Manager
Email: eanderson@maxxamanalytics.com
Phone# (780) 577-7113 Ext:7113

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

Sampler Initials: PH

AT1 BTEX AND F1-F2 (WATER)

Maxxam ID		Q62282		Q62283		
Sampling Date		2009/09/03		2009/09/03		
		11:15		11:23		
COC Number		80957		80957		
	Units	09-1106	RDL	09-1107	RDL	QC Batch

Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	mg/L	<0.1	0.1	1.6	0.1	3401849
Volatiles						
Benzene	ug/L	<0.4	0.4	27	0.4	3399560
Toluene	ug/L	<0.4	0.4	340	0.4	3399560
Ethylbenzene	ug/L	<0.4	0.4	200	0.4	3399560
o-Xylene	ug/L	<0.4	0.4	720 (1)	4	3399560
m & p-Xylene	ug/L	<0.8	0.8	1400 (1)	8	3399560
Xylenes (Total)	ug/L	<0.8	0.8	2100	8	3399560
F1 (C6-C10) - BTEX	ug/L	<100	100	3000	100	3399560
(C6-C10)	ug/L	<100	100	5600	100	3399560
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	93	N/A	110	N/A	3399560
D4-1,2-DICHLOROETHANE (sur.)	%	92	N/A	91	N/A	3399560
D8-TOLUENE (sur.)	%	95	N/A	97	N/A	3399560
O-TERPHENYL (sur.)	%	112	N/A	114	N/A	3401849

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

Sampler Initials: PH

AT1 BTEX AND F1-F2 (WATER)

Maxxam ID		Q62284		Q62285		
Sampling Date		2009/09/03 11:30		2009/09/03 11:39		
COC Number		80957		80957		
	Units	09-1108	RDL	09-1109	RDL	QC Batch

Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	mg/L	<0.1	0.1	1.7	0.1	3401849
Volatiles						
Benzene	ug/L	<0.4	0.4	6.4	0.4	3399560
Toluene	ug/L	0.8	0.4	3200 (1)	4	3399560
Ethylbenzene	ug/L	0.6	0.4	640 (1)	4	3399560
o-Xylene	ug/L	2.5	0.4	920 (1)	4	3399560
m & p-Xylene	ug/L	4.7	0.8	2300 (1)	8	3399560
Xylenes (Total)	ug/L	7.1	0.8	3300	8	3399560
F1 (C6-C10) - BTEX	ug/L	<100	100	7500	100	3399560
(C6-C10)	ug/L	<100	100	15000	100	3399560
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	93	N/A	101	N/A	3399560
D4-1,2-DICHLOROETHANE (sur.)	%	90	N/A	96	N/A	3399560
D8-TOLUENE (sur.)	%	96	N/A	95	N/A	3399560
O-TERPHENYL (sur.)	%	112	N/A	110	N/A	3401849

N/A = Not Applicable
 RDL = Reportable Detection Limit
 (1) Detection limits raised due to dilution to bring analyte within the calibrated range.

AT1 BTEX AND F1-F2 (WATER)

Maxxam ID		Q62286	Q62287	Q62288		
Sampling Date		2009/09/03	2009/09/03	2009/09/03		
		11:46	11:46	11:54		
COC Number		80957	80957	80957		
	Units	09-1110	09-1111	09-1112	RDL	QC Batch

Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	mg/L	<0.1	<0.1	<0.1	0.1	3401849
Volatiles						
Benzene	ug/L	<0.4	<0.4	<0.4	0.4	3399560
Toluene	ug/L	0.6	1.8	0.6	0.4	3399560
Ethylbenzene	ug/L	<0.4	0.5	<0.4	0.4	3399560
o-Xylene	ug/L	<0.4	0.9	0.6	0.4	3399560
m & p-Xylene	ug/L	<0.8	2.2	1.0	0.8	3399560
Xylenes (Total)	ug/L	<0.8	3.1	1.5	0.8	3399560
F1 (C6-C10) - BTEX	ug/L	<100	<100	<100	100	3399560
(C6-C10)	ug/L	<100	<100	<100	100	3399560
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96	97	89	N/A	3399560
D4-1,2-DICHLOROETHANE (sur.)	%	95	94	102	N/A	3399560
D8-TOLUENE (sur.)	%	94	94	91	N/A	3399560
O-TERPHENYL (sur.)	%	109	110	112	N/A	3401849
N/A = Not Applicable RDL = Reportable Detection Limit						

Sampler Initials: PH

AT1 BTEX AND F1-F2 (WATER)

Maxxam ID		Q62289		
Sampling Date		2009/09/03 12:01		
COC Number		80957		
	Units	09-1113	RDL	QC Batch

Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	mg/L	0.4	0.1	3401849
Volatiles				
Benzene	ug/L	1400	40	3399549
Toluene	ug/L	12000	40	3399549
Ethylbenzene	ug/L	1100	40	3399549
o-Xylene	ug/L	1900	40	3399549
m & p-Xylene	ug/L	3900	80	3399549
Xylenes (Total)	ug/L	5900	80	3399549
F1 (C6-C10) - BTEX	ug/L	2200	100	3399549
(C6-C10)	ug/L	22000	100	3399549
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	99	N/A	3399549
D4-1,2-DICHLOROETHANE (sur.)	%	108	N/A	3399549
D8-TOLUENE (sur.)	%	94	N/A	3399549
O-TERPHENYL (sur.)	%	110	N/A	3401849
N/A = Not Applicable RDL = Reportable Detection Limit				

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q62260	Q62262	Q62263		
Sampling Date		2009/09/02 12:00	2009/09/02 12:05	2009/09/02 10:55		
COC Number		80956	80956	80956		
	Units	09-1093	09-1094	09-1096	RDL	QC Batch

Physical Properties						
Moisture	%	20	18	13	0.3	3400993
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3400008
F3 (C16-C34 Hydrocarbons)	mg/kg	23	30	41	10	3400008
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3400008
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3400008
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3400331
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3400331
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3400331
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3400331
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3400331
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3400331
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3400331
(C6-C10)	mg/kg	<12	<12	<12	12	3400331
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	99	101	99	N/A	3400331
D10-ETHYLBENZENE (sur.)	%	107	104	106	N/A	3400331
D4-1,2-DICHLOROETHANE (sur.)	%	97	93	94	N/A	3400331
D8-TOLUENE (sur.)	%	103	102	104	N/A	3400331
O-TERPHENYL (sur.)	%	94	107	105	N/A	3400008

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q62264	Q62265		
Sampling Date		2009/09/02 11:00	2009/09/02 11:05		
COC Number		80956	80956		
	Units	09-1097	09-1098	RDL	QC Batch

Physical Properties					
Moisture	%	13	15	0.3	3400993
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	10	3400008
F3 (C16-C34 Hydrocarbons)	mg/kg	37	41	10	3400008
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	13	10	3400008
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	3400008
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	3400331
Toluene	mg/kg	<0.020	<0.020	0.020	3400331
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	3400331
Xylenes (Total)	mg/kg	<0.040	<0.040	0.040	3400331
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	3400331
o-Xylene	mg/kg	<0.020	<0.020	0.020	3400331
F1 (C6-C10) - BTEX	mg/kg	<12	<12	12	3400331
(C6-C10)	mg/kg	<12	<12	12	3400331
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	97	99	N/A	3400331
D10-ETHYLBENZENE (sur.)	%	110	111	N/A	3400331
D4-1,2-DICHLOROETHANE (sur.)	%	94	95	N/A	3400331
D8-TOLUENE (sur.)	%	104	104	N/A	3400331
O-TERPHENYL (sur.)	%	113	106	N/A	3400008
N/A = Not Applicable RDL = Reportable Detection Limit					

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q62266	Q62267	Q62268		
Sampling Date		2009/09/02 11:15	2009/09/02 11:20	2009/09/02 11:20		
COC Number		80956	80956	80956		
	Units	09-1099	09-1100	09-1101	RDL	QC Batch

Physical Properties						
Moisture	%	20	22	23	0.3	3401454
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3400008
F3 (C16-C34 Hydrocarbons)	mg/kg	16	72	54	10	3400008
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	30	27	10	3400008
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3400008
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3400331
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3400331
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3400331
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3400331
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3400331
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3400331
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3400331
(C6-C10)	mg/kg	<12	<12	<12	12	3400331
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	101	99	100	N/A	3400331
D10-ETHYLBENZENE (sur.)	%	115	106	113	N/A	3400331
D4-1,2-DICHLOROETHANE (sur.)	%	93	93	96	N/A	3400331
D8-TOLUENE (sur.)	%	105	104	103	N/A	3400331
O-TERPHENYL (sur.)	%	102	100	103	N/A	3400008

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q62269	Q62270	Q62271		
Sampling Date		2009/09/02 11:30	2009/09/02 11:35	2009/09/02 11:45		
COC Number		80956	80956	80956		
	Units	09-1102	09-1103	09-1104	RDL	QC Batch

Physical Properties						
Moisture	%	15	13	15	0.3	3401454
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	10	3400008
F3 (C16-C34 Hydrocarbons)	mg/kg	14	10	17	10	3400008
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	10	3400008
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3400008
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3400331
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3400331
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3400331
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3400331
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3400331
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3400331
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	12	3400331
(C6-C10)	mg/kg	<12	<12	<12	12	3400331
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	97	99	99	N/A	3400331
D10-ETHYLBENZENE (sur.)	%	105	111	106	N/A	3400331
D4-1,2-DICHLOROETHANE (sur.)	%	97	95	98	N/A	3400331
D8-TOLUENE (sur.)	%	103	103	103	N/A	3400331
O-TERPHENYL (sur.)	%	106	101	111	N/A	3400008

N/A = Not Applicable
RDL = Reportable Detection Limit

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		Q62272	Q62291	Q62294		
Sampling Date		2009/09/02 11:50	2009/09/03 09:15	2009/09/03 09:22		
COC Number		80956	80957	80957		
	Units	09-1105	09-1114	09-1115	RDL	QC Batch

Physical Properties						
Moisture	%	20	8.6	9.4	0.3	3401454
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	46	40	10	3400008
F3 (C16-C34 Hydrocarbons)	mg/kg	39	57	39	10	3400008
F4 (C34-C50 Hydrocarbons)	mg/kg	12	<10	<10	10	3400008
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	3400008
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	3400331
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	3400331
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	3400331
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	0.040	3400331
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	0.040	3400331
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	3400331
F1 (C6-C10) - BTEX	mg/kg	<12	<12	13	12	3400331
(C6-C10)	mg/kg	<12	<12	13	12	3400331
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	100	99	100	N/A	3400331
D10-ETHYLBENZENE (sur.)	%	112	114	109	N/A	3400331
D4-1,2-DICHLOROETHANE (sur.)	%	95	95	96	N/A	3400331
D8-TOLUENE (sur.)	%	103	103	101	N/A	3400331
O-TERPHENYL (sur.)	%	120	118	105	N/A	3400008

N/A = Not Applicable
RDL = Reportable Detection Limit

Sampler Initials: PH

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		Q62260	Q62263	Q62266	Q62269		
Sampling Date		2009/09/02 12:00	2009/09/02 10:55	2009/09/02 11:15	2009/09/02 11:30		
COC Number		80956	80956	80956	80956		
	Units	09-1093	09-1096	09-1099	09-1102	RDL	QC Batch

Elements							
Total Arsenic (As)	mg/kg	2	2	3	2	1	3405153
Total Cadmium (Cd)	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1	3405153
Total Chromium (Cr)	mg/kg	8	6	9	8	1	3405153
Total Cobalt (Co)	mg/kg	2	3	6	3	1	3405153
Total Copper (Cu)	mg/kg	8	<5	8	6	5	3405153
Total Lead (Pb)	mg/kg	4	3	3	3	1	3405153
Total Nickel (Ni)	mg/kg	7	7	12	7	1	3405153
Total Zinc (Zn)	mg/kg	12	11	12	13	10	3405153

RDL = Reportable Detection Limit

Maxxam ID		Q62271		
Sampling Date		2009/09/02 11:45		
COC Number		80956		
	Units	09-1104	RDL	QC Batch

Elements				
Total Arsenic (As)	mg/kg	2	1	3407306
Total Cadmium (Cd)	mg/kg	<0.1	0.1	3407306
Total Chromium (Cr)	mg/kg	8	1	3407306
Total Cobalt (Co)	mg/kg	4	1	3407306
Total Copper (Cu)	mg/kg	5	5	3407306
Total Lead (Pb)	mg/kg	3	1	3407306
Total Nickel (Ni)	mg/kg	8	1	3407306
Total Zinc (Zn)	mg/kg	13	10	3407306

RDL = Reportable Detection Limit

TOTAL PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		Q62291	Q62294		
Sampling Date		2009/09/03	2009/09/03		
		09:15	09:22		
COC Number		80957	80957		
	Units	09-1114	09-1115	RDL	QC Batch

Hydrocarbons					
Total Extractables C10 to C30	mg/kg	98	74	10	3406587
Surrogate Recovery (%)					
O-TERPHENYL (sur.)	%	118	105	N/A	3406587

N/A = Not Applicable
 RDL = Reportable Detection Limit



Maxxam Job #: A948623
Report Date: 2009/09/15

AECOM
Client Project #: 2977-371-00 JOHNSON POINT

Sampler Initials: PH

Package 1	7.7°C
Package 2	8.7°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Sample Q62289-01: BTEX detection limits raised due to dilution to bring analyte within the calibrated range.

Results relate only to the items tested.



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report
 Maxxam Job Number: EA948623

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3399549 CD1	Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/09/08		100	%	70 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/08		100	%	70 - 130	
		D8-TOLUENE (sur.)	2009/09/08		102	%	70 - 130	
		Benzene	2009/09/08		93	%	70 - 130	
		Toluene	2009/09/08		100	%	70 - 130	
		Ethylbenzene	2009/09/08		105	%	70 - 130	
		o-Xylene	2009/09/08		106	%	70 - 130	
		m & p-Xylene	2009/09/08		105	%	70 - 130	
		(C6-C10)	2009/09/08		102	%	70 - 130	
		Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/09/08		102	%	70 - 130
	D4-1,2-DICHLOROETHANE (sur.)		2009/09/08		99	%	70 - 130	
	D8-TOLUENE (sur.)		2009/09/08		104	%	70 - 130	
	Benzene		2009/09/08		92	%	70 - 130	
	Toluene		2009/09/08		103	%	70 - 130	
	Ethylbenzene		2009/09/08		109	%	70 - 130	
	o-Xylene		2009/09/08		111	%	70 - 130	
	m & p-Xylene		2009/09/08		111	%	70 - 130	
	(C6-C10)		2009/09/08		110	%	80 - 120	
	Method Blank		4-BROMOFLUOROBENZENE (sur.)	2009/09/08		98	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/08		103	%	70 - 130	
		D8-TOLUENE (sur.)	2009/09/08		96	%	70 - 130	
		Benzene	2009/09/08	<0.4		ug/L		
		Toluene	2009/09/08	<0.4		ug/L		
		Ethylbenzene	2009/09/08	<0.4		ug/L		
		o-Xylene	2009/09/08	<0.4		ug/L		
		m & p-Xylene	2009/09/08	<0.8		ug/L		
		Xylenes (Total)	2009/09/08	<0.8		ug/L		
		F1 (C6-C10) - BTEX	2009/09/08	<100		ug/L		
		(C6-C10)	2009/09/08	<100		ug/L		
		RPD	Benzene	2009/09/08	NC		%	40
			Toluene	2009/09/08	NC		%	40
	Ethylbenzene		2009/09/08	NC		%	40	
	o-Xylene		2009/09/08	NC		%	40	
m & p-Xylene	2009/09/08		NC		%	40		
Xylenes (Total)	2009/09/08		NC		%	40		
F1 (C6-C10) - BTEX	2009/09/08		NC		%	40		
(C6-C10)	2009/09/08		NC		%	40		
3399560 AN1	Matrix Spike		4-BROMOFLUOROBENZENE (sur.)	2009/09/10		110	%	70 - 130
			D4-1,2-DICHLOROETHANE (sur.)	2009/09/10		87	%	70 - 130
		D8-TOLUENE (sur.)	2009/09/10		98	%	70 - 130	
		Benzene	2009/09/10		NC	%	70 - 130	
		Toluene	2009/09/10		NC	%	70 - 130	
		Ethylbenzene	2009/09/10		NC	%	70 - 130	
		o-Xylene	2009/09/10		NC	%	70 - 130	
		m & p-Xylene	2009/09/10		NC	%	70 - 130	
		(C6-C10)	2009/09/10		NC	%	70 - 130	
		Spiked Blank	4-BROMOFLUOROBENZENE (sur.)	2009/09/10		106	%	70 - 130
	D4-1,2-DICHLOROETHANE (sur.)		2009/09/10		88	%	70 - 130	
	D8-TOLUENE (sur.)		2009/09/10		97	%	70 - 130	
	Benzene		2009/09/10		96	%	70 - 130	
	Toluene		2009/09/10		87	%	70 - 130	
	Ethylbenzene		2009/09/10		94	%	70 - 130	
	o-Xylene		2009/09/10		92	%	70 - 130	
	m & p-Xylene		2009/09/10		92	%	70 - 130	
	(C6-C10)		2009/09/10		110	%	80 - 120	



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)
 Maxxam Job Number: EA948623

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3399560 AN1	Method Blank	4-BROMOFLUOROBENZENE (sur.)	2009/09/10		105	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/10		89	%	70 - 130
		D8-TOLUENE (sur.)	2009/09/10		95	%	70 - 130
		Benzene	2009/09/10	<0.4		ug/L	
		Toluene	2009/09/10	<0.4		ug/L	
		Ethylbenzene	2009/09/10	<0.4		ug/L	
		o-Xylene	2009/09/10	<0.4		ug/L	
		m & p-Xylene	2009/09/10	<0.8		ug/L	
		Xylenes (Total)	2009/09/10	<0.8		ug/L	
		F1 (C6-C10) - BTEX	2009/09/10	<100		ug/L	
	RPD	(C6-C10)	2009/09/10	<100		ug/L	
		Benzene	2009/09/10	NC		%	40
		Toluene	2009/09/10	NC		%	40
		Ethylbenzene	2009/09/10	NC		%	40
		o-Xylene	2009/09/10	NC		%	40
		m & p-Xylene	2009/09/10	NC		%	40
		Xylenes (Total)	2009/09/10	NC		%	40
		F1 (C6-C10) - BTEX	2009/09/10	NC		%	40
		(C6-C10)	2009/09/10	NC		%	40
		3400008 KO	Matrix Spike	O-TERPHENYL (sur.)	2009/09/10		108
F2 (C10-C16 Hydrocarbons)	2009/09/10				93	%	50 - 130
F3 (C16-C34 Hydrocarbons)	2009/09/10				95	%	50 - 130
F4 (C34-C50 Hydrocarbons)	2009/09/10				98	%	50 - 130
Spiked Blank	O-TERPHENYL (sur.)		2009/09/10		101	%	50 - 130
	F2 (C10-C16 Hydrocarbons)		2009/09/10		112	%	80 - 120
	F3 (C16-C34 Hydrocarbons)		2009/09/10		111	%	80 - 120
	F4 (C34-C50 Hydrocarbons)		2009/09/10		119	%	80 - 120
Method Blank	O-TERPHENYL (sur.)		2009/09/10		91	%	50 - 130
	F2 (C10-C16 Hydrocarbons)		2009/09/10	<10		mg/kg	
	F3 (C16-C34 Hydrocarbons)		2009/09/10	<10		mg/kg	
	F4 (C34-C50 Hydrocarbons)		2009/09/10	<10		mg/kg	
RPD	F2 (C10-C16 Hydrocarbons)		2009/09/10	NC		%	50
	F3 (C16-C34 Hydrocarbons)		2009/09/10	NC		%	50
	F4 (C34-C50 Hydrocarbons)		2009/09/10	NC		%	50
	3400331 CL9		Matrix Spike	4-BROMOFLUOROBENZENE (sur.)	2009/09/09		103
D10-ETHYLBENZENE (sur.)		2009/09/09			101	%	30 - 130
D4-1,2-DICHLOROETHANE (sur.)		2009/09/09			120	%	60 - 140
D8-TOLUENE (sur.)		2009/09/09			89	%	60 - 140
Benzene		2009/09/09			116	%	60 - 140
Toluene		2009/09/09			95	%	60 - 140
Ethylbenzene		2009/09/09			99	%	60 - 140
m & p-Xylene		2009/09/09			98	%	60 - 140
Spiked Blank		o-Xylene	2009/09/09		103	%	60 - 140
		(C6-C10)	2009/09/09		100	%	60 - 140
		4-BROMOFLUOROBENZENE (sur.)	2009/09/09		102	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2009/09/09		119	%	30 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/09		96	%	60 - 140
		D8-TOLUENE (sur.)	2009/09/09		102	%	60 - 140
		Benzene	2009/09/09		105	%	60 - 140
		Toluene	2009/09/09		100	%	60 - 140
Method Blank	Ethylbenzene	2009/09/09		110	%	60 - 140	
	m & p-Xylene	2009/09/09		108	%	60 - 140	
	o-Xylene	2009/09/09		111	%	60 - 140	
	(C6-C10)	2009/09/09		93	%	80 - 120	
	4-BROMOFLUOROBENZENE (sur.)	2009/09/09		100	%	60 - 140	

Quality Assurance Report (Continued)

Maxxam Job Number: EA948623

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3400331 CL9	Method Blank	D10-ETHYLBENZENE (sur.)	2009/09/09		121	%	30 - 130	
		D4-1,2-DICHLOROETHANE (sur.)	2009/09/09		95	%	60 - 140	
		D8-TOLUENE (sur.)	2009/09/09		104	%	60 - 140	
	RPD	Benzene	2009/09/09	<0.0050			mg/kg	
		Toluene	2009/09/09	<0.020			mg/kg	
		Ethylbenzene	2009/09/09	<0.010			mg/kg	
		Xylenes (Total)	2009/09/09	<0.040			mg/kg	
		m & p-Xylene	2009/09/09	<0.040			mg/kg	
		o-Xylene	2009/09/09	<0.020			mg/kg	
		F1 (C6-C10) - BTEX	2009/09/09	<12			mg/kg	
		(C6-C10)	2009/09/09	<12			mg/kg	
		Benzene	2009/09/09	NC			%	50
		Toluene	2009/09/09	NC			%	50
		Ethylbenzene	2009/09/09	NC			%	50
		Xylenes (Total)	2009/09/09	NC			%	50
		m & p-Xylene	2009/09/09	NC			%	50
		o-Xylene	2009/09/09	NC			%	50
		F1 (C6-C10) - BTEX	2009/09/09	NC			%	50
		(C6-C10)	2009/09/09	NC			%	50
3400993 SR7	Method Blank	Moisture	2009/09/08	<0.3		%		
	RPD	Moisture	2009/09/08	2.6		%	20	
3401454 SR7	Method Blank	Moisture	2009/09/08	<0.3		%		
	RPD	Moisture	2009/09/08	2.9		%	20	
3401849 YT	Matrix Spike	O-TERPHENYL (sur.)	2009/09/10		111	%	70 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/09/10		109	%	70 - 130	
	Spiked Blank	O-TERPHENYL (sur.)	2009/09/10		110	%	70 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/09/10		103	%	80 - 120	
	Method Blank	O-TERPHENYL (sur.)	2009/09/10		112	%	70 - 130	
		F2 (C10-C16 Hydrocarbons)	2009/09/10	<0.1		mg/L		
	RPD	F2 (C10-C16 Hydrocarbons)	2009/09/10	NC		%	40	
	3405153 PC1	Calibration Check	Total Arsenic (As)	2009/09/10		94	%	80 - 120
			Total Cadmium (Cd)	2009/09/10		81	%	80 - 120
			Total Chromium (Cr)	2009/09/10		81	%	80 - 120
Total Cobalt (Co)			2009/09/10		82	%	80 - 120	
Total Copper (Cu)			2009/09/10		81	%	80 - 120	
Total Lead (Pb)			2009/09/10		102	%	80 - 120	
Total Nickel (Ni)			2009/09/10		82	%	80 - 120	
Total Zinc (Zn)			2009/09/10		81	%	80 - 120	
Matrix Spike			Total Arsenic (As)	2009/09/10		77	%	75 - 125
			Total Cadmium (Cd)	2009/09/10		81	%	75 - 125
			Total Chromium (Cr)	2009/09/10		NC	%	75 - 125
			Total Cobalt (Co)	2009/09/10		77	%	75 - 125
		Total Copper (Cu)	2009/09/10		89	%	75 - 125	
		Total Lead (Pb)	2009/09/10		NC	%	75 - 125	
QC Standard		Total Nickel (Ni)	2009/09/10		75	%	75 - 125	
		Total Zinc (Zn)	2009/09/10		NC	%	75 - 125	
		Total Arsenic (As)	2009/09/09		92	%	50 - 150	
		Total Chromium (Cr)	2009/09/09		88	%	41 - 159	
		Total Cobalt (Co)	2009/09/09		86	%	75 - 125	
		Total Copper (Cu)	2009/09/09		81	%	72 - 127	
		Total Lead (Pb)	2009/09/09		83	%	54 - 146	
		Total Nickel (Ni)	2009/09/09		90	%	61 - 139	
		Total Zinc (Zn)	2009/09/09		83	%	72 - 128	
		Method Blank	Total Arsenic (As)	2009/09/09	<1		mg/kg	
			Total Cadmium (Cd)	2009/09/09	<0.1		mg/kg	



AECOM
 Attention: DARA SCHMIDT
 Client Project #: 2977-371-00 JOHNSON POINT
 P.O. #:
 Site Reference:

Quality Assurance Report (Continued)
 Maxxam Job Number: EA948623

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits	
3405153 PC1	Method Blank	Total Chromium (Cr)	2009/09/09	<1		mg/kg		
		Total Cobalt (Co)	2009/09/09	<1		mg/kg		
		Total Copper (Cu)	2009/09/09	<5		mg/kg		
		Total Lead (Pb)	2009/09/09	<1		mg/kg		
		Total Nickel (Ni)	2009/09/09	<1		mg/kg		
		Total Zinc (Zn)	2009/09/09	<10		mg/kg		
	RPD	Total Arsenic (As)	2009/09/09	NC		%	35	
		Total Cadmium (Cd)	2009/09/09	NC		%	35	
		Total Chromium (Cr)	2009/09/09	3.3		%	35	
		Total Cobalt (Co)	2009/09/09	NC		%	35	
		Total Copper (Cu)	2009/09/09	NC		%	35	
		Total Lead (Pb)	2009/09/09	11.1		%	35	
		Total Nickel (Ni)	2009/09/09	6.2		%	35	
		Total Zinc (Zn)	2009/09/09	NC		%	35	
3406587 YT	Spiked Blank	O-TERPHENYL (sur.)	2009/09/10		104	%	50 - 130	
		Total Extractables C10 to C30	2009/09/10		93	%	60 - 130	
	Method Blank	O-TERPHENYL (sur.)	2009/09/10		91	%	50 - 130	
3407306 EO1	Calibration Check	Total Extractables C10 to C30	2009/09/10	<10		mg/kg		
		Total Arsenic (As)	2009/09/10		82	%	80 - 120	
	Total Cadmium (Cd)	2009/09/10		86	%	80 - 120		
	Total Chromium (Cr)	2009/09/10		90	%	80 - 120		
	Total Cobalt (Co)	2009/09/10		90	%	80 - 120		
	Total Copper (Cu)	2009/09/10		87	%	80 - 120		
	Total Lead (Pb)	2009/09/10		85	%	80 - 120		
	Total Nickel (Ni)	2009/09/10		89	%	80 - 120		
	Total Zinc (Zn)	2009/09/10		84	%	80 - 120		
	Matrix Spike	Total Arsenic (As)	2009/09/10		88	%	75 - 125	
		Total Cadmium (Cd)	2009/09/10		93	%	75 - 125	
		Total Chromium (Cr)	2009/09/10		92	%	75 - 125	
		Total Cobalt (Co)	2009/09/10		95	%	75 - 125	
		Total Copper (Cu)	2009/09/10		90	%	75 - 125	
		Total Lead (Pb)	2009/09/10		90	%	75 - 125	
		Total Nickel (Ni)	2009/09/10		90	%	75 - 125	
		Total Zinc (Zn)	2009/09/10		87	%	75 - 125	
	QC Standard	Total Arsenic (As)	2009/09/10		91	%	50 - 150	
		Total Chromium (Cr)	2009/09/10		94	%	41 - 159	
		Total Cobalt (Co)	2009/09/10		95	%	75 - 125	
		Total Copper (Cu)	2009/09/10		77	%	72 - 127	
		Total Lead (Pb)	2009/09/10		85	%	54 - 146	
		Total Nickel (Ni)	2009/09/10		94	%	61 - 139	
		Total Zinc (Zn)	2009/09/10		74	%	72 - 128	
		Method Blank	Total Arsenic (As)	2009/09/10	<1			mg/kg
	Total Cadmium (Cd)		2009/09/10	<0.1			mg/kg	
Total Chromium (Cr)	2009/09/10		<1			mg/kg		
Total Cobalt (Co)	2009/09/10		<1			mg/kg		
Total Copper (Cu)	2009/09/10		<5			mg/kg		
Total Lead (Pb)	2009/09/10		<1			mg/kg		
Total Nickel (Ni)	2009/09/10		<1			mg/kg		
Total Zinc (Zn)	2009/09/10		<10			mg/kg		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.
 Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
 QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



AECOM
Attention: DARA SCHMIDT
Client Project #: 2977-371-00 JOHNSON POINT
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA948623

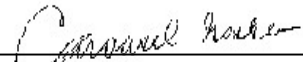
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780)577-7100 FAX(780)450-4187

Validation Signature Page

Maxxam Job #: A948623


The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



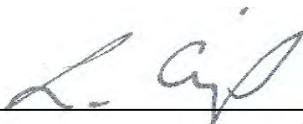
CAROUSEL USSHER, Analyst 2




DIANE ZACHARKIW, Scientific Specialist



HUA WO, Organics Supervisor



LISA CUMMINGS, Extractables Supervisor



MATTHEW BARTEAU, Analyst 2

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

013(2)

Handwritten initials

AC48603 Page: 1 of 2

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: _____ PC: _____

Contact #: Ph: 403.270.9200 Fax: 403.270.0399

Report To:

AECOM (Dara Schmidt)

2540 Kensington Road NW

Calgary

Prov: Alberta PC: T2N 3S3

Ph: 403.450.9923 Fax: 403.270.4822

PO # / AFE #:

Quotation #: C08-029

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:

Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

dara.schmidt@aecom.com

priya.handa@aecom.com

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

SOILS (footnotes defined on back)

WATERS (footnotes defined on back)

OTHER TEST(S)

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	BTEX F1-F4	Sieve (75 micron)	Salinity 4	Regulated Metals (CCME / AT1)*	Assessment ICP Metals?	Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1)	TC/TP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	PCBS	BTEX F1 <input type="checkbox"/> VOCs	BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	REGULATED METALS (CCME / AT1) ²		Mercury <input type="checkbox"/> Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	TOC <input type="checkbox"/> DOC	*HOLD for 60 Days	# of Containers Submitted
														Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved				
1	09-1093	S	2-Sept-09 12:00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	4
2	09-1094		12:05	✓															4
3	09-1096		10:55	✓		✓													4
4	09-1097		11:00	✓															4
5	09-1098		11:05	✓															4
6	09-1099		11:15	✓		✓				✓									4
7	09-1100		11:20	✓															3
8	09-1101		11:20	✓															3
9	09-1102		11:30	✓		✓				✓									4
10	09-1103		11:35	✓															4
11	09-1104		11:45	✓		✓				✓									4
12	09-1105		11:50	✓															4

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Priya Handa Date/Time: 7 Sept-09 11:30

Sign and Print: [Signature]

COMMENTS/SPECIAL INSTRUCTIONS:

*Metals: As, Cd, Cr, Co, Cu, Pb, Ni, Zn.

# JARS USED & NOT SUBMITTED	Received By <u>05/09/09</u> <u>9:50 SW</u>	Temperature			Ice
		<u>7</u>	<u>8</u>	<u>8</u>	
CUSTODY SEAL <u>(YES)</u> / NO		<u>8</u>	<u>9</u>	<u>9</u>	

Invoice To: Require Report? Yes No

Company Name: AECOM

Contact Name: Ana Galue

Address: ana.galue@aecom.com

Prov: _____ PC: _____

Contact #s: Ph: 403.270.9200 Fax: 403.270.0399

Report To:

AECOM (Dara Schmidt)

2540 Kensington Road NW

Calgary

Prov: AB PC: T2N 3S3

Ph: 403.450.9923 Fax: 403.270.4822

PO # / AFE #:

Quotation #: C08-329

Project #: 2977-371-00

Project Name: Johnson Point

Location:

Sampler's Initials: PH

DETECTION LIMIT REQUIREMENTS:
Check the applicable criterion and indicate land use

AT1 _____

CCME _____

OTHER _____

SERVICE REQUESTED:

RUSH (Please ensure you contact the lab to reserve)

Date Required: _____

REGULAR Turnaround (5 to 7 Days)

REPORT DISTRIBUTION:

EMAIL ADDRESS(S):

dara.schmidt@

aecom.com

priya.handa@

aecom.com

Sample Identification	Matrix S/W	Date & Time Sampled Year/Month/Day	(Site) SOILS (footnotes defined on back)		(Office) WATERS (footnotes defined on back)						OTHER TEST(S)				
			BTEX F1-F4	Sieve (75 micron) Salinity 4	Regulated Metals (CCME / AT1) Assessment ICP Metals ²	<input type="checkbox"/> Paint Filter <input type="checkbox"/> Flashpoint <input type="checkbox"/> pH (1:1) <input type="checkbox"/> TCLP <input type="checkbox"/> BTEX <input type="checkbox"/> Metals	<input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOCs	<input checked="" type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4	Routine Water Package <input type="checkbox"/> Turb <input type="checkbox"/> F	Total <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved	Dissolved <input type="checkbox"/> Preserved <input type="checkbox"/> Not Preserved <input type="checkbox"/> Filtered <input type="checkbox"/> Not Filtered	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved	<input type="checkbox"/> Ammonia <input type="checkbox"/> TKN <input type="checkbox"/> COD	<input type="checkbox"/> TOC <input type="checkbox"/> DOC	*HOLD for 60 Days
1 <u>09-1106</u>	<u>W</u>	<u>3-Sept-09 11:15</u>						<input checked="" type="checkbox"/>							<u>5</u>
2 <u>09-1107</u>		<u>11:23</u>						<input checked="" type="checkbox"/>							<u>5</u>
3 <u>09-1108</u>		<u>11:30</u>						<input checked="" type="checkbox"/>							<u>5</u>
4 <u>09-1109</u>		<u>11:39</u>						<input checked="" type="checkbox"/>							<u>5</u>
5 <u>09-1109</u>		<u>11:46</u>						<input checked="" type="checkbox"/>							<u>5</u>
6 <u>09-1110</u>		<u>11:46</u>						<input checked="" type="checkbox"/>							<u>5</u>
7 <u>09-1111</u>		<u>11:46</u>						<input checked="" type="checkbox"/>							<u>5</u>
8 <u>09-1112</u>		<u>11:54</u>						<input checked="" type="checkbox"/>							<u>5</u>
9 <u>09-1113</u>	<u>S</u>	<u>12:01</u>						<input checked="" type="checkbox"/>							<u>5</u>
10 <u>09-1114</u>	<u>S</u>	<u>3-Sept-09 9:15</u>				<input checked="" type="checkbox"/>									<u>2</u>
11 <u>09-1115</u>	<u>S</u>	<u>3-Sept-09 9:22</u>				<input checked="" type="checkbox"/>									<u>2</u>
12															

*All samples are held for 60 calendar days after sample receipt. For long term storage please contact your project manager.

Maxxam Job #:

Relinquished By: Refer to Pg. 1 Date/Time: _____

Sign and Print: _____

COMMENTS/SPECIAL INSTRUCTIONS:

# JARS USED & NOT SUBMITTED	Received By <u>05/09/09</u> <u>9:50 AW</u>	Temperature			Ice
		<u>7</u>	<u>8</u>	<u>8</u>	
CUSTODY SEAL <input checked="" type="checkbox"/> YES / NO		<u>8</u>	<u>9</u>	<u>9</u>	

Appendix K (on CD)

Site Departmental Representative Weekly Reports and Meeting Minutes



ATTENDEES: Katherine Silcock, INAC (KS) Fedorak, Barry, AECOM (BF)
Norrie, Brendon, AECOM (BN) Russell Newmark, EGT (RN)
Jim Stevens, EGT (JS) Andrew Liddiard INAC (AL)
Bill Mitchell, INAC (BM) Joel Gowman, INAC (JG)
Bill Coedy, INAC (BC) James Lay, EGT (JL)
Michael Bernardin, PWGSC (MB) Merven Grubens, EGT (MG)

DATE: 23rd November 09

TIME: 10:00am – 3:00pm MST

REF: Johnson Point Lessons Learned

LOCATION: Canada Place - 9700 Jasper Ave, Room 237

PHONE: 780-495-4368

No	Speaker	Item Description
	MB	Opening remarks – the purpose of this meeting is to build an inventory of things that went right/wrong with this project so we can all learn and make improvements on the way we manage future projects.
	BM	Opening remarks cont' – also we are accountable to taxpayers and need to demonstrate good value. Are there ways we can do things better, what lessons can be applied to other sites.
1.0 Apron Area PHC Investigation		
	BN	Remediate soil or contaminated water flowing through soil - Apron Area PHC? Might it have been better to remediate the groundwater then digging up all the soil?
	BN	No guidelines on max depth to dig to in RAP or INAC guidelines used (Apron Area PHC Investigation)
	BN	Application of 2005 INAC near shore criteria to whole area - significantly increased volume to excavate and difficult to ascertain edge depth of excavation. Applicability of near shore criteria. (Apron Area PHC Investigation). Using new (2008) INAC criteria for near shore areas (1290 F1 and 330 F2) would have eliminated the need for much of the Apron Area excavations.



	RN / JL	EGT has cleaned up many sites in the Arctic for DND. They spend way more time doing investigation and still have problems. Doing more investigation at these sites is not always the answer. At K If we were to redo the work today with the new INAC criteria most of the apron area would have been left in place.
	BN	More work should have been done in the RAP to better understand the geology and underlying conditions.
	JL	Essentially removed relatively solid base along the river and replaced it with less stable, poorly compacted material.
	Conclusions	<p>Use of INAC 2008 protocol would have eliminated the need for much of the excavation in the apron area.</p> <p>Should have had a better understanding of the underlying geology in the area, silts, sands, gravel, water table elevation, river meandering, high water levels, gravel seams etc.</p> <p>Consider extraction techniques for PHC near the water bodies to avoid spill over into excavations.</p>
2.0 Buried Debris Excavations		
	BN	Lack of debris in most excavations and poor delineation in others. 4 regrades in total at a cost of about \$500,000 each. Areas that were identified during geophysical assessment showed little in the way of actual debris. This site might have been better to dig up all the landfills given the lack of suitable onsite material for erosion protection. Type one material had to be barged in from Holman/Uluhaktok which added much cost to the regrades.
	JG	If going to dig up then there are potential unknown's such as depth of debris and permafrost issues.
	BF	Typically landfills are classified as A, B or C and cost for regrades usually way less when considering other options.
	R.N	For this type of site, you wouldn't expect so much "bad stuff" in the landfills given its use compared to other sites where there would have been transformer fluids etc.
	AL/BF	What about GPR? We don't usually dig in landfills for H&S reasons.
	Conclusion	<p>RAP should be thoroughly reviewed and questioned throughout the project period. One line in the RAP can often lead to a lot of extra work and costs.</p> <p>Careful assessment of geophysical anomalies needed to more accurately estimate the volume of buried debris.</p> <p>More consideration and/or risk assessments may have lead to the landfills being dug up rather than re-graded given the lack of suitable borrow material at this particular site.</p>
3.0 Investigation phase groundwater monitoring/ water in excavations.		
	BN	Investigation monitoring wells in main station less than one foot long and slotted to surface. Essentially the surface water was able to enter the well thus throwing off the accuracy of the ground water samples.



	BN	Identification that groundwater needed treating in RAP cost project significant amount of money for no real benefit. The contractor brought a treatment facility to site under the impression that groundwater would need to be treated. As it turned out no groundwater treatment was required.
	BN	Large areas excavated at once despite initial plans that this would not happen. This was unavoidable due to both the increased depth of contamination and low criteria; holes could not be closed without testing – 10 day wait. Constant and/or heavy rain caused the excavations to fill with water while waiting for test results.
	MB/RN	Does DND have the same problems on their sites? Can anything be done to prevent this? Increasing the lab priority made a huge difference.
	BC/BN	PID – would this have worked? Results are kind of like a shotgun spread – not accurate enough.
	AL	Onsite test kits default to F2-near shore, 2500ppm for terrestrial.
	RN/BF	In hindsight we could have done more delineation in Yr 1. That might have saved from digging so close to the water's edge. This way we would have had a discussion beforehand about what is a reasonable offset distance from the waters edge.
	JL	Have you considered using a portable CAEL certified lab?
	AL/BF	Yes, they are faster but much more costly. On a \$50million project it might be feasible like Cape Dyer for example, but not on these smaller sites.
	KS/BF	Even the labs don't always give turn around time that they promise. It is the job of the environmental specialist onsite to be on them.
	JS/BN	Lab turn around time was 16 days at first, up front testing was most onerous and took the longest to get results. Its ironic that the largest excavations have the most testing thus the most time needed.
	Conclusion	<p>Well installation logs should be included in investigation reports.</p> <p>Rush orders were put in place help reduce the time that the excavations were left open. This however comes with extra costs which need to be considered against the potential risks with leaving excavations open.</p> <p>No other real way to avoid this situation was identified aside from upfront detailed delineation which might have helped.</p>
4.0 Borrow		
	BN	Very little material on site met or could be made to meet the type 2 spec. Also we were completely short of Type 1 (armor) which had to be brought in. What turned out to be the best source o Type 2 was the airstrip which was not identified in the RAP as a potential borrow area.



	BC/BN	Could we have used treated material as backfill? Most of it was not better to put back in.
	JG	Using airstrip as borrow is highly problematic with getting permitting given its close proximity to the ocean. Roads are a different story so long as they are no longer needed.
	RN	Identified PIN-main where this was done.
	BM	Maybe the project doesn't go ahead because of lack of suitable material – this could be used as leverage with the regulators to allow use of airstrip material.
	AL/RN	There is sometimes a lack of perspective with the regulators. On some sites it is a more important issue than others. Many sites have plenty or readily available borrow but his one did not.
	Conclusion	Borrow sources need to be better defined during the assessment phase. The far end of the airstrip should have been given more consideration (not withstanding permitting) given that it was the best source of material.
5.0 Nightshift work / River spill over incident		
	BN	Night shifts were a good tool used mainly to remove bolts from the tanks and haul borrow. A lot of progress happened during the nights. River meets excavation incident happened during night shift/ while site super was off site. Essentially the excavation was advanced to what was considered a reasonable distance to the river, however over night the river level raised and flooded the excavation. This happened at about 6 am.
	BM/AL	Probably should not have been digging this close to the river or should have built-up the edge before starting. How did areas get marked for excavaton.
	MB	Should we be predefining a setback on the drawings? Would this have prevented this spill?
	BN	The original stakes based off the drawing were actually in the river, so the river must have meandered between then and now. The stakes were set back from the river's edge to a reasonable distance.
	JS	One of the problems is a buffer issue, there is no formal buffer set back from water's edge. Also, Brendon is right in that these types of sensitive activities should be done during the day.
	KS	If not comfortable, then this should have been conveyed higher up. This was never communicated.
	MB	Sometimes it is difficult to fully appreciate certain situations from the office chair and these calls are best left to the person onsite.
	JS	Even after the incident we were pushed to go closer to the lake and ocean. These are heavy pieces of equipment used to excavate and not always that precise.
	BM/BN	There needs to be a balance between risk and reward. Consider adaptive management. We need to step back and consider what is important – but if it OK to leave contamination in place closest to the water then why remove the stuff that is farther away...



	RN	The whole apron area was flooded in the spring and that caught everybody off guard. The fact that we got so much rain is something that we need to start planning for.
	Conclusion	<p>Sensitive operations should be performed during day shifts and under proper supervision.</p> <p>There is no industry standard for excavation setbacks from water edges. Need to use adaptive management and carefully consider the risks when working near water bodies.</p> <p>If in doubt, consult with PWGSC/INAC.</p>
6.0 Tandems vs Rock Trucks		
	BN	There was limited/no use for tandem trucks at this site. The conditions were such that only the rock trucks were able to move around without creating ruts and/or getting stuck. Should we consider specifying rock trucks in the specifications?
	JS	We probably could have gotten away with tandems however we would have been coming back next year to finish. It was difficult to know beforehand that we were going to have that much rain.
	BF/MB	We would pay a premium if rock trucks are specified in the contract. We try to avoid being that prescriptive, way may encourage contractors to bid using rock trucks but ultimately it is up to them to decide what is best suited for the job.
	RN	We would have thought that tandems would have worked when we took the job, but in hindsight it was a good call to bring in rock trucks even though upfront costs were significantly higher.
	Conclusion	At bidders conference / site tour, rock truck vs tandems discussion should be had to make contractors aware of the potential risk/reward where sites consist of predominantly sand.
7.0 Regulatory		
	BN	Greywater discharge tested high in Chlorine – regulatory level below that measured in river (water source for camp). Chlorine levels in river not measured during investigations or RAP. The samples taken from the river were not consistently high in chlorine however was identified as the likely source. Possibly due to tidal effects.
	BN	Regulators expectations with regard to hold times? Thursdays were the only days when greywater samples could get to a lab within the 24hour hold time. This was not always possible given variability of flights and weather conditions.
	RN/KS	Regulators were sometimes quite lenient at site, but more direct in their reports. That's because they would make their reports while back in the office after the site visit.
	BM/KS	INAC inspectors tend to hold INAC sites to a higher standard than industry. They may have been even stricter if not for INAC's relationship with them.
	RN/BM	I have almost never seen them show up to one of our sites in the past 20 some years particularly at DND sites. Should maybe not let them piggy back on our flights.
	KS/JG	Just need to be upfront with them so they are aware when certain things are happening. One reason water board came to site was to consider removing the chlorine from the licence. It was valuable to have them there.
	BM	What were the actual issues with the regulators?
	BN/KS/JG	Chlorine exceedances, tank registration numbers, drip trays, spill outside generator shack, borrow quantity exceeded.



JS/RN	It was actually a valve dripping but the exact valve was never pointed out. Reports from the inspectors weren't sent out very fast, in fact the report for the August 21 st inspection was not sent out until after the next inspection on September 8th. There was in fact a huge effort made to appease their concerns.
MB	The inspectors are focused on very specific things on the site, and don't need to consider the big picture items such as cost, schedule, scope, productivity etc. They show up at the meetings and give input but are not part of the core project team and don't fully understand the roles or communication lines of the various people involved.
BF/BN	Regulators were phoning AECOM representative onsite on a regular basis. What do you do with their concerns – some could lead to a whole new project. The apron area erosion concerns should have been identified during the RAP phase so potential concerns are addressed in the design rather than after the work is complete.
KS	Apron area was risk managed and will be discussed at future meetings.
AL	FCSAP people get off track sometimes – we are not into creating pristine environments - that is not the intent. It is a risk based approach.
BN/JG	Do the regulators have input early in the project. They were involved in RAP options and during the phase III.
RN/MB	Was surprised how the whole group was able to get together and make a quick decision on the PHC issue in the apron area. This was attributed in part to the regulators being available supporting the decision.
BM/MB	It seems that the inspectors had a problem with a lot of little things. Best to keep them happy, even if some of them seem tedious – that will go a long way in keeping them on side.
JG	One area where they were more lenient than industry was borrow material.
BN	Was surprised how quickly the source was exhausted – it was only realized after the fact that it went over the permitted amount.
KS	This is something that could have been approved over the phone but was not communicated until later.
BN	The problem with the borrow areas is that 8 areas were identified on the license but only two had suitable material. Could have estimated 3 times more than expected and we would have been fine but tried to be too specific and went over.
JG	On non compliance issue - at no point was authorization given to discharge greywater with chlorine exceedences.
JS	We were given permission to discharge greywater after the chlorine had dissipated over the winter. At the end of the year, greywater was being held with the intent to barge it offsite since we had not received the results. In the end we had to release it, even though it was high in chlorine otherwise it would have froze and cracked the tank and would have lead to an uncontrolled discharge in the spring. Typically we only report fuel spills – it's not clear that this was a "spill".
JG/JS	Just needed to make a phone call and they could have given permission. We would still not necessarily gotten approval to discharge but still would have had to do the same thing.



	<p>Conclusion</p>	<p>Good communication is key.</p> <p>Inspectors should be included at start-up meetings if they are going to be actively involved throughout the project. This would allow them to communicate expectations directly to all upfront. Establish lines of communication at Kick-off meeting.</p> <p>Requests coming from the regulatory inspectors need to be addressed in order to keep them on side. Losing the support of the regulatory bodies can lead to communication breakdowns and potential project delays.</p> <p>Remediation strategy should pay close attention to general site conditions- sites with high erosion potential should not be altered too much or have long term facilities built on them.</p> <p>A phone call to the inspectors to explain in advance of any permit breaches such as borrow area exceedances or discharging greywater that doesn't meet criteria will go a long way in preventing any perceived wrong doings at the site. Best to keep the inspectors up to speed with regulatory type challenges.</p> <p>File spill reports in a timely manner as required by regulation. Including photos is an effective means of communication.</p> <p>The party that will be responsible for filling out spill reports needs to be at beginning of project (DR, contractor, INAC or PWGSC).</p>
<p>8.0 Overall / General</p>		
	<p>MB/RN</p>	<p>Overall objectives of the project were met on schedule and on budget despite adverse weather conditions and other surprise challenges such as PHC soils at depth, insufficient laydown area for treated soil, water seepage from under existing landfill area, thermistor/ water well installations. This was attributed to a highly motivated contractor – working double shifts. INAC, PWGSC and various regulatory bodies worked together to resolve issue in a timely manner.</p>
	<p>MB/BM</p>	<p>Monthly invoices were reviewed and approved in a timely manner. This is important because we have some projects that are 50% complete but only 10% billed. This leads to major administrative challenges at year end. Would like to see this on more projects.</p>
	<p>MB</p>	<p>Community site tour and final monthly meeting held on same day and both community and project team arrived onsite at or about the same time. The objective of holding both meetings on the same day was to reduce travel costs and travel time for the project team. The result of coordinating both tour and meeting lead to a perceived lack of attention/time for both. Greater separation should be planned in the future to allow the time needed for each (tour and meeting).</p>
	<p>MG</p>	<p>Community members said that they were impressed after the last site visit. The site was cleaned up and didn't smell like fuel anymore.</p>
	<p>Conclusion</p>	<p>Again, good communication amongst all parties is key to project success.</p> <p>Highly motivated contractor (working double shifts at times) with the right equipment allowed for project to be complete on schedule and budget despite not being in the best financial interest of the contractor.</p>



		<p>PWGSC, EGT & AECOM negotiated prior to each month end to agree upon quantities. If survey measurements were not available then the agreed upon quantity was ~10% less then the estimate. This allowed EGT to provided invoices at the end of each month without delay.</p> <p>Consider planning site meeting and community tour on separate days or greater separation on the same day to allow the needed time for both without overlap.</p>
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The meeting adjourned at 3:30 p.m.

The foregoing is considered a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

Do not hesitate to contact me should you have any questions.

Regards,

Michael Bernardin, B.Env.D.
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Edmonton, AB

Report of Meeting

Project Description: Environmental Site Remediation, Johnson Point, NWT.

File Number: 2977-371-00

For period ending: June 30, 2008 **Location:** EGT Construction Camp, Johnson Point

Recorded By: B. Norrie **Date:** June 30, 2009

Attendees: Jim Stevens, EGT
 Dara Schmidt, AECOM
 Brendon Norrie, AECOM
 Chris Kjarsgaard, AECOM
 Kurt Kure, IEG
 Keith Cox, EGT Surveyor

Distribution: Attendees
 Michael Bernardin, PWGSC
 Katherine Silcock, INAC
 Joel Gowman, INAC
 Barry Fedorak, AECOM

Item	Discussion	Action By
1.0	Health and Safety/ Fire/ Spills: <ul style="list-style-type: none"> Medic reports no medical incidents this season 	
2.0	Water and Land Use Permit Conditions <ul style="list-style-type: none"> EGT to begin discharging post-treatment greywater pond today via one inch hose and pump. EGT reminded that permission to discharge is for treated greywater currently in pond only, i.e. pond should be dry at end of discharging. If discharging of pond is completed by Thursday, EGT plans to refill post-treatment pond with treated greywater and test so samples can be flown out on Thursdays planned flight. AECOM plans to take QC chlorine samples from different parts of the greywater source and treatment system as check against EGT sampling and to provide more information towards getting permission for continuous discharge. 	EGT EGT AECOM
3.0	Contractor Submittals: <ul style="list-style-type: none"> EGT to submit progress claim for period ending June 30th. 	EGT

PLEASE NOTE: If this report does not agree with your records of the meeting, or if there are any omissions, please advise, otherwise we will assume the contents to be correct.

Report of Meeting
 June 30, 2009
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
4.0	Survey: <ul style="list-style-type: none"> • 3 full-size copies of construction drawing C06 provided to Contractor/ Surveyor to make easier staking out and information recording for the Apron Area soil excavation. • Electronic copies of the 2009 survey coordinates provided to Surveyor. 	
5.0	Demo and Debris: <ul style="list-style-type: none"> • EGT plans to package leachable lead painted materials in lined and braced marine shipping containers as outlined in the specifications. • Site mechanic has salvaged and is using a small sleigh trailer. EGT requested to complete waiver form if they intend to retain the sleigh trailer after completion of site activities. • EGT are also to provide a completed waiver form for any significant salvaged timbers. Only untreated and unpainted timbers are available for salvage. 	 EGT EGT
6.0	Soil Excavations: <ul style="list-style-type: none"> • IEG are to take baseline samples of soil beneath hydrocarbon treatment cell as described in the specifications. • Error in legend of 2009 construction drawing C06; "<450mg/kg TPH" should read "4570 mg/kg TPH" • Departmental Representative is to sample the stockpiled or windrowed soil from buried debris excavations for metals and TPH as described in the specifications. • IEG and Departmental representative to contact laboratory to determine costs and potential delays for testing groundwater for C10-C19 rather than normal C10-C16. • Agreement reached that initial excavations in Apron Area will be Buried Debris Areas. Excavated soil will be windrowed either within the excavation or on adjacent areas to be excavated subsequently as PHC excavations. 	 IEG AECOM IEG /AECOM

PLEASE NOTE: If this report does not agree with your records of the meeting, or if there are any omissions, please advise, otherwise we will assume the contents to be correct.

UMA Engineering Ltd.
 17007 107 Avenue
 Edmonton, Alberta T5S 1G3
 T 780.486.7000 F 780.486.7070 www.uma.aecom.com

Report of Meeting

Project Description: Environmental Site Remediation, Johnson Point, NWT.

File Number: 2977-371-00

For period ending: August 28, 2008 **Location:** EGT Construction Camp, Johnson Point

Recorded By: L. Slikker **Date:** August 29, 2008

Attendees: Jim Stevens, EGT
 Dara Schmidt, UMA
 Len Slikker, UMA
 Thomas Strachan, Medic

Distribution: Jim Stevens, EGT
 Brendon Norrie, UMA
 Dara Schmidt, UMA
 Len Slikker, UMA
 David Wells, IEG
 Brad Thompson, PWGSC
 Emma Pike, INAC
 Barry Fedorak, UMA

Item	Discussion	Action By
1.0	<p>Health and Safety/ Fire/ Spills:</p> <ul style="list-style-type: none"> • Some, but not all required fuel/ oil drip trays on site. • List of Material Safety Data Sheets (MSDS) available on site in Site Superintendent's office. • Medic reports one incident resulting in person requiring medical attention where an eye wash station was required. No additional medical treatment was required. 	

PLEASE NOTE: If this report does not agree with your records of the meeting, or if there are any omissions, please advise, otherwise we will assume the contents to be correct.

Report of Meeting
 August 28, 2008
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
2.0	<p>Water and Land Use Permit Conditions</p> <ul style="list-style-type: none"> • EGT has tested post-treatment greywater flowing from aeration/ UV treatment. Water Samples were taken and sent out. EGT is waiting for results. • Depending on the results of testing, batches of greywater will be discharged this season. EGT is waiting for a response from the Northwest Territories Water Board for the discharge location. • At the Johnson Point Monthly Meeting, on August 27 2008, it was decided if an additional pond is required, it should be constructed across the road (opposite existing pond). • Due to a quantity miscalculation, EGT has made an amendment to water volumes used on site. 	EGT
3.0	<p>Contractor work plan for remainder of season:</p> <ul style="list-style-type: none"> • Development of borrow material. • Construction of some landfill regrades. Required material comes from Borrow Area 3. UMA Geotech person will arrive on site Sunday, August 31, 2008. • Incineration of unpainted/ untreated wood. • Completion of hydrocarbon auguring/ sampling. • Continue with Tank demolition. • Conduct asbestos removal from Nodwell camp trailers in Tuk in September/ October when qualified crew returns from Johnson Point or other sites. 	
4.0	<p>Contractor Submittals:</p> <ul style="list-style-type: none"> • EGT is to submit to Engineer and Owner information on the proposed disposal facilities for demolition items. Assessment of progress claim requires information on level of demo needed for final disposal. 	EGT
5.0	<p>Barrel Testing / Processing and other</p> <ul style="list-style-type: none"> • 'Floor sweeping' material in ripped asbestos bag, in barrels at haz-mat area are to be assessed by UMA to determine appropriate disposal method. • Tank Bladders to be tested and inspected. 	UMA UMA
6.0	<p>Survey:</p> <ul style="list-style-type: none"> • Surveyor completed staking perimeters of regrades at landfill sites B, C, D and Main Station PHC contaminated soil, POL Area Plume, as well as laying out grid for PHC soil testing. 	

PLEASE NOTE: If this report does not agree with your records of the meeting, or if there are any omissions, please advise, otherwise we will assume the contents to be correct.

Report of Meeting
 August 28, 2008
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
7.0	<p>Demo and Debris:</p> <ul style="list-style-type: none"> Six of the bolted tanks for demolition are lined. UMA to inspect and take sample of any residue encountered. EGT to use vapour analyser as part of demolition procedures. Paint samples for leachable lead testing have been taken and were taken out on Charter flight August 21, 2008. 	UMA
8.0	<p>Soil Excavations:</p> <ul style="list-style-type: none"> No soil excavations are anticipated this year as, given the short remaining season, setting up lined areas for soil treatment/ processing is not worth it. UMA to use backhoe to conduct further delineation around edges of PHC excavations. UMA to assess use of delineation sampling as pre-excavation confirmatory wall sampling. UMA informed EGT that soil from buried debris areas within the Apron Area excavation limits would still have to be sampled even if it has been sampled as part of grid PHC sampling. Soil from buried debris areas needs to be sampled for metals and any other materials found in the debris (PCBs, pesticides etc.) 	<p>UMA</p> <p>INFO</p>
9.0	<p>Uluhaktok:</p> <ul style="list-style-type: none"> Type 1 samples collected from Samples were sent to UMA Calgary Lab for gradation analysis. Results, needed for material approval prior to barging Type 1 to Johnson Point, have been received. Barge bringing Type 1 material to Johnson Point will also deliver hoe and rocktruck. 	

PLEASE NOTE: If this report does not agree with your records of the meeting, or if there are any omissions, please advise, otherwise we will assume the contents to be correct.

Report of Meeting

Project Description: Environmental Site Remediation, Johnson Point, NWT.

File Number: 2977-371-00

For period ending: July 8, 2009 **Location:** EGT Construction Camp, Johnson Point

Recorded By: B. Norrie **Date:** July 8, 2009

Attendees: Jim Stevens, EGT
 Dara Schmidt, AECOM
 Brendon Norrie, AECOM
 Chris Kjarsgaard, AECOM
 Greg Wright, AECOM
 Kurt Kure, IEG
 Keith Cox, EGT Surveyor

Distribution: Attendees
 Michael Bernardin, PWGSC
 Katherine Silcock, INAC
 Joel Gowman, INAC
 Barry Fedorak, AECOM

Item	Discussion	Action By
1.0	Health and Safety/ Fire/ Spills: <ul style="list-style-type: none"> Medic reports no medical incidents since last meeting. 	
2.0	Water and Land Use Permit Conditions <ul style="list-style-type: none"> Greywater discharging that began last week is close to being completed. Portions of the post-treatment pond base now visible. Discharging will continue until tomorrow morning (July 9). When discharging is completed morning of July 9, EGT is to refill pond with currently stored treated greywater. EGT to test refilled greywater to send out on July 9 flight. AECOM to take samples of river water and post treatment greywater sample to send on July 9 flight 	EGT EGT AECOM
3.0	Contractor Submittals: <ul style="list-style-type: none"> Next progress claim will be for period ending July 31st. 	EGT

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Report of Meeting
 July 8, 2009
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
4.0	Survey: <ul style="list-style-type: none"> • Complete set of natural ground surveys has been provided to Departmental Representative. • Package of survey surfaces used for July 31 payment claim will be sent to Departmental representative by July 25th, to enable confirmation of claimed volumes. 	Surveyor
5.0	Barrel and Hazardous Waste Processing <ul style="list-style-type: none"> • Diamonds North in discussion with EGT to dispose of or use DDN aircraft fuel on site that is close to expiring. • AECOM to enquire with INAC/ PWGSC as to fate of other cashed fuel on site, most of which is much older than Diamonds North fuel. 	AECOM
6.0	Demo and Debris: <ul style="list-style-type: none"> • EGT to provide completed waiver forms for sleigh camp and any significant salvaged timbers. Only untreated and unpainted timbers are available for salvage. • Maintenance building is scheduled for demolition when crew is available. Potential that shortly the night shift will complete night time tank work soon and be available. • A layer of bedding sand is present beneath the bladder of Tank 14. Sandwiched between the bedding sand and the metal tank plates is a layer of fibreglass. EGT notes that this fibreglass is well bound to the plates and bolt heads and it is unlikely that the base can be disassembled like the rest of the tank portions. Base may be folded for disposal without attempt the remove fibreglass. 	EGT EGT

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Item	Discussion	Action By
7.0	<p>Soil Excavations:</p> <ul style="list-style-type: none"> • Minimal debris was found in buried debris lobe N. Most of the soil excavated from this excavation can be backfilled. AECOM to clearly identify and test stockpiled soil that is not to be backfilled. • Buried debris lobe M is surveyed and can be backfilled as no debris or stained soil was found in excavation. • EGT/ IEG reminded that due to the complexity of the Apron Area excavations, constant supervision of excavation operations is needed to ensure excavated soil to taken to appropriate treatment/ disposal locations. • IEG and Departmental Representative to contact laboratory to determine costs and potential delays for testing groundwater for C10-C19 rather than normal C10-C16. • Second haul truck driver coming in to site within next week. EGT planning to commence soil hauling on both day and night shifts. • Noted that heavy hydrocarbon fuel contamination in and around Buried debris Lobe J could produce lead exceedances as well as hydrocarbon exceedances if fuel contained high levels of lead. • Acknowledged that detailed planning of Apron Area Northeast Plume Part 2 excavation will be needed to prevent unnecessary inflows of groundwater and river water. EGT not to begin excavation in this area until excavation methodology has been agreed upon between all parties. • Departmental Representative to investigate potential buried debris area south of landfill A regrade. Strong anomaly shown in this area on 2005 Komex report but nothing evident in 2006 EBA report. Initial tests to be conducted using hand auger and follow up with excavator if required. 	<p>AECOM</p> <p>EGT</p> <p>EGT</p> <p>AECOM</p> <p>AECOM</p>
8.0	<p>Soil Treatment:</p> <ul style="list-style-type: none"> • IEG sent first samples from allued PHC soil out on July 7 flight. Results expected at end of this week. • Departmental representative calculates typical allued soil windrow cross-section to be approximately 8m². Thus 20m³ of soil equates with approximately 2.5 lineal meters of windrow. • Prior to removal of treated soil from the treatment cell, IEG is to provide to the Departmental Representative with the relevant testing information including lab result summaries, lab report sheets and a treatment cell diagram clearly showing the relevant soil stockpiles/ windrows. 	<p>IEG</p>

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UMA Engineering Ltd.
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 Edmonton, Alberta T5S 1G3
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Report of Meeting

Project Description: Environmental Site Remediation, Johnson Point, NWT.

File Number: 2977-371-00

For period ending: September 04, 2008 **Location:** EGT Construction Camp, Johnson Point

Recorded By: B. Norrie **Date:** September 04, 2008

Attendees: Jim Stevens, EGT
 Brendon Norrie, UMA
 Dara Schmidt, UMA
 Len Slikker, UMA
 Thomas Strachan, Medic

Distribution: Jim Stevens, EGT
 Brendon Norrie, UMA
 Dara Schmidt, UMA
 Len Slikker, UMA
 Brad Thompson, PWGSC
 Emma Pike, INAC
 Barry Fedorak, UMA

Item	Discussion	Action By
1.0	Health and Safety/ Fire/ Spills: <ul style="list-style-type: none"> Medic reports two minor incidences of dust in eye. Persons in question utilized eye wash station and no additional medical treatment was required. 	
2.0	Water and Land Use Permit Conditions <ul style="list-style-type: none"> EGT has tested post-treatment grey water flowing from aeration/ UV treatment. Water. EGT is still awaiting results which are now overdue. Depending on the results of testing and authorisation from Northwest Territories Water board, greywater will be discharged this season. When submitting results of test to water board, EGT is reminded to ask for permission to begin continuous discharge and testing program. At the Johnson Point Monthly Meeting, on August 27 2008, it was decided if an additional pond is required; it should be constructed across the road (opposite existing pond). 	EGT

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Report of Meeting
 September 04, 2008
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
3.0	<p>Contractor work plan for remainder of season:</p> <ul style="list-style-type: none"> • Development of borrow materials at Borrow Area 3. • Continue construction of landfill regrades. First lift on Lobe D has been compacted and requires assessment and approval by UMA personnel before next lift can be placed. First lift on Lobe C has been placed and requires compaction. • Continue incineration of unpainted/ untreated wood. • Completion of hydrocarbon auguring/ sampling. • Continue with Tank demolition. Crew intends to complete demolition of one large tank (tank 16) before finish of season. • Asbestos removal from Nodwell camp trailers currently in Tuk may be undertaken by Hazco in BC following barging of trailers to BC. EGT to confirm arrangements and receive receipt from Hazco that trailers are OK to transport as is. 	<p>UMA</p> <p>EGT</p>
4.0	<p>Contractor Submittals:</p> <ul style="list-style-type: none"> • EGT is to submit to Engineer and Owner information on the proposed disposal facilities for demolition items. Likely to be two further progress claims submitted this year, one on or after September 15 for remaining construction season work, and another when transportation and disposal of materials is completed. 	EGT
5.0	<p>Barrel Testing / Processing and other</p> <ul style="list-style-type: none"> • Barrel testing to be undertaken next year. Inventory of barrels and likely contents has been completed. • 'Floor sweeping' material in ripped asbestos bags, in barrels at haz-mat area have been sampled for asbestos. Samples have been sent. Awaiting results. • Tank Bladders were tested and inspected. Samples sent out on Charter flight September 3rd. Awaiting results. 	UMA
6.0	<p>Survey:</p> <ul style="list-style-type: none"> • Survey information to be forwarded to UMA as both electronic point files and electronic or hard copies of Surveyors completed drawing files. 	S
7.0	<p>Demo and Debris:</p> <ul style="list-style-type: none"> • Six of the bolted tanks for demolition are lined. UMA inspected and took samples of residue encountered. EGT to use vapour analyser as part of demolition procedures. • Paint samples for leachable lead testing need additional cutting to smaller pieces prior to submission to lab. 	<p>UMA</p> <p>EGT/ UMA</p>

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Report of Meeting
 September 04, 2008
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
8.0	Soil Excavations: <ul style="list-style-type: none"> • No soil excavations are anticipated this year as, given the short remaining season, setting up lined areas for soil treatment/ processing is not worth it. 	UMA
9.0	Uluhaktok Type 1 material: <ul style="list-style-type: none"> • EGT still hopeful that barge will bring Type 1 material from Uluhaktok to Johnson Point this season. Dependent of NTCL schedule. 	

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Report of Meeting

Project Description: Environmental Site Remediation, Johnson Point, NWT.

File Number: 2977-371-00

For period ending: July 18, 2009 **Location:** EGT Construction Camp, Johnson Point

Recorded By: G. Wright **Date:** July 19, 2009

Attendees: Jim Stevens, EGT
 Greg Wright, AECOM
 Priya Handa, AECOM
 Kairi Pawlick, AECOM
 Josh Foster, IEG
 Keith Cox, EGT Surveyor

Distribution: Attendees
 Michael Bernardin, PWGSC
 Katherine Silcock, INAC
 Joel Gowman, INAC
 Barry Fedorak, AECOM
 Brendon Norrie, AECOM

Item	Discussion	Action By
1.0	<p>Health and Safety/ Fire/ Spills:</p> <ul style="list-style-type: none"> One incident was reported this week. While removing loosened bolts during tank demolition, a worker grazed himself his ear/side of head with a sledge hammer. It is unclear how the incident happened exactly, but first aid was not required. No other incidents or accidents were reported this week. 	
2.0	<p>Water and Land Use Permit Conditions</p> <ul style="list-style-type: none"> No grey water was discharged since the last meeting. Sample results from AECOM sampling (river water and post treatment grey water) remain overdue. The camp ran out of bottled drinking water on July 13th, and milk and juice on July 14th. With the exception of a couple cartons of milk that was later found, the only fluids available from July 13 to 16 was boiled river water. An arrangement to charter a suitable aircraft at first availability was not fully explored nor was it made a priority by the Contractor. Contractor is to ensure that adequate supplies of drinking water be onsite to avoid the problem from reoccurring. 	<p>AECOM</p> <p>EGT</p>

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Report of Meeting
 July 19, 2009
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
3.0	Contractor Submittals: <ul style="list-style-type: none"> Next progress claim will be for period ending July 31st. 	EGT
4.0	Survey: <ul style="list-style-type: none"> Package of survey surfaces used for July 31 payment claim will be sent to Departmental Representative by July 25th, to enable confirmation of claimed volumes. 	Surveyor
5.0	Barrel and Hazardous Waste Processing <ul style="list-style-type: none"> Agreement in place between Diamonds North and EGT to use DDN fuel barrels. The nav gas will be used to refuel charter planes, the diesel will be used for the incinerator or generator, and the propane and barrels that cannot be used will be shipped offsite. AECOM awaiting direction from INAC/ PWGSC as to fate of other cached fuel on site (PCSP Resolute, INAC/DIAND, DNM Holman, etc). Inventory of barrel cache was sent out on July 9, 2009. Maintenance building was demolished and disassembled July 15-17. Hazardous waste was placed in ISO containers. EGT will be strapping down the waste material, attaching the bulk head containment (within the container), photographing and labelling prior to sealing the container for shipment. AECOM to provide direction (i.e. consolidate, wash, crush, etc) regarding barrels in haz waste holding area when results are available. AECOM to provide summary table of painted material, specifically the nav aid material and green sheds, which identifies the specific disposal requirements. 	EGT AECOM EGT AECOM AECOM
6.0	Demo and Debris: <ul style="list-style-type: none"> EGT reminded to provide completed waiver forms for sleigh camp, power poles and any significant salvaged timbers. Only untreated and unpainted timbers are available for salvage. Bedding sand is present between the fuel bladder and tank base on all large tanks. EGT to continue stockpiling the bedding sand adjacent to each tank location until laboratory results have been received. EGT collected surface debris from Landfill A. Small amounts of debris remaining in other areas that must be collected and disposed accordingly. Additionally, EGT is reminded that when the Lobe P stockpiles are disposed (assuming they will be disposed on site) visible debris remaining in the excavated soil should be collected as it is placed and spread at the soil disposal location. 	EGT EGT EGT

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Report of Meeting
 July 19, 2009
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
7.0	<p>Soil Excavations:</p> <ul style="list-style-type: none"> • Backfilled buried debris Lobes M and N. Still waiting for results from small stockpile from Lobe N. • IEG to continue with supervision and direction on apron area excavations, to ensure contaminated material is taken to the appropriate disposal location or treatment cell. • Groundwater samples have been collected from Lobes Y, L and X, and will be collected from Lobes P, J, Part 6 of SE Plume and main station excavation. AECOM to confirm disposal location for groundwater pumped from excavations. • IEG to confirm shipment of parts for groundwater treatment system. • EGT to continue hauling when conditions are suitable. • Stockpile results are expected by July 22. AECOM will continue to check with the laboratory as to the status of the results and the reason for such timely turnaround. • Reminded that detailed planning of Apron Area Northeast Plume Part 2 excavation will be needed to prevent unnecessary inflows of groundwater and river water. EGT not to begin excavation in this area until excavation methodology has been agreed upon between all parties. • Departmental Representative completed preliminary investigation of strong geophysical anomaly south of landfill A regrade. No debris was noted and permafrost was reached at 0.3m. Once the area is dryer, test pits should be advanced in the area to confirm preliminary findings. 	<p>AECOM</p> <p>EGT</p> <p>AECOM</p> <p>IEG</p> <p>AECOM</p> <p>EGT/IEG /AECOM</p> <p>AECOM/ EGT</p>
8.0	<p>Soil Treatment:</p> <ul style="list-style-type: none"> • Results from first allu treatment met disposal requirements (i.e. below 4570 ppm). IEG submitted detailed report to DR, which was approved. The soil was hauled from the treatment cell to the soil disposal location. • Treatment cell was at capacity with a second batch of soil requiring allu treatment by July 16. Second batch of allu treatment will be completed in time for samples to go out on July 21 charter flight. • Approval to use alternate disposal site was obtained. EGT reminded to use the alternate spot for wet soil that requires disposal. • AECOM to provide direction on height of current disposal location. To minimize the footprint of the current disposal location, AECOM recommends that the soil disposal site be built up. However, the disposal location should remain slightly lower than the top of the ridge to ensure that drainage is directed toward the west. 	<p>EGT/IEG</p> <p>EGT</p> <p>AECOM</p>

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Report of Meeting
 July 19, 2009
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
9.0	<p>Regrading/Backfilling:</p> <ul style="list-style-type: none"> • Once groundwater results are available, treatment requirements and a suitable disposal location will be determined. AECOM to inquire about the status of sump water results. • EGT reminded to keep regrade lifts to approximately 200 mm. • Only the dry material from the airstrip excavation is suitable to Landfill A regrade. Wet material should be disposed at the alternate disposal location at the upper site. • Geotech density tests to be performed after each lift. EGT to let DR know when the regrade is ready for inspection. Results for C and D indicate good compaction on the first lifts, whereas B requires additional compaction. 	<p>AECOM</p> <p>EGT</p> <p>EGT</p> <p>EGT</p>

Next meeting is scheduled for July 26, 2009.

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UMA Engineering Ltd.
 17007 107 Avenue
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Report of Meeting

Project Description: Environmental Site Remediation, Johnson Point, NWT.

File Number: 2977-371-00

For period ending: September 11, 2008 **Location:** EGT Construction Camp, Johnson Point

Recorded By: L. Slikker **Date:** September 11, 2008

Attendees: Jim Stevens, EGT
 Len Slikker, UMA
 Thomas Strachan, Medic

Distribution: Jim Stevens, EGT
 Brendon Norrie, UMA
 Dara Schmidt, UMA
 Len Slikker, UMA
 Brad Thompson, PWGSC
 Emma Pike, INAC
 Barry Fedorak, UMA

Item	Discussion	Action By
1.0	Health and Safety/ Fire/ Spills: <ul style="list-style-type: none"> • Medic reports no incidents in this time period. 	
2.0	Water and Land Use Permit Conditions <ul style="list-style-type: none"> • EGT has tested post-treatment grey water flowing from aeration/ UV treatment. • The grey water second set of sample results were not acceptable. Due to the high level of chlorine, approval has not been granted for discharge. • EGT has added an additional aeration tank next to the second holding pond. • EGT will fly in a quantity of Sodium Sulfite, a chlorine neutralizer, in order to lower the chlorine level in the second holding pond. • EGT will take a third set of samples after the Sodium Sulphite treatment. 	EGT

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Report of Meeting
 September 11, 2008
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
3.0	Contractor work plan for remainder of season: <ul style="list-style-type: none"> • Tidy up Borrow Area 3. • Continue construction of landfill regrades. Second lift on Lobe D has been compacted and next lift can be placed. Second lift on Lobe B has been placed, compacted and inspected, and next lift can be placed. Second lift on Lobe C is being placed and requires compaction. Temperatures are still favourable to do the above mentioned activities but this may quickly change. • Incineration of unpainted/ untreated wood. • Continue with Tank demolition until Friday afternoon, September 12, 2008. • Type 2 material hauling will continue for a short period of time, weather permitting. 	
4.0	Contractor Submittals: <ul style="list-style-type: none"> • EGT is to submit to Engineer and Owner information on the disposal methods/ location for demolition items. 	EGT
5.0	Barrel Testing / Processing and other:	
6.0	Survey: <ul style="list-style-type: none"> • Survey information has been forwarded to UMA. 	
7.0	Demo and Debris: <ul style="list-style-type: none"> • Paint samples for leachable lead testing needed additional cutting to smaller pieces. Samples have been submitted to lab. 	
8.0	Soil Excavations:	
9.0	Uluhaktok Type 1 Material: <ul style="list-style-type: none"> • EGT still hopeful that barge will bring Type 1 material from Uluhaktok to Johnson Point this season. Dependent on NTCL schedule and weather. 	

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Report of Meeting

Project Description: Environmental Site Remediation, Johnson Point, NWT.

File Number: 2977-371-00

For period ending: July 25, 2009 **Location:** EGT Construction Camp, Johnson Point

Recorded By: B. Norrie **Date:** July 26, 2009

Attendees: Jim Stevens, EGT
 Brendon Norrie, AECOM
 Priya Handa, AECOM
 Kairi Pawlick, AECOM
 Josh Foster, IEG
 Richard Gibson, EGT Surveyor

Distribution: Attendees
 Michael Bernardin, PWGSC
 Katherine Silcock, INAC
 Joel Gowman, INAC
 Barry Fedorak, AECOM

Item	Discussion	Action By
1.0	Health and Safety/ Fire/ Spills: <ul style="list-style-type: none"> • Medic reports no medical incidents since last meeting. 	
2.0	Water and Land Use Permit Conditions <ul style="list-style-type: none"> • Discharging of greywater from post-treatment pond continues using a stronger pump than used during the last discharge event. Level of greywater in pond is dropping. 	
3.0	Contractor Submittals: <ul style="list-style-type: none"> • Next progress claim will be for period ending July 31st. 	EGT

Report of Meeting
 July 25, 2009
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
4.0	<p>Survey:</p> <ul style="list-style-type: none"> Package of survey surfaces used for July 31 payment claim will be sent to Departmental Representative shortly, to enable confirmation of claimed volumes. Package will include surveyed surfaces for regrades B, C and D. These surfaces were paid last year based on estimates but EGT believes surveys will show additional volume to pay. The final depths of buried debris excavation have been completed and surveyed. Payments for hydrocarbon excavations will be claimed based on survey or estimations, depending on which excavation portions are at final depth. 	Surveyor/ IEG
5.0	<p>Barrel and Hazardous Waste Processing</p> <ul style="list-style-type: none"> Agreement in place between Diamonds North and EGT to use DN fuel barrels. The nav gas will be used to refuel charter planes, the diesel will be used for the incinerator or generator, and the propane and barrels that cannot be used will be shipped offsite. AECOM is provide EGT with a summary of disposal requirements for barrels once last of sample results is reserved from lab early in coming week. 	EGT AECOM
6.0	<p>Demo and Debris:</p> <ul style="list-style-type: none"> EGT reminded to provide completed waiver forms for sleigh camp, power poles and any significant salvaged timbers. Only untreated and unpainted timbers are available for salvage. EGT to discuss waiver requirements with PWGSC/ INAC personnel during site meeting on July 27th. Last pile of tank bedding sand formed yesterday. AECOM is to sample remaining piles and send samples to lab on July 27th flight. Leachable lead painted demolition material 90% packaged in lined marine shipping containers. Site crews waiting on EGT decision on final disposal location before sealing containers. If leachable and non-leachable painted materials are going to same disposal location then additional non-leachable painted material will also be placed in the containers prior to closure. 	EGT AECOM EGT
7.0	<p>Soil Excavations:</p> <ul style="list-style-type: none"> AECOM to discuss with PWGSC/INAC the potential to send more samples to lab on rush rather than standard turnaround. AECOM to sample ponded water in excavations and send samples on July 27th flight. Dealing the large volumes of water in excavations will be significant operation (once ground is dry enough to permit resumption of excavation work). EGT/ AECOM to discuss water discharge options/ limitations with INAC land use inspector. 	AECOM AECOM EGT/ AECOM

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Report of Meeting
July 25, 2009
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
8.0	Soil Treatment: <ul style="list-style-type: none">• Once ground is dry enough to permit hauling operations. Treated soil will be hauled to, and disposed of, at the second disposal location on ridge where potential for remobilisation of saturated material is lower.	
9.0	Regrading/Backfilling: <ul style="list-style-type: none">• Ground conditions are such that regrading/ backfilling operations are some way off.	

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Report of Meeting

Project Description: Environmental Site Remediation, Johnson Point, NWT.

File Number: 2977-371-00

For period ending: August 2, 2009 **Location:** EGT Construction Camp, Johnson Point

Recorded By: B. Norrie **Date:** August 2, 2009

Attendees: Jim Stevens, EGT
 Brendon Norrie, AECOM
 Katie Scott, AECOM
 Chris Kjarsgaard, AECOM
 Kurt Kure, IEG
 Richard Gibson, EGT Surveyor

Distribution: Attendees
 Michael Bernardin, PWGSC
 Katherine Silcock, INAC
 Joel Gowman, INAC
 Barry Fedorak, AECOM

Item	Discussion	Action By
1.0	Health and Safety/ Fire/ Spills: <ul style="list-style-type: none"> • Medic reports no medical accidents/ incidents since last meeting. • Medic has provided care to two EGT personnel with pre-existing health issues. Both persons to leave site on tomorrows flight for additional care. 	
2.0	Water and Land Use Permit Conditions <ul style="list-style-type: none"> • Water being pumped via 2" hose from Apron Area excavations to approved discharge location on tundra southwest of camp incinerator. Water discharged on top of plywood sheet to reduce erosion at discharge point. 	
3.0	Contractor Submittals: <ul style="list-style-type: none"> • Next progress claim to be submitted to AECOM today for review 	EGT
4.0	Survey: <ul style="list-style-type: none"> • NTR 	

Report of Meeting
 August 2, 2009
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
5.0	<p>Barrel and Hazardous Waste Processing</p> <ul style="list-style-type: none"> • Water in the two sumps/ dugouts in the main station has been tested with results that meet water licence discharge criteria. Sump walls can be breached and water discharged in controlled manner at the contractors convenience. • Battery components to be contained within liner Seacan for off-site shipping. • Inventory of on-site fuel barrels and latest INAC disposal comments to be provided to EGT by AECOM so barrel can be arranged and contents processed. • AECOM to sample the contents of barrels that were consolidated this week. 	<p>AECOM AECOM</p>
6.0	<p>Demo and Debris:</p> <ul style="list-style-type: none"> • Debris collection on-going. 	
7.0	<p>Soil Excavations:</p> <ul style="list-style-type: none"> • Field observations indicate hydrocarbon contamination at the beach end of the SW Plume extends to the north and possibly south. Excavation limits to be extended by AECOM where appropriate and testpit samples to be collected to delineate excavation boundary. • AECOM to sample last remaining Lobe P stockpile and airstrip excavation base/ walls for submission to lab on tomorrow's flight. • Base of west portion of Lobe Y and lobe J needs scraping to reach design depth and allow confirmatory sampling. EGT to conduct when water level drops. 	<p>AECOM AECOM EGT</p>
8.0	<p>Soil Treatment:</p> <ul style="list-style-type: none"> • Confirmatory sampling of Main station PHC excavation showed two exceedances. Lab instructed to test samples surrounding exceedances (samples already at lab as held samples). Material excavated from main station PHC excavation to be treated to below SSTL at treatment cell. 	
9.0	<p>Regrading/Backfilling:</p> <ul style="list-style-type: none"> • Treated soil disposal areas filling up. Disposing of all soil from the excavations within the footprint of the two disposal areas will likely create two hills that project more than 2m above other portions of the ridge top. AECOM to investigate possibility of delineating another soil disposal area. Potential areas include further along ridge towards Landfill Regrade D or SW of recon lobe N. • Agreement that excavation within airstrip to be backfilled with best Type 2 material available and compacted to 100% SPMDD. Remaining excavations can be backfilled with type 3 and trackpacked. 	<p>AECOM</p>

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Report of Meeting

Project Description: Environmental Site Remediation, Johnson Point, NWT.

File Number: 2977-371-00

For period ending: August 10, 2009 **Location:** EGT Construction Camp, Johnson Point

Recorded By: B. Fedorak **Date:** August 15, 2009

Attendees: Jim Stevens, EGT
 Barry Fedorak, AECOM
 Katie Scott, AECOM
 Chris Kjarsgaard, AECOM
 Kurt Kure, IEG
 Sam Bird, IEG
 Richard Gibson, EGT Surveyor

Distribution: Attendees
 Michael Bernardin, PWGSC
 Katherine Silcock, INAC
 Joel Gowman, INAC
 Brendon Norrie, AECOM

Item	Discussion	Action By
1.0	Health and Safety/ Fire/ Spills: <ul style="list-style-type: none"> Medic reports no medical accidents/ incidents since last meeting. 	
2.0	Water and Land Use Permit Conditions <ul style="list-style-type: none"> Water being pumped via 2" hose from Apron Area excavations to approved discharge location on tundra southwest of camp incinerator. Water discharged on top of plywood sheet to reduce erosion at discharge point. 	
3.0	Contractor Submittals: <ul style="list-style-type: none"> Next progress claim to be submitted in September for August work. 	EGT
4.0	Survey: <ul style="list-style-type: none"> Survey is up to date with Airstrip Excavations EGT to provide prelim survey for ponded excavations near Landfill A to be backfilled. 	EGT

PLEASE NOTE: If this report does not agree with your records of the meeting, or if there are any omissions, please advise, otherwise we will assume the contents to be correct.

Report of Meeting
 August 10, 2009
Site Remediation, Johnson Point, NWT

Item	Discussion	Action By
5.0	<p>Barrel and Hazardous Waste Processing</p> <ul style="list-style-type: none"> • Water in the two sumps / dugouts in the Main Station has been tested with results that meet water licence discharge criteria. Sump walls can be breached and water discharged in controlled manner at the contractor's convenience. • Battery components have been contained within lined Seacan for off-site shipping. • Inventory of on-site fuel barrels and latest INAC barrels from nearby island (estimated at 20 to 30 barrel, Joel Gowman to confirm) to be provided to EGT by AECOM so barrels can be arranged and contents processed. • AECOM to provide testing results of contents of barrels that were consolidated last week. 	<p>AECOM</p> <p>AECOM</p>
6.0	<p>Demo and Debris:</p> <ul style="list-style-type: none"> • No activities related to debris collection to report. 	
7.0	<p>Soil Excavations:</p> <ul style="list-style-type: none"> • Field observations indicate hydrocarbon contamination at the beach end of the SW Plume extends to the north and possibly south. Excavation limits to be extended by AECOM where appropriate and testpit samples to be collected to delineate excavation boundary. • AECOM sampled last remaining Lobe P stockpile and airstrip excavation base/ walls and sent on Sunday (August 9) plane. • West walls of Base of west portion of Lobe Y and lobe J have been excavated to design depth, sampled and samples sent out on Sunday (Aug 9) plane. 	<p>AECOM</p> <p>AECOM</p> <p>EGT</p>
8.0	<p>Soil Treatment:</p> <ul style="list-style-type: none"> • Secondary excavation completed within Main station PHC plume in two areas. Second round of confirmatory samples taken and submitted to lab on Sunday's (Aug. 9) plane. Material excavated from main station PHC excavation to be treated to below SSTL at treatment cell. 	
9.0	<p>Regrading/Backfilling:</p> <ul style="list-style-type: none"> • The first soil disposal area is full and there is to be no more soil taken to this area. All remaining airstrip area contaminated soils designated for disposal (below SSTL) are to be taken to the second disposal area. Disposing of all soil from the excavations within the footprint of the two disposal areas will likely create two hills that project more than 2m above other portions of the ridge top. • Excavation within airstrip to be backfilled with best Borrow B Material available and compacted to 100% SPMDD. Remaining excavations can be backfilled with type 3 and trackpacked. AECOM to monitor. 	<p>AECOM</p>

PLEASE NOTE: If this report does not agree with your records of the meeting, or if there are any omissions, please advise, otherwise we will assume the contents to be correct.

Report of Meeting

Project Name: Project Inter-Season Meeting, Johnson Point Site Remediation

File Number: 2977-371-00

Meeting Date: April 20-21, 2009 **Location:** E. Gruben's Transport Office, Inuvik, NWT

Recorded By: Brendon Norrie **Date:** May 4, 2009
Public Works and Government Services Canada (PWGSC)

Attendees:

- Brad Thompson..... Project Manager
- Michael Bernardin Interim Project Manager
- Indian and Northern Affairs Canada (INAC)
- Katherine Silcock..... Project Manager
- Joel Gowman Project Officer
- Jan Davies Environmental Regulator (present for first part of meeting)
- E. Gruben's Transport Limited (EGT)
- Russell Newmark..... Project Manager
- Jim Stevens..... Site Superintendent
- David Wells IEG Representative (present for part of meeting)
- AECOM.
- Barry Fedorak..... Project Manager
- Brendon Norrie Lead Resident Engineer

Distribution:

- Brad Thompson
- Michael Bernardin
- Katherine Silcock
- Joel Gowman
- Russell Newmark
- Jim Stevens
- Barry Fedorak
- Brendon Norrie

Item	Discussion	Action By
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Item	Discussion	Action By
1.	<p>Project Team Contact Details</p> <p>Owner Indian and Northern Affairs Canada Project Manager Katherine Silcock Contaminants and Remediation Directorate P.O. Box 1500 Yellowknife, NT X1A 2R3 Phone: (867) 669-2461 Fax: (867) 669-2721 E-mail: silcockk@inac-ainc.gc.ca</p> <p>Alternate Project Manager Joel Gowman Contaminants and Remediation Directorate P.O. Box 1500 Yellowknife, NT X1A 2R3 Phone: (867)669-2423 Fax: (867) 669-2721 Cell: (867)446-1838 Email: gowmanj@inac-ainc.gc.ca</p> <p>Water Resource Officer Jan Charles Davies Indian and Northern Affairs Canada North Mackenzie District P.O. Box 2100, Inuvik, NT X0E 0T0 Tel: (867) 777-3662 Fax: (867) 777-2090 Email: daviesj@inac-ainc.gc.ca</p> <p>Land Use Inspector Glenn Sorensen Resource Management Officer Indian and Northern Affairs Canada North Mackenzie District P.O. Box 2100, Inuvik, NT X0E 0T0 867-777-5909Tel 867-777-2090 Fax Email: SorensenG@inac-ainc.gc.ca</p> <p>Contracting Agency Public Works & Gov. Services Canada Project Manager Brad Thompson, P.Eng. 5th Floor, 10025 Jasper Avenue Edmonton, AB T5J 1S6 Phone: (780) 497-3862 Fax: (780) 497-3842 Cell: (780) 918-6277 E-mail; brad.thompson@pwgsc.gc.ca</p>	

Item	Discussion	Action By
	<p>Interim Project Manager..... Michael Bernardin 5th Floor, 10025 Jasper Avenue Edmonton, AB T5J 1S6 Phone: (780) 497-3853 Fax: (780) 497-3842 Cell: (780) 288-7148 Email: micheal.bernardin@pwgsc.gc.ca</p> <p>On-Site Representatives AECOM Project Manager Barry Fedorak 17007 - 107 Avenue Edmonton, AB T5S 1G3 Phone: (780) 930 0031 Fax: (780) 481 2934 Email: barry.fedorak@aecom.com</p> <p>Lead Resident Engineer..... Brendon Norrie 17007 - 107 Avenue Edmonton, AB T5S 1G3 Phone: (780) 930 0032 Fax: (780) 481 2934 Email: brendon.norrie@aecom.com</p> <p>General Contractor E. Gruben Transport Limited Project Manager Russell Newmark P.O. Box 177 Tuktoyaktuk, NT X0E 1C0 Phone: (867) 977-7008 Fax: (867) 977-7040 Cell: (867) 678-0040 Email: rnewmark@egrubens.com</p> <p>Site Superintendent Jim Stevens P.O. Box 177 Tuktoyaktuk, NT X0E 1C0 Phone: (867) 977-7000 Fax: (867) 977-7040 Cell: (867) 678-0033 Email: jstevens@egrubens.com</p> <p>IEG Representative David Wells Phone: (867)-777-8521 Cell: (867) -678-0644 Email: DWells@klohn.com</p>	
1.	<p>Introductions/ Review of Agenda</p> <p>Introduction of new staff to project; Katherine Silcock who is taking over from Emma Pike and Michael Bernardin who will be the interim project manager while Brad Thompson is on leave starting at the end of May 2009.</p>	

Item	Discussion	Action By
2.	<p>Environment, Health and Safety</p> <p>No significant Health and Safety or environmental issues / incidents occurred during the 2008 Season.</p> <p>EGT will continue to include Health and Safety issues in daily morning work briefing on site during the construction season with additional specific Health and Safety discussions with specialist crews (i.e. tank demo crews).</p> <p>Demolition crews may work 24 hours early in season (i.e. two crews shifts) with night time crews doing the more routine work that does not involve removal of panels, etc.</p>	

Item	Discussion	Action By
3.	<p>Review of 2008 Site Activities.</p> <p>The airstrip was extended to the south</p> <p>Tank demolition is approximately half completed with six of the twelve large tanks remaining to be dismantled.</p> <p>Environmental sampling and analysis was conducted and included a detailed delineation program for the Apron Area contaminated soil areas.</p> <p>Granular material borrow investigations were completed and AECOM has identified required quantities and prospective borrow areas for project requirements.</p> <p>Silt fence at the airstrip was removed at end of year.</p> <p>All non-leachable lead painted material was removed by barge and then transferred to NTCL operated barge which then took all material to Vancouver for disposal.</p> <p>2009 Plan</p> <p>It is likely that the same large barge from Vancouver will be brought to the arctic this season by NTCL and there is possibility that remaining demo material could shipped with this barge to the Vancouver area for recycling / disposal.</p> <p>The GNWT has fuel currently in tanks in Tuktoyaktuk. There is a possibility that early in the season this fuel could be transported to Uluhaktuk for the community resupply with a barge that could backhaul the Type 1 material at Uluhaktuk to Johnson Point.</p> <p>EGT plans to move the Type 1 material to site in one trip using two or possibly three barges. Quantity survey of the Type 1 material could be undertaken on the barge rather than stockpiling on site which could involve double handling.</p> <p>Diamonds North is not likely to be on site until later in the season or possibly not at all. The agreement between EGT and Diamonds North for last season will also be used this season. EGT requires two weeks notice prior to mobilization of Diamonds North to site. A teleconference is needed between Diamonds North and EGT to renew the existing agreement and conditions.</p>	<p>PWGSC/ EGT/ Diamonds North</p>

Item	Discussion	Action By
4.	<p>Regulatory Issues</p> <p>The flow in the river during 2008 was sufficient to allow the water intake to be located near the camp. EGT indicated that there is some flex pipe on site if intake needs to be moved upstream.</p> <p>An additional post treatment holding pond will be constructed on the south side of the road immediately upon arrival to site this season as existing pond is nearly full and is not yet approved for discharge.</p> <p>Testing of the greywater in 2008 showed exceedances for chlorine and no origin or source has been, as yet, identified. It was agreed that the natural chlorine content of up stream river water should be tested to determine if it is the source of the high chlorine content in greywater. IEG to test on site.</p> <p>If chlorine hold times can not be met, then field test kits could be possibly be used if the water licence analyst agrees. Currently the analyst has approved only the use of the IEG nominated lab and their stated hold times.</p> <p>The initial water licence application did not include addition of chlorine neutralising chemical as a treatment process and hence a modification to the water licence is needed. The INAC Water Resources Officer (Jan Davies) recommends that a modification application (including the MSDS for the chemical) be made as soon as possible. EGT to submit chemical details to INAC for application</p> <p>AECOM to check EBA raw water analysis for chlorine. <i>The existing analytical data was checked and no chlorine values were reported.</i></p> <p>An application to modify the quarry permit is required due to the changes in the regrade design and the updated information on borrow volumes available. AECOM to provide INAC with a table showing existing and required borrow requirements to support the quarry permit application.</p> <p>EGT and PWGSC agreed that if greater than 2000 m3 of Type 1 material is needed for regrades and that material is available from the material being barged from Uluhaktuk, PWGSC will pay for the material over 2000m3 at the existing m3 rate.</p> <p>Treated hydrocarbon soil is to be disposed of in a location greater than 100m from fish-bearing waters and greater than 30m from a drainage course. PWGSC, INAC and EGT will work together to select locations for the treatment area and final disposal area for the excavated hydrocarbon soil. These locations are to be presented to the Land Use Inspector for approval.</p> <p>New regulations for fuel storage tanks on Federal Government Projects require tanks to be inspected, certified by an Engineer and identified for an inventory with a unique Environment Canada number and label. These new regulations would apply to EGT tanks at Johnson Point. Currently, the tanks are full of fuel and unavailable to be inspected and numbered. PWGSC/ INAC are to make inquires to Environment Canada as to the best course of action. Further clarification on this issue to be sought by INAC and communicated to EGT.</p>	<p>IEG</p> <p>EGT</p> <p>AECOM</p> <p>PWGSC/ INAC/EGT</p> <p>PWGSC/ INAC/EGT</p>

Item	Discussion	Action By
5.	<p>Remediation Design</p> <p>EGT accepts design changes for landfill regrades as proposed by AECOM in Nov 2008 letter.</p> <p>Based on results of 2008 environmental sampling by AECOM and IEG, the identified boundaries of the Apron Area and Main station hydrocarbon soil excavations differ from those given in the tender drawings.</p> <p>AECOM is to produce new construction drawings showing the landfill regrade redesigns and hydrocarbon soil excavation boundaries.</p>	AECOM
6.	<p>Soil and Groundwater Treatment</p> <p>Further sampling within the PHC excavations will be conducted in early 2009 season by AECOM with the machine auger to further delineate the depth of excavation. IEG will also use these holes to gather samples of the groundwater.</p> <p>The volume of groundwater to treat is still an unknown. EGT stated that they are not interested in treating more water than necessary.</p> <p>EGT to provide a summary work plan detailing the general sequence of apron area excavations, how soil and groundwater treatment activities will be integrated and any changes from the soil and groundwater treatment plans submitted last year.</p> <p>General EGT methodology will be to excavate hot areas first, minimise the generation of water and excavated in checkerboard pattern, leaving berms between distinct excavations.</p> <p>EGT does not anticipate any problems with the treatment of soil by allu bucket in available timeframe.</p> <p>The proposed soil treatment area, subject to approval by the Land Use Inspector, is on a ridge between landfill regrades C and D.</p> <p>EGT indicates that the Main station hydrocarbon soils excavation will be undertaken prior to Apron area excavation.</p> <p>EGT advises that the Apron area debris excavations will proceed before hydrocarbon soil excavations.</p> <p>EGT indicates that the activated carbon groundwater treatment system is on site and the charcoal for the system is still required.</p>	AECOM EGT
7.	<p>Community Meetings</p> <p>EGT advises that the Community meeting in Sachs Harbour is planned for around the 15th of June. PWGSC is unable to attend.</p> <p>EGT indicates that Community meetings in Sachs Harbour and Uluhaktuk planned for the fall.</p>	

Item	Discussion	Action By
8.	<p>Schedule Review</p> <p>EGT is planning the mobilization to site to occur on or about June 20.</p> <p>The barge with Type 1 material is expected to be on site around the end of July</p> <p>EGT anticipate completion of all works in 2009 and demobilization in mid-September.</p>	

Weekly Site Report

(For Period Ending Saturday, August 10, 2008)

Project:

INAC Clean Up Project
Johnson Point, NWT

UMA File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3862 Cell: (780) 918-6277 Fax: (780) 497-3842</p>
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To: Barry Fedorak
Firm: UMA Engineering Ltd.
Fax: (780) 486-7070
Date: August 10, 2007

Page 1 of 6

From: Brendon Norrie
C.C.: Len Slicker, Brad Thompson, Emma Pike

1.0 WEATHER

	MON	TUES	WED	THURS	FRI	SAT	SUN				
Date						August 9	August 10				
Temp						Approx 7 °C	Approx 7 °C				
Conditions	Resident not on site					Overcast in morning, clearing in afternoon	Overcast,				
Ceiling						250-500m	250-500m				
Visibility						20 km+	Increasing through day to 30km				
Precip						None	None				
Wind						Light	None				
Wildlife						Small herd of Musk ox to SW.					
Other											

2.0 Health and Safety

- First daily safety meeting held morning of August 10th. Safety issues to be brought up and discussed every morning at 8am job briefing.
- No safety incidents reported since crew arrived on site.
- Medic setting up first aid station. Medical oxygen tanks not located yet.
- Radios issued to crew and Departmental Representative.
- Dedicated Wildlife Monitor due on next flight from Sachs Harbour. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 7.8 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.
- Work began Saturday on construction of greywater storage and treatment sumps/ lagoons. Until first sump is constructed, greywater is being stored in an aeration tank.

Spills and Authorized Releases

- No reported fuel spills or authorized liquid releases occurred this week.

4.0 FLIGHTS AND BARGE VISITS

- Tug and barges from Tuktoyaktuk landed late on Tuesday August 5th with camp, equipment and some EGT crew. All equipment and materials were off loaded in 30 hrs. Barge then left for Holman with Type 1 Material processing equipment.
- Twin Otter flight landed on Thursday, August 7th, delivering Medic and more equipment operators.
- Twin Otter flight, operated by Aklak Air, landed at 3pm on Saturday August 9th, delivering Site Superintendent, UMA Resident Engineer, Communication Tech, camp cook and kitchen hand/ housekeeper.

5.0 Camp Operations

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.

6.0 WORK ACTIVITIES

- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Work day starts with a job and safety briefing. There is no night shift currently operating.

Access Road/ Airstrip

- Roads are all functioning and passable to all vehicles with exception of area adjacent to Airstrip. Off loading of equipment and camp from barge and movement of demolition items to the airstrip resulted in extensive rutting of ground where road meets airstrip. EGT using low ground pressure equipment and trying to avoid rutted area.
- Airstrip is dry and has been dragged to level small irregularities. Washouts are still present and will be filled when quarry permit is obtained to allow for extraction of borrow material.

General

- Ground in both low and high areas of the site is soft with a higher soil moisture content than anticipated. Crew reported several days of rain prior to August 9th resulting in saturated low lying areas of the site near the airstrip. Noticeable drying has occurred during the last two days of dryer weather. Subsidence cracking and small erosion gullies were observed across the site indicating generally erosive conditions.
- Communication links operational on Sunday afternoon.

Demolition

- EGT crew busy moving demolition items and large debris pieces to the western side of the airstrip in preparation for loading onto the Barge. Virtually all moderate to large items, except wooden sheds and large bolt-together tanks, have been moved to the airstrip.
- Camp units have been separated from orange painted Nodwell chassis's.

Debris Collection

- Large pieces of debris (e.g. loading ramps, sleigh equipment) have been moved to staging area next to Airstrip.
- No collection of small debris items has yet been undertaken

Barrels

- Barrels processed and crushed during previous remediation efforts at Johnson Point are consolidated adjacent to the airstrip.

Excavations

- No excavation took place this week

Hazardous Materials

- Leachable lead painted items have been identified and separated from non-leachable lead components

Borrow

- No borrow areas developed this week.
- All identified borrow areas (and all ground in general) is soft, with higher moisture content than anticipated. EGT may implement drainage works this season to allow areas to dry out prior to borrow development next season.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Loading non-hazardous demolition and debris material onto barge for return trip and off-loading at Tuktoyaktuk. Barge is expected on site from Holman early morning Monday August 11th.
- Finish constructing greywater holding and treatment system
- Road improvements including adjusting road alignment adjacent to airstrip to avoid soft and wet areas.
- Assessing potential borrow areas
- Removal of asbestos from items to be loaded on barge.
- Surveyor and David Wells (IEG) are scheduled to arrive on site on Thursday August 14th to begin laying out contaminated soil excavations and soil sampling.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted.

9.0 PERSONNEL ON SITE

List of personnel on site as of Sunday evening August 10th.

UMA Personnel			
Brendon Norrie - Departmental Representative			
E. Gruben's Transport			
Jim Stevens – Site Superintendent	Dusty Carrothers - Mechanic	Mel Weber - Operator	Mike Sharpe – Communications Tech
Ryan Clowe - Operator	Mike Cobiell - Operator	Ray Clermont – Camp Specialist	Larry Pituka - Carpenter
Joe Bob Panaktalok	Lee John Panaktalok	Freddy Voudrach	
Camp			
Thomas Strachan - Medic	Molly Umouk- Chief Cook	Marilyn Gardlund – Kitchen/ Attendant	
Wildlife Monitors			

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
2	JCB 722 Rock Trucks	Idle
1	CAT 322C Excavator	Moving Demolition items
1	Hitachi EX200 Excavator with Allu bucket	Idle
1	CAT 14G Grader	Idle
1	Small Komatsu D31PX Dozer	Road repair and construction of Greywater holding/ treatment system
1	CAT D6 Dozer	Used to push over tall fuel tanks
1	CAT 1108 Loader	Moving Demolition items
1	CAT 950 Loader	Idle
3	Ford 350 double cab trucks	Used to transport EGT Personnel.
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
1	John Deere Gator XUV 4X4	Used by UMA Representative
	ATVs and Trailers	Idle
1	Delta Commander	Moving Demolition items
1	CAT TL1055 Telehandler	Moving Demolition items
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Idle
1	Aluminum boat	Idle
1	Autocar HL30TC70 Truck with crane	Moving Demolition items
1	Kenworth Flat bed, roll off truck with winch	Moving Demolition items

SUBMITTED BY:

Brendon Norrie



Departmental Representative
 UMA Engineering Ltd.
Brendon.norrie@uma.aecom.com

Date: August 10, 2008

Weekly Site Report

(For Period Ending Saturday Evening, June 27, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak
Firm: AECOM Canada Ltd.
Site Phone: (403) 450-9929
Date: June 28, 2009
Page 1 of 6
From: Brendon Norrie
C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	MON	TUES	WED	THURS	FRI	SAT
Date	June 22	June 23	June 24	June 25	June 26	June 27
Temp	AECOM personnel not on site		Warm	Warm	Warm	Cool
Conditions			Mostly Clear	Mostly clear	Partly cloudy	Mostly clear
Ceiling			200m- unlimited (increasing during day)	Unlimited	200 increasing to 500m	Unlimited
Visibility			15km to unlimited	Unlimited	Unlimited	Unlimited
Precip			None	Light in evening	None	None
Wind			None	Moderate	Very light	Moderate from NNE
Wildlife			Some migrating birds passing through			
Other	Channel ice cracked but not broken up					

2.0 Health and Safety

- Safety issues brought up and discussed every morning at 8am job briefing.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Medic reports no incidents or accidents during week.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 54.7 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

- River and post-treatment lagoon sampled and tested for chlorine by contractor prior to AECOM arriving on site. Laboratory results received at beginning of week show residual chlorine in river source water to be higher than both post treatment greywater and water license discharge criteria. Results show residual chlorine levels in post-treatment lagoon to be lower than Water license criteria.
- Permission given on Tuesday by Glen Sorenson (Water/ Land use inspector) via email to discharge the treated greywater currently in the lagoon. Contractor plans to discharge greywater next week when ground in discharge location has had time to dry further. There is sufficient capacity in settling lagoon and treatment system for interim storage.
- As part of airstrip repairs, silt fencing was erected along the beach where airstrip washout exists.

Spills and Authorized Discharges (Clause 1e of Water License).

- No spills occurred this week

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m3 per day)	Quantity of all waste discharged (m3)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-

4.0 FLIGHTS AND BARGE VISITS

- Twin Otter flight landed in late afternoon of Wednesday, June 24th, delivering AECOM Departmental Representative and Environmental Inspector, two laborers and one equipment operator
- No barge visits to site this week.

5.0 Camp Operations

- All grey-water plumbing up and running by June 25th.
- Phones/wireless internet operational by June 25th.
- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Swamp mats placed as walkways around camp buildings.
- Snow clearing operations continue around camp.
- Medic has all necessary medial supplies on site.

6.0 WORK ACTIVITIES

- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Work day starts with a job and safety briefing. There is no night shift currently operating.

Access Road/ Airstrip

- Snow clearing efforts continued throughout week. All snow has either melted or been removed from work areas, roads and airstrip. Snow drifts remain between camp buildings.
- Roads are all functioning and passable to all vehicles. A shallow ditch was excavated adjacent to the road through apron area to facilitate drainage. Culverts beneath roads are flowing and entirely functional.
- Airstrip is dry and has been graded and dragged to level small irregularities. Previously filled washout near southern end of airstrip has washed out again this spring. Contractor modified washout into ditch to drain large areas of melt water forming on west side of runway. Silt curtain erected to filter sediment from washout drainage flowing to ocean.

General

- Ground has dried over the course of the week, particularly in high and sandy areas of the site. Low areas of the site are still soft and wet, particularly the low ground to the east and north of the camp, adjacent to the river.
- In general, the site is dryer than when operations commenced in 2008..

Demolition

- Beginning on June 25th, crews continued working on dismantling one of the largest POL tanks (Tank 14) at the Tank Farm. The three largest tanks have two rings of pie-shaped pieces on the top, as opposed to the one ring found on smaller tanks. The three larger tanks also have different arrangements of bolts that are more difficult to remove. Compared with the smaller tanks, the tops of the larger tanks require the more frequent use of the grinders/ cut off saws to remove the bolts.

Debris Collection

- No debris collection activities conducted this week

Excavations

- No excavation took place this week

Contaminated Soil Treatment

- On June 26th and 27th, an approximately 28m x 24m soil treatment area was established within Borrow Area 4. Using the Komatsu bulldozer, material from within the treatment area footprint was pushed up to form berms approximately 0.4m high. A 30m x 35m hydrocarbon-resistant liner is on site and will be placed when hydrocarbon soil excavation operations commence.

Earthworks

- Complete and partially complete landfill regrades show no signs of significant erosion. Compacted material is firm and dry except for regrade toes where material is still wet and soft.

Barrels/ Hazardous Materials

- Environmental Inspector inspected and sampled contents of barrels in the Haz waste storage area. Samples to be sent out on plane due Monday.

- Contractor has steam cleaner on site but no barrel wash frame/ rack.

Borrow

- No borrow material extracted during the week.
- 2008 borrow pit still too wet to access and extract material from.

7.0 SCHEDULE

The contractor’s plan for the coming week includes:

- Staking out and excavation of Apron Area Contaminated soils beginning with buried debris area excavation.
- Discharging of greywater currently in post-treatment holding pond.
- Continue demolition of Tanks in Tank Farm
- Road improvements
- Chris Kjarsgaard (AECOM), Kurt Kure (EGT), a surveyor and personnel from IEG are scheduled to arrive on site on Monday June 29th.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening August 16th.

AECOM Personnel			
Brendon Norrie - Departmental Representative		Dara Schmidt – Environmental Inspector	
E. Gruben's Transport – work crew			
Jim Stevens – Site Superintendent	Dusty Carrothers - Mechanic	Mel Weber - Operator	Freddy Voudrach - Operator
Simon Adam - Operator	Lee John Panaktalok - Labour	Joe Bob Panaktalok - Labour	George Voudrach - Labour
Murray Elias - Labour			
E. Gruben's Transport - Camp staff			
Thomas Strachan - Medic	Molly Klehgenberg- Chief Cook	Marilyn Gardlund – Kitchen/ Attendant	Stanley Cockney – Camp maintenance
E. Gruben's Transport - Wildlife Monitors			
Trevor Lucas			

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Dragging airstrip when required
1	CAT 322C Excavator	Idle
1	Hitachi EX200 Excavator	Created ditch at south end of airstrip to facilitate drainage.
1	CAT 14G Grader	Grading airstrip when required
1	Small Komatsu D31PX Dozer	Construction of Hydrocarbon contaminated soil treatment area.
1	CAT D6 Dozer	Idle
1	CAT 1108 Loader	Assisting with tank demolition operations and dragging station area.
1	CAT 950 Loader	Idle
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel.
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM Reps
4	ATVs and Trailers	One used by Wildlife monitor
1	CAT TL1055 Telehandler	Assisting with tank demolition operations
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Idle
1	Aluminum boat	Idle

SUBMITTED BY:

Brendon Norrie



Departmental Representative
AECOM Canada Ltd.
brendon.norrie@.aecom.com

Date: June 28, 2009

Weekly Site Report

(For Period Ending Saturday, August 16, 2008)

Project:

INAC Clean Up Project
Johnson Point, NWT

UMA File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3862 Cell: (780) 918-6277 Fax: (780) 497-3842</p>
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To: Barry Fedorak
Firm: UMA Engineering Ltd.
Site Phone: (403) 450-1387
Date: August 17, 2008

Page 1 of 8

From: Brendon Norrie
C.C.: Len Slikker, Brad Thompson, Emma Pike

1.0 WEATHER

	MON	TUES	WED	THURS	FRI	SAT
Date	August 11	August 12	August 13	August 14	August 15	August 16
Temp	Cool	Cool	Cool	Warm	Cool	Cool
Conditions	Overcast	Overcast	Overcast clearing to fine	Clear, fine	Overcast	Overcast
Ceiling	500-1000m	500-1000m	200m-unlimited (increasing during day)	Unlimited	200 increasing to 500m	250m
Visibility	20 km+	20 km+	15km to unlimited	Unlimited	10 km to 20 km	5 km to 15 km
Precip	Overnight rain	None	None	None	Overnight dew	Periodic rain
Wind	Light from west	Light from west	None	Very light from SE	light from SE	Mod strong from west
Wildlife	Small herd of Musk ox to W. Arctic fox around camp.					
Other						

2.0 Health and Safety

- Safety issues brought up and discussed every morning at 8am job briefing.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arriving on site.
- Medic reports no incidents or accidents during week.
- Awaiting medical oxygen tanks from Tuk.
- Dedicated Wildlife Monitor on site (from Sachs Harbour). Gun and bear deterrents on site and available (Bangers and screamers).
- Two workers fit-tested as part of asbestos work prep.
- WSCC asbestos remediation approval received August 14th,

3.0 Water and Land Use Permit Conditions

- Approximately 4.5 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.
- Work continued on construction of greywater storage and treatment cells/ lagoons east of the camp. Ground at proposed treatment location was too close to site groundwater level to construct sumps by excavation. Berms for the initial settling pond (28,700L; 10.3*6.2*0.45m) were instead created using timbers and borrow material. The pond was lined with Enviroliner 4030, with a layer of geotextile placed below the liner to cushion against damage to the liner. From this initial settling pond, greywater is pumped into the aeration tank. Borrow material was also placed and spread to create a level pad for construction of the post aeration cells/ lagoons.
- As part of airstrip repairs, silt fence erected along the beach where airstrip washout exits.

Clause	1a	1b	1c
Description	Quantity of Fresh Water obtained from all sources (not to exceed 20m3 per day)	Quantity of all waste discharged (m3)	Location and direction of flow of discharges
9 August 08	7.8 m ³		
16 August 08	4.5 m ³		

Spills and Authorized Discharges (Clause 1e of Water License).

- 25-50L of greywater leaked from fitting between two sections of hose. Leak was located approximately 10m from the aeration tank and greywater was contained within immediately adjacent natural depression.

4.0 FLIGHTS AND BARGE VISITS

- Tug and three barges returning from Uluhaktok from Tuktoyaktuk landed at 8am August 11. Tug and barges left site at 7:30 pm with demolition items, excess equipment and three EGT staff (Communication tech and two equipment operators).
- Twin Otter flight landed on Thursday, August 14th, delivering Surveyor, Wildlife Monitor and Camp Maintenance person. Carpenter and Camp set up person left on flight.
- Dave Mitchell (UMA) inspected Uluhaktok Type 1 material operation between Thursday August 14th and Saturday August 16th (flying on commercial flights). Relieved by Chris Keeley (UMA) on Saturday.
- Ken Borak Twin Otter from Polar Continental Shelf Project (Resolute Bay) landed twice on August 11th. First landing to drop off fuel cache and second for refueling after collecting scientists at the north end of Banks Island.

5.0 Camp Operations

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Swamp mats placed as walkways around camp buildings.
- Geotechnical lab supplies (oven, trays etc) still in Inuvik/ Tuk.

6.0 WORK ACTIVITIES

- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Work day starts with a job and safety briefing. There is no night shift currently operating.

Access Road/ Airstrip

- Roads are all functioning and passable to all vehicles. Ruts in area adjacent to Airstrip have been dragged but ground remains wet and somewhat rutted. EGT using low ground pressure equipment and avoiding rutted area.
- Airstrip is dry and has been dragged to level small irregularities. Type 2 and 3 material from Borrow Area 3 used to fill washouts and shallow swales across Airstrip.

General

- Ground has dried over the course of the week, particularly in high and sandy areas of the site. Low areas of the site are still soft and wet.

Demolition

- Following removal of demolition items by barge, crew began consolidating and moving remaining demo and debris items from the apron area to the area between camp and tankfarm.
- Mechanic removing wheels from Nodwell chasses.
- Metal portion of the NAVAID was removed from its wooden platform foundation and dismantled. Light ballasts removed and bagged as Haz material.
- Burn bin positioned south of tank farm. Untreated/ unpainted wood being plied in bin ready for incineration.
- Demolition items removed by barge and placed in Horizons North Yard in Tuktoyaktuk include:
 - The three Apron area Nodwel Camp units
 - All "ATCO" type trailers
 - The Camp portion of all other Nodwell camp units
 - Nodwell generator unit
 - Nearly all tanks less than 20,000 L
 - Nearly all tanks between 20,000 and 300,000 L
 - Unpainted sleds and sled components
 - Bulldozer
 - Most Nodwell tracks
 - Large ramp structure from the Upper Camp Area
 - Small unpainted wooden buildings
 - Old incinerator

Debris Collection

- Debris in Apron Area being moved and placed between camp and tankfarm. Potentially hazardous debris placed in material processing area.

Barrels

- Barrels processed and crushed during previous remediation efforts at Johnson Point loaded in old sled for off site transport.
- Existing viable fuel cashes moved to a location further south along airstrip.
- Contractor has steam cleaner on site but no barrel wash frame/ rack.
- Inspection shows some barrels with product to process prior to washing/ crushing including:
 - Six INAC/ DIAND 2000 barrels of aviation fuel – Full
 - 15 INAC 2000-2005 barrels of Jet A/ B fuel – 10 to 30% Full
 - 1 GNWT SACHS barrel of Jet B – 60% full
 - 2 unmarked barrels of fuel – Full
 - 2 unmarked barrels of fuel – 10 – 20% fuel and water mix
 - Approx 10 empty fuel barrels – empty but likely need washing

Excavations

- No excavation took place this week

Hazardous Materials

- Material processing area established between camp and tankfarm, on north side of road. Area was leveled and swampmats placed. Swampmats covered with poly and berms constructed on each swampmat with sandbags.
- Asbestos containing wall board section removed from small sleigh unit. Asbestos wrapped and placed in hazardous material processing area.
- Leachable lead painted items have been identified and separated from non-leachable lead components
- Full barrel of unidentified, potentially hazardous chemical found within pile of debris. Substance is green and yellow powder that turns greenish blue on contact with water. Highly staining. Staining and free powder found on ground around barrel. Barrel placed in Hazardous material processing area along with stained surface soil.
- Memo issued concerning positive asbestos test found in Phase III Environmental Site Assessment report (linoleum in Apron Area Nodwell camp units).
- Certification records provided by contractor for six on the Marine shipping containers on site.

Borrow

- Most identified borrow areas (and ground in general) are soft, with higher moisture content than anticipated. EGT likely to implement drainage works this season to allow borrow areas 4 and 6 to dry out prior to borrow development next season.
- Borrow Area 3 developed and material extracted for use as fill on airstrip and road repairs, and as leveling and berm material at the greywater treatment system. This borrow area looks very promising as a source of Type 2 material. An upper brown silty sand layer (6-8") is underlain by dry, brownish grey fine to coarse sand with trace silt. Permafrost at approximately 0.6m (max).
- Borrow Areas 5 and 8 are very wet, low lying or hummocky and silty. Unlikely that either of these two areas will be used. Material from BA 3 is actually being brought into BA 8 as fill for the greywater system.
- Much of Borrow Area 7 is currently occupied by Diamonds North camp facilities. Most of the rest of this area is hummocky, poorly draining ground with high silt content. It is unlikely that much material will be removed from this area.
- Extraction volumes specified on 2008 quarry permit will need to be revised for the 2009 permit to reflect actual site conditions. Volumes specified in 2008 permit should be sufficient for 2008 season work.
- UMA inspection of Uluhaktok Type 1 material source has following comments:
 - Source is frost shattered shale bedrock.
 - Gap graded natural deposit (fine gravels and large boulders, few cobbles and large gravel clasts).
 - Material is platy
 - Not much point in selectively excavating courser areas. Faster and more efficient method of obtaining desired material would be to process more and remove fine material.
 - Suggested that contractor think of installing 4" screen as well as 2 and 6" screens to help increase percentage of courser material.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Consolidation of hazardous debris in the hazardous material processing area between Camp and the tankfarm.
- Removal of debris and demolition items from the Apron Area buried Debris and Contaminated soil excavation areas to allow sampling.
- Finish constructing greywater holding and treatment system
- Continue demolition of Nodwell chassies
- Road improvements
- Assessing potential borrow areas

- David Wells (IEG), Dara Schmidt (UMA), Len Slicker (UMA) and more labour crew members are scheduled to arrive on site on Monday August 18th to begin contaminated soil sampling.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening August 16th.

UMA Personnel			
Brendon Norrie - Departmental Representative			
E. Gruben's Transport			
Jim Stevens – Site Superintendent	Keith Cox - Surveyor	Dusty Carrothers - Mechanic	Mel Weber - Operator
Joe Bob Panaktalok - Labour	Lee John Panaktalok - Labour	Freddy Voudrach - operator	
Camp			
Thomas Strachan - Medic	Molly Klehgenberg- Chief Cook	Marilyn Gardlund – Kitchen/ Attendant	Stanley Cockney – Camp maintenance
Wildlife Monitors			
Trevor Lucas			

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling borrow material
1	CAT 322C Excavator	Assisting in construction of Greywater treatment cells
1	Hitachi EX200 Excavator	Excavating material from Borrow Area 3
1	CAT 14G Grader	Idle
1	Small Komatsu D31PX Dozer	Road/ airstrip repair and construction of Greywater holding/ treatment system
1	CAT D6 Dozer	Idle
1	CAT 1108 Loader	Moving Demolition items and dragging airstrip and roads
1	CAT 950 Loader	Used by Mechanic
2	Ford 350 double cab trucks	Used to transport EGT Personnel.
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by UMA Rep and Surveyor
4	ATVs and Trailers	One used by Wildlife monitor
1	CAT TL1055 Telehandler	Moving Demolition items
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Idle
1	Aluminum boat	Idle
1	Delta Commander	Removed from site on Barge
1	Autocar HL30TC70 Truck with crane	Removed from site on Barge
1	Kenworth Flat bed, roll off truck with winch	Removed from site on Barge

SUBMITTED BY:

Brendon Norrie



Departmental Representative
 UMA Engineering Ltd.
Brendon.norrie@uma.aecom.com

Date: August 16, 2008

Weekly Site Report

(For Period Ending Saturday, July 4, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak
Firm: AECOM Canada Ltd.
Site Phone: (403) 450-9929
Date: July 5, 2009
Page 1 of 8
From: Brendon Norrie
C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	June 28	June 29	June 30	July 1	July 2	July 3	July 4
Temp	Cool	Cool	Cool	Warm	Warm	Warm	Cold
Conditions	Overcast	Mostly clear	Mostly clear	Clearing throughout day	Overcast clearing to clear	Clear	Overcast
Ceiling	1000m	1000m+	2000m+	1000m to unlimited	500m to unlimited	Unlimited	100-200m
Visibility	15km	20km+	20km+	20km+	15km	Unlimited	10-15km
Precip	Rain in evening	Nil	Nil	Nil	Nil	Nil	Scattered light showers
Wind	Moderate from NW	Moderate from NW	Moderate from NW	Very light from west	Still	Still	Moderate from NW
Wildlife	Some migrating birds passing through, Seals on ice in channel, Musk ox inland						
Other	Large parts of channel now ice-free						

2.0 Health and Safety

- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Medic reports no incidents or accidents during week.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 46.7 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- Approximately 20L of fatty water spilled from the kitchen grease/ fat trap onto the surrounding ground. Caused by backlog of water in pipe from trap to sump due to sump being gradually pushed out of ground by water pressure. Problem corrected by cutting side of sump to reinstate positive drainage. Spilled liquid collected in low ground immediately around trap and, once hardened, the fat was collected and disposed of in camp incinerator.
- On June 30th, the contractor began discharging greywater from the post-treatment pond using a 1" hose and submersible pump. The discharge location is approximately 40m SW of the camp incinerator location. As of Saturday evening, approximately two thirds of the greywater in the pond had been discharged. Discharged water percolating into soil prior to reaching water courses.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8		
1-Jul-09	15.1		
4-Jul-09	15.8		
June 30-July 4	-	109	8075210N 450885E. Flow towards SE.

4.0 FLIGHTS AND BARGE VISITS

- Turboprop equipped DC3 operated by AKLAK air landed on site at approximately 5:30pm on June 29th. EGT laborers and equipment operator and second wildlife monitor arrived on the flight along with surveyor, EGT hazmat specialist and AECOM geotechnical inspector. Flight left at approx 7:20pm. Russell Newmark (EGT) toured site while DC3 was unloading and left on flight out.
- No barge visits to site this week.
- Two F-18 fighter jets flew over site on June 28th.

5.0 Camp Operations

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Swamp mats placed as walkways around camp buildings.
- Snow drifts still exist between camp buildings but all other snow on site has melted.
- Medic has all necessary medial supplies on site.

6.0 WORK ACTIVITIES

General

- Ground has continued to dry over the course of the week, particularly in high and sandy areas of the site. Low areas of the site are still soft and wet, particularly the low ground to the east and north of the camp, adjacent to the river.
- In general, the site is drier than when operations commenced in 2008.
- Mechanic constructed loading ramp to enable unloading of Type 1 material when barge from Uluhaktok arrives.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Work day starts with a job and safety briefing.
- Night shift crew arrived on June 29th flight and began partial night shift that night. Full night shift began June 30th.

Access Road/ Airstrip

- 6" culvert installed in portion of washout/ ditch at southern end of airstrip to facilitate access to borrow pit.
- Roads are all functioning and passable to all vehicles. A shallow ditch was excavated adjacent to the road through apron area to facilitate drainage. Culverts beneath roads are flowing and entirely functional.
- Airstrip is dry and in good condition. Dragged prior to aircraft arrival.

Demolition

- Day and night shift crews continued working on dismantling one of the largest POL tanks (Tank 14) at the Tank Farm. The three largest tanks have two rings of pie-shaped pieces on the top, as opposed to the one ring found on smaller tanks. The three larger tanks also have different arrangements of bolts that are more difficult to remove. Compared with the smaller tanks, the tops of the larger tanks (and Tank 14 in particular) require the more frequent use of the grinders/ cut off saws to remove the bolts.
- Night shift crews concentrate on partially unbolting tank sections so use of heavy equipment is minimized during night. Day shift finishes unbolting and removing sections.
- Top and upper ring of Tank 14 removed by Saturday evening. Night shift has unbolted significant portions of the top sections of Tanks 15, 16 and 19.
- Contractor proposed to Departmental Representative and PWGSC that orange painted Nodwell chasses be packaged as non-hazardous waste, lead painted waste rather than as Hazardous waste as called for in specifications and RAP. Existing Leachable lead tests support classification as non-hazardous waste.
- Contractor reminded that waivers needed for demolition items salvaged by contractor, including wood timbers and small sleigh camp used by mechanic.

Debris Collection

- Minor debris collection activities conducted this week.

Excavations

- Buried debris excavations began on July 2nd with the excavation of **Lobe P** at the Apron area. The base of excavation was constrained by the permafrost at between 0.65 and 0.9m depth. Excavated soil (brown silt) was stockpiled on adjacent excavation areas for sampling. Debris within Lobe P comprised camp waste including kitchen utensils, pots, cans, plastic tarpaulins and miscellaneous steel. Most was contained within a small (1m x 2.5m) burn pit. Further excavation of the burn pit areas is needed following thawing. Minor fuel filter and battery components were encountered and separated. The majority of this area overlaps into the PHC excavation area. Once the depth of PHC excavation is met, confirmatory sampling for PHCs will be conducted. A sampling program of the stockpiles excavated from Lobe P will be completed as per the Protocol.
- Buried debris **lobe L** was excavated on July 3rd and 4th. Only debris found consisted of an empty, dry, 5" steel pipe, buried approximately 0.4 m below surface, aligned NW-SW and appearing to extend across the airstrip. The pipe was cut at the SE edge of the excavation rather than continue to trench across, and compromise, the airstrip. There was no evidence of contamination in the southeastern portion of the excavation and therefore testing of stockpile samples in this area is not deemed necessary. The portion of the excavation outside the area of hydrocarbon impacted soil was backfilled on July 4th following survey. Hydrocarbon sheen was noted on groundwater in the western portion of the excavation. No hazardous materials were encountered.
- Buried debris **lobe K** was excavated to permafrost (0.75m depth) on July 4th. Only one piece of debris (steel approximately the size of a truck bumper) was encountered in the excavation. No hazardous materials, hydrocarbon staining or odours were encountered. Excavation stockpiles were sampled, but will be placed on hold. There is no evidence of contamination in this excavation and therefore testing of samples is not deemed necessary. Contractor has been cleared to replace the soil in the excavation.
- Buried debris **lobe J** was excavated to permafrost (between 0.5 and 0.70m depth) on July 4th. Two pieces of rebar and approximately 20m of wire were encountered in the excavation. Strong hydrocarbon odour and staining was noted in portions of the excavation. No hazardous materials were encountered. Most of the soil in this Lobe requires hydrocarbon treatment. Sampling of the stockpiles for other parameters such as metals and PCBs is not deemed necessary with the extremely limited volume of non-hazardous debris excavated.
- The course of the Unnamed River has changed since last season due to heavy freshet. The river now flows through the most northeastern part of the NW plume and has eroded approximately 70m² of excavation area.

Contaminated Soil Treatment

- Starting on July 1st, the contractor constructed the berms of the soil treatment cell. To reduce the potential for unnecessary water build-up, the treatment cell liner will be placed immediately prior to placement of hydrocarbon contaminated soil.
- No soil treatment operations were conducted this week.

Earthworks

- No earthwork operations conducted this week.

Barrels/ Hazardous Materials

- Environmental Inspector completed sampling contents of barrels in the Haz waste storage area. The samples were sent from site on the July 2 (Thursday) flight.

Borrow

- Development of existing borrow pit within Borrow Area # 3 began June 28 and continued throughout week. A 4" culvert installed in borrow area to facilitate access while still allowing drainage.

Survey

- Surveyor completed natural ground survey of Apron and Station soil excavation areas. Survey files and notes forwarded to Departmental Representative.
- Apron and Station Area excavation limits were staked out during the week.
- Surveys completed on final buried debris excavation surfaces of Lobes L, J and K. Lobe P requires further excavation prior to survey.
- Natural ground survey of landfill A lobe A regrade completed.
- Placed material volume surveys of landfill regrades B, C and D completed.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Continuing demolition of Tank Farm tanks.
- Continue excavation of hydrocarbon impacted soil. Soils requiring treatment to be hauled to the treatment cell. Once cell is full the soils already below SSTL will be hauled and placed in hydrocarbon soil disposal area on the west side of the ridge.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Brendon Norrie - Departmental Representative		Dara Schmidt – Environmental Inspector	
Chris Kjarsgaard – Geotechnical Inspector			
E. Gruben's Transport – work crew			
Jim Stevens – Site Superintendent	Dusty Carrothers - Mechanic	Kurt Kure – Hazmat Specialist	Keith Cox - Surveyor
Simon Adam - Operator	Freddy Voudrach - Operator	Mel Weber - Operator	Eddie Lucas - Operator
Murray Elias - Labour	George Voudrach - Labour	Joe Bob Panaktalok - Labour	Lee John Panaktalok - Labour
Josh Teddy - Labour	Shaun Green - Labour		
E. Gruben's Transport - Camp staff			
Thomas Strachan - Medic	Molly Klehgenberg- Chief Cook	Marilyn Gardlund – Kitchen/ Attendant	Stanley Cockney – Camp maintenance
Ricky Tumma – Cooks Assistant			
E. Gruben's Transport - Wildlife Monitors			
Trevor Lucas	Robert Avik		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling excavated soil to stockpile areas
1	CAT 322C Excavator	Excavating buried debris areas
1	Hitachi EX200 Excavator	Excavating buried debris areas and developing borrow area.
1	CAT 14G Grader	Grading airstrip when required
1	Small Komatsu D31PX Dozer	Developing borrow area
1	CAT D6 Dozer	Idle
1	CAT 1108 Loader	Assisting with tank demolition operations and dragging station area.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM personnel
4	ATVs and Trailers	One used by Wildlife monitor
1	CAT TL1055 Telehandler	Assisting with tank demolition operations
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Idle. Double front wheels added to one truck by mechanic.
1	Aluminum boat	Idle

SUBMITTED BY:

Brendon Norrie



Departmental Representative
AECOM Canada Ltd.
brendon.norrie@.aecom.com

Date July 5th, 2009

Weekly Site Report

(For Period Ending Saturday, August 23, 2008)

Project:

INAC Clean Up Project
Johnson Point, NWT

UMA File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3862 Cell: (780) 918-6277 Fax: (780) 497-3842</p>
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To: Barry Fedorak
Firm: UMA Engineering Ltd.
Site Phone: (403) 450-1387
Date: August 23, 2008

Page 1 of 8

From: Brendon Norrie/ Len Slikker
C.C.: Brad Thompson, Emma Pike, Dara Schmidt

1.0 Weather

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	August 17	August 18	August 19	August 20	August 21	August 22	August 23
Temp	Cool	Cold	Cool	Cold	Cool	Cool	Cool
Conditions	Partly cloudy	Partly cloudy	Partly cloudy	Overcast	Overcast	Overcast	Overcast
Ceiling	500m	500m	1000m	700m	500-1000m	500-1000m	500m
Visibility	20km	20km	30km	25km	15 - 30km	30km	20km
Precip	Periodic snow	Overnight snow, periodic light snow through day	none	Rain in afternoon	Periodic light rain, clearing in afternoon	Periodic light rain	None
Wind	Light from NE	Mod from west	Light from west	Light from west	Still	Light from west	Light from west
Wildlife	Arctic fox seen around camp. Two Arctic Wolves (male and female) approached camp and airstrip from north but left again after being approached by wildlife monitor and crew in pick up.						
Other							

2.0 Health and Safety

- Safety issues brought up and discussed every morning at 8am job briefing.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arriving on site.
- Medic reports two minor incidents resulting in personnel requiring medical attention, one abrasion and one for pre existing back pain.
- Two small oxygen tanks on site. One further large tank on its way
- Dedicated Wildlife Monitor on site (from Sachs Harbour). Gun and bear deterrents on site and available (Bangers and screamers).
- Medic to check that all vehicles on site now have small first aid kits, fire extinguishers and spill kits.
- Some, but not all required fuel/ oil drip trays on site.
- Ground to air radio established and working

- Last two fire extinguishers required on site are scheduled to come to site on next flight.
- List of MSDS sheets available on site in Site Superintendents office.
- Specific safety briefing given by Site Superintendent to crew scheduled to work on tank demolition. Safety harnesses fitted and issues discussed.
- Incident involving Dara Schmidt occurred on August 21st. UMA incident reporting has been completed. Incident involved Environmental Inspector photographing and sampling contents of a barrel stored at the main station for the purpose of identification. When the barrel was opened there was fine dust released. Although PPE was being utilized, as it was being removed, some of the dust came into contact with the inspector's eyes. Immediate first aid attention was sought, and an eye wash station was used to flush the product out of the eye. No further medical attention was required and there was no time lost due to the incident.

3.0 Water and Land Use Permit Conditions

- Approximately 4.0 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.
- Work continued on construction of greywater storage and treatment cells/ lagoons east of the camp. Ground at proposed treatment location was too close to site groundwater level to construct sumps by excavation. The first post- aeration pond (13.0m x 21.0m x 0.35m) was constructed with berms created from imported borrow material. The pond was lined with Enviroliner 4030, with a layer of geotextile placed below the liner to cushion against damage to the liner.
- Damage noted in both rolls of Enviroliner scheduled for use as liners on the two post-treatment ponds. Damage to one was along edge and was avoided by altering the location of the berm so damaged portion was outer edge of berm. The extent of damage to the second liner has yet to be determined.
- As part of airstrip repairs, silt fence erected along the beach where airstrip washout exits.

Clause	1a	1b	1c
Description	Quantity of Fresh Water obtained from all sources (not to exceed 20m3 per day)	Quantity of all waste discharged (m3)	Location and direction of flow of discharges
9 August 08	7.8 m ³		
16 August 08	4.5 m ³		
22 August 08	4.0 m ³		

Spills and Authorized Discharges (Clause 1e of Water License).

- 1 - 5L of oil residue spilt from two previously crushed barrels at the Apron Area during consolidation of debris. Absorbent pads used to soak up oil. Location of spill within NE Apron Area PHC excavation.

4.0 FLIGHTS AND BARGE VISITS

- Ken Borak Twin Otter flight landed on Monday, August 18th, delivering two UMA personnel, IEG person, two laborers, one equipment operator and groceries.
- Ken Borak Beach 99 landed on August 19th to deliver more groceries and supplies. Plane became stuck at far north end of airstrip during taxiing.

- Ken Borak Twin Otter flight landed on Thursday, August 21th, delivering one IEG person, one AOGS person, groceries and mechanical parts. Brendon Norrie (UMA) left site on flight.

5.0 Camp Operations

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Swamp mats placed as walkways around camp buildings.
- Geotechnical lab supplies (oven, trays etc) still in Inuvik/ Tuk.

6.0 WORK ACTIVITIES

- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Work day starts with a job and safety briefing. There is no night shift currently operating.

Access Road/ Airstrip

- Roads are all functioning and passable to all vehicles. Ruts in area adjacent to Airstrip have been dragged but ground remains wet and somewhat rutted. EGT using low ground pressure equipment and avoiding rutted area.
- Airstrip is dry and has been dragged to level small irregularities. Type 2 and 3 material from Borrow Area 3 used to fill washouts and shallow swales across Airstrip. Approximately 5000 feet of airstrip now operational.

General

- Ground has dried over the course of the week, particularly in high and sandy areas of the site. Low areas of the site are still soft and wet.

Demolition

- Crew completed consolidation and transportation of remaining demo and debris items from the apron area to the area between camp and tankfarm.
- Mechanic removing wheels from Nodwell chasses.
- Untreated/ unpainted wood being plied in and around bin ready for incineration. Burn bin volume measured at approx 8.5m³ but likely 10m³ when filled above top of bin.
- Crew began demolition of large bolted tanks in Tankfarm. Two crew members in full body harnesses are lowered to roof and high walls of tank using a manbasket on the end of the Telehandler. Crew removing bolts using air impact wrenches, hammers, grinder and cut off saw, starting with the roof sections. Once unbolted, plate sections are removed from tank using the 966 loader with a 'stinger' pole attachment. Removed sheets are palletized.
- Tank demo crew completed demo of one tank by the end of the week.
- Berms surrounding tank farm knocked down and dragged smooth by dozer and loader.

Debris Collection

- Debris in Apron Area consolidated and packaged for removal. Packaged loads organized along airstrip. Debris that requires cutting etc moved to mechanics area near tankfarm. Potentially hazardous debris placed in material processing area between camp and tankfarm.
- Crew on ATVs with trailers collecting debris from mid and upper site areas

Barrels

- Barrels processed and crushed during previous remediation efforts at Johnson Point were loaded in old sled for off site transport.
- Contractor has steam cleaner on site but no barrel wash frame/ rack.

Excavations

- Surveyor staked out perimeter of Apron Area, Main Station PHC excavations and mid station re-grade.
- IEG began sampling of hydrocarbon excavations at Apron Area using 8" auger attached to the Hitachi Excavator. An auger hole progressed at each location staked by surveyor to, or slightly into permafrost (ranging from approximately 0.8m to 1.8 mbgs). Stakes placed at every intersection of 10 m grid lines oriented N-S and E-W, as well as in the center of each 10 m x 10 m square. A total of approx 378 stakes placed in the two excavations. At each location IEG collected two jars and one bag sample from the auger. Bagged samples taken from each auger hole were tested for headspace vapor readings using a mini-Ray Photo-ionization Detector (PID). IEG will be submitting the highest readings from every 100 m² sampling area for laboratory analysis of Total Petroleum Hydrocarbons (TPH). UMA has been provided with one duplicate sample jar for each test hole. PID measurement readings are currently still ongoing. 20% duplications will be submitted for laboratory analysis upon confirmation from IEG as to which samples had the highest levels of volatile field readings.
- No excavation took place this week.

Hazardous Materials

- Debris propane gas stacked and banded together in skid along side airstrip, ready for on site transport. Valves open to vent remaining gas
- Leachable lead paint samples taken, packaged and sent to lab for the following demo items:
 - Orange painted wood from shed
 - Black painted metal from Nodwell camp chassis
 - Orange painted metal from NAVAID
 - White painted metal from NAVAID

Borrow

- Borrow Area 3 developed and material extracted for use as fill on airstrip and road repairs, and as leveling and berm material at the greywater treatment system. This borrow area looks very promising as a source of Type 2 material. An upper brown silty sand layer (6-8") is underlain by dry, brownish grey fine to course sand with trace silt. Permafrost at approximately 0.6m (max).
- No other borrow sources used this week.
- Extraction volumes specified on 2008 quarry permit will need to be revised for the 2009 permit to reflect actual site conditions. Volumes specified in 2008 permit should be sufficient for 2008 season work.
- Production of Type 1 material at Uluhaktok completed on August 21, 2008: Five representative samples of produced Type 1 material (fraction below 200mm) taken and submitted for gradation analysis. UMA Geotechnical inspection on site in Uluhaktok measured/ estimated Type 1 material size fractions above 200mm.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Finish constructing greywater holding and treatment system
- Continue demolition of Nodwell chassies
- Assessing potential borrow areas
- Incineration of unpainted/ untreated wood.
- Completion of hydrocarbon soil excavation augering/ sampling.
- Continue with Tank demolition.
- Testpitting for depth and perimeter delineation at the Apron Area excavations.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening August 23, 2008.

UMA Personnel			
Len Slikker - Departmental Representative		Dara Schmidt – Environmental Inspector	
E. Gruben's Transport Personnel			
Jim Stevens – Site Superintendent	Keith Cox - Surveyor	Dusty Carrothers - Mechanic	Mel Weber - Operator
Joe Bob Panaktalok - Labour	Lee John Panaktalok - Labour	Freddy Voudrach - Operator	Angus Kikoak - Operator
Josh Teddy - Labour	Murray Elias - Labour		
IEG Personnel			
David Wells – Soils Characterization	Jared Peterson - Soils Characterization		
Camp			
Thomas Strachan - Medic	Molly Klengenber- Chief Cook	Marilyn Gardlund – Kitchen/ Attendant	Stanley Cockney – Camp maintenance
Wildlife Monitors			
Trevor Lucas			

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling borrow material
1	CAT 322C Excavator	Assisting in construction of Greywater treatment cells and excavating borrow material from BA 3.
1	Hitachi EX200 Excavator	Excavating material from Borrow Area 3 and augering IEG test holes
1	CAT 14G Grader	Idle
1	Small Komatsu D31PX Dozer	Road/ airstrip repair and construction of Greywater holding/ treatment system
1	CAT D6 Dozer	Idle
1	CAT 966 Loader	Moving Demolition items and dragging airstrip and roads
1	CAT 950 Loader	Used by Mechanic
2	Ford 350 double cab trucks	Used to transport EGT Personnel.
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by UMA Reps and Surveyor
4	ATVs and Trailers	Used by Wildlife monitor and debris crew
1	CAT TL1055 Telehandler	Tank demolition and moving demo items
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Idle
1	Aluminum boat	Idle
1	Kenworth Flat bed, roll off truck with winch	Idle

SUBMITTED BY:

Len Slikker

Departmental Representative
 UMA Engineering Ltd.
 Len.slikker@uma.aecom.com

Date: August 23, 2008

Weekly Site Report

(For Period Ending Saturday, July 11, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak

Firm: AECOM Canada Ltd.

Site Phone: (403) 450-9929

Date: July 11, 2009

Page 1 of 8

From: Greg Wright

C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	June 5	June 6	June 7	July 8	July 9	July 10	July 11
Temp	Cold	Cool	Cold	Cold	Cool	Cool	Cold
Conditions	Overcast	Overcast	Overcast	Overcast	Overcast	Cloudy	Partly Cloudy
Ceiling	200-500m	100m	200-500m	200-500m	500m	<500m	>1000m
Visibility	Up to 10 km	5km	Up to 10 km	Up to 10 km	15km +	Up to 3km	20+ km
Precip	Nil	Light snow flurries	Light rain and snow	Light rain and snow	None	Wet snow and rain	None
Wind	Still	Light from West	Moderate from NW	Moderate from West	Still	Moderate from West	Moderate to Strong from WNW
Wildlife	Some migrating birds (loons, king eider ducks, gulls, etc), seals on ice in channel, musk ox inland						
Other	Large parts of the Prince of Wales Straight is ice-free, however it is still closed off south of the site. Flow in unnamed river is decreasing steadily (smaller channels closing, islands appearing, etc).						

2.0 Health and Safety

- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Medic reports no incidents or accidents during week.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 24.7 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- Discharging of greywater from the post-treatment pond, begun last week was completed in the early morning of July 9th.
- Post-treatment pond was refilled with treated greywater on July 9th and sampled by both the Contractor and Departmental Representative.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8		
1-Jul-09	15.1		
4-Jul-09	15.8		
7-Jul-09	14.1		
10-Jul-09	10.6		
June 30-July 9	-	95 m ³	Correction; Last weeks report overestimated the volume of greywater discharged. Total of 95m ³ discharged between June 30 and July 9.

4.0 FLIGHTS AND BARGE VISITS

- Bandit operated by AKLAK air landed on site at approximately 5:30pm on July 7th. AECOM Departmental Representative relief arrived on flight. Flight left at approx 7:20pm.
- Bandit operated by AKLAK air landed on site at approximately 5:30pm on July 9th. Replacement camp staff and additional equipment operator arrived on flight.
- No barge visits to site this week.

5.0 Camp Operations

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Swamp mats placed as walkways around camp buildings.
- Minor snow and ice still exist between camp buildings but all other snow on site has melted.
- Medic has all necessary medial supplies on site.

6.0 WORK ACTIVITIES

General

- Until Friday July 10th, most work areas of the site were dry. However, a fairly substantial wet snow and rain event occurred on Friday that caused a temporary halt to hauling contaminated soil from the airstrip to the upper ridge site. Over the course of Saturday afternoon and evening, the haul road dried out relatively well and was dragged to prepare for hauling to recommence.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Work day starts with a job and safety briefing.
- Night shift continued to work on the tank demolition.

Access Road/ Airstrip

- Up until Friday (July 10th) the roads were all functioning and passable to all vehicles; however, a steady amount of wet snow and rain fell during the early hours on Friday morning and continued throughout the day. Consequently, hauling of contaminated soil from the airstrip to the upper site (treatment cell or soil disposal site) was halted. The rock truck and gravel trucks remained stationary for the remainder of the work week.
- Site roads were dragged on July 11, which reduced damage to the site roads from the continued use of regular trucks and John Deere Gators.
- Vehicle traffic on the airstrip itself was minimized. Therefore the airstrip remains in good condition.

Demolition

- Tank demolition continues with both day and night shift crews.
- Bedding sand was discovered between the fuel bladder and the tank base in Tanks 14 and 16. It appears that all the remaining tanks will have varying thicknesses of this bedding sand. The bedding sand has been removed from both Tanks 14 and 16 using a squeegee-like attachment on the excavator bucket, and stockpiled adjacent to each of the tank locations. Samples of the bedding sand have been submitted for laboratory analysis so that disposal requirements can be determined. A significant hydrocarbon odour was noted in the bedding sand within Tank 16.
- Demolition of warehouse building was temporarily put on hold due to Snow Buntings nesting within the building. According to an external reference the birds typically leave the nest within 17 days, and these birds were already hatched when they were discovered on July 10th. The demolition of the warehouse will be put on hold until the nest is vacated.

Debris Collection

- Minor debris collection activities conducted this week.

Excavations

- Buried debris **Recon 1 Lobe N** was excavated on July 5th to the permafrost depth of 0.7m. Debris recovered was minimal and consisted of domestic garbage. No hazardous materials were encountered and no debris or staining was evident at depths below 0.7m. Soil excavated from areas with debris was stockpiled separately to non-debris soil. Following survey, the non-debris soil was backfilled into the excavation on July 9th.

- Buried debris **Recon 1 Lobe M** was excavated on July 5th to the permafrost depth of 0.7m. No debris or staining was encountered in the excavation. Following survey, the excavated soil was backfilled into the excavation on July 9th.
- Beginning on July 5th, the portions of the Apron Area excavations with hydrocarbon concentrations above the site specific target level of 4579 mg/ kg were excavated. **Lobe X** was excavated first on July 5th, followed by **Lobe Y** on July 6th. The excavation activities conducted on July 5th and 6th in **Lobe X** and **Lobe Y** were limited by permafrost at a depth of 0.7 m. Also, excavation of **Lobe Y** was limited to the east half of the lobe as the current haul road is located on top of the west half of **Lobe Y**. The excavated soil was loaded and hauled by rock truck to the treatment cell. A heavy hydrocarbon odour and staining was noted in both excavations. The excavations were left open to thaw throughout the week.
- Excavation of portions of **SW Plume Part 1** and **Part 2**, where hydrocarbon levels are below SSTL in the SW Plume, began on July 5th and carried on throughout the week.
- Buried debris **Lobe J** was excavated on July 4th to the permafrost depth of 0.5 to 0.7 m. Debris was limited to two pieces of rebar and approximately 20 m of wire.
- Buried debris **Lobe K** was excavated on July 4th to a depth of 0.75 m. Approximately six items of metal debris were removed from the excavation. The debris soil stockpile was sampled on July 4th and the excavation was backfilled on July 7th.
- Buried debris **Lobe L** was excavated on July 3rd to a depth between 0.7 to 0.9 m. Debris encountered during the excavation of the eastern half of the excavation (portion that extends beyond the PHC co-contaminated soil) was limited to a 6" pipe. The pipe was located one foot below ground surface and appears to extend horizontally below the airstrip. The pipe was cut off and left in place since excavation of the dry/rusty pipe and inherent damage to the airstrip does not outweigh the potential environmental risks associated with leaving the pipe in place. The eastern half of **Lobe L** was sampled and backfilled on July 3rd. The west portion of **Lobe L**, which is co-contaminated with PHC soil, was excavated and stockpiled adjacent to the excavation and samples were collected on July 3rd. Additionally, at a depth of approximately 0.8 m there was free water in gravels and a slight hydrocarbon sheen visible on the water surface. Contact water samples were also collected and submitted to determine treatment and disposal requirements.
- Excavation of buried debris **Lobe P** commenced on July 2nd and progressed to permafrost at 0.7 m depth. Excavated soil was stockpiled in windrows on the PHC contaminated soil area to the east. Initial debris recovered was limited to minor amount of sheet metal and domestic debris (cans, pans, forks, plates, etc). A newspaper removed from the debris was dated January 30th, 1980. Further excavation of **Lobe P** was conducted after July 9th in the pockets where debris was still visible and two main debris pits and several other shallow pits were discovered. The main debris pits were located approximately 3 m northwest of BH-117 and in the direct vicinity of BH-116. Based on field observations, the main pits extend to approximately 2.5 m below original grade. Debris included bed frames, a compressed gas cylinder (previously punctured), burnt timbers and plywood, partial barrels, oil filters, damaged batteries, pipe, wire, tarpaulin, scrap metal and other domestic waste. Sorting of the debris was done within the excavation area. The debris was placed on the south side of the excavation and the soil was placed on the PHC contaminated soil area north of the excavation. The snow/rain event on July 10th and thawing that occurred during the week left the base of the excavation saturated. Consequently the excavator spent the better part of July 11th attempting to clean the base of the excavation. The debris excavation within **Lobe P** will continue next week.
- Departmental Representative and Environmental Inspector investigated a geophysical anomaly identified in the 2005 Komex geophysical investigation which was not shown in the EBA phase III

assessment or RAP. Test holes were advanced in several locations (to a maximum depth of 0.3 m due to permafrost) however no buried debris was encountered. When Landfill A is being regraded, AECOM will complete testpits using the excavator to further investigate the anomaly. It may be that the anomaly is actually caused by surface debris (partial barrels) in the vicinity.

Contaminated Soil Treatment

- The hydrocarbon treatment liner was unrolled and placed on July 5th. Excavated soil requiring treatment was placed in cell and alluvial operations commenced at 3pm that day. To reduce the potential for damage, the initial soil placed in the cell was spread as a protective layer approximately 0.3m thick across the whole cell. Soil placed subsequently was alluded into windrows lengthwise within the cell.
- By July 9th the cell was at capacity with three windrows of alluded soil. The volume of soil within each windrow varied between 250 and 350 m³.
- IEG sampled the initial windrow of soil on July 9th. Results of this IEG sampling were not available at the time of reporting.
- Apron Area excavated soil below the SSTL was hauled and placed on the west side of the ridge road for disposal. The approximate soil disposal location is 8076075N 450275E. Material was spread and track packed by the D6 dozer.

Earthworks

- No earthwork operations conducted this week.

Barrels/ Hazardous Materials

- Environmental Inspector completed sampling contents of barrels in the Haz waste storage area.

Borrow

- Proctor compaction tests were completed on Type 2 material collected from Borrow Area B and Area C. Memo detailing results to follow.

Survey

- Survey was conducted on buried debris Lobe P; however due to weather constraints Lobe P requires further excavation prior to completing the survey.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Continuing demolition of Tank Farm tanks.
- Complete excavation of buried debris Lobe P.
- Continue excavation of hydrocarbon impacted soil. Soils requiring treatment to be hauled to the treatment cell as soil proven treated is taken off the cell. Soils already below SSTL will be hauled and placed in hydrocarbon soil disposal area on the west side of the ridge.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Greg Wright - Departmental Representative		Dara Schmidt – Environmental Inspector	
Chris Kjarsgaard – Geotechnical Inspector			
E. Gruben's Transport – work crew			
Jim Stevens – Site Superintendent	Kurt Kure – Hazmat Specialist	Josh Foster – Hazmat/PHC Specialist	Keith Cox - Surveyor
Dusty Carrothers - Mechanic	Simon Adam - Operator	Freddy Voudrach - Operator	Mel Weber - Operator
Jason McLoughlin - Operator	Doug Roland - Operator	Jed Stefure - Operator	Lee John Panaktalok - Labour
Josh Teddy – Labour	Steven Rufus – Labour	Logan Gruben – Labour	Alan Jacobson – Labour
Kenny Anikina – Labour	Murray Elias – Crew Leader	Nelson Lay – Labour	Shaun Green – Labour
Eddie Lucas - Operator	–		
E. Gruben's Transport - Camp staff			
Susan Eaton - Medic	John Bernhardt- Chief Cook	Irene Wolki – Kitchen/ Attendant	Stanley Cockney – Camp maintenance
Ricky Tumma – Cooks Assistant			
E. Gruben's Transport - Wildlife Monitors			
Trevor Lucas	Mason Kimiksana		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling excavated soil
1	CAT 322C Excavator	Excavating buried debris areas
1	Hitachi EX200 Excavator	Alluving soil and collecting bedding sand
1	CAT 14G Grader	Grading airstrip and road when required
1	Small Komatsu D31PX Dozer	Regrading backfilled excavations
1	CAT D6 Dozer	Regrading soil disposal site
1	CAT 1108 Loader	Assisting with tank demolition operations and dragging station area.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM personnel
4	ATVs and Trailers	Used by Wildlife monitor and camp staff
1	CAT TL1055 Telehandler	Assisting with tank demolition operations
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Idle
1	Aluminum boat	Idle

SUBMITTED BY:

Greg Wright



Departmental Representative
AECOM Canada Ltd.
Greg.wright@aecom.com
Date July 11th, 2009

Weekly Site Report #4

(For Period Ending Saturday, August 30, 2008)

Project:

INAC Clean Up Project
Johnson Point, NWT

UMA File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3862 Cell: (780) 918-6277 Fax: (780) 497-3842</p>
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To: Barry Fedorak

Firm: UMA Engineering Ltd.

Site Phone: (403) 450-1387

Date: August 30, 2008

Page 1 of 7

From: Len Slikker

C.C.: Brad Thompson, Emma Pike, Brendon Norrie, Dara Schmidt,

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	August 24	August 25	August 26	August 27	August 28	August 29	August 30
Temp	Cool	Cool	Cold	Cold	Cool	Cold	Cool
Conditions	Partly cloudy	Clear	Partly cloudy	Clear	Partly cloudy	Partly cloudy	Partly cloudy
Ceiling	100-500m	Unlimited	Unlimited	Unlimited	100-500m	500-1000m	500-1000m
Visibility	20km	30km	30km	30km	10km	10km	10km
Precip	None	None	none	Fog early morning, no precip	Overnight light snow	Overnight light snow, rain in morning	Overnight rain
Wind	Light from west	Mod from east	Brisk from north	Brisk from north	Light from north	Mod from north	Brisk from north
Wildlife	Arctic fox seen around camp. Three polar bears seen on the ice in Prince of Wales Strait. Polar bears were observed by wildlife monitor till they disappeared from the area. Several warning shots were fired by wildlife monitor. Wolf sighting and seals in Strait.						
Other							

2.0 Health and Safety

- Safety issues brought up and discussed every morning at 8 am job briefing.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arriving on site.
- Medic reports one incident resulting in person requiring medical attention, eye wash station was utilized; no additional medical attention was required.
- Dedicated Wildlife Monitor on site (from Sachs Harbour). Gun and bear deterrents on site and available (Bangers and screamers). Additional wildlife monitor arrived on site August 27, 2008.
- All vehicles on site now have small first aid kits, fire extinguishers and spill kits.
- Most, but not all required fuel/ oil drip trays on site.
- List of Material Safety Data Sheets (MSDS) available on site in Site Superintendent's office.
- Specific safety issues reviewed and discussed daily by Site Superintendent to crew scheduled to work on tank demolition.

3.0 Water and Land Use Permit Conditions

- Approximately 34.4 m³ of water was pumped from the unnamed river this week for use as non-potable camp water. Note revised fresh water volumes due to reassessment of storage tank volumes.
- According to Land Use Inspector, if additional grey water storage pond is required, it should be constructed opposite second pond and across the road.

Clause	1a	1b	1c
Description	Quantity of Fresh Water obtained from all sources (not to exceed 20m3 per day)	Quantity of all waste discharged (m3)	Location and direction of flow of discharges
9 August 08	7.8 m ³		
13 August 08	8.8 m ³		
16 August 08	8.8 m ³		
18 August 08	17.6 m ³		
22 August 08	15.8 m ³		
25 August 08	17.2 m ³		
28 August 08	17.2 m ³		

4.0 FLIGHTS AND BARGE VISITS

- Ken Borak Beech 99 flight landed on Sunday, August 24th, delivering one INAC person; one EGT material specialist; parts and groceries.
- Ken Borak Beech 99 flight landed on Wednesday, August 27th, delivering one PWGSC person; one INAC person; one EGT manager; one additional wildlife monitor; groceries; and supplies. PWGSC, INAC and one EGT personnel left on same flight.
- No Barge visits occurred during this time period.

5.0 Camp Operations

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Geotechnical lab supplies (oven, trays etc) have arrived onsite.
- Grey water samples taken from second holding pond and shipped to lab. No results have been received to date.
- Grey water discharge location proposed by EGT to Land Use Inspector. Inspector to communicate location to Water Board for approval.

6.0 WORK ACTIVITIES

- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Each work day starts with a job and safety briefing. There is no night shift currently operating.

Access Road/ Airstrip

- Roads are all functioning and passable to all vehicles. Ruts in area adjacent to Airstrip are being dragged but ground remains wet and somewhat rutted. EGT continues to use low ground pressure equipment and avoiding rutted areas.
- Airstrip is dry and has been dragged to level small irregularities.
- Airstrip is operational and no complaints have been voiced by Aklak Air / Ken Borak about runway conditions.

General

- Ground has dried over the course of the week, particularly in high and sandy areas of the site. Low areas of the site are still soft and wet.
- First light snow arrived August 28, 2008.

Demolition

- Untreated/ unpainted wood being piled in and around bin ready for incineration. Burn bin volume measured at approx 10m³ when filled above top of bin. A total of 9 burn bin loads have been incinerated so far.
- Majority of site work consists of the bolt-together Tank demolition. Crews continue to demolish large bolted tanks at Tankfarm. Two crew members in full body harnesses are lowered to roof and high walls of tank using a manbasket on the end of the Telehandler. Crew removing bolts using air impact wrenches, hammers, grinder and cut off saw, starting with the roof sections. Once unbolted, plate sections are removed from tank using the 966 loader with a 'stinger' pole attachment. Removed sheets are palletized.
- Tank demo crew completed demo of Tank 2 last week, this week demolished Tank 1, 3 and 50% of Tank 5. Tank demo crew started to demolish Tank 4.
- Nav-Aid timber base removed and hauled to burn bin area. Timber foundation poles were pulled from the ground.

Debris Collection

- Misc. piping cut, banded together and hauled to airstrip staging area.
- Crew on ATVs with trailers continues to collect debris from mid and upper site areas.

Barrels

- Inventory of Barrels at the airstrip was completed. 91 full barrels of Jet A or B fuel remain stored at airstrip. An inventory of labeled barrels with ownership has been compiled. There are 20 barrels onsite that are 1/10th to 1/3 full (some with missing bungs appear empty). Barrel thieves will be brought onto site next season to investigate further. There are 6 additional barrels (1/2 to 2/3 full) that need to be tested as per the barrel protocol and will require cleaning next year prior to crushing. In case additional barrels are found next year, EGT will not be steam cleaning barrels until closer to the end next season. Not being able to get barrel thieves' onsite this season will not cause delays in the processing schedule. Remaining barrels onsite will be processed first thing next season.

Excavations

- IEG sampled hydrocarbon excavations at Apron Area using 8" auger. Stakes placed at every intersection of 10 m grid lines oriented N-S and E-W, as well as in the center of each 10 m x 10 m square. At each location IEG collected two jars and one bag sample from the auger. Bagged samples taken from each auger hole were tested for headspace vapour readings. UMA was provided with one duplicate sample jar for each test hole. 20% duplicates of samples IEG has chosen to submit have been submitted to the lab for the NE plume, duplicates for the SW plume are to be sent on the next plane. Concerns were noted with variance to IEGs soil characterization plan. In some of the staked 100 m² areas, composite auger samples were taken for depths greater than 1.0 mbgs and in some cases where auger holes were advanced to 2.0 m depth. IEG will be returning to site to re-sample these areas next week.
- IEG has left site without completing water monitoring or slugtests in wells located in the Apron area. IEG will be returning to site next week.
- UMA has advanced 23 testpits in the apron area with a backhoe and 8 with a split spoon hand auger. The purpose of this investigation is to act as a means of 'pre-confirmatory testing to confirm proposed excavation depth and perimeter will encapsulate contaminated soil in the area. Test pits that were advanced along the west edge of the runway noted a large degree of groundwater influx into the testpit.
- A testpitting program was also completed within and around the perimeter of the main station excavation. Eight testpits were advanced to permafrost or approximately 1.0 m bgs (which ever came first). Samples were taken within; below and at base of contamination. Samples are to be sent south on the next flight.

Hazardous Materials

- Surface and subsurface soil samples were taken in the temporary storage area set up near the main station. These samples will be used as background soil conditions after decommissioning the storage area at the end of next season.
- Samples were taken from the tank bladders, and will send away for analysis of leachable organics. It is anticipated that these liners may be disposed of in a non-hazardous waste landfill. Tanks 14-19 have bladders remaining inside.
- Took sample of unknown white substance found in Tank 14, suspected substance appears to be absorbent.
- Tank 15 has some domestic non-hazardous waste within it. Investigation inside the tank revealed that there is approximately a cubic meter or less of items such as; plastic bags, plastic rolls, tarps, rubber boots, plastic pails, tire tube, pop cans. These items can be disposed of as non-hazardous materials.
- Leachable lead paint samples sent to lab for the following demo items: Orange painted wood from shed; Black painted metal from Nodwell camp chassis; Orange painted metal from NAVAIID; and White painted metal from NAVAIID – awaiting results.

Borrow

- Test pits excavated in Borrow Area 2, 4, 6 and 7 turned up what appears to be poor material for Type 2 use. Borrow Area 3 has discontinuous areas of what appears to be Type 2. EGT began

hauling Type 2 material from Borrow Area 3 and stockpiled same at Landfill Lobe D. Total of 34 loads hauled for regrade purposes.

- No other borrow sources used this week.
- Extraction volumes specified on 2008 quarry permit will need to be revised for the 2009 permit to reflect actual site conditions. Volumes specified in 2008 permit should be sufficient for 2008 season work.
- Production of Type 1 material at Uluhaktok completed on August 21, 2008. Sieve analyses have been completed on the five samples collected while the UMA geotech inspector was on site. The gradations of all five samples fall within the Type 1 gradation provided in the UMA Type 1 clarification Memo (July 25, 2008).

7.0 SCHEDULE

The contractor’s plan for the coming week includes:

- Discharge grey water from post aeration/ UV holding pond, if samples return passing results and after permission from Water Board has been received.
- Assessing potential borrow areas
- Incineration of unpainted/ untreated wood.
- Completion of hydrocarbon soil excavation auguring/ sampling.
- Continue with Tank demolition.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been submitted.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening August 30, 2008.

UMA Personnel			
Len Slikker - Departmental Representative		Dara Schmidt – Environmental Inspector	
E. Gruben's Transport			
Jim Stevens – Site Superintendent	Dusty Carrothers - Mechanic	Freddy Voudrach - Operator	Mel Weber - Operator
Doug Roland- Operator	Angus Kikoak- Operator	Lee John Panaktalok - Labour	Joe Bob Panaktalok - Labour
Murray Elias- Labour	Josh Teddy- Labour		
Camp			
Thomas Strachan - Medic	Molly Klengenber- Chief Cook	Marilyn Gardlund - Kitchen/ Attendant	Stanley Cockney - Camp maintenance
Wildlife Monitors			
Trevor Lucas	Opi Anikina		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling borrow material
1	CAT 322C Excavator	Used for testpit excavation
1	Hitachi EX200 Excavator	Excavating material from Borrow Area 3
1	CAT 14G Grader	Road/airstrip maintenance
1	Small Komatsu D31PX Dozer	Road/ airstrip repair
1	CAT D6 Dozer	Idle
1	CAT 966 Loader	Moving Demolition items and dragging airstrip and roads
1	CAT 950 Loader	Used by Mechanic
2	Ford 350 double cab trucks	Used to transport EGT Personnel.
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by UMA Reps
4	ATVs and Trailers	Two ATVs used by Wildlife monitors
1	CAT TL1055 Telehandler	Moving Demolition items
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Idle
1	Aluminum boat	Idle
1	Kenworth Flat bed, roll off truck with winch	Used to transport oversize metal debris to laydown area at airstrip

SUBMITTED BY:

Len Slikker

Departmental Representative
 UMA Engineering Ltd.
 len.slikker@uma.aecom.com

Date: August 30, 2008

Weekly Site Report

(For Period Ending Saturday, July 18, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0	Contract Authority: Public Works and Government Services Canada Telus Tower North 5 th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842
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To: Barry Fedorak
Firm: AECOM Canada Ltd.
Site Phone: (403) 450-9929
Date: July 18, 2009
Page 1 of 9
From: Greg Wright
C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	July 12	July 13	July 14	July 15	July 16	July 17	July 18
Temp	Cold	Cool	Cold	Mild-Cool	Cool	Cool	Cool
Conditions	Overcast	Overcast	Cloudy	Sunny	Overcast and foggy	Overcast	Overcast
Ceiling	500m	500m	500m	unlimited	<100 to unlimited	<100m to unlimited	<1000m
Visibility	15 km	12km	Up to 20 km	20+ km	<100 to 5km	Up to 20km	Up to 15 km
Precip	Isolated showers	Rain	Light rain	None	Light Rain	Misty/Light Rain	Isolated showers
Wind	Moderate from N-NW	Moderate from W	Strong from N-NW	Strong from N-NE	Strong from N	Moderate from NW	Moderate from N
Wildlife	Some migrating birds (loons, king eider ducks, gulls, etc), seals on ice in channel, musk ox inland						
Other	Large parts of the Prince of Wales Strait ice-free until July 14; however, strong N winds on July 14 th and 15 th closed off the entire channel north and south of the site. Flow in unnamed river is fluctuating with rainfall events, but decreasing overall.						

2.0 Health and Safety

- One incident was reported this week. The incident involved a worker assisting with the tank demolition. While sledge hammering out the loosened bolts, the worker struck himself on the ear/side of head with the sledge hammer. It is unclear how the incident happened exactly, but first aid was not required (i.e. no bleeding or significant swelling). No other incidents or accidents were reported this week.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 37.0 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- No greywater discharging occurred this week.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8		
1-Jul-09	15.1		
4-Jul-09	15.8		
7-Jul-09	14.1		
10-Jul-09	10.6		
June 30-July 9	-	95 m ³	
13-Jul-09	10.6		
15-Jul-09	14.1		
17-Jul-09	12.3		

4.0 FLIGHTS AND BARGE VISITS

- A Bandit was scheduled to fly to site on July 13th or 14th. However, due to ponding and otherwise wet conditions on the airstrip the flight did not occur. Contractor decided not to charter a more suitable aircraft (i.e. Twin Otter or DC3) as replacement flight.
- DC3 operated by AKLAK air landed on site at approximately 9:30pm on July 16th. Current AECOM Environmental and Geotechnical were replaced with relief's arriving on the flight. 10 crew and camp staff replaced 9 persons leaving site. The return flight left at approximately 10:30pm.
- No barge visits to site this week.

5.0 Camp Operations

- Camp ran out of bottled drinking water on July 13th, and milk and juice on July 14th. Additional cartons of milk (within their due dates) were found and made available on July 15th and 16th. However, from July 13 to 16 the only water was boiled river water. An arrangement to charter a larger aircraft at first availability was not fully explored nor was it made a priority by the Contractor.
- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Swamp mats placed as walkways around camp buildings.
- Minor snow and ice still exist between camp buildings but all other snow on site has melted.

- Medic has all necessary medical supplies on site.

6.0 WORK ACTIVITIES

General

- The tank farm area and upper site remained relatively dry throughout the week.
- A significant amount of precipitation occurred between July 13 and 18, combined with the wet snow and rain from the week prior made for very wet, mucky conditions at the airstrip area. Consequently, at several times throughout the week hauling from the airstrip was temporarily halted due to wet conditions. In addition, most of the excavations have a significant volume of water in them. Water samples were collected for laboratory analysis to determine potential treatment requirements so that the discharge conforms to the Land and Water Use permits.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Work day starts with a job and safety briefing.
- Night shift continued to work on the tank demolition.

Access Road/ Airstrip

- The road conditions varied throughout the week. On dry days, both trucks were able to haul material, where as on wet days the hauling of contaminated material to the treatment cell or for disposal was halted and the trucks remained stationary.
- Site roads were dragged on July 15th, which reduced damage to the site roads from the continued use of regular trucks and John Deere Gators.
- Vehicle traffic on the airstrip itself was minimized. The airstrip had ponded water on the surface in several areas and was softer than it had been which limited the type of aircraft suitable to land at the site to aircraft with large tundra tires.

Demolition

- Tank demolition continues with both day and night shift crews.
- As was the case with the other large tanks, bedding sand was discovered below the fuel bladder and on the tank base in Tank 15 and Tank 17. The bedding sand was removed from Tank 15 using a squeegee-like attachment on the excavator bucket, and stockpiled adjacent to former tank location. The bedding sand from Tank 17 will be removed at the same time as Tanks 18 and 19. Samples of the bedding sand were submitted last week; however results were not available at the time of reporting. Once available, AECOM will determine the disposal requirements for the bedding sand.
- The snow buntings nesting in the warehouse building did not survive the cold temperatures and extreme winds that occurred early in the week. Consequently, demolition of warehouse building took place on July 15. Once on the ground, the wall panels were further dismantled to minimize the volume of material requiring specialized packaging. This involved taking apart the panels and removing the insulation so that only the painted materials were placed in the disposal container. The dismantling was completed on July 17th, but final packaging remains to be completed.

Debris Collection

- Surface debris collection was conducted within Landfill A to prepare the area for regrading activities.

Excavations

- Excavation of **Lobe X** continued this week, and was completed to the spec depth (1.3 m) along the northern perimeter but still requires additional excavating toward the south. Should the excavation be completed, AECOM conduct the confirmatory sampling prior to the next charter flight out (scheduled for Tuesday July 21st). A sample of the groundwater present in the excavation was collected and sent out on July 16th.
- Excavation of **Lobe Y** continued as two separate parts. The east half of the excavation was completed to the spec depth of 1.0 m, and confirmatory samples were collected on July 15th. The confirmatory sampling was restricted to grids along the east perimeter due to stockpiles within the excavated area. The stockpiles are the soils excavated during the second pass (i.e. after allowing the permafrost to thaw further) but were too wet to haul to the treatment cell. IEG has completed stockpile sampling of this material to determine if the material in fact requires treatment or if it is suitable for disposal. The west portion of **Lobe Y** was excavated to a depth of 0.7 m on July 16th. As a result of precipitation events and thawing of the frozen soil, a significant amount of water is present in the **Lobe Y** excavation. A water sample was collected and sent out on July 16th.
- Soil excavated from buried debris **Lobe J**, which was excavated on July 4th, remains stockpiled adjacent to the excavation. As previously noted, limited to no debris was observed in the area identified as a buried landfill. Since **Lobe J** falls within the area of **Lobe Y**, the excavated soil will be treated as hydrocarbon contaminated material that requires treatment (i.e. above the SSTL). Additional excavating is required to complete the excavation to the spec depth (1.0 m), at which point confirmatory base samples will be collected. If necessary, groundwater samples will also be collected to determine disposal requirements.
- Excavation of **Part 1** (SW plume) continued north and west, towards M2. The area was excavated and hauled to the soil disposal location during the July 18/19 night shift. A second pass will be required in most of the excavated area due permafrost restrictions.
- Excavation of **Part 6** of the southwest plume commenced on July 13th, and was advanced to an average depth of 0.7 m. The excavated soil was stockpiled in the corner of the excavation as no hauling was taking place that day. On July 17th, the stockpiled material was hauled to Landfill A and used for the preliminary lifts on the landfill regrade. With the exception of the plume that lies within the roadway (near M7 and M8), the remaining area of **Part 6** was excavated to a depth of 0.7 m on July 17th. Material that was relatively dry was used for Landfill A regrades, whereas the wet material was disposed at the alternate soil disposal location at the upper site. Refer to the following section (Contaminated Soil Treatment) regarding the alternate soil disposal location.
- Since no debris was observed during the original excavation of **Lobe L**, the stockpiled soil was hauled to the soil disposal location during the July 17/18 night shift. **Lobe L** excavation is currently at a depth of 0.8 m, therefore additional excavating is required in this area. A significant volume of water is present within the excavation; however results from a water sample collected from the excavation was not available at the time of reporting. On July 18th, the area of **Part 1** (NE plume) that surrounds the **Lobe L** area was excavated to a depth of 0.8 m. The soil excavated was hauled to the original soil disposal location. Excavation to the northwest was limited by the stockpiles from the **Lobe P** buried debris excavation. The stockpiles remain in place as results have not yet been received.

- Excavation of buried debris **Lobe P** continued on July 12th. With the exception of a small pocket of debris in the southeast corner of the excavation, the buried debris areas have been excavated, sorted, stockpiled and removed from the excavation. Confirmatory sampling was completed on **Lobe P**, except where further excavation was required (SE corner), was completed on July 13. The debris excavation within the small pocket in the southeast corner was completed on July 17 and 18. Confirmatory sampling in that portion of Lobe P, as well as water sampling from the ponded water within the excavation, will be conducted prior to the next charter flight. Results from stockpile testing were not available at the time of reporting.
- Excavation of the **main station PHC** plume was completed to the spec depth of 0.5 m on July 16. The excavated material was hauled to the treatment cell to undergo allu treatment. Confirmatory sampling of the base and groundwater will be conducted prior to the charter flight scheduled for July 21.

Contaminated Soil Treatment

- Results from the first batch of allu treatment were submitted on July 14th. Results indicated that the allu treatment brought the concentrations below the SSTL. The treated soil was hauled from the treatment cell to the soil disposal site located on the west side of the upper ridge.
- By July 16th the treatment cell was at capacity with a second batch of hydrocarbon contaminated material requiring allu treatment. The alluing was conducting when conditions allowed (i.e. not raining) and will continue in to next week. It is thought that the alluing will be completed in time to have stockpile samples sent out on the next charter flight.
- Conditions at the site were generating unfavorable results at the current soil disposal location. With the material being too wet and the slope being slightly too steep, placed material was remobilizing and compaction was ineffective. A request to use an alternate disposal location was submitted to PWGSC and INAC, whom obtained approval from issuers of the LUP and WL. The alternate disposal location was used and will continue to be used for wet material that requires disposal at the upper site.

Earthworks

- Density tests were performed on Landfill regrades B, C and D, which were graded with the preliminary lifts last fall. Landfill C and D were found to meet the 95% SPMDD density criteria; however Landfill B did not (91-92 %). It was recommended to compact the surface of Landfill B using the vibratory roller prior to placing additional lifts. Additional density tests will be performed once the area has been compacted.
- Type 2 material excavated from the airstrip (from SW Plume Part 6) was used for preliminary regrading at Landfill A. Insufficient material was placed at Landfill A to qualify as a lift. Consequently no density testing was completed in the area. The material used from Part 6 for Landfill A regarding was taken from the first excavation pass (i.e. surface to permafrost) and was dry. However, some material from a second excavation pass was placed on Landfill A, which resulted in soft and wet conditions in localized spots. EGT will drain the area prior to placing additional material. Should the material not drain properly, excavation of the wet material may be required. Moving forward, material used for regrading Landfill A will be limited to the dry material excavated during the first pass, and the wet material coming from the second pass will be disposed at the alternate soil disposal location at the upper site.
- Based on the grading stakes, Landfills B and C require two additional lifts (approximately 400 mm) and Landfill D requires one lift (100 to 200 mm).

Barrels/ Hazardous Materials

- Results from barrel sampling completed at the haz waste storage area were not available at the time of reporting. Once available, AECOM will draft a memo to identify which barrels require consolidation and/or disposal, which require washing and which can be crushed.
- Hazardous waste generated from the demolition of the maintenance building was dismantled and placed in an ISO container. As described in the demolition section, the containers still require final packaging (tie down material, attach bulk head frame, etc) before the container is set for shipping.

Borrow

- During the July 18/19 night shift, four rock truck loads were hauled from Borrow B and placed at Landfill regrade C. Additional material will be taken from the borrow areas as the regrades progress and as excavation backfilling occurs.

Survey

- Survey completed buried debris Lobe P and main station PHC area.
- Grading and toe stakes were placed on all landfills.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Continuing demolition of Tank Farm tanks.
- Continue excavation of hydrocarbon impacted soil. Soils requiring treatment to be hauled to the treatment cell as soil proven treated is taken off the cell. Soils already below SSTL will be hauled and placed in hydrocarbon soil disposal area on the west side of the ridge.
- Begin hauling Type 2 borrow material for the landfill regrades.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Greg Wright - Departmental Representative		Priya Handa – Environmental Inspector	
Kairi Pawlick – Geotechnical Inspector			
E. Gruben's Transport – work crew			
Jim Stevens – Site Superintendent	Dusty Carrothers - Mechanic	Josh Foster – PHC Specialist	Keith Cox - Surveyor
Freddy Voudrach - Operator	Mel Weber - Operator	Eddie Lucas - Operator	Jason McLoughlin - Operator
Doug Roland - Operator	Jed Stefure - Trucker	Josh Teddy – Labour	Steven Rufus – Labour
Alan Jacobson – Labour	Joe Bob Panaktalok - Labour	Murray Elias – Crew Leader	Nelson Lay – Labour
Kenny Anikina – Labour	Shaun Green – Labour	Ryan Yakeleya – Operator/Crew Leader	Mike Weir – Operator
Kelvin Elias - Trucker			
E. Gruben's Transport - Camp staff			
Susan Eaton - Medic	John Bernhardt- Chief Cook	Irene Gordon – Camp Attendant	Jeffrey Pingo – Camp Maintenance
Ricky Tumma – Cooks Assistant	Debbie Pingo – Night Cook		
E. Gruben's Transport - Wildlife Monitors			
Margaret Lennie	Mason Kimiksana		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling excavated soil
1	CAT 322C Excavator	Excavating buried debris areas
1	Hitachi EX200 Excavator	Alluving soil and collecting bedding sand
1	CAT 14G Grader	Grading airstrip and road when required; drainage control
1	Small Komatsu D31PX Dozer	Regrading soil disposal and Landfill A
1	CAT D6 Dozer	Regrading soil disposal site
1	CAT 1108 Loader	Assisting with tank demolition operations and dragging station area.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM personnel
4	ATVs and Trailers	Used by Wildlife monitor and camp staff
1	CAT TL1055 Telehandler	Assisting with tank demolition operations
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Hauling excavated soil (when site is dry)
1	Aluminum boat	Idle

SUBMITTED BY:

Greg Wright



Departmental Representative
AECOM Canada Ltd.

Greg.wright@aecom.com

Date July 18th, 2009

Weekly Site Report

(For Period Ending Saturday, July 25, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak
Firm: AECOM Canada Ltd.
Site Phone: (403) 450-9929
Date: July 25, 2009
Page 1 of 8
From: Brendon Norrie
C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	July 19	July 20	July 21	July 22	July 23	July 24	July 25
Temp	Cold	Cold	Mild	Mild-Cool	Cool	Cool	Cool
Conditions	Overcast	Overcast	Mostly Sunny (Fog Patches)	Sunny	Overcast and foggy	Overcast and foggy	Overcast
Ceiling	100-500m	1000m	200m to unlimited	unlimited	200m	100m to 300m	<300m
Visibility	5-10 km	10-15 km	Up to 20 km	20+ km	5km	<100m to 5 km	Up to 2 km
Precip	Light Rain	Heavy Rain Overnight	None	Light Snow	heavy rain overnight	Rain, heavy overnight	light to heavy rain
Wind	Light from S	Moderate from W	Still	Light from S	Light from S	Still	Still
Wildlife	Some migrating birds (loons, king eider ducks, gulls, etc), seals on ice in channel, musk ox inland. Polar Bear sighted on ice in straight on July 24.						
Other	Channel is partially covered with ice; areas of open water vary with wind direction. Flow in unnamed river is fluctuating with rainfall events, at highest level of season on Saturday.						

2.0 Health and Safety

- No incidents or accidents were reported this week.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 23.8 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- EGT samples collected from the Post-treatment pond on July 17th returned oil and grease and TSS results below discharge criteria. These results were forwarded to INAC Land use/ water inspector in afternoon of July 24th along with below criteria chlorine results (0.1 mg/L) collected by AECOM on July 9th.
- Verbal and email permission was granted by INAC Inspector in evening of July 24th to discharge contents of the post-treatment greywater pond. Discharging to the previously approved discharge location SW of camp commenced in evening of July 24th. Rain on July 24th/25th initially matched or exceeded the discharge rate.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8		
1-Jul-09	15.1		
4-Jul-09	15.8		
7-Jul-09	14.1		
10-Jul-09	10.6		
June 30-July 9	-	95 m ³	
13-Jul-09	10.6		
15-Jul-09	14.1		
17-Jul-09	12.3		
21-July-09	10.6		
23-July-09	13.2		
July 24 th +		10 m3+	Discharging continuing

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 7:45pm on July 21st. Surveyor relief arrived onsite. Flight left at approximately 9:00 pm.
- A Bandit operated by AKLAK air landed on site at approximately 5:30 pm on July 23rd. AECOM Departmental Representative arrived on the flight. The return flight left at approximately 6:30pm.
- No barge visits to site this week.

5.0 Camp Operations

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Swamp mats used as walkways around camp buildings.

- All snow on site has melted.
- Medic has all necessary medical supplies on site.
- Camp water intake having to be moved depending on the fluctuating river level.
- Night crew hauling material or conducting other small tasks when weather permits.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Work day starts with a job and safety briefing.

6.0 WORK ACTIVITIES

General

- A significant amount of precipitation occurred between July 18th and 21st and between July 23rd and 25th, which combined with the rain from the week prior made for very wet conditions over the entire site, but particularly at the apron area and airstrip.
- Due to wet conditions and the need to preserve the road surfaces, borrow and excavated soil hauling was not conducted on July 19th, 21st, 22nd, 24th or 25th.

Access Road/ Airstrip

- The road conditions varied throughout the week. On dry days, both trucks were able to haul material, whereas on wet days the hauling of excavated soil or borrow material was suspended. By week end, standing water was present on most portions of the road in the apron and airstrip areas and some areas of the main site.
- Vehicle traffic on the airstrip itself was minimized. Until July 24th, the airstrip did not have ponded water on the surface. Areas of ponded water along the southern half of the airstrip developed during July 24th and 25th until large areas were covered with water. Ponded water along the west edge of the airstrip started flowing across the airstrip surface in sheetflow up to two inches deep.
- By July 25th the 12" culvert previously installed at the southern end of the airstrip was not able to drain the volume of water collecting along the west edge of the airstrip and was under water.
- To drain the ponded water along the west side of the airstrip and prevent further water flow across the airstrip, a ditch was excavated adjacent to the 12" culvert at midday on July 25th. Water level then began to drop and water flow across the airstrip ceased. The borrow pit was inaccessible after this ditching work.

Demolition

- Tank demolition continued with both day and night shift until July 21st. The tank demolition was nearing completion so the night shift was then no longer required. Demolition of the final tank (Tank 19) was completed on July 23rd, 2009.
- The bedding sand was removed from Tanks 17, 18 and 19 using a squeegee-like attachment on the excavator bucket, and stockpiled adjacent to former tank location. Samples of the bedding sand will be submitted to determine the disposal requirements.
- Steel plates were banded and bolts, liners, gaskets containerized for shipment.
- Navaid steel sections were stacked and banded for shipment.

- The maintenance building panels were dismantled, placed and secured in marine shipping container. Hazardous waste containers still require final packaging (tie down material, attach bulk head frame, etc) before the container is set for shipping.

Debris Collection

- Minor surface debris collection was conducted this week.

Excavations

- As of the end of the week, all apron area excavations are filled with water to depths of up to 1.0m.

Buried Debris Excavations:

- **Lobe P** - Analytical results for the majority of the Lobe P stockpiles were received on July 22nd. No metals or PCB exceedances were noted; however, several of the stockpiles exceeded the SSTL for hydrocarbon. Stockpiled soil that did not exceed the SSTL was hauled to the approved soil disposal area on July 23rd. The analytical results from the remaining stockpiles are expected next week. Confirmatory sampling of Lobe P was completed during the week. A water sample was taken from Lobe P on July 21th.
- **Lobe L** – Additional excavation were conducted on July 24th with excavated material piled within corner of excavation to drain prior to removal/ sampling.
- **Recon Lobe N** - Analytical results were received on July 22nd; no exceedances were reported for Recon Lobe N.

Hydrocarbon excavations:

- Confirmatory sampling of the **Main Station** PHC excavation was completed on July 20th. A sample of the ponded water within the excavation was taken on July 21st and submitted for discharge criteria analysis. Heavy rain during the night of July 23rd- July 24th eroded the north side of the excavation and the ponded water emptied from the excavation.
- Excavation in the **Apron Area** was limited this week due to the large volume of rain.
 - **Lobe Y, Lobe J and Part 2 (SW Plume)** - A water sample was taken from Lobe Y/J on July 21st. Lobe Y was excavated to depth on July 24th; confirmatory sampling is required. Additional excavation of the remainder of SW plume Part 2 to depth was completed; confirmatory sampling still required. IEG tested stockpiled soils within SW plume excavation July 21st and 22nd to determine if they require transportation to treatment cell (when space available) or to disposal location.
 - **SW Plume (Part 6)** – The majority of Part 6 was confirmatory sampled on July 20th. Remaining samples will be collected subsequent to further excavation (in road).

Contaminated Soil Treatment

- Alluving of the second batch was completed on July 20th. Stockpile samples were collected and sent out on July 21st. Awaiting results.
- Both disposal locations were used; the alternate disposal location was used and will continue to be used for wet material, and the original disposal location will be used for dryer material.

- Following heavy rain on July 24th and 25th, the containment berm around the soil treatment area was not able to contain the volume of rainwater. Overtopping of the berms by water and suspended soil occurred along the east side during morning of July 25th. Berm on east side of cell was increased in size and height using adjacent natural ground at midday on July 25th which successfully contained soil and most ponded water.
- IEG completed testing of windrowed material currently in the treatment cell on July 21st and sent samples to lab on July 21st flight.

Earthworks

- EGT created ditches within placed material on landfill regrade A on July 21st in an effort to drain moisture from the material. As of July 25th, the material is still saturated and should it not drain properly, excavation of the wet material will be required.
- Small quantities of material were hauled to regrade areas when weather allowed. Landfill D – 2 loads. Landfill A – 12 loads. Landfill C – 53 loads. Some of the material was partially spread, however the heavy rains prevented grading or compaction.

Barrels/ Hazardous Materials

- NTR

Borrow

- Total of 64 loads were removed from Borrow B during the week for placement on regrades.
- Rain and very wet ground conditions prevented borrow operations from July 23rd except for efforts to improve borrow area drainage.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Waiting for rain to stop and ground conditions to improve so soil excavation and hauling can resume.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Brendon Norrie - Departmental Representative		Priya Handa – Environmental Inspector	
Kairi Pawlick – Geotechnical Inspector			
E. Gruben's Transport – Work crew			
Jim Stevens – Site Superintendent	Dusty Carrothers - Mechanic	Josh Foster (IEG) – PHC Specialist	Richard Gibson - Surveyor
Simon Adam - Operator	Mel Weber - Operator	Mike Weir - Operator	Jed Stefure - Operator
Doug Roland - Operator	Kenny Anikina - Trucker	Josh Teddy – Labour	Shawn Green – Labour
Ryan Yakeleya – Operator/Crew Leader	Kelvin Elias - Trucker	Nelson Lay – Labour	
E. Gruben's Transport - Camp staff			
Susan Eaton - Medic	Molly Klengenber Chief Cook	Irene Gordon – Camp Attendant	Jeffrey Pingo – Camp Maintenance
John Bernhardt – 2 nd Cook	Debbie Pingo – Night Cook		
E. Gruben's Transport - Wildlife Monitors			
Margaret Lennie	Mason Kimiksana		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling excavated soil and borrow material
1	CAT 322C Excavator	Excavating buried debris areas
1	Hitachi EX200 Excavator	Alluving soil , collecting bedding sand and borrow pit improvements
1	CAT 14G Grader	Grading airstrip and road when required; drainage control
1	Small Komatsu D31PX Dozer	Regrading soil disposal and spreading material on Landfills A and C.
1	CAT D6 Dozer	Regrading soil disposal site
1	CAT 1108 Loader	Assisting with tank demolition operations and dragging station area.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM personnel
4	ATVs and Trailers	Used by Wildlife monitor and camp staff
1	CAT TL1055 Telehandler	Assisting with tank demolition operations
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Hauling excavated soil (when site is dry)
1	Aluminum boat	Idle

SUBMITTED BY:

Brendon Norrie



Departmental Representative
AECOM Canada Ltd.
Brendon.norrie@aecom.com
Date July 25th, 2009

Weekly Site Report #5

(For Period Ending Saturday, September 06, 2008)

Project:

INAC Clean Up Project
Johnson Point, NWT

UMA File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3862 Cell: (780) 918-6277 Fax: (780) 497-3842</p>
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To: Barry Fedorak
Firm: UMA Engineering Ltd.
Site Phone: (403) 450-1387
Date: September 06, 2008
 Page 1 of 9
From: Brendon Norrie
C.C.: Brad Thompson, Emma Pike, Joel Gowman, Len Slikker, Dara Schmidt,

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	August 31	Sept 01	Sept 02	Sept 03	Sept 04	Sept 05	Sept 06
Temp	Cold	Cool	Cool	Cool	Cool	Cold	Cool
Conditions	Overcast, Fog	Overcast	Mostly cloudy	Mostly cloudy	Mostly cloudy	Mostly sunny	Mostly sunny
Ceiling	100m	100m	100-500m	300-500m	200m	500-1000m	500-1000m
Visibility	2km	5km	10km	15km	15km	20km	20km
Precip	Light rain	None	Sprinkle	None	Overnight frost	None	None
Wind	Brisk from north	Light from east	Light from west	Light from west	Mod from west	Brisk from north	Brisk from west
Wildlife	Arctic foxes, wolves, musk-oxen. Bear tracks seen around camp.						
Other	Seal sightings in the Prince of Wales Strait.						

2.0 Health and Safety

- Safety issues brought up and discussed every morning at 8 am job briefing.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arriving on site.
- Medic reports two minor incidences of dust in eye. Persons in question utilized eye wash station and no additional medical attention was required.
- Two dedicated Wildlife Monitors on site (from Sachs Harbour and Tuktoyaktuk). Gun and bear deterrents on site and available (Bangers and screamers).
- Specific safety issues reviewed and discussed daily by Site Superintendent to crew scheduled to work on tank demolition.

3.0 Water and Land Use Permit Conditions

- Approximately 46.5 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Clause	1a	1b	1c
Description	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
9 August 08	7.8 m ³		
13 August 08	8.8 m ³		
16 August 08	8.8 m ³		
18 August 08	17.6 m ³		
22 August 08	15.8 m ³		
25 August 08	17.2 m ³		
28 August 08	17.2 m ³		
31 August 08	16.0 m ³		
3 Sept 08	15.1 m ³		
4 Sept 08	6.5 m ³		
6 Sept 08	8.9 m ³		

- EGT received results from grey water samples taken from post-treatment holding pond and shipped to lab August 24, 2008. Results were received on September 4, 2008 and show exceedance of “dissolved chlorine” in one of the four sample. Other three samples are also relatively high in “dissolved chlorine”. EGT investigating reason for testing of dissolved, rather than residual or free chlorine and effect on discharge application.
- Two further grey water samples taken from post-treatment holding pond and shipped September 6th.
- Depending on the results of second round of testing and authorization from Northwest Territories Water Board, grey water will be discharged this season. When submitting results of test to Water Board, EGT is reminded to ask permission to begin continuous discharge and testing program.
- EGT awaiting approval from Water Board on proposed discharge location

4.0 FLIGHTS AND BARGE VISITS

- Kenn Borek Banteriante flight landed on Wednesday, September 3rd, delivering one UMA person; one IEG person; two EGT persons; one AOGS person; groceries, parts and supplies.
- Kenn Borek Beech 99 flight landed on Saturday, September 6th, delivering one EGT person; groceries, parts and supplies.
- No Barge Visits took place during this time period.

5.0 Camp Operations

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.

6.0 WORK ACTIVITIES

- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Each work day starts with a job and safety briefing. There is no night shift currently operating.

Access Road/ Airstrip

- Roads are all functioning and passable to all vehicles. Roads are graded and dragged as required. EGT continues to use low ground pressure equipment and avoiding rutted areas.
- Airstrip is dry and is dragged regularly to level small irregularities. Airstrip maintenance is ongoing.
- EGT began developing an access road between lobes of Apron Area PHC soils.

Demolition

- Untreated / unpainted wood being piled in and around burn bin ready for incineration. Three bin loads (30m³) were incinerated this week for a total of 312 burn bin loads incinerated so far.
- Majority of EGT site activities centered on demolition of bolt-together tanks at the tankfarm. Crew completed demolition of Tanks 4 and 5 this week. On September 4, 2008 tank demo crew started demo on Tank 16, a 1,662,120 liter tank. Demolition of this tank is anticipated to take approximately one week to complete.
- To date, Tank 1 – 6 (incl.) have been demolished. Tank plates sections have been palletized and banded.
- Wooden tent frames on the south side of the access road, in the area of the camp were demolished and materials sorted and stockpiled. Unpainted plywood separated for potential reuse as marine shipping container dunnage.
- Nav-aid steel and insulation removed from airstrip area and stored in the wooden garage.
- A sample of the liner used as a fuel tank was collected by the Environmental inspector and sent for laboratory analysis. This plastic/rubberized liner is not anticipated to have leachable organics present, but tests will determine whether the liner can be disposed of as non-hazardous material next season.
- Environmental Inspector collected and submitted a sample of unknown white substance found in Tank 14. Substance appears to be absorbent material.
- Bolt-together fuel Tank 15 has some domestic non-hazardous waste within it. Investigation inside the tank revealed that there is approximately a cubic meter or less of items such as; plastic bags, plastic rolls, tarps, rubber boots, plastic pails, tire tube, pop cans. These items can be disposed of as non-hazardous materials.

Debris Collection

- Crew on ATVs with trailers continued debris clean up operations periodically on small-scale/ spare time basis.
- Surface debris removed from Existing Landfill B.

Barrels

- UMA Environmental inspector completed an inventory of Barrels at the airstrip. 91 full barrels of Jet A or B fuel remain stored at airstrip. An inventory of labeled barrels with ownership has been compiled. There are 20 barrels onsite that are 1/10th to 1/3 full (some with missing bungs appear empty). There are 6 additional barrels (1/2 to 2/3 full) that need to be tested as per the barrel protocol and will require cleaning next year prior to crushing. In case additional barrels are found next year, EGT will not be steam cleaning barrels until closer to the end of next season.
- Barrel thieves will be brought onto site next season to complete classification of barrels with remaining product. Not being able to get barrel thieves' onsite this season will not cause delays in the processing schedule. Remaining barrels onsite will be processed first thing next season.
- There are 5 barrels in the temporary storage area that have unknown solid contents. Barrels have been identified as JPB-01 to JPB-05.
- Barrels JPB-01 to JPB-04 have similar contents that appear to be remnants of floor sweepings as they contain, soil, sawdust, bits of metal, and ashes. Samples of material in these barrels were taken and submitted for asbestos percentage analysis.
- Barrel JPB-05 is an unknown substance that appears green/blue/gold in color has been sent for analysis. The powder substance is thought perhaps to be remnants of a drilling additive or marking dye.

Hazardous Materials

- Leachable lead paint samples previously sent to lab were returned to UMA as lab was unable to cut the material into required small sample pieces. EGT Mechanic recut the samples for the following demo items: Orange painted wood from shed; Black painted metal from Nodwell camp chassis; Orange painted metal from NAVAID; and White painted metal from NAVAID. Recut pieces were flown out on September 6th flight.
- Asbestos materials placed in SeaCan within Hazardous Material Process Area. Transformers from the NAVAID structure were bagged and also stored at hazmat processing area.
- Surface and subsurface soil samples were taken in the temporary storage area set up near the main station. These samples will be used as background soil conditions after decommissioning the storage area at the end of next season.

Hydrocarbon Contaminated Soil Excavations

- UMA Environmental Inspector advanced 23 testpits in the apron area with a backhoe and 8 with a split spoon hand auger. Investigation was conducted as 'pre-confirmatory' testing to confirm that excavation depth and perimeter noted on drawings will encapsulate contaminated soil in the area. Samples collected at 0.025, 0.5 and 0.5m depths and submitted for analysis. Test pits that were advanced along the west edge of the airstrip noted large groundwater influx into the testpit (up to 100L/ Min).
- UMA Environmental Inspector also completed a testpitting program was within and around the perimeter of the main station PHC excavation. Eight testpits were advanced to permafrost or approximately 1.0 m bgl (which ever came first). Samples were taken within; below and at base of contamination. Samples sent for analysis.

Apron Area Hydrocarbon Contaminated Soil Excavations (NE & SW Plume)

- Agreement was reached early in the week between the DR and EGT that IEG staff would return to site to resample areas of the Apron Area plumes originally incorrectly sampled to depths greater than 1.2m bgl.
- Jared Petersen (IEG) arrived on site September 3rd and on September 4th conducted resampling operations. With Environmental Inspector assistance, IEG restaked 36 10m*10m grid squares and the corresponding (approximately) 80 locations were redrilled and resampled. Following PID analysis of these redrilled samples, IEG submitted to UMA the list of samples they proposed to submit for analysis so the Environmental Inspector could prepare the required 20% duplicates.
- IEG initially proposed to submit a total of 7 samples to cover the 3,600 m³ resampling in the NE plume. As a result of conversations between the DR, Environmental Inspector and IEG, it was clear that IEG were incapable of following the agreed Updated Contaminated Soil Treatment Plan without direct assistance by UMA personnel. The DR requested that Jim Stevens carefully review the information submitted to him by David Wells following the first round of sampling.
- Following Jims review of the material submitted to him by IEG, it emerged that an insufficient number of samples were submitted from the first round of auguring in August. Of the approximately 180 samples required to adequately classify the 18,000m³ of Apron Area hydrocarbon excavation, only 63 viable samples had been submitted. A further 51 viable samples had been collected as a result of the September 4th resampling.
- Collecting all available information, the DR and Environmental Inspector identified the approximately 60 grid squares for which there were currently no viable representative samples.
- Using previous PID readings the DR compiled a list of exact locations that required resampling as part of a third round of auguring to provide enough information to complete the classification program.
- Jim Stevens insisted that Jared would not be leaving site until all auguring had been completed.

Groundwater Sampling

- On September 2, groundwater wells within and surrounding the proposed main station excavation were monitored for water levels by UMA Environmental Inspector. Samples were taken at wells where there was sufficient volume to obtain a sample. Due to insufficient volumes, it was not feasible to purge the wells prior to obtaining a sample. Samples from wells MW-16 and MW-18 were collected for routine and partial BTEX F1F2 Hydrocarbon analysis. Samples were sent from site on September 3rd for analysis.

Borrow Material

- Approximately 1200m³ of Type 2 material excavated from Borrow Area 3 was used as first lift on landfill regrades.
- No other borrow sources used this week.
- Extraction volumes specified on 2008 quarry permit will need to be revised for the 2009 permit to reflect actual site conditions. Volumes specified in 2008 permit should be sufficient for 2008 season work.
- Memo issued to EGT approving material produced at Uluhaktok for use as Type 1 fill.
- UMA DR excavated test pits along west side of airstrip and gathered samples from these pits and test pits previously excavated by EGT in Borrow Area 3, 4 and 6. Moisture content and grain size analysis conducted on a total of 11 samples of potential Type 2 material. Memo detailing results to follow.

Earthworks

- First lift of Type 2 material placed and compacted on Existing Landfills C and D. Material packed by three passes of tow-behind compactor. Sample of lift material (post compaction) on Existing landfill D collected by DR and tested on site for moisture content and grain size analysis. Results show material has moisture content of 12.2% and grain size gradation that approximates the required Type 2 gradation except for a lack of course gravel sizes.
- Contractor began placing first lift of material on Existing landfill B. Haul road spur to Landfill B developed from Tankfarm Area.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Drain post-treatment grey water holding pond at approved discharge location, after permission from Water Board has been received.
- Continued development of borrow materials at Borrow Area 3, specifically improving drainage in existing borrow pit.
- Continue incineration of unpainted / untreated wood.
- Complete Apron Area hydrocarbon soil excavation auguring / sampling.
- Continue with Tank demolition. Crew intends to complete demolition of one large tank (Tank 16) before end of season.
- Continue construction of landfill regrades. First lift on Lobe D has been compacted; first lift on Lobe C has been placed and placement of first lift on Lobe B is in progress.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been submitted.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening September 06, 2008.

UMA Personnel			
Len Slikker - Departmental Representative			
E. Gruben's Transport			
Jim Stevens – Site Superintendent	Dusty Carrothers - Mechanic	Mel Weber - Operator	Angus Kikoak - Operator
Josh Teddy – Labour	Bradley Voudrach - Labour	Freddy Voudrach - Operator	Murray Elias - Labour
Jeffrey Pingo - Camp maintenance	Brad Kirby - Labour		Jared Peterson – IEG PHC Soils
Camp			
Thomas Strachan - Medic	Molly Klengenberg - Chief Cook	Marilyn Gardlund - Kitchen/ Attendant	Ricky Tumma - Kitchen Help
Wildlife Monitors			
Trevor Lucas	Opi Anikina		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling borrow material
1	CAT 322C Excavator	Used for testpit excavation & borrow material excavation
1	Hitachi EX200 Excavator	Fitted with auger attachment and used for hydrocarbon soil drilling/ sampling
1	CAT 14G Grader	Road/airstrip maintenance
1	Small Komatsu D31PX Dozer	Road / airstrip repair / regrades
1	CAT D6 Dozer	Idle
1	CAT 966 Loader	Moving demolition items and dragging airstrip and roads
1	CAT 950 Loader	Used by Mechanic
2	Ford 350 double cab trucks	Used to transport EGT Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by UMA Reps
4	ATVs and Trailers	Two ATVs used by Wildlife monitors
1	CAT TL1055 Telehandler	Moving Demolition items
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Idle
1	Aluminum boat	Idle
1	Kenworth Flat bed, roll off truck with winch	Used to transport oversize metal debris to laydown area at airstrip
1	Hyster C200-220 Tow-behind smooth drum vibratory packer	Compacting granular material at regrade locations

SUBMITTED BY:

Brendon Norrie



Departmental Representative
 UMA Engineering Ltd.
 brendon.norrie@uma.aecom.com

Date: September 08, 2008

Weekly Site Report

(For Period Ending Saturday, August 1, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak
Firm: AECOM Canada Ltd.
Site Phone: (403) 450-9929
Date: August 2, 2009
Page 1 of 8
From: Brendon Norrie
C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	July 26	July 27	July 28	July 29	July 30	July 31	August 1
Temp	Cool	Cool - mild	Cool	Mild	Mild	Mild	Mild-warm
Conditions	Overcast	Partly cloudy	Partly cloudy)	Clear	Clear/ light high cloud	Clear	Clear
Ceiling	500m	1500m	500m	unlimited	2000+m	unlimited	unlimited
Visibility	5 km	10+ km	10 km	unlimited	20 km	unlimited	unlimited
Precip	Heavy Rain in morning	None	None	None	None	None	None
Wind	From west, increasing during day	Calm	Still	Light from N	Still	Light from N	Light from N
Wildlife	Some migrating birds (loons, king eider ducks, gulls, etc), seals on ice in channel, musk ox inland. Polar Bear sighted on ice in straight on July 31 st . Bowhead Whales sighted in straight on August 1 st .						
Other	Channel is partially covered with ice; areas of open water vary with wind direction. Flow in unnamed river peaked at noon on July 26 then dropped through week.						

2.0 Health and Safety

- No incidents or accidents were reported this week.
- Medic has provided care to two EGT personnel with pre-existing health issues. Both persons to leave site on August 3rd flight for additional care.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 19.4 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- Discharging of post-treatment greywater pond, begun on July 24th, continued until complete on July 29th.
- Following on-site discussions with INAC water license/ land use inspector, and direction from PWGSC via email, EGT began discharging water from Apron Area excavation via 2" hose to the authorized discharge location on August 1st. Water discharged on top of plywood sheet to reduce erosion at discharge point. Samples of this water had previously been tested by AECOM and shown to not exceed discharge criteria.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8		
1-Jul-09	15.1		
4-Jul-09	15.8		
7-Jul-09	14.1		
10-Jul-09	10.6		
June 30-July 9	-	95 m ³	
13-Jul-09	10.6		
15-Jul-09	14.1		
17-Jul-09	12.3		
21-July-09	10.6		
23-July-09	13.2		
24 - 29 July-09		115.0	
27-Jul-09	10.6		
30-Jul-09	8.8		

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 3:30pm on July 27st delivering INAC, PWGSC and EGT personnel for monthly site meeting. Following site tour and meeting the flight left at approximately 7:30 pm with same meeting personnel and six additional EGT personnel.
- A Twin Otter operated by AKLAK air landed on site at approximately 5:30 pm on July 30th. AECOM Geotech and Environmental relief arrived on the flight. The flight left at approximately 6:30pm.
- No barge visits to site this week.

5.0 Camp Operations

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Swamp mats used as walkways around camp buildings.
- All snow on site has melted.
- Medic has all necessary medical supplies on site.
- Camp water taken from Unnamed River.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Work day starts with a job and safety briefing.

6.0 WORK ACTIVITIES

General

- Heavy rains that affected operations last week ceased at midday on July 26th. Weather during the rest of the week was good with sun and light winds helping to dry site.
- At peak river level, the river was covering all portions of the NE plume that are NE of Lobe P. At peak, the pond had also migrated into portions of Lobe X and SW Plume Part 1.
- By the end of week, the site (except for water filled excavations) was drier than any other time this season.
- Day shift trucking operations recommenced on July 28th after site roads had dried sufficiently. Night crew trucking recommenced on July 31th.

Access Road/ Airstrip

- Airstrip and road repair work conducted throughout week with drag and grader.
- One load of type 2 material from borrow pit used to fill depression on airstrip on July 28th.

Demolition

- The last tank bottom was folded up in preparation for off-site shipment on July 27th. Steel plates and center posts have been banded for off-site shipment.
- Confirmatory sampling for hydrocarbons and lead was conducted on the stockpiles of tank bedding sand. Samples sent to lab and awaiting results.

Debris Collection

- Minor surface debris collection was conducted this week. Previous heavy rain has exposed debris in buried debris stockpiles.
- Three partial loads of non-painted wood were incinerated in burn bin during week.

Excavations

Buried Debris Excavations:

- Lobe P: Analysis of results from Lobe P stockpiles showed only one stockpile (#42) with an exceedance (TPH). Pile 42 taken to treatment cell and all other stockpiles hauled to disposal areas.

- Recon Area N: Sample results from last remaining stockpile showed no exceedances. Pile was knocked down and bladed into surrounding ground.

Main Station Hydrocarbon excavation:

- Results of confirmatory sampling of Main station PHC excavation showed exceedances at two locations. Lab instructed to test four samples from locations surrounding exceedances (samples already at lab as held samples). Awaiting results.

Apron Area (NE & SW Plume) Hydrocarbon excavations:

- Lobe X (SW Plume)– Confirmatory samples were collected from area on July 31th and will be sent to the lab on the next flight.
- Lobe Z and NE Plume (Part 1)– Lobe Z and an adjacent portion of SW plume Part 1 were excavated to design depth. Confirmatory samples taken on July 31st and will shipped to the lab on the next flight.
- SW Plume (Part 1)– Excavated on July 31th/ August 1th to between 0.5 and 0.8m depth (permafrost). Further excavation to be conducted after thaw. One sample result from the small portion of the area that has been confirmatory sampled returned result above criteria. Analysis has been requested on two adjacent held samples.
- SW Plume (Part 2)– One confirmatory sample exceeded criteria. Analysis has been requested on two adjacent held samples.
- SW Plume (Part 6)– Sample results were received and 7 samples in three sample locations exceed criteria. Five adjacent samples have been sent for analysis to determine the limits of the new excavation areas.
- Lobe P (NE Plume)– Two samples exceeded criteria. Analysis has been requested on three adjacent held samples to determine the limits of the new excavation areas.
- Lobe Y (SW Plume)– Sample results for the small portion of Lobe Y that has been sampled were all below criteria. Above water portion of Lobe Y material stockpiles within excavation was removed to the treatment cell on August 1st. The majority of the area is still under water. Final excavation to design depth and sampling will be conducted once the water level is lower.

Contaminated Soil Treatment

- IEG provided summary report of testing on second round of treated soil in cell. Results showed all piles to be treated to below SSTL criteria. AECOM duplicate results were received for IEG samples taken from the second batch of soil in the treatment cell. Both sets of results were within the generally accepted 50% relative percent difference when compared to IEG's results. Treated soil was removed and disposed of on July 29th.
- Began 3rd round of soil placement in treatment cell on July 30th with stockpiled material from Lobes Y. One cycle of allu treatment performed on this material on July 30th and August 1st.
- Treated soil and soil from excavation areas below SSTL are disposed of in the second disposal area. First disposal area being packed and shaped to accommodate further soil.
- Disposal Area 2 expanded southwards along ridge to take advantage of flat or shallow depression areas. Overall area of second disposal area is same as originally indicated on drawing to Land Use Inspector as material has not been placed as far down the back slope as originally intended.

- Treated soil disposal areas filling up. Disposing of all soil from the excavations within the footprint of the two disposal areas will likely create two hills that project more than 2m above other portions of the ridge top. AECOM to investigate possibility of delineating another soil disposal area. Potential areas include further along ridge towards Landfill Regrade D or SW of Recon lobe N.

Earthworks

Landfill Regrade A:

- Material placed as first lift was saturated at beginning of week but dried through week. Still draining at end of week and will need further spreading and compaction.
- 35 loads of granular material from airstrip excavations was hauled to Regrade A on August 1st and placed as scattered piles along NW and SW edges, ready for mixing with Type 2 material from borrow pit for second lift.

Landfill Regrade B:

- Inspection mid week showed soft areas adjacent to the lake on NE side but overall material is firm. Evidence of washed out material at very toe of regrade but no erosion channels on top or side slopes.

Landfill Regrade C:

- 37 loads of Type 2 material hauled to Landfill Regrade C on July 28th to form third lift.
- One pass made on third lift on July 30th with tow behind packer. Compacted crust forming but material below is too wet and not packing.
- Density tests completed on Regrade C show material is over optimum moist and does not meet compaction specification of 95% of SPMDD. Scarifying drying and recompaction required.

Landfill Regrade D:

- Inspection at beginning of week showed the material was saturated due to overall flatness of the regrade surface. Erosion was minor and limited to very toe of slope.
- Material dried considerably through the week and density tests completed at end of week showed densities that meet job specification.

Sieves

- Three sieves completed on Type 2 material (Sample IDs: JP-15, JP-16 and JP-17):
 - JP-15: sampled from the saturated material at the toe of Landfill A on July 27, 2009.
 - JP-16: sampled from the south stockpile at Borrow B on July 27, 2009.
 - JP-17: sampled from the north stockpile at Borrow B on July 27, 2009.
 - All of the sieve results indicate that the material requires coarser fractions to meet Type 2 specification.

Barrels/ Hazardous Materials

- Aqueous and fuel-based contents from partially full barrels in the temporary storage area were consolidated for testing.
- EGT collected Diamonds North diesel drums from the camp site and pumped the contents into camp generator tank. Empty barrels to be crushed or returned intact for refund.

Borrow

- Hauled 37 rocktruck loads of Type 2 material from borrow pit on July 28, 2009.
- Further drainage improvement work needed in pit.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Excavation of Airstrip portions of the SW Plume.
- Further excavation of SW plume part 1.
- Scraping of west portion of lobe Y to design depth to allow confirmatory sampling.
- Drainage improvements in Borrow Pit.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Brendon Norrie - Departmental Representative		Katie Scott – Environmental Inspector	
Chris Kjarsgaard – Geotechnical Inspector			
E. Gruben's Transport – Work crew			
Jim Stevens – Site Superintendent	Dusty Carrothers - Mechanic	Kurt Kure (IEG) – PHC Specialist	Richard Gibson - Surveyor
Simon Adam - Operator	Mel Weber - Operator	Mike Weir - Operator	Jed Stefure - Operator
Kelvin Elias - Trucker	Nelson Lay – Labour	Jeffrey Pingo– Labour	Art Adey - Operator
Fred Gruben - Trucker			
E. Gruben's Transport - Camp staff			
Thomas Strachan - Medic	Molly Klengenber Chief Cook	Marilyn Gardlund – Camp Attendant	Stanley Cockney – Camp Maintenance
John Bernhardt – 2 nd Cook	Debbie Pingo – Night Cook		
E. Gruben's Transport - Wildlife Monitors			
Margaret Lennie	Spencer Mangelana		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling excavated soil and borrow material
1	CAT 322C Excavator	Excavating contaminated soil and borrow materials
1	Hitachi EX200 Excavator	Alluving soil
1	CAT 14G Grader	Grading airstrip and road when required
1	Small Komatsu D31PX Dozer	Regrading soil disposal areas
1	CAT D6 Dozer	Regrading soil disposal sites
1	CAT 1108 Loader	Dragging roads and airstrip.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM personnel
4	ATVs and Trailers	Used by Wildlife monitor and camp staff
1	CAT TL1055 Telehandler	Idle
1	Terra Gator Water truck	Dragging airstrip
2	Kenworth Gravel trucks	Hauling excavated soil
1	Aluminum boat	Idle

SUBMITTED BY:

Brendon Norrie



Departmental Representative
AECOM Canada Ltd.
Brendon.norrie@aecom.com
Date August 2, 2009

Weekly Site Report #6

(For Period Ending Saturday, September 13, 2008)

Project:

INAC Clean Up Project
Johnson Point, NWT

UMA File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3862 Cell: (780) 918-6277 Fax: (780) 497-3842</p>
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To: Barry Fedorak
Firm: UMA Engineering Ltd.
Site Phone: (403) 450-1387
Date: September 13, 2008
 Page 1 of 6
From: Len Slikker
C.C.: Brad Thompson, Emma Pike, Brendon Norrie, Dara Schmidt,

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	Sept 07	Sept 08	Sept 09	Sept 10	Sept 11	Sept 12	Sept 13
Temp	Cold	Cool	Cool	Cool	Cool	Cool	Cold
Conditions	Overcast	Overcast	Overcast	Overcast	Partly cloudy	Partly cloudy	Overcast
Ceiling	50-200m	200m	100-200m	100-200m	500-1000m	300-1000m	100-200m
Visibility	2km	5km	5km	10km	15km	15km	15km
Precip	Light snow	Light snow	Snow overnight	None	None	None	None
Wind	Brisk from west	Mod from north west	Light from north west	Light from west	Light from south east	Light from south east	Light from north
Wildlife	Arctic foxes, wolves, musk-oxen, arctic hares. Bear tracks seen around camp.						
Other	Seal sightings in the Prince of Wales Strait.						

2.0 Health and Safety

- Safety issues brought up and discussed every morning at 8 am job briefing.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arriving on site.
- Medic reports no incidents in this time period.
- One dedicated Wildlife Monitor on site (from Tuktoyaktuk). Wildlife Monitor from Sachs Harbour left site on EGT charter flight September 13, 2008. Gun and bear deterrents on site and available (Bangers and screamers).
- Specific safety issues reviewed and discussed daily by Site Superintendent to crew scheduled to work on tank demolition.

3.0 Water and Land Use Permit Conditions

- Approximately 26.4 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Clause	1a	1b	1c
Description	Quantity of Fresh Water obtained from all sources (not to exceed 20m3 per day)	Quantity of all waste discharged (m3)	Location and direction of flow of discharges
9 August 08	7.8 m ³		
13 August 08	8.8 m ³		
16 August 08	8.8 m ³		
18 August 08	17.6 m ³		
22 August 08	15.8 m ³		
25 August 08	17.2 m ³		
28 August 08	17.2 m ³		
31 August 08	16.0 m ³		
3 Sept 08	15.1 m ³		
4 Sept 08	6.5 m ³		
6 Sept 08	8.9 m ³		
8 Sept 08	13.2 m ³		
10 Sept 08	13.2 m ³		

4.0 FLIGHTS AND BARGE VISITS

- Kenn Borek Banteriante flight landed on Tuesday, September 9th, delivering groceries, parts, supplies and construction material.
- Kenn Borek Beech 99 flight landed on Saturday, September 13th, delivering one EGT person, some groceries, parts and equipment.
- No Barge Visits took place during this time period.

5.0 Camp Operations

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Camp is being prepared for this season's shutdown. EGT Camp Specialist arrived September 13, 2008 to drain down and blow out water treatment plant and camp buildings.
- Treated grey water, from the second holding pond, will not be discharged this season. Sodium sulfite was brought in by EGT to neutralize chlorine count in grey water.

6.0 WORK ACTIVITIES

- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Each work day starts with a job and safety briefing.

Access Road/ Airstrip

- Roads are all functioning and passable to all vehicles. Roads were graded and dragged as required. EGT continues to use low ground pressure equipment and avoiding rutted areas.
- Airstrip is dry and is dragged regularly to level small irregularities. Airstrip repairs are ongoing.

- Contractor developing access road between lobes of apron PHC soils.

General

- General site cleanup completed for the season.
- Equipment and materials parked in flats at south west of Landfill A for winter storage.

Demolition

- Untreated / unpainted wood being piled in and around burn bin ready for incineration. Four bin loads (40m³) were incinerated this week for a total of 16.5 burn bin loads incinerated so far.
- Majority of EGT site activities centered on demolition of bolt-together tanks at the tankfarm. On September 4, 2008 tank demo crew started demo on Tank 16, a 1,662,120 liter tank. Removal of tank sections on Tank 16 was stopped due to high winds and icy surfaces. Continued bolt removal on lower sections and rims of all remaining tanks. Tank demolition crew departed site on September 13, 2008.
- To date, Tank 1 – 6 (incl.) have been demolished. Tank plate sections have been palletized and banded. Tank 16, one of the largest tanks, is approximately 15% demolished and some bolts have been removed from Tanks 14 and 15 (approximately 3% each).
- Tanks 37 and 64 are on site and being used as containers for bolts/nuts, obtained by tank demo activities.

Debris Collection

- Crew on ATVs with trailers discontinued debris clean up operations for this season.

Barrels

No activity

Excavations

- IEG re-sampled Apron Area excavations (third round of sampling) on September 07/08, 2008. The drill holes were identified with the use of hand-held GPS unit and recorded by IEG.
- UMA took duplicate of every 5th sample. Cooler with samples flown out for analysis in Calgary on September 09, 2008.
- IEG completed one water monitoring or slugtest in well located in the Apron area.

Hazardous Materials

No activity

Borrow

- Approximately 1250m³ of Type 2 material excavated from Borrow Area 3 was used as second lift on landfill regrades.
- No other borrow sources used this week.

- Extraction volumes specified on 2008 quarry permit will need to be revised for the 2009 permit to reflect actual site conditions. Volumes specified in 2008 permit should be sufficient for 2008 season work.

-

Earthworks

- Second lift of Type 2 material placed and compacted on Existing Landfills B, C and D.
- EGT is presently placing material on Existing Landfill D. Compaction will not be performed this year due to lower temperatures.

7.0 SCHEDULE

The contractor’s plan for the coming week includes:

- Incineration of unpainted / untreated wood.
- Continued development of borrow materials at Borrow Area 3, specifically improving drainage in existing borrow pit.
- Preparing Camp shutdown for the 2008 season. Departmental Representative is scheduled to leave site September 14, 2008 and EGT on September 16/17, 2008.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been submitted.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening September 13, 2008.

UMA Personnel			
Len Slikker - Departmental Representative			
E. Gruben's Transport			
Jim Stevens – Site Superintendent	Dusty Carrothers - Mechanic	Mel Weber - Operator	Ray Clermont - Camp Specialist
Camp			
Thomas Strachan - Medic	Molly Klengenberg - Chief Cook	Ricky Tumma - Kitchen Help	Jeffrey Pingo - Camp maintenance
Wildlife Monitors			
Opi Anikina			

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling borrow material
1	CAT 322C Excavator	Used for testpit excavation & borrow material excavation
1	Hitachi EX200 Excavator	Fitted with auger attachment and used for hydrocarbon soil drilling/sampling; borrow material excavation
1	CAT 14G Grader	Road/airstrip maintenance
1	Small Komatsu D31PX Dozer	Road / airstrip repair / regrades
1	CAT D6 Dozer	Idle
1	CAT 966 Loader	Moving Demolition items and dragging airstrip and roads
1	CAT 950 Loader	Used by Mechanic
2	Ford 350 double cab trucks	Used to transport EGT Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Idle
4	ATVs and Trailers	Two ATVs used by Wildlife monitors
1	CAT TL1055 Telehandler	Moving Demolition items
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Idle
1	Aluminum boat	Idle
1	Kenworth Flat bed, roll off truck with winch	Used to transport oversize metal debris to laydown area at airstrip
1	Hyster C200-220 Tow-behind smooth drum vibratory packer	Compacting granular material at regrade locations

SUBMITTED BY:

Len Slikker

Departmental Representative
 UMA Engineering Ltd.
 len.slikker@uma.aecom.com

Date: September 13, 2008

Weekly Site Report

(For Period Ending Saturday, August 8, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak
Firm: AECOM Canada Ltd.
Site Phone: (403) 450-9929
Date: August 8, 2009
Page 1 of 8
From: Brendon Norrie
C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	August 2	August 3	August 4	August 5	August 6	August 7	August 8
Temp	Mild	Mild	Mild	Cold	Cool	Cold	Cool
Conditions	Clear	Clear	Fog	Overcast	Fog in morning. Partly cloudy in evening	Overcast, clearing in evening	Overcast
Ceiling	Unlimited	Unlimited	50m	500-1000m	250m	100m	100m
Visibility	Unlimited	Unlimited	50+m	5 km	1 km	Up to 10+ km	500m
Precip	None	None	None	None	None	Light snow flurries	Light snow flurries
Wind	Light N wind	Still	Still	Light N wind	Still in morning, strong from NW in evening	Light west wind	Light west wind
Wildlife	Some migrating birds (loons, king eider ducks, gulls, etc), seals on ice in channel. Polar Bear sighted on ice off the north end of the airstrip on August 5 th .						
Other	Channel is mostly ice-free; ice accumulations vary with wind direction.						

2.0 Health and Safety

- No incidents or accidents were reported this week.
- Medic has provided care to two EGT personnel with pre-existing health issues. Both persons left site on August 3rd flight for additional care.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 35.2 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- EGT continued discharging water from Apron Area excavations via 2" hose to the authorized discharge location throughout week. Water discharged on top of plywood sheet to reduce erosion at discharge point. Samples of this water had previously been tested by AECOM and shown to not exceed discharge criteria. An oil absorbent boom was deployed around the pump intake.
- River/ soil excavation interaction on August 6th (explained in soil excavation section).

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8		
1-Jul-09	15.1		
4-Jul-09	15.8		
7-Jul-09	14.1		
10-Jul-09	10.6		
June 30-July 9	-	95 m ³	
13-Jul-09	10.6		
15-Jul-09	14.1		
17-Jul-09	12.3		
21-July-09	10.6		
23-July-09	13.2		
24 - 29 July-09		115.0	
27-Jul-09	10.6		
30-Jul-09	8.8		
02-Aug-09	10.6		
05-Aug-09	12.3		
08-Aug-09	12.3		

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 5:30pm on August 3rd. Kurt Kure and Andy Surinak arrived to relieve Jim Stevens and Mel Weber respectively. The flight left at approximately 6:15pm.
- No barge visits to site this week.

5.0 CAMP OPERATIONS

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Swamp mats used as walkways around camp buildings were removed and used to gain truck access to NE excavation areas.
- All snow on site has melted.
- Medic has all necessary medical supplies on site.
- Camp water taken from Unnamed River.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Work day starts with a job and safety briefing.
- Difficulties with phone system during week (calls cut off and not connecting).

6.0 WORK ACTIVITIES

General

- Work activities concentrated on soil excavations and soil disposal.

Access Road/ Airstrip

- Increased truck traffic in and out of the pit this week necessitated excavation and reinstallation of the culvert at the south end of the airstrip on August 7th.

Demolition

- Results were received for samples taken from tank bedding sand stockpiles. Samples show no piles exceeded criteria for lead and only two of the six stockpile exceeded SSTL for total hydrocarbons. Survey of the stockpiles indicates the two piles over hydrocarbon criteria equate to approximately 41m³.
- One partial load of unpainted, untreated wood debris burned in burn bin on August 2nd.
- No physical demolition work conducted this week.
- Approximately 50 Sea-Cans are available on site and 25 were constructed during the week to hold bedding sand. All Sea-Cans were previously used to transport Tier I soil from Atkinson Point (BAR-D) to disposal facilities are not new or in "as new" condition. All are weathered and some suffered damage to the wood components during emptying/ disassembly/ transport/ reassembly.
- An unknown quantity of Sea-Can hydrocarbon liners are on site.

Debris Collection

- Minor surface debris collection was conducted this week.

Excavations

Buried Debris Excavations:

- All buried debris excavations have been completed

Main Station Hydrocarbon excavation:

- Results were received for held confirmatory samples taken from the main station hydrocarbon excavation. Analysis of all confirmatory samples from this excavations show two areas requiring further excavation.
- Areas for further excavation were staked out for excavation on August 7th.

Apron Area (NE & SW Plume) Hydrocarbon excavations:

By August 8th approximately 80% of the Apron Area plumes have been excavated to design depth and confirmatory sampled. The area around Lobe L was drained and requires scraping of the soil along the bottom before sampling can take place.

- **NE Plume (Lobe P)** - Results from held samples received on August 4th. Analysis of all samples collected from the base of the Lobe P footprint showed hydrocarbon exceedances in two areas. These areas were staked on August 4th and excavated on August 5th. Confirmatory samples from the base of the second round of excavation were collected on August 6 and sent from site on August 9.
- **NW Plume (Part 2)** – The night shift of August 5th – 6th commenced excavating Part 1, starting at the river and moving away from the river and Southeastwards. The initial section was excavated to within 1m of the water flow with later sections excavated to within 4m of the water. Soft soil conditions meant the rocktruck had difficulty reaching the excavator position. Instead of placing swampmats, a wide trench was cut down to firm ground more than 1m along the north side of the excavation and the rocktruck drove along the base of the trench.
- At approximately 7am on August 6th the high tide cause the river level to rise between 5 and 10cm, overtop the 1m wide portion of the buffer berm and spill into the excavation. This portion of the buffer berm was quickly eroded and within 10 minutes the excavation was full, and connected to the river.
- Silt fence was erected at the connection between the excavation and river. When the water level in the river (and excavation) dropped with low tide in the afternoon, a higher berm was constructed to isolate the excavation from further river level fluctuations.
- On August 7th an additional berm was created between Part 1 and the excavated access trench. Water within Part 1 was then pumped into the access trench and Lobe P, leaving Part 1 dry.
- **NW Plume (Part 1)** - Remaining portions of the NE plume on the river flood plain flats was excavated to design depth on August 7th using swampmats to allow rocktruck access. A 1m thick berm was left between Part 1 and Part 2 to act as a back-up containment berm should the river rise prior to excavation backfilling.
- Last portion of NW Plume was excavated to design depth on August 8th.
- **SW Plume (Part 1, 2, 6, Lobe Y)** – Excavation of the remaining base soil in this plume was conducted between August 4th and August 5th following removal of the ponded water. Wet/ saturated excavated material was spread over the second disposal area to facilitate drying.
- **SW Plume (Part 1)** – Inspection of the excavation following final scraping of base material during night shift (August 4th – 5th) noted that the base of much of Part 1 was an ice lens, rather than permafrost soil. The ice lens is at least one foot thick and slopes to both the east and west. The decision was made to immediately begin backfilling the exposed portion of the ice lens as:
 - The likelihood that hydrocarbon contamination penetrated below the lens is very low.
 - The small amount of soil remaining above the ice lens was saturated, unrecoverable and untreatable.

- Excavation below the ice is unfeasible.
- Exposure was causing the ice to melt and refill the excavation that had just been pumped dry.
- The base of the excavation in the area of the ice was surveyed and pin flags were placed to indicate the extent of the ice to the backfilling crew. Backfilling commenced on August 5th and continued during the rest of the week.
- **SW Plume (Part 2)** – Based on held sample results, an area in the north part of this part was staked and excavated on August 8th.
- **SW Plume (Part 6)** – Sample results from north wall of part 6 showed exceedances. Additional excavation area was staked out on August 5th and excavated. Confirmatory samples from this additional excavation were collected on August 8th and sent from site on August 9.
- **SW Plume (Airstrip portion)** – Excavation continued through week to design depths. Toothed bucket needed to rip permafrost to allow excavation in areas scheduled for excavation to 1.3m. Excavation at the beach end of the plume was extended to the NE and SW to remove obviously stained/ odorous soil. Contractor left an approximately 6m wide road through the northern portion of Part 3/ Part 5 to allow continued access to the airstrip and borrow pit. Confirmatory sampling of airstrip excavations was undertaken on August 3rd and samples were shipped from site on August 3rd flight. Odour and sheen in portion of base near the road indicates further excavation is needed.

Contaminated Soil Treatment

- IEG sampled third allued soil currently in Treatment cell on August 2nd and samples were sent to lab on August 3rd.
- A total of 92 loads of soil taken to, and placed in either first or second disposal area during week.
- Inspected upper site and ridgeline looking for a suitable site of a third soil disposal location but there is no location that satisfied the remediation and land use objectives. Remaining excavation soil can be accommodated within the footprint of the first and second disposal locations.

Earthworks

- Water contained within the two dugout sumps in the main station area were progressively breached on August 2nd to allow water to gradually flow out. Water samples taken from the contained water earlier in season showed water to be below discharge criteria. Minor volumes of debris was exposed.

Landfill Regrade A:

- 5" deep ditch created around northwest side of regrade to channel away surface water.
- Material placed as first lift continued drying.
- 35 loads of granular material from airstrip excavations was hauled to Regrade A during nightshift of August 2nd – 3rd and placed in one large pile immediately west of regrade, ready for mixing with Type 2 material from borrow pit for third lift.
- 187 loads of 'good" Type 2 material from stockpiles in the borrow pit was hauled and placed amongst the airstrip material stockpiles for mixing and spreading as the second lift.
- A sieve completed on a mix of 2.5 parts Type 2 from Borrow Pit to 1 part sand/ gravel material from the airstrip excavation showed material to be approximately parallel to, but outside, the specified Type 2 material envelope.

Landfill Regrade B:

- NTR

Landfill Regrade C:

- NTR

Landfill Regrade D:

- NTR

Barrels/ Hazardous Materials

- NTR

Borrow

- Hauled 187 loads of Type 2 material from borrow pit during week.
- Borrow pit development recommenced on August 4th. Material excavated and stockpiled from northern part of borrow pit. Sieve complete on material (JP-19) on August 5 showed same lack of gravel (compared with Type 2 spec) as other parts of the borrow pit as well as a clay/ silt content outside Type 2 spec.
- This poor, clay-rich, material from the pit was used as backfill on top of the ice lens in the SW plume.
- Two sieves completed on Type 2 material (Sample IDs: JP-18 and JP-19):
 - Sampled from the east side of Borrow B adjacent to the access road.
 - All of the sieve results indicate that the material requires coarser fractions to meet specification.
-

7.0 SCHEDULE

The contractor's plan for the coming week include:

- Continue excavation of Main Station PHC Contaminated Soil Area
- Continue excavation of SW Plume – Part 6
- Backfilling of Airstrip Area excavations including Lobe Z, NE Plume – Part 1 and SW Plume – Part 1.
- Backfilling of Poned Excavations SW of Landfill A

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Brendon Norrie - Departmental Representative		Katie Scott – Environmental Inspector	
Chris Kjarsgaard – Geotechnical Inspector			
E. Gruben's Transport – Work crew			
Kurt Kure (IEG) – PHC Specialist	Richard Gibson - Surveyor	Dusty Carrothers (EGT) – Mechanic	
Simon Adam - Operator	Fred Gruben – Trucker	Mike Weir - Operator	Jed Stefure - Operator
Kelvin Elias - Trucker	Nelson Lay – Labour	Jeffrey Pingo– Labour	Art Adey - Operator
E. Gruben's Transport - Camp staff			
Thomas Strachan - Medic	Molly Klengenberg Chief Cook	Marilyn Gardlund – Camp Attendant	Stanley Cockney – Camp Maintenance
John Bernhardt – 2 nd Cook	Debbie Pingo – Night Cook		
E. Gruben's Transport - Wildlife Monitors			
Margaret Lennie	Spencer Mangelana		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling excavated soil and borrow material
1	CAT 322C Excavator	Excavating contaminated soil areas
1	Hitachi EX200 Excavator	Working in borrow pit
1	CAT 14G Grader	Grading road when required
1	Small Komatsu D31PX Dozer	Regrading soil disposal areas and backfilling over ice lens
1	CAT D6 Dozer	Regrading soil disposal sites
1	CAT 1108 Loader	Dragging roads and airstrip.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM personnel
4	ATVs and Trailers	Used by Wildlife monitor and camp staff
1	CAT TL1055 Telehandler	Idle
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Hauling borrow material
1	Aluminum boat	Idle

SUBMITTED BY:

Brendon Norrie



Departmental Representative
AECOM Canada Ltd.
Brendon.norrie@aecom.com
Date August 8, 2009

Weekly Site Report

(For Period Ending Saturday, August 15, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Brendon Norrie
Firm: AECOM Canada Ltd.
Site Phone: (403) 450-9929
Date: August 15, 2009
Page 1 of 8
From: Barry Fedorak
C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	August 9	August 10	August 11	August 12	August 13	August 14	August 15
Temp	Cool	Cool to Mild	Cool	Cool	Mild	Mild	Cool
Conditions	Partly Cloudy	Fog in morning. Partly cloudy in evening	Partly Cloudy	Overcast	Clear	Clear, becoming overcast in evening	Overcast
Ceiling	1500m	250m to Unlimited	1500m	500-1000m	Unlimited	Unlimited to 500m	1500m
Visibility	15+ km	15+ km	10 km	5 km	Unlimited	Unlimited	10 km
Precip	None	None	None	None	None	Light Shower in Evening	Occ. Shower
Wind	Light wind	Still	Still	Still	Light Wind	Light wind	Light wind
Wildlife	Some migrating birds (loons, king eider ducks, gulls, etc), seals on ice in channel. Polar Bears sighted on ice off the north end of the airstrip on August 12 th , 13 th and 14 th .						
Other	Channel is mostly ice-free; ice accumulations vary with wind direction.						

2.0 Health and Safety

- No Health and Safety issues to report.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 37.0 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- EGT continued discharging water from Apron Area excavations via 2" hose to the authorized discharge location throughout week. Water discharged on top of plywood sheet to reduce erosion at discharge point. Samples of this water had previously been tested by AECOM and shown to not exceed discharge criteria. An oil absorbent boom was deployed around the pump intake.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8		
1-Jul-09	15.1		
4-Jul-09	15.8		
7-Jul-09	14.1		
10-Jul-09	10.6		
June 30-July 9	-	95 m ³	
13-Jul-09	10.6		
15-Jul-09	14.1		
17-Jul-09	12.3		
21-July-09	10.6		
23-July-09	13.2		
24 - 29 July-09		115.0	
27-Jul-09	10.6		
30-Jul-09	8.8		
02-Aug-09	10.6		
05-Aug-09	12.3		
08-Aug-09	12.3		
10-Aug-09	12.3		
13-Aug-09	14.1		
15-Aug-09	10.6		

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 6:00pm on August 9th with 5 passengers including Barry Fedorak, Jim Stevens, Sam Bird and two other EGT Staff. The plane departed at approximately 7:00pm with four EGT staff going out on rotation.

- A Twin Otter operated by AKLAK Air landed on site at approximately 8:45pm on August 11th with DFO Inspectors (Amanda Joynt and Terry Stein) and other EGT staff. The plane departed at approximately 10:30pm with DFO and Andy Surinak and Kurt Kure.
- A Twin Otter operated by AKLAK Air landed on site at approximately 6:45pm on August 13th with EGT personnel and departed at approximately 8:30pm.
- No barge visits to site this week.

5.0 CAMP OPERATIONS

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Medic has all necessary medical supplies on site.
- Camp water taken from Unnamed River.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon. Work day starts with a job and safety briefing.

6.0 WORK ACTIVITIES

General

- Work activities concentrated on soil excavations and disposal.

Access Road/ Airstrip

- In addition to general backfill of Lobe P Area, two road crossing were backfilled across Part 4 and 6 in the Southwest Plume to facilitate access through this excavation area.

Demolition

- Results were received for samples taken from tank bedding sand stockpiles. Samples show no piles exceeded criteria for lead and only two of the six stockpiles (from Tank 14 and 15) exceeded SSTL for total hydrocarbons. Survey of the stockpiles indicates the two piles over hydrocarbon criteria equate to approximately 41m³. Piles containerized into 20 Seacans for off-site disposal.
- All demolition work has been completed.
- An unknown quantity of Sea-Can hydrocarbon liners are on site.

Debris Collection

- No surface debris collection was conducted this week.

Excavations

Buried Debris Excavations:

- All buried debris excavations have been completed

Main Station Hydrocarbon excavation:

- Results were received for held confirmatory samples taken from the Main Station PHC excavation. Testing of confirmatory samples from this excavation shows two areas requiring further excavation.
- These areas were excavated on August 12th and confirmatory sample results are pending.

Apron Area (NE & SW Plume) Hydrocarbon excavations:

By August 15th, approximately 95% of the Apron Area design plumes have been excavated to design depth and confirmatory sampled. There are various areas which exceed the near shore criteria at either the lateral design extents and/or depth. Some of these areas have been extended and further testing is pending. The final portion of the design excavation (road through the SW Plume, Part 3 and 5) was initiated this week. Large portions of SW Plume Part 1 and Lobe P were under water.

- **NE Plume - Lobe Z and Part 1** - Lobe Z has been excavated to design depth and confirmatory testing shows results below criteria. A large portion of Part 1 from the border of Part 2 to the limit between N10 and N15 has also been tested and shows results below criteria. Backfilling has begun in this area. Based on PID results from the base of the area to the north of Lobe L, it is expected that further depth excavation will be required. A limited area north of the design segment between N10 and N11 was extended further north to remove odorous soil which followed a thin sand and gravel seam. The thickness and depth of the sand and gravel seam became extensive and excavation was stopped pending further investigation and direction from PWGSC and INAC for excavation of areas beyond and deeper than design extents.
- **NE Plume – Lobe P** – All confirmatory samples meet criteria. Backfilling has begun in the area.
- **NE Plume – Part 2** - DFO visited site this week to follow up on the river meets excavation situation at the NE Plume – Part 2. DFO was generally satisfied with mitigation measures taken and submitted a report on August 14 with follow up requirements.
- **SW Plume (Part 1)** – Backfilling has begun throughout Part 1. A portion of the excavation along the west wall was above criteria. The contractor was instructed to excavate no closer than 3 meters from the lake. No further confirmatory sampling or excavation will be conducted in this area adjacent to the lake. The extension on the NE side of the area was extended again based on sample results. During further excavation a box marked explosive was uncovered. No further excavation will be conducted in this area due to safety concerns.
- **Lobe X** – Sample results indicated that the base was above the near shore criteria and the walls are above the SSSL criteria. Excavation along the west wall was extended towards the lake and the contractor was instructed to excavate no closer than 3 m from the lake. Excavated soils from this area were taken to the treatment cell. Depth excavation and excavation to the north to continue.
- **SW Plume (Part 2)** – A portion of this area at the north end was excavated deeper and sample results indicate there is still further excavation required at depth. The remainder of the area is approved for backfill.
- **SW Plume (Part 3)** - The excavation has been partially completed. Confirmatory samples were submitted last week and indicated that an area still required additional depth excavation. The current excavation base in this area, however, consists of a highly permeable gravel layer within 0.1 m of the current water table. Excavation below the water table has not continued as the area is located in the airstrip footprint and removal of this gravel and expected high seepage rates will not allow for a suitable backfill base for the airstrip with consideration to the marginal borrow material available at this site. The southern portion of the excavation met criteria.
- **SW Plume (Part 4)** – Based on samples results from last week, the southern tip of this area was extended further south to further remove obvious odorous soil. In compliance with DFO recommendations, silt fencing was installed between the excavation and the ocean. Confirmatory samples were taken at the walls and base of the excavation and sent for testing. A total of five testpits were excavated just outside the south portion of the airstrip to a distance of approximately 50m to the east of the design limits. The beach sand and gravels in these testpits appear to exceed criteria based on odour and PID results. Samples to be sent out on the next plane. The excavation has not been extended pending direction from PWGSC and INAC for excavation of areas beyond and deeper than design extents.

- **SW Plume (Part 5)** – Part 5 was partially excavated this week. Design depth was not reached because of permafrost. The excavation will continue at depth.
- **SW Plume (Part 6)** – One sample of the extension tested above criteria but had previously been excavated with another near shore exceedence in an adjacent area. The other met criteria. The area will be confirmatory sampled once the design excavation depth has been achieved.
- **SW Plume - Lobe Y and J** – Excavation was completed in these areas and confirmatory samples were taken. A portion of the area exceeded Near Shore criteria and needs to be excavated further. The remainder of the area has been approved for backfill.

Contaminated Soil Treatment

- Testing from treatment cell soils that underwent third alluvium since placement on August 2nd showed results below SSTL and these soils have been moved to Disposal Area No. 2.
- A total of 40 loads were placed in the treatment cell this week including 14 loads from area north of Lobe P, 6 loads from Lobe X and 20 Loads from the Main Station depth excavation extension.

Earthworks

- Water contained within the two dugout sumps in the Main Station Area has been drained in a controlled manner. Samples taken earlier from the contained water are below discharge criteria. Minor debris was exposed.

Landfill Regrade A:

- Previously stockpiled material placed after initial base soils had dried out. Stockpiled material from Borrow B and sandy material from SW plume excavation to be blended. Began placing and blending this material with grader.
- A sieve completed on a mix of 2.5 parts Type 2 from Borrow Pit to 1 part sand/ gravel material from the airstrip excavation showed material to be approximately parallel to, but outside, the specified Type 2 material envelope.

Landfill Regrade B:

- NTR

Landfill Regrade C:

- Still need to compact the third lift and complete density tests to confirm compaction. Material needs to dry as it is currently above optimum moisture content.

Landfill Regrade D:

- Final thin lift placed, allowed to dry and compacted. Compaction testing to be provided.

Barrels/ Hazardous Materials

- NTR

Borrow

- Hauled 465 loads of Type 2 and Type 3 material from Borrow Pit B during the week.
- Material excavated and stockpiled from northern part of borrow pit. Sieve complete on material (JP-20 and 21) on August 12 and 13 showed same lack of gravel (compared with Type 2 spec) as other parts of the borrow pit as well as a clay/ silt content outside Type 2 spec.

- Two sieves completed on Type 2 material (Sample IDs: JP-20 and JP-21):
 - Sampled from road crossing backfill at Airstrip Area excavation and from placed blended materials (from Borrow B and Airstrip excavation sand) in Landfill A.
 - All of the sieve results indicate that the material requires coarser fractions to meet specification and these coarser fractions are generally not available at site.

7.0 SCHEDULE

The contractor's plan for the coming week include:

- Continue excavation of Main Station PHC Contaminated Soil Area.
- Continue excavation of SW Plume – Parts 3, 5 and 6.
- Backfilling of approved Airstrip Area excavations.
- Backfilling of Poned Excavations SW of Landfill A.
- Moving of Demolition Items to Airstrip in preparation for the Barge.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Barry Fedorak - Departmental Representative		Katie Scott – Environmental Inspector	
Chris Kjarsgaard – Geotechnical Inspector			
E. Gruben's Transport – Work crew			
Jim Stevens – Site Superintendent	Richard Gibson - Surveyor	Sam Bird (IEG) – PHC Specialist	Ryan Lennie – PHC Specialist Assistant
Fred Voudrach - Operator	Mel Weber – Operator	James Keevik - Operator	Mike Weir - Operator
Doug Roland - Trucker	Murray Elias – Labour	Lee John Panaktalok – Labour	Art Adey - Operator
Fred Gruben Jr. - Trucker	Percy Chabun – Operator	Dusty Carrothers - Mechanic	
E. Gruben's Transport - Camp staff			
Thomas Strachan - Medic	John Bernhardt - Chief Cook	Rickey Tumma – 2 nd Cook	Charley Arey – Camp Attendant
Gerald Panaktalok – Camp Maintenance			
E. Gruben's Transport - Wildlife Monitors			
Opi Anikina	Wayne Thrasher		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling excavated soil and borrow material
1	CAT 322C Excavator	Excavating contaminated soil areas
1	Hitachi EX200 Excavator	Working in borrow pit
1	CAT 14G Grader	Grading road when required
1	Small Komatsu D31PX Dozer	Regrading soil disposal areas, spreading backfilling over Airstrip PHC contaminated soil areas.
1	CAT D6 Dozer	Regrading soil disposal sites
1	CAT 1108 Loader	Dragging roads and airstrip.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM personnel
4	ATVs and Trailers	Used by Wildlife monitor and camp staff
1	CAT TL1055 Telehandler	Idle
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Hauling borrow material
1	Aluminum boat	Idle

SUBMITTED BY:

Barry Fedorak, P.Eng.

Departmental Representative
AECOM Canada Ltd.
barry.fedorak@aecom.com
Date August 15, 2009

Weekly Site Report

(For Period Ending Saturday, August 22, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0	Contract Authority: Public Works and Government Services Canada Telus Tower North 5 th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842
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To: Barry Fedorak

Firm: AECOM Canada Ltd.

Site Phone: (403) 450-9929

Date: August 22, 2009

Page 1 of 10

From: Greg Wright

C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	August 16	August 17	August 18	August 19	August 20	August 21	August 22
Temp	Cool to mild	Cool	Cool	Cool	Cool to cold	Cool to mild	Cool
Conditions	Overcast/ cloudy and partly foggy	Overcast	Overcast	Partly Cloudy	Cloudy	Partly cloudy, becoming clear in afternoon	Clear
Ceiling	>1000m	<500m	500-1000m	1000m to unlimited	500-1000m	500m to unlimited	Unlimited
Visibility	15+ km		Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
Precip	None	Occasional light showers	None	None	None	None	None
Wind	Light wind	Light	Moderate from South	Light to Moderate from South	Moderate wind from South	Moderate wind from West	Moderate to strong wind from North
Wildlife	Some migrating birds (loons, king eider ducks, gulls, etc), seals on ice in channel.						
Other	Channel is mostly ice-free.						

2.0 Health and Safety

- No Health and Safety issues to report.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 24.7 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- EGT continued discharging water from Apron Area excavations via 2" hose to the authorized discharge location throughout week. Water discharged on top of plywood sheet to reduce erosion at discharge point. Samples of this water had previously been tested by AECOM and shown to not exceed discharge criteria. An oil absorbent boom was deployed around the pump intake to capture potential hydrocarbon sheen.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8		
1-Jul-09	15.1		
4-Jul-09	15.8		
7-Jul-09	14.1		
10-Jul-09	10.6		
June 30-July 9	-	95	
13-Jul-09	10.6		
15-Jul-09	14.1		
17-Jul-09	12.3		
21-July-09	10.6		
23-July-09	13.2		
24 - 29 July-09		115.0	
27-Jul-09	10.6		
30-Jul-09	8.8		
02-Aug-09	10.6		
05-Aug-09	12.3		
08-Aug-09	12.3		
10-Aug-09	12.3		
13-Aug-09	14.1		
15-Aug-09	10.6		
19-Aug-09	14.1		
19-21 August 09		40.0	
21-Aug-09	10.6		

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 18:00 on August 18th with 4 passengers including Russel Newmark, Greg Wright, Priya Handa and one other EGT Staff. The plane departed at approximately 20:00.
- A DC3 operated by AKLAK Air landed on site at approximately 12:30 on August 21st with 10 passengers including Michael Bernardin, Katherine Silcock, Joel Gowman, Glenn Sorenson, Jan Davies, Sarah Mackenzie, Russel Newark and 3 EGT staff. The plane departed at approximately 17:30 with all personnel listed above and EGT staff going out on rotation.
- Helicopter arrived on site at approximately 10:30 on August 16th with Joel Gowman and pilot on board. Helicopter proceeded to Ulukhaktok to pick up flight engineer, but was delayed there due to weather. Pilot and flight engineer arrived at 20:30. Proceeded to Unnamed Island in the straight (approx 3 miles from Johnson Point) to collect barrels. Returned at 21:30 with 17 barrels.
- Barge from Ulukhaktok arrived at 18:00 on August 17th, carrying with it the Type 1 material. Offloading of the Type 1 material was initiated at 21:00 pm and was completed by mid-day on August 18th. The barge was then loaded with demolition debris, haz waste, idle equipment, etc. The barge left Johnson Point at 16:30 on August 19th.

5.0 CAMP OPERATIONS

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Medic has all necessary medical supplies on site.
- Camp water taken from Unnamed River.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon.
- Work day starts with a job and safety briefing.

6.0 WORK ACTIVITIES

General

- Work activities concentrated on backfilling soil excavations where confirmatory samples meet the near shore criteria. Also, offloading and loading the barge took the better part of 3 days.

Access Road/ Airstrip

- In addition to general backfill of Lobe P Area, two road crossing were backfilled across Part 4 and 6 in the Southwest Plume to facilitate access through this excavation area.

Demolition

- All demolition work has been completed.
- Bedding sand from Tanks 14 and 15 were placed in seacans for offsite disposal. 20 seacans (mostly from Tank 15) were sent on the August 19th barge and 7 seacans remain onsite to be sent on the final demob barge.

Debris Collection

- Debris collection from within the main station sumps. Debris included torn barrels and other miscellaneous non-hazardous debris.

Buried Debris Excavations:

- All buried debris excavations have been completed.

PHC Contaminated Soil Excavations

Main Station Hydrocarbon excavation:

- Awaiting results from the additional excavating and sampling that took place on August 12th. Delineation samples to be collected should additional excavation be required.

Apron Area (NE & SW Plume) Hydrocarbon excavations:

By August 15th, approximately 95% of the Apron Area design plumes have been excavated to design depth and confirmatory sampled. However, significant hydrocarbon contamination has been identified outside of the original spec areas. In all cases the contamination extends to a depth significantly deeper than any other contaminated areas previously identified onsite. Also, the contamination is located in a water-saturated gravel layer. The lateral and vertical delineation of the contamination is unknown as the boundaries of the gravel layer were not reached. Based on a discussions during the onsite monthly progress meeting, it was concluded that the most suitable approach is to halt any further excavation at depth and excavate only where the top 30 cm exceeds the near shore criteria.

Monitoring wells and thermistors were discussed for the extensive excavation north of N9/N10; however, the design and requirements of the monitoring wells and thermistors is to be determined.

In excavated areas where contamination remains at depth (i.e. confirmatory samples of the base and/or walls are above the near shore criteria), the perimeter walls are to be sampled to confirm that the top 30 cm was below the F1 and F2 guidelines. This is the scenario for the following excavations: northeast of N9/N10, south of N15, northwest of Lobe X, two points along the south perimeter of the SW plume, east of M10 and north and south of Part 4 along the beach. Delineation samples, from the same soil horizon (i.e. top 30 cm), will also be taken in these areas should the perimeter wall samples exceed criteria. Additionally, samples will be collected from the base of the walls in these locations to indicate the level of contamination being left in place.

- **NE Plume - Lobe Z and Part 1** –Part 1 and Lobe Z have been excavated to design depth and confirmatory testing shows results below criteria. A large portion of Part 1 from the border of Part 2 to the limit between N9 and N15 has also been tested and shows results below criteria. Backfilling has begun in this area. Contamination at depth remains east of the N9 and N15 limit and north of N10/N11. Further excavation was initiated towards the north, however what was thought to be a relatively thin seam of gravel became extensive (extends beyond 2.7m below grade). Excavation was halted pending further investigation and direction from PWGSC and INAC for excavation of areas beyond and deeper than design extents. As per the decision made on August 21st, no further excavation will be completed at depth in this area. Perimeter walls will be sample at 0-30 cm and at the base for the excavation north of N10/N11 and in the immediate vicinity of N15. Delineation samples of the 0-30 cm horizon will also be collected should excavation be required. Backfilling of this excavation will not take place until samples have been collected and details of monitoring wells/thermistors have been concluded.

- **NE Plume – Lobe P** – All confirmatory samples meet criteria. Backfilling continues.
- **NE Plume – Part 2** - Once backfilling has progressed from Part 1 toward Part 2, the small dike left in place between Part 1 and Part 2 will be removed and hauled for disposal. Backfilling will progress towards the perimeter berm along the river. Water within the excavation will be pumped (to the greywater discharge location) as necessary.
- **SW Plume (Part 1)** – Backfilling continued throughout the west half of Part 1. No further confirmatory sampling or excavation will be conducted in the area immediately adjacent to the lake. The extension on the NE side requires confirmatory sampling, but no further excavation. In the excavation near M2/M3, where a box labeled as “EXPLOSIVES” was encountered, no further excavation will take place. Confirmatory sampling will be completed along the base and walls. Delineation samples of the top 30cm will also be collected.
- **Lobe X** – Sample results indicated that the base was above the near shore criteria. No further excavation will take place in this area. Confirmatory samples will be collected from the base of the excavation to have on record any contamination left in place. Samples will also be collected to the west along the high water mark to evaluate potential contamination that exists in the 0-30 cm horizon in that area. Surface samples (i.e. 0-30 cm) will also be taken to the north-northeast of Lobe X to delineate potential surface soils that may require excavation.
- **SW Plume (Part 2)** – All confirmatory samples meet criteria.
- **SW Plume (Part 3)** - Confirmatory samples of the last remaining base sample points were sent on the August 21st charter. Based on the approach moving forward, no further vertical excavation will be conducted in this area. Two wall samples were found to exceed the near shore criteria, however the samples were composites of the entire wall height. Consequently, the top 30 cm in these areas will be resampled. Delineation samples of the top 30 cm will also be collected. Additionally, confirmatory sample results from further excavating to the south (near M16) have not yet been received.
- **SW Plume (Part 4)** – No additional excavation or backfilling has been completed. Results for the testpit program along the beach have not yet been received. Based on the approach moving forward, samples will be collected from the top 30 cm along the excavation walls and in locations away from the excavation in order to provide delineation (if required).
- **SW Plume (Part 5)** – Part 5 was partially excavated this week. Design depth was not reached because of permafrost and based on the revised approach for this area, no further vertical excavating will take place. Confirmatory samples were collected from the base and the perimeter walls. The top 30 cm of the wall and delineation samples of the surface soils will also be collected.
- **SW Plume (Part 6)** – Two wall samples were found to exceed the near shore criteria, however the samples were composites of the entire wall height. Consequently, discrete samples from the base will be collected. The top 30 cm of the wall and delineation samples of the top 30 cm will also be collected.
- **SW Plume - Lobe Y and J** – Excavation was completed in these areas and confirmatory samples were taken. The remainder of this area has been approved for backfill.

Contaminated Soil Treatment

- A total of 40 loads are located in the treatment cell, including 14 loads from area north of Lobe P, 6 loads from Lobe X and 20 Loads from the Main Station depth excavation extension.
- Results from samples of the first row (east) indicate the soil has been treated. That material will be removed from the cell and disposed at soil disposal area 2.

Earthworks

Landfill Regrade A:

- As per the monthly progress meeting held on August 21st, drains were installed in the ditches that exist within Landfill A regrade area. The drain design involved laying out geotextile fabric along the length of the ditch, placing approximately 18" of Type 1 material, folding the geotextile over the top of the Type 1 and covering with Type 2 material to the specified elevation. The ditches were surveyed before the geotextile liner was put in place (to obtain original elevations and extents of the ditches) and after the Type 1 material was placed on top (to obtain the thickness and volume of the Type 1 layer). Approximately 1 load of Type 1 material was used to construct each of the drains. As built drawings will be completed once the survey is available.
- Previously stockpiled material placed after initial base soils had dried out. Material from Borrow B and Borrow 6 to be blended. Regrades continue.

Landfill Regrade B:

- Densities completed and meet specification of 95% SPDD. Final survey required.

Landfill Regrade C:

- Densities completed and meet specification of 95% SPDD. Final survey required.

Landfill Regrade D:

No new work in past 7 days. Final survey required.

Excavation Backfill:

Placing of Type 3 from Borrow B in excavations. Initial lift thickness exceeds specification, but needed to establish a stable base for additional lifts. Contractor reminded to keep lifts within acceptable thickness when applicable, and that sufficient track packing take place between lifts.

Soil Disposal Areas:

Limited time spent on reshaping the original soil disposal location. Lands inspector (Glenn Sorensen) asked to have the sides reshaped to reduce the grade slightly. Both disposal areas require more reshaping, compacting and recontouring before they are complete.

Barrels/ Hazardous Materials

- Leachable lead painted materials have been placed, secured and sealed in two Marine Shipping Containers. The containers were sent on the August 19th barge.
- Sampled 5 barrels that INAC brought to site (barrel collection project).

Borrow

- Two sieves completed on Type 2 material (Sample IDs: JP-22 and JP-23):
 - All of the sieve results indicate that the material requires coarser fractions to meet specification and these coarser fractions are generally not available on site.
- Type 1 material arrived on barge. Material offloaded and stockpiled on the airstrip adjacent to the wind sock.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Continue backfilling cleared areas of SW and NE plume.
- Continue backfilling of Sumps SW of Landfill A.
- Continue final lifts and regrades for all landfills. Continue to place Type 1 material where required.
- Continue reshaping soil disposal locations.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Greg Wright - Departmental Representative		Priya Handa – Environmental Inspector	
Chris Kjarsgaard – Geotechnical Inspector			
E. Gruben's Transport – Work crew			
Jim Stevens – Site Superintendent	Richard Gibson – Surveyor (to Aug 18 only)	Sam Bird (IEG) – PHC Specialist	Andy Surinak - Operator
Fred Voudrach - Operator	Mel Weber – Operator	Jed Stefure - Operator	Kelvin Elias - Operator
Eddie Lucas – Truck Driver	Murray Elias – Labour	Lee John Panaktalok – Labour	Art Adey - Operator
Fred Gruben Jr. - Trucker	Percy Chabun – Operator	Dusty Carrothers - Mechanic	Toby Stefure - Operator
E. Gruben's Transport - Camp staff			
Thomas Strachan - Medic	John Bernhardt - Chief Cook	Rickey Tumma – 2 nd Cook	Charley Arey – Camp Attendant
Gerald Panaktalok – Camp Maintenance			
E. Gruben's Transport - Wildlife Monitors			
Spencer Mangelena	Wayne Thrasher		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
1	JCB 722 Rock Truck	Hauling excavated soil and borrow material
1	CAT 322C Excavator	Excavating contaminated soil areas
1	Hitachi EX200 Excavator	Working in borrow pit
1	CAT 14G Grader	Grading road when required
1	Small Komatsu D31PX Dozer	Regrading soil disposal areas, spreading backfilling over Airstrip PHC contaminated soil areas.
1	CAT D6 Dozer	Regrading soil disposal sites
1	CAT 1108 Loader	Dragging roads and airstrip.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM personnel
4	ATVs and Trailers	Used by Wildlife monitor and camp staff
1	CAT TL1055 Telehandler	Idle
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Hauling borrow material
1	Aluminum boat	Idle

SUBMITTED BY:

Greg Wright, M.Sc.



Departmental Representative
AECOM Canada Ltd.
greg.wright@aecom.com
Date August 22, 2009

Weekly Site Report

(For Period Ending Saturday, August 22, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak

Firm: AECOM Canada Ltd.

Site Phone: (403) 450-9929

Date: August 22, 2009

Page 1 of 10

From: Greg Wright

C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	August 16	August 17	August 18	August 19	August 20	August 21	August 22
Temp	Cool to mild	Cool	Cool	Cool	Cool to cold	Cool to mild	Cool
Conditions	Overcast/ cloudy and partly foggy	Overcast	Overcast	Partly Cloudy	Cloudy	Partly cloudy, becoming clear in afternoon	Clear
Ceiling	>1000m	<500m	500-1000m	1000m to unlimited	500-1000m	500m to unlimited	Unlimited
Visibility	15+ km		Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
Precip	None	Occasional light showers	None	None	None	None	None
Wind	Light wind	Light	Moderate from South	Light to Moderate from South	Moderate wind from South	Moderate wind from West	Moderate to strong wind from North
Wildlife	Some migrating birds (loons, king eider ducks, gulls, etc), seals on ice in channel.						
Other	Channel is mostly ice-free.						

2.0 Health and Safety

- No Health and Safety issues to report.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 24.7 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- EGT continued discharging water from Apron Area excavations via 2" hose to the authorized discharge location throughout week. Water discharged on top of plywood sheet to reduce erosion at discharge point. Samples of this water had previously been tested by AECOM and shown to not exceed discharge criteria. An oil absorbent boom was deployed around the pump intake to capture potential hydrocarbon sheen.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8		
1-Jul-09	15.1		
4-Jul-09	15.8		
7-Jul-09	14.1		
10-Jul-09	10.6		
June 30-July 9	-	95	
13-Jul-09	10.6		
15-Jul-09	14.1		
17-Jul-09	12.3		
21-July-09	10.6		
23-July-09	13.2		
24 - 29 July-09		115.0	
27-Jul-09	10.6		
30-Jul-09	8.8		
02-Aug-09	10.6		
05-Aug-09	12.3		
08-Aug-09	12.3		
10-Aug-09	12.3		
13-Aug-09	14.1		
15-Aug-09	10.6		
19-Aug-09	14.1		
19-21 August 09		40.0	
21-Aug-09	10.6		

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 18:00 on August 18th with 4 passengers including Russel Newmark, Greg Wright, Priya Handa and one other EGT Staff. The plane departed at approximately 20:00.
- A DC3 operated by AKLAK Air landed on site at approximately 12:30 on August 21st with 10 passengers including Michael Bernardin, Katherine Silcock, Joel Gowman, Glenn Sorenson, Jan Davies, Sarah Mackenzie, Russel Newark and 3 EGT staff. The plane departed at approximately 17:30 with all personnel listed above and EGT staff going out on rotation.
- Helicopter arrived on site at approximately 10:30 on August 16th with Joel Gowman and pilot on board. Helicopter proceeded to Ulukhaktok to pick up flight engineer, but was delayed there due to weather. Pilot and flight engineer arrived at 20:30. Proceeded to Unnamed Island in the straight (approx 3 miles from Johnson Point) to collect barrels. Returned at 21:30 with 17 barrels.
- Barge from Ulukhaktok arrived at 18:00 on August 17th, carrying with it the Type 1 material. Offloading of the Type 1 material was initiated at 21:00 pm and was completed by mid-day on August 18th. The barge was then loaded with demolition debris, haz waste, idle equipment, etc. The barge left Johnson Point at 16:30 on August 19th.

5.0 CAMP OPERATIONS

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Medic has all necessary medical supplies on site.
- Camp water taken from Unnamed River.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon.
- Work day starts with a job and safety briefing.

6.0 WORK ACTIVITIES

General

- Work activities concentrated on backfilling soil excavations where confirmatory samples meet the near shore criteria. Also, offloading and loading the barge took the better part of 3 days.

Access Road/ Airstrip

- In addition to general backfill of Lobe P Area, two road crossing were backfilled across Part 4 and 6 in the Southwest Plume to facilitate access through this excavation area.

Demolition

- All demolition work has been completed.
- Bedding sand from Tanks 14 and 15 were placed in seacans for offsite disposal. 20 seacans (mostly from Tank 15) were sent on the August 19th barge and 7 seacans remain onsite to be sent on the final demob barge.

Debris Collection

- Debris collection from within the main station sumps. Debris included torn barrels and other miscellaneous non-hazardous debris.

Buried Debris Excavations:

- All buried debris excavations have been completed.

PHC Contaminated Soil Excavations

Main Station Hydrocarbon excavation:

- Awaiting results from the additional excavating and sampling that took place on August 12th. Delineation samples to be collected should additional excavation be required.

Apron Area (NE & SW Plume) Hydrocarbon excavations:

By August 15th, approximately 95% of the Apron Area design plumes have been excavated to design depth and confirmatory sampled. However, significant hydrocarbon contamination has been identified outside of the original spec areas. In all cases the contamination extends to a depth significantly deeper than any other contaminated areas previously identified onsite. Also, the contamination is located in a water-saturated gravel layer. The lateral and vertical delineation of the contamination is unknown as the boundaries of the gravel layer were not reached. Based on a discussions during the onsite monthly progress meeting, it was concluded that the most suitable approach is to halt any further excavation at depth and excavate only where the top 30 cm exceeds the near shore criteria.

Monitoring wells and thermistors were discussed for the extensive excavation north of N9/N10; however, the design and requirements of the monitoring wells and thermistors is to be determined.

In excavated areas where contamination remains at depth (i.e. confirmatory samples of the base and/or walls are above the near shore criteria), the perimeter walls are to be sampled to confirm that the top 30 cm was below the F1 and F2 guidelines. This is the scenario for the following excavations: northeast of N9/N10, south of N15, northwest of Lobe X, two points along the south perimeter of the SW plume, east of M10 and north and south of Part 4 along the beach. Delineation samples, from the same soil horizon (i.e. top 30 cm), will also be taken in these areas should the perimeter wall samples exceed criteria. Additionally, samples will be collected from the base of the walls in these locations to indicate the level of contamination being left in place.

- **NE Plume - Lobe Z and Part 1** –Part 1 and Lobe Z have been excavated to design depth and confirmatory testing shows results below criteria. A large portion of Part 1 from the border of Part 2 to the limit between N9 and N15 has also been tested and shows results below criteria. Backfilling has begun in this area. Contamination at depth remains east of the N9 and N15 limit and north of N10/N11. Further excavation was initiated towards the north, however what was thought to be a relatively thin seam of gravel became extensive (extends beyond 2.7m below grade). Excavation was halted pending further investigation and direction from PWGSC and INAC for excavation of areas beyond and deeper than design extents. As per the decision made on August 21st, no further excavation will be completed at depth in this area. Perimeter walls will be sample at 0-30 cm and at the base for the excavation north of N10/N11 and in the immediate vicinity of N15. Delineation samples of the 0-30 cm horizon will also be collected should excavation be required. Backfilling of this excavation will not take place until samples have been collected and details of monitoring wells/thermistors have been concluded.

- **NE Plume – Lobe P** – All confirmatory samples meet criteria. Backfilling continues.
- **NE Plume – Part 2** - Once backfilling has progressed from Part 1 toward Part 2, the small dike left in place between Part 1 and Part 2 will be removed and hauled for disposal. Backfilling will progress towards the perimeter berm along the river. Water within the excavation will be pumped (to the greywater discharge location) as necessary.
- **SW Plume (Part 1)** – Backfilling continued throughout the west half of Part 1. No further confirmatory sampling or excavation will be conducted in the area immediately adjacent to the lake. The extension on the NE side requires confirmatory sampling, but no further excavation. In the excavation near M2/M3, where a box labeled as “EXPLOSIVES” was encountered, no further excavation will take place. Confirmatory sampling will be completed along the base and walls. Delineation samples of the top 30cm will also be collected.
- **Lobe X** – Sample results indicated that the base was above the near shore criteria. No further excavation will take place in this area. Confirmatory samples will be collected from the base of the excavation to have on record any contamination left in place. Samples will also be collected to the west along the high water mark to evaluate potential contamination that exists in the 0-30 cm horizon in that area. Surface samples (i.e. 0-30 cm) will also be taken to the north-northeast of Lobe X to delineate potential surface soils that may require excavation.
- **SW Plume (Part 2)** – All confirmatory samples meet criteria.
- **SW Plume (Part 3)** - Confirmatory samples of the last remaining base sample points were sent on the August 21st charter. Based on the approach moving forward, no further vertical excavation will be conducted in this area. Two wall samples were found to exceed the near shore criteria, however the samples were composites of the entire wall height. Consequently, the top 30 cm in these areas will be resampled. Delineation samples of the top 30 cm will also be collected. Additionally, confirmatory sample results from further excavating to the south (near M16) have not yet been received.
- **SW Plume (Part 4)** – No additional excavation or backfilling has been completed. Results for the testpit program along the beach have not yet been received. Based on the approach moving forward, samples will be collected from the top 30 cm along the excavation walls and in locations away from the excavation in order to provide delineation (if required).
- **SW Plume (Part 5)** – Part 5 was partially excavated this week. Design depth was not reached because of permafrost and based on the revised approach for this area, no further vertical excavating will take place. Confirmatory samples were collected from the base and the perimeter walls. The top 30 cm of the wall and delineation samples of the surface soils will also be collected.
- **SW Plume (Part 6)** – Two wall samples were found to exceed the near shore criteria, however the samples were composites of the entire wall height. Consequently, discrete samples from the base will be collected. The top 30 cm of the wall and delineation samples of the top 30 cm will also be collected.
- **SW Plume - Lobe Y and J** – Excavation was completed in these areas and confirmatory samples were taken. The remainder of this area has been approved for backfill.

Contaminated Soil Treatment

- A total of 40 loads are located in the treatment cell, including 14 loads from area north of Lobe P, 6 loads from Lobe X and 20 Loads from the Main Station depth excavation extension.
- Results from samples of the first row (east) indicate the soil has been treated. That material will be removed from the cell and disposed at soil disposal area 2.

Earthworks

Landfill Regrade A:

- As per the monthly progress meeting held on August 21st, drains were installed in the ditches that exist within Landfill A regrade area. The drain design involved laying out geotextile fabric along the length of the ditch, placing approximately 18" of Type 1 material, folding the geotextile over the top of the Type 1 and covering with Type 2 material to the specified elevation. The ditches were surveyed before the geotextile liner was put in place (to obtain original elevations and extents of the ditches) and after the Type 1 material was placed on top (to obtain the thickness and volume of the Type 1 layer). Approximately 1 load of Type 1 material was used to construct each of the drains. As built drawings will be completed once the survey is available.
- Previously stockpiled material placed after initial base soils had dried out. Material from Borrow B and Borrow 6 to be blended. Regrades continue.

Landfill Regrade B:

- Densities completed and meet specification of 95% SPDD. Final survey required.

Landfill Regrade C:

- Densities completed and meet specification of 95% SPDD. Final survey required.

Landfill Regrade D:

No new work in past 7 days. Final survey required.

Excavation Backfill:

Placing of Type 3 from Borrow B in excavations. Initial lift thickness exceeds specification, but needed to establish a stable base for additional lifts. Contractor reminded to keep lifts within acceptable thickness when applicable, and that sufficient track packing take place between lifts.

Soil Disposal Areas:

Limited time spent on reshaping the original soil disposal location. Lands inspector (Glenn Sorensen) asked to have the sides reshaped to reduce the grade slightly. Both disposal areas require more reshaping, compacting and recontouring before they are complete.

Barrels/ Hazardous Materials

- Leachable lead painted materials have been placed, secured and sealed in two Marine Shipping Containers. The containers were sent on the August 19th barge.
- Sampled 5 barrels that INAC brought to site (barrel collection project).

Borrow

- Two sieves completed on Type 2 material (Sample IDs: JP-22 and JP-23):
 - All of the sieve results indicate that the material requires coarser fractions to meet specification and these coarser fractions are generally not available on site.
- Type 1 material arrived on barge. Material offloaded and stockpiled on the airstrip adjacent to the wind sock.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Continue backfilling cleared areas of SW and NE plume.
- Continue backfilling of Sumps SW of Landfill A.
- Continue final lifts and regrades for all landfills. Continue to place Type 1 material where required.
- Continue reshaping soil disposal locations.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Greg Wright - Departmental Representative		Priya Handa – Environmental Inspector	
Chris Kjarsgaard – Geotechnical Inspector			
E. Gruben's Transport – Work crew			
Jim Stevens – Site Superintendent	Richard Gibson – Surveyor (to Aug 18 only)	Sam Bird (IEG) – PHC Specialist	Andy Surinak - Operator
Fred Voudrach - Operator	Mel Weber – Operator	Jed Stefure - Operator	Kelvin Elias - Operator
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E. Gruben's Transport - Camp staff			
Thomas Strachan - Medic	John Bernhardt - Chief Cook	Rickey Tumma – 2 nd Cook	Charley Arey – Camp Attendant
Gerald Panaktalok – Camp Maintenance			
E. Gruben's Transport - Wildlife Monitors			
Spencer Mangelena	Wayne Thrasher		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
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1	CAT 950 Loader	Used by mechanic
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2	John Deere Gator XUV 4X4	Used by AECOM personnel
4	ATVs and Trailers	Used by Wildlife monitor and camp staff
1	CAT TL1055 Telehandler	Idle
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Hauling borrow material
1	Aluminum boat	Idle

SUBMITTED BY:

Greg Wright, M.Sc.



Departmental Representative
AECOM Canada Ltd.
greg.wright@aecom.com
Date August 22, 2009

Weekly Site Report

(For Period Ending Saturday, August 29, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak
Firm: AECOM Canada Ltd.
Site Phone: (403) 450-9929
Date: August 29, 2009
Page 1 of 9
From: Brendon Norrie
C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	August 23	August 24	August 25	August 26	August 27	August 28	August 29
Temp	Cool	Cool	Cold	Warm	Cool to cold	Cool	Cool
Conditions	Partly cloudy	Cloudy/ Overcast	Cloudy, becoming clear in afternoon	Clear	Cloudy	Overcast/ low cloud/ fog	Overcast/ low cloud/ fog
Ceiling	>1000m	1000m	1500m to unlimited	Unlimited	500-1000m	200m	250m
Visibility	Unlimited	15 km vis	Unlimited	Unlimited	Unlimited	2 km	5-10 km
Precip	None	Light rain overnight	None	None	None	None	Heavy rain overnight
Wind	Moderate to strong from North	Moderate to strong from North	Strong from North	Moderate from South, becoming Still	Moderate wind from South	Still	Still
Wildlife	Some migrating birds (loons, king eider ducks, gulls, Canada geese etc), seals on ice in channel. Polar bears (mother and 2 cubs) spotted on ice approximately 300 yds north of airstrip.						
Other	Concentration of ice in channel varied throughout the week. Fair amount travelled from north during days with strong winds. Rains over night August 28-29 th filled the base of the excavations that remain open.						

2.0 Health and Safety

- No Health and Safety issues to report.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 38.8 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- EGT continued discharging water from Apron Area excavations via 2" hose to the authorized discharge location throughout week. Water discharged on top of plywood sheet to reduce erosion at discharge point. Samples of this water had previously been tested by AECOM and shown to not exceed discharge criteria. An oil absorbent boom was deployed around the pump intake.
- Continuous discharge of grey water continued to approved discharge area.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8	-	-
1-Jul-09	15.1	-	-
4-Jul-09	15.8	-	-
7-Jul-09	14.1	-	-
10-Jul-09	10.6	-	-
June 30-July 9	-	95	authorized site
13-Jul-09	10.6	-	-
15-Jul-09	14.1	-	-
17-Jul-09	12.3	-	-
21-July-09	10.6	-	-
23-July-09	13.2	-	-
24 - 29 July-09		115.0	authorized site
27-Jul-09	10.6	-	-
30-Jul-09	8.8	-	-
02-Aug-09	10.6	-	-
05-Aug-09	12.3	-	-
08-Aug-09	12.3	-	-
10-Aug-09	12.3	-	-
13-Aug-09	14.1	-	-
15-Aug-09	10.6	-	-
19-Aug-09	14.1	-	-
19-21 August 09		40.0	authorized site
21-Aug-09	10.6	-	-
23-Aug-09	8.8	-	-
27-Aug-09	10.6	-	-
29-Aug-09	8.8	-	-
23-29 Aug		60.0	authorized site

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 6:30pm on August 27th with thermistor/ monitoring well supplies and 3 passengers including DR relief. The plane departed at approximately 7:30pm.

5.0 CAMP OPERATIONS

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Medic has all necessary medical supplies on site.
- Camp water taken from Unnamed River.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon.
- Work day starts with a job and safety briefing.

6.0 WORK ACTIVITIES

General

- Work activities concentrated on backfilling soil excavations and landfill regrades.

Access Road/ Airstrip

- Ongoing repairs and maintenance of airstrip road crossing

Demolition

- All demolition work has been completed.
- 7 SeaCans of PHC bedding sand remain onsite.

Debris Collection

- N/A.

Buried Debris Excavations:

- All buried debris excavations have been completed and backfilled.

PHC Contaminated Soil Excavations

Main Station Hydrocarbon excavation:

- All confirmatory results have been received and are below the SSSL.
- Backfilling/ recontouring of the excavation using surrounding berm material was undertaken with the D6 on August 28/ 29th.
- Some investigation phase monitoring wells were removed from around the excavation.

Apron Area (NE & SW Plume) Hydrocarbon excavations:

- **NE Plume - Lobe Z and Part 1** – As per the decision made on August 21st, no further excavation will be completed at depth in this area. The majority of the backfilling of the area west of N9/N15 boundary was completed by August 24th. Backfilling continued on Part 1 up to N10/N11 boundary; however the area north of that remained open so that monitoring wells and/or thermistors could be installed. Perimeter walls were sampled at 0-30 cm and at the base for the excavation north of N10/N11 and in the immediate vicinity of N15. Delineation samples of the 0-30 cm horizon were also collected 6m out from the wall should excavation be required. Backfilling of this excavation will not take place until samples have been collected.
- **NE Plume – Lobe P** – All confirmatory samples meet criteria. Backfilling completed.
- **NE Plume – Part 2** - The small dike left in place between Part 1 and Part 2 was removed on August 23rd, and hauled for disposal to disposal area 2. Backfilling along the river took place during the August 25th nightshift, between the hours of 1 am and 6 am. The area was backfilled by progressing the backfilling to approximately 10 feet from the river, then entering the trough and pushing the water and saturated soil to the west end of the trough. The water and saturated soil was corralled in the corner as to allow backfilling of the excavation to progress on a dry, solid base. The water and saturated soil is to be pumped or otherwise removed from the excavation prior to backfilling the remainder of the excavation.
- **SW Plume (Part 1)** – Backfilling continued throughout the west half of Part 1. No further confirmatory sampling or excavation will be conducted in the area immediately adjacent to the lake. Confirmatory samples were collected from the NE extension; however no additional excavation will take place as per the August 21st meeting. In the excavation near M2/M3, where a box labeled as “EXPLOSIVES” was encountered, though no explosive material was found. Confirmatory sampling was completed (“EXPLOSIVE” area) and delineation samples of the top 30cm were also collected along the walls of the M2/M3 excavation extension. The Contractor was requested to not use surface soil for backfilling purposes in that area until samples are tested as they are needed to cover contamination left in place.
- **Lobe X** – Confirmatory samples were collected from the base of the excavation. Samples were also collected to the west along the high water mark to evaluate potential contamination that exists in the 0-30 cm horizon in that area, as well as surface samples to the north-northeast of Lobe X to delineate potential surface soils that may require excavation.
- **SW Plume (Part 2)** – All confirmatory samples meet criteria. Backfilling commenced on August 26th.
- **SW Plume (Part 3)** – Latest confirmatory samples indicate exceedances remaining in three spots along the south perimeter of Part 3. These include the expanded excavation area near M16 and M17, a point in the immediate vicinity to M17 and one point in the immediate vicinity of M15. The top 30 cm in these areas was sampled and delineation samples of the top 30 cm were also collected this week.
- **SW Plume (Part 4)** – No additional excavation has been completed. Results for the testpit program along the beach indicate that all samples exceed the near shore criteria. It should be known however that these samples were collected from the base of the excavation, at an average depth of 1.3 m. Based on the agreed approach moving forward, samples were collected from the top 30 cm along the excavation walls and in locations 6, 12 and 24m away from the excavation to provide delineation (if required). Backfilling from the airstrip toward the ocean commenced on August 25th, and was completed using Type 2 material. Backfilling progressed to the boundary between the airstrip and the beach. The remainder of the excavation will be backfilled using course sand material from Borrow 6.

- **SW Plume (Part 5)** – No additional excavation has been completed and backfilling commenced on August 23rd. Samples were collected from the base and the perimeter walls. The top 30 cm of the wall and top 30 cm delineation samples out from the wall were also collected.
- **SW Plume (Part 6)** – Two wall samples were found to exceed the near shore criteria, however the samples were composites of the entire wall height. Discrete samples from the base were collected, along with samples of the top 30 cm of the wall and delineation samples of the top 30 cm out from the wall.
- **SW Plume - Lobe Y and J** - Backfilling in this area began on August 23rd.
- All soil samples taken from excavations were sent to lab on August 27th flight. Results are expected by Wednesday September 2nd.

Contaminated Soil Treatment

- Results from samples of the remaining soil in the treatment cell indicate the material is suitable for disposal. The material was removed from the cell on August 26th and disposed at soil disposal area 2.
- IEG will be completing confirmatory sampling of the base material within the cell, as well as sampling of the soil below the cell liner.

Earthworks

Landfill Regrade A:

- Type 2 material placement and compaction was completed on August 29th. Compared with final design elevations, some areas were high and some low by up to 300mm but DR approved final surface based on sufficient cover and ability of surface to shed water. Simply replicating natural ground surface with 1m of fill would create mounds and depressions with potential for ponding or erosion.
- Compaction tests on final lift all meet specified compaction of 95% SPDD.
- Placement of Type 1 material commenced in afternoon of August 29th.
- Drains within base layer of regrade are draining water as intended.

Landfill Regrade B:

- Survey indicated that Type 2 cover is still required. Contractor directed to pump out the pond north of the regrade area to achieve cover thickness and compaction.

Landfill Regrade C:

- Final lift (<100mm) was placed on the regrade area on August 24th. Grade stakes were put in place to indicate thickness of Type 1 cover. Hauling and placing of Type 1 material was started on August 25th and was completed on August 26th. A final survey is required to confirm specified cover thickness has been achieved.

Landfill Regrade D:

- Type 1 material placed around perimeter slopes on August 27th and 28th.

Excavation Backfill:

- Type 3 from Borrow B and 6 hauled and placed in excavations. Initial lift thickness exceeded specification in most areas, but needed to do so to establish a stable base for the following lifts. Contractor reminded to keep lifts within acceptable thickness when applicable, and that sufficient track packing take place between lifts.
- Regrades on airstrip area commenced on August 23rd. Backfilling was completed in thin lifts (200mm or less). All three airstrip lifts placed so far were tested for compaction and met the specified compaction of 100% SPDD. One final lift needs to be placed, compacted and tested.

Sump Backfill:

- The two (now empty) sumps/ ponds in the station were backfilled on August 29th with Type 3 material from Borrow Area 6.
- Survey of the final sump area to be completed

Soil Disposal Areas:

- Limited time spent on reshaping the original soil disposal location. Both disposal areas require more reshaping, compacting and recontouring before they are complete. Disposal Area 1 shaping is approximately 95% complete, no more material is being placed in Disposal Area 1. Additional shaping still required. Disposal area 2 shaping is approximately 95% complete. Additional placement of material from treatment cell 95% completed, still some residual treatment cell material to be placed early next week.

Barrels/ Hazardous Materials

- Leachable lead painted materials have been placed, secured and sealed in two Marine Shipping Containers. The containers were sent on the August 19th barge.
- Barrels JPB-01 through JBP-05 (solid materials) have been consolidated into one lined SeaCan to be disposed of off-site as Tier II soil.
- Washing of barrel collected during separate INAC project continues.
- SeaCans with asbestos, Tier 2 soils, batteries and transformers were closed and banded.
- Hazmat processing area dismantled.

Borrow

- Sample JP-24 for sieve and standard proctors completed on Type 2 material, placed in airstrip excavation.
 - Material sieve results indicate that the material requires coarser fractions to meet specification.

Apron Area Instrumentation Installation Program

- 2" PVC Monitoring Wells MW09-01 through MW09-07 were installed on August 29th to depths of between 1.2m and 2.9m below ground level.
- Hollow, water-tight 2" PVC pipe was installed in two locations to 2.25m (T09-01) and approx 2.9m (T09-02) below ground level. The pipe will accommodate thermistors to be installed in the coming week.

7.0 SCHEDULE

The contractor’s plan for the coming week include:

- Continue backfilling cleared areas of SW and NE plume.
- Continue final lifts and regrades for all landfills. Continue to place Type 1 material where required.
- Continue reshaping soil disposal locations.
- Assist with installation of monitoring wells and thermistors.
- Reclaiming of Borrow Pits
- Removal of last of treated soil from treatment cell, decommissioning of cell and collection of confirmatory samples from below liner.
- Evaporation of aqueous barrel contents.
- Incineration or use of organic barrel contents in site equipment.
- Remaining survey requirements.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Brendon Norrie - Departmental Representative		Priya Handa – Environmental Inspector	
Chris Kjarsgaard – Geotechnical Inspector			
E. Gruben's Transport – Work crew			
Jim Stevens – Site Superintendent	Keith Cox – Surveyor	Dusty Carrothers - Mechanic	Andy Surinak - Operator
Fred Voudrach - Operator	Mel Weber – Operator	Jed Stefure - Operator	Kelvin Elias - Operator
Lee John Panaktalok – Labour	Art Adey - Operator	Wallace Panaktalok - Truck Driver	Percy Chabun – Operator
Simon Adams – operator			
E. Gruben's Transport - Camp staff			
Gerald Panaktalok – Camp Maintenance	John Bernhardt - Chief Cook	Rickey Tumma – 2 nd Cook	Charley Arey – Camp Attendant
Thomas Strachan - Medic			
E. Gruben's Transport - Wildlife Monitors			
Spencer Mangelena	Wayne Thrasher		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
2	JCB 722 Rock Trucks	Hauling borrow material for regrades and backfilling.
1	CAT 322C Excavator	Working in borrow pit
1	Excavator	Working in borrow pit
1	Hitachi EX200 Excavator	Placing Type 1 material
1	CAT 14G Grader	Grading road when required, grading airstrip backfill
1	Small Komatsu D31PX Dozer	Regrading soil disposal areas, backfilling over Airstrip, regrading landfills, backfilling excavations
1	CAT D6 Dozer	Regrading soil disposal sites and open excavations
1	CAT 1108 Loader	Dragging roads and airstrip, loading Type 1 material.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM, IEG and surveyor
4	ATVs and Trailers	Used by Wildlife monitor and camp staff
1	CAT TL1055 Telehandler	Idle
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Sent on August 19 th barge.
1	Aluminum boat	Idle

SUBMITTED BY:

Brendon Norrie, M.Sc., P.Geol.



Departmental Representative
AECOM Canada Ltd.

brendon.norrie@aecom.com

Date August 29, 2009

Weekly Site Report

(For Period Ending Saturday, August 29, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0	Contract Authority: Public Works and Government Services Canada Telus Tower North 5 th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842
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To: Barry Fedorak
Firm: AECOM Canada Ltd.
Site Phone: (403) 450-9929
Date: August 29, 2009
Page 1 of 9
From: Brendon Norrie
C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	August 23	August 24	August 25	August 26	August 27	August 28	August 29
Temp	Cool	Cool	Cold	Warm	Cool to cold	Cool	Cool
Conditions	Partly cloudy	Cloudy/ Overcast	Cloudy, becoming clear in afternoon	Clear	Cloudy	Overcast/ low cloud/ fog	Overcast/ low cloud/ fog
Ceiling	>1000m	1000m	1500m to unlimited	Unlimited	500-1000m	200m	250m
Visibility	Unlimited	15 km vis	Unlimited	Unlimited	Unlimited	2 km	5-10 km
Precip	None	Light rain overnight	None	None	None	None	Heavy rain overnight
Wind	Moderate to strong from North	Moderate to strong from North	Strong from North	Moderate from South, becoming Still	Moderate wind from South	Still	Still
Wildlife	Some migrating birds (loons, king eider ducks, gulls, Canada geese etc), seals on ice in channel. Polar bears (mother and 2 cubs) spotted on ice approximately 300 yds north of airstrip.						
Other	Concentration of ice in channel varied throughout the week. Fair amount travelled from north during days with strong winds. Rains over night August 28-29 th filled the base of the excavations that remain open.						

2.0 Health and Safety

- No Health and Safety issues to report.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 38.8 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- EGT continued discharging water from Apron Area excavations via 2" hose to the authorized discharge location throughout week. Water discharged on top of plywood sheet to reduce erosion at discharge point. Samples of this water had previously been tested by AECOM and shown to not exceed discharge criteria. An oil absorbent boom was deployed around the pump intake.
- Continuous discharge of grey water continued to approved discharge area.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8	-	-
1-Jul-09	15.1	-	-
4-Jul-09	15.8	-	-
7-Jul-09	14.1	-	-
10-Jul-09	10.6	-	-
June 30-July 9	-	95	authorized site
13-Jul-09	10.6	-	-
15-Jul-09	14.1	-	-
17-Jul-09	12.3	-	-
21-July-09	10.6	-	-
23-July-09	13.2	-	-
24 - 29 July-09		115.0	authorized site
27-Jul-09	10.6	-	-
30-Jul-09	8.8	-	-
02-Aug-09	10.6	-	-
05-Aug-09	12.3	-	-
08-Aug-09	12.3	-	-
10-Aug-09	12.3	-	-
13-Aug-09	14.1	-	-
15-Aug-09	10.6	-	-
19-Aug-09	14.1	-	-
19-21 August 09		40.0	authorized site
21-Aug-09	10.6	-	-
23-Aug-09	8.8	-	-
27-Aug-09	10.6	-	-
29-Aug-09	8.8	-	-
23-29 Aug		60.0	authorized site

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 6:30pm on August 27th with thermistor/ monitoring well supplies and 3 passengers including DR relief. The plane departed at approximately 7:30pm.

5.0 CAMP OPERATIONS

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Medic has all necessary medical supplies on site.
- Camp water taken from Unnamed River.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon.
- Work day starts with a job and safety briefing.

6.0 WORK ACTIVITIES

General

- Work activities concentrated on backfilling soil excavations and landfill regrades.

Access Road/ Airstrip

- Ongoing repairs and maintenance of airstrip road crossing

Demolition

- All demolition work has been completed.
- 7 SeaCans of PHC bedding sand remain onsite.

Debris Collection

- N/A.

Buried Debris Excavations:

- All buried debris excavations have been completed and backfilled.

PHC Contaminated Soil Excavations

Main Station Hydrocarbon excavation:

- All confirmatory results have been received and are below the SSTL.
- Backfilling/ recontouring of the excavation using surrounding berm material was undertaken with the D6 on August 28/ 29th.
- Some investigation phase monitoring wells were removed from around the excavation.

Apron Area (NE & SW Plume) Hydrocarbon excavations:

- **NE Plume - Lobe Z and Part 1** – As per the decision made on August 21st, no further excavation will be completed at depth in this area. The majority of the backfilling of the area west of N9/N15 boundary was completed by August 24th. Backfilling continued on Part 1 up to N10/N11 boundary; however the area north of that remained open so that monitoring wells and/or thermistors could be installed. Perimeter walls were sampled at 0-30 cm and at the base for the excavation north of N10/N11 and in the immediate vicinity of N15. Delineation samples of the 0-30 cm horizon were also collected 6m out from the wall should excavation be required. Backfilling of this excavation will not take place until samples have been collected.
- **NE Plume – Lobe P** – All confirmatory samples meet criteria. Backfilling completed.
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- **SW Plume (Part 1)** – Backfilling continued throughout the west half of Part 1. No further confirmatory sampling or excavation will be conducted in the area immediately adjacent to the lake. Confirmatory samples were collected from the NE extension; however no additional excavation will take place as per the August 21st meeting. In the excavation near M2/M3, where a box labeled as “EXPLOSIVES” was encountered, though no explosive material was found. Confirmatory sampling was completed (“EXPLOSIVE” area) and delineation samples of the top 30cm were also collected along the walls of the M2/M3 excavation extension. The Contractor was requested to not use surface soil for backfilling purposes in that area until samples are tested as they are needed to cover contamination left in place.
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- IEG will be completing confirmatory sampling of the base material within the cell, as well as sampling of the soil below the cell liner.

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Landfill Regrade A:

- Type 2 material placement and compaction was completed on August 29th. Compared with final design elevations, some areas were high and some low by up to 300mm but DR approved final surface based on sufficient cover and ability of surface to shed water. Simply replicating natural ground surface with 1m of fill would create mounds and depressions with potential for ponding or erosion.
- Compaction tests on final lift all meet specified compaction of 95% SPDD.
- Placement of Type 1 material commenced in afternoon of August 29th.
- Drains within base layer of regrade are draining water as intended.

Landfill Regrade B:

- Survey indicated that Type 2 cover is still required. Contractor directed to pump out the pond north of the regrade area to achieve cover thickness and compaction.

Landfill Regrade C:

- Final lift (<100mm) was placed on the regrade area on August 24th. Grade stakes were put in place to indicate thickness of Type 1 cover. Hauling and placing of Type 1 material was started on August 25th and was completed on August 26th. A final survey is required to confirm specified cover thickness has been achieved.

Landfill Regrade D:

- Type 1 material placed around perimeter slopes on August 27th and 28th.

Excavation Backfill:

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- The two (now empty) sumps/ ponds in the station were backfilled on August 29th with Type 3 material from Borrow Area 6.
- Survey of the final sump area to be completed

Soil Disposal Areas:

- Limited time spent on reshaping the original soil disposal location. Both disposal areas require more reshaping, compacting and recontouring before they are complete. Disposal Area 1 shaping is approximately 95% complete, no more material is being placed in Disposal Area 1. Additional shaping still required. Disposal area 2 shaping is approximately 95% complete. Additional placement of material from treatment cell 95% completed, still some residual treatment cell material to be placed early next week.

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- Continue final lifts and regrades for all landfills. Continue to place Type 1 material where required.
- Continue reshaping soil disposal locations.
- Assist with installation of monitoring wells and thermistors.
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- Remaining survey requirements.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

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9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

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Chris Kjarsgaard – Geotechnical Inspector			
E. Gruben's Transport – Work crew			
Jim Stevens – Site Superintendent	Keith Cox – Surveyor	Dusty Carrothers - Mechanic	Andy Surinak - Operator
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E. Gruben's Transport - Wildlife Monitors			
Spencer Mangelena	Wayne Thrasher		

10.0 EQUIPMENT UTILIZATION

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1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Sent on August 19 th barge.
1	Aluminum boat	Idle

SUBMITTED BY:

Brendon Norrie, M.Sc., P.Geol.



Departmental Representative
AECOM Canada Ltd.

brendon.norrie@aecom.com

Date August 29, 2009

Weekly Site Report

(For Period Ending Saturday, September 5, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak

Firm: AECOM Canada Ltd.

Site Phone: (403) 450-9929

Date: September 5, 2009

Page 1 of 8

From: Brendon Norrie

C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	August 30	August 31	Sept 1	Sept 2	Sept 3	Sept 4	Sept 5
Temp	Cool	Cool	Cold	Cool	Cold	Cool	Cold
Conditions	Overcast/ low cloud/ fog	Overcast	Overcast	Overcast	Overcast	Overcast	Partly cloudy
Ceiling	300 m	150 m	500 m	300 m	500 m	250 m	300 m
Visibility	5 km	1 km	5 - 10 km	5 - 10 km	15 – 20 km	Up to 5 km	5 - 10 km
Precip	None	Blowing snow and rain. Rain throughout prev night	Light rain in afternoon	Intermittent light rain	None	Steady light Rain 4am – 11am	Blowing and drifting snow
Wind	Light from South	Strong from West	Still	Still	V light from SE	Increasing to strong from WSW	Strong from SW
Wildlife	Some migrating birds (loons, king eider ducks, gulls, Canada geese etc). .						
Other	Channel Ice free. Rains over night August 30- 31 th saturated ground and roads.						

2.0 Health and Safety

- No Health and Safety issues to report.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 19.4 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- EGT continued discharging water from Apron Area excavations via 2" hose to the authorized discharge location throughout week. Water discharged on top of plywood sheet to reduce erosion at discharge point. Samples of this water had previously been tested by AECOM and shown to not exceed discharge criteria. An oil absorbent boom was deployed around the pump intake.
- Continuous discharge of grey water continued to approved discharge area.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8	-	-
1-Jul-09	15.1	-	-
4-Jul-09	15.8	-	-
7-Jul-09	14.1	-	-
10-Jul-09	10.6	-	-
June 30-July 9	-	95	authorized site
13-Jul-09	10.6	-	-
15-Jul-09	14.1	-	-
17-Jul-09	12.3	-	-
21-July-09	10.6	-	-
23-July-09	13.2	-	-
24 - 29 July-09		115.0	authorized site
27-Jul-09	10.6	-	-
30-Jul-09	8.8	-	-
02-Aug-09	10.6	-	-
05-Aug-09	12.3	-	-
08-Aug-09	12.3	-	-
10-Aug-09	12.3	-	-
13-Aug-09	14.1	-	-
15-Aug-09	10.6	-	-
19-Aug-09	14.1	-	-
19-21 August 09		40.0	authorized site
21-Aug-09	10.6	-	-
23-Aug-09	8.8	-	-
27-Aug-09	10.6	-	-
29-Aug-09	8.8	-	-
23-29 Aug	-	60.0	authorized site
31 Aug	8.8	-	-
3 Sept	10.6	-	-
30 Aug – 5 Sept	-	35	authorized site

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 6:30pm on August 31th and departed at approximately 7:30pm. Geotechnical Inspector departed with plane.
- A Twin Otter operated by AKLAK Air landed on site at approximately 5:00pm on September 3rd and departed at approximately 6:00pm. Environmental Inspector departed with plane.

5.0 CAMP OPERATIONS

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Medic has all necessary medical supplies on site.
- Camp water taken from Unnamed River.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon.
- Work day starts with a job and safety briefing.
- Geotech and Environmental Lab trailers shut down and drained ready for removal

6.0 WORK ACTIVITIES

General

- Rain and snow has saturated ground and slowed or prevented Type 1 placement and final dragging of site.

Access Road/ Airstrip

- Ongoing repairs and maintenance of road and airstrip road crossing required. Following rain overnight on August 30 - 31 site roads were in the worst condition of the season.

Demolition

- All demolition work has been completed.
- 7 SeaCans of PHC bedding sand remain onsite.
- One half load and one full load of unpainted wood was burnt in burn bin on August 30th.

Debris Collection

- All debris collection activities have been completed.

Buried Debris Excavations:

- All buried debris excavations have been completed and backfilled.

PHC Contaminated Soil Excavations

Main Station Hydrocarbon excavation:

- Excavation has been completed and backfilled.
- D.R. removed remaining investigation phase monitoring wells from around Main Station PHC excavation area. The 4 or 5 wells on the river plain were found to comprise approx 1m of upstand

with only 7-12" of pipe below ground. The entire portion below ground was slotted (up to ground surface) which meant only water in wells came from surface water flowing into pipe through slots.

Apron Area (NE & SW Plume) Hydrocarbon excavations:

- **NE Plume** – Results of final round of sampling showed two exceedances at depth (1m) near windsock but no surface exceedances near windsock. Two surface exceedances near N14 (992 and 994) and one near N16 (728) were in areas totally rutted and disturbed by rain and vehicle traffic over last two weeks and therefore there was no remaining, contaminated insitu soil to excavate. Over course of week the NE Plume was backfilled and dragged.
- **SW Plume (Lobe X)** – Results of final round of sampling showed five surface exceedance (964, 965, 968, 974 and 1002). The affected soil around samples 974 and 1002 was excavated on September 2nd. Clean sample results constrained the extent of this excavation. The affected soil around samples 965, 968 and 974 were not excavated as they were located adjacent to the freshwater lake which has risen due to the rain. Sample locations 965, 968 and 974 are currently under water.
- **SW Plume (Part 2)** – Results of final round of sampling showed two surface exceedance (952 and 956). The affected soil was excavated on September 2nd. Clean sample results constrained the extent of this excavation.
- **SW Plume (Part 4)** – Results of final round of sampling showed two surface exceedance (1037 and 1049). The affected soil in these areas (one on the SW wall and one 6m NE of the NE wall) was excavated on September 2nd. Clean sample results constrained the extent of these excavations.
- **SW Plume** – Results of final round of sampling showed no exceedances in other portions of the SE plume. By the end of the week much of the SW plume was backfilled and dragged.

Contaminated Soil Treatment

- Results from samples of the remaining (base layer) soil in the treatment cell indicate the material is suitable for disposal. D.R. approved removal of this soil. The material was removed from the cell on August 31st and disposed at soil disposal area 1.
- Following removal of soil, the liner was cut and removed and placed in a marine shipping container as waste for disposal. Berms were knocked down and blended with natural ground.
- AECOM environmental Inspector completed confirmatory sampling of the natural ground beneath the cell liner according to IEG sampling plan. Samples shipped for analysis on September 3rd flight.

Earthworks

Landfill Regrade A:

- Type 2 material placement complete.
- Compaction tests on final Type 2 lift all meet specified compaction of 95% SPDD.
- Placement of Type 1 material suspended during week due to saturated ground and risk of excessive rutting.
- Drains within base layer of regrade are draining water as intended.

Landfill Regrade B:

- No work this week

Landfill Regrade C:

- Survey of final (Type 1) surface conducted on September 5th.

Landfill Regrade D:

- Survey of final (Type 1) surface completed.

Apron Area Backfill:

- Type 3 from Borrow Pits B and 6 hauled and placed in excavations. Initial lift thickness exceeded specification in most areas, but needed to do so to establish a stable base for the following lifts. Contractor reminded to keep lifts within acceptable thickness when applicable, and that sufficient track packing take place between lifts.

Airstrip Backfill:

- Placement of the last lift of material in the airstrip excavation was conducted on September 3rd. First the saturate soil material in the excavation was bladed off to the side. The excavation was then brought to grade using material from Borrow Pit B and shaped/ compacted using the D3, Loader tires and vibrating roller. The material placed was taken from the "road" portion of the pit and consisted of grey sandy fine gravels overlain by approximately 0.4m of clayey silt. This material differs from the bulk of the "Type 2" taken from the pit but is closer in composition to the natural airstrip material (beach washed mudstone gravels). Density tests performed on September 5th on the final airstrip backfill layer showed it to be significantly less dense than that achieved from the initial airstrip backfill layers but approximately the same density as the natural, insitu airstrip surface. Final lift is approx 5% wet of optimum and therefore requires drying and further compaction to achieve a density greater than the insitu airstrip surface. Rejection and replacement of the final airstrip backfill surface is impractical as there is essentially no better material available without opening up a new borrow area further from the airstrip. With the rain and saturated ground conditions, opening up a new borrow area would pose significant logistical and reclamation challenges.

Sump Backfill:

- Survey of the final sump area completed.

Soil Disposal Areas:

- Final loads of PHC soil from Apron Area placed on Soil Disposal Areas.
- Soil Disposal Areas still require final sloping and compaction work to blend in to surrounding terrain.

Barrels/ Hazardous Materials

- Three empty, clean barrels collected from tundra to north of Unnamed River and crushed for disposal.
- All barrel/ hazardous waste work now complete. Barrel contents have been incinerated, evaporated or pumped into EGT tanks and barrels have been crushed. Remaining intact barrels are to be taken from site for return to distributor.

Borrow

- Reclamation of Borrow Pit B ongoing throughout week.
- Sand backfill hauled from Borrow Pit 6 throughout week for use as Apron Area backfill.

Landfill Monitoring Plan Baseline Sampling Program

- Samples collected from discrete depths from five test pits excavated around each of landfills A, C and D on August 30th and around Landfill B on September 2nd.
- Samples sent on September 3rd flight for analysis as baseline natural ground samples.

Apron Area Instrumentation Installation Program

- Monitoring wells purged on August 31st and September 2nd.
- Groundwater samples collected from monitoring wells on September 3rd. Samples sent on flight out on September 3rd. Water in base of deeper wells (MW09-01 and MW09-02) has begun to freeze.

7.0 SCHEDULE

The contractor’s plan for the coming week includes:

- Place Type 1 materials around Landfill Regrade B and remaining portions of landfill Regrade A. Finish backfilling of Apron Area excavations.
- Complete final grading and compaction of backfilled airstrip area.
- Complete reshaping soil disposal locations.
- Complete reclaiming of Borrow Pits
- Complete Remaining survey requirements.
- Install thermistor cables in Apron Area thermistor pipes.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Brendon Norrie - Departmental Representative			
E. Gruben's Transport – Work crew			
Jim Stevens – Site Superintendent	Richard Gibson – Surveyor	Dusty Carrothers - Mechanic	Andy Surinak - Operator
Fred Voudrach - Operator	Mel Weber – Operator	Simon Adam - Operator	Art Adey - Operator
Percy Chabun – Operator	Lee John Panaktalok – Labour	Joe Bob Panaktalok - Labour	
E. Gruben's Transport - Camp staff			
Howard lucas – Camp Maintenance	Val Gordon - Chief Cook	Rickey Tumma – 2 nd Cook	Marilyn Gardlund – Camp Attendant
Susan Eaton - Medic			
E. Gruben's Transport - Wildlife Monitors			
Spencer Mangelena	Wayne Thrasher		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
2	JCB 722 Rock Trucks	Hauling borrow material for regrades and backfilling.
1	CAT 322C Excavator	Working in borrow pit
1	Excavator	Working in borrow pit
1	Hitachi EX200 Excavator	Placing Type 1 material
1	CAT 14G Grader	Grading road when required, grading airstrip backfill
1	Small Komatsu D31PX Dozer	Regrading soil disposal areas, backfilling Apron Area.
1	CAT D6 Dozer	Regrading soil disposal sites and open excavations
1	CAT 1108 Loader	Dragging roads and airstrip, loading Type 1 material.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM, IEG and surveyor
3	ATVs and Trailers	Used by Wildlife monitor and camp staff. One flown out on September 3 rd flight.
1	CAT TL1055 Telehandler	Idle
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Sent on August 19 th barge.
1	Aluminum boat	Idle

SUBMITTED BY:

Brendon Norrie, M.Sc., P.Geol.



Departmental Representative
AECOM Canada Ltd.

brendon.norrie@aecom.com

Date September 5, 2009

Weekly Site Report

(For Period Ending Tuesday, September 22, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak

Firm: AECOM Canada Ltd.

Site Phone: (403) 450-9929

Date: September 22, 2009

Page 1 of 8

From: Brendon Norrie

C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	Sept 6	Sept 7	Sept 8	Sept 9	Sept 10	Sept 11	Sept 12
Temp	Cool	Cool	Cool	Cool	Cool	Cold	Cool
Conditions	Overcast, clear by 2pm	Partly cloudy	Partly cloudy. Clear in pm	Clear. Heavy frost	Overcast	Partly cloudy	Overcast
Ceiling	400m	400m to unlimited	500m +	unlimited	300m	600m - unlimited	300m
Visibility	15 km	15 km	15km	20 km	10 – 15 km	20km	15 km
Precip	None	None	None	None	Overnight snow	Freezing fog in pm	None
Wind	Still	Light from West	V light from W	Light from W	Still	Strong from W	Light from N
<p>Departmental Representative not on Site after September 15th.</p>							
	SUN	MON	TUES				
Date	Sept 13	Sept 14	Sept 15				
Temp	Cold	Cold	Cold				
Conditions	Overcast	Overcast	Overcast				
Ceiling	500m	200m	600m				
Visibility	10 – 15 km	10 km	15+ km				
Precip	Light rain in morning	Rain	None				
Wind	Still	Light from NW	Still				
Wildlife	Some migrating birds (loons, king eider ducks, gulls, Canada geese etc).						
Other	Channel filling with ice from 10 th . Impassable to barge by 11 th .						

2.0 Health and Safety

- No Health and Safety issues to report.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Wildlife Monitor Left site Sept 10. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately **???? m³** of water was pumped from the unnamed river this week for use as non-potable camp water.
- As requested by INAC Land Use Inspector, approximately 2764 m³ of Additional borrow material was placed on the Apron Area PHC excavation area. This material was quarried from the existing, previously constructed, road between the station Area and ridgeline. This borrow source was not identified on the 2009 Quarry permit.

Spills and Authorized Discharges (Clause 1e of Water License).

- Post-treatment greywater pond removed on Sept 6th. Liner placed in Marine shipping container for removal from site.
- All plumbing and grey water system piping was disconnected and the camp entirely drained out on September 17th when the barge was just off-shore and appeared likely to land.
- EGT was remained on September 8th that two-weekly sampling during discharge was required for continuous discharge. A greywater sample was taken and sent for analysis on September 11th. No greywater was discharge between September 8th and receipt of sample results.
- The grey water results (attached) showed a spike in chlorine, the source of which is unknown. Chlorine also spiked in greywater lab results from September 2008.
- Grey water was held until September 19th with the intent of bringing it out by barge in the Gator and the white "aeration" tank on a highboy. The drop in temperatures which accompanied the high winds of the 17th – 19th made it increasingly difficult to keep this grey water from freezing in the tank. Along with increased unlikelihood of barge getting in EGT decided to discharge the greywater on the 19th. This decision had to be made prior to valves and fittings freezing. If grey water had been left in tank(s) there would have resulted in an uncontrolled spill in the spring as well as destroying the tanks. Greywater was discharged over about 12 hours to the approved discharge location. Total volume of discharge was approximately 12 cubic meters.
- EGT has been instructed to report the September 19th greywater release as an unauthorized discharge by the Water Use license Inspector.
- On September 22nd just prior to site departure the site superintendent chopped a hole in the river ice and took samples for lab chlorine analysis. Sample results have not yet been received by the DR.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8	-	-
1-Jul-09	15.1	-	-
4-Jul-09	15.8	-	-
7-Jul-09	14.1	-	-
10-Jul-09	10.6	-	-
June 30-July 9	-	95	authorized site
13-Jul-09	10.6	-	-
15-Jul-09	14.1	-	-
17-Jul-09	12.3	-	-
21-July-09	10.6	-	-
23-July-09	13.2	-	-
24 - 29 July-09		115.0	authorized site
27-Jul-09	10.6	-	-
30-Jul-09	8.8	-	-
02-Aug-09	10.6	-	-
05-Aug-09	12.3	-	-
08-Aug-09	12.3	-	-
10-Aug-09	12.3	-	-
13-Aug-09	14.1	-	-
15-Aug-09	10.6	-	-
19-Aug-09	14.1	-	-
19-21 August 09		40.0	authorized site
21-Aug-09	10.6	-	-
23-Aug-09	8.8	-	-
27-Aug-09	10.6	-	-
29-Aug-09	8.8	-	-
23-29 Aug	-	60.0	authorized site
31 Aug	8.8	-	-
3 Sept	10.6	-	-
30 Aug – 5 Sept	-	35	authorized site
19 September	-	12	authorized site

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 1:00pm on September 8th with Sachs Harbor Community members and departed at approximately 4:00pm following site tour.
- A DC3 operated by AKLAK Air landed on site at approximately 12:20pm on September 8th with INAC/ PWGSC/ EGT/ DFO personnel and departed at approximately 5:00pm following site tour and meeting.
- A Twin Otter operated by AKLAK Air landed on site at approximately 5:15pm on September 11th and departed at approximately 5:45pm with EGT equipment operators.
- A Twin Otter operated by AKLAK Air landed on site at approximately 6:00pm on September 15th and departed at approximately 6:45pm with EGT camp staff and Departmental Representative.
- NTCL barge attempted to get in on September 17th and made it to within approx. 1.5 km of beach but had to turn back due to impenetrable ice. The barge went to Dean Dundas Bay on the west coast of Victoria Island about 30 km down the strait to hole-up for the night. On night of the 17th winds picked up significantly and during the Sept 18th and 19th winds were in the 50 to 70 kmph range. This cleared some of the ice around the site but the barge could not travel at all due to the wind. On Sept 20th the barge tried again and could get only within approx. 7km and turned back again to Dean Dundas Bay. The channel in front of the site had largely cleared of ice but the ice had drifted down towards Dean Dundas Bay. On Sept. 21st the barge tried again but had a hard time maneuvering in either direction out of Dean Dundas Bay. At this point NTCL decided to head back to Tuk.
- All site personnel removed from site via aircraft by September 22nd.

5.0 CAMP OPERATIONS

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Medic has all necessary medical supplies on site.
- Camp water taken from Unnamed River.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon.
- Work day starts with a job and safety briefing.
- Geotech and Environmental Lab trailers shut down and drained ready for removal

6.0 WORK ACTIVITIES

General

- Rain and snow saturated ground and slowed Type 1 placement and final dragging of site.

Access Road/ Airstrip

- Repairs and maintenance of road and airstrip continued until departure.
- Road culverts pulled and slopes shaped to allow future vehicle movement.

Demolition

- All demolition work has been completed.
- All non-Hazardous debris and demolition materials were loaded on to the AMIX salvage barge in Tuk and will be taken to Surrey for disposal/ salvage.

Debris Collection

- All debris collection activities have been completed.

Buried Debris Excavations:

- All buried debris excavations have been completed and backfilled.

PHC Contaminated Soil Excavations

Main Station Hydrocarbon excavation:

- Excavation has been completed and backfilled.

Apron Area (NE & SW Plume) Hydrocarbon excavations:

- Excavation backfilled by September 8th.
- To address concerns brought up at September 8th site meeting, 271 additional loads of material was placed on the Apron Area excavation, in areas where residual contamination at depth is known. This additional material was sourced by excavating the elevated roadway between the Station Area and the ridgeline.

Contaminated Soil Treatment

- No Activity
- Soil treatment and disposal areas were dragged to promote drainage and minimize ponding of water. The side slopes of the disposal areas were tracked using the D3 to reduce erosion on the slope

Earthworks

Landfill Regrades:

- Type 2 and Type 1 material placement completed on all regrades. Sufficient Type 1 material remained to completely cover Landfill Regrade B rather than armoring only the lower slopes.

Airstrip Backfill:

- Grading and packing of final airstrip surface continued during week prior to DR leaving site.
- Density tests performed on September 8th on the final airstrip backfill layer showed it to be the same density as the natural, insitu airstrip surface. Along the edge of the strip (beach and Apron side) the density was 2-5% less than natural airstrip density. Moisture contents were measured at approximately 2-3% wet of the optimum natural airstrip moisture content. Additional drying and further compaction after DR left site likely achieved a density equal to or greater than the insitu airstrip surface. Inspection during 2010 site visit will be necessary to access final density.
- Dragging and contouring of areas disturbed by activities (except for camp area) completed.

Barrels/ Hazardous Materials

- Three empty, clean barrels collected from tundra to north of Unnamed River and crushed for disposal.
- All barrel/ hazardous waste work now complete. Barrel contents have been incinerated, evaporated or pumped into EGT tanks and barrels have been crushed. Remaining intact barrels are to be taken from site for return to distributor.

Borrow

- Reclamation of Borrow Pits completed, as much as conditions would allow. Side slopes cut to mimic natural ground and areas dragged to promote drainage and minimize ponding.

- The elevated, anthropogenic road between the station area and the ridge was excavated and used as additional fill on the Apron Area. At completion of borrow activities the area was dragged.

Landfill Monitoring Plan Baseline Sampling Program

- Samples collected from discrete depths from five test pits excavated around each of landfills A, C and D on August 30th and around Landfill B on September 2nd.

Apron Area Instrumentation Installation Program

- Monitoring wells purged on August 31st and September 2nd.
- Groundwater samples collected from monitoring wells and sent on flight out on September 3rd.
- Thermistors installed in two locations in Apron Area. Locations surveyed.
- Readings taken from thermistors on September 9th, 13th and 15th. Measured resistance readings change with depth, indicating thermistors are functioning as designed. Correlation of resistance readings with temperature to be completed.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Demobilize equipment by barge if conditions allow.

8.0 PERSONNEL ON SITE

No personnel remain on site.

9.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
2	JCB 722 Rock Trucks	Hauling borrow material for backfilling.
1	CAT 322C Excavator	Working in borrow pit
1	Excavator	Working in borrow pit
1	Hitachi EX200 Excavator	Placing Type 1 material
1	CAT 14G Grader	Grading road when required, grading airstrip backfill
1	Small Komatsu D31PX Dozer	Regrading soil disposal areas, backfilling Apron Area.
1	CAT D6 Dozer	Regrading soil disposal sites and open excavations
1	CAT 1108 Loader	Dragging roads and airstrip, loading Type 1 material.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM, IEG and surveyor
3	ATVs and Trailers	Used by Wildlife monitor and camp staff. One flown out on September 3 rd flight.
1	CAT TL1055 Telehandler	Idle
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Sent on August 19 th barge.
1	Aluminum boat	Idle

SUBMITTED BY:

Brendon Norrie, M.Sc., P.Geol.



Departmental Representative
AECOM Canada Ltd.

brendon.norrie@aecom.com

Date October 6th, 2009

Weekly Site Report

(For Period Ending Saturday, September 5, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak

Firm: AECOM Canada Ltd.

Site Phone: (403) 450-9929

Date: September 5, 2009

Page 1 of 8

From: Brendon Norrie

C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	August 30	August 31	Sept 1	Sept 2	Sept 3	Sept 4	Sept 5
Temp	Cool	Cool	Cold	Cool	Cold	Cool	Cold
Conditions	Overcast/ low cloud/ fog	Overcast	Overcast	Overcast	Overcast	Overcast	Partly cloudy
Ceiling	300 m	150 m	500 m	300 m	500 m	250 m	300 m
Visibility	5 km	1 km	5 - 10 km	5 - 10 km	15 – 20 km	Up to 5 km	5 - 10 km
Precip	None	Blowing snow and rain. Rain throughout prev night	Light rain in afternoon	Intermittent light rain	None	Steady light Rain 4am – 11am	Blowing and drifting snow
Wind	Light from South	Strong from West	Still	Still	V light from SE	Increasing to strong from WSW	Strong from SW
Wildlife	Some migrating birds (loons, king eider ducks, gulls, Canada geese etc). .						
Other	Channel Ice free. Rains over night August 30- 31 th saturated ground and roads.						

2.0 Health and Safety

- No Health and Safety issues to report.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Dedicated Wildlife Monitor on site. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately 19.4 m³ of water was pumped from the unnamed river this week for use as non-potable camp water.

Spills and Authorized Discharges (Clause 1e of Water License).

- EGT continued discharging water from Apron Area excavations via 2" hose to the authorized discharge location throughout week. Water discharged on top of plywood sheet to reduce erosion at discharge point. Samples of this water had previously been tested by AECOM and shown to not exceed discharge criteria. An oil absorbent boom was deployed around the pump intake.
- Continuous discharge of grey water continued to approved discharge area.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8	-	-
1-Jul-09	15.1	-	-
4-Jul-09	15.8	-	-
7-Jul-09	14.1	-	-
10-Jul-09	10.6	-	-
June 30-July 9	-	95	authorized site
13-Jul-09	10.6	-	-
15-Jul-09	14.1	-	-
17-Jul-09	12.3	-	-
21-July-09	10.6	-	-
23-July-09	13.2	-	-
24 - 29 July-09		115.0	authorized site
27-Jul-09	10.6	-	-
30-Jul-09	8.8	-	-
02-Aug-09	10.6	-	-
05-Aug-09	12.3	-	-
08-Aug-09	12.3	-	-
10-Aug-09	12.3	-	-
13-Aug-09	14.1	-	-
15-Aug-09	10.6	-	-
19-Aug-09	14.1	-	-
19-21 August 09		40.0	authorized site
21-Aug-09	10.6	-	-
23-Aug-09	8.8	-	-
27-Aug-09	10.6	-	-
29-Aug-09	8.8	-	-
23-29 Aug	-	60.0	authorized site
31 Aug	8.8	-	-
3 Sept	10.6	-	-
30 Aug – 5 Sept	-	35	authorized site

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 6:30pm on August 31th and departed at approximately 7:30pm. Geotechnical Inspector departed with plane.
- A Twin Otter operated by AKLAK Air landed on site at approximately 5:00pm on September 3rd and departed at approximately 6:00pm. Environmental Inspector departed with plane.

5.0 CAMP OPERATIONS

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Medic has all necessary medical supplies on site.
- Camp water taken from Unnamed River.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon.
- Work day starts with a job and safety briefing.
- Geotech and Environmental Lab trailers shut down and drained ready for removal

6.0 WORK ACTIVITIES

General

- Rain and snow has saturated ground and slowed or prevented Type 1 placement and final dragging of site.

Access Road/ Airstrip

- Ongoing repairs and maintenance of road and airstrip road crossing required. Following rain overnight on August 30 - 31 site roads were in the worst condition of the season.

Demolition

- All demolition work has been completed.
- 7 SeaCans of PHC bedding sand remain onsite.
- One half load and one full load of unpainted wood was burnt in burn bin on August 30th.

Debris Collection

- All debris collection activities have been completed.

Buried Debris Excavations:

- All buried debris excavations have been completed and backfilled.

PHC Contaminated Soil Excavations

Main Station Hydrocarbon excavation:

- Excavation has been completed and backfilled.
- D.R. removed remaining investigation phase monitoring wells from around Main Station PHC excavation area. The 4 or 5 wells on the river plain were found to comprise approx 1m of upstand

with only 7-12" of pipe below ground. The entire portion below ground was slotted (up to ground surface) which meant only water in wells came from surface water flowing into pipe through slots.

Apron Area (NE & SW Plume) Hydrocarbon excavations:

- **NE Plume** – Results of final round of sampling showed two exceedances at depth (1m) near windsock but no surface exceedances near windsock. Two surface exceedances near N14 (992 and 994) and one near N16 (728) were in areas totally rutted and disturbed by rain and vehicle traffic over last two weeks and therefore there was no remaining, contaminated insitu soil to excavate. Over course of week the NE Plume was backfilled and dragged.
- **SW Plume (Lobe X)** – Results of final round of sampling showed five surface exceedance (964, 965, 968, 974 and 1002). The affected soil around samples 974 and 1002 was excavated on September 2nd. Clean sample results constrained the extent of this excavation. The affected soil around samples 965, 968 and 974 were not excavated as they were located adjacent to the freshwater lake which has risen due to the rain. Sample locations 965, 968 and 974 are currently under water.
- **SW Plume (Part 2)** – Results of final round of sampling showed two surface exceedance (952 and 956). The affected soil was excavated on September 2nd. Clean sample results constrained the extent of this excavation.
- **SW Plume (Part 4)** – Results of final round of sampling showed two surface exceedance (1037 and 1049). The affected soil in these areas (one on the SW wall and one 6m NE of the NE wall) was excavated on September 2nd. Clean sample results constrained the extent of these excavations.
- **SW Plume** – Results of final round of sampling showed no exceedances in other portions of the SE plume. By the end of the week much of the SW plume was backfilled and dragged.

Contaminated Soil Treatment

- Results from samples of the remaining (base layer) soil in the treatment cell indicate the material is suitable for disposal. D.R. approved removal of this soil. The material was removed from the cell on August 31st and disposed at soil disposal area 1.
- Following removal of soil, the liner was cut and removed and placed in a marine shipping container as waste for disposal. Berms were knocked down and blended with natural ground.
- AECOM environmental Inspector completed confirmatory sampling of the natural ground beneath the cell liner according to IEG sampling plan. Samples shipped for analysis on September 3rd flight.

Earthworks

Landfill Regrade A:

- Type 2 material placement complete.
- Compaction tests on final Type 2 lift all meet specified compaction of 95% SPDD.
- Placement of Type 1 material suspended during week due to saturated ground and risk of excessive rutting.
- Drains within base layer of regrade are draining water as intended.

Landfill Regrade B:

- No work this week

Landfill Regrade C:

- Survey of final (Type 1) surface conducted on September 5th.

Landfill Regrade D:

- Survey of final (Type 1) surface completed.

Apron Area Backfill:

- Type 3 from Borrow Pits B and 6 hauled and placed in excavations. Initial lift thickness exceeded specification in most areas, but needed to do so to establish a stable base for the following lifts. Contractor reminded to keep lifts within acceptable thickness when applicable, and that sufficient track packing take place between lifts.

Airstrip Backfill:

- Placement of the last lift of material in the airstrip excavation was conducted on September 3rd. First the saturate soil material in the excavation was bladed off to the side. The excavation was then brought to grade using material from Borrow Pit B and shaped/ compacted using the D3, Loader tires and vibrating roller. The material placed was taken from the "road" portion of the pit and consisted of grey sandy fine gravels overlain by approximately 0.4m of clayey silt. This material differs from the bulk of the "Type 2" taken from the pit but is closer in composition to the natural airstrip material (beach washed mudstone gravels). Density tests performed on September 5th on the final airstrip backfill layer showed it to be significantly less dense than that achieved from the initial airstrip backfill layers but approximately the same density as the natural, insitu airstrip surface. Final lift is approx 5% wet of optimum and therefore requires drying and further compaction to achieve a density greater than the insitu airstrip surface. Rejection and replacement of the final airstrip backfill surface is impractical as there is essentially no better material available without opening up a new borrow area further from the airstrip. With the rain and saturated ground conditions, opening up a new borrow area would pose significant logistical and reclamation challenges.

Sump Backfill:

- Survey of the final sump area completed.

Soil Disposal Areas:

- Final loads of PHC soil from Apron Area placed on Soil Disposal Areas.
- Soil Disposal Areas still require final sloping and compaction work to blend in to surrounding terrain.

Barrels/ Hazardous Materials

- Three empty, clean barrels collected from tundra to north of Unnamed River and crushed for disposal.
- All barrel/ hazardous waste work now complete. Barrel contents have been incinerated, evaporated or pumped into EGT tanks and barrels have been crushed. Remaining intact barrels are to be taken from site for return to distributor.

Borrow

- Reclamation of Borrow Pit B ongoing throughout week.
- Sand backfill hauled from Borrow Pit 6 throughout week for use as Apron Area backfill.

Landfill Monitoring Plan Baseline Sampling Program

- Samples collected from discrete depths from five test pits excavated around each of landfills A, C and D on August 30th and around Landfill B on September 2nd.
- Samples sent on September 3rd flight for analysis as baseline natural ground samples.

Apron Area Instrumentation Installation Program

- Monitoring wells purged on August 31st and September 2nd.
- Groundwater samples collected from monitoring wells on September 3rd. Samples sent on flight out on September 3rd. Water in base of deeper wells (MW09-01 and MW09-02) has begun to freeze.

7.0 SCHEDULE

The contractor’s plan for the coming week includes:

- Place Type 1 materials around Landfill Regrade B and remaining portions of landfill Regrade A. Finish backfilling of Apron Area excavations.
- Complete final grading and compaction of backfilled airstrip area.
- Complete reshaping soil disposal locations.
- Complete reclaiming of Borrow Pits
- Complete Remaining survey requirements.
- Install thermistor cables in Apron Area thermistor pipes.

8.0 TASK AUTHORIZATIONS AND CHANGE ORDERS

No Task Authorizations or Change Orders have been requested or submitted this week.

9.0 PERSONNEL ON SITE

List of personnel on site as of Saturday evening.

AECOM Personnel			
Brendon Norrie - Departmental Representative			
E. Gruben's Transport – Work crew			
Jim Stevens – Site Superintendent	Richard Gibson – Surveyor	Dusty Carrothers - Mechanic	Andy Surinak - Operator
Fred Voudrach - Operator	Mel Weber – Operator	Simon Adam - Operator	Art Adey - Operator
Percy Chabun – Operator	Lee John Panaktalok – Labour	Joe Bob Panaktalok - Labour	
E. Gruben's Transport - Camp staff			
Howard lucas – Camp Maintenance	Val Gordon - Chief Cook	Rickey Tumma – 2 nd Cook	Marilyn Gardlund – Camp Attendant
Susan Eaton - Medic			
E. Gruben's Transport - Wildlife Monitors			
Spencer Mangelena	Wayne Thrasher		

10.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
2	JCB 722 Rock Trucks	Hauling borrow material for regrades and backfilling.
1	CAT 322C Excavator	Working in borrow pit
1	Excavator	Working in borrow pit
1	Hitachi EX200 Excavator	Placing Type 1 material
1	CAT 14G Grader	Grading road when required, grading airstrip backfill
1	Small Komatsu D31PX Dozer	Regrading soil disposal areas, backfilling Apron Area.
1	CAT D6 Dozer	Regrading soil disposal sites and open excavations
1	CAT 1108 Loader	Dragging roads and airstrip, loading Type 1 material.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM, IEG and surveyor
3	ATVs and Trailers	Used by Wildlife monitor and camp staff. One flown out on September 3 rd flight.
1	CAT TL1055 Telehandler	Idle
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Sent on August 19 th barge.
1	Aluminum boat	Idle

SUBMITTED BY:

Brendon Norrie, M.Sc., P.Geol.



Departmental Representative
AECOM Canada Ltd.

brendon.norrie@aecom.com

Date September 5, 2009

Weekly Site Report

(For Period Ending Tuesday, September 22, 2009)

Project:

INAC Clean Up Project
Johnson Point, NWT

AECOM File #:

2977-371-00

<p>Contractor: E. Gruben's Transport Box 177 Tuktoyaktuk, NWT XOE 1C0</p>	<p>Contract Authority: Public Works and Government Services Canada Telus Tower North 5th Floor, 10025 – Jasper Avenue Edmonton, AB, T5S 1S6 Tel: (780) 497-3853 Cell: (780) 288 7148 Fax: (780) 497-3842</p>
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To: Barry Fedorak

Firm: AECOM Canada Ltd.

Site Phone: (403) 450-9929

Date: September 22, 2009

Page 1 of 8

From: Brendon Norrie

C.C.: Michael Bernardin, Katherine Silcock, Joel Gowman

1.0 WEATHER

	SUN	MON	TUES	WED	THURS	FRI	SAT
Date	Sept 6	Sept 7	Sept 8	Sept 9	Sept 10	Sept 11	Sept 12
Temp	Cool	Cool	Cool	Cool	Cool	Cold	Cool
Conditions	Overcast, clear by 2pm	Partly cloudy	Partly cloudy. Clear in pm	Clear. Heavy frost	Overcast	Partly cloudy	Overcast
Ceiling	400m	400m to unlimited	500m +	unlimited	300m	600m - unlimited	300m
Visibility	15 km	15 km	15km	20 km	10 – 15 km	20km	15 km
Precip	None	None	None	None	Overnight snow	Freezing fog in pm	None
Wind	Still	Light from West	V light from W	Light from W	Still	Strong from W	Light from N
<p>Departmental Representative not on Site after September 15th.</p>							
	SUN	MON	TUES				
Date	Sept 13	Sept 14	Sept 15				
Temp	Cold	Cold	Cold				
Conditions	Overcast	Overcast	Overcast				
Ceiling	500m	200m	600m				
Visibility	10 – 15 km	10 km	15+ km				
Precip	Light rain in morning	Rain	None				
Wind	Still	Light from NW	Still				
Wildlife	Some migrating birds (loons, king eider ducks, gulls, Canada geese etc).						
Other	Channel filling with ice from 10 th . Impassable to barge by 11 th .						

2.0 Health and Safety

- No Health and Safety issues to report.
- Safety issues brought up and discussed every morning at 8am job briefing.
- Job briefing for night shift conducted at 8pm.
- Site orientation conducted for all personnel on site throughout week. New personnel oriented to site upon arrival.
- Wildlife Monitor Left site Sept 10. Gun and bear deterrents on site and available (Bangers and screamers).

3.0 Water and Land Use Permit Conditions

- Approximately **???? m³** of water was pumped from the unnamed river this week for use as non-potable camp water.
- As requested by INAC Land Use Inspector, approximately 2764 m³ of Additional borrow material was placed on the Apron Area PHC excavation area. This material was quarried from the existing, previously constructed, road between the station Area and ridgeline. This borrow source was not identified on the 2009 Quarry permit.

Spills and Authorized Discharges (Clause 1e of Water License).

- Post-treatment greywater pond removed on Sept 6th. Liner placed in Marine shipping container for removal from site.
- All plumbing and grey water system piping was disconnected and the camp entirely drained out on September 17th when the barge was just off-shore and appeared likely to land.
- EGT was remained on September 8th that two-weekly sampling during discharge was required for continuous discharge. A greywater sample was taken and sent for analysis on September 11th. No greywater was discharge between September 8th and receipt of sample results.
- The grey water results (attached) showed a spike in chlorine, the source of which is unknown. Chlorine also spiked in greywater lab results from September 2008.
- Grey water was held until September 19th with the intent of bringing it out by barge in the Gator and the white "aeration" tank on a highboy. The drop in temperatures which accompanied the high winds of the 17th – 19th made it increasingly difficult to keep this grey water from freezing in the tank. Along with increased unlikelihood of barge getting in EGT decided to discharge the greywater on the 19th. This decision had to be made prior to valves and fittings freezing. If grey water had been left in tank(s) there would have resulted in an uncontrolled spill in the spring as well as destroying the tanks. Greywater was discharged over about 12 hours to the approved discharge location. Total volume of discharge was approximately 12 cubic meters.
- EGT has been instructed to report the September 19th greywater release as an unauthorized discharge by the Water Use license Inspector.
- On September 22nd just prior to site departure the site superintendent chopped a hole in the river ice and took samples for lab chlorine analysis. Sample results have not yet been received by the DR.

Clause	1a	1b	1c
Date	Quantity of Fresh Water obtained from all sources (not to exceed 20m ³ per day)	Quantity of all waste discharged (m ³)	Location and direction of flow of discharges
17-Jun-09	17.6	-	-
18-Jun-09	8.8	-	-
21-Jun-09	15.1	-	-
25-Jun-09	13.2	-	-
28-Jun-09	15.8	-	-
1-Jul-09	15.1	-	-
4-Jul-09	15.8	-	-
7-Jul-09	14.1	-	-
10-Jul-09	10.6	-	-
June 30-July 9	-	95	authorized site
13-Jul-09	10.6	-	-
15-Jul-09	14.1	-	-
17-Jul-09	12.3	-	-
21-July-09	10.6	-	-
23-July-09	13.2	-	-
24 - 29 July-09		115.0	authorized site
27-Jul-09	10.6	-	-
30-Jul-09	8.8	-	-
02-Aug-09	10.6	-	-
05-Aug-09	12.3	-	-
08-Aug-09	12.3	-	-
10-Aug-09	12.3	-	-
13-Aug-09	14.1	-	-
15-Aug-09	10.6	-	-
19-Aug-09	14.1	-	-
19-21 August 09		40.0	authorized site
21-Aug-09	10.6	-	-
23-Aug-09	8.8	-	-
27-Aug-09	10.6	-	-
29-Aug-09	8.8	-	-
23-29 Aug	-	60.0	authorized site
31 Aug	8.8	-	-
3 Sept	10.6	-	-
30 Aug – 5 Sept	-	35	authorized site
19 September	-	12	authorized site

4.0 FLIGHTS AND BARGE VISITS

- A Twin Otter operated by AKLAK Air landed on site at approximately 1:00pm on September 8th with Sachs Harbor Community members and departed at approximately 4:00pm following site tour.
- A DC3 operated by AKLAK Air landed on site at approximately 12:20pm on September 8th with INAC/ PWGSC/ EGT/ DFO personnel and departed at approximately 5:00pm following site tour and meeting.
- A Twin Otter operated by AKLAK Air landed on site at approximately 5:15pm on September 11th and departed at approximately 5:45pm with EGT equipment operators.
- A Twin Otter operated by AKLAK Air landed on site at approximately 6:00pm on September 15th and departed at approximately 6:45pm with EGT camp staff and Departmental Representative.
- NTCL barge attempted to get in on September 17th and made it to within approx. 1.5 km of beach but had to turn back due to impenetrable ice. The barge went to Dean Dundas Bay on the west coast of Victoria Island about 30 km down the strait to hole-up for the night. On night of the 17th winds picked up significantly and during the Sept 18th and 19th winds were in the 50 to 70 kmph range. This cleared some of the ice around the site but the barge could not travel at all due to the wind. On Sept 20th the barge tried again and could get only within approx. 7km and turned back again to Dean Dundas Bay. The channel in front of the site had largely cleared of ice but the ice had drifted down towards Dean Dundas Bay. On Sept. 21st the barge tried again but had a hard time maneuvering in either direction out of Dean Dundas Bay. At this point NTCL decided to head back to Tuk.
- All site personnel removed from site via aircraft by September 22nd.

5.0 CAMP OPERATIONS

- Waste from camp operations, including sewage waste from Pacto toilets, is being incinerated.
- Medic has all necessary medical supplies on site.
- Camp water taken from Unnamed River.
- The standard work day is between 8 am and 8 pm with half hour break for lunch at 1 pm and short breaks in the mid morning and mid afternoon.
- Work day starts with a job and safety briefing.
- Geotech and Environmental Lab trailers shut down and drained ready for removal

6.0 WORK ACTIVITIES

General

- Rain and snow saturated ground and slowed Type 1 placement and final dragging of site.

Access Road/ Airstrip

- Repairs and maintenance of road and airstrip continued until departure.
- Road culverts pulled and slopes shaped to allow future vehicle movement.

Demolition

- All demolition work has been completed.
- All non-Hazardous debris and demolition materials were loaded on to the AMIX salvage barge in Tuk and will be taken to Surrey for disposal/ salvage.

Debris Collection

- All debris collection activities have been completed.

Buried Debris Excavations:

- All buried debris excavations have been completed and backfilled.

PHC Contaminated Soil Excavations

Main Station Hydrocarbon excavation:

- Excavation has been completed and backfilled.

Apron Area (NE & SW Plume) Hydrocarbon excavations:

- Excavation backfilled by September 8th.
- To address concerns brought up at September 8th site meeting, 271 additional loads of material was placed on the Apron Area excavation, in areas where residual contamination at depth is known. This additional material was sourced by excavating the elevated roadway between the Station Area and the ridgeline.

Contaminated Soil Treatment

- No Activity
- Soil treatment and disposal areas were dragged to promote drainage and minimize ponding of water. The side slopes of the disposal areas were tracked using the D3 to reduce erosion on the slope

Earthworks

Landfill Regrades:

- Type 2 and Type 1 material placement completed on all regrades. Sufficient Type 1 material remained to completely cover Landfill Regrade B rather than armoring only the lower slopes.

Airstrip Backfill:

- Grading and packing of final airstrip surface continued during week prior to DR leaving site.
- Density tests performed on September 8th on the final airstrip backfill layer showed it to be the same density as the natural, insitu airstrip surface. Along the edge of the strip (beach and Apron side) the density was 2-5% less than natural airstrip density. Moisture contents were measured at approximately 2-3% wet of the optimum natural airstrip moisture content. Additional drying and further compaction after DR left site likely achieved a density equal to or greater than the insitu airstrip surface. Inspection during 2010 site visit will be necessary to access final density.
- Dragging and contouring of areas disturbed by activities (except for camp area) completed.

Barrels/ Hazardous Materials

- Three empty, clean barrels collected from tundra to north of Unnamed River and crushed for disposal.
- All barrel/ hazardous waste work now complete. Barrel contents have been incinerated, evaporated or pumped into EGT tanks and barrels have been crushed. Remaining intact barrels are to be taken from site for return to distributor.

Borrow

- Reclamation of Borrow Pits completed, as much as conditions would allow. Side slopes cut to mimic natural ground and areas dragged to promote drainage and minimize ponding.

- The elevated, anthropogenic road between the station area and the ridge was excavated and used as additional fill on the Apron Area. At completion of borrow activities the area was dragged.

Landfill Monitoring Plan Baseline Sampling Program

- Samples collected from discrete depths from five test pits excavated around each of landfills A, C and D on August 30th and around Landfill B on September 2nd.

Apron Area Instrumentation Installation Program

- Monitoring wells purged on August 31st and September 2nd.
- Groundwater samples collected from monitoring wells and sent on flight out on September 3rd.
- Thermistors installed in two locations in Apron Area. Locations surveyed.
- Readings taken from thermistors on September 9th, 13th and 15th. Measured resistance readings change with depth, indicating thermistors are functioning as designed. Correlation of resistance readings with temperature to be completed.

7.0 SCHEDULE

The contractor's plan for the coming week includes:

- Demobilize equipment by barge if conditions allow.

8.0 PERSONNEL ON SITE

No personnel remain on site.

9.0 EQUIPMENT UTILIZATION

#	Description	Use during Week
2	JCB 722 Rock Trucks	Hauling borrow material for backfilling.
1	CAT 322C Excavator	Working in borrow pit
1	Excavator	Working in borrow pit
1	Hitachi EX200 Excavator	Placing Type 1 material
1	CAT 14G Grader	Grading road when required, grading airstrip backfill
1	Small Komatsu D31PX Dozer	Regrading soil disposal areas, backfilling Apron Area.
1	CAT D6 Dozer	Regrading soil disposal sites and open excavations
1	CAT 1108 Loader	Dragging roads and airstrip, loading Type 1 material.
1	CAT 950 Loader	Used by mechanic
2	Ford 350 double cab trucks	Used to transport EGT and AECOM Personnel
1	Kubota RTV 900 4x4	Site Supervisors work site runabout
2	John Deere Gator XUV 4X4	Used by AECOM, IEG and surveyor
3	ATVs and Trailers	Used by Wildlife monitor and camp staff. One flown out on September 3 rd flight.
1	CAT TL1055 Telehandler	Idle
1	Terra Gator Water truck	Idle
2	Kenworth Gravel trucks	Sent on August 19 th barge.
1	Aluminum boat	Idle

SUBMITTED BY:

Brendon Norrie, M.Sc., P.Geol.



Departmental Representative
AECOM Canada Ltd.

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Date October 6th, 2009