SHELL CANADA LIMITED
WEST CHANNEL REMEDIATION PROGRAM 2003
FINAL REPORT



Prepared for:

Shell Canada Limited.
400-4th Avenue SW
Calgary, AB T2P 2H5

Prepared by:

IEG Environmental

December, 2003
Project: 5435-03

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Distribution:

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Date: _____

Kurt Kure, B.Sc., P.Eng.
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Date: _____

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Contract Manager and Senior Review

EXECUTIVE SUMMARY

Environmental site assessments conducted in 2000 confirmed local residents complaints of hydrocarbon soil contamination at the former Shell Canada Limited (Shell) West Channel Staging Point in the Mackenzie Delta, Northwest Territories. This former staging area and fuel storage site is located on a vegetated peninsula adjacent to the West Channel of the Mackenzie River on Inuvialuit 7(1)(a) lands approximately 37 kilometres northwest of Aklavik, NT.

In 2001, Inuvialuit Environmental (IEG) conducted an in-situ remedial program after a request from Aklavik residents to minimize disturbance to the site. This program was partially successful, but it was discontinued in 2002 due to the excessive length of time (+10 years) it would require to complete remediation. In 2002, Komex International conducted a CCME Level 2 Quantitative Risk Assessment of the site and IEG conducted a number of pilot studies to identify a suitable treatment method. In Komex's report (2003), soil deeper than 50 cm is not expected to cause harm to people or wildlife. However, as a precautionary approach, Komex recommended that any subsurface soil containing 30,000 ppm total petroleum hydrocarbons (TPH) be removed. This is to minimize the potential of mobile hydrocarbons being present. Komex also recommended that surface soil be cleaned to 3,200 ppm because of the possibility of effects to small, insect-eating mammals. Shell proposed to clean the surface areas to the GNWT standard of 2,500 ppm and to ensure that subsurface areas were remediated to concentrations less than 30,000 ppm. Upon completion of remedial activites, the site is not expected to cause harm to people or wildlife.

On June 30, 2003, Shell acquired a Land Use Permit from the Inuvialuit Land Administration (ILA) for ex-situ remediation of hydrocarbon contaminated soil. Following ILA approval, a barge camp was mobilized to site and a crew began work on-site on July 10. The remediation program was conducted from July 10 to August 24, 2003.

The 2003 Remediation Program utilized a proven soil aeration/volatilization technology. This technology was chosen over other feasible options based on the results of 3 laboratory scale treatability studies and a pilot scale landfarm monitored during 2002. The results from these 4 tests conclusively showed that the soil can be remediated to levels below the risk-based criteria using aeration and volatilization methods. During summer 2003, the contaminated soil was mixed and aerated using an allu bucket on a Hitachi200 trackhoe to achieve the desired reductions in hydrocarbon concentration. The technology chosen was weather dependent which negatively impacted the desired outcome. During the operational period, only 25 days were suitable for mixing. Tarps and low temperature drying technology were utilized to off-set moist conditions.

Shell and its contractors' commitment to following best practice measures to minimize the risk of potential environmental impacts and site disturbance allowed for a successful remediation of the affected site with no safety incidents and no negative environmental impacts.

As part of the cleanup, Shell requested IEG to maximize Inuvialuit training and economic benefits. Approximately 84% of financial expenditures on the project were paid to Inuvialuit businesses. Of the 21 persons who worked on the site, 14 were Inuvialuit, 2 were Gwich'in from Aklavik and 5 were from southern Canada.

The general objective of the West Channel cleanup project was to reduce the toxicity, mobility or mass of the contaminant in a manner that would ensure protection of public health and safety, and the environment. The goal for remediation of the West Channel Site is to achieve this general objective by

reducing contaminant concentrations in soil to levels acceptable to the regulatory agencies and to the local community.

As a result of the 2003 remediation program at West Channel, the following conclusions can be stated:

1. No free product hydrocarbon exists at the West Channel site – this is important as the main pathway of concern was the potential for hydrocarbons to flow to the Mackenzie River.
2. The edges of the hydrocarbon impacted area, in both the surface and the sub-surface have been confirmed. There was no indication of contamination at the river bank.
3. Ten monitoring wells were installed and a 25 year monitoring plan was developed to monitor the pathway between the hydrocarbon impacted area and the Mackenzie River as an additional protection measure.
4. More than 2000m^3 of hydrocarbon impacted soils were excavated and treated on-site.
5. Hydrocarbon concentrations decreased about 35% despite difficult weather conditions and a minimum amount of mixing days. Treatment was primarily achieved through homogenization (mixing) and aeration of the contaminated soil. Hydrocarbon concentrations in the subsurface soils decreased to an average of 10,600 ppm as measured by the on-site PetroFLAG™ test kit, well below the CCME guideline of 30,000 ppm for subsurface soils.
6. An area of approximately 1750m^2 of surface hydrocarbon impacted soils was successfully treated.
7. There is an area of soil yet requiring treatment that is marginally above the GNWT industrial criteria of 2500 ppm and the risk-based criteria of 3200 ppm. The averaged concentration of surface soils is now 1840 ppm. The maximum concentration from the final sampling program was 3700 ppm.
8. We anticipate that further reductions in subsurface hydrocarbon concentration will occur as a result of the oxygenation of the soil (breaking up the soil by mixing and exposure of the soil to air).
9. We anticipate that further reductions in the surface soils will occur as a result of photo-oxidation (exposure to sunlight), a roto-tilling program and the addition of nutrients in 2004 and phyto-remediation and further oxidation as plant communities re-grow on the site.

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1.0 INTRODUCTION

1.1 Project Scope

Shell Canada Limited (Shell) contracted IEG Environmental (IEG) under Blanket Order No. 46002282001OB to provide personnel, equipment and remedial project management for the cleanup of the West Channel Site. The project required excavation and on-site remediation of hydrocarbon contaminated soil and was carried out during July and August 2003. Permission to complete the project was granted by the Inuvialuit Land Administration (ILA) with Land Use Permit ILA03AS024.

The West Channel site is located on a vegetated peninsula adjacent to the West Channel of the Mackenzie River on Inuvialuit private (7(1)(a)) lands approximately 37 kilometres northwest of the community of Aklavik, NT. The coordinates of the site are 68°28'33" N latitude and 135°33'25" W longitude.

The West Channel site was a staging area for Shell Canada's oilfield activities from 1971 until 1975, when the fuel tanks located at the site were removed and the site abandoned. The site covers an area of approximately 4.6 hectares. A history of the site and the project to date is provided in Section 1.2 of this report.

As part of the cleanup, Shell requested IEG to maximize Inuvialuit training and economic benefits. Significant Inuvialuit sub-contractors included the provision of barge camp and heavy equipment by E.Gruben's Transport (EGT); camp catering by Arctic Oil and Gas Services (AOGS); air support to and from the site by Canadian Helicopters and Aklak Air and provision of barge services by NTCL and Bob's Welding. Approximately 84% of financial expenditures on the project were paid to Inuvialuit businesses (including IEG). Of the 21 persons who worked on the site, 14 were Inuvialuit, 2 were Gwich'in from Aklavik and 5 were from southern Canada. A complete list of Inuvialuit businesses utilized for the project is provided in Table 8.

The general objective of the West Channel cleanup project was to reduce the toxicity, mobility or mass of the contaminant in a manner that would ensure protection of public health and safety, and the environment. The goal for remediation of the West Channel Site is to achieve this general objective by reducing contaminant concentrations in soil to levels acceptable to the regulatory agencies and to the local community.

1.2 Project History

The West Channel site was a staging area for Shell Canada's oilfield activities from 1971 until 1975, when the fuel tanks located at the site were removed and the site abandoned. Investigation into the possibility of fuel contamination in the soil at West Channel was initiated after a member of the Aklavik Hunters and Trappers Committee noticed odours in a pit dug at the site for bait fish in 2000. Shell immediately initiated an investigation into the concern. A phased approach to assessment of the site was undertaken, culminating in an in-situ remedial program in 2001. In-situ treatment was chosen to meet the concerns of the residents of Aklavik about disturbance of the site. The in-situ program was abandoned after one year as it was estimated that it would take ten years or more to complete. On-site and laboratory studies were undertaken in 2002 to develop an effective remediation method that could meet the objectives of the cleanup. Following community input in the spring of 2002, further delineation and a risk assessment were prepared to establish the risk posed by the fuel-impacted soil to people and animals who might use the site. The amount of clean-up required to protect human and environmental health was also determined.

The executive summary of the Risk Assessment (Komex International, 2003) provided the following information and conclusion:

> *The first step in the risk assessment was to look at how humans, fish, birds, animals and vegetation are exposed to the contamination. It was determined through water sampling and the screening process that the water quality and fish in the Mackenzie River would not be affected by the fuel-impacted soil. Vegetation was also not effected, as demonstrated by the thick vegetation present in most of the contaminated area. The only part of the contaminated site that people or animals could possibly be in contact with is the surface soil, from the ground surface to 50cm deep. Since this is the most likely way humans and animals would be exposed to the fuel-impacted soil, the risk assessment focused on the surface soil and the amount of clean-up needed to make the site safe for humans and the environment.*
>
> *In preparing a risk assessment, many conservative assumptions are made to arrive at a risk level. It was assumed that people* [of all ages] *use the site every day for two summer months for their whole lives (70 years). People using the site were assumed to harvest and eat plants, birds and wildlife from the site. It was assumed that these plants, birds and animals live on the fuel-impacted soil. Direct contact with fuel-impacted soil was also considered. Breathing of hydrocarbon vapours at the site was not considered because of the depth of the contamination and any vapours will disperse rapidly in outdoor air.*
>
> *The different ways in which animals and birds are exposed to the fuel-impacted soil was also carefully considered. Plants could absorb small amounts of hydrocarbons from soil and be eaten by animals. Invertebrates (insects, etc.) in this area could absorb hydrocarbons from the soil at the ground surface and then be eaten by animals. Several species of wildlife were examined in the risk assessment. The most vulnerable species, based on their increased exposure or sensitivity to the contaminants, were chosen to represent animals which might be found on the site now or in the future. It is assumed that if these species would not be affected, then no harm would come to other species. The wildlife species that were used to represent northern animals were willow ptarmigan, American robin, northern red-backed vole, moose, masked shrew, red fox, ermine, sharp-shinned hawk, and short-eared owl.*
>
> *The results of the risk assessment show that soil deeper than 50 cm is not expected to cause harm to people or wildlife species. However, to prevent future problems it is recommended that any subsurface soil which could act as a source of free flowing hydrocarbons be cleaned up. In the surface soils, the possibility of effects to small, insect eating mammals was identified. A level of 3,200 ppm of F2 fraction hydrocarbons (diesel) was found by the risk assessment to be protective of small, insect eating mammals. Cleanup of the surface soils to the territorial standard for total petroleum hydrocarbons of 2,500 ppm will be undertaken to eliminate this risk. Once remediation is completed, the site is not expected to cause harm to wildlife or people.*

The scope of the 2003 Remediation Program and future site monitoring work was guided by the above conclusion in the Komex Risk Assessment. During the 2003 program, surface soils (those soils in the top 50 cm of the ground surface) with TPH concentrations above the Government of the Northwest Territories (GNWT) criteria (2,500 ppm) were excavated and treated. The GNWT criteria are more stringent than the risk assessment's criteria which calculated maximum concentration allowable for protection of human and animals at 3200 ppm.

The chosen remediation method for the excavated soils involved aeration, mixing and volatilization of the contaminated soils. This method has been well proven in Alaska, southern Canada and in the western Arctic at sites such as the Saviktok tank farm clean-up at Tuktoyaktuk, and the Nicholson Point and Clinton Point DEW Line Clean-ups. It involves repeatedly turning over and thus mixing the contaminated soil; this technique essentially aerates and dries the soil whereby a portion of the contaminations is volatilized. While there may be some biological reduction of concentrations using this technique, it has been observed

(e.g., bench scale studies) that the majority of the hydrocarbon concentration reduction is due to volatilization through exposure to heat or the evaporative energies of the air and sun. For this reason, warm dry weather was an important factor in the potential success of the program. Details on the method used in 2003 are provided in Section 2.0 of this report. Details on the 2001 program and the 2002 studies are available in separate reports published by IEG on behalf of Shell. (See Section 5.0.)

Soils greater then one-half meter (0.5m) below ground surface were remediated to significantly less than the 30,000 mg/kg specified in the Canadian Council of Ministers of the Environment (CCME) guidance document (CCME 2000). According to CCME, soils with concentrations greater than 30,000 mg/kg — also known as 'source material' — can potentially leach free phase hydrocarbons or pure hydrocarbon liquid. Free phase hydrocarbons are more mobile and substantially more hazardous; these hydrocarbons could, over time and through changing site conditions, potentially migrate to the surface and into the Mackenzie River. However, evidence of free phase hydrocarbons was not found during either of the 2001 or 2003 remediation activities or during the extensive assessment program completed to date (160 boreholes or sampling locations to date). Nonetheless, the soil with the potential to contain free product hydrocarbons >30,000 mg/kg was excavated and treated to further reduce the likelihood of free hydrocarbon product.

Following the 2003 remediation program, a long term (25 years) monitoring program has been planned, ensuring that any remaining hydrocarbons will not present a threat to any users of the site or to the environment. The monitoring program will involve groundwater sample collection near the outer edge of the contaminated area from both existing and new groundwater monitoring wells. The collection of groundwater samples will help assess whether there is any plume movement of contaminated groundwater. If water samples indicate the presence of hydrocarbons, soil samples will also be obtained from the area of concern to assess the size of the impacted area. Soil and water samples will be analyzed for total petroleum hydrocarbons (TPH).

1.3 Contaminants of Concern

The West Channel staging site was used by Shell until the 1970s for petroleum storage in surface tanks and the staging of supplies for seismic exploration operations. Previous site investigations involving chemical analysis of soil and groundwater samples, as well as historical records, were reviewed to identify the contaminants of concern. The source material on site was determined as primarily diesel contamination co-mingled with minor amounts of gasoline contamination.

A Phase I investigation conducted by Shell in July 2000 indicated elevated concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX), and some metals. The BTEX and metal concentrations in four samples exceeded the applicable CCME criteria.

A Phase II investigation conducted by Inuvialuit Environmental Inc. (IEI) in September 2000 verified the areas of concern as identified in the Phase I investigation. Thirteen (of the twenty-five) soil sample locations contained measurable petroleum hydrocarbon constituent concentrations. Eight samples exceeded the GNWT criteria of 2,500 mg/kg for TPH. In addition, one soil sample slightly exceeded the CCME criteria for barium; this sample result (2,040 mg/kg) was marginally above the CCME criteria (2,000 mg/kg.). From the forty-nine samples taken, no other soil sample analyzed contained metals concentrations in excess of the guidelines.

Further investigation established the extent of contamination, including the lateral and vertical distribution of the hydrocarbon contamination. The concentration of TPH within the soil varies, and the maximum found (at Dutch Auger location 31) was 76,000 ppm. Nine percent (9%) of the locations sampled for TPH were over 40,000 ppm, and forty-six percent (46%) were below 8,000 ppm.

The bulk of the contamination present at the site is longer chain hydrocarbons (known as Total Extractable Hydrocarbons (TEH)). TEH are hydrocarbons from 10 to 60 carbon atoms in length (C10 to C60). An analysis was performed on selected soil samples to characterize the type of hydrocarbon; it indicated the hydrocarbon profile was characteristic of arctic diesel, Jet Fuel A or kerosene. The components of diesel are of lower mobility when compared to the hydrocarbon characteristic of gasoline contamination (<C10). Sorption properties of high range carbon molecules (>C20) remain adsorbed to soil particles which reduces their ability to move in vapour and water (dissolved) phases.

A smaller portion of the site is co-contaminated with lighter hydrocarbons (known as Total Volatile Hydrocarbons (TVH)). TVH analysis (C6 to C10) of selected soil samples indicated the presence of some limited volatile hydrocarbon concentrations which is indicative of gasoline contamination.

Samples were also analyzed for polyaromatic hydrocarbons (PAHs). PAHs sometimes may be found in conjunction with petroleum hydrocarbon contamination, and are potentially more toxic than aliphatic hydrocarbons. However, there was no PAH contamination found in excess of the CCME criteria.

The single exceedance for barium was not considered to be a contaminant of concern for the purposes of this remedial action.

1.4 Contaminant Distribution

The approximate lateral distribution of residual fuel contamination before remediation is depicted in Plate 1. The residual hydrocarbons exceeded the risk based criteria in two distinct areas (west area and east area) of the overall impacted soil zone. The two areas of concern appear to have two distinctive smaller plumes: a heavier-ended hydrocarbon plume (>C10) and a smaller lighter-ended (<C10) plume. However, both of these plumes intersect and where therefore treated as one. The aerial extent of the subsurface contamination which required remediation (soils >30,000 mg/kg of 3%) is approximately 1,250 square meters. There is a smaller area of surface contamination (2,500 mg/kg) that also requires remediation; the surface contamination has the same general area of the subsurface contamination. The depth of contamination was generally limited from 0 to 2 m below ground surface.

Plate 1 Aerial Photo (2002) and Site Layout.

1.5 Regulatory Approvals

Shell Canada Limited (Shell) received a Land Use Permit (#ILA03AS024) from the Inuvialuit Land Administration (ILA) for: (i) ex-situ remediation of hydrocarbon contaminated soil during 2003; and (ii) follow-up monitoring (≤25 years) at the West Channel site. ILA granted approval for additional remediation activities to take place between June and September 2004 if required. The ILA Permit is attached as Appendix G.

In September 2000, ILA had issued Shell a Land Use License (#ILA00AN43) for the reconnaissance work (i.e., Phase II study); this License was amended in April 2001 to allow IEG to collect 60 litres of surface soil for pre-testing. In June 2001, ILA had issued Shell a Land Use Permit (#ILA01AX29) for remediation work; this permit was extended for the 2002 work. The NWT Water Board had issued a Water License (N7L1-1770) in August 2001 and it expires on July 31, 2003. It is anticipated that a water license will not be required for any future monitoring activity on site.

The primary agency with regulatory jurisdiction over the 2003 Remediation Program and follow-up monitoring is the ILA. The 2003 Remediation Program and follow-up monitoring are below the thresholds for the NWT Water Board's licensing requirements. Community consultation regarding the project was undertaken on April 28, 2003. The results of the consultation were provided in the Project Description submitted to ILA on May 12, 2003. The ILA approved the 2003 cleanup proposal (project description) on June 30, 2003 after the monthly ILA Commissioner's (ILAC) meeting. The project did not require further environmental screening.

2.0 METHODOLOGY

The 2003 Remediation Program utilizing soil aeration/volatilization was selected after several months of study, experimentation and on-site pilot projects. Other options/technologies were also considered on bench or pilot scale, but did not have as great a potential for remediation of the site as mechanically assisted aeration/volatilization.

The basis of the chosen remedial program using volatilization has been well proven in Alaska, southern Canada and in the western Arctic at sites such as the Saviktok tank farm clean-up at Tuktoyaktuk, and the Nicholson Point and Clinton Point DEW Line Clean-ups. It involves repeatedly turning over and thus mixing the contaminated soil; this technique essentially aerates and dries the soil whereby a portion of the contamination is volatilized, over multiple field seasons. While there may be some biological reduction of concentrations using this technique, it has been observed (e.g., bench scale studies) that the majority of the hydrocarbon concentration reduction is due to volatilization through exposure to the evaporative energies of the air and sun.

2.1 Process Description

The overall action program for the remediation of the West Channel site was as follows:

1. The remedial area was initially determined through locating samples, taken from the site during previous assessment activities which exceeded the 30,000 ppm criteria. Clean surface soils overlying the soil with hydrocarbon concentrations greater than 30,000 mg/kg (ppm) of TPH were removed and set aside. The topsoil was field screened by flame ionization detector (FID), which provides a qualitative/relative measure of hydrocarbon contamination during excavation. Soil with lower FID readings, typically less than 1000 ppm, were deemed clean and stockpiled. The excavation and field screening continued until contaminated soil (>2,500 ppm) was exposed.
2. Once all the clean soil had been removed from the remedial region, the area was divided into cells approximately 6m by 12m and the soil excavated and piled adjacent to the excavation on contaminated soil. The soil piles were then tilled and aerated by a Hitatchi e200 excavator either by "throwing" the material or mixing with an Allu bucket whenever able, all within the excavation area. The size of the cells was chosen such that the excavation and soil piles could be covered with the 40 by 60 foot tarps supplied for the project, in the event of inclement weather.
3. The subsurface soils were remediated by this method to an average bulk concentration of 10,600 ppm[1], well less than the established criteria of 30,000 ppm (CCME risk-based criteria). Initial concentrations throughout the whole area were found to be in excess of 30,000 ppm in the original assessments of the site. The soils remaining in the bottom and sidewalls of the excavation were on approximately 2,700 ppm on average, with 65 of the 96 samples collected less than 2,500 ppm. Analytical results are provided in Appendix B.
4. Any contaminated surface soil encountered during the clean soil stripping process was left in place and excavated and mixed with the deeper contaminated soil.
5. Following remediation of the excavated area, the clean surface soil was then replaced on top of the homogenized subsurface soil. Our objective is to revegetate the area with willows, growing from the roots present in the soil that will be placed back on the surface.

The area was left to revegetate naturally from the surrounding willow-alder complex. No foreign seed or seedling plant species were introduced to the site.

[1] Represents the result obtained from the on-site analysis with the PetroFLAG™ Test Kit. The result obtained from the CAEAL accredited laboratory yielded an average of 8,000 ppm. A discussion for the discrepancy between the two numbers is provided in section 3.2.

Based upon previous treatability studies, the main factors in the success of volatilization of the hydrocarbons are:

- Exposure of the soil to convective drying air currents;
- Exposure of the soil to the heat and radiation of the sun; and/or
- Lowering the water content of the soil to expose the hydrocarbon to the air and heat of the sun since the hydrocarbon is typically adsorbed directly by the soil particles and moisture would impede the volatilization from the soil.

To achieve peak effectiveness, the mixing of soils is optimally done on dry and moderately sunny days. In the event of wet conditions, mixing was stopped and the contaminated soils were covered with tarps. In addition, any surface water, such as rain, was diverted from the active treatment area or collected and treated if it came into contact with the contaminated soil.

All mechanical mixing occurred within the contaminated area after the clean top soil had been stripped; this approach avoided the need for a secondary (or separate) containment area which, if implemented, could result in further dispersion of contamination. All soil was handled in the footprint of the area which was excavated.

The soil was turned from 1 to 5 times to achieve the desired reduction in hydrocarbon concentration (<30,000 ppm). While the length of time required to treat the soil was entirely dependant on weather conditions and the saturation of the soil, it was originally expected to take from 25 to 60 days (at a maximum) of active mixing to achieve the required concentration reduction. Actual days of mixing on site totaled 25.

Poor weather and soil conditions hindered the aeration of the soil for most effective remediation. Over the course of the project the rain, low temperatures and overcast conditions did not provide for adequate time and heat. Along with lack of effective drying days, the Allu bucket, which provided the best mixing/aeration, was also not practically functional on saturated soils (which was approximately half of the site). In spite of the conditions, a 20% overall reduction in the soil concentration was achieved; and the subsurface contaminated soil was effectively homogenized eliminating the potential for free product to form and migrate to possible receptors.

2.2 Aids Used During Remediation

Due to the number of weather days and typically inclement conditions at the site a number of techniques were used to prevent the excavation and treatment piles from getting saturated and to attempt to dry an already wet location. These techniques included the use of tarps and heaters and the use of heat-enhanced soil vapour extraction. Both methods are described below.

2.2.1 Tarps and Heaters

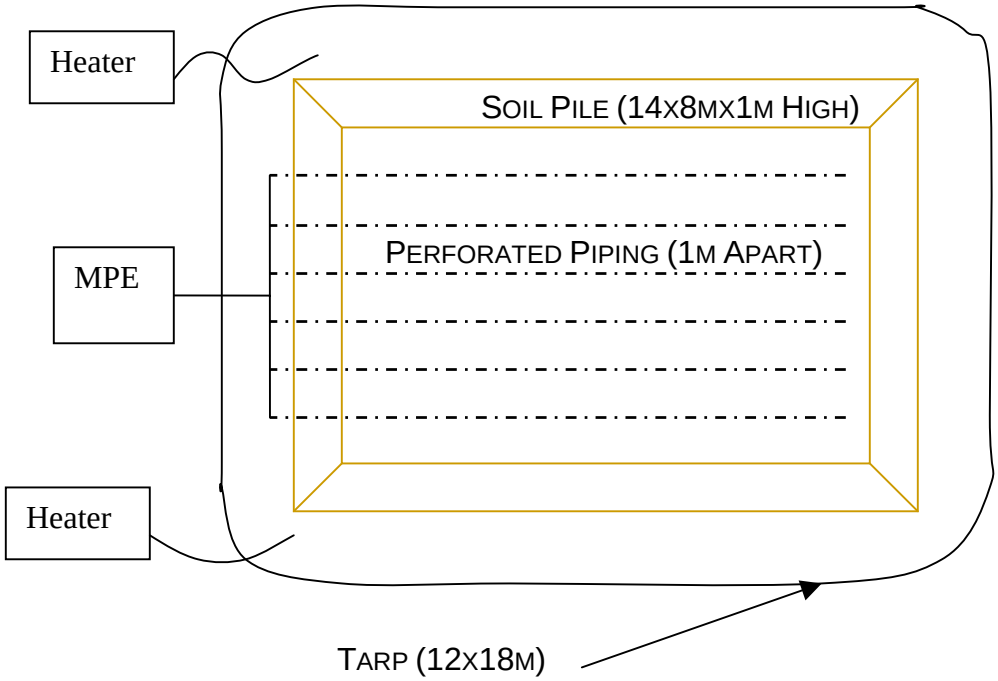
Six 40 by 60 foot tarps were purchased for the project and were used to cover the excavations and treatment piles during wet periods (See Photographs 5,12,13,14). The water collected on the tarps was pumped off without treatment since it had not come into contact with the contaminated soil. Use of the tarps prevented the soil from becoming saturated with water and unmanageable for the excavator once the weather cleared and helped maintain an overall dry site. For soil that was already wet, two 1 MMBTU/hr indirect heaters were used under the tarps to assist in drying the surface of the soil, however this was no substitution for the heat of the sun and the convective force of the wind.

2.2.2 HEEVES Trial

Description of System

Heat Enhanced Ex-situ soil Vapour Extraction System (HEEVES) was used as an alternate soil treatment technology for the Shell West Channel site, in instances when conditions for use of the Allu Bucket or mixing were not good; wet weather or if enhanced hydrocarbon removal was required. A pilot system was constructed and tested in attempts to establish the parameters for operation of the system (See Photographs 19, 20).

HEEVES consists of soil vapour extraction piping inside a "fluffed" excavated soil pile, covered with a continuous tarp and heated blowers to dry and thermally desorb hydrocarbons from the soil.



HEEVES LAYOUT SCHEMATIC

Pilot System Set-up

The pilot system consisted of the following components:

- Multiphase Extraction (MPE) System tied into the perforated piping layed out either on the ground or 300mm from the ground surface covered with geotextile or other porous covering to avoid sucking soil into the MPE.
- Soil placed over the piping and evenly distributed with the Allu Bucket to a maximum of 1m deep. The soil was NOT to be compacted to allow for airflow through the soil. All of the perforated piping was covered to avoid short circuiting of the hot air under the tarp.
- A tarp was spread over the pile, pegged down and the edges sealed to the ground surface, so that the hot air could not escape except for two holes where the hot air was introduced.

- Two – 450,000 BTU/hr, 2800 CFM Indirect Diesel Heaters blowing under the tarp with air temperatures from 140ºF to 180ºF.

The operational premise of the system is that the hot air would be contained under the tarp and would be drawn through the soil with the MPE heating and drying the soil to a point where significant thermal desorption of the hydrocarbons could occur. During operation it was expected that soil temperatures would rise close to the temperature of the air pocket under the tarp all the way to the base of the pile and to the MPE suction piping. Field observations indicated that soil temperatures increased to 23 to 35^{o}C; that air was flowing into the pile; and an FID reading from the MPE exhaust provided a 500 ppm concentration.

2.3 Progress/Confirmatory Soil Sampling Methodology

2.3.1 Determining Clean Top Soil

Areas of surface contamination were identified and staked out based on previous assessment information. The clean topsoil within that boundary was removed to the underlying contaminated area. This was primarily determined by portable Flame Ionization Detector (FID) and PetroFLAG™ Field Test Kit results collected 30cm down, before the next lift is excavated. The clean soil was removed in 30cm lifts and stockpiled for regrading the upper 0.5m of the site after treatment of the contaminated subsurface soil was completed.

2.3.2 Contaminated Surface Soil

The areas of contaminated topsoil based on FID and PetroFLAG™ readings was cordoned off with flagging. The contaminated topsoil was treated along with the contaminated subsurface soil.

2.3.3 Excavation of Contaminated Soils

After all clean topsoil was removed from the area of contaminated subsurface soil, the area was sectioned off into discrete areas a maximum of 6m in width by 12m in length. Each cell was labeled with a letter which is shown in the attached drawing provided in Figure 3 of Appendix A. Only up to three cells were excavated at any one time due to space constraints on the contaminated soil and the number of tarps available. Each cell provided from 70m^3 to 120m^3 depending on the overall depth of the contaminated soil from 1 to 2m deep. The soil was piled adjacent to the excavation behind the hoe. Excavation did not exceed 2.5m in depth as this was the expected maximum depth of contamination. The 12m by 18m tarps were sufficient to cover the excavation in the event of rain or to protect the permafrost exposed due to excavation activities. Exposure of large areas of permafrost to the surface and heat was avoided due to the potential problems it could cause with melt back and mud.

Once the soil was excavated, it was mixed and aerated until the bulk concentration in the soil were well below the 30,000 mg/kg CCME Guideline. This required handling the pile several times with the Allu or clean-up bucket to homogenize and volatilize the hydrocarbon.

2.3.4 Initial Sampling for Baseline of Contaminated Soil

Composite grab samples (from five separate locations where the most recent bucket was dumped) were taken from the soil pile approximately every 10 buckets (or 10m^3). The sample was homogenized and subsampled and split in two subsamples: one bag for FID analysis and another jar for PetroFLAG™ analysis and possible water content analysis and laboratory analysis. The samples with the two highest FID

readings, one from either half of the 6m by 12m excavation, were field tested with the PetroFLAG™ Field Test Kit.

2.3.5 Before and After Aeration With the Allu Bucket or Other Treatment

Sampling during the mixing process was conducted to try to get a feel for the reduction in hydrocarbon content achieved with each successive mixing event. The hydrocarbon reduction should be closely tied to the soil moisture content. Up to two analytical samples were submitted per mixing event.

Before the soil was mixed with the excavator a composite sample was taken at the location where the excavator was about to take a bucket full of soil. The excavator scooped up the soil and either dumped it or processed it with the Allu bucket into the transfer pile. A second composite sample was taken where the soil was dumped. This was done up to three times while the soil pile was being processed and repeated each time the soil pile was moved. These samples were collected, and, at a minimum, analyzed by FID. Select pairs of samples (before and after) were analyzed by PetroFLAG™ based on the FID reading. The sampling regime was modified periodically based on FID and PetroFLAG™ results. The more heterogeneous the FID results the more sampling was required.

2.3.6 Soil Treating Endpoint Sampling

Once the soil had shown that it had been sufficiently treated through sampling to below a concentration of 30,000 mg/kg total hydrocarbons, a final round of sampling was conducted. Two samples were collected from the total volume of treated soil for every 6m by 12m excavation for FID, PetroFLAG™ and Laboratory Analysis.

2.3.7 Sidewall and Excavation Bottom Confirmatory Sampling

Sidewall and bottom samples were composited (minimum of five subsamples per composite) every 18m² of surface area or 6m by 3m section of the 12m by 6m excavation. For each cell this amounted to approximately four bottom samples per excavation and one or two sidewall samples (depending on uncertainty of area). The overall surface area of the excavation is approximately 1500m² amounting to 96 analytical samples during the course of the project. The size of the excavation was determined through FID, olfactory, visual and PetroFLAG™ results from periodic sampling.

2.3.8 Sample Naming Procedure

All samples included:

- the date the sample was collected,
- the area where the sample was collected,
- what type of sample was collected, and
- a sequential number as follows

  - For Example: PIA071503-245

PI being the type of sample, which can be one of the following:

S = Surface Sampling to identify clean fill
E = Intermediate Samples from the Excavation (Checking trends in contamination in the excavation
PI = Pile Initial Composite Sample – Before First Mixing Event
PI1 = Pile Initial Mixing/Treatment Discrete Sample

PF1 = Pile Final Mixing/Treatment Discrete Sample
PI2 = Pile Initial Composite Sample – Second Mixing Event
PF2 =Pile Final Composite Sample – Second Mixing Event
PF =Pile Final Composite Sample Once Mixing/Treatment is complete
CB1 = Confirmatory Sample of the Bottom
CB2 = Second Confirmatory Sample of the Bottom and so on for every confirmatory sample for the excavation
CW1 = Confirmatory Sample of the Side Wall

A - Being the Excavation Designation for the 6m by 12m area.

071503 being the Date (month/day/year)

245 being a Sequential Number

2.3.9 Analytical Procedures

In order to provide representative analytical results such that results can be compared between samples taken at different times, the following procedure was followed for each sample collected.

FID Analysis

The FID is a semi-quantitative measurement for volatile hydrocarbons in the soil. This measurement is strongly affected by sub sampling of the bulk sample, the volume of soil used, temperature of the soil and volume of air in the bag. The following steps were used to standardize these parameters.

1. A homogeneous mixture of composite soil samples was required. This was accomplished by collecting composite samples and mixing them together in a bucket, cutting them into one another.
2. The samples were then sub sampled into two or three representative samples, one for FID anlaysis and the other for PetroFLAG™ and (if required) a third for analytical analysis. Approximately 500mL of sub sample (1/4 to 1/3 of the bag) was placed in a labeled 1L Ziplok bag and sealed with a nominal headspace ensuring that the airspace was equivalent to that of previously sampled bags.
3. The contents of the bag were gently agitated/manipulated by hand and warmed in an incubator or in the sun until the temperature of the soil was between and 20ºC and 25ºC.
4. The temperature was measured with an infrared thermometer and recorded.
5. The soil was agitated in the bag once more and the FID inserted into the bag ensuring that the air did not escape. The maximum concentration observed was recorded.

PetroFLAG™ Analysis

A second sample was subsampled from the mixed composite sample for analysis using the PetroFLAG™ Field Test Kit. A small sample was taken from the labeled 500mL glass jar that was sent to the laboratory. A subsample was collected out of the glass jar using a clean scoopula, from three locations within the jar. Excess sample material will be used for soil moisture content analysis. These subsamples were then mixed again and another subsample was collected from the mixed soil for PetroFLAG™ testing. Testing was conducted following PetroFLAG™ methods outlined in the Test Kit Manual.

Moisture Content

Moisture content is an important property for the aeration/treatment of the soil excavated from the site. Moisture content should be done on all treatment sample and possibly other designated samples. All soil

treatment samples ("P" samples) sent in for laboratory analysis were to have a field moisture content done. The procedure for doing the moisture content is as follows:

1. Using gloves (keeping natural oils from your fingers from adhering to the sample tray which could cause errors) weigh a sample tray and record it.
2. Tare the scale and weigh approximately 4-7 grams of soil and record the weight.
3. Place in the oven at 105ºC for 24 hours
4. Remove from the oven with tongs and place in the dessicant dryer to prevent condensation on the sample from skewing results. If the dessicant is pink it is saturated with water and needs to be regenerated by placing in the oven overnight until it is blue.
5. Weigh the sample, record the final weight and calculate the moisture content of the soil.

Laboratory Analysis

The soil collected for analysis by both PetroFLAG™ and Laboratory analysis was placed in labeled glass 500mL jars and refrigerated at approximately 4ºC until the samples were ready to be shipped from site. When shipped, the samples were placed in a cooler with ice packs and bagged ice to maintain the temperature of the sample during shipping. The samples were flown from the site by helicopter to ensure that they would reach Inuvik in time to be shipped to Calgary the same day. If this was not possible the samples were refrigerated in Inuvik until the next available flight. Chain of Custody (COC) procedures were followed during sample shipment. Samples were submitted to Maxxam Analytics for 2 day turnaround on sample results. The results were then faxed or e-mailed to site for incorporation into the data set. A shorter turnaround time was requested if the progress of the project had the potential of being negatively affected by the turnaround time. Site decisions were based on FID and PetroFLAG™ testing for the most part. However, confirmation analytical sample results of the sidewall and base samples were received and reviewed for areas of further potential excavation before the clean top soil was placed over the site. More than one set of confirmatory samples was sometimes required before excavation was complete within a specific area.

2.3.10 Remediation Progress Sampling

During the remediation process, the soil was excavated and treated in distinct units. Remediation progress sampling was completed after successive excavation of a unit of soil and monitored for overall contaminant reduction by headspace analysis with the FID. FID vapor headspace analysis was correlated to PetroFLAG™ Field Test Kit and laboratory analysis. When it was determined that the soil had been remediated to below 30,000 ppm (based on the remediation progress sampling), a confirmatory composite sample was collected from the specific unit and submitted to an accredited laboratory for analysis of CCME Hydrocarbons.

2.3.11 Excavation Sampling

Once the soil was removed from the excavation to the estimated extent of the contaminated soil plume requiring remediation, a composite sample or multiple samples for an average concentration was taken from the side walls and floor of the excavation approximately every $9m^2$ (a grid 3m by 3m) of surface area. The samples were screened onsite using PetroFLAG™ analysis and were forwarded for laboratory analysis if the screening indicated hydrocarbon concentrations were below the clean-up criteria. Samples were analyzed for CCME Hydrocarbons. (See Figure 4 in Appendix A for sample locations.)

2.3.12 Confirmatory Surface Soil Sampling

Once the remediation of the affected area was complete, ten soil samples were collected from across the backfilled area, as final confirmatory samples. The samples were taken from the top 50 cm horizon as individual composite samples. The samples were analyzed at Maxxam laboratories.

2.4 Groundwater Monitoring Wells and Program

A long term groundwater monitoring program was initiated at the completion of the remediation program. This program consists of a series of groundwater wells maintained around the perimeter of the existing contamination, particularly on the east side of the site nearest to the Mackenzie River. The ongoing monitoring of groundwater is intended to assuage any concern of contamination moving towards the Mackenzie River. Full details of the long term monitoring program are provided in a separate report available from Shell or the ILA. Analytical results of the 2003 groundwater sampling program are provided in Table 6 of Appendix B.

2.5 Project Resources and Infrastructure Usage

2.5.1 Personnel

Ten to fourteen people were required on the site at any one time for the duration of the project. Crews worked on a cross-shift basis, typically 2 weeks in and two weeks out. The following personnel were present at the site for either a portion, or for duration, of the project:

- Remediation Foreman
- General Labourers (1-2)
- Excavator Operator
- Environmental Technician
- Camp Attendant
- Cooks
- Wildlife Monitor
- Environmental Monitor
- Shell Representative
- Medic

The Shell Remediation Project provided temporary employment for 12 Inuvialuit beneficiaries and two Gwich'in individuals from Aklavik.

2.5.2 Camp

The camp facility used for the project was the Arctic Star Barge Camp supplied by E. Gruben's Transport. The Arctic Star was moored with three anchors dug on shore and tied with metal cables to the barge. The barge was situated in the small back eddie off of the point. NTCL mobilized the Arctic Star and demobilized the barge and all the equipment. The heavy equipment was mobilized to site by the Bob Gully Barge. Rig mats were used for the mobilization and demobilization of equipment to protect the shoreline.

2.5.3 Water Requirements

Bottled drinking water for the site was supplied from Inuvik and utility water supply was from tanks onboard the Arctic Star. Minor amounts for water were withdrawn from the Mackenzie for use as utility water on the Barge in the last two weeks of the project. In total, approximately 1000 gallons of water was treated from the Mackenzie River.

2.5.4 Camp Wastewater Treatment and Disposal

Wastes generated at the site were to be disposed of by the following methods:

- septic sewage and grey water were stored onboard the Arctic Star in septic tanks for disposal in Inuvik,
- burnable solid wastes were incinerated on the Arctic Star,
- non-burnable solid wastes were stored in wooden seacans and shipped to Inuvik for disposal in the landfill.
- A waste separation system was used on site for metals, plastics and oily waste. All other refuse, other than oil products, was stored in wooden seacans which were stored on shore. Waste materials were separated onsite, recorded and transferred to an approved off-site facility. Oily solid wastes were stored in lined c-cans and disposed of at an approved facility in Inuvik.

2.5.5 Fuel Storage

Seven thousand gallons of diesel fuel were transported to the site to power the excavator, skid steer, generator and ancillary equipment. The fuel was stored in dual containment storage tanks with about 10,000 gallon capacity. An empty 10,000 gallon fuel tank was transported to the site and filled from another 10,000 gallon tank located on the barge. A temporary berm was constructed around the tank and a rig mat was placed beside the tank used as a pad to refuel equipment.

3.0 RESULTS AND DISCUSSION

The Arctic Star arrived at the site, pulled by the Vic Ingram and moored on July 7, 2003. The crew arrived for a project kick-off meeting on July 9th and the equipment was offloaded from the Bob Gully barge on July 10th. During the next couple days the excavation was laid out and the willows were cleared. Excavation started by removing clean topsoil in 30cm lifts and checking the soil in the next 30cm depth interval. Approximately 450m³ to 600m³ of clean (<2500 ppm) topsoil was excavated and stored in piles around the perimeter of the cleared area to be used as backfill for the upper 0.5m of the excavation. Excavation of contaminated soil began after all the clean topsoil was removed. During the course of the project, 16 cells of contaminated subsurface soil were excavated and treated amounting to approximately 2000m³ in place volume. Activities occurring each day throughout the project were included in the Daily Job Reports, which are attached as Appendix E. A photo log of the project is also attached as Appendix D.

3.1 Sampling for Clean Surface Soil

As the clean soil was stripped from the surface the next layer of soil to 30cm deep was sampled and analyzed with the FID to provide an indication of significant hydrocarbon presence in the soil. The FID and PetroFLAG™ samples collected for this purpose are shown in Table 1 along with their respective FID and/or PetroFLAG™ readings.

The area of contaminated topsoil was much larger than anticipated based on FID readings and generally consisted of the soil on the upper tier. This soil was left for excavation with the contaminated subsurface soil.

3.2 Correlation Between PetroFLAG™ and Analytical Results

To gain confidence in the PetroFLAG™ field results for use in determining the extent of the excavation, a correlation between the PetroFLAG™ and laboratory analysis was required. This was done initially by sending samples with varying PetroFLAG™ concentrations in for laboratory analysis and comparing the results in the field. Over the course of the project a comparison of the total hydrocarbon concentration of the PetroFLAG™ versus the laboratory analysis showed that the PetroFLAG™ was on average 1.4 times the laboratory result. This is shown in Figure 7 as a scatter plot with a best-fit line representing the average correlation between tests. Variation between the two results for a particular sample could be due to a number of factors such as:

- Subsampling procedures may have provided samples with different concentrations.
- The generic response curve used for Diesel in the PetroFLAG™ kit may not have fit the profile for the makeup of hydrocarbon components specific to the site.

It should be noted that the PetroFLAG™ Kit is a semi-quantitative method providing information to make field decisions. An arbitrary concentration of 20,000 ppm resulting from PetroFLAG™ analysis was established as the cutoff for further excavation of subsurface soils. This number provided for a margin of error in the PetroFLAG™ results from the analytical results.

3.3 Confirmatory Samples of the Sidewall and Base of Excavation

As discussed in the methodology section of this report, samples were collected from the base and sidewalls of the excavation to verify that concentrations were below the established limit of 30,000 ppm for the subsurface soils. The results of this sampling program are shown in Table 2.

In total, 96 samples were collected during the excavation. The average concentration of these samples was 2800 ppm with 68% (65 samples) of the samples falling below the GNWT criteria for hydrocarbons of 2500 ppm. All the samples were well below the 30,000 ppm criteria for subsurface contaminated soil. The highest value observed was 10,964 ppm total hydrocarbon concentration found in the bottom of cell D. The cells were excavated at least 0.5m below the depth of samples collected during previous assessments which had elevated hydrocarbon contamination (>30,000 ppm). During excavation there was no visual evidence of free hydrocarbon product in the soil. A bar graph showing the distribution of sample concentrations of bottom and sidewall samples is included as Figure 8.

3.4 Initial Concentration of Contaminated Subsurface Soil

Hydrocarbon concentrations had been observed in excess of 30,000 ppm during previous assessment activities. These samples were collected in a discrete manner, meaning from one specific location at specific depths, and defined the initial area requiring excavation. Discrete sampling works well for identifying areas of maximum concentrations. However it does not provide accurate data concerning bulk contaminant reduction during treatment of the soil.

During excavation of a cell, composite samples were taken of the excavated material to provide the initial concentration of the bulk hydrocarbon in the soil. Subsamples were collected from 5 or more locations on the soil pile and these samples mixed as homogeneously as possible to determine the initial average bulk hydrocarbon concentration of the pile. This was considered the starting point for aeration and further mixing. Samples were collected in this manner to reduce the variability in analysis from sample to sample within the same cell due to the heterogeneity of individual grab samples, providing a more consistent basis for determining contaminant reduction.

The initial samples and subsequent samples from the piles were analyzed by PetroFLAG™ and FID since the results were only being compared relative to other samples collected during mixing and not on an absolute scale, such as the bottom and sidewall confirmatory samples.

Based on this sampling the initial average concentration of soil being excavated was around 16,000 ppm (PetroFLAG™) with the highest average concentration being 23,500 ppm (PetroFLAG™). The data from the initial samples of the excavated material is included as Table 3.

3.5 Final Concentration of Backfilled Contaminated Subsurface Soil

Once the soil had been mixed and aerated two or more times the soil was backfilled with the hoe into the cell in 30 cm lifts and packed with the bucket. However before the soil was backfilled a composite sample similar to the initial sample was taken to determine the bulk concentration of the soil pile. The backfilled contaminated subsurface soil averaged about 10,600 ppm (PetroFLAG™) with the highest recorded concentration being around 17,600 ppm (PetroFLAG™) for cell D. The results for these samples are shown in Table 4.

The average laboratory analytical result for TPH from cells A and C is approximately 6000 ppm following treatment which is also shown in Table 4, and based on the correlation between PetroFLAG™ results and analytical concentrations the final average concentrations are likely around 7,500 ppm with a maximum concentration of 12,300 ppm.

Through the mixing and volatilization process the soil was homogenized, eliminating zones with elevated hydrocarbon concentration, and thereby reducing or eliminating the potential to leach free phase hydrocarbons toward the river.

It could also be expected that since the soil was aerated (oxygen-enriched) during the mixing process that biological degradation of the remaining hydrocarbon may possibly occur in the subsurface soil over the short term.

3.6 Contaminant Reduction Using Aeration

The overall concentration change from the first excavation until backfilling was in the order of a 20% to 34% reduction. Due to the averaging effect of collecting the initial and final samples as composite samples this reduction is attributed to volatilization, rather than sample variability.

Some monitoring was done for each mixing event, taking samples before and after mixing (processing the soil with the Allu bucket). These ranged from 0% up to 43% at the highest, for a reduction in hydrocarbon contamination for a single mixing event.

Naturally if the sun, winds and warmer temperatures were present the effect of volatilization was increased. As was shown in 2002 bench scale studies, a maximum contaminant reduction (F2 Fraction) of 69% could be expected at dry ambient conditions (10ºC) after 440 hrs of continuous airflow (HydroQual, 2002). To achieve the amount of contaminant reduction observed at site, the soil would have to be exposed to 100 to 150 hours of drying airflow at 10ºC. These results were achieved however, under controlled conditions where heat and airflow remained constant through of the volume of soil for the duration of the test. The soil was also not saturated. These are not conditions that can be achieved in the field to any great extent. To achieve higher contaminant reduction over a shorter period of time, an external source of heat would be required. Considering the limitations imposed by a wet summer, saturated soil conditions and the volume of material treated, the contaminant reduction achieved is significant.

3.7 Alternative Remedial Methods – HEEVES

The HEEVES pilot was set up as described in the methodology section for two days near the end of the project. As mentioned in the methodology, the soil was to be layered on the piping with the Allu bucket leaving the soil fluffy and permeable to air flow. At the time the test was done the Allu bucket wasn't functional due to hydraulic problems with the excavator and the soil was just placed on the piping. Functionally the system was working and the multiphase pump was removing some hydrocarbon from the soil as evidenced by FID readings from the exhaust. An appreciable difference was not noted in concentrations of hydrocarbons in the soil over the short period the test was run. It is believed that this was due to the compaction of the treated soils. The results of this pilot study are therefore inconclusive.

3.8 Surface Soil (0–50cm) Final Concentrations

Once all of the excavated contaminated subsurface soil was backfilled, the remaining clean topsoil was replaced on the surface. There was an inadequate volume of clean soil available to completely backfill the upper 50cm of the excavation. This was partially because there was more contaminated topsoil than anticipated and also because some of the clean soil had been mixed with contaminated soil increasing the concentration over 2500 ppm. The stockpiled clean soil was placed toward the river and the mixed contaminated surface soil (>2500 ppm) was placed on higher ground so that it would stay drier and could be tilled in the future to reduce the remaining contamination to below 2500 ppm.

In an effort to dry the clean soil stored near the river, some of the clean soil was mixed with the contaminated soil stored on higher ground. The result was that surface soils in the north-west portion of the backfilled excavation are over the GNWT industrial criteria (2500 ppm) and will require an additional year of tilling and drying.

It is proposed that the contaminated area will be tilled several times in the summer of 2004 and resampled to ensure the concentrations are below 2500 ppm. This scope of work was contemplated in the 2003 Project Description submitted to ILA, but will require an amendment to the Land Use Permit. A plot of the surface sample location is included as Figure 2 and the results are included as Table 1. Three out of the 10 samples exceeded the 2500 ppm criteria established for surface soils, but were close to the risk based concentration for surface soils of 3200 ppm provided by the Risk Assessment completed by Komex.

3.9 Long-term Groundwater Monitoring Wells

Near the end of the excavation, existing wells from previous remediation activity were evaluated for the potential to be used as long-term monitoring wells. Some of the existing wells were retrofitted with 2-inch monitoring pipe and five new wells were drilled with the skid steer drilling attachment, to provide adequate coverage of the potential migration of hydrocarbons from the remaining contaminated soil. The well construction details are included as Appendix C and locations are shown on Figure 5. These wells were developed and sampled for baseline concentrations of BTEX, Total Purgeable Hydrocarbons and Total Extractable Hydrocarbons. Only one of these wells, LTMW-7, an existing well located near the edge of the excavation, contained hydrocarbons above the method detection limit. LTMW-7 is bounded by two wells closer to the river to catch any plume migration.

4.0 CONCLUSIONS

1. We have confirmed, through extensive excavation to permafrost, and multiple sampling at the edges of the excavation, that no free product hydrocarbon exists at the West Channel site – this is important as the main pathway of concern was the potential for hydrocarbons to flow to the Mackenzie River.
2. We have confirmed, through extensive sampling, the edges of the hydrocarbon impacted area, in both the surface and the sub-surface. There was no indication of contamination at the river bank.
3. We have installed 10 monitoring wells and developed a 25 year monitoring plan to monitor the pathway between the hydrocarbon impacted area and the Mackenzie River as an additional protection measure.
4. We have excavated and treated on-site more than 2000m^3 of hydrocarbon impacted soils.
5. Hydrocarbon concentrations decreased about 35% despite difficult weather conditions and a minimum amount of mixing days. Treatment was primarily achieved through homogenization (mixing) and aeration of the contaminated soil. Hydrocarbon concentrations in the subsurface soils decreased to an average of 10,600 ppm (PetroFLAG), well below the CCME guideline of 30,000 ppm for subsurface soils.
6. We have successfully treated an area of 1750m^2 of surface hydrocarbon impacted soils. There is an area of soil yet requiring treatment that is marginally above the GNWT industrial criteria of 2500 ppm and the risk-based criteria of 3200 ppm. The averaged concentration of surface soils is now 1840 ppm. The maximum concentration from the final sampling program was 3700 ppm.
7. We anticipate that further reductions in subsurface hydrocarbon concentration will occur as a result of the oxygenation of the soil (breaking up the soil by mixing and exposure of the soil to air).
8. We anticipate that further reductions in the surface soils will occur as a result of photo-oxidation (exposure to sunlight), a roto-tilling program and the addition of nutrients in 2004 and phyto-remediation and further oxidation as plant communities re-grow on the site.

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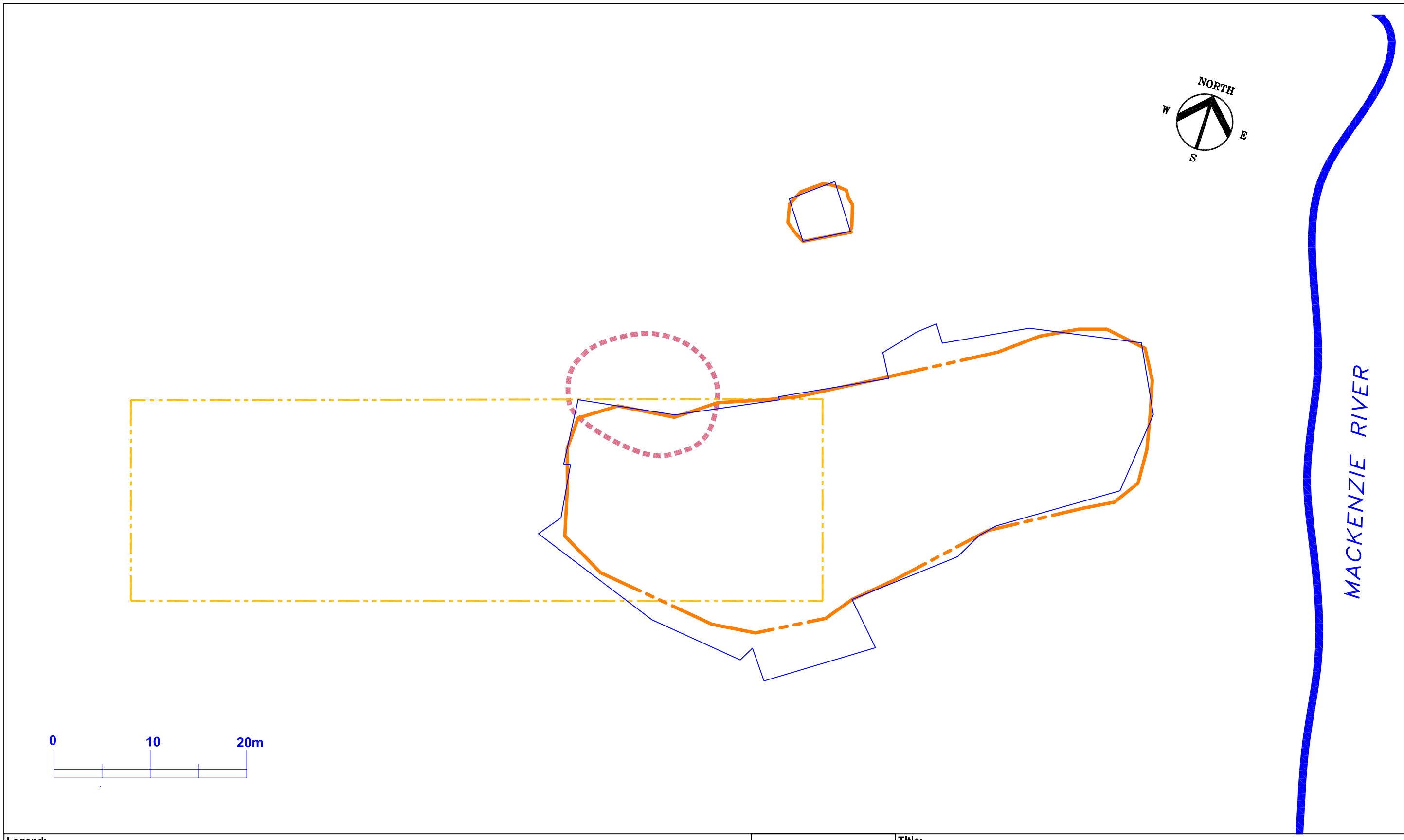
Appendix A
Figures



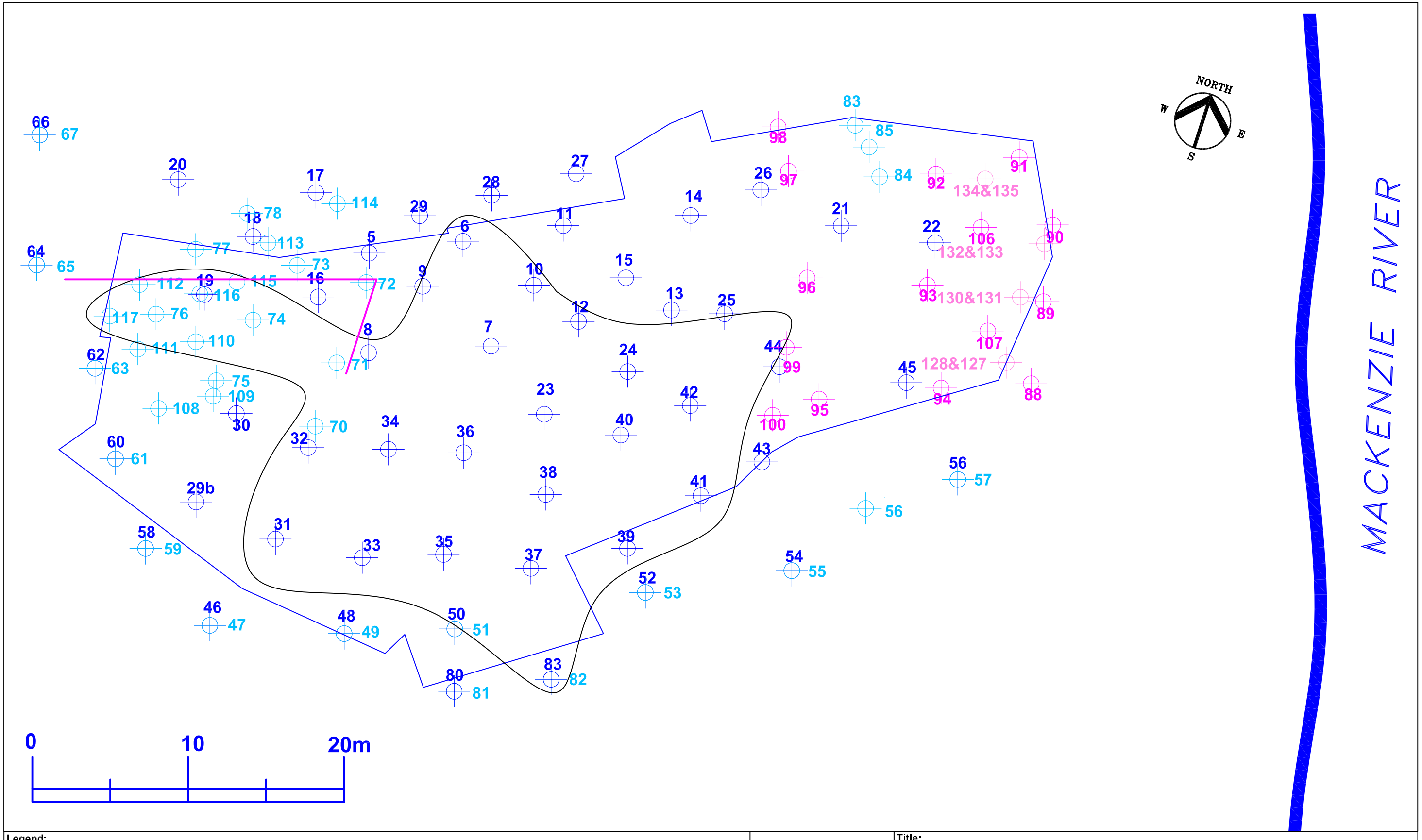
Legend:

- Tank Farm Area
- Subsurface Contaminated Soil
- Surface Contamination Soil
- 2003 Excavation Area

(Results based on Phase II testing.)

IEG Environmental

Title: Surface & Subsurface Contamination Boundaries		
Site: Shell West Channel, 2003 Remediation		Fig. No.: 1
DWG Date: Nov 15, 2003	File No.: 5435-03	Scale: 1:375



Legend:

- 0-30cm Soil Sample Depth
- 30-60cm Soil Sample Depth
- 60-90cm Soil Sample Depth
- 90-120cm Soil Sample Depth
- 2003 Excavation Area
- Surface Sample Contamination Plume, (FID > 2000)

IEG Environmental

Title: Surface Sample Locations, Various Depths

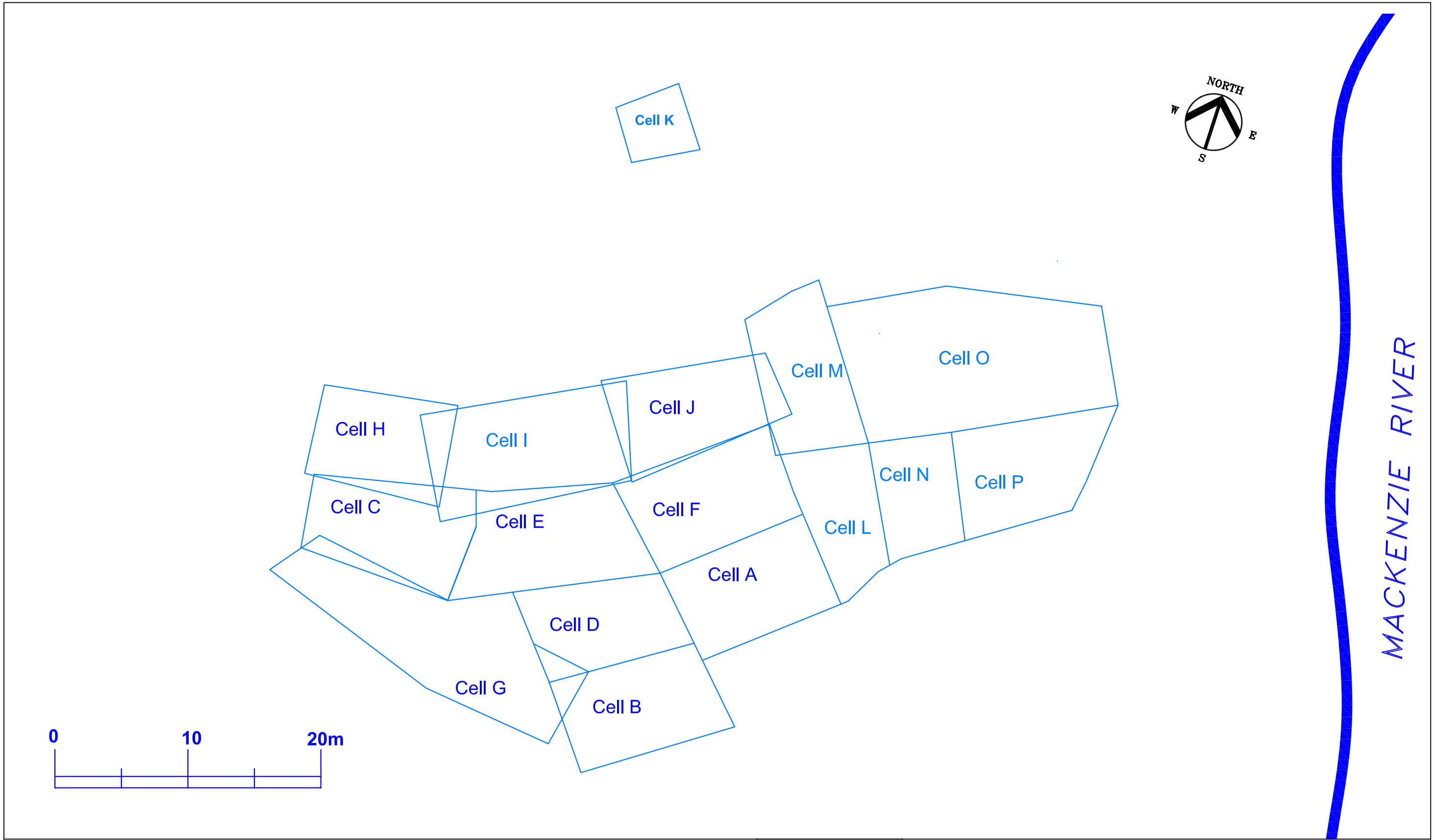
Site: Shell West Channel, 2003 Remediation

Fig. No.: 2

DWG Date: Nov 15, 2003

File No.: 5435-03

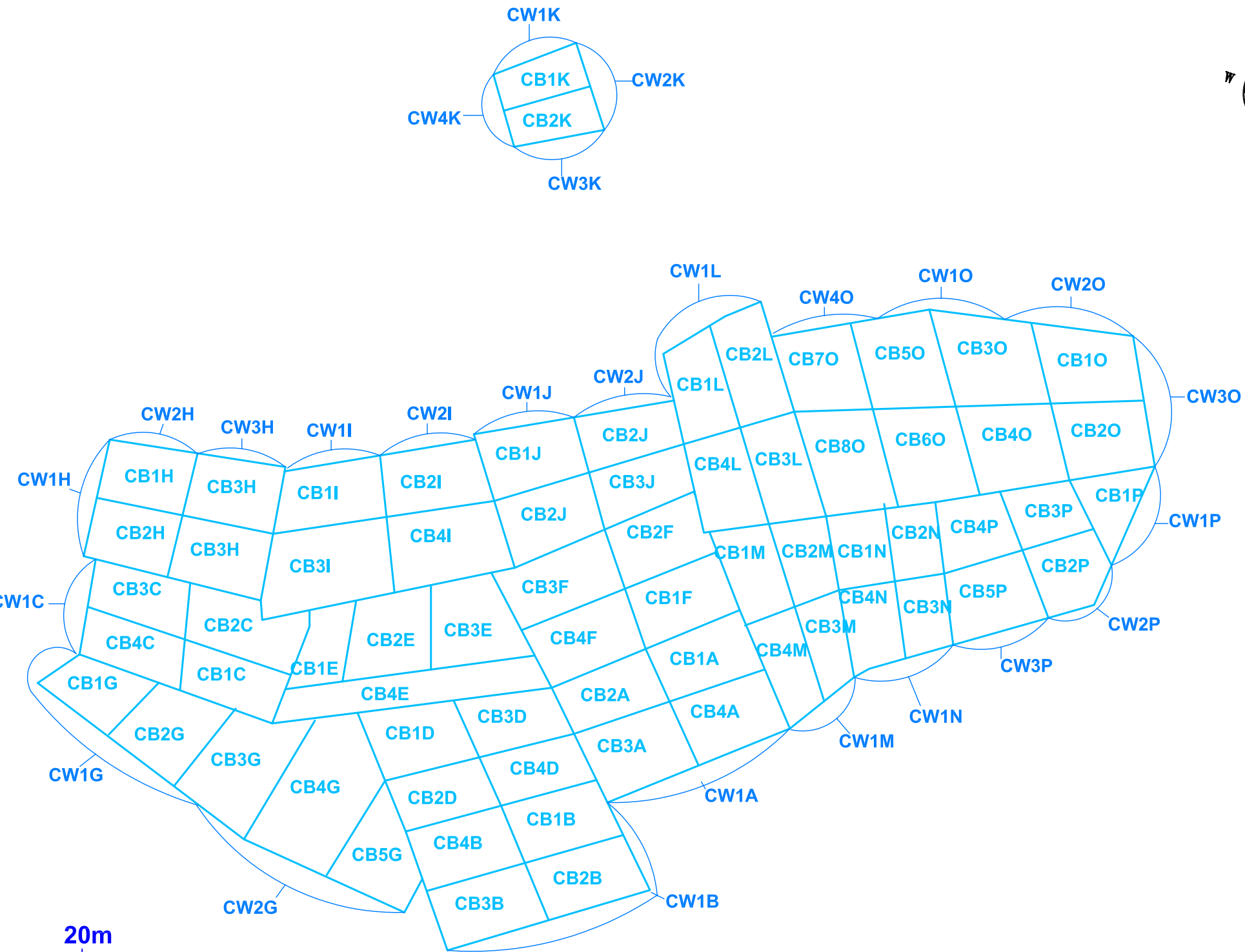
Scale: 1:230



Legend:

Cell Boundaries

Title: Cell Boundaries			
Site: Shell West Channel, 2003 Remediation			**Fig. No.:** 3
DWG Date: Nov 15, 2003	**File No.:** 5435-03	**Scale:** 1:280	



Legend:

CB1A = Confirmatory Bottom Sample #1 from Cell A

CW1A = Confirmatory Wall Sample #1 Cell A

IEnvironmental

Title: Confirmatory Bottom and Wall Sample Locations

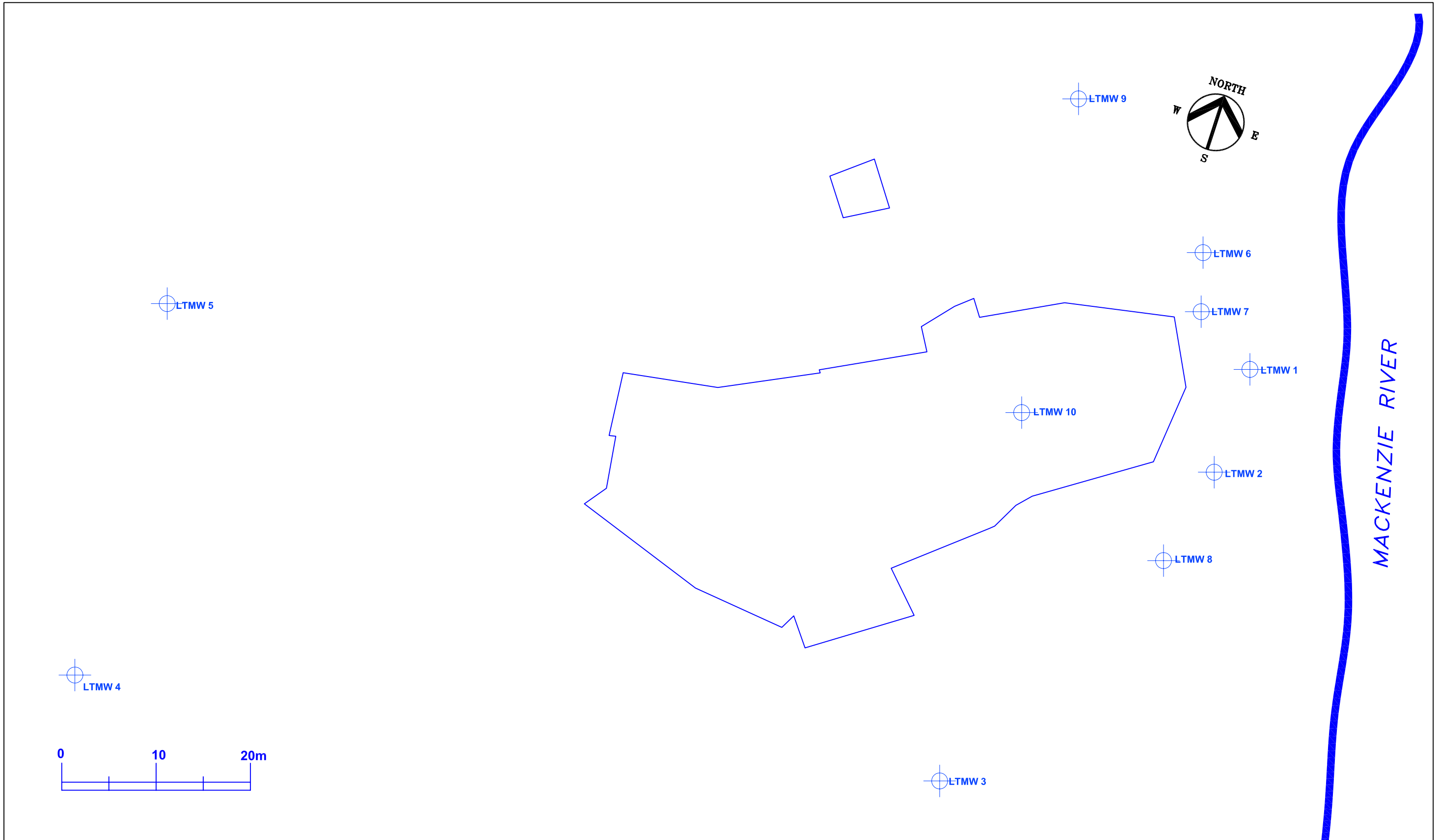
Site: Shell West Channel, 2003 Remediation

Fig. No.: 4

DWG Date: Nov 15, 2003

File No.: 5435-03

Scale: 1:275



Legend:

Cell Boundaries

LTMW = Long Term Monitoring Well

IEG Environmental

Title: Long Term Monitoring Well Locations

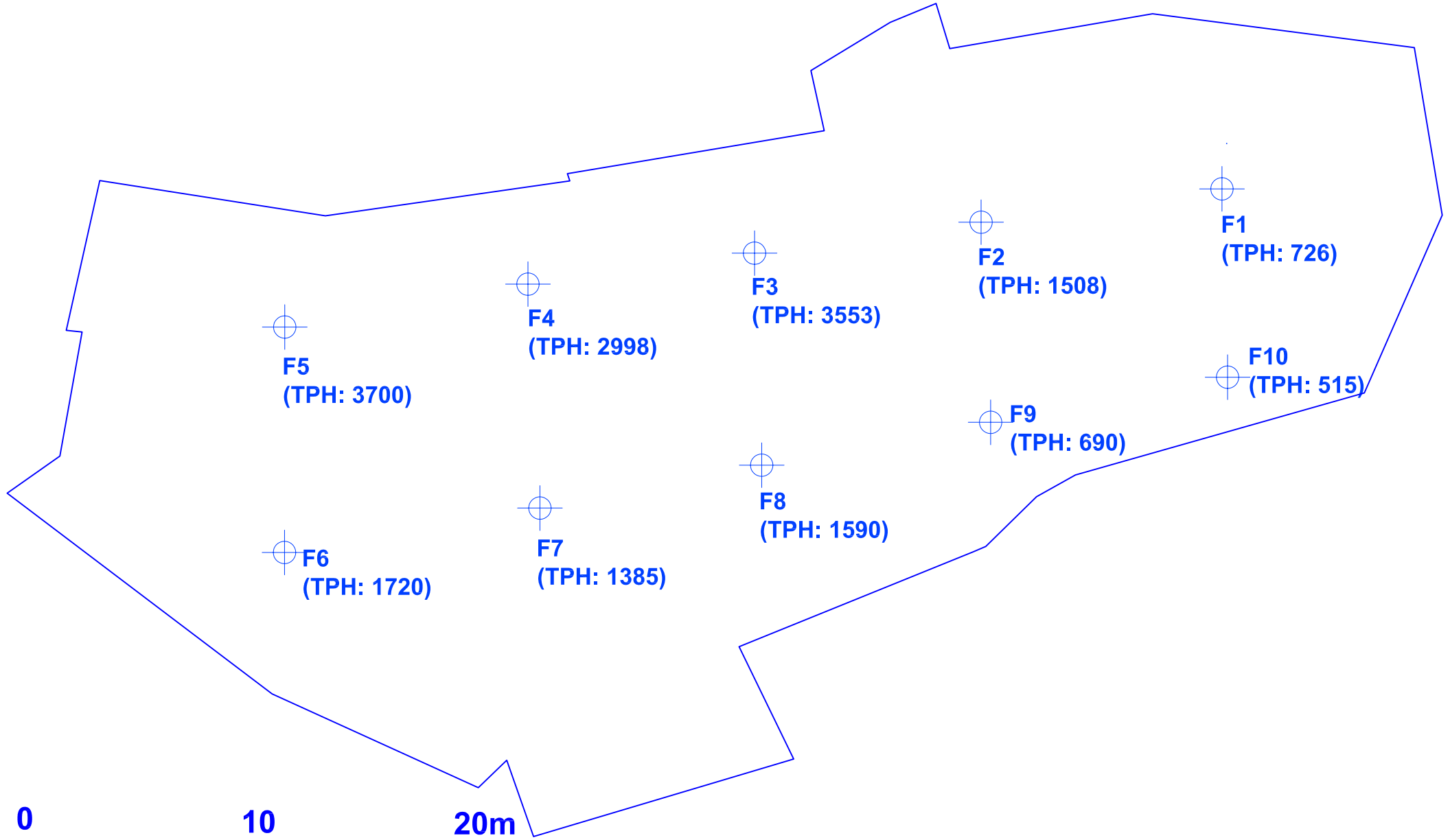
Site: Shell West Channel, 2003 Remediation

Fig. No.: 5

DWG Date: Nov 15, 2003

File No.: 5435-03

Scale: 1:375



MACKENZIE RIVER

Legend:

- Final Surface Sample Location
- Cell Boundary
- TPH Total Petroleum Hydrocarbons (ppm)

IEG Environmental

Title: Final Surface Sample Locations			Fig. No.: 6
Site: Shell West Channel, 2003 Remediation			
DWG Date: Nov 15, 2003	File No.: 5435-03	Scale: 1:240	

Figure 7 - Petroflag Correlation to Analytical Results

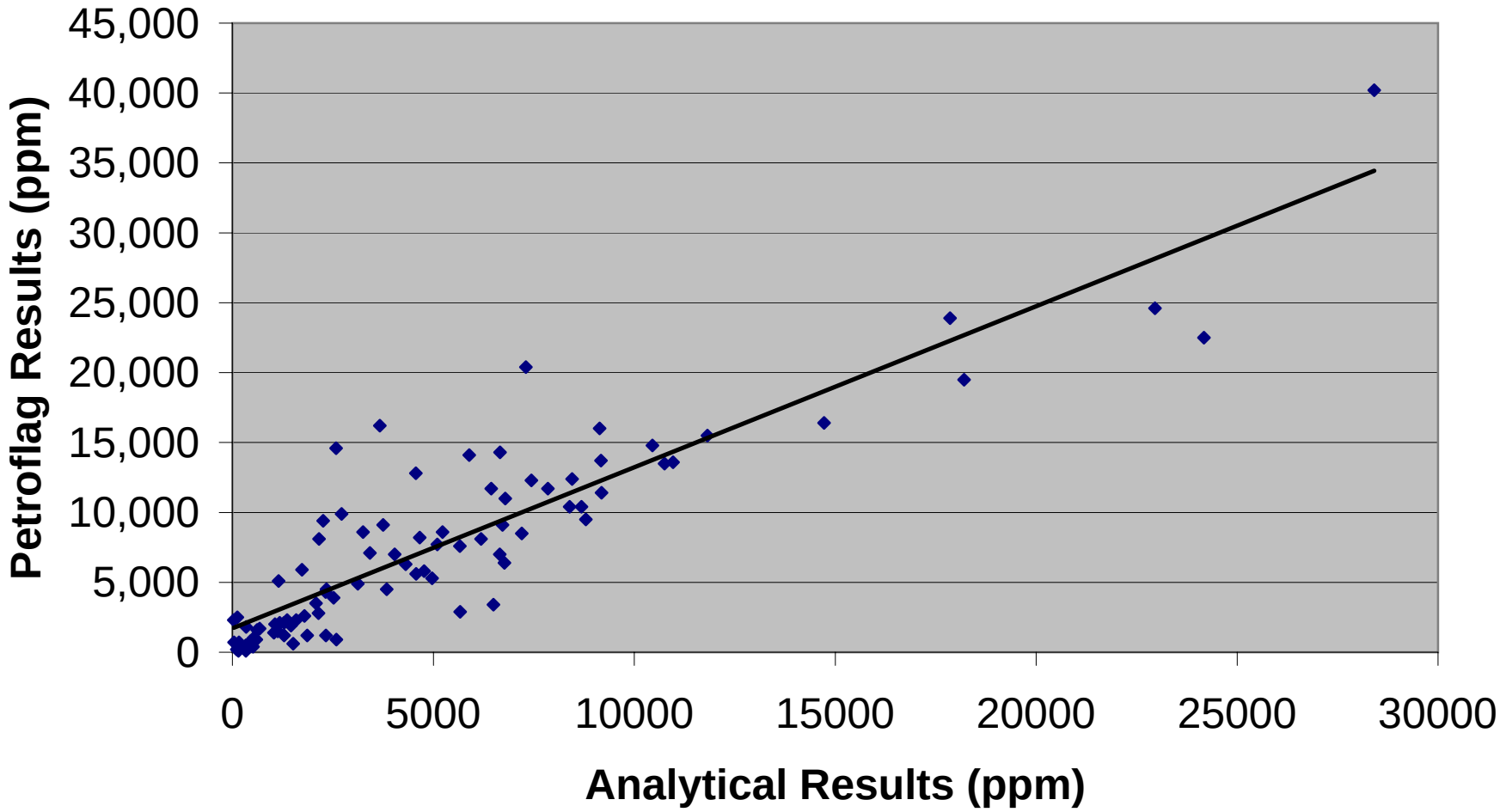
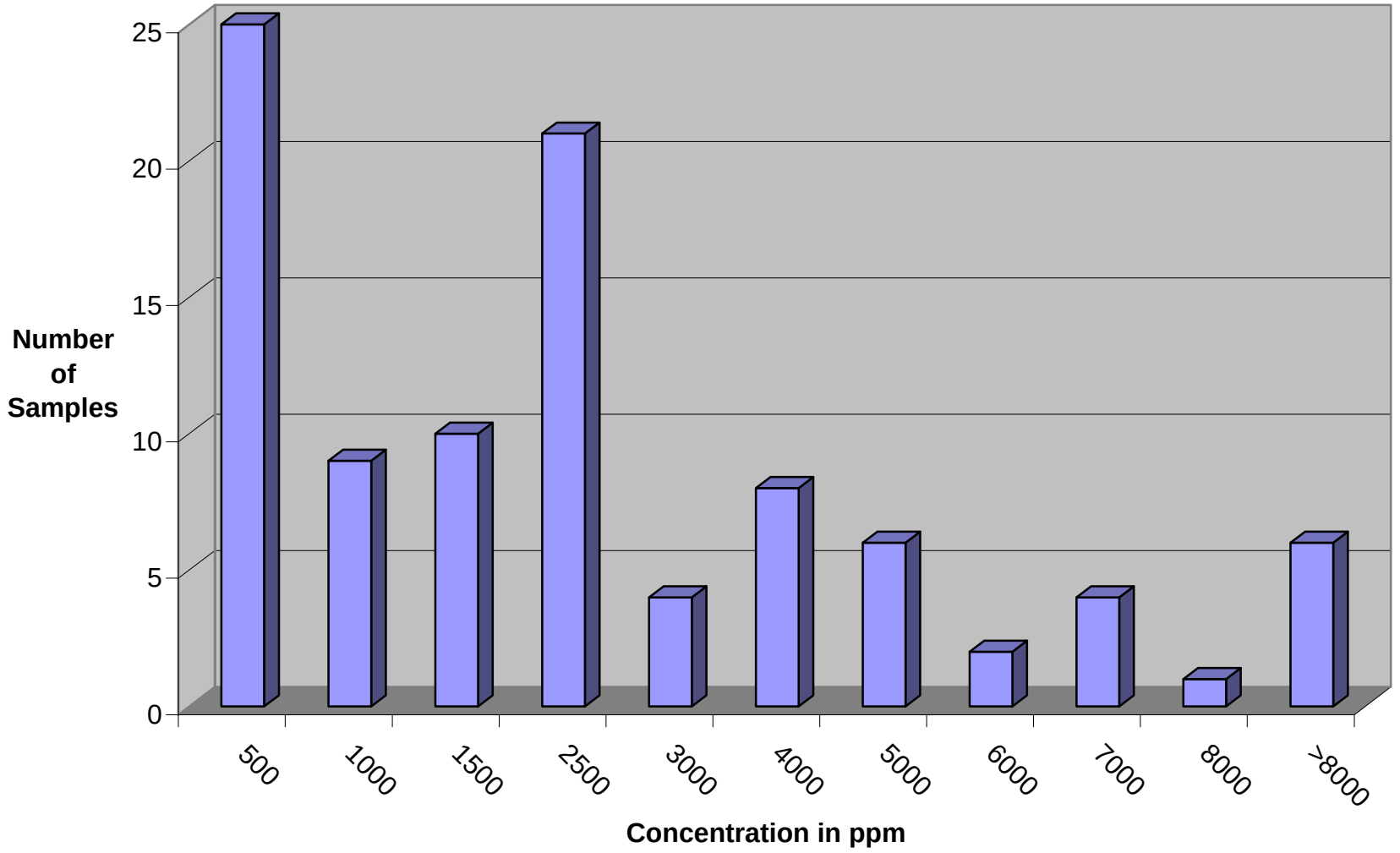


Figure 8 - Distribution of Hydrocarbon Contamination Remaining in Bottom and Sidewalls of the Excavation



Appendix B
Tables

Table 1 - Surface Soil Samples, FID & Petroflag Results

Sample Information			F.I.D.	Petroflag Result		
Type of Sample	Date mm/dd/yy	Soil Sample Number	F.I.D. Reading (ppm)	Sample Weight (g)	Petroflag Reading (ppm)	Corrected Value (ppm)
S	07/11/03	1	**150**			
S	07/11/03	2	**470**			
S	07/11/03	3	**500**	1.00	816	**8,200**
S	07/11/03	4	**35**	1.00	64	**600**
S	07/11/03					
S	07/11/03	5	**890**			
S	07/11/03	6	**2,800**	1.00	1867	**18,700**
S	07/11/03	7	**40**			
S	07/11/03	8	**35**			
S	07/11/03	10	**1,500**	1.00	1223	**12,200**
S	07/11/03	11	**1,000**			
S	07/11/03	12	**1,250**			
S	07/11/03	13	**0**			
S	07/11/03	14	**1,950**	1.00	1588	**15,900**
S	07/11/03	15	**1,000**			
S	07/11/03	16	**240**			
S	07/11/03	17	**0**			
S	07/11/03	18	**20**			
S	07/11/03	19	**10**			
S	07/11/03	20	**25**			
S	07/11/03	21	**180**			
S	07/11/03	22	**25**			
S	07/11/03	23	**190**			
S	07/11/03	24	**4,400**			
S	07/11/03	25	**0**			
S	07/11/03	26	**0**			
S	07/11/03	27	**0**			
S	07/11/03	28	**0**			
S	07/11/03	29	**1,550**	0.54	1327	**24,600**
S	07/12/03	30	**570**			
S	07/12/03	31	**8,350**			
S	07/12/03	32	**10,000**			
S	07/12/03	33	**3,150**	0.52	1016	**19,500**
S	07/12/03	34	**6,500**			
S	07/12/03	35	**6,550**			
S	07/12/03	36	**1,300**			
S	07/12/03	37	**5,550**			
S	07/12/03	38	**1,300**			

Table 1 - Surface Soil Samples, FID & Petroflag Results

Sample Information			F.I.D.	Petroflag Result		
Type of Sample	Date mm/dd/yy	Soil Sample Number	F.I.D. Reading (ppm)	Sample Weight (g)	Petroflag Reading (ppm)	Corrected Value (ppm)
S	07/12/03	39	**10,000**			
S	07/12/03	40	**7,700**			
S	07/12/03	41	**3,600**	0.32	110	**3,400**
S	07/12/03	42	**2,200**	0.69	1132	**16,400**
S	07/12/03	43	**0**			
S	07/12/03	44	**0**			
S	07/12/03	45	**0**			
S	07/12/03	46	**190**			
S	07/12/03	47	**430**			
S	07/12/03	48	**120**			
S	07/12/03	49	**290**			
S	07/12/03	50	**0**			
S	07/12/03	51	**1,250**			
S	07/12/03	52	**0**			
S	07/12/03	53	**10,000**			
S	07/12/03	54	**0**			
S	07/12/03	55	**780**			
S	07/12/03	56	**0**			
S	07/12/03	57	**0**			
S	07/13/03	58	**250**			
S	07/13/03	59	**830**			
S	07/13/03	60	**0**			
S	07/13/03	61	**0**			
S	07/13/03	62	**0**			
S	07/13/03	63	**0**			
S	07/13/03	64	**70**			
S	07/13/03	65	**350**			
S	07/13/03	66	**0**			
S	07/13/03	67	**1,150**			
S	07/13/03	68		5.03	1168	**2,300**
S	07/13/03	69		5.04	803	**1,600**
S	07/13/03	70	**1,150**			
S	07/13/03	71	**10,000**			
S	07/13/03	72	**1,850**			
S	07/13/03	73	**620**			
S	07/13/03	74	**0**			
S	07/13/03	75	**0**			
S	07/13/03	76	**25**			

Table 1 - Surface Soil Samples, FID & Petroflag Results

Sample Information			F.I.D.	Petroflag Result		
Type of Sample	Date mm/dd/yy	Soil Sample Number	F.I.D. Reading (ppm)	Sample Weight (g)	Petroflag Reading (ppm)	Corrected Value (ppm)
S	07/13/03	77	**30**			
S	07/13/03	78	**15**			
S	07/13/03	79	**0**			
S	07/13/03	80	**15**			
S	07/13/03	81	**200**			
S	07/13/03	82	**3,900**			
S	07/13/03	83				
S	07/13/03	84				
S	07/13/03	85				
S	07/13/03	86		5.00	1356	**2,700**
S	07/13/03	87		5.00	625	**1,300**
S	07/13/03	88	**0**			
S	07/13/03	89	**35**			
S	07/13/03	90	**0**			
S	07/13/03	91	**0**			
S	07/13/03	92	**0**			
S	07/13/03	93	**0**			
S	07/13/03	94	**0**			
S	07/13/03	95	**10**			
S	07/13/03	96	**530**			
S	07/13/03	97	**550**	1.39	313	**2,300**
S	07/13/03	98	**480**			
S	07/13/03	99	**3,350**	0.69	1652	**23,900**
S	07/13/03	100	**10,000**			
S	07/13/03	101	**100**			
S	07/13/03	102	**6,450**	2.81	693	**2,500**
S	07/13/03	103	**2,600**			
S	07/13/03	104	**1,000**			
S	07/13/03	105	**2,050**			
S	07/13/03	106	**240**			
S	07/13/03	107	**0**			
S	07/14/03	108	**290**			
S	07/14/03	109	**370**			
S	07/14/03	110	**690**			
S	07/14/03	111	**620**			
S	07/14/03	112	**25**			
S	07/14/03	113	**1,700**			
S	07/14/03	114	**1,100**			

Table 1 - Surface Soil Samples, FID & Petroflag Results

Sample Information			F.I.D.	Petroflag Result		
Type of Sample	Date mm/dd/yy	Soil Sample Number	F.I.D. Reading (ppm)	Sample Weight (g)	Petroflag Reading (ppm)	Corrected Value (ppm)
S	07/14/03	115	**690**			
S	07/14/03	116	**10,000**			
S	07/14/03	117	**10,000**			
S	07/14/03	118	**1,750**	0.78	230	**2,900**
S	07/14/03	119	**980**	1.06	274	**2,600**
S	07/14/03	120	**120**	1.11	186	**1,700**
S	07/14/03	121	**120**	1.11	186	**1,700**
S	07/14/03	122	**75**			
S	07/14/03	123	**0**			
S	07/14/03	124	**30**			
S	07/14/03	125	**430**			
S	07/14/03	126	**10**			
S	07/14/03	127	**30**			
S	07/14/03	128	**70**			
S	07/14/03	129	**55**			
S	07/14/03	130	**100**			
S	07/14/03	131	**65**			
S	07/14/03	132	**25**			
S	07/14/03	133	**70**			
S	07/14/03	134	**20**			
S	07/14/03	135	**5,300**			

Table 2 - Confirmatory Bottom and Confirmatory Sidewall, Analytical Sample Results

Soil Sample ID					Lab Results				
Type of Sample	**Cell Quad #**	**Cell**	**Date mm/dd/yy**	**Soil Sample Number**	**F1** (C06-C10)	**F2** (C10-C16)	**F3** (C16-C34)	**F4** (C34-C50)	**Total (ppm)**
CB	1	A	07/16/03	**173**	1200	3600	160	10	**4970**
CB	2	A	07/16/03	**174**	2100	6900	160	10	**9170**
CB	3	A	07/16/03	**175**	2100	6200	140	10	**8450**
CB	4	A	07/16/03	**176**	2000	8700	45	10	**10755**
CW	1	A	07/16/03	**178**	2400	58	110	10	**2578**
CB	1	B	07/16/03	**179**	2300	3500	83	9	**5892**
CB	2	B	07/16/03	**180**	2300	5400	140	10	**7850**
CB	3	B	07/16/03	**181**	450	820	10	10	**1290**
CB	4	B	07/16/03	**182**	1000	2800	31	10	**3841**
CW	1	B	07/16/03	**183**	2200	390	120	10	**2720**
CB	1	C	07/17/03	**187**	31	32	75	10	**148**
CB	2	C	07/17/03	**188**	92	730	230	10	**1062**
CB	3	C	07/17/03	**189**	670	1700	140	10	**2520**
CB	4	C	07/17/03	**190**	650	3800	200	10	**4660**
CW	1	C	07/17/03	**191**	69	220	180	42	**511**
CB	1	D	07/17/03	**202**	2200	8500	250	14	**10964**
CB	2	D	07/17/03	**203**	1200	2900	200	9	**4309**
CB	3	D	07/17/03	**204**	770	720	85	10	**1585**
CB	4	D	07/17/03	**205**	640	710	100	10	**1460**
CB	1	E	07/17/03	**206**	1300	5000	130	10	**6440**
CB	2	E	07/17/03	**207**	820	1400	93	10	**2323**
CB	3	E	07/17/03	**208**	1200	2700	130	9	**4039**
CB	4	E	07/17/03	**209**	35	230	61	9	**335**
CB	1	F	07/17/03	**210**	20	5	10	9	**44**
CB	2	F	07/17/03	**211**	110	190	140	19	**459**
CB	3	F	07/17/03	**212**	670	1400	210	64	**2344**
CB	4	F	07/17/03	**213**	1000	69	73	10	**1152**
CB	1	G	07/21/03	**271**	320	1100	82	10	**1512**
CB	2	G	07/21/03	**272**	190	18	61	10	**279**
CB	3	G	07/21/03	**273**	23	11	80	18	**132**
CB	4	G	07/21/03	**274**	230	24	78	16	**348**
CB	5	G	07/21/03	**275**	570	390	53	10	**1023**
CW	1	G	07/21/03	**276**	920	2200	140	10	**3270**
CW	2	G	07/21/03	**277**	2600	6200	130	10	**8940**
CB	1	H	07/22/03	**286**	310	52	78	20	**460**
CB	2	H	07/22/03	**287**	100	27	65	10	**202**

Table 2 - Confirmatory Bottom and Confirmatory Sidewall, Analytical Sample Results

Soil Sample ID					Lab Results				
Type of Sample	**Cell Quad #**	**Cell**	**Date mm/dd/yy**	**Soil Sample Number**	**F1** (C06-C10)	**F2** (C10-C16)	**F3** (C16-C34)	**F4** (C34-C50)	**Total (ppm)**
CB	3	H	07/22/03	**288**	19	20	200	61	**300**
CB	4	H	07/22/03	**289**	10	67	250	110	**437**
CW	1	H	07/22/03	**290**	32	300	150	10	**492**
CW	2	H	07/22/03	**291**	94	360	100	10	**564**
CW	3	H	07/22/03	**292**	200	370	89	9	**668**
CB	1	I	07/27/03	**326**	45	5	10	9	**69**
CB	2	I	07/27/03	**327**	230	1000	120	27	**1377**
CB	3	I	07/27/03	**328**	47	83	97	38	**265**
CB	4	I	07/27/03	**329**	22	48	10	10	**90**
CW	1	I	07/27/03	**330**	790	4600	78	10	**5478**
CW	2	I	07/27/03	**331**	500	50	61	9	**620**
CB	1	J	07/21/03	**278**	82	5	10	10	**107**
CB	2	J	07/21/03	**279**	20	5	10	10	**45**
CB	3	J	07/21/03	**280**	21	5	10	10	**46**
CB	4	J	07/21/03	**281**	340	240	78	10	**668**
CW	1	J	07/21/03	**282**	340	360	120	10	**830**
CW	2	J	07/22/03	**283**	1100	2600	270	10	**3980**
CB	1	K	08/08/03	**424**	1000	840	14	10	**1864**
CB	2	K	08/08/03	**425**	130	270	92	35	**527**
CW	1	K	08/08/03	**420**	2100	6600	85	10	**8795**
CW	2	K	08/08/03	**421**	1500	3700	17	10	**5227**
CW	3	K	08/08/03	**422**	2000	4700	62	9	**6771**
CW	4	K	08/08/03	**423**	1900	4800	12	10	**6722**
CB	1	L	08/02/03	**364**	550	4300	210	40	**5100**
CB	2	L	08/02/03	**365**	1200	5200	200	53	**6653**
CB	3	L	08/02/03	**366**	360	630	33	10	**1033**
CB	4	L	08/02/03	**367**	180	790	120	36	**1126**
CW	1	L	08/02/03	**368**	580	3700	250	32	**4562**
CB	1	M	08/03/03	**373**	330	1600	130	34	**2094**
CB	2	M	08/03/03	**374**	49	63	45	33	**190**
CB	3	M	08/03/03	**375**	750	2200	190	64	**3204**
CB	4	M	08/03/03	**376**	550	2400	110	31	**3091**
CW	1	M	08/03/03	**377**	3100	3700	320	31	**7151**
CB	1	N	08/04/03	**391**	13	5	83	10	**111**
CB	2	N	08/04/03	**392**	46	55	240	110	**451**
CB	3	N	08/04/03	**393**	1100	2300	11	10	**3421**

Table 2 - Confirmatory Bottom and Confirmatory Sidewall, Analytical Sample Results

Soil Sample ID					Lab Results				
Type of Sample	**Cell Quad #**	**Cell**	**Date mm/dd/yy**	**Soil Sample Number**	**F1** (C06-C10)	**F2** (C10-C16)	**F3** (C16-C34)	**F4** (C34-C50)	**Total (ppm)**
CB	4	N	08/04/03	**394**	860	1200	10	10	**2080**
CW	1	N	08/05/03	**395**	1000	710	10	10	**1730**
CB	1	O	08/06/03	**404**	1700	1100	290	28	**3118**
CB	2	O	08/06/03	**405**	780	1200	150	10	**2140**
CB	3	O	08/06/03	**406**	890	490	120	10	**1510**
CB	4	O	08/06/03	**407**	290	29	10	10	**339**
CB	5	O	08/06/03	**408**	530	58	17	10	**615**
CB	6	O	08/06/03	**409**	440	440	220	75	**1175**
CB	8	O	08/08/03	**418**	2100	8700	140	10	**10950**
CB	7	O	08/08/03	**419**	2000	4000	230	10	**6240**
CW	1	O	08/06/03	**400**	2600	550	90	10	**3250**
CW	2	O	08/06/03	**401**	57	253	16	10	**336**
CW	3	O	08/06/03	**402**	45	220	140	10	**415**
CW	4	O	08/06/03	**403**	3200	3700	290	10	**7200**
CB	1	P	08/06/03	**413**	1900	580	98	10	**2588**
CB	2	P	08/06/03	**414**	300	250	38	10	**598**
CB	3	P	08/06/03	**415**	880	1200	190	55	**2325**
CB	4	P	08/06/03	**416**	790	3600	170	10	**4570**
CB	5	P	08/06/03	**417**	990	250	40	10	**1290**
CW	1	P	08/06/03	**410**	110	37	10	10	**167**
CW	2	P	08/06/03	**411**	2300	6600	270	15	**9185**
CW	3	P	08/06/03	**412**	2800	1800	160	14	**4774**

Table 3 - Initial Concentration of Contaminated Subsurface Soil

Soil Sample ID				Depth from Surface (m)	Observations	F.I.D. Reading (ppm)	F.I.D. Temp (ºC)	PetroFlag Result:			Lab Results					Moisture Content (%)
Type of Sample	Cell	Date mm/dd/yy	Soil Sample Number					Sample Weight (g)	PetroFlag Reading (ppm)	Corrected Value (ppm)	F1 (C06-C10)	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Total (ppm)	
E	A	07/15/03	138	0.5	Odor	5,450	16.5	0.58	900	**15,500**	2000	9700	110	10	**11820**	19
E	B	07/15/03	141	0.3	Odor	10,000	18	0.33	294	**8,900**						
E	B	07/15/03	142	0.3	Odor	7,800	17	0.50	4	**100**						
E	B	07/15/03	145	1	Odor	11,000	36	0.42	681	**16,200**	2800	660	200	9	**3669**	19
E	B	07/15/03	146	1	Odor	11,000	34	0.40	351	**8,800**						
E	B	07/15/03	151	1.2	Odor	11,000	18	0.41	629	**15,300**						
E	B	07/15/03	153	1.2	Odor	8,050	21	0.39	689	**17,700**						
E	B	07/15/03	155	1.6	Odor	6,750	23	0.41	807	**19,700**						
E	B	07/15/03	156	1.8	Odor	11,000	20	0.43	640	**14,900**						
PI	B	07/15/03	157	NA	Odor	7,400	25	0.66	1548	**23,500**						
PI	B	07/15/03	158	NA	Odor	11,000	30	0.57	703	**12,300**						
PI	A	07/15/03	161	NA	Odor	5,800	22	0.67	826	**12,300**	2100	5200	130	10	**7440**	18
PI	A	07/15/03	164	NA	Odor	5,150	26	0.64	949	**14,800**	2300	8100	44	9	**10453**	16
PI	A	07/16/03	168	NA	Odor	5,800	23	0.62	642	**10,400**	1600	7000	79	10	**8689**	19
E	C	07/16/03	186		Odor	2,750	30	0.86	1932	**22,500**	710	23000	430	33	**24173**	24
E	D	07/17/03	192	0.8	Odor	2,000	30	0.62	1140	**18,400**						
E	E	07/17/03	196	0.8	Odor	1,550	27	0.65	1100	**16,900**						
E	F	07/17/03	201	1.2 - 1.5	Odor	800	26	1.26	1017	**8,100**	1800	250	94	9	**2153**	16
PI	C	07/18/03	214	Pile Comp	Initial	2,150	29	1.05	847	**8,100**	1100	4900	180	10	**6190**	18
PI	C	07/18/03	215	Pile Comp	Initial	3,300	32	1.11	1040	**9,400**	1400	730	120	9	**2259**	18
PI	D	07/18/03	216	Pile Comp	Initial	3,150	30	0.96	1686	**17,600**						
PI	D	07/18/03	217	Pile Comp	Initial	7,450	31	0.75	1531	**20,400**	2100	5000	190	10	**7300**	17
PI	E	07/18/03	218	Pile Comp	Initial	6,450	31	0.76	1215	**16,000**	2000	6900	210	30	**9140**	14
PI	E	07/18/03	219	Pile Comp	Initial	3,950	34	0.97	1715	**17,700**						
PI	F	07/18/03	220	Pile Comp	Initial	3,300	30	0.63	902	**14,300**	1700	4800	150	11	**6661**	19
PI	F	07/18/03	221	Pile Comp	Initial	2,150	30	0.93	809	**8,700**						
PI	C	07/18/03	224	Pile Comp	Initial	5,200	29	0.89	1261	**14,200**						
PI	E	07/19/03	230			7,100	29	0.63	1208	**19,200**						
PI	C	07/19/03	242			7,950	27	0.69	840	**12,200**						
PI	E	07/19/03	247			11,000	27	0.63	1318	**20,900**						
PI	E	07/20/03	258			6,550	38	0.65	1161	**17,900**						
PI	F	07/20/03	262			6,700	33	0.65	900	**13,800**						
E	L	07/29/03	347		NW	1,450	25	1.00	225	**2,300**						
E	L	07/29/03	348		NE	2,650	23	0.99	707	**7,100**						
E	L	07/29/03	351		S WALL	2,800	22	0.99	825	**8,300**						
E	M	08/02/03	352		NW	7,800	23	1.00	208	**2,100**						
PI	M	08/02/03	357		INITIAL PILE	9,250	24	1.00	496	**5,000**						
PI	L	08/02/03	358		INITIAL PILE	3,400	23	1.03	1276	**12,400**						
PI	M	08/04/03	390			2,100	22	1.02	906	**8,900**						

Table 4 - Final Concentration of Backfilled Contaminated Subsurface Soil

Soil Sample ID					Observations	F.I.D. Reading (ppm)	F.I.D. Temp	PetroFlag Result			Reduction In Hydrocarbons [%=(1-final/initial)*100]			Lab Results					Reduction In Hydrocarbons [%=(1-final/initial)*100]		
Type of Sample		Cell	Date mm/dd/yy	Soil Sample Number				Sample Weight (g)	PetroFlag Reading (ppm)	Corrected Value (ppm)	Initial (ppm)	Final (ppm)	% Reduction	F1 (C06-C10)	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Total (ppm)	Initial (ppm)	Final (ppm)	% Reduction
PF	2	A	07/15/03	**165**	Odor	7,750	24	0.69	756	**11,000**		11,000	**26**	1500	5200	80	10	6790		6,790	35
PF	4	A	07/16/03	**169**	Odor	5,200	24	0.76	787	**10,400**		10,400	**0**	1600	6600	180	10	8390		8,390	3
PF		A	07/16/03	**170**	Mixed 2 Times, Final	3,600	24	0.68	621	**9,100**		**9,100**	**26**	1500	2100	140	10	3750		**3,750**	**50**
PF	1	B	07/15/03	**157B**	Odor	8,700	25	0.57	1122	**19,700**		19,700	**16**								
PF	2	B	07/15/03	**158B**	Odor	11,000	30	0.50	369	**7,400**		7,400	**40**								
PF		B	07/15/03	**159**	Mixed 2 Times, Final	10,500	35	0.48	364	**7,600**		**7,600**	**40**	1800	3700	150	9	5659			
PF	2	C	07/18/03	**225**	Initial	9,600	30	0.72	780	**10,800**		10,800	**24**								
PF	3	C	07/19/03	**243**		6,750	29	0.62	619	**10,000**		10,000	**18**								
PF		C	07/19/03	**246**	Final, Mixed 2 Times	6,100	30	0.61	550	**9,000**		**9,000**	**4**								
PF		D	07/19/03	**241**	Mixed 1 Time	7,250	30	0.72	1400	**19,400**		**19,400**	**5**								
PF		D	07/20/03	**261**	Final	6,200	33	0.64	1127	**17,600**		17,600	**14**								
PF		E	07/18/03	**229**	Mixed 1 Time	5,800	25	0.71	1395	**19,600**		**19,600**	**-2**								
PF	2	E	07/19/03	**231**	Final	11,000	28	0.71	780	**11,000**		11,000	**43**								
PF	3	E	07/19/03	**248**		7,750	27	0.51	776	**15,200**		15,200	**27**								
PF		E	07/19/03	**251**	Mixed 2 Times	8,950	30	0.56	734	**13,100**		**13,100**	**26**								
PF	6	E	07/20/03	**259**		8,050	34	0.63	1084	**17,200**		17,200	**4**								
PF		E	07/20/03	**260**		5,850	33	0.71	1157	**16,300**		16,300									
PF		F	07/19/03	**236**	Mixed 1 Time	1,400	40	0.68	968	**14,200**		**14,200**	**0**								
PF	3	F	07/20/03	**263**	Final	8,550	38	0.63	790	**12,500**		12,500	**9**								
PF		F	07/20/03	**266**		7,850	33	0.64	830	**13,000**		**13,000**	**9**								
PF	1	G	07/23/03	**304**	1/3, Petroflag no good	6,650	25	5.03	364	**700**		700									
PF	2	G	07/23/03	**305**	Petroflag no good	4,450	20	5.06	287	**600**		600									
PF	1	G	07/23/03	**308**	PILE AFTER 1 SIFT, Petroflag no good	2,400	22	5.03	346	**700**	**700**										
PF	1	H	07/22/03	**296**	1/3, Petroflag no good	440	21	5.16	179	**300**		300									
PF	2	H	07/22/03	**300**	Petroflag no good	1,150	22	5.07	263	**500**		500									
PF		H	07/22/03	**301**	Petroflag no good	520	22	4.98	146	**300**		**300**									
PF	1	J	07/23/03	**310**	1/3, Petroflag no good	1,450	23	5.00	346	**700**		700									
PF	1	L	08/02/03	**363**	PILE AFTER 1 SIFT	6,500	22	0.99	2244	**22,700**	**22,700**										
PF		L	08/03/03	**389**	PILE FINAL	2,050	22	0.98	1280	**13,100**		**13,100**	**42**								
PF		L,N&P	08/15/03	**441**	final	3,700		1.02	896	**8,800**											
PF		M&O	08/15/03	**440**	final	4,550		1.00	711	**7,100**											
PF		M&O	08/16/03	**452**		4,200		1.00	778	**7,800**											
PF		M&TS	08/21/03	**485**	M and Topsoil Mixed	440		1.00	334	**3,300**											
PF		M&TS	08/21/03	**486**	M and Topsoil Mixed	290		1.00	339	**3,400**											
PF		N&P	08/16/03	**451**		3,950		1.00	1018	**10,200**											

Table 5 - Surface Soil (0-50cm) Final Concentrations

Soil Sample ID				Lab Results				
Type of Sample	**Cell**	**Date mm/dd/yy**	**Soil Sample Number**	**F1** (C06-C10)	**F2** (C10-C16)	**F3** (C16-C34)	**F4** (C34-C50)	**Total (ppm)**
F	final	08/23/03	487	54	480	180	12	726
F	final	08/23/03	488	330	880	240	58	1508
F	final	08/23/03	489	270	3000	260	23	3553
F	final	08/23/03	490	350	2400	230	18	2998
F	final	08/23/03	491	530	3000	160	10	3700
F	final	08/23/03	492	350	1200	160	10	1720
F	final	08/23/03	493	320	1000	55	10	1385
F	final	08/23/03	494	220	1000	300	70	1590
F	final	08/23/03	495	200	120	250	120	690
F	final	08/23/03	496	65	130	260	60	515

Table 6 - Groundwater Monitoring Paramaters

Water Sample ID	Date (mm/dd/yy)	Well Survey Data and Well Dimensions								Pre-Purge Measurements								Post-Purge Measurements						BTEX (mg/L)					Total Extractable Hydrocarbons (mg/L)
		Top of Casing Elev (m)	Ground Surface Elev (m)	Easting (m)	Northing (m)	Water Level (cm)	Water Elevation (m)	Depth to Bottom (cm)	Diameter (cm)	Free Product (mm)	Water Volume (L)	Measured Dissolved O_2 (mg/L)	pH	Conductivity (µS/cm)	Temp (ºC)	F.I.D (ppm)	Turbidity (NTU)	Measured Dissolved O_2 (mg/L)	pH	Conductivity (µS/cm)	Temp (ºC)	Total Volume Purged (L)	Purge Rate (L/min)	Benzene	Toluene	Ethyl-benzene	Xylenes	Total (C_3-C_{10})	Total (C_{11}-C_{30})
LTMW1	08/13/03	98.996	98.256	3.32	70.15	-	-	240.00	6.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.0005)	<0.0004	0.0018	0.002	<0.1	<0.5
LTMW2	08/13/03	98.950	98.164	-7.57	66.39	N/A	-	202.50	6.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0004	<0.0004	<0.0004	<0.00012	<0.1	<0.5
LTMW3	08/13/03	99.618	98.836	-40.30	37.27	-	-	295.00	6.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0009	<0.0004	<0.0004	<0.00012	<0.1	<0.5
LTMW4	08/13/03	100.39	99.702	-29.07	-54.39	234.00	-	250.00	6.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0004	<0.0004	<0.0004	<0.00012	<0.1	<0.5
LTMW5	08/13/03	-	-	10.30	-44.61	N/A	-	287.00	6.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.0007)	<0.0004	<0.0004	<0.00012	<0.1	<0.5
LTMW6	08/13/03	-	-	15.70	65.19	-	-	-	6.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0004	<0.0004	<0.0004	<0.00012	<0.1	<0.5
LTMW7	08/13/03	98.860	98.312	9.44	64.98	-	-	300.00	6.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.198	0.136	0.0602	0.361	1.2	1.2
LTMW8	08/13/03	99.268	98.946	-16.94	61.00	187.00	-	229.00	6.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0078	<0.0004	<0.0004	<0.00012	<0.1	<0.5
LTMW9	08/13/03	-	-	32.00	5.20	-	-	-	6.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0038	<0.0004	<0.0004	<0.00012	<0.1	<0.5

Note - () = The result was less than the RDL and is subject to reduced levels of confidence

- RDL = Reliable Detection Limit (2 x MDL)
- MDL = Method Detection Limit - Calculated on the basis of instrument detection level, the dilution used, and the weight of the sample

Complete List of Analytical Results

Soil Sample ID				Depth from Surface (m)	Observations	F.I.D. Results		PetroFlag Result			Lab Results					Moisture Content (%)
Type of Sample	Cell	Date mm/dd/yy	Soil Sample Number			F.I.D. Reading (ppm)	F.I.D. Temp.	Sample Weight (g)	PetroFlag Reading (ppm)	Water Content Corrected Value (ppm)	F1 (C06-C10)	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Total (ppm)	
S		07/11/03	20	0.3	Surface Soil	25					47	460	47	10	**564**	19
S		07/11/03	29	0.6	Surface Soil	1,550		0.54	1327	24,574	1100	21000	700	160	**22960**	23
S		07/12/03	33	0.6	Surface Soil	3,150		0.52	1016	19,538	3100	15000	100	10	**18210**	17
S		07/12/03	41	0.6	Surface Soil	3,600		0.32	110	3,438	2400	4000	85	10	**6495**	14
S		07/12/03	42	0.6	Surface Soil	2,200		0.69	1132	16,406	1600	13000	110	10	**14720**	20
S		07/13/03	68	Soil Pile Comp1	Surface Soil			5.03	1168	2,330	250	980	120	10	**1360**	17
S		07/13/03	97	0.6 - 0.9	Surface Soil	550	32	1.39	313	2,252	10	5	10	10	**35**	21
S		07/13/03	99	0.6 - 0.9	Surface Soil	3,350	28.5	0.69	1652	23,942	2600	15000	250	10	**17860**	27
S		07/13/03	102	0.9 - 1.2	Surface Soil	6,450	27	2.81	693	2,466	60	43	10	10	**123**	23
S		07/14/03	118	Initial Soil Pile	Surface Soil	1,750	15	0.78	230	2,950	1800	3500	280	90	**5670**	16
S		07/14/03	119	Comp of all Piles	Surface Soil	980	15	1.06	274	2,600	270	1300	210	10	**1790**	20
S		07/14/03	121	Double of Final	Surface Soil	120	15	1.11	186	1,680	38	310	250	81	**679**	19
E	A	07/15/03	138	0.5	Excavation	5,450	16.5	0.58	900	15,517	2000	9700	110	10	**11820**	19
E	B	07/15/03	145	1	Excavation	11,000	36	0.42	681	16,214	2800	660	200	9	**3669**	19
PF	B	07/15/03	159	NA	Final Pile	10,500	35	0.48	364	7,583	1800	3700	150	9	**5659**	18
PI	A	07/15/03	161	NA	Initial pile	5,800	22	0.67	826	12,328	2100	5200	130	10	**7440**	18
PI	A	07/15/03	164	NA	2nd mixing	5,150	26	0.64	949	14,828	2300	8100	44	9	**10453**	16
PF	A	07/15/03	165	NA	2nd mixing	7,750	24	0.69	756	10,957	1500	5200	80	10	**6790**	18
PI	A	07/16/03	168	NA	4th mixing	5,800	23	0.62	642	10,355	1600	7000	79	10	**8689**	19
PF	A	07/16/03	169	NA	4th mixing	5,200	24	0.76	787	10,355	1600	6600	180	10	**8390**	18
PF	A	07/16/03	170	NA	Final Pile	3,600	24	0.68	621	9,132	1500	2100	140	10	**3750**	18
CB	A	07/16/03	173	1.6	Bottom	3,750	22	0.89	470	5,281	20	5	10	9	**44**	22
CB	A	07/16/03	174	1.75	Bottom	11,000	32	0.54	739	13,685	20	5	10	10	**45**	19
CB	A	07/16/03	175	1.8	Bottom	11,000	33	0.52	645	12,404	21	5	10	10	**46**	21
CB	A	07/16/03	176	1.3	Bottom	11,000	30	0.55	741	13,473	45	5	10	9	**69**	23
CB	A	07/16/03	177	1.3	Bottom	11,000	28	0.53	2130	40,189	22	48	10	10	**90**	17
CW	A	07/16/03	178	1.3-1.75	Wall	11,000	29	0.53	775	14,623	82	5	10	10	**107**	20
CB	B	07/16/03	179	1.7	Bottom	11,000	29	0.59	830	14,068	13	5	83	10	**111**	19
CB	B	07/16/03	180	1.7	Bottom	11,000	29	0.57	668	11,719	23	11	80	18	**132**	22
CB	B	07/16/03	181	2.2	Bottom	970	29	0.67	140	2,090	31	32	75	10	**148**	21
CB	B	07/16/03	182	2.2	Bottom	1,850	29	1.25	557	4,456	110	37	10	10	**167**	22
CW	B	07/16/03	183	1.7-2.2	Wall	11,000	25	0.69	684	9,913	49	63	45	33	**190**	20
E	C	07/16/03	184		Excavation	2,400	29				100	27	65	10	**202**	
E	C	07/16/03	185		Excavation	1,150	30				47	83	97	38	**265**	
E	C	07/16/03	186		Excavation	2,750	30	0.86	1932	22,465	190	18	61	10	**279**	24
CB	C	07/17/03	187	1.4	Bottom	170	33	1.37	7	51	19	20	200	61	**300**	21
CB	C	07/17/03	188	1.4	Bottom	50	29	0.78	155	1,987	35	230	61	9	**335**	22
CB	C	07/17/03	189	1.4	Bottom	480	27	0.68	262	3,853	57	253	16	10	**336**	23
CB	C	07/17/03	190	1.4	Bottom	130	25	0.69	568	8,232	290	29	10	10	**339**	21
CW	C	07/17/03	191	1.0 - 1.4	Wall	420	30	1.51	63	417	230	24	78	16	**348**	19
E	D	07/17/03	192	0.8	Excavation	2,000	30	0.62	1140	18,387	45	220	140	10	**415**	
E	D	07/17/03	193	1.2	Excavation	870	30				10	67	250	110	**437**	
E	D	07/17/03	194	1	Excavation	1,650	28				46	55	240	110	**451**	15
E	D	07/17/03	195	1.8	Excavation	710	26				110	190	140	19	**459**	
E	E	07/17/03	196	0.8	Excavation	1,550	27	0.65	1100	16,923	310	52	78	20	**460**	
E	E	07/17/03	197	1.5	Excavation	1,500	27				32	300	150	10	**492**	
E	E	07/17/03	198	0.5 - 1.2	Excavation		26				69	220	180	42	**511**	20
E	E	07/17/03	199	1.2 - 1.5	Excavation	420	26				65	130	260	60	**515**	
E	F	07/17/03	200	1	Excavation	900	26				130	270	92	35	**527**	
E	F	07/17/03	201	1.2 - 1.5	Excavation	800	26	1.26	1017	8,071	94	360	100	10	**564**	16

Complete List of Analytical Results

Soil Sample ID				Depth from Surface (m)	Observations	F.I.D. Results		PetroFlag Result			Lab Results					Moisture Content (%)
Type of Sample	Cell	Date mm/dd/yy	Soil Sample Number			F.I.D. Reading (ppm)	F.I.D. Temp.	Sample Weight (g)	PetroFlag Reading (ppm)	Water Content Corrected Value (ppm)	F1 (C06-C10)	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Total (ppm)	
E	F	07/17/03	201B	1.5	Excavation	750	27				300	250	38	10	**598**	
CB	D	07/17/03	202	1.5	Bottom	1,800	38	1.08	1471	13,620	530	58	17	10	**615**	17
CB	D	07/17/03	203	1.5	Bottom	4,650	34	1.01	640	6,337	500	50	61	9	**620**	16
CB	D	07/17/03	204	1.8	Bottom	3,850	34	1.07	244	2,280	340	240	78	10	**668**	20
CB	D	07/17/03	205	1.8	Bottom	2,450	34	1.08	210	1,944	200	370	89	9	**668**	20
CB	E	07/17/03	206	1.6	Bottom	2,550	33	1.07	1257	11,748	200	120	250	120	**690**	19
CB	E	07/17/03	207	1.6	Bottom	1,950	30	0.88	380	4,318	54	480	180	12	**726**	20
CB	E	07/17/03	208	1.8	Bottom	2,950	33	1.02	718	7,039	340	360	120	10	**830**	18
CB	E	07/17/03	209	1.8	Bottom	900	31	1.07	8	75	570	390	53	10	**1023**	14
CB	F	07/17/03	210		Bottom	900	32	1.05	75	714	360	630	33	10	**1033**	17
CB	F	07/17/03	211		Bottom	1,450	31	1.02	82	804	92	730	230	10	**1062**	20
CB	F	07/17/03	212		Bottom	1,900	33	0.95	429	4,516	180	790	120	36	**1126**	23
CB	F	07/17/03	213		Bottom	1,850	32	1.71	871	5,094	1000	69	73	10	**1152**	24
PI	C	07/18/03	214	Pile Comp	Initial pile	2,150	29	1.05	847	8,067	440	440	220	75	**1175**	18
PI	C	07/18/03	215	Pile Comp	Initial pile	3,300	32	1.11	1040	9,369	450	820	10	10	**1290**	18
PI	D	07/18/03	216	Pile Comp	Initial pile	3,150	30	0.96	1686	17,563	990	250	40	10	**1290**	
PI	D	07/18/03	217	Pile Comp	Initial pile	7,450	31	0.75	1531	20,413	230	1000	120	27	**1377**	17
PI	E	07/18/03	218	Pile Comp	Initial pile	6,450	31	0.76	1215	15,987	320	1000	55	10	**1385**	14
PI	E	07/18/03	219	Pile Comp	Initial pile	3,950	34	0.97	1715	17,680	640	710	100	10	**1460**	
PI	F	07/18/03	220	Pile Comp	Initial pile	3,300	30	0.63	902	14,317	330	880	240	58	**1508**	19
PI	F	07/18/03	221	Pile Comp	Initial pile	2,150	30	0.93	809	8,699	890	490	120	10	**1510**	
PI	C	07/18/03	222	Pile Comp	1st mixing	1,150	33				320	1100	82	10	**1512**	24
PF	C	07/18/03	223	Pile Comp	1st mixing	1,050	31				770	720	85	10	**1585**	23
PI	C	07/18/03	224	Pile Comp	2nd mixing	5,200	29	0.89	1261	14,169	220	1000	300	70	**1590**	
PF	C	07/18/03	225	Pile Comp	2nd mixing	9,600	30	0.72	780	10,833	350	1200	160	10	**1720**	
PF	C	07/18/04	226		Final Pile						1000	710	10	10	**1730**	19
PI	E	07/18/03	227		1st mixing	3,100	29				1000	840	14	10	**1864**	
PF	E	07/18/03	228		1st mixing	3,750	29				860	1200	10	10	**2080**	
PF	E	07/18/03	229		1st mixing	5,800	25	0.71	1395	19,648	330	1600	130	34	**2094**	
PI	E	07/19/03	230		2nd mixing	7,100	29	0.63	1208	19,175	780	1200	150	10	**2140**	
PF	E	07/19/03	231		2nd mixing	11,000	28	0.71	780	10,986	1800	250	94	9	**2153**	
PI	F	07/19/03	232		1st mixing	6,800	32				1400	730	120	9	**2259**	
PF	F	07/19/03	233		1st mixing	4,200	31				820	1400	93	10	**2323**	
PI	F	07/19/03	234		2nd mixing	3,000	43				880	1200	190	55	**2325**	
PF	F	07/19/03	235		2nd mixing	6,400	33				670	1400	210	64	**2344**	
PF	F	07/19/03	236		Final Pile	1,400	40	0.68	968	14,235	670	1700	140	10	**2520**	
PI	D	07/19/03	237		1st mixing	8,700	32				2400	58	110	10	**2578**	
PF	D	07/19/03	238		1st mixing	4,000	30				1900	580	98	10	**2588**	
PI	D	07/19/03	239		2nd mixing	4,800	28				190	2100	310	10	**2610**	
PF	D	07/19/03	240		2nd mixing	6,800	30				2200	390	120	10	**2720**	
PF	D	07/19/03	241		Final Pile	7,250	30	0.72	1400	19,444	1900	770	140	9	**2819**	
PI	C	07/19/03	242		3rd mixing	7,950	27	0.69	840	12,174	350	2400	230	18	**2998**	
PF	C	07/19/03	243		3rd mixing	6,750	29	0.62	619	9,984	550	2400	110	31	**3091**	
PI	C	07/19/03	244		4th mixing	2,800	29				1700	1100	290	28	**3118**	
PF	C	07/19/03	245		4th mixing	4,650	30				750	2200	190	64	**3204**	
PF	C	07/19/03	246		2nd mixing	6,100	30	0.61	550	9,016	2600	550	90	10	**3250**	
PI	E	07/19/03	247		3rd mixing	11,000	27	0.63	1318	20,921	920	2200	140	10	**3270**	
PF	E	07/19/03	248		3rd mixing	7,750	27	0.51	776	15,216	1100	2300	11	10	**3421**	
PI	E	07/19/03	249		4th mixing	430	27				270	3000	260	23	**3553**	
PF	E	07/19/03	250		4th mixing	7,000	25				530	3000	160	10	**3700**	

Complete List of Analytical Results

Soil Sample ID				Depth from Surface (m)	Observations	F.I.D. Results		PetroFlag Result			Lab Results					Moisture Content (%)
Type of Sample	Cell	Date mm/dd/yy	Soil Sample Number			F.I.D. Reading (ppm)	F.I.D. Temp.	Sample Weight (g)	PetroFlag Reading (ppm)	Water Content Corrected Value (ppm)	F1 (C06-C10)	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Total (ppm)	
PF	E	07/19/03	251		Final Pile	8,950	30	0.56	734	13,107	1000	2800	31	10	**3841**	
PI	D	07/19/03	252		3rd mixing	7,150	41				1100	2600	270	10	**3980**	
PF	D	07/19/03	253		3rd mixing	9,400	40				1200	2700	130	9	**4039**	
PI	D	07/19/03	254		4th mixing						1200	2900	200	9	**4309**	
PF	D	07/19/03	255		4th mixing						580	3700	250	32	**4562**	
PI	E	07/20/03	256		5th mixing	5,800	33				790	3600	170	10	**4570**	
PF	E	07/20/03	257		5th mixing	6,500	33				650	3800	200	10	**4660**	
PI	E	07/20/03	258		6th mixing	6,550	38	0.65	1161	17,862	2800	1800	160	14	**4774**	
PF	E	07/20/03	259		6th mixing	8,050	34	0.63	1084	17,206	1200	3600	160	10	**4970**	
PF	E	07/20/03	260		Final Pile	5,850	33	0.71	1157	16,296	550	4300	210	40	**5100**	
PF	D	07/20/03	261		Final Pile	6,200	33	0.64	1127	17,609	1500	3700	17	10	**5227**	
PI	F	07/20/03	262		3rd mixing	6,700	33	0.65	900	13,846	790	4600	78	10	**5478**	
PF	F	07/20/03	263		3rd mixing	8,550	38	0.63	790	12,540	650	4300	560	84	**5594**	
PI	F	07/20/03	264		4th mixing	5,900	34				2300	3500	83	9	**5892**	
PF	F	07/20/03	265		4th mixing	5,150	34				240	5200	460	100	**6000**	
PF	F	07/20/03	266		Final Pile	7,850	33	0.64	830	12,969	1100	4900	180	10	**6190**	
E	G	07/20/03	267		EXCAVATION	1,800	33				2000	4000	230	10	**6240**	
E	G	07/20/03	268		EXCAVATION	8,100	39				1300	5000	130	10	**6440**	
E	G	07/20/03	269		EXCAVATION						1200	5200	200	53	**6653**	
E	G	07/20/03	270		EXCAVATION	5,450	45				1700	4800	150	11	**6661**	
CB	G	07/21/03	271		Bottom	740	38				1900	4800	12	10	**6722**	21
CB	G	07/21/03	272		Bottom	330	34	5.01	346	6,920	2000	4700	62	9	**6771**	24
CB	G	07/21/03	273		Bottom	800	32	5.02	146	2,920	3100	3700	320	31	**7151**	22
CB	G	07/21/03	274		Bottom	1,050	30	5.00	96	1,920	3200	3700	290	10	**7200**	22
CB	G	07/21/03	275		Bottom	6,300	28	5.02	107	2,140	2100	5000	190	10	**7300**	20
CW	G	07/21/03	276		Wall	10,750	28	5.04	80	1,600	2300	5400	140	10	**7850**	19
CW	G	07/21/03	277		Wall	11,000	28	5.09	402	8,040	1600	6500	220	10	**8330**	19
CB	J	07/21/03	278		Bottom	280	30	5.07	304	6,080	2100	6200	140	10	**8450**	21
CB	J	07/21/03	279		Bottom	570	35	5.01	93	1,860	2100	6600	85	10	**8795**	21
CB	J	07/21/03	280		Bottom	0	30	5.08	33	660	2600	6200	130	10	**8940**	22
CB	J	07/21/03	281		Bottom	1,150	32	5.04	95	1,900	2000	6900	210	30	**9140**	20
CW	J	07/21/03	282		Wall	5,950	30	5.13	87	1,740	2100	6900	160	10	**9170**	21
CW	J	07/22/03	283		Wall	3,250	25	5.07	314	6,280	2300	6600	270	15	**9185**	20
			284		MISSED SAMPLE #						2000	8700	45	10	**10755**	
			285		MISSED SAMPLE #						2100	8700	140	10	**10950**	
CB	H	07/22/03	286		Bottom	150	24	5.03	53	1,060	2200	8500	250	14	**10964**	24
CB	H	07/22/03	287		Bottom	200	24	5.00	47	940	710	23000	430	33	**24173**	21
CB	H	07/22/03	288		Bottom	110	23.5	5.00	57	1,140	4000	24000	400	12	**28412**	22

Table 8 West Channel Remediation Program Inuvialuit Resources

	Inuvialuit Organization	Services Provided
1	Aklak Air Inc.	Aircraft Charter
2	Aklavik Community Corporation	Catering/Council Chambers Rental
3	Aklavik Hunters and Trappers Committee	Wildlife Monitors
4	Allen Services & Contracting	Supplies
5	Arctic Oil & Gas Services	Camp Catering
6	Arctic Rim	Supplies
7	Barbara Allen	Translation Service
8	Bob's Welding	Barge Services
9	Canadian Helicopters	Helicopter Charter
10	Canadian North Airlines	North-South carrier (Personnel/Cargo)
11	IEG Environmental	Project Management/Personnel
12	E. Grubens Transport	Barge Camp; Heavy Equipment
13	Eddie Greenland Taxi Services	Transporation
14	Inuvialuit Development Corporation - IDC	Supplies Rental
15	Inuvialuit Land Administration - ILA	Permitting; Environmental Monitors
16	Inukshuk Geomatics Inc.	Surveying Services
17	Lakes and Rivers Consulting	Boat Trips
18	Mackenzie Range Supply	Digger Rubber Boot
19	Nigaluk	Wildlife Monitoring
20	Norm's Building	Field Supplies
21	Northwest Transport	Machinery Transportation
22	Northwind Industries	Fuel tanks, rigmats
23	Northern Transportation Company Ltd. - NTCL	Barge Services
24	Price Contracting	Sea Cans
25	Storrcan Enterprises	Vehicle Rental

Appendix C
Borehole Logs

IEG Environmental
1338 R 36 Ave. NE
Calgary, AB
T2E 6T6

Log of Borehole: LTMW 1

Project No.: 5435-03

Project: West Channel Remediation Project

Client: Shell Canada Limited

Location: West Channel, Mackenzie Delta, NT *Project Manager:* Kurt Kure

SUBSURFACE PROFILE				SAMPLE				
Depth (m)	Symbol	Description	Elev. (m)	Number	Type	Recovery	Well Installation	Well Completion Details
-1								Stickup = 0.74 m AGS PVC endcap
								6 cm PVC riser
0		Ground Surface	98.3					Ground surface = 98.256 m
		Silt SILT, compact, moist, grey in colour, with trace organics.		1	Auger	100		Bentonite seal from surface to 0.30 m BGS
								6 cm PVC screen from 0.30 m to 2.35 m BGS
1			97.1					13 cm PVC screen from surface to 2.35 m BGS
		Silt SILT, compact, wet, dark grey in colour, trace clay.		2	Auger	100		Silica sand, from bentonite seal to 2.35 m BGS
2								6 cm PVC screen from 0.30 m to 2.35 m BGS
								6 cm PVC endcap
								13 cm PVC endcap
3		End of Borehole	95.3					

Drilled By: IEG Environmental

Drill Method: Solid Stem Auger

Drill Date: August 18, 2003

Hole Size: 15 cm

Datum: Onsite Benchmark

Sheet: 1 of 1

IEG Environmental
1338 R 36 Ave. NE
Calgary, AB
T2E 6T6

Log of Borehole: LTMW 2

Project No.: 5435-03

Project: West Channel Remediation

Client: Shell Canada Limited

Location: West Channel, Mackenzie Delta, NT *Project Manager:* Kurt Kure

SUBSURFACE PROFILE				SAMPLE				
Depth (m)	Symbol	Description	Elev. (m)	Number	Type	Recovery	Well Installation	Well Completion Details
-1								Stickup = 0.785 m AGS PVC endcap
0		Ground Surface	98.2					Ground surface = 98.164 m
		Silt SILT, compact, moist, grey-brown in colour, some organics, trace clay.		1	Auger	100		Bentonite seal from surface to 0.30 m BGS 6 cm PVC screen from 0.30 m
1			97.2					13 cm PVC screen from surface to 2.35 m BGS
		Silt SILT, dense, wet, dark grey in colour, some clay.						Silica sand, from bentonite seal to 2.35 m BGS
2				2	Auger	100		6 cm PVC screen from 0.30 m to 2.35 m BGS 6 cm PVC endcap 6 cm PVC endcap
3			94.9					
		End of Borehole						

Drilled By: IEG Environmental

Drill Method: Solid Stem Auger

Drill Date: August 18, 2003

Hole Size: 15 cm

Datum: Onsite Benchmark

Sheet: 1 of 1

IEG Environmental
1338 R 36 Ave. NE
Calgary, AB
T2E 6T6

Log of Borehole: LTMW 3

Project No.: 5435-03

Project: West Channel Remediation Project

Client: Shell Canada Limited

Location: West Channel, Mackenzie Delta, NT *Project Manager:* Kurt Kure

SUBSURFACE PROFILE				SAMPLE				
Depth (m)	Symbol	Description	Elev. (m)	Number	Type	Recovery	Well Installation	Well Completion Details
-1								Stickup = 0.782 m AGS PVC endcap 6 cm PVC riser
0		Ground Surface	98.9					Ground surface = 98.863 m Bentonite seal from surface to 0.30 m BGS
		Silt SILT, compact, moist, brown in colour, some organics.		1	Auger	100		6 cm PVC screen from 0.30 m to 2.35 m BGS
1			97.9					13 cm PVC screen from surface to 2.35 m BGS
		Silt SILT, compact, wet, grey-brown in colour.						Silica sand, from bentonite seal to 2.35 m BGS
2				2	Auger	100		6 cm PVC screen from 0.30 m to 2.35 m BGS 6 cm PVC endcap 13 cm PVC endcap
3			95.4					
		End of Borehole						

Drilled By: IEG Environmental

Drill Method: Solid Stem Auger

Drill Date: August 18, 2003

Hole Size: 15 cm

Datum: Onsite Benchmark

Sheet: 1 of 1

IEG Environmental
1338 R 36 Ave. NE
Calgary, AB
T2E 6T6

Log of Borehole: LTMW 4

Project No.: 5435-03

Project: West Channel Remediation Project

Client: Shell Canada Limited

Location: West Channel, Mackenzie Delta, NT *Project Manager:* Kurt Kure

SUBSURFACE PROFILE				SAMPLE				
Depth (m)	Symbol	Description	Elev. (m)	Number	Type	Recovery	Well Installation	Well Completion Details
-1								
		Ground Surface	99.7					Stickup = 0.69 m AGS PVC endcap
0		**Silt** SILT, compact, dry, grey-brown in colour, some organics.						6 cm PVC riser Ground surface = 99.702 m Bentonite seal from surface to 0.30 m BGS 6 cm PVC screen from 0.30 m to 2.35 m BGS
1			98.6					13 cm PVC screen from surface to 2.35 m BGS
		Silt SILT, compact, moist, grey in colour.						Silica sand, from bentonite seal to 2.35 m BGS
2			97.5					6 cm PVC screen from 0.30 m to 2.35 m BGS
		Silt SILT, compact, wet, grey in colour.						6 cm PVC endcap 13 cm PVC endcap
3			96.2					
		End of Borehole						

Drilled By: IEG Environmental

Drill Method: Solid Stem Auger

Drill Date: August 18, 2003

Hole Size: 15 cm

Datum: Onsite Benchmark

Sheet: 1 of 1

IEG Environmental
1338 R 36 Ave. NE
Calgary, AB
T2E 6T6

Log of Borehole: LTMW 7&8

Project No.: 5435-03

Project: West Channel Remediation Project

Client: Shell Canada Limited

Location: West Channel, Mackenzie Delta, NT *Project Manager:* Kurt Kure

SUBSURFACE PROFILE				SAMPLE				
Depth (m)	Symbol	Description	Elev. (m)	Number	Type	Recovery	Well Installation	Well Completion Details
-1								TYPICAL INJECTION WELL (LTMW 7 & 8)
								PVC endcap
								25 mm PVC riser
0		Ground Surface	0.0					75 mm solid pipe
1		**BACKFILLED NATIVE MATERIAL**						25 mm PVC screen
2								75 mm screened pipe (0.02 slot)
3			-3.0					
		End of Borehole						

Drilled By: N/A

Drill Method: N/A

Drill Date: N/A

Hole Size: 15 cm

Datum: Onsite Benchmark

Sheet: 1 of 1

Appendix D
Photographic Log

Date: July 10, 2003
Photo Location/Reference: Photo was taken from roof of Arctic Star facing southwest.
Photo Description: Photo shows the contaminated soil boundary as based on past sampling.

Date: July 11, 2003
Photo Location/Reference: Photo taken where “Cell I” was excavated; photo taken facing northwest.
Photo Description: The sampling technician taking a surface soil sample. The surface soil samples were used to determine the level of contamination in the different depths of soil.

Date: July 11, 2003
Photo Location/Reference: Photo taken on the south side of the step approximately where “Cell L” was located. The photo is facing east and shows where Cells N & P would later be excavated.
Photo Description: After the surface soil had been tested, the results were used to determine the depth of “surface soil” (<2500ppm) to be removed.

Date: July 14, 2003
Photo Location/Reference: Photo taken from roof of the Arctic Star. Shows the area where Cell G was excavated. Photo taken facing southwest.
Photo Description: Part of the area shown has had the surface soil removed. The photo also shows a pile of surface soil, which was kept separate from soil that was excavated from the cells.

Date: July 15, 2003
Photo Location/Reference: Photo taken on the step, in the middle of the treatment area. Photo taken facing is east.
Photo Description: Tarps thatwere used to keep the soil dry. Rain caused pooling of water on the tarps, which was later pumped off. The east end of the site was covered to prevent runoff from saturating the soil with water.

Date: July 16, 2003
Photo Location/Reference: Photo taken from roof of the Arctic Star. The Photo is taken Facing southwest.
Photo Description: The allu-bucket on the hoe is sifting the piles of soil generated from the excavation of cells A and B. Each pile was worked at least two times through the allu-bucket.

Date: July 17, 2003
Photo Location/Reference: Photo taken on the west side of the treatment area facing west.
Photo Description: Cells C, D, and E after being excavated by the hoe. Each of the cells was approximately 12m by 6m, and were excavated to various depths. The depths were determined by testing confirmatory bottom samples to ensure the highest levels of contamination would be treated.

Date: July 19, 2003
Photo Location/Reference: Photo taken from roof of the Arctic Star Photo taken facing is southwest.
Photo Description: The hoe backfilling the cells C, D, and E with the allu-bucket. After the hoe sifted the excavation pile twice it would then backfill the cell using the allu-bucket. The sea containers on the right of the photo were used for equipment storage during the project.

Date: July 21, 2003
Photo Location/Reference: The photo taken from north side of the treatment area facing east.
Photo Description: Here the depth of cell F can be seen. The wooden stakes marking the edge are approximately 1m high. Most of the cells shared similar lengths, widths, and depths.

Date: July 21, 2003
Photo Location/Reference: Photo taken on north side of the treatment area, just on the north edge of cell J. The direction the photo is facing is northeast.
Photo Description: Shown in the photo is the water treatment system. Arctic star barge camp is in the background. Water was treated, stored, analyzed and drained to ground

Date: July 22, 2003
Photo Location/Reference: Photo taken from roof of the Arctic Star and the direction the photo is facing is southeast.
Photo Description: Shown in the photo are the piles that were generated from the excavation of cells J and H. In the foreground the water treatment system can be seen. The hoe is in the process of using the allu-bucket to sift the piles of soil generated from cells J and H.

Date: July 26, 2003
Photo Location/Reference: Photo taken on the north side of cell J just on the edge of the site. Photo taken facing the east Photo shows the area where cell O would later be excavated.
Photo Description: A pump is being set up to remove water that pooled on the tarps after a day of rain.

Date: July 30, 2003
Photo Location/Reference: Photo taken from roof of the Artic Star. Photo taken facing southwest.
Photo Description: Shown in the photo is much of west end of the site under tarps due to a string of rainy weather days. Heaters were used to blow hot air under the tarps to minimize the amount of moisture accumulated in the soil.

Date: Aug. 2, 2003
Photo Location/Reference: Photo taken on the north end of cell M, facing south.
Photo Description: Cells M and L after being excavated. The tarps in the background are in place because of the several days of rain.

Date: Aug. 7, 2003
Photo Location/Reference: Photo taken on the northeast end of the site, at the bottom of the elevation change. The direction the photo is facing is southeast.
Photo Description: Cells O and P after being excavated. These two cells had cell bottoms below the water level of the river, adding the wetness of the soil.

Date: Aug. 7, 2003
Photo Location/Reference: Photo taken on the north side of the site, just north of cell J. Photo taken facing is southwest.
Photo Description: Shown here is the cells A – J after being excavated and worked with the allu-bucket. This area still requires backfilling with clean top soil.

Date: Aug. 8, 2003
Photo Location/Reference: Photo taken on the north side of the site, at the north end of cell M. Photo taken facing east.
Photo Description: Cells O, P and N following replacement of the treated excavation soil. Soil was excavated and worked with the allu-bucket, and then laid back down in place without the surface soil.

Date: Aug. 8, 2003
Photo Location/Reference: Photo is taken on the west end of cell K. The direction the photo is facing is east.
Photo Description: Shown in the photo is cell K after excavation. Cell K was the only cell that was separate from the rest of the cells. It was found about 10 metres north of cell J. The dimensions of cell K were 7m by 7m.

Date: Aug. 14, 2003
Photo Location/Reference: Photo taken at the west end of the site; about 3m north of cell H. Photo Taken facing is northeast.
Photo Description: Shown in this photo is the HEVEES piping. The HEVEES project was set up for drying and lowering the contamination of a soil pile M. Soil pile M resulted from the mixing of surface soil (<2500p.p.m.) with cell excavation soil or subsurface soil (>2500p.p.m.).

Date: Aug. 15, 2003
Photo Location/Reference: Photo taken at the west end of the site; about 3m northwest of cell H. Photo is facing is northeast.
Photo Description: HEVEES project with the soil laid down over the piping, and a tarp over the soil. Multi-phase pump removes hydrocarbons from the worked soils. Hydrocarbons “sucked” out through HEVEES system as exhaust.

Date: Aug. 19, 2003
Photo Location/Reference: Photo taken at the west end of the site, where cell H and C meet. The Photo is facing is east.
Photo Description: The hoe backfilling the surface soil over top the excavation cells. The soil that was first stripped off and set a side is now laid on top over the “worked” soil..

Date: Sept 8, 2003
Photo Location/Reference: Photo taken from the northwest edge of the site. Photo taken facing is southeast.
Photo Description: The completion of the project, after all of the surface soil had been laid back down and the equipment moved out.

Date: Sept 8, 2003
Photo Location/Reference: Photo taken from a helicopter on the southeast side of the site. Photo is facing is northwest.
Photo Description: Shown in this photo is the site as seen from the air after the demob. This is the condition the site was left in at the end of the project.

Appendix E
Daily Logs & Field Notes

FRIDAY - JULY 4, 2003

Weather Conditions:	Sunny, Overcast 15C

DAILY ACTIVITIES LOG

- Project manager and sample tech. arrived via Canadian North at 12:15
- AOGS Supplied the Arctic Star with the food for the project. They didn't store the dry goods away in the Arctic Star; EGT had to move the food into the boot room. Cook and attendant to arrive at the site on Monday Evening with sample tech and 2nd project manager.
- Collected the external antenna for one of the cell phones for the camp
- Went and looked at the equipment and C-Can to see what shape they were in.
- 2nd project manager went and looked at the Northwinds tanks/connection hose to see if they were adequate
- Sourcing tidy tank for equipment (generator, heaters, excavator refuelling) and pump
- Discussed possible docking locations for the Arctic Star Barge at the West Channel Site either on the northwest side if we can get close enough to the bank to get our ramp onto solid ground or right off the point in the bay caused by eddies in the river (where the barge was unloaded in 2002). Relay the plan to Frog who is EGTs rep for anchoring the barge.
- Set up one phone on the Arctic Star. 110VAC to 12V DC adapter didn't work so we tied the phone into 12 V adapter for the radio on the arctic star. The audiovox does not have any battery storage only works with active power.
- Loaded a D3 cat for setting the anchors since we were unsure of how wet the site was and whether a loader (which EGT was supplying to set the anchors) would be able to get around the site.
- The Arctic Star left at about 20:00 being pulled by the Vic Inghaham.
- Arctic Star Fuel tank was gauged on July 4, 2003 at 103.5 inches this was not witnessed by IEG.

SATURDAY - JULY 5, 2003

Weather Conditions:	Sunny, 25C

DAILY ACTIVITIES LOG

- Inventoried the C-Can in Inuvik for materials
- Arctic Star arrived at site around 5:00pm. Pushed into barge unloading bay at the end of the point extended the ramps and took two anchors off the barge to bury. Dug pits with the D3 Dozer to bury the anchors. Tied to the two anchors on shore and tried to push the Arctic Star out to drop a third anchor in the water. However the anchor would not catch on the bottom and the movement of the barge pulled out the bow anchor and drug it into the water at around 9:00. Had to recover the two anchors now in the water which took until about 2:00 am. EGT reburied three anchors on shore and tied off to them. The Vic Ingrham left the Arctic Star at about 4:00am bound for Inuvik.
- Barge tied with about40ft southeast of the northern point of the bay at the end of the point. Need to move it back to get a little more room for the Joe Gully Barge to unload.
- Created the daily activity log and project cost tracking spreadsheet.

SUNDAY - JULY 6, 2003

Weather Conditions:	Sunny, 15-20C Evening 15C and SE Wind and some rain

DAILY ACTIVITIES LOG

- Finished anchoring the Arctic Star, moving it down the beach another 10ft and tying diagonal lines to the anchors for additional stability. EGT got the D3 stuck once again trying to move the barge. Needed to be pulled out by the loader. EGT would not have been able to bury the anchors with the loader alone. The D3 was needed to

bury the anchors.
- Extended the ramp to the arctic star so that the skidsteer could come on board for fuel if needed. Set up satellite dish for TV.
- Prepared sampling plan discussing the samples that would be collected and the methodology to be used
- Looked around at the site and tried to identify landmarks for initial site layout

MONDAY - JULY 7, 2003

Weather Conditions:	Raining 10C and windy SE

DAILY ACTIVITIES LOG

- Completed site sampling plan
- Started Loading Bob Gully's Barge around noon. Had to ensure the generator would be able to handle running the pump. Had to change a plug so we could power the transfer pump with the generator.
- Northwinds owner had a heart attack. The tanks were rented from Northwinds so it took some work to get them from their yard with all that was happening.
- The helicopter planned for the evening was cancelled due to low ceiling and bad weather in Inuvik. Due to come tomorrow. It was rainy, windy and cold all day at site. Wherever the cat had driven to put in the anchors the water was ponding on surface in the ruts.
- Lay out the excavation once

TUESDAY - JULY 8, 2003

Weather Conditions:	Morning – light wind, clear, overcast 12C

DAILY ACTIVITIES LOG

- Bob Gully Barge left Inuvik around 10:00 expected to be a 20hr trip to site.
- People started arriving around 12:30 for the project K/O meeting
- Meeting was held in the board room next to the office with all personelle on site attending. Sign-in sheet was circulated and minutes of the meeting and the materials covers are part of the project files.

WENESDAY - JULY 9, 2003

Weather Conditions:	Overcast High of 15C Rained Overnight

DAILY ACTIVITIES LOG

- Bob Gully Barge arrived at around 6:30 and left at 20:45.
- Loader got stuck first thing pulling the ramp out, pulled the Loader out with the D3. Then used the D3 to attach to the fuel tank pulling it from shore with the loader with a nylon rope or pushing the tank with the excavator. The excavator was behind 5 rig mats that were brought and had to be moved out to help push the tank off the barge. The excavator with the rig mats on top were pulled to shore with the excavator and the buckets and equipment on top moved. All the lighter materials were removed in the bucket while the fuel was being pumped to the onshore tank
- The tank was moved approximately 30 m from the high water mark. In actuality the whole site was under the normal high water mark. ILA Land Administrator was found in Inuvik and was questioned about the tank having to be 100m from the water. He said that considering the nature of the site to do the best that we can do which, was 30m with the amount of hose which was available to get from the back of the barge to the tank on shore. The approximately 7000 gallons in the tank on the Joe Gully Barge was transferred in about 4 hours with no leaks or spills. Spill trays were placed under all the fittings and the spill boom was deployed around the barge to contain any possible spill in the water. The pump was removed from the tank on the barge with the excavator however was cracked with trying to insert it into the tank on shore.

- A crew of about 2 spent the day clearing brush from the site where the excavation is to happen. The special axes used to cut the willow worked very well. The brush will be mixed with the topsoil and spread over the site once the excavation is complete and the site is regarded.
- After the excavator warmed up and was used to do some of the moving off the barge a significant leak was noticed from the hydraulic pump. Grubens are sending out a mechanic and new pump likely for Friday morning to fix the leak. The ILA land monitor was made aware of the situation and plans and agreed to the course of action. In the mean time the leaks will be collected with adsorbent pads beneath the pump.

THURSDAY - JULY 10, 2003

Weather Conditions:	Overcast in the morning high of 18C Sunny in the afternoon

Daily Activities Log

- Had a half hour safety meeting at 8:00 to discuss the activities of the day potential hazards and required PPE. Went through and discussed the contents of Shell little red safety book. Sign acknowledgement pages to be returned to project manager.
- Posted Shells SD policy, Camp Guidelines and ERP information in the kitchen, office and mudroom.
- Built dikes around the fuel tank towards the river, on three sides since the tank parked on a slight slope, to contain the fuel if there were a spill. The excavator will be refuelled inside the dike. Bolts were tightened on the tank ladder
- Took the Allu bucket off of the excavator and put on the cleanup bucket on for excavating soils. It takes about an hour and a half to take the bucket off. Moved one rig mat beside the fuel tank to park the hoe on.
- Worked on fixing the pump. Ordered a 1 ½ inch die set to rethread the pipe. Arctic Star mechanic was able to get the broken pipe out of the pump end. IEG Inuvik priced out a dye set and tripod to rent and decided it was cheaper to send a plumber with his tools to fix it on the helicopter already coming out to site.
- Moved a rig mat in off the gang plank to the Arctic star to avoid the mud with the skid steer
- Marked out the preliminary excavation with lath and ribbon to get a feel for the size of the excavation. Continued clearing the willows from the work area where the clean soils will be stockpiled. Piling the willows southwest of the excavation.
- Cleaned out the c-container and made a spot for the laboratory.
- Tried measuring the position of the perimeter of the excavation with the laser distance finder. We require reflective signs to get a good measurement from the four posts set up for locating sample locations.
- Began striping off the upper 30 cm of soil and stockpiling outside of the contaminated zone able to do about a quarter of the excavation before quitting time.

FRIDAY - JULY 11, 2003

Weather Conditions:	Slightly Cloudy 15C Slight wind blowing High of 21C

Daily Activities Log

- Began removing topsoil from the surface of the eastern end of the excavation near the river. Hoe shut down for coffee and would not restart (lack of fuel). Fuel was hauled to the excavator to fill the tank up even though it was still ¼ full. Operator made a call after coffee to the Gruben mechanic said that the suction line to the fuel tank had been cut a foot from the bottom, likely to prevent pumping water into the engine. More fuel was hauled to the excavator after morning coffee to bring the level up so that the hoe could start. This operation took approximately 3-4 hours to complete making the hoe not operational for that time.
- The plumber came from Inuvik on the helicopter to pick up crew for Inuvik. He threaded the pipe in about 20 minutes. Once the hoe was going and the fuel pump was put back together the hoe was used to put the pump back into the fuel tank. However, the pump wouldn't run likely due to foreign material in the impellers from fuel tank on the barge. About two hours was spent putting the pump together and getting it into the tank. After lunch it was decided to try Plan B which was to use the pump on the Arctic star to pump fuel from the storage tank on shore for now and have a new pump sent from Northwinds in Inuvik to replace this pump. The Arctic star pump was tried and kept cutting the breaker since there was too much suction head required to draw the fuel. Plan C is to try the tidy tank 12V pump to get us by until we get the Northwinds pump replaced. The tidy tank pump was installed and will likely work

for the next 3 or 4 days, but the main pump needs to be made operational for continued work.

- The topsoil (0-30 cm) was sampled in many different areas with the FID and some with Petroflag. Some results indicated concentration greater than 2,500 ppm the topsoil that was formerly thought of as clean based on previous testing. An extensive testing program of 30+ samples with the FID was done to determine the general extent of the contamination at less than 30cm. The upper 50cm+ will be excavated in two lifts with testing done on a grid pattern before excavation begins with the FID to define the extent of the surface contamination before the next stage of excavation resumes. This approach will continue until we reach contaminated soil at depth (whatever it may be) so that we can get enough clean fill to fill the upper 50cm with soil with less than 2,500ppm.
- The excavator worked until 10:00pm moving clean soil.

SATURDAY - JULY 12, 2003

Weather Conditions:	Windy Cloudy 18C dropped 12C in the afternoon and began raining at 18:00.

Daily Activities Log

- Held the morning meeting in the TV room as usual to go over the daily plan and discuss any safety issues may have arisen the day before. The plan is to take off 0.3m of clean soil at a time and then assess with the handauger and FID the next 0.3m and mark out the contaminated areas to avoid. The clean soil will be excavated and stockpiled for backfilling the last 0.5m when remediation of the soils below 0.5m is complete.
- Continued sampling the surface soil outside of the estimated boundary for contamination and the second lift of soil from the south side of the excavation (0.3m to 0.6m) with the FID, occasional Petroflag and selected soil samples for analysis.
- Surface soil excavated from the surface (to 30cm) contained high FID readings >10,000. This soil amounting to about 600 m3 ex-situ has "fluffed" with the cleanup bucket handling it 4 times from 10:00 to 14:00. This soil was relatively dry and broke down well. When the rain came the soil was piled up and tarped with a 40X60 foot tarp to keep it dry.
- English/Inuvialuit dialect signs were put up on the beach warning people there is construction work being done on the site and to report to the site supervisor.
- Rain started at 18:00 and rained steady all night about ¼ to ½ of an inch. Tarps were put over the wet ground near the river and over the pile to keep them dry. If we had enough tarps to cover the site, we could go right back to work after a rain. The tarps we have only cover a third to half of the site.
- Brought the cost control up to date to week ending 2003-07-12 adding all the costs from January 2003 to date. May be missing some office support hours for July but the cost report should be relatively accurate.

SUNDAY - JULY 13, 2003

Weather Conditions:	Slight Breeze 15C overcast

Daily Activities Log

- The tarps were laid out over the lower portion of the site and over the mixed surface soil pile. These areas remained dry. Water was pumped off of the lower tarp. About 60 gallons was removed from a tarp 40'X60'. More tarps would help if the weather goes bad. Once the sun comes out we would likely be able go right back to work once the tarps are removed instead of having to wait for the surface to dry out.
- Continued removing and stockpiling clean surface soil over the contaminated soils for use in backfilling the upper 0.5m of the excavation when treatment is done. Sampling to this end continued in advance of the excavator
- Shell rep. and project manager discussed the use of the ripper attachment for the hoe and the heaters that are coming if the site gets wet or in the evenings. Ripping an area, covering with tarps and blowing heat to aid in volatilization of the contaminants.

MONDAY - JULY 14, 2003

Weather Conditions:	Cloudy patches 15C overcast

Daily Activities Log

- 2nd project manager arrived in morning. Shell rep, Gruben's mechanic and samples departed. Unfortunately several important supplies did not arrive ie) safety glasses, oxygen regulator. Priority was subsequently placed on expediting these two items plus greater emphasis be put on overall supply order compilation and delivery.
- Revisited the non-working fuel pump with the manufacture's manual but where still unsuccessful in getting it to work. Upon speaking with a manufacture's representative, it was decided that a new motor would have to be ordered.
- The tarp covering the lower excavated site closest to the river was removed after the water was removed from the top of the tarp. Clean soil from the eastern end of the excavation was collected and stockpiled. Some water pooling had occurred underneath and was noted. A larger bell hole was dug in this area to help compensate for this and to allow water to accumulate there plus facilitate eventual removal. The area was recovered with tarp because of the threatening weather conditions and will remain tarpped until the sun comes out.
- Contaminated soil >30,000mg/kg was excavated from two separate pits A and B and stockpiled within the contaminated foot print. All of the clean surface soil that was available had been striped for placing back over the treated soil when done. Soil excavated from the pits and bottom sample were sampled. The excavations had gotten to the depth of permafrost with the soil being collect around 0C.
- The contaminated soil is being excavated in pits no greater than 12mX6m, which is as large as the tarps could cover in the event of bad weather. This is being done to avoid exposing large sections of permafrost to the surface to give us control on melt back, and workable volumes of soil for aeration with the excavator. The pits will be covered with at least one foot of soil for insulation and/or a tarp with the silver side up to prevent precipitation from soaking into the excavation and reflect the heat of the sun.
- Aklavik Elder visitation.

TUESDAY - JULY 15, 2003

Weather Conditions:	Overcast, cool 10C morning, slightly warmer, party cloudy afternoon

Daily Activities Log

- Called IEG Calgary about getting Inuvik and Calgary IEG costs and PO summaries before Tuesday of each week.
- Pumped rain water off tarp covering lower excavation site from showers occurring overnight. Tarps working well keeping soil dry underneath. We will likely have problems mixing and aerating the soil near the river because it is saturated with water. We will wait until we have some good weather before we attempt to excavate. We might be able to mix the soil off with dryer soil from the upper level to aid in treating the soil. When the heaters get here we will try blowing hot air under the tarps and see how well it works to dry the soil.
- Dipped tank on Arctic Star – $96^{1/3}$ in from$103^{1/2}$ on 2003-07-04. Also dipped the site fuel tank with water paste to determine if measures need to be taken because of water in the fuel. About one inch of fuel was found in the west end of the tank.
- The Allu bucket was attached to the hoe to mix the piles excavated from Excavations A and B mixing piles. Before trying on the dryer soils we tried using it on the wet clean soils excavated near the river to see how well it would work. The Allu bucket does process the soil easily breaking it up into smaller chunks but when it hits the ground it is like thick mud. The Allu bucket may be useful in mixing off wetter soils with dryer soil to get a workable product. The allu bucket can not be used for excavating the pits because will only work on above ground piles. It appears to be too heavy for the 200 hoe since it cant' extend the boom with a full bucket and you can not operate other hydrauics while the drums are rotating. The Allu bucket processes about 80-100m3/hr and does an excellent job of aerating and homogenizing the soil. A lot of vapour was given off when the Allu was operating. The finished product is very fine moist, soft, and well mixed soil. The soil breaks down very nicely.
- The excavation B soil was mixed twice with the Allu bucket. Initial FID readings were reduced from 11K on average to 8.7K on a fairly consistent basis, however these
- Moved onto excavation A soil with Allu bucket, finished working the soil once quit at 10:00
- Aklavik Elder visitation.

WEDNESDAY – JULY 16, 2003

Weather Conditions:	Overcast, cool 14C morning, slightly warmer, partly cloudy afternoon

Daily Activities Log

- Pumped rain water off tarp covering lower excavation site from showers occurring overnight.
- The excavator having the Allu Bucket on was used ot mix and treat the pile for A cell once3 more on surface, then the Allu bucket was taken off and the clean-up bucket was attached. The permafrost protective cover of fill, placed in excavations A and B, was removed. Excavation of cell C was started as confirmatory sampling was completed on Cells A and B. Permafrost was found to be very shallow below the parts of the excavation where the sawdust was found to about 0.7m deep. The ripper was attached to the hoe to break up the permafrost to get to a depth of at least 1.5m.
- Heaters and other supplies arrived with the that were required, at around 15:30. The trip from Inuvik took approximately 2.5 hours full of freight. Boat can hold a lot of freight and is relatively quick to get us the larger material we need. We will also likely use it for getting samples to Inuvik instead of the helicopter, when it works out.
- Called Osprey Scientific to get the PetroFlag dilution kits so we can get more accurate results at higher concentrations. We will be getting concentrations greater than 30,000 in our testing of the initial soils and need greater accuracy in the 15,000 to 30,000 range. The excavations will be backfilled based on Petorflag results of the confirmatory samples and treated material.

THURSDAY - JULY 17, 2003

Weather Conditions:	Rained overnight - Overcast, cool 10C morning, slightly warmer, party cloudy afternoon and 15C high wind

DAILY ACTIVITIES LOG

- Pumped rain water off tarp covering lower excavation site from showers occurring overnight.
- Cells D, E and F were excavated to various depths depending on the location. The excavations near the elevation drop toward the river are deeper, up to 2.5 m, past where the earlier assessments found contamination in excess of 30,000ppm. The deeper contamination is likely due to deeper permafrost on the slope. Each cell was piled individually for mixing with the Allu Bucket tomorrow.
- Confirmatory samples were collected every 18m2 (about four per cell) and sidewall samples where cell was on the outer edge of the overall excavation. Initial contaminated soil samples were collected by grabbing soil every 10 buckets and homogenizing for two samples per cell. Composite samples were also taken from the pile when it was complete and a baseline for the mixing/aeration concentration reduction.
- Worked on getting the heaters going however, one of the heater fan motor was not functioning. Called Hertz for replacement parts for the unit.
- Called Osprey Scientific to get the PetroFlag dilution kits so we can get more accurate results at higher concentrations. Extracting from smaller amounts of soil ie less than 1g, could potential give either non representative high or low readings due to the particular subsample taken. We may be getting concentrations greater than 30,000 in our testing of the initial soils and need greater accuracy in the 15,000 to 30,000 range. The excavations will be backfilled based on Petroflag results of the confirmatory samples and treated material.
- We are approximately 1/4 done the excavation of the site in approximately 5 days of excavating.

FRIDAY- JULY 18, 2003

Weather Conditions:	High winds most of the day clear sky high of 18C at around 18:00 hrs

DAILY ACTIVITIES LOG

- Began and finished mixing the soils from excavations C through F with the Allu bucket. Still doing a nice job of mixing a homogeneous pile. Monitoring the initial concentrations of the piles and the concentration reduction through mixing.
- Continued pulling the garbage (mostly sawdust bags) out of Pile C and placing it in a lined C-Can to be taken back to Inuvik and disposed.
- Rolled up the tarps over the lower eastern portion of the excavation, with the oncoming good weather, so that it may have a chance to dry out. Set up tank and pumps and pumped off approximately 900 gallons of water that had accumulated in the excavation into a storage tank. The water will be tested for discharge criteria (BETX and PHC) and will be discharged to surface if acceptable to ILA. Water doesn't appear contaminated based on smell and appearance, no free product observed.
- The excavation on the eastern part of the excavation near the river will be wet and difficult to mix and dry. The

proposed plan for this location is to leave the excavation last so that the rest of the contaminated site can be used for laying out the contaminated soil to dry and mix it. After samples are taken from the bottom and sides, the excavations will be filled with dry treated soil from other parts of the site to avoid accumulations of water that will require possible treatment.

- Received the first analytical results from Maxxam and all fell within a reasonable tolerance of the Petroflag results, to provided added confidence in the Petroflag results we are getting. A Petroflag result of greater than 20,000 will be treated as contaminated subsurface soil >30,000mg/kg, due to subsampling variance and method error tolerance to ensure we excavated and treat the contaminated soil adequately.
- Boat brought supplies out and took samples and 2nd project manager back to Inuvik. The samples are to be shipped to Maxxam in Calgary tomarrow for delivery to the lab on Monday morning. The tarps that were expected did not show up via Northwest Transport.

SATURDAY - JULY 19, 2003

Weather Conditions:	Hot and sunny in the morning 20C cooling off to 15C in the late afternoon

DAILY ACTIVITIES LOG

- Working the soil with the Allu bucket backfilling the excavations by sifting the soil into the excavation from which it came in 30cm lift and compacting with the excavator bucket. Cells C and D were backfill with the Allu bucket into their excavations
- Soil from excavations E and F were sifted one extra time due to higher average concentrations in the soil >20,000.
- Worked on getting communications to work, moving the system to an east room in the Arctic Star to get the cell phones to work with only the bag phone. Get a strong signal with the external antenna but cannot dial out, due to interference from something likely on the Arctic Star.
- Replaced the fuel pump with the new one which arrived yesterday. Pump now works well. Set up 230V power for the fuel pump from the Arctic Star so we could move the generator to the Sea Can to run the heaters and the MPE when required.
- Pump another 150 gal from the sump in the lower eastern excavation. The volume in the sump returned to the elevation of the river. The main excavation is on the order of 30cm above the river elevation. Observed an Irridecent Bacterial Sheen on the surface of water seeping from locations on the side hill and near the river in the pumped excavation. These appeared to be near the former injection wells.
- Have used 90 Petroflag tests to date.

SUNDAY - JULY 20, 2003

Weather Conditions:	Hot and sunny high of 26C

DAILY ACTIVITIES LOG

- Working the soil with the Allu bucket backfilling the excavations E and F, by sifting the soil into the excavation from which it came in 30cm lift and compacting with the excavator bucket.
- Four different boats stopped on their way back from Shingle Point who stayed for supper and left around nine.
- Cleaning out the sea container, sorting fittings and hose and storing the hose and fittings in the 4X4 wooden c-cans. Assembling the materials required to hook up the water treatment system for treating potential water from the eastern part of the excavation.
- The excavator spent some time grading the site near the end of the day. Equipment has been moved to where the water treatment is to occur on the north side of the site.
- Completed the cost reporting for Monday for the previous week.

MONDAY - JULY 21, 2003

Weather Conditions:	Hot and sunny high of 32C at 20:00 calm no wind

DAILY ACTIVITIES LOG

- Started with the daily safety meeting as usual discussing the daily.
- Continued grading the site for an hour in the morning. Excavated cells G, J and H throughout the day. Had to leave cell I in place do to lack of soil handling room. Permafrost was at 1m in cell H.
- Set up the water treatment system (two tanks, bag filter and activated carbon filter) to treat water pumped from the excavation. Treated about 700 gallons with 300 gallons being held in the carbon filter housing. Water collecting during excavation
- Installed AutoCAD and plotted the cell boundaries and sample locations for the incoming crew. Continued sampling the excavated cells as they were completed and taking samples of the excavated materials.
- GNWT Water Resources Officer called the site for Shell rep, gave him Shell rep's cell number. He wanted to come and make a site visit.
- Made arrangements with IEG Inuvik for the crew change to happen tomorrow.
- Continue to have periodic bad cell phone reception.

TUESDAY - JULY 22, 2003

Weather Conditions:	Morning – breeze 16C Afternoon - sunny, hot, calm, temp high 20'sC

DAILY ACTIVITIES LOG

- Morning safety meeting.
- Clean up existing excavations for sampling
- Acquire remaining confirmatory samples from excavation. Acquire discharge water samples.
- 2nd project manager and 2nd sample tech's flight delayed arriving from Kitti because of low ceiling en route from Swimming Point. Load up pertinent costing and reporting software onto 2nd project managers computer. Discuss sampling protocols.
- Changeover crew arrives. Safety orientation for new crew and site guidelines. Hand out Shell Safety Manuel for sign off sheet.
- Continue working unit H with Allu bucket, taking samples en route, back fill into excavation H and compacting with excavator bucket. Lost small male connection to Allu bucket, modified to keep working, later, part found.
- Evening visitation from Aklavik.
- Continue to have periodic bad cell phone reception, possible cause is heat.

WEDNESDAY - JULY 23, 2003

Weather Conditions:	Morning – breeze +16C Afternoon - sunny, hot, calm, temp high +20'sC

DAILY ACTIVITIES LOG

- Morning safety meeting. Highlights: importance of letting medic know of any prescription drugs you may be on; emphasis on caution and communication when working around the excavator, especially since it is first full day; move back the flagged out area of the site slightly when working near workers around the sea can; set up water bottle and pop can recycling container.
- Begin initial sifting Unit G morning till afternoon coffee break. Continually taking samples. Process backlogged FID and Petroflag sampling to get caught up to date.
- Initial sifting of Unit J in the afternoon commences. Continue after dinner. Excavator has a leak on one of the bucket hoses and is taken apart, re-sealed and re-tightened.
- Continue moving excavated debris garbage into sea cans, completely filled 4 of 6 to date. Need to order 4 more.
- Separate out sizes of pvc pipe from the sea can into separate piles based on size, then banded together for easier transportation. During this exercise some one sees a rabbit and mistakes it for a bear. Wildlife Monitor- confirms the absence of any threatening wildlife in the vicinity of the work area.
- Cell phone coverage is better than previous day. Spoke with Shell rep about his upcoming visit – Monday July 28th and coordinating helicopter to bring in him and medic's replacement. Also faxed last few days daily reports to him.
- Spoke with 1st project manager around 10:00 pm to give him update of the day. Conversed with him and 2nd sample tech about maintaining proper sampling procedures. 2nd sample tech. has been able to use dilution extenders which allow for using larger sample size of soil during Petroflag testing.

THURSDAY - JULY 24, 2003

Weather Conditions:	Morning – smoky, calm, humid +13C Afternoon – less smoky, sunny breaks, humid, hot, +25'C

DAILY ACTIVITIES LOG

- Morning safety meeting. Highlights: Shell safety sign in sheets turned in; disposal of Petroflag garbage to be placed in garbage sea cans for proper disposal; discussion of bear sighting protocol; clear lens safety glasses for working with Petroflag in the sea can onboard of Arctic Star.
- Arctic star's mechanic raised the issue of how to properly facilitate boom spill deployment if and when any fuel transfer occurs from the Arctic Star without having a boat. The reference cited was from the West Channel Remediation Project Kick Off Meeting of July 8th, 2003. Specifically the IEG Spill Response Plan section: Spill Prevention – *booms are to be present in the water, slightly downstream of transfer site.*
- The fuel pump on the fuel tank is again not performing properly. Like before, the pump kicks on for 30 seconds, then off when fuelling occurs. Breaker, power to pump and switch were all tested and all functioning properly. Spoke to manufacture company representative Keller equipment, branch manager, where new pump was purchased. His advice was to take pump out to see if anything was lodged in the intake, also said it was possible the capacitor was shot. Furthermore, spoke with Northwinds where the pump and tank was rented and was advised to ship old motor in and he will replace it with one of now found spares. We are not convinced that simply replacing the motor will solve the problem since it is a brand new motor currently on pump. Replaced pump in tank after dinner, filled excavator.
- GNWT Water Resources Officer, visited the site and raised the following questions: One, the size and positioning of current containment burm of fuel storage tank. Two, having not received an amendment to current remediation program, still operating on old operating plan; Two, absence or need of water use license on site. Three, how is the silt discharged if the water treatment system is used. Received authorization from ILA to use same area for getting more soil to make burm longer and higher.
- Excavator was down for several hours when the small hose piece from the Allu bucket came loose and got pulled into the rollers. Arctic Star mechanic and operator were able to fashion a replacement part from pieces on the Arctic Star to keep down time to a minimum.
- Tarpaulins on lower excavated area laid out again since the prospect of showers this evening are appearing around us and on the horizon.

FRIDAY - JULY 25, 2003

Weather Conditions:	Morning – overcast, threatening thunder- clouds, windy, warm +19. Afternoon – dark rain clouds moving in +10.

DAILY ACTIVITIES LOG

- Morning safety meeting. Highlights: Welcome and orientation to new kitchen staff, Shell sign off sheet; maintain cleanliness of site by picking up any garbage you see; maintain proper PPE at all times.
- Spoke with IEG Inuvik. about the issues arising from yesterday's visit from GNWT Water Resources. Inuvik said they had no real jurisdiction on site since we were operating under ILA and working on Inuvialuit private lands. However, he would give a courtesy call to bring him up to speed on the program. We also discussed Arctic star's mechanic concern from yesterday regarding any possible fuel transfer from the Arctic Star and proper boom spill deployment without a boat. We agreed it was probably unlikely that this would occur, since there should be enough fuel in the tank on land. We need to measure the current levels in both tanks to get more accurate fuel consumption rates and possible leftovers. Discussed defining work hours of crew and ability to continue working excavator without presence of wildlife monitor. Suggested asking wildlife monitor to work in conjunction with excavator after dinner like earlier shift monitor. Issue of providing steel-toed rubber boots for the wildlife monitor must now be brought to the Hunter's and Trapper's Association who will either authorize purchase or allow IEG to deduct cost of boots. Issue of changing out operator, excavator operator to comply with Shell's consecutive workday policy was also discussed. Solution is to have operator go out with medic when Shell reps come in, now scheduled for July 29th, replacement operator to come in.
- Changed over Allu bucket to digging bucket. Began morning by increasing the size and depth of containment boom around fuel tank. Moved sifted soil pile Unit G closer to excavated hole because the distance from the hole is too far away to properly put back in. Started excavation of Unit I.
- Weather changed dramatically in the afternoon. Covered Unit G sifted soil piles, got remaining tarp ready for coverage of open excavation Unit I. Went down 1.5 metres on Unit I and samples indicate we have gone deep

enough and levels are acceptable. Need to change digging bucket to Allu bucket to begin sifting excavated soil in Unit I and replacing sifted soil into Unit G. Heavy rain during bucket changeover stops sifting process. Remaining tarp is put over excavation hole Unit I. Tarp is taken from large topsoil pile to cover excavated soil Unit I. Inclement weather during and after supper shuts down production. Weather clears up around 10:30 – 11:00 PM

- Received a phone call from Keeler branch manager wondering how our fuel pump issues were going. Mentioned that the capacitor power supply should be between 300-350 volts, otherwise the capactor is defective. Arctic star mechanic does not have the proper equipment aboard the Arctic Star to test this.
- Phoned Maximm about water samples sent out with project manager and sample tech. Rush priority now with rain falling and we still have not discharged the initially pumped water from lower excavation that was under the tarp. Maximm initially could not find the water samples, but did later. The samples had been held aside since the sampling protocal for hydrocarbons is currently just for soil and there are various levels of hydrocarbon sampling for water. Phoned project manager and told him to speak with Maximm regarding level of price of hydrocarbon testing for water.

SATURDAY - JULY 26, 2003

Weather Conditions:	Morning – raining, wet, cool, windy, low ceiling +10. Afternoon – similar conditions, rain start and stop, at times heavy +8.

DAILY ACTIVITIES LOG

- Morning safety meeting. Highlights: Slippery site, caution when walking. Wear appropriate rain gear. Discussed water conservation. Arctic star mechanic stated that it appears the rate of water consumption and waste storage has increased since crew changeover.
- Rain started to fall approximately around 4:00 am and continued throughout day as a steady rain. Pumped out lower excavation and Unit I excavation twice throughout day. Re-tarp excavated soil Unit I, partially uncovered over night by wind. Used working heater all day to help dry this soil pile. Arctic star mechanic installed new fan motor and relay on other heater and checked switch wiring, however, still tripping breaker once burner has ignited and fan tries to blow. Possible explanations are length and gauge of wire. Arctic star mechanic working on rigging up heavier gauge wire and plug
- Checked with IEG Inuvik and operator replacement. Need to contact Gruben's about availability and readiness.
- Weather forecast is pretty much more of the same right through Wednesday. Optimistic there will be sufficient drying to start sifting soil Unit I

SUNDAY - JULY 27, 2003

Weather Conditions:	Morning – wet, cool, windy, +10. Afternoon – windy variable cloud +12. Evening – rain, +10

DAILY ACTIVITIES LOG

- Morning safety meeting. Highlights: Caution excavator working in slippery conditions. Morning 4-day weather forecast similar to yesterday, however day was heavy wind that helped dry site and rain did not return until 7:00 pm
- Discharge accumulated surface tarp water in lower excavation and excavation Unit I. Removed tarps covering sifted soil Unit G, excavated soil Unit I. Took confirmatory samples Unit I. Started second sift of soil back into Unit G excavation, which took remainder of day and is not quite finished.
- Both heaters are working now thanks to Arctic stars mechanic diligence and ability to match cords and re-wire generator breaker. Moved both heaters down to excavated soil site from lower site region. Fashioned tent like structure and let heaters run all day. Results of drying that un-sifted soil are not great. This soil is quite compacted from the overall amount of moisture contained from initial excavation. The pile is too compact and the pile needs to be lower and spread out to facilitate better drying results. Continuous rain returned at dinner, tarped remaining sifted soil Unit G and un-sifted soil Unit I.
- Received a tour of Arctic Star's water and waste system to better understand how system operates and the amount of water and waste storage capacity remaining Arctic Star's mechanic will continually update this issue. Worst-case scenario would be to start water treatment system and have to import other raw waste storage containers to accommodate and hold until returning to Inuvik to be pumped off
- Project manager called for update on project and we discussed latest samples taken from Unit I and water samples sitting at Maximm. He has put a rush on those samples and we should hopefully have results by Tuesday latest.

This is good news since there is approximately 4000 litres sitting in the tank, awaiting ok to discharge. His plan is to start driving back up to Inuvik tomorrow with his family.

- Evening visitation – Stayed for dinner

MONDAY - JULY 28, 2003

Weather Conditions:	Morning – wet, broken cloud, calm +10. Afternoon – overcast, Evening – sunny +15

Daily Activities Log

- Morning safety meeting. Highlights: Excavator operator work with the wind when sifting. Get consistent fresh air; wear proper PPE available (carbon filter mask) in hoe, if wind is unfavourable. We are currently operating in confined workspace area with excavation edge of Unit I, generator and heaters. Ensure you have communication with excavator operator when moving around machine.
- Reminder to operator to wipe out motor area after raining to ensure it does not drip anything from engine compartment when travelling over site first thing in the morning.
- Clearly mark used oil containers around fuel and oil storage and separate accordingly. Used fuel drum now in place for used oil.
- Pumped captured surface water from lower excavation and tarped sifted soil Unit G. Finished sifting Unit G back into excavation and started sifting Unit I. There was a fair amount of debris in soil from excavation of Unit I ie) saturated wood that was separated into different pile and transported via skid steer for disposal into the sea can. Began initial sifting process and sampling. Confirmatory bottom sampling indicates we have gone deep enough at 2 m. Finish initial sift and begin second sift back into excavation.
- 2nd sample tech. receives clarification and admission from Osprey that they have sent wrong Petroflag dilution kit. We requested high range extraction solvent and they sent standard extraction solvent. We have been actively pursuing clarification because results using the dilution kit show substantially lower values than 1st sample techs generated using the smaller sample sizes. Osprey gave us new protocol to make current kit work, but unfortunately it creates more wet chemistry. 2nd sample tech decides to not use the dilution kit and stick with using lower sample amounts of 1 gram.
- Evening visitation – Boat from Aklavik.

TUESDAY - JULY 29, 2003

Weather Conditions:	Morning – sunny, calm, +15, Afternoon – sunny, windy, Evening – sunny +20

Daily Activities Log

- Morning safety meeting. Highlights: emphasize caution when excavator and bobcat are working in the same space; place drip matts under refuelling areas=generators and heaters; look at getting fuel shut off valve for tiday tank; will be new operator on excavator change, so emphasis will be even greater on communication when in vicinity of machine
- Fold up tarps currently on ground drying, take off tarps where heaters have been working (soil from lower excavation area). Set up discharge and filtration system. Receive water analysis from Maxxim at 11:00 and begin discharge of filtered water. Pump up water from under tarps in lower excavation to be filtered and discharged x 2.
- Housekeeper awakes ill in the morning. Symptoms are upset stomach, vomiting. Upon consultation with her physician he suggests it might be the tap water on the Arctic Star. The only other illness reported to date was 2nd sample tech who also complained about the tap water. Arctic star's mechanic explains he has pumped some river water into the water system to ensure the system works should we need to start processing water. To help alleviate crews concerns a tap water sample will be sent into Inuvik for potable standards before the water becomes an excuse for any and all ailments.
- Upon consultation with ILA survey out and clear area labelled Unit K scheduled outside current dig area for willow removal. ILA also raised issue of labours lack of a operator's licence to operate skid steer so he is no longer able to operate skid steer.
- Received confirmation from IEG Inuvik that Shell's reps will be coming in via boat not helicopter because of being

pushed back in Canadian Helicopters priority list. This is actually good for bringing in supplies that would have otherwise not fit in helicopter.

- Finished sifting soil, second time, back into excavation Unit I. Change excavator bucket to dig bucket for moving soil from lower excavation area.
- Boat arrived with personnel and supplies. Onboard Shell rep. and operator to camp guidelines and Shell Health and Safety Policy handbook. View excavation site with Shell rep after dinner and allow operator to begin excavate Unit L. Ability of new operator to effectively operate excavator pales in comparison to 1st operator and is noted by Shell rep. O-ring blows in line of excavator and digging perspective relative to the Unit is initially prone to possible tip over. Send out confirmatory samples and 1 water sample. Water sample to be tested for potability.

WEDNESDAY - JULY 30, 2003

Weather Conditions:	Morning – cool, raining, +10, Afternoon – intermittent rain, overcast, Evening – overcast, drizzle, +12

DAILY ACTIVITIES LOG

- Morning safety meeting. Highlights: Welcome newcomers, Shell Health and Safety sign off sheets; a fire alarm had gone off yesterday, cause was the clothes dryer room door left open; emphasis on good communication with new excavator operator; rain gear, slippery surface when walking.
- Covered entire excavation and soil piles with tarps. Turned heaters on soil pile from lower excavation area.
- Conversation with Shell rep regarding how job has been going and some of the current personnel, their duties and abilities. Focussed on: Excavator Operator, Wildlife Monitor and Skid Steer Operator. Cited inexperience on excavator, capability on the monitor and IEG responsibility having operator without licence in event of accident on Skid Steer. Urged good note keeping regarding all these matters. Wildlife Monitor has been previously noted regarded ability to work with crew members after 20:00. Check past daily activities journal for other specifics and labours entry recently for non-licence compliance and operating suspension.
- FID testing of current excavated bottom Unit L. Results currently within range.
- Evening discussion with Shell rep and 2nd sample tech about subcontractor's responsibility of having appropriate insurance coverage on site. Specifically NWT WCB coverage and liability coverage. Shell rep. assumption was that current employees were all IEG employees and mused the issue of having appropriate coverage given they were not. 2nd sample tech. phoned his current employer to see if in fact they have current WCB coverage in NWT. 2nd project manager has filled out appropriate forms for WCB NWT but needs to confirm with his office it is current.

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THURSDAY - JULY 31, 2003

Weather Conditions:	Morning – cool, raining, overcast +8, Afternoon – overcast, clearing, Evening – clearing +12

DAILY ACTIVITIES LOG

- Morning safety meeting. Highlights: Weather report, Aklavik, NW wind and raining, rain all day. Northern games at Shingle Pointe this weekend. All the drum dancing, lip and ear pulling competitions one can enjoy. Suggestion of having guest sign in sheet for visitors who come in off the river as visitors. Request to send up Drum and News North papers on next helicopter or boat.
- Discharge accumulated water from on top of tarps. Keep heaters going on excavated piles.
- Conversation with IEG Inuvik regarding operator and crew changes. Need to amend current plan of Shell rep leaving operator coming in on Monday August 4th and rest of crew coming out Thursday August 7th. These dates clash with when crew came in originally and need for 2nd sample tech and 2nd project manager to make flights south on August 6th.
- Fuel dip on land storage tank = 69" ¾, Arctic Star – 87" ¾. Original citation in daily activity of fuel on Star is 103" ½ .
- Remove tarps off lower excavated soil pile and turn off heaters. ILA monitor sees labour cleaning up minor overflow spill while re-fuelling heaters and warns him to ask for help when re-fuelling and to alert him to any level of spill that occurs before cleanup begins. This appears to now be an ongoing personality conflict between the two. There is

nothing official brought forward from ILA monitor, only hostile feelings felt from labour. Spoke with labour about the situation or lack of it. Advice is to ignore any personal confrontation with ILA monitor and to ask him for help with any task on site.

- Move soil from lower excavation once more up higher on hill to make for more room.

FRIDAY – AUGUST 1, 2003

Weather Conditions:	Morning – cloudy, rain +10, Afternoon – overcast, Evening – cloudy, clearing, +12

Daily Activities Log

- Morning safety meeting. Highlights: Weather forecast, cloudy periods today and tomorrow high +13; Report and spills whatever size to ILA monitor, ask for help with any tasks especially fuelling; trim willow stumps around Unit K
- Pump water under tarp into filtering system then discharge, begin excavating Unit M
- Conversation with IEG Inuvik. re: crew changes next week and operator back this weekend. Synopsis: operator back in Sunday. Shell rep, 2nd sample tech and 2nd project manager out Wednesday morning, project manager and sample tech in, remainder of crew change Thursday morning.
- Note regarding having to constantly ask Wildlife Monitor the whereabouts of his firearm when he is around worksite and the firearm is not with him. Several examples of firearm storage in the past include; leaning up against skid steer tire and against generator.
- Rain comes in afternoon; tarp piles and excavations. Excavator blows another hose ring and has to be rigged for further use. Part is ordered and will be coming in with operator.
- Canadian Helicopter arrives to take Shell rep to Farwell camp to investigate reported break in.
- Evening discussion about subcontractors on site and IEG. Present 2nd sample tech, Shell rep and 2nd project manager. Which employees on site have coverage? Who needs coverage? Do labour and wildlife monitor need WCB coverage? Are they IEG employees or subcontractors? Need clarification from IEG Inuvik

SATURDAY – AUGUST 2, 2003

Weather Conditions:	Morning – sunny, slight breeze +10, Afternoon – sunny, slight breeze, Evening – sunny, cloud patches +13

Daily Activities Log

- Morning safety meeting. Highlights: safety goggles fogging up; stop, clean off before continuing to work; look at getting in some defoggers, or, dishwashing detergent helps. Weather: sunny, +12, slight breeze
- Start initial sift Unit L, take confirmatory samples, Petroflag bottom. Discharge water off tarps, pump and filter water under tarps, then discharge. Remove tarps. O-ring blows several times in excavator, 3 to be exact. Cause is mostly operator because of pressure build up on the Allu bucket over time. New operator's initial average sift time is 2:40 from bucket sift to bucket sift. Note: also putting more torque on hydraulics by continually scooping from very bottom of pile and filling up bucket totally. Old operator average was 50 – 60 seconds between sifting buckets. FID readings off initial sift of Unit L are high and another sift and Petroflag test will be done before sifted back into the excavation. Begin initial sifting Unit M.
- Note: lunch another reminder to Wildlife Monitor to get out to site before crew. This is an ongoing saga. IEG outside contact in Inuvik away for weekend.
- Filling sea cans with contaminated wood and debris from Units J and I.
- Phone Maxxim about results for batch of confirmatory samples that were sent it quite some time ago and promised to be faxed Friday. Received call back from person on call, but access to faxing results is limited to certain people and with the current long weekend receiving results probably means we are sol.
- Arctic Star mechanic informs us that our current water situation sits at 10.9 days before we need to start drawing from the river through the water treatment system.
- Discuss with Shell rep. the possibilities of running another excavator shift at night to help meet projected finishing time of mid month. Potential limiting factors include; weather, 2nd technician availability, Wildlife Monitor. Currently under review over next couple days to see how production goes and what type of weather arrives.

SUNDAY – AUGUST 3, 2003

Weather Conditions:	Morning – sunny, slight breeze +10, Afternoon – clouds, slight drizzle, Evening – cloudy, overcast +12

Daily Activities Log

- Morning safety meeting. Highlights: Recap of safety issues. Request each crewmember to cite one safety fact from previous days as a reminder. Recited safety facts included the following: do not leave floater in pumping tank unattended; wait in barge porch for Wildlife Monitor to lead out to site; caution when walking on wet slippery muddy surfaces; always wear proper PPE; if you don't know how to use equipment, ask someone who does; stop and clean safety glasses when working and fogging up; proper communication and lock out when working around the excavator; teamwork, work and solve tasks together; use buddy system when on the Arctic Star, know where everyone is at all times.
- 2nd operator finishes initial sift Unit M, take confirmatory samples of excavation bottom. Second sift Unit L. Finish second sift Unit L and Petroflag, 3rd sift Unit L into excavation.
- Stray dog that had been sighted across the river two days ago swims Peel River over to Arctic Star and is given a hero's welcome by entire crew replete with food, drink and tlc. Arctic Stars mechanic notes that portion of Arctic Star are no longer in water, but actually on sand because of river subsiding.
- Helicopter arrives with operator, but replacement parts are not correct. 2nd operator and samples sent out with request for someone to pick them up and call IEG Inuvik to deliver them to crew house. IEG Inuvik calls later on in day and states that Maxxim has been trying to fax Friday's requested confirmatory results to Arctic Star unsuccessfully. Also states that mornings samples sent out have been delivered to wrong address in Inuvik and she is currently trying to track them down plus send us the fax from Maxxim. Receive results from Maxxim via Sarah's fax late afternoon, all confirmatory results appear to be within project thresholds.
- Note: Observation at quitting time by Shell rep. and 2nd project manager of Wildlife Monitor trying to dislodge firearm clip with barrel of gun initially resting on own foot, then muddy ground. Consistent and noted comments by Medic of how Wildlife Monitor carries firearm and direction barrel is pointing while working around other crew members on site.

MONDAY – AUGUST 4, 2003

Weather Conditions:	Morning – cold, foggy, overcast breeze +7, Afternoon – clearing, cloudy patches, Evening – variable cloud, partially sunny, +15

Daily Activities Log

- Morning safety meeting. Highlights: we are getting close to end of shift and can start to focus more on going home and less on safety; reminder to always be focussing on safety, more so when you are approaching the end of shift;
- Labour is allowed back on skid steer with the following provisions: to be used only for specific working tasks; operate well clear of other crewmembers; this is agreeable to everyone including ILA monitor.
- Meeting requested by Shell rep. following morning safety meeting regarding his concerns with the persistently cool, cloudy, precipitation threatening weather, since his arrival on site and with the job continuing to move forward. Swhell rep. is very concerned about the prospect of increasingly cool and inclement weather and the impact it will have on the remaining excavation and moreover, project finishing date, especially since the remaining excavation portion is the wettest. His observational input proposal is to work longer hours with a second excavator operator and sample technician and not have some of the current crew configuration on site, specifically the labourers, Wildlife Monitor and cook's helper. He also requests that 2nd project manager meet with medic upon completion of shift about the documented and observable issues with the Wildlife Monitor. Specifically, a formal report be written up that ensures this particular monitor is never present on one of Shell's projects again. Also, any current IEG site work plan change, or, staffing configuration change, be formally proposed to senior IEG and Shell management for review and upon their acceptance or rejection formal documentation be received at the work site confirming their position. His observations and suggestions are certainly valid and currently under consideration pending discussions with IEG Inuvik in morning.
- Current approach to wet soil issues and remaining area is still consistent with initial plan. Lower area has been left till end to take advantage of gradual lower river level. Excavator is currently mixing sifted soil from Unit M with clean soil from lower excavation area into a dry usable fill soil, which has previously been too wet or moist since it was excavated some time ago. Furthermore, this will allow us to have clean soil available to quickly replace the

excavated contaminated soil once the bottom has been found on the remaining lower cells and to help in the dry mixing of that soil. Using a sample area in the lower NE quadrant as showing higher concentration levels of hydrocarbons we excavated down approximately 1.5 m to see if there was any correspondence to these preliminary hydrocarbon readings. Sample excavation 2x2x1.5 m depth, total depth now about 2.3 m. Field Petroflag results confirm high level of hydrocarbons at about the 1.9 m level of the sample area where DA 12 had indicated a level of 34000.

- Project manager called in afternoon and evening for updates he is now in Inuvik. He recommends we open up all lower cells now that water level is lower than site. Recommends taking water level depth relative to site so we do not go deeper than that when excavating. Also to put rush orders on all confirmatory samples sent in from here on.
- Evening excavation open new Unit N. Unearth old water pipes from previous years efforts. Take samples below water pipes for FID and Petroflag tests. Switch to Allu bucket for sifting of combined soil piles, but do not begin since pressure in the Allu bucket is very low. Need to order new fittings to help increase pressure flow.

TUESDAY – AUGUST 5, 2003

Weather Conditions:	Morning – extremely windy, +15, temperature dropping, Afternoon – windy, cold, Evening – overcast, +6

DAILY ACTIVITIES LOG

- Morning safety meeting. Highlights: caution working around lower excavated cells when pulling tarps because we are going deeper; re-visit fire protocol on Arctic Star and mustard stations; feeding of the dog and the ownership of it .
- Continue to excavate and move lower site contaminated soil up to level ground. Excavation of lower site is quite deep with high levels of contamination readings – 3 m. It appears as perhaps this was where the land ended so many years ago and may have been the area where fuel was loaded and unloaded. Signs of straw of vegetation at over 2 m.
- Allu bucket casing shows no real sign of fluid in it. Operator speaks with Allu owner or manufacturer to get some information. O rings are too big for current fittings and could be restricting flow which makes it turns less. Proper parts are on order for the helicopter tomorrow.
- Rain arrives at 1:45 and shut down until after supper.
- Speak with IEG Inuvik late in the afternoon about suggestions and scenarios of yesterday's meeting with Shell rep. IEG is most definitely receptive to the potential of another operator and sampler but the weather should be cooperating first and clearly it is not. Wildlife Monitor issues will be put to rest in a couple days when he goes home. Issues surrounding budget and timelines concerns are put into the context of the Contract Proposal which appear to be ok. Time will be made tomorrow to have some meeting time for Shell rep.
- Issue of WCB and coverage is put to rest when informed that IEG covers NWT subcontractors so long as they do not earn more than 200 K. However, it does not cover AB subs.
- Some confusion over airline tickets coming out of Calgary and soil sample tech. will not be coming in tomorrow, but Thursday with the rest of the crew.

WEDNESDAY – AUGUST 6, 2003

Weather Conditions:	Morning – overcast and cold 6C rising to a high of 15C at 19:00

DAILY ACTIVITIES LOG

- Helicopter arrived at 8:15 however there was only room for 2nd sample tech. and Shell rep. to fly out with their gear. 2nd project manager stayed behind to be flown out during the crew change on the next day.
- Had the safety meeting in the mud room cautioning against working in proximity to the excavation.
- Have excavated the contaminated soil over 30,000 ppm in the main contaminated area. Cell K needs to be excavated north of the main excavation. The bottom of cells O and P was clean out to a depth of 2.6 m below ground surface and the wet material moved up on the bench to dryer soil for mixing and drying.
- Confirmatory samples were collected from cells O and P from the sidewalls and bottom of the excavation for on-site and laboratory analysis.
- Excavation M was backfilled.
- The clean top soil was moved to the north edge of the excavation to provide room for mixing and handling of the wet soils from O and P to be worked.

- Confirmatory samples were analyzed with the PID and Petroflag prior to backfilling.

THURSDAY – AUGUST 7, 2003

Weather Conditions:	Morning – breezy with light cloud 12C Late morning windy gusting >50-100 kph from the NW with light rain. 8 C.

DAILY ACTIVITIES LOG

- Pumping water out of the lower excavation that seeped in from the river likely around 3000 gallons. The bottom of the excavation is slightly below the elevation of the river. The water being pumped from the excavation has a strong hydrocarbon odour and there is a noticeable sheen in the east end of the excavation about two feet up the sidewall where the groundwater is seeping in. Pumped and treated approximately 1500 gal groundwater from the excavation. Discharged the treated water west of the excavation onto the ground surface.
- A half meter of sifted contaminated soil was being excavated from the majority of the site to use as backfill for the lower east side of the excavation. The excavation is being backfilled to prevent water accumulation and future difficulties in backfilling due to access. Confirmatory samples collected from areas O and P appeared to be be well below the 30,000ppm criteria based on Petroflag results with the highest being a sidewall sample from P at around 15,000 ppm as diesel.
- The camp has used approximately 10,000 gallons of sewage storage to date we are now going to reserve storage with 6000 gallons capacity in total. The usage has been approximately 330 gallons per day for the Arctic Star giving us approximately 15-18 days storage before we require the sewage will need to be pumped off. ILA Monitor indicated that Storr and Sons have a barge in Aklavik and a vacuum truck, which may be an option if the project exceeds 15 days. This option needs to be explored. We also have about 3000 gallons storage in the water treatment tanks we had for treating water on site.
- The Arctic Star will be pumping some river water for treatment. The volumes will be less than the quantity at which a water withdrawl permit would be required (100m3 please confirm). Arctic Stars mechanic will be recording the volumes.

FRIDAY – AUGUST 8, 2003

Weather Conditions:	Morning – NW Wind Overcast 4C, Evening – Sunny at around 15:00 with slight breeze 10C

DAILY ACTIVITIES LOG

- During the night the wave action and high water washed the bank away under the walkway. The hoe was used to reposition the gangway and rigmat.
- The excavator packed the lower portion of the excavation which was backfilled yesterday.
- The isolated contamination found north of the main excavation (Cell K) was dug 4mX4m, separating the clean topsoil from the contaminated soil which was found 0.8m deep. The hole was excavated to 1.6m deep. Sampling and on-site analysis was completed on the sidewall and bottom samples.
- The excavator started working on piling mixed contaminated soil from the top 0.5m of the contaminated area for mixing with the wet contaminated soil from O and P so that it can be worked and properly mixed.
- The hoe broke down at 13:30. The muffler came loose from its supports and melted the solenoid which controls the throttle. The rest of the day was spent diagnosing the problem and jerry rigging the system to work which took until 21:30. The hoe does work but may not be reliable over the long run.
- The leftover pipe found in the seacan was banded and prepared for shipping back to Inuvik on the barge. The Experimental landfarm was cleaned-up by putting the soil with the other contaminated soil and the liner rolled up.
- Two boats of people arrived at the site, one boat at 18:00 with c-cans, partial fuel pump, drinking water and left at 18:45.
- The “complete and working” fuel pump from Northwinds was grossly inadequate. It was missing junction box cap on top, the enclosed pump portion on the bottom, plug and the threads were broke on the threaded

motor mount on the bottom.

SATURDAY – AUGUST 9, 2003

Weather Conditions:	Sunny 15C high of 20C in the afternoon

DAILY ACTIVITIES LOG

- Excavator continued to gather and mix soil from the upper 0.5m of the contaminated soil with the wet soil taken from O and P until around 15:00 when it quit and would not work for more than 10 minutes at a time with no power. The afternoon was spent troubleshooting with operator and mechanic with EGT. EGT was called and informed of the mechanical problems with the hoe that we had yesterday and today. Operator discovered why the hoe wouldn't operate at full power and only 10 minutes late in the evening and we will try it tomorrow.
- Identified potential monitoring wells on the perimeter of the hydrocarbon contaminated area. The wells will be found and marked as monitoring wells. The rest will be pulled up from ground surface and abandoned.
- Cleaning up the collected samples and placing them with the contaminated soil and neatening the c-can and testing area on the Arctic Star. Loading unnecessary piping etc. onto the Arctic Star.
- Modified the auger mount to fit the skid steer. The holes for the pins were 2.5 inches too wide and the bottom flange wasn't long enough and was not angled to match the skid steer mount and also had stiffening braces that were in the way. The system was tested and worked well in unfrozen ground but not with permafrost, which would require a different bit then what was sent. However, it should be adequate to install any wells we need for monitoring.
- Building c-cans and placing contaminated wood into them for shipment back to Inuvik.
- We will burn the trees and roots collected off the site within the excavation. However, need to check restrictions on burning for the project. ILA agreed it would be OK to burn the material on site.
- Replaced the capacitor of the fuel pump with the one brought out by Northwinds. However, the pump would still only work for 30 seconds and then quit.

SUNDAY – AUGUST 10, 2003

Weather Conditions:	Morning - Overcast 14C, Afternoon – Sunny no wind and 20C

DAILY ACTIVITIES LOG

- Excavator mixed the wet soils from areas O and P with previously sifted dry soils. Soils will be roughly mixed with the cleanup bucket and then the Allu bucket will be used to mix them a second and hopefully last time before backfilling and packing.
- Existing potential long-term monitoring wells were checked for groundwater level and suitability for use in the long term monitoring program. Five new potential monitoring locations not already covered by viable existing monitoring wells were identified for drilling.
- Debris mixed with soil was separated and placed in the pile to be burnt and the soil put in the pile being mixed.
- Two groups of visitors stopped in during the morning for coffee and to drop off some caribou meat.

MONDAY – AUGUST 11, 2003

Weather Conditions:	Morning - Overcast 8C, Afternoon – Raining 4C

DAILY ACTIVITIES LOG

- Soils from O and P and 0.5 meters of contaminated dirt (<30,000ppm) were roughly mixed with the cleanup bucket. The Allu bucket was attached to the hoe after lunch however the throttle was not operating properly due to previous mechanical problems and the hoe did not have have enough power to operate effectively.

An EGT mechanic is scheduled to come in to replace the damaged parts tomorrow afternoon.

- Approximately 650m3 of topsoil less than 2500 ppm hydrocarbons is required to cover the excavated area with a 0.5m layer of "clean surface fill". Currently there is about 400m3 of clean topsoil. Additional soil will need to be treated to get the volume required. Additional top soil can likely be gained during grading of the site to a consistent contour.
- Three new long term monitoring wells were drilled in areas void of existing wells.
- Work was shut down after supper due to rain and the hoe not being operational.
- Three groups of visitors stopped in for supper with four extra people for supper.

TUESDAY – AUGUST 12, 2003

Weather Conditions:	Morning - Overcast 5C, Afternoon - Raining 5C

Daily Activities Log

- The new long-term monitoring wells were completed and older recovery or injection wells were refurbished to act monitoring wells. All other pipe sticking above ground was pulled. Please see the attached map for the selected monitoring well locations.
- The elevations of the long term monitoring wells were surveyed for future use. The base of the tripod (tepee) was used as a benchmark. The wells were developed and allowed to recover before sampling.
- EGT did not get the part (alternator) it required to get the hoe mobile, therefore the mechanic did not come out to assess the hoe and install it. The mechanic is scheduled to come tomorrow afternoon.
- A preliminary date was set for demob of the Arctic Star by NTCL for the 21st of August. The NTCL barge is scheduled to move 5 barges from Hay River to Tuk and swing down to SWC to demob the Arctic Star to Inuvik. To be ready for this date a second hoe operator to work the soil during a night shift, he will also help with the demobilization of the on-site equipment and the Arctic Star.

WEDNESDAY – AUGUST 13, 2003

Weather Conditions:	Morning - Overcast 5C, Afternoon - Overcast 8C, Evening – Overcast Clear 12C

Daily Activities Log

- The long term monitoring wells were developed and sampled for shipment tomorrow morning with the helicopter
- Sending the labourer and a sampling technician home due to limited amount of sampling and labour work left on the project.
- EGT Mechanic and second shift hoe operator arrived at 20:30 by float plane to work on the hoe.

THURSDAY – AUGUST 14, 2003

Weather Conditions:	Morning - Overcast 5C, Afternoon – Sunny 18C, Evening – Sunny, partly cloudy 21C

Daily Activities Log

- Helicopter arrived approximately 2:30 pm with 2nd project manager. Originally scheduled to arrive with him was an IDC photographer, but because of weather delay did not.
- Hoe up and working in afternoon and continues to fluff up excavated soil O and P. Set up HEEVES piping for drying and lower contaminated soil M. Initial set up indicates system is functioning properly since hydrocarbons are being emitted from exhaust pipe. Plan to set up tarp and heaters tomorrow to finish and begin regime.
- First excavator night shift begins and runs smoothly throughout the night with 2nd operator. Continues to work excavated soil O and P.

FRIDAY – AUGUST 15, 2003

Weather Conditions:	Morning – Sunny 15C, Afternoon – Foggy 10C, Evening – Sunny, partial cloud 14C.

Daily Activities Log

- Safety Meeting: Highlights; Radio communication with night operator; Current radio status down to 4 radios with project manager departure. To ensure radio communication at night only two radios to be used during day and two at night. Request to have Shell rep. to bring out some safety award or Shell paraphernalia to the crew.
- Arctic Star is experiencing a serious from last weeks storm, currently beached at bow and stern ends. Arctic Stars mechanic depth measurements around barge indicate plenty of water around it and optimistic NTCL will be able to pull Star off.
- Excavator continues to fluff soil up and down site. Allu bucket not in use, nor are there any plans to use again because of moisture content in current soil. Continue to take samples. Excavator alternator changed at end of operators shift because of power loss.
- HEEVES sampling at various depths, some reduction correlation after 6 hours of drying and MPE use, however, any significant drying of soil limited to surface level 1-1.5". FID readings show reduction over time. Remove first level with excavator with limited success, meaning, several pipes crushed when excavator peeling soil back. New layer put down on smaller HEEVES surface for night shift.
- Spoke with ILA about possibility of burning cut willows. Advised to check with RWED about needing a fire permit. Will allow burning or transport of willows in sea cans as preferred methods.
- Boat arrived from Aklavik via Grubens with new excavator alternator and hoses. Plane pilot from Inuvik also made trip to Arctic Star to ensure mechanic would have enough time to replace any parts on excavator.
- Arctic Star mechanic has finally been able to make the fuel pump on the land tank work properly to facilitate fuel transfer from tank to Arctic Star. It appears that the problem was the re-wiring from the initial fix, all twisted inside.

SATURDAY – AUGUST 16, 2003

Weather Conditions:	Morning – Cool, overcast 10C, Afternoon – Clearing, 15C, Evening – Sunny, 18C

Daily Activities Log

- Safety Meeting - Highlights: Discussed loading of Arctic Star.
- Continued to work soil in excavation area back and forth in morning. Began laying down bottom soil at east end allowing for topsoil finish. Took composite samples from HEEVES first and second pile M layers. Petroflag results indicate that there is still higher than 2500 ppm despite program. Opinion is HEEVES is only partially successful. The laid out soil over piping is too dense to have much radius of influence around pipes. Sifting with Allu bucket might better facilitate this problem. Further note, while scraping off first HEEVES soil layer 3 pipes were damaged by the excavator because of difficulty finessing removal when you cannot see how deep the pipes are. Continued to run MPE all day on second layer. FID readings from MPE showed reduction but soil readings showed variance at different levels. Took some FID readings from remaining topsoil piles to get indication of levels. All were very low.
- Excavator not running properly. Machine power cutting in and out, stalling out as result. Operator manages to work through day with machine in this condition, but has to pause frequently throughout to let machine either cool down or power up before he can continue. This problem started to show during the prior night shift. Operator thought it was the alternator at about 5:00 am and changed it out from previously installed alternator from Arctic Star. The evening shift start is delayed so two fuel filters can be flown to Arctic Star via floatplane, which was en route empty from Tuk to Inuvik. Newly installed fuel filter does not solve problem. Operator shuts down approximately one hour into the shift because the machine is performing similar to day shift. Mechanic is consulted and diagnosis fuel flow as culprit. Suggests breaking and cleaning lines and draining fuel tank to find out if there is anything restricting flow and causing a clog. The 2nd operators work on machine until 24:00 when they retire because excavator will now not even start.

SUNDAY – AUGUST 17, 2003

Weather Conditions:	Morning – Cool, overcast 10C, Afternoon – Overcast, 10C, Evening – Overcast, 10C

Daily Activities Log

- Safety Meeting - Highlights: nothing new to report
- Excavator not starting. Start morning by tightening and bleeding all lines, successful in getting it started and began working, lasted for ½ hour then moved over to fuel burm for removal of fuel tank. Telephone call from Grubens fogged in at Tuk and Inuvik. Wants operator to call him at lunch on action plan, mechanic is ready to fly back in to Arctic Star once weather permits. Successfully remove and clean fuel tank, but this is not the problem. Await arrival of mechanic remainder of the day. Another phone call after supper from Grubens saying that Tuk is still fogged in and mechanic will not be making it in today.
- Tarp entire excavation site and pile M. Continue working with HEEVES project trying to increase vacuum capacity. Increase the vacuum capacity by making MPE intake smaller 4" – 2". Take FID readings of pre and post program soil. Measured levels are reduced by 2/3 on surface level. Temperature readings vary, but all above 20C at each depth. Previous temperature measure of soil shows signs of warming up to 40 cm depth. Currently, depth of soil not as high as we began, using bobcat bucket now and just putting soil on top of the pipes. Question still remains about radius of influence around pipes. Increased temperature raises hydrocarbon activity but is possible still trapped in soil because of density.

WEDNESDAY– AUGUST 20, 2003

Weather Conditions:	Morning – Cool, rainy, 5C, Afternoon – Overcast, cool, 8, Evening – Overcast, 10

Daily Activities Log

- Safety Meeting – Highlights – no safety meeting this morning
- Rain, drizzle in morning. Mechanic worked on excavator till noon. Attempted to use excavator to push barge off beach, unsuccessful. Excavator worked from lunch until dinner then broke down. Moved southern topsoil pile closer to excavated site, continued to level and contour site more.
- Looked at potentially opening up another cell outside of heavy contaminated area > 1 m to use more topsoil and replace bottom .5 m with some higher reading soil from M. Petroflag results revealed too high concentration to safely excavate area around c-can. Results south by old land farm were low enough to potentially excavate in this region. Discussed with Shell representative this potential option and all others. Decided to work with what we currently have with soil M if the excavator can keep working vs opening up another cell.
- Night shift – Successful getting excavator up and running. Currently using Allu bucket to sift part of pile M which had heaters on last night and all day today.
- Arranged burning permit for willows from RWED. Moved carbon filter and tarps closer to barge for de-mob and started loading up IEG c-can for move to beach and barge.

MONDAY– AUGUST 18, 2003

Weather Conditions:	Morning – Clear, calm, sunny 10, Afternoon – Sunny, 15, Evening – Cloudy,10

Daily Activities Log

- Safety Meeting - Highlights: continue to wear PPE
- Morning, excavator repairs waiting for mechanic (EGT), expected around 12:00. Continue working HEEVES project for some more data. Take temperatures of soil in morning and after running heaters all night.
- Afternoon, excavator up and working, current fuel pump bypassed with electric pump into fuel tank. Finish laying down soil into excavated site and pack down in evening. Resumed sifting pile M trying to lower readings acceptable for topsoil fill. Remove tarps, dismantle HEEVES.
- Spoke with IEG Inuvik regarding de-mob. Boat from NTCL is now scheduled to arrive between August 27th – 29th. Reasoning behind this is our uncertain complete readiness for Wednesday or Thursday.

TUESDAY– AUGUST 19, 2003

Weather Conditions:	Morning – Foggy, mist 8C, Afternoon – Foggy, 10, Evening – Overcast, foggy, 10

Daily Activities Log

- Safety Meeting - Highlights: Getting close to the end of job, more focus on safety, not less.
- Fuel transfer begins from land fuel tank to Arctic Star. Total fuel transfer from tank to Arctic Star to date = 4,419.9 imperial gallons.
- Site visit from ILA and IEG Inuvik. Meeting appears to go well from everyone's perspective. Comments are site is clean and impressive from the air.
- Continue mixing partial pile M taking Petroflag samples throughout sifting. Unfortunately results are still too high to use comfortably as topsoil. This is becoming disconcerting considering weather and excavator uncertainty.
- Change over to other pile M on night shift, begins to rain in middle of night and is tarp is put over pile.

THURSDAY– AUGUST 21, 2003

Weather Conditions:	Morning – Overcast, 10, Afternoon – Partly sunny, 15, Evening – Partly cloudy, 10

Daily Activities Log

- Safety Meeting – Highlights –
- Rain, early morning during night shift. Used Allu bucket throughout the night. Petroflag morning test mixture of clean top soil and pile M, result 4100. IEG Calgary called and offered some advice including putting M soil down in specific area and being up front about it not reaching .5 m threshold of 2500 ppm. Discussed any and all possible scenarios and solutions for current dilemma. Dismissed notion of mixing all topsoil and pile M together. Further advice to try and find more topsoil. Took dutch auger samples to .5 m on north and south area ridges outside current excavation area towards river. Both these samples indicate that at .5m there are potentially high concentrations of hydrocarbons and therefore not a possible solution to current top-soil issue. Consensus acknowledgment it is very possible with current sifting regime under cool wet weather conditions will not allow any further hydrocarbon reduction.
- Defections over the West Channel Wall – IEG Assistant Sampling Technician, AOGS Helper.
- Burned woody debris (willows) in hollowed out half of pile M. Spoke with IEG – Calgary about documentation of work and safety issues with Wildlife Monitor during previous shift. She is writing a letter to HTC to disallow Wildlife Monitor on working on another scheduled Shell project.

FRIDAY– AUGUST 22, 2003

Weather Conditions:	Morning – Windy, overcast, 9, Afternoon – Intermittent showers, 8, Evening – Cloudy, rain

Daily Activities Log

- Safety Meeting – Highlights –
- Morning, weather indicates rain immanent necessitating tarpaulin pile M and all other soil piles currently on sit in preparation for field recommendation to lay down pile M which still sits with readings of 4K ppm into lower end of excavation closest to the river and topsoil into upper end of site. Upon consulting with IEG Calgary and project manager in Calgary via telephone, decision is delayed until they consult with Shell. Calgary's preferred decision is to lay down good topsoil in lower end of excavation and pile M in top portion of site at 40cm. This will allow for future rototilling and fertilizing in a defined area. To facilitate this decision topsoil pile must therefore be moved from west end across entire site to bottom where it can be used as topsoil.
- Night shift moves top-soil across site and into position for lay-down in the morning.

SUNDAY– AUGUST 24, 2003

Weather Conditions:	Morning – partially overcast 10, Afternoon – clearing, sunny patches.

Daily Activities Log

- Safety Meeting – Highlights –
- Remaining fuel transfer from storage tank to Arctic Star. Fuel containment burm dismantled. Crew departures, soil samples sent out.

SATURDAY – AUGUST 23, 2003

Weather Conditions:	Morning – cool, overcast 8, Afternoon – overcast, Evening – raining, 10

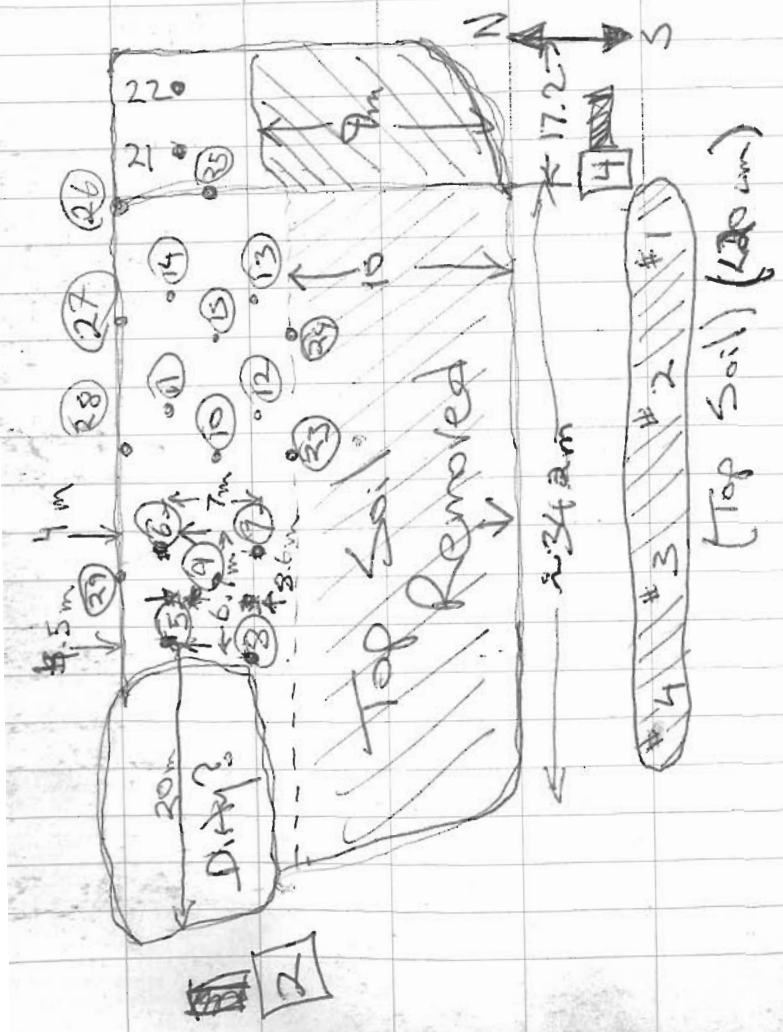
Daily Activities Log

- Safety Meeting – Highlights – In our final days on site, reminder that safety is still the greatest focus. Slippery conditions and excavation operation deferred to operator judgement.
- Rain overnight makes site quite wet and slippery, but still workable. Morning, excavator operator begins laying down good topsoil onto bottom. Afternoon and early evening spent laying down and contouring remaining soil (pile M). Late evening, final long-term monitoring well put in and final site composite soil samples taken. Ten site soil composites each consist of 6 sub composite samples up to .5m. Petroflag results relative to the way soil was laid down. Petroflag results at bottom end of site where good top soil was put back indicate readings below 2400 ppm. Remainder of site ranging between 3-4000 ppm.
- Loaded generator, 45 gallon drums and all 5 gallon pails into Arctic Star fuel burm. Moved sea can on Star from original position further down the side.

Fri. July 11 /03

" " River " "

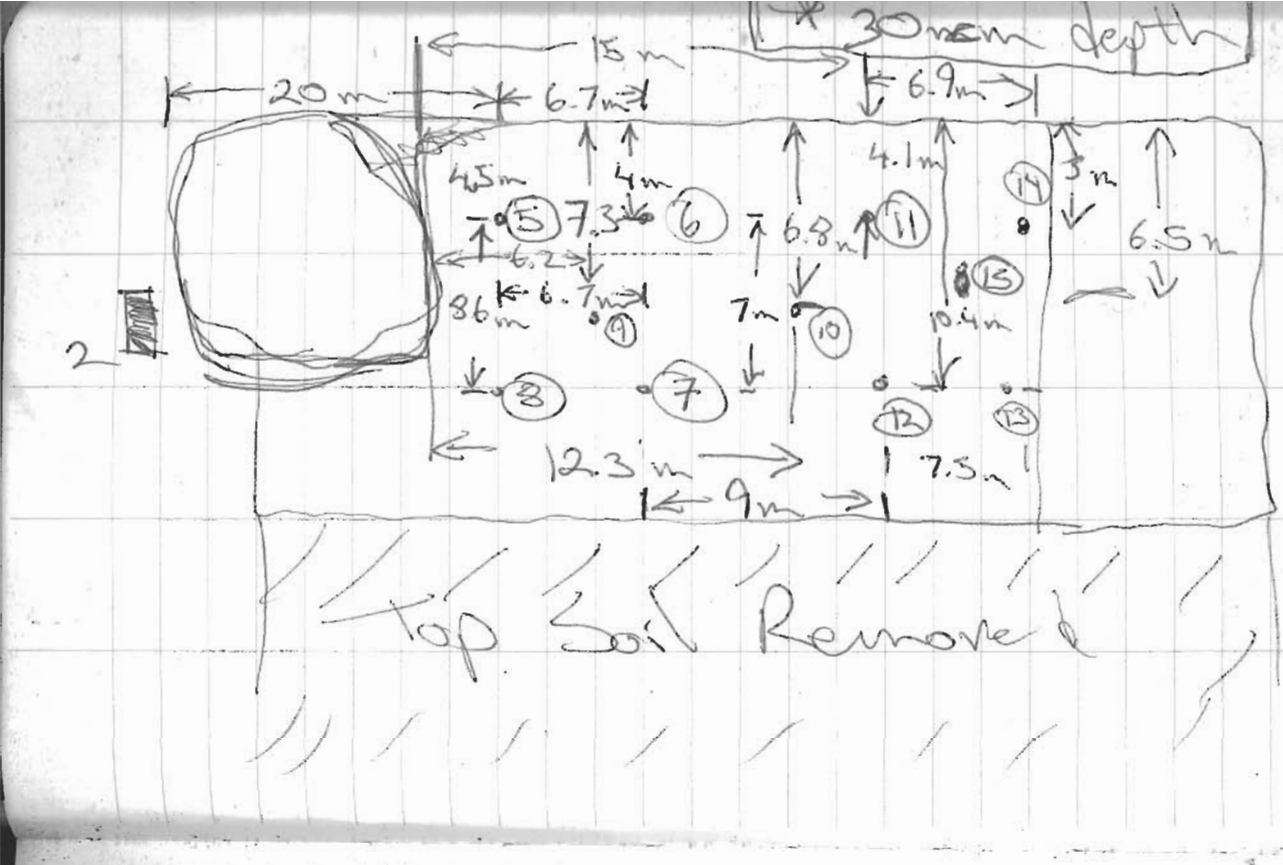
" "

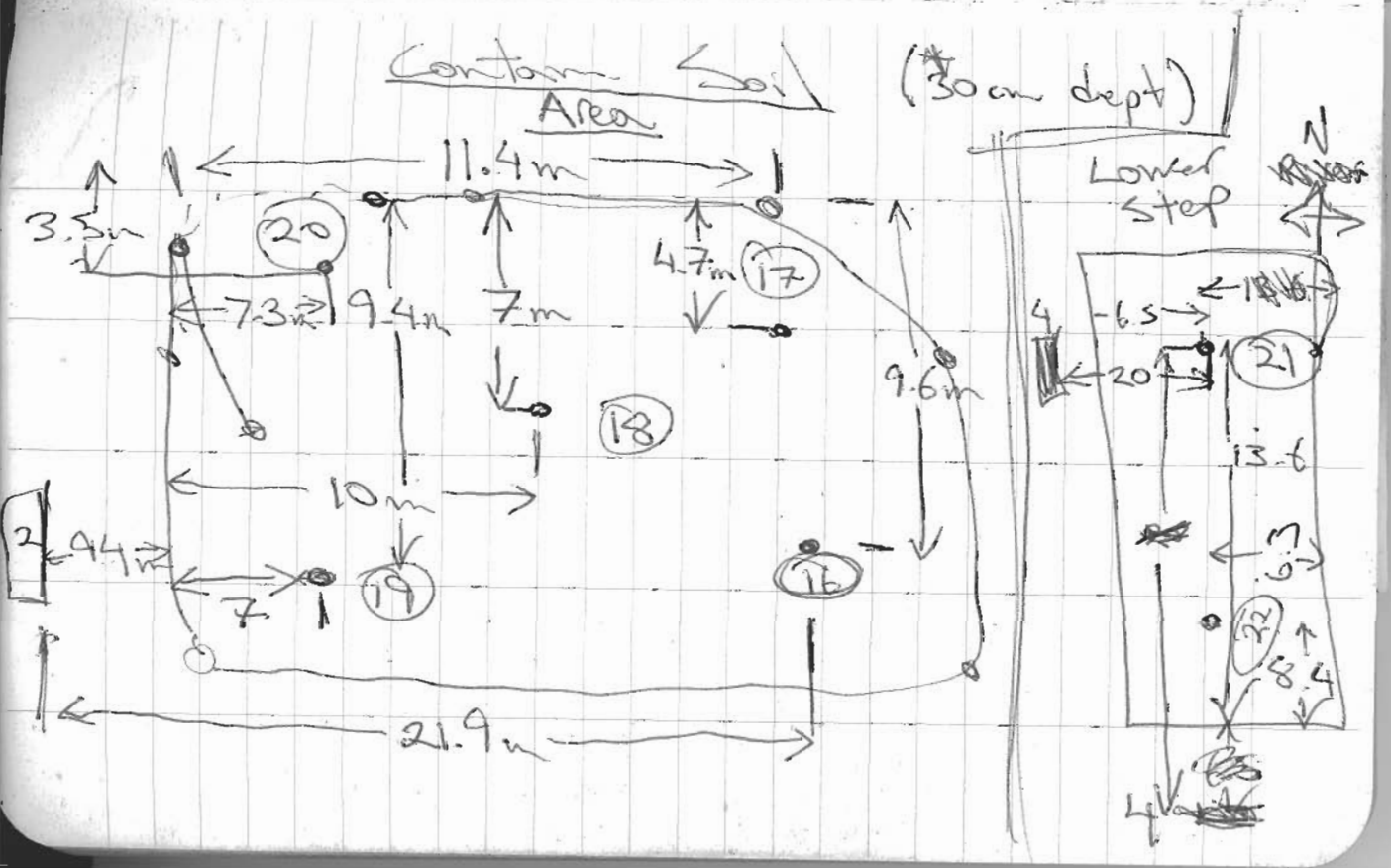


Moved Top Soil Samp Soil Sample	Top Soil (ppm) F.I.D	Observation — Petro Flag Weight 1. Gram
#1	150	Petro. Products Smell Worse
#2	470	odor of Product (Petro N/A Petro Flag)
#3	500	odor of Product (Petro Flag 816)
#4	35	No Smell (Petro Flag 64)

Unds. Top Soil Samp		Petro Flag Results 1. G.
# 5	890	Petro Smell
# 6	2200	PF Petro Smell Petro Flag 1867
# 7	40	No Smell
# 8	35	No Smell
# 9	500	Smell
# 10	1700	PF Smell Petro Flag 1223 (A)
# 11	1000	Smell
# 12	1250	Smell
# 13	0	
# 14	1950	PF Smell PF 1588 (A)
# 15	1000	Smell

		Dirty Top Soil Samples
# 16	240	No Smell
# 17	0	No Smell
# 18	20	No Observations
# 19	10	No
# 20	25	No
# 21	180	No
# 22	25	No


15 m
30 cm depth
20 m
6.7m
6.9m
4.1m
3m
6.5m
4.5m
4m
7.3
6.8m
6.2
8.6m
6.7m
7m
10.4m
12.3m
7.5m
9m
Top Soil Remove


Contam. Soil
Area
(30 cm dept)
Lower
step
N
11.4m
3.5m
4.7m
7.3m
9.4m
7m
9.6m
10m
9.4m
7
21.9m
6.5
20
13.6
8.4
4

29 → 3 = 20.3m
29 → 2 = 30.4m

28 → 3 = 16.2m
28 → 4 = 31.3m

27 → 4 = 28.4m
27 → 4 = 12.5m

39 28 27 26

26 → 4 = 24.9m
26 → 3 = 12.2m

6 11 14

9 10 15 25

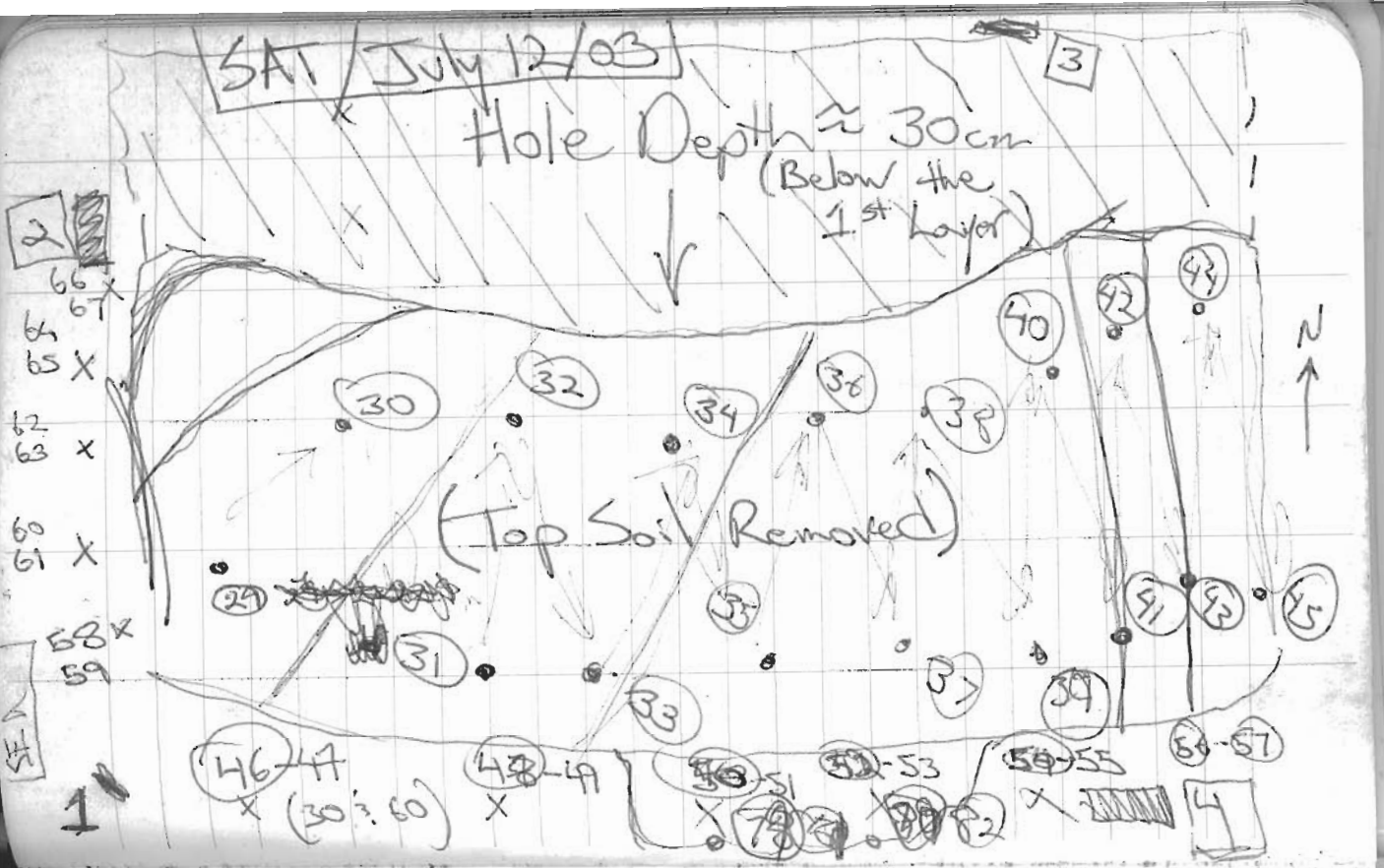
21 23 24

25 → 3 = 18.3m
25 → 2 = 48.8m

23 → 3 = 23.7m
23 → 2 = 37.5m

24 → 4 = 20.5m
24 → 2 = 43.9m

Soil Sample Number	F.I.D	Petrol	Observations
23	190	N/A	No Smell
24	400		Stinks
25	0	N/A	N/A
26	0	N/A	N/A
27	0	N/A	N/A
28	0	N/A	N/A
29	0	N/A	No Smell



(29b) 29→2 = 22.9m
29→1 = 13.1m

(30) 30→2 = 22.5m
30→1 = 18.3m

(31) 31→2 = 28.9m
31→1 = 15.4m

(32) 32→2 = 27.7m
32→1 = 20.5m

(33) 33→2 = 32.9m
33→1 = 19.2m

(34) 34→2 = 31.2m
34→1 = 23.4m

(35) 35→2 = 37.5m
35→1 = 26.3m

(36) 36→2 = 36.3m
36→1 = 28.5m

(37) 37→4 = 21.5m
37→1 = 32.5m

(38) 38→4 = 21.7m
38→2 = 40.8m

(39) 39→4 = 15.5m
39→3 = 30.9m

(40) 40→4 = 16.4m
40→3 = 23.7m

Soil Sample	F.I.D (p.p.m)	Petro Flag	Observations OF SAMPLE
# 29 *	1100		• Smell of Product
# 30	570		• Smell of Product
# 31	8350		• Smell of Product
# 32	10000		• Strong Smell
# 33 *	10000	New 135c 0.57g	• Strong Smell
# 34	6500		• Smell
# 35	6550		• Smell
# 36	1300		• Smell
# 37	5550		• Smell
# 38	1300		• Weak Smell
# 39	10000		• Strong Smell
# 40	7700		• Smell
# 41 *	5800	5B	• Smell
# 42 *	2700	0.55g	• Smell
# 43	0		• Clean
# 44	0		• Clean
# 45	0		• Clean
# 46	190		Depth 30cm ~~Strong~~ No Smell
# 47	430		60cm Smell
# 48	120		30cm No Smell
# 49	290		60cm Faint Smell
# 50	0		30cm NA
# 51 *	1250		60cm Smell
# 52	0		30cm NA
# 53 *	10000		60cm Smell

(41) 41 -> 3 = 27.5m
41 -> 41 = 10.6m

(42) 42 -> 4 = 14.8m
42 -> 42 = 22.2m

(43) 43 -> 4 = 26.1m
43 -> 43 = 24.8.7m

(44) 44 -> 4 = 13.7m
44 -> 44 = 24.6m

(45) 45 -> 4 = 30m
45 -> 45 = 13.3m

(46) 46 -> 38 = 10.8m
46 -> 46 = 29.6m

47 -> 1 = 19.4m
47 -> 2 = 35.6m

48 -> 2 = 40.8m
48 -> 1 = 26.5m

49 -> 4 = 20.9m
49 -> 3 = 37.9

50 -> 3 = 33.2m
50 -> 4 = 12.5m

51 -> 3 = 32.3m
51 -> 4 = 6.2m

58 - 2 = 23.2m
58 - 1 = 8.7m

Soil Sample #	FID	Petro Flag	Depth (cm)	Observation
54	0		30	N/A
55	780		60	Smell
56	0		30	NA
57	0		60	NA
58	250		30	No smell
59	830		60	No Smell
60	0		30	NA
61	0		60	NA
62	0		30	NA
63	0		60	NA
64	0		30	No smell
65	350		60	No Smell
66	0		30	No Smell
67	1150		60	Smell

60-2 = 17.4 m
60-1 = 12.3 m

62-2 = 12.3 m
62-1 = 17.8 m

64-2 = 2.1 m
64-3 = 42.2 m

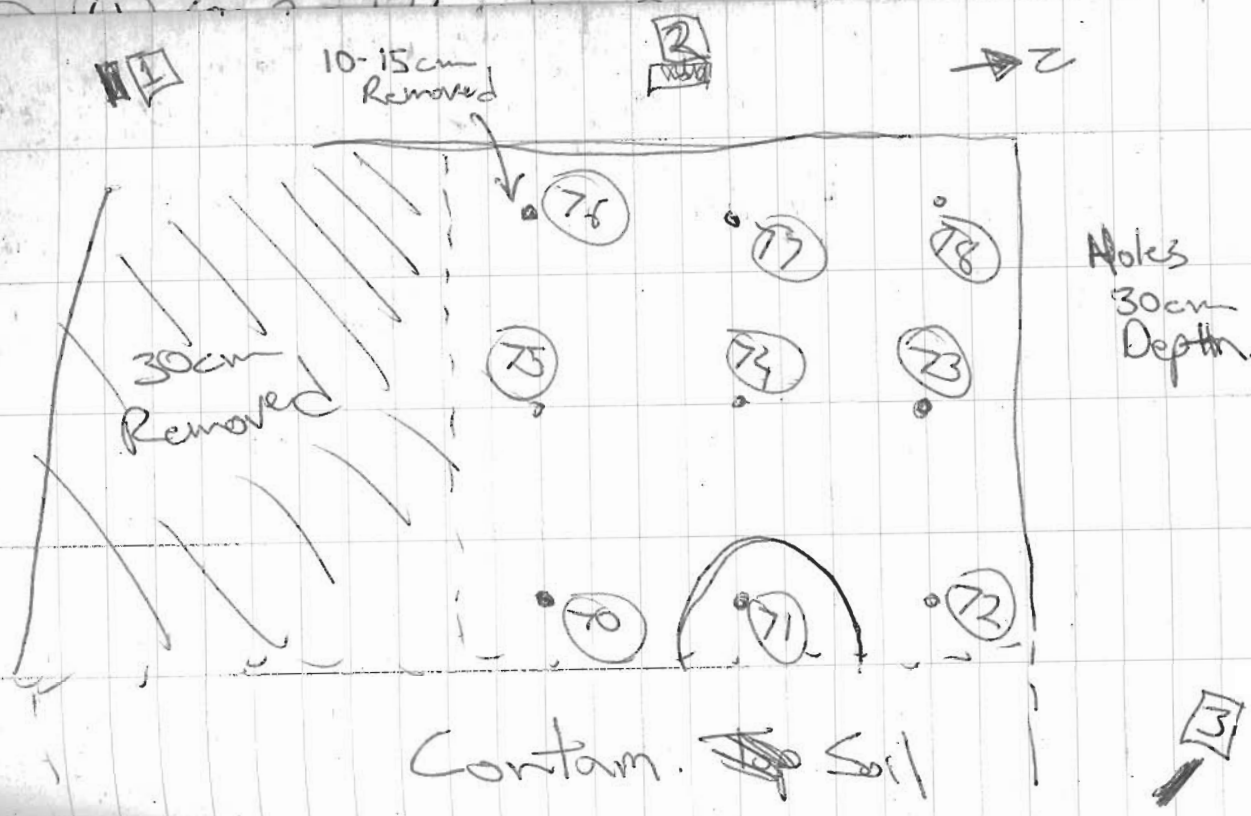
66-2 = 0.83 m
66-3 = 40.5 m

(61) (63) (65) (67)
(60) (62) (64) (66)

Mid day "Clean" Pile Samples

Samples
68 & 69 Are From the "clean" top Soil
68 was from the West end of the pile
69 was from the east end

* Both used multiple samples from different areas on ends of the pile to make composite samples, then were mixed



(70) 70→2 = 26.3m
70→3 = 32.3m

(71) 71→2 = 26.1m
71→3 = 28.4m

(72) 72→2 = 27m
72→3 = 23.7m

(73) 73→3 = 27.4m
73→2 = 22.5m

(74) 74→2 = 20.2m
74→3 = 31.1m

(75) 75→3 = 35.2m
75→2 = 19.3m

(76) 76→2 = 14.1m
76→1 = 21.9m

(77) 77→2 = 14.5m
77→3 = 35.1m

(78) 78→2 = 15.5m
78→3 = 33.4m

(79) (81) 78→2 = 43.3m
78→1 = 26.7m

(80) (82) 79→2 = 47.7m
79→3 = 32.9m

Soil Sample	F.I.D	Petro Flag	Depth (cm)	Observations
# 68			~~30~~ NA	
# 69			~~30~~ NA	
70	1150		30	Smell
71	+10000		30	Smell
72	1850		30	Smell
73	620		30	Smell
74	0		30	No
75	~~180~~ 0		30	
76	25		30	
77	30		30	
78	15		30	
79	0		30	
80	15		30	
81	200		60	
82	3900		60	
29-C	1550	Old Results →	1100	
33 B	3150		10 000	
41-B	3600		5800	
42-B	2200	→	2700	

Step Down North

(83) 83 → 3 = 12.6 m
83 → 4 24.6 m

(84) 84 → 4 21.3 m
84 → 3 15.3 m

(85) 85 → 4 = 23.2 m
85 → 3 = 13.4 m

Soil Sample #	F.I.D	Petro Flag	
83	1400		21
84	∅		21.5
85	970		25

Soil Sample	F.I.D	Petro Flag	Depth (cm)	Observations
#68			~~30~~ NA	
#69			~~30~~ NA	
70	1150		30	Smell
71	+10000		30	Smell
72	1850		30	Smell
73	620		30	Smell
74	0		30	No
75	~~30~~		30	
76	25		30	
77	30		30	
78	15		30	
79	0		30	
80	15		30	
81	200		60	
82	3900		60	
29-C	1550		→ 1100	
33 B	3150		→ 10000	
41-B	3600	2nd Results	5800	
42-B	2200		→ 2700	

Step Down North

(83) 83 -> 3 = 12.6 m
83 -> 4 = 24.6 m

(84) 84 -> 4 = 21.3 m
84 -> 3 = 15.3 m

(85) 85 -> 4 = 23.2 m
85 -> 3 = 13.4 m

Soil Sample #	F.I.D	Petro Flag	
83	1400		21
84	∅		215
85	970		25

Petro Flag Results:

Sample #	Weight (g)	Result	Results 2nd	
29	1.0	1132	1033 P	
33	0.39g	448	349 (Retest with 0.5)	
41	0.32	178	110 (Retest with 0.5)	
42	0.50	568	446	
68	0.55	65	Retest	
69	0.55	0	Retest	
87	1.08	88	Retest	625 5g
86	1.08	110	Retest	1356 5g

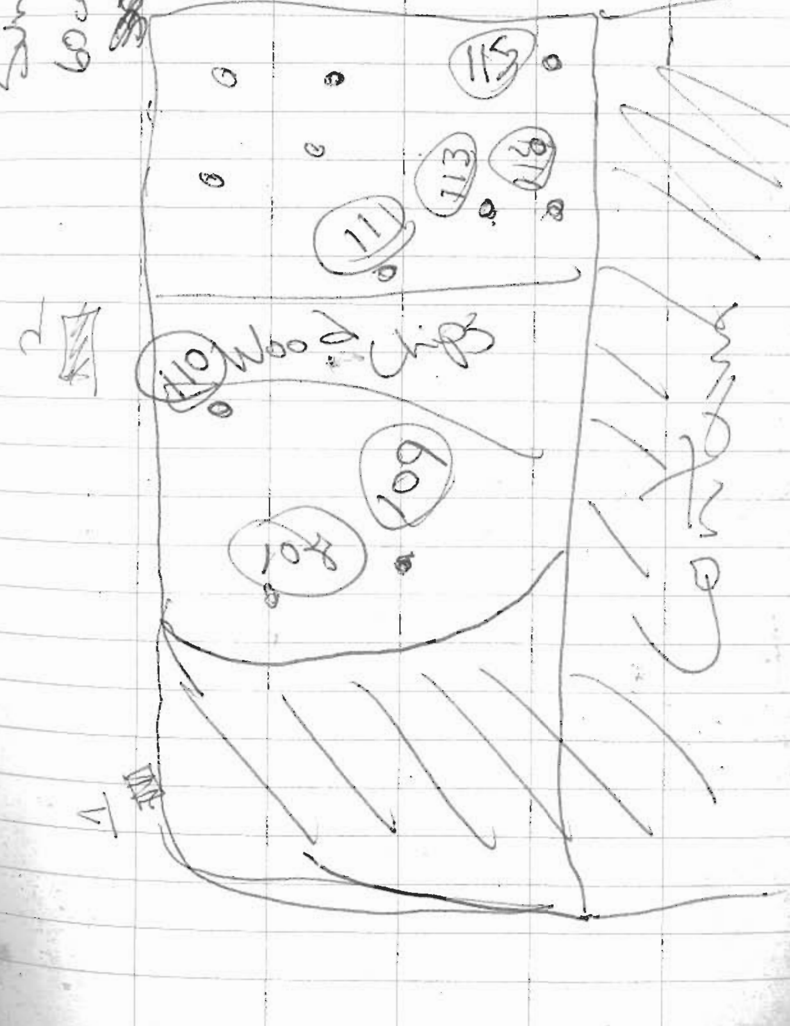
Petro Flag Test To Be Done:

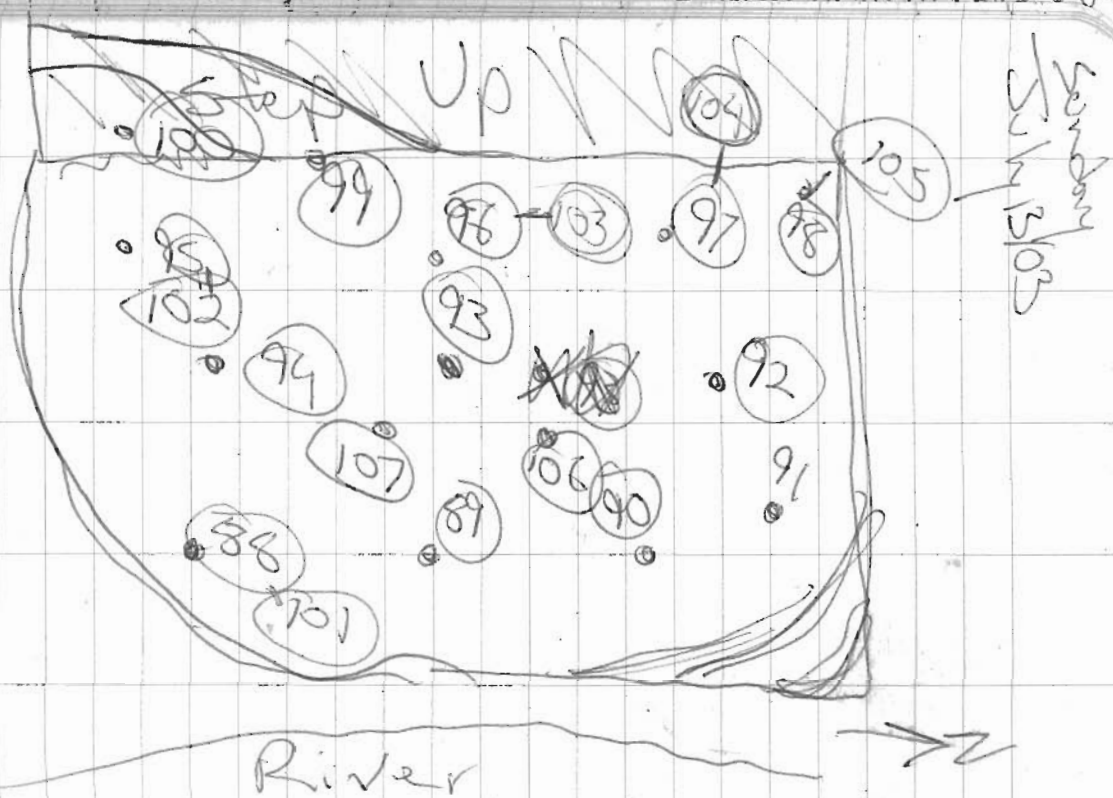
- Retest # 33 & 41 w. 0.5g
- Retest # 68 & 69 & 87 & 86 w +2.5g sample

Soil Temp Out Of Soil

Put In New Data From Retest

Sunday July 13/03
60 cm Holes on Removed Top Soil Layer





88 101 88→4 = 13.3m
88→3 = 30.9

89 89-3 = 28.4
89-4 17.5

90 90-4 = 21.8
90-3 = 26.7

91 91-4 = 24.6m
91-3 = 23.3

92 92-4 = 21.4
92-3 = 21.6

93 93-3 = 25.9m
93-4 = 19.9m

94 94-3 = 29.9m
94-4 = 11.0m

95 95-3 = 29.5m
95-4 = 8.9m

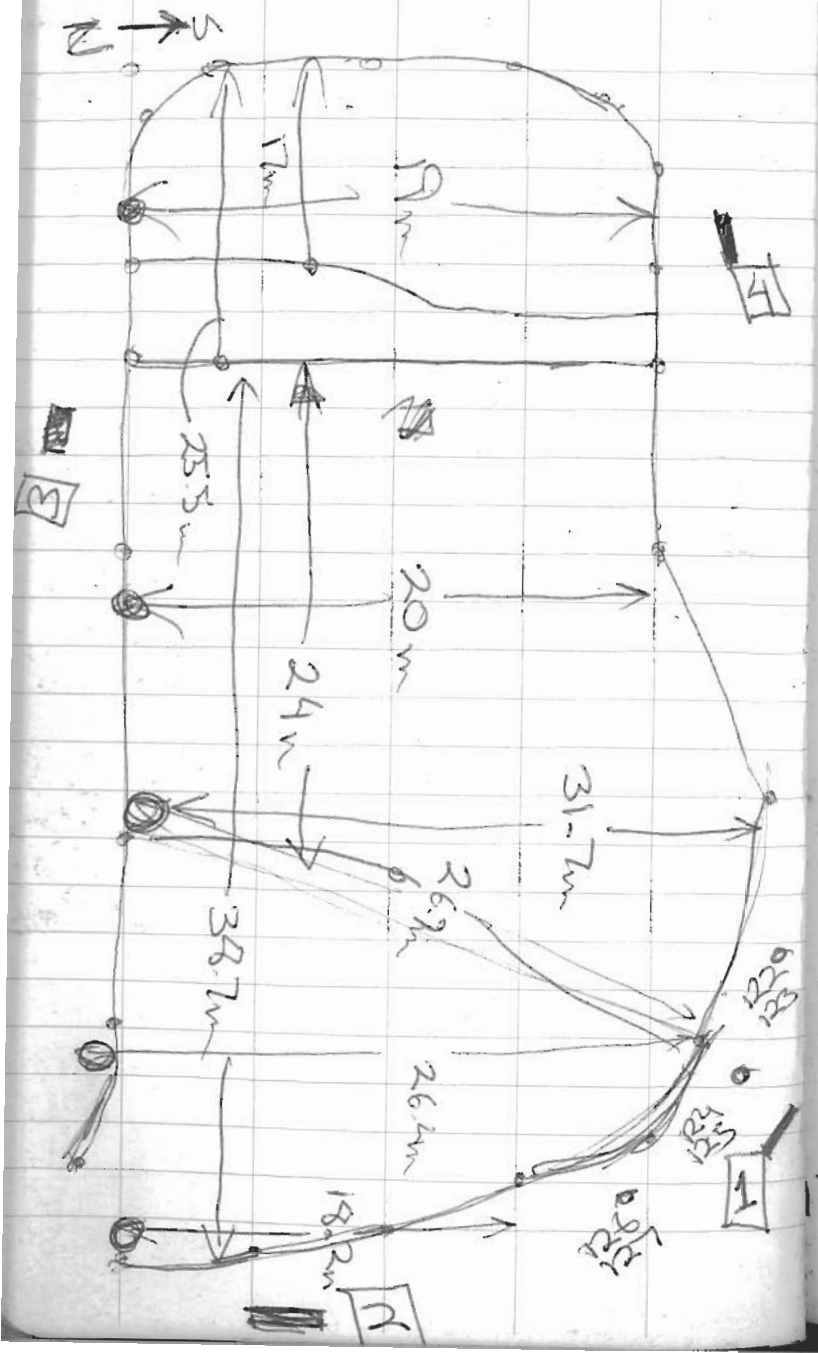
96 96-4 = 13.3m
96-3 = 25.1m

97 97-4 = 18.0m
97-3 = 22m

Soil #	P.I.D	WT Soil	F.I.D	Soil Temp	Weight
33	1356	0.57			
41	663	0.55			
86	1356	5.01			
87	625	5.03			
88	1168	503			
89	803	504			
97			106	1.07g	~~0.07~~
99			1263		0.54g
108			290	18	
109			370	18	
110			690	21.5	
111			626	19.5	
112			25	20	
113			1700	24.5	
114			1100	21.5	
115			690	20.00	
116			10000	22	
117			10000	19	
118	230		1750	14.5	0.78g
119	274		980	14.5	1.06g
120	186		120	15	1.11g
102			862		0.54g
105			84		0.56g
106			76		2.08g

98-4 = 23.1 ppm
98-3 = 18.1 ppm
89-3 = 22.9 ppm
89-4 = 14.2 ppm
100-3 = 27 ppm
100-5 = 9.5 ppm
106-3 = 24.5 ppm
106-4 = 19.2 ppm
107-4 = 15 ppm
107-3 = 27.1 ppm

(98) (89) (100) (106) (107)



Soil #	F.I.D	Reading Temp °C	Int Temp	Observation
88	0	22	8°C	No
89	35	19.5		No
90	0	22.5		No
91	0	23.5		No
92	0	23		No
93	0	24.5		No
94	0	23		No
95	0	27.5		No
96	530	26.5		No
*97	5500	32	Test	Yes
98	480	29		Yes
*99	3350	26.5		Yes
100	1000	25		Yes
101	100	24.5		
*102	6450	26.5		Odor Pres
103	2680	23.5		Odor Pres
104	1000	21.5		Odor Pres
*105	2050	22.5		Odor Pres
*106	240	18.5		
107	0	19.5		

108 — 108-2 = 17.1m
108-1 = 18.4m

109 — 2 = 19.6m
1 = 18.9m

110 — 2 = 17.1
1 = 21.3

111 — 2 = 13.9
1 = 19.4

112 — 2 = 12.6
1 = 23.4

113 — 2 = 20.6
1 = 29.1

114 — 2 = 25.2
1 = 33.6

115 — 2 = 20.5
3 = 24.2

116 — 2 = 16.5
3 = 33.8

117 — 2 = 13.0
3 = 36.9

Analytical Test Samples

Sample #	
113	→ Initial soil pile
119	→ Composite of All Soil piles
120	→ Final Soil Pile (A)
121	→ Was the Double Soil Samples

47B were taken from Approximate location of old site soil was exposed by 110.

99B

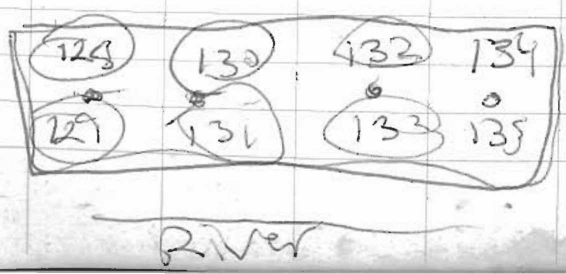
102B

Sample #	Temp °C	F.I.D.	Depth cm	Observation
122	26.5	75	30	
123	27	0	60	
124	25.5	30	30	
125	27.5	430	60	Obor
126	26.5	10	30	
127	25	30	60	
~~128~~				
99B	25.5	5700		
97B	25.5	0		
102B	23.0	320		

122 & 123 → 2 = 27.7m
→ 1 = 7.2m

124 & 125 → 2 = 24m
→ 1 6.5 m

126 & 127 → 2 = 18.8m
→ 1 = 10.4



30 60

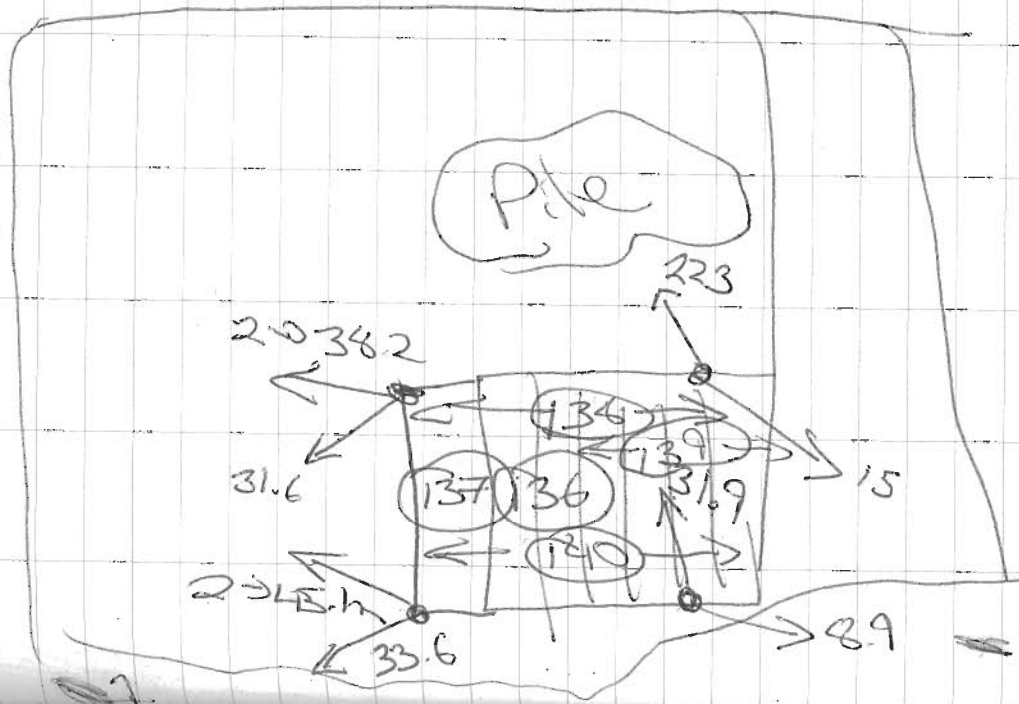
128 & 129 → 3 = 28.6m
→ 4 = 13.0 m

130 & 131 → 3 = 27m
→ 4 = 16.8m

132 & 133 → 3 = 26.7m
→ 4 = 20.5 m

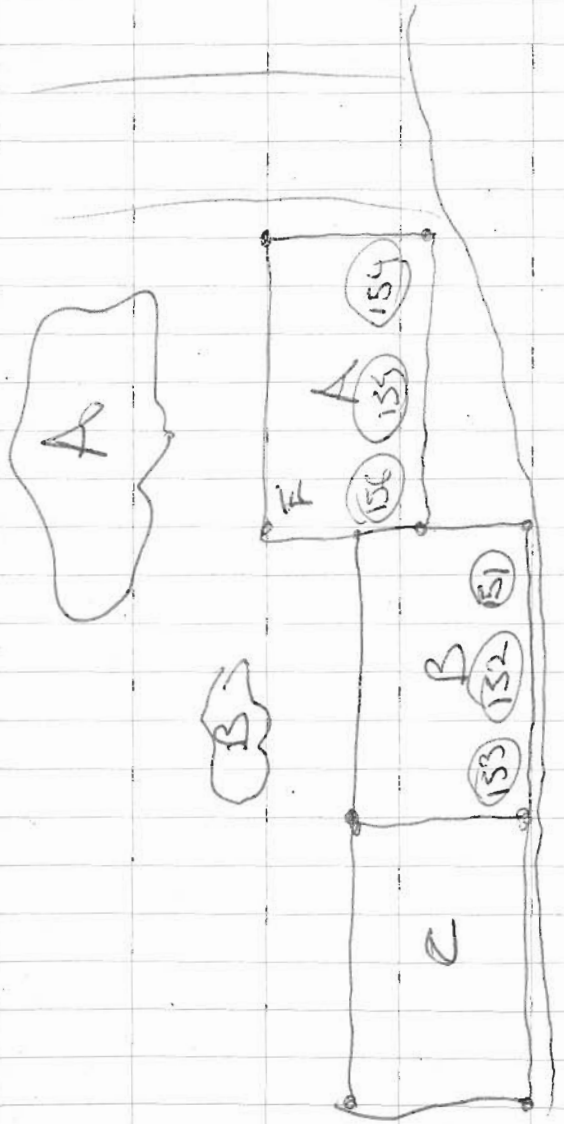
134 & 135 → 3 = 21.6m
→ 4 = 22.5 m

Sample #	Temp	FID	Depth	
128	14.5	70	30	
129	13.5	55	60	O
130	14.5	100	30	
131	14.5	65	60	
132	14.5	25	30	
133	15	70	60	
134	16	20	30	
135	17	530	60	
[illegible]			30	
[illegible]			60	



137 136

Depth
50cm
50cm

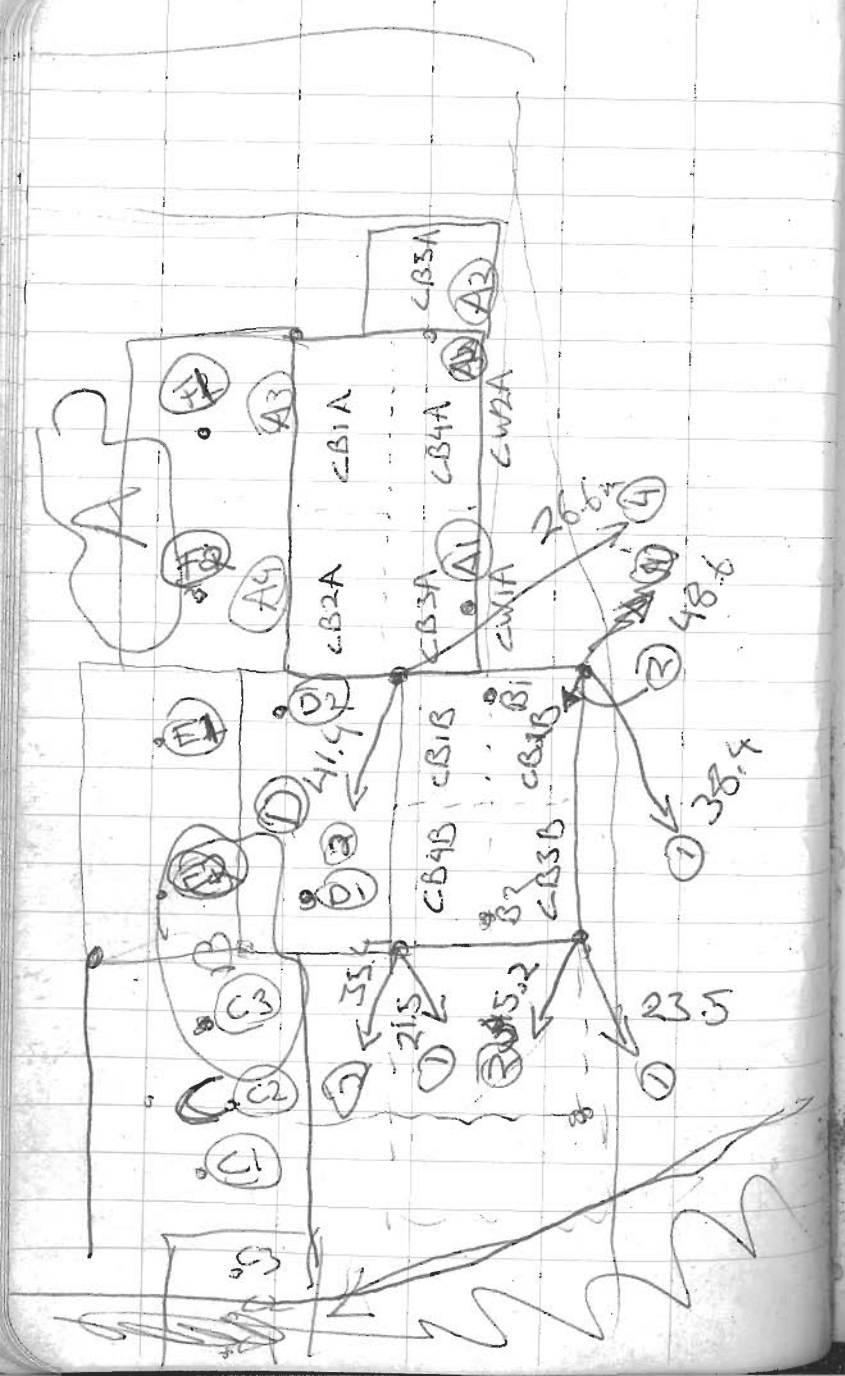


Sample # EP	Depth	Exit Temp	Petro Flag	Wt
B141	30cm	5	294	0.33g
B142	30cm	4	~~294~~	0.58g
B143	30cm	7		
B144	50cm	~~0.5~~ 4		
B145	100cm	0.5		
B146	100cm	2.0		
B147	125cm	2.0		
A137?			126	0.33g
A136			100	0.58g
A146	80	3.5		
A149	100	1.5		
A150	120	4.5		

Sample #	Exit Temp	F.I.D Temp	F.I.D Reading (ppm)	Petro Weight	Petro Reading
A138	~~XXX~~	16.5	5450	0.58	900
A139	~~XX~~	16	4350		
A140	~~XXX~~	17.5	9150		
B141	5	17.5	10500	0.33	294
B142	4	17	7800	0.5	4
B143	7	14.5	4900		
B144	4	16	4000		
B145	0.5	36.5	+10000 → 0.42		681
B146	2	33.5	+10000 → 0.40		357
B147	2	26.0	6700		
A148	3.5	24	2950		
A149	1.5	24.5	2400		
A150	4.5	25	4200		
B151	1	18	+10750 → 0.41		624
B152	1	19	6650		
B153	1	20.5	8050 → 0.39		689
A154	0.4	21.5	5900		
A155	0.3	22.5	6750 → 0.41		807
A156	0.3	19.5	+10000 → 0.43		640
Pile					
~~B157~~		~~8700~~			
~~B158~~					

Depth of Sample	Pile	F.I.D	Weight (g)	Petro Flag
	~~B157~~ → 8700			
0.5m				
0.5m	EPF-B			
0.5m	→ 157			1122
0.3m	Temp · Sifted	8700	0.57	~~XXX~~
0.3m	25 · Unsifted	7400	0.66	~~XXX~~ 1547
0.3m				
0.5m	→ 158			
1.0m	Temp · Sifted	+11000	0.50	369
1.0m	30 · Unsifted	+11000	0.57	703
1.25m				
0.8m	→ 159	10500	0.48	364
1.0m	(Mixed 2 times)			
1.2m	Temp 35			
1.2m	Comp B Initial (comp of other B samples)			
1.2m	160		0.57	554
1.5m				
1.6m				
1.8m				

Sample #ID	F.I.D. Temp °C	F.I.D Reading (ppm)	Petro Flag WT %	Petro Flag Result
PIA 071503-161	22	5850	0.67	826
PI1A 071503-162	26	2300		
PF1A 071503-163	23	4700		
PI2A 071503-164	26	5150	0.64	949
PF2A 071503-165	24	7750	0.69	756
PI3A 071603-166	31	3000		
PF3A 071603-167	27	1750		
PI4A 071603-168	23	5300		
PF4A 071603-169	24	~~5800~~ 5200		
PF A 071603-170	~~28~~	~~6600~~ 3600	0.68	621
PI5A 071603-171	26	6600		
PF5A -172	27	9750		
CB1A 173	22	3750	0.89	470
CB2A 174	32	+11000	0.54	739
CB3A 175	33	+11000	0.52	645
CB4A 176	30	+11000	0.55	741
CW5A 177	~~28~~	+11000	0.53	2130
CW1A 178	29	+11000	0.53	775
CB1B 179	29	+11000	0.59	830
CB2B 180	29	+11000	0.57	668
CB3B 181	29	970	0.67	140
CB4B 182	29	1850	1.25	557
CW1B 183	25	+11000	0.69	684
EC 184	29	2400		
185	30	1150		
186	30	2750		

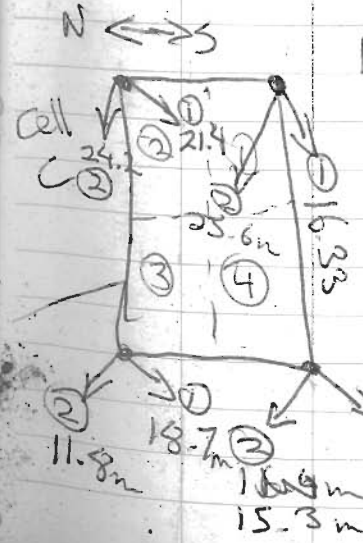


Level 3

Plastic Pipe -> Base = 0.595 m

C1 = (Bottom of stick to mark)
= 90 cm / 1.43 m
C2 = 88 cm / 1.35 m
C3 = 88.5 / 1.34 m

Base B = 155 cm
B1 = 167 cm
B2 = 229
A1 = 180 cm
A2 = 130 cm
A3 = 160 cm
A4 = 178 cm

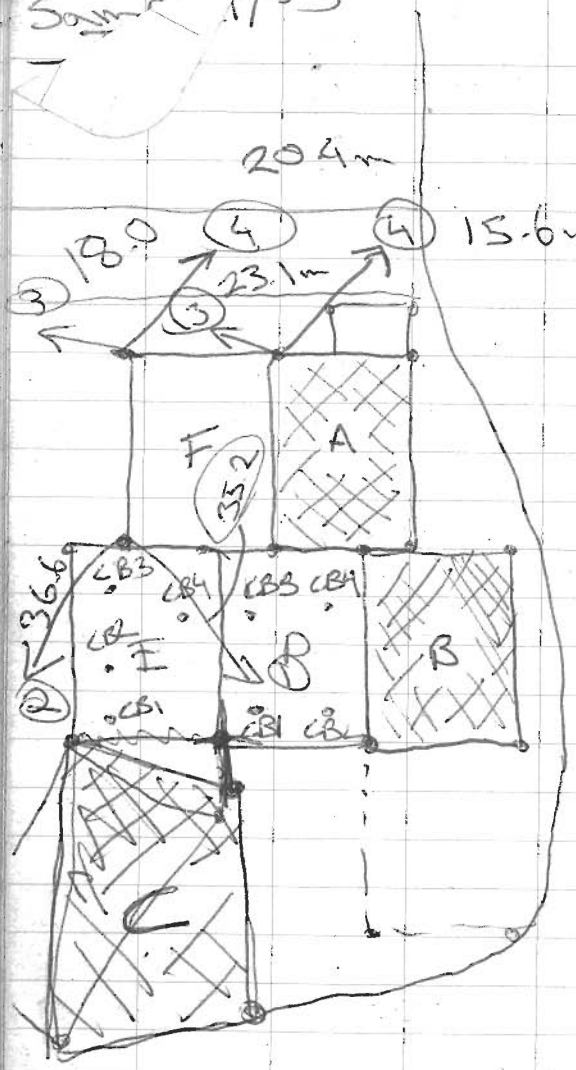


Base -> Plastic = 57 cm
D1 = 159 cm = 115+30 = 145
D2 = 155 cm = 152+30 = 182
138+30 = 168
E1 = 96 cm Depth
E2 = 101 cm 122+30 =
F1 = 141 cm = 160+30 = 152
F2 = 106 = 173+30 = 190 203

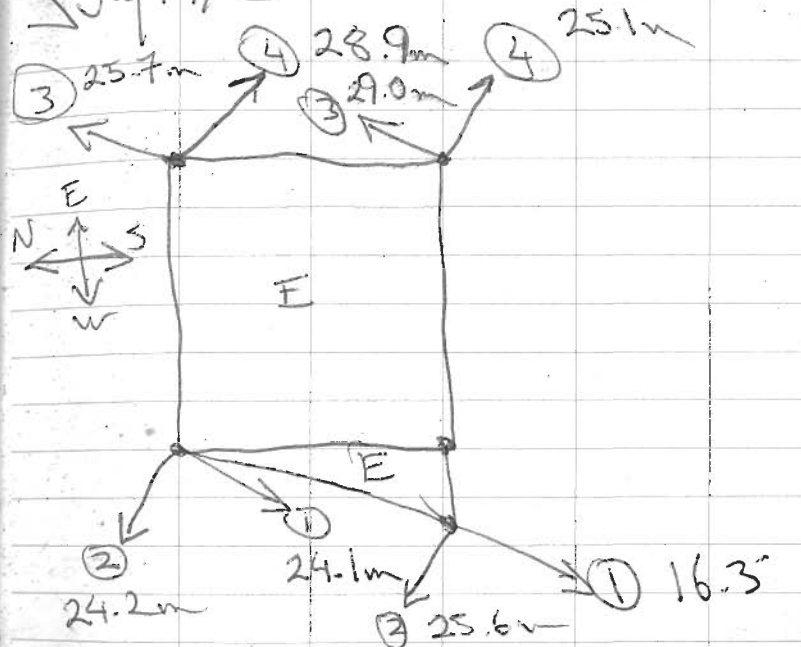
July 17/03

Sample ID			F.I.D Temp	F.I.D Reading	Weight (g)	Petro Flag Reading	Depth
CB1C		187	33	170	1.37		
CB2C		188	~~39~~	50	0.78	155	
CB3C		189	~~27~~	480	0.~~8~~	262	
CB4C		190	25	130	0.69	~~1~~568	
CWC		191	25	420	1.51	63	
ED		192	30	2000			80 cm
ED		193	30	870			1.2m
ED		194	22	1650			1.0m
ED		195	26	710			1.8m
EE		196	27	1550			0.8m
EE		197	27	1500			1.5
EE		198	26				0.5-1.2
EE		199	26	420			1.2-1.5
EE		200	26	900			1.0
EE		201	26	800			1.2-1.5
EE	201b	~~200~~	27	750			1.5
E							

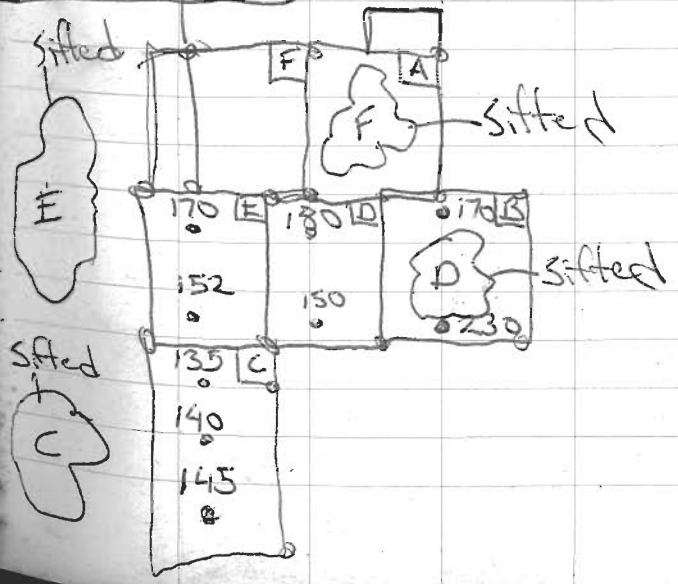
July 17/03



July 17/03



July 18 Depth



Sample ID			F.I.D Temp	F.I.P Reading	Weight (g)	Reading Retro Time	Retro Flag	Corrected Value	2nd Retro Flag	WT
CB 1D 071703		202	38	1800	~~1.08~~	27	1471	13620		
CB 2D		203	34	4650	1.01	26	640	6400		
CB 3D		204	34	3850	1.07	24	244	2280		
CB 4D		205	34	2450	1.03	9	210	1945		
CB 1E		206	33	2550	1.07	1	1257	1175		
CB 2E		207	30	1950	0.88	27	380	4320		
CB 3E		208	33	2950	1.02	16	718	7040		
CB 4E		209	31	900	1.07	14	8	7477		
CB 1F		210	32	900	1.05	1	75	715		
CB 2F		211	31	1450	1.02	~~024~~	82	804		
CB 3F		212	33	1900	0.95	14	429	4515		
CB 4F		213	32	1850	1.71	9	871	5093		
PIC 071803		214	29	2150	1.03	19	847		1259	1.04
PIC 071803		215	32	3300	1.11	15	1040			
PID		216	30	3150	0.96	15	1686			
PID		217	31	7450	0.75	12	1531			
PIE		218	31	6450	0.76	28	1215		702	0.65
PIE		219	34	3950	0.97	20	1715			
PIF		220	30	3300	~~0.93~~ 0.63	~~902~~	~~809~~ 902			
PIF		221	30	2150	0.93	16	~~809~~			
PIC		222 ~~223~~	32.5	1150						
PFIC		223	31	1050						
PF2C	224 ~~225~~	~~225~~ 225	29	5250 →	0.69					
PI2C 225	~~226~~	~~226~~ 226	30	9600 →						
	226 ~~227~~									

July 18/03

SAMPLES TO BE S

From Cell A

EA	138	X
PI2A	164	X
PF2A	165	X
PI4A	168	X
PF4A	169	X
PIA	161	X
PFA	170	X
CB1A	173	X
CB2A	174	X
CB3A	175	X
CB4A	176	X
~~CB1~~		
CW1A	178	X

Cell B

EB	145	X
PI1B	157 No	✓
PF1B	157b No	✓
PI2B	158 No	✓
PF2B	158b No	✓
~~PIB~~ PFB	159	X
PIB	160 No	✓
CB1B	179	X
CB2B	180	X
CB3B	181	X
CB4B	182	X
CW1B	180	✓

Cell C

EC	186	X
PI1C	222	X
PF1C	223	X
PIC	214	X
? PFC	226	X
CB1C	187	X
CB2C	188	X
CB3C	189	X
CB4C	190	X
CWC	191	X

Cell D

ED	194	X
PID	217	X
CB1D	X	202
CB2D	X	203
CB3D	X	204
CB4D	X	205

→ PIC 215

Cell F

EF	201	X
PIF	220 ~~226~~	
CB1F	210	✓
CB2F	211	✓
CB3F	212	✓
CB4F	213	✓

Cell E

EE	198	X
PIE	218	X
CB1E	206	X
CB2E	207	X
CB3E	208	X
CB4E	209	X

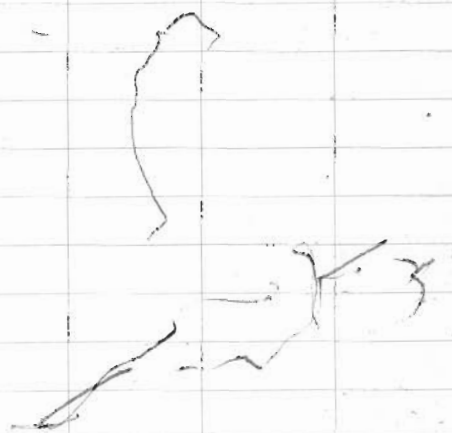
July 18/03

Sample I.D		Temp	F.I.D	Weight (g)	Petro Flag	Time
PI2E	227	29	3100			
PF1E	228	29	3750			
PFE	229	25	5800	0.71	1395	265
PI2E	230	29	7100			
PF2E	231	27.5	+11000			
PI1F	232	32	6800			
PF1F	233	31	9200			
PI2F	July 21 234	43	3000			
PF2F	235	33	6400			
PFF	July 21 236	236	1400	0.68	968	
PI1D	237	32	8700			
PF1D	238	30	4000			
PI2D	239	28	4800			
PF2D	240	30	5800		1400	
PFD	241	30	7250	0.72	~~1570~~	12
PI3C	242	27	7950			
PF3C	243	29	6750			
PI4C	244	29	2800			
PF4C	245	30	4650			
PFC	246	30	6100	0.~~88~~ 0.61	550	
PI3E	247	27	+11000			
PF3E	248	27	7750			
PI4E	249	27	430			
PF4E	250	25	7000			
PFE	251	50	8950	0.56	734	

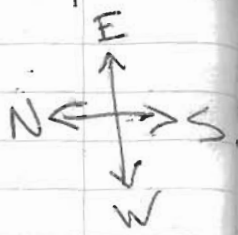
July 20/03

Petro Flog		Time	wt	Petro Flog	
201	9		1.26	1017	
~~EF 200~~					
~~PIF 220~~					
PI3C 242	7.5	~~9~~	0.62	~~1619~~	
PF3C 243	6	~~7~~	0.69	840	
PI3E 247	4	~~5~~	051	776	
~~PF~~ PF4E 248		~~6~~	0.63	1318	(9)
PFD 261			~~2.53~~		

July 20 Sample ID		FID	Temp	wt	Petro Flog	
254						
255						
PI5E 07/2003	256	5850	33			
PF5E	257	6500	33			
PI6E	258	6550	38	0.65	1161	(9)
PF6E	259	8050	34	0.63	1084	(2)
PFF	260	5850	33	0.71	1157	(8)
PFD	261	6200	33	0.64	1127	(3)
PI3F	262	6700	36	0.65	900	(4)
PF3F	263	8350	38	0.63	790	(10)
PI4F	264	5900	34			
PF4F	265	5150	34			
PFF ↓	266	7850		0.64	830	(5)



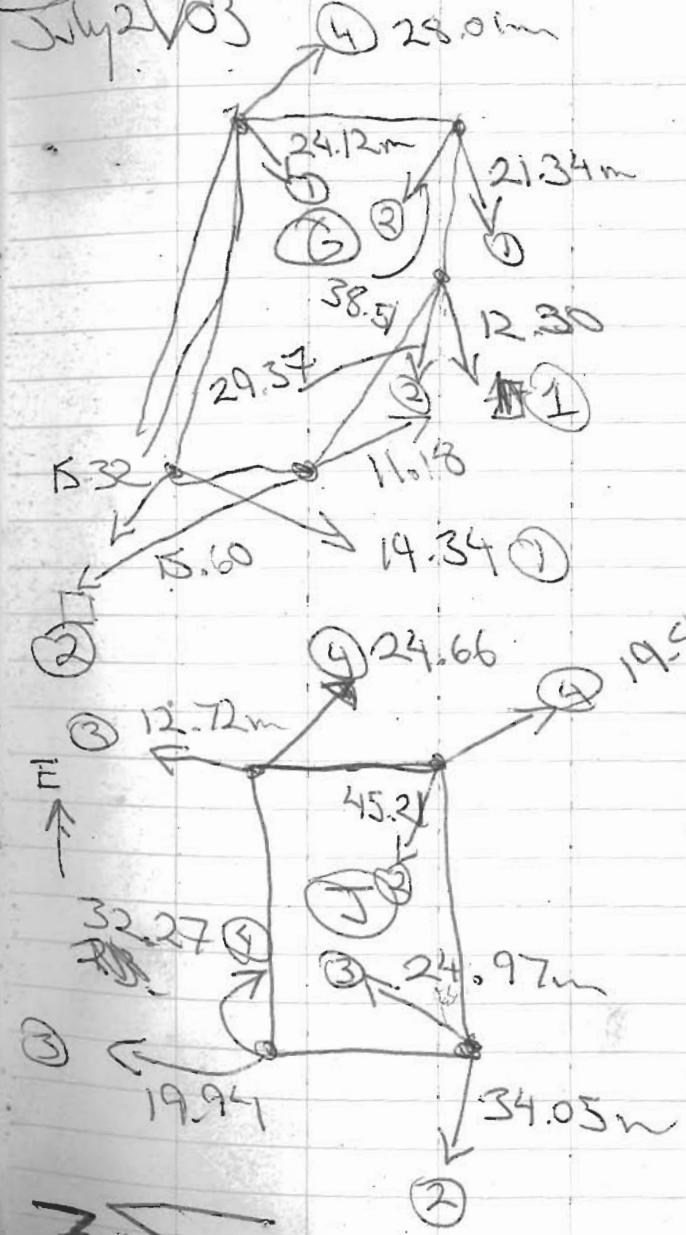
July 20/03



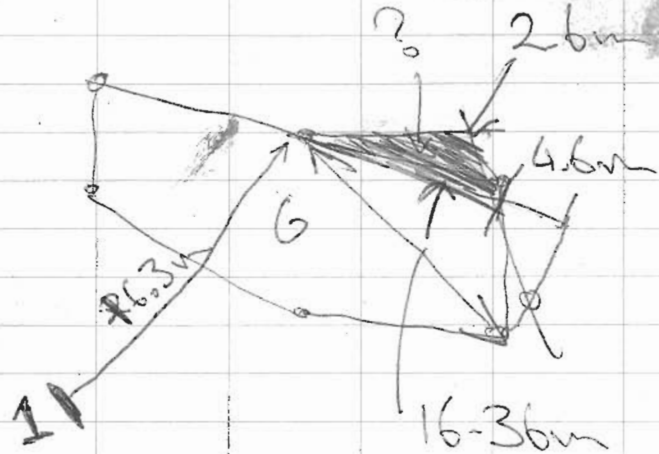
Elev.

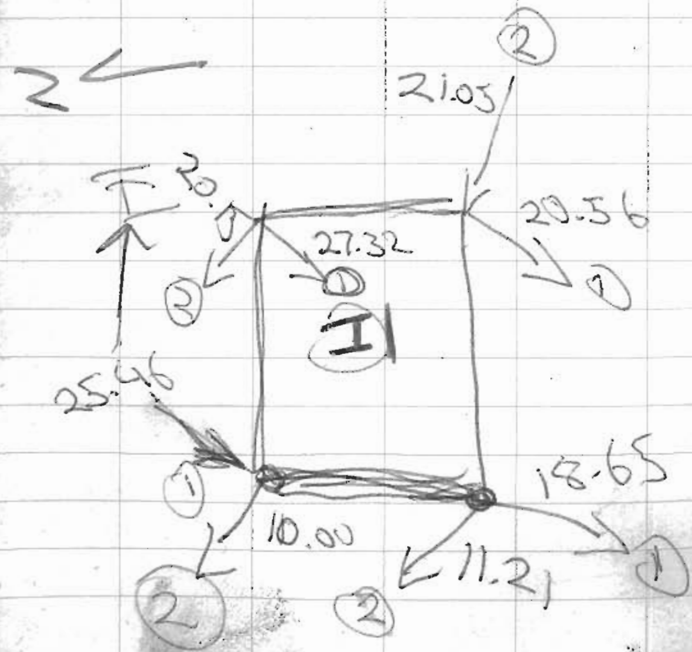
G1 = 30+
G2 = 30+
H1 = 30+
H2 = 30+
I1 = 30+
I2 = 30+
J1 = 30+
J2 = 30+

July 21/03



July 23/03





CWLJ 072203-283 → PIJ
EJ 284
EJ 285
EJ 286
EJ 287
EH 288 → PIH

Sample ID		temp	FID temp	FID Reading	wt. (g)	Petro flag	Actual	DF	comments
	296								
CB1G072103	271	6.5C			.55	200	3636	18.2	18.4 PF
"	271D1	9.C			5.08	86	1720	20	
"	271D2	9.0C			10.06	165	1650	10	
"	271D1A				5.08	1097	2159	1.96	
CB2G072103	272								
CB3G072103	273								
CB4G072103	274								
CB5G072103	275								
PF1H072203	296	16.5	21.0	440	5.16	179	3580	20	
PI1H072203	297	16.0	21.0	250	5.19	274	5480	20	
PIH072203	298	16.5	22.0	970	5.05	102	2040	20	
PI2H072203	299	15.5	21.5	1050	5.02	107	2140	20	
PF2H072203	300	14.5	21.5	1150	5.07	263	5260	20	
PFH072203	301	15.0	21.5	520	4.98	146	2920	20	
PI0G72303	302	16.0	25.0	5250	4.97	315	6300	20	
PIG072303	303	16.0	25.0	7050	5.03	381	7620	20	
PF1G072303	304	17.5	25.0	6650	5.03	364	7280	20	
PI2G072303	305	16.0	20.0	4450	5.06	287	5740	20	also on next page cliff
PF2G072303	306	16.0	21.0	3600	5.00	369	7380	20	
CB3J072103	280	16.0			5.08	74	1480	20	
CB4J072103	281	16.5			5.04	95	1900	20	
CW1J072103	282	16.0			5.13	87	1740	20	
CW2J072103	283	16.0			5.07	314	6280	20	

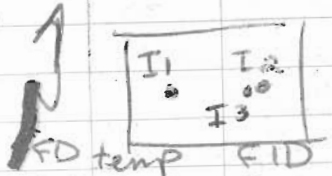
1-780-812-3200
1-403-912-9442
1888-311-0885

Sample ID		temp	FID temp	FID	wt (g)	Retro flag	actual	DF	Comment
CB1H072203	286	15.5			5.03	53	1060	20	
CB2H072203	287	14.0			5.00	47	940	20	
CB3H072203	288	15.0			5.00	57	1140	20	
CB4H072203	289	14.5			5.09	45	900	20	
CW1H072203	290	16.5			5.03	63	1260	20	
CW2H072203	291	16.0			5.06	178	3560	20	
CW3H072203	292	17.5			5.02	88	1760	20	
~~PI6~~ PI2G072303	305	18.5			5.06	287	5740	20	
PF2G072303	306	19.0			5.00	369	7380	20	
CW1G072103	280		23.0	1250					
CW2G072103	282		22.5	2450					
CB2J072103	286		23.0	260					
CB3J072103	288		23.5	170					
CB1J072103	284		23.0	120					
CB4J072103	290		23.5	220					
CB2G072103	272		24	180					
CB3G072103	274		23.5	230					
CB4G072103	277		22.0	360					
CB5G072103	279		23.0	660					
CB1H072203	286		24.0	150					
CB2H072203	287		24.0	200					
CB3H072203	288		23.5	110					
CB4H072203	289		23.5	120					
CW2J072203	283		23.0	750					
CW2H072203	290		23.0	240					
CW3H072203	291		22.0	570					

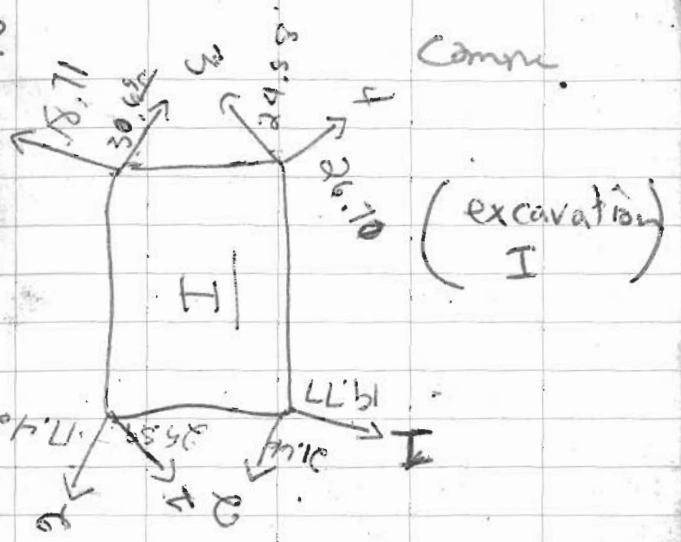
sample ID	temp (Jar)	FID temp	FID	wt (g)	Petro flag		Df	comments
CW1H072203 292	7.5	22.0	170	5.04	<40		20	
PIJ 072303 307	22	22.5	1500	5.04	95	1900	20	
PC1G 072303 308	22	22.0	2400	5.03	346	6920	20	
PI1J 072303 309	22.5	22.5	1000	5.01	312	6240	20	
PF1J 072303 310	22.5	22.5	1450	5.00	346	6920	20	
CB2G072103 272	19.5			5.01	146	2920	20	
CB3G072103 273	20.0			5.02	96	1920	20	
CB4G072103 274	20.0			5.00	107	2140	20	
CB5G072103 275	19.5			~~5.02~~	~~<40~~	1600	20	
CW1G072103 276	20.5			5.04	402	8040	20	
CW2G072103 277	20.5			5.09	304	6080	20	
CB1J072103 278	20.0			5.07	93	1860	20	
CB2J072103 279	20.5			5.06	33	660	20	
~~DSJ072303 308~~								
PI1J072303 311		22.0	3450					
PF1J072303 312		21.5	5500					
PI1J072303 313		24.5	1100					
PF1J072303 314		24.5	980					
PC1J072403 315		24.5	2950					after mix 1' ~~pile~~
PI2J072403 316		24.5	2800					
PF2J072403 317		24.0	2950					
DSJ072403 318	8.5	24.0	4050					Descret sample from "oily" soil
PI2J072403 319		24.5	3300					
PF2J072403 320		24.5	<1400					

Excavation of I

I1 - 1.5 m down West side
I2 - 1.3 m down East side
I3 = I2 - 2.15 m



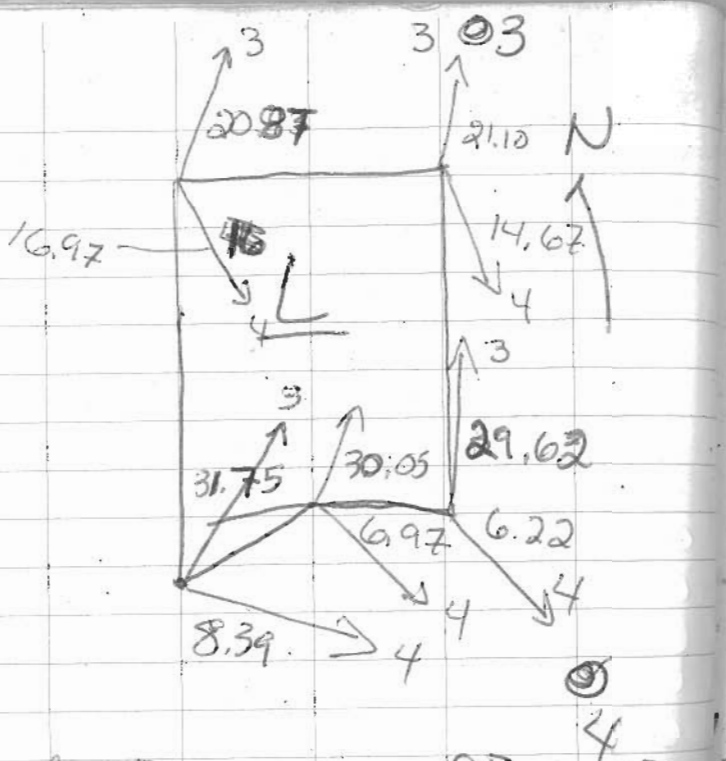
sample ID		Jar Temp	FID temp.	FID	
EI 072503	321	25.0	2600	NW	
EI 072503	322	23.5	660	NE	
EI 072503	323	23.5	1300	SE	
EI 072503	324	20.5	430	SW	
PI 072703	325	7.5	26	3150	
CB1I 072703	326	7.5	23	4140	
CB2I "	327	6.0	22.5	610	
CB3I "	328	7.5	23	1350	
CB4I "	329	8.5	22	6040	
CW1I "	330	9.0	24.5	3500	
CW2I "	331	9.0	27	2750	
EI 072503	321	7.5	25	2600	
DSI 072403	318B	8.5	24.0	4050	
DSI 072403	318A	8.5	24.0	4050	
PI2G 072703	332		20	5000	
PF2G 072703	333		19.5	3800	
PI2G 072703	334		25.0	5850	
PF2G 072703	335		21.5	2350	
~~PF2G 072703~~	~~336~~				

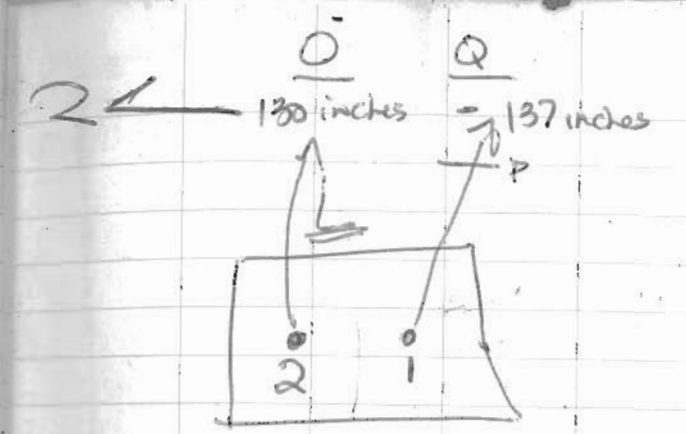


wt.	Petro flag	actual	DL	comments
5.01	199	3980	40	Pile initial
5.03	10	200	20×2	NW
5.02	37	740	20×2	NE
5.05	30	600	20×2	SE
5.07	4	80	20×2	SW
4.99	291	5820	20×2	E side Nimall
4.97	140	2800	20×2	W side Nimall
5.02	69	1380	20×2	
10.06	567	5670	10×2	5,830 Dilution kit
1.01	1466	14660	10	11,460 No kit

sample ID		Can temp	~~Retr~~ FID temp	FID	wt (grams)	Retro flag	corrected value	DF	comments
PFIG072703	336	~~2.5~~	23.5	2150	0.99	1199	11,990	10	
PIIO72803	338		22.5	3150	~~0.99~~				
PFIO72803	338		23.0	5250					
DSJ072403	318	/	/	/	1.02	1326	13,260	10	
DSJ072403	318	/	/	/					
PIIO72803	339		25.5	8550					
PFIO72803	340		25.5	5700					
confirmatory.									
PIHO72203	298	6.0			1.0	290	2900	10	petroflag
PFHO72203	301	6.5			1.0	615	6150	10	scale
PIGO72303	302	7.0			1.0	1190	11,900	10	"
PF2GO72303	306	7.0			1.0	1170	11,700	10	"
CB3IO72703	328	7.0			1.0	76	760	10	"
CWIIO72703	330	7.0			1.0	837	8370	10	"
~~PF2I~~ PCI	341		25.5	970					
~~PF2I~~ PI2I[28]	342		25.0	1450					1450
~~PI2I~~ PF2I[28]	343		25.0	1200					1200
~~PF2I~~ PI2I[29]	344		25.0	2050					2050
~~PFI~~ PF2I[29]	345		25.0	1650					1650
PFI	346		20.0	1750					
EL072903	347	8.5	22.0	1450	1.00	225	2250	10	NW
EL072903	348	8.5	23.0	2650	0.99	707	7070	10	NE
EL072903	349		20.5	650					SE
EL072903	350		25.0	640					SW
EL072903	351	8.5	22.0	2800	0.99	825	8250	10	5 wall

326- 331



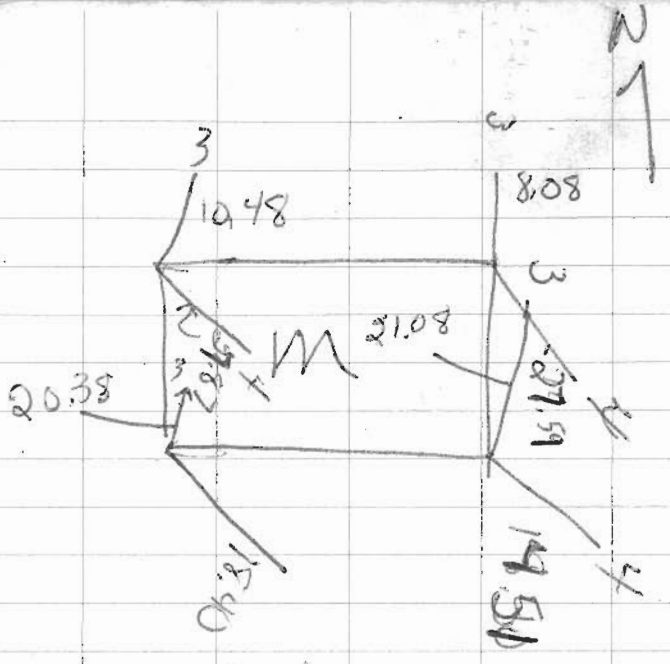


Sample ID		Jar temp	AD temp	FID	wt.	Retrofitting corrected	D.L.	Comments
EM080203	352	7.5	23.0	7800	1.00	208	10	NW
EM080203	353		23.5	1800				NE
EM080203	354		25.0	2200				SE
EM080203	355		23.0	1850				SW
EM080203	356		24.0	[illegible]				N wall
PIM080203	357	6.0	24.0	9250	1.00	496		Initial M Pile
PIL080203	358	6.5	23.0	3400	1.03	1276		Initial L Pile
PIL080203	359		23.0	8100	~~1.03~~			1/3
PFL080203	360		23.0	5150				1/3
PIL080203	361		22.5	7550				2/3
PFL080203	362		22.5	6150				2/3

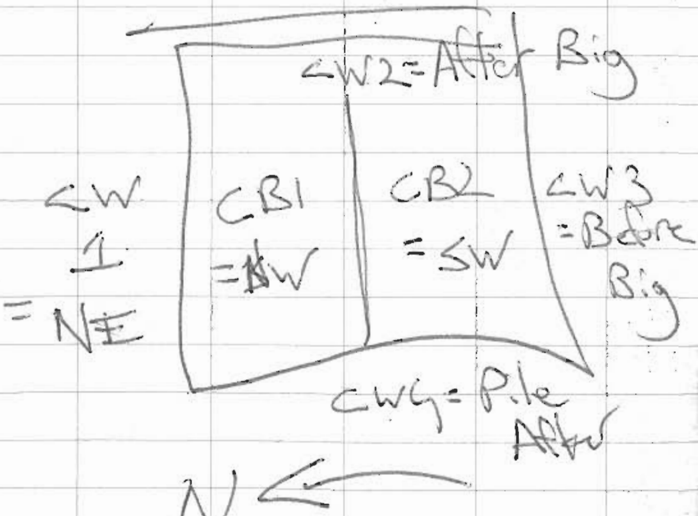
		Jar temp	FID temp	FID	wt.	Retro flas Reading	Actual	DF	Comments
PC LO80203	363	18.5	21.5	6500	0.99	2244	22,440	10	pile after 1 sift
CB1 LO80203	364	17.5	21.5	900	0.98	759	7590	10	NW
CB2 LO80203	365	18.5	22.0	1200	1.03	723	7230	10	NE
CB3 LO80203	366	17.5	22.0	180	0.96	135	1350	10	SE
CB4 LO80203	367	17.0	20.0	100	1.04	157	1570	10	SW
CW1 LO80203	368	18.0	20.0	3750	1.01	1291	12,910	10	South wall
PI 1 MO80203	369		23.0	1800					1/3
PF 1 MO80203	370		20.0	1700					1/3
PI 1 MO80303	371		20.0	2500					2/3
PF 1 MO80303	372		20.0	2300					2/3
CB1 MO80303	373	~~20.~~ 7.5	21.0	6500	1.02	186	1860		NW
CB2 MO80303	374	8.0	22.5	960	1.04	61	610		NE
CB3 MO80303	375	7.5	23.5	1350	1.01	304	3040		SE
CB4 MO80303	376	8.0	22.5	6400	1.03	466	4660		SW
CW1 MO80303	377	8.0	22.0	5500	1.01	639	6390		N wall
PI 2 LO80303	378		23.0	5050					1/3
PF 2 LO80303	379		22.5	3550					1/3
PI 2 LO80303	380		~~22.5~~ 20.5	8150					2/3
PF 2 LO80303	381		20.0	6900					2/3
PC 2 LO80303	382	8.0	20.0	6050	1.01	1598	15980		pile after 2 sift
PC 1 MO80303	383		20.0	3050					pile after 1 sift
PI 3 LO80303	384		22.0	1450					1/3
PF 3 LO80303	385		22.0	2550					1/3
PI 3 LO80303	386		22.0	2350					2/3
PF 3 LO80303	387		22.0	1600					2/3

W

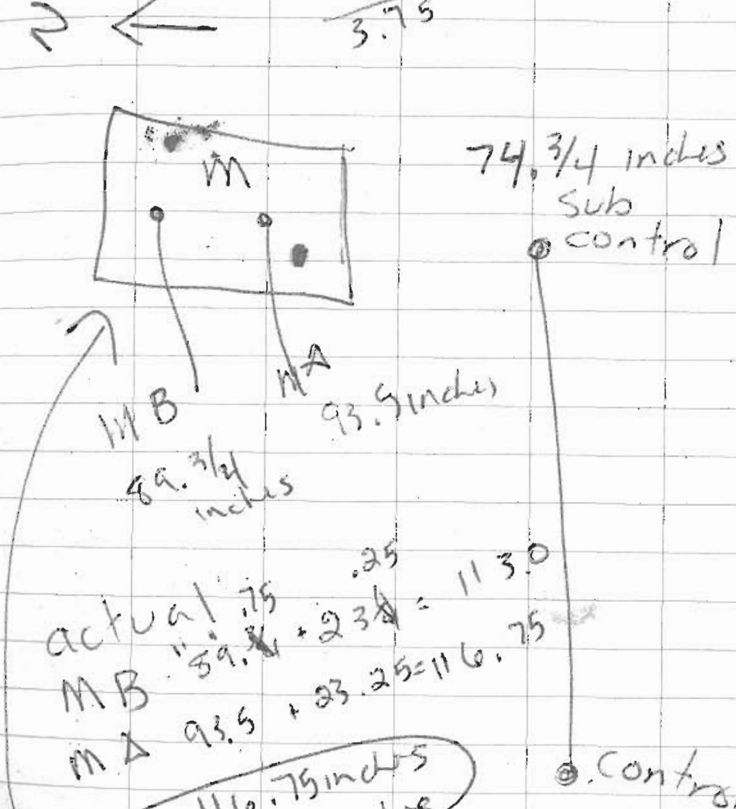
Sample ID		Jar temp	FID temp	FID	Wt.	Petroflas		DF	comments
PFL080303	389		22.0	2050	0.98	1280			
B1 45-60					1	32	320	10	Petro flag scale
B1 60-75					.5	468	~~4680~~ 9360	20	
B1 60-75					1	1230	12300	10	
B1 75-100					.5	675	13500	20	
B1 75-100					1	1000	10000	10	
TPN-1 28					1.00	1291	12910	10	
TPN-2 42					0.99	1210	12100	10	
TPN-3 38					0.99	2348	23480	10	
TPN-4 pile					1.01	759	7590	10	
TPN-3 38					.99	1046	20,920	20	
TPN-2 42					.99	539	10,780	20	
TPN-4 pile					1.01	393	7860	20	
TPN-3 38					.5	1780	35,600	20	
CW1N080503	395	6.5	22	2600	1.00	586			S wall N
P1M080403	390	5.0	22	2100	1.02	906			Initial Pile
CB1N080403	391	7.0	22	740	1.02	23			NW
CB2N080403	392	6.0	22	800	1.03	55			NE
CB3N080403	393	7.5	22	5850	1.02	724			SE
CB4N080403	394	5.5	22	9150	0.99	349			SW
E0080503	396		23	+11,000					6ft North
E0080503	397		24	2250					6ft Rep 1L
E0080503	398	4.5			1.0	242	HC 76 inches		8.5 ft
E0080503	399	4.5			1.0	31	start at		11.5 ft U, 5 inches South



Cell K8



93.50
89.75
3.75



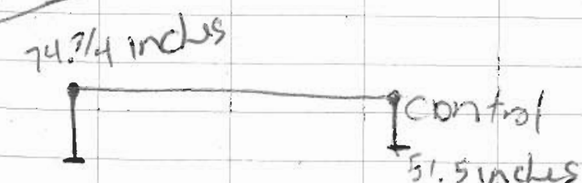
actual

MB 89.75 + 23.25 = 113.0

MA 93.5 + 23.25 = 116.75

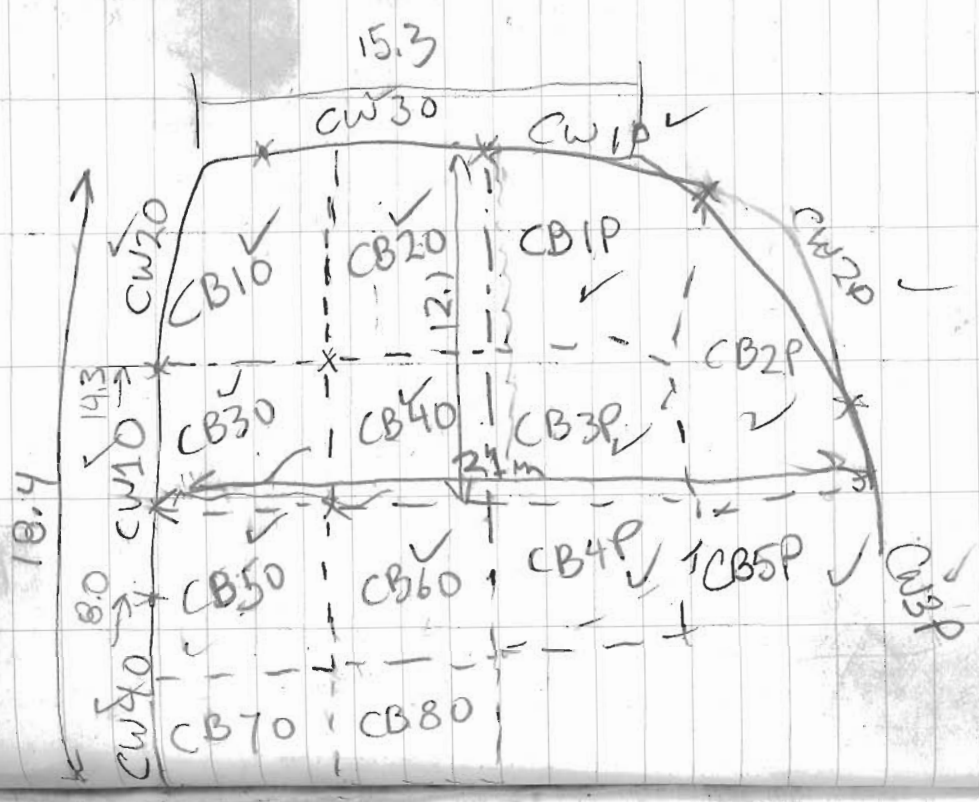
MA = 116.75 inches

MB = 113.0 inches



74 1/4 - 51 1/2 = 23 1/4

2003-8-7


15.3
CW30
CW10
CW20
CB10
CB20
CB1P
CW20
12.1
CB2P
14.3
CB30
CB40
CB3P
CW10
18.4
CB50
CB60
CB4P
CB5P
CW30
8.0
CW40
CB70
CB80


25.4
25.9m
20.0
14.10m
30.4m
32.1
Cell P
Cell O
Cell N
Cell M
Cell L
(4)
Rw = 11 or 14
(3)

		JAR TEMP	FW TEMP	FW READING	WEIGHT	PETRO FLAG	Df	Actual weight			
CW10	400		21.5°	6200	1.03	885	10	8850			
CW20	401		21.5°	380	1.00	50	10	500			
CW30	402		21°	290	1.00	62	10	620			
CW40	403		20°	4900	1.01	863	10	8630			
CB10	404		21°	6000	1.03	508	10	508			
CB20	405		20°	1650	1.01	286	10	2860			
CB30	406		21.5°	1750	1.00	60	10	600			
CB40	407		21°	570	1.01	179					
CB50	408		20.5	2050	1.0	157					
CB60	409		20.5	1100	1.01	208					
CW1P	410		22°	460	1.01	73	10	730			
CW2P	411		20.5°	1550	1.0	1488	10	14880	.50	572	11,440
CW3P	412		20.5°	7800	1.01	96	10	960	.50	291	5,820
CB1P	413		25°	1200	1.02	88	10	880			
CB2P	414		24°	4300	1.02	87	10	870			
CB3P	415		22°	990	.99	122	10	1220			
CB4P	416		22°	990	1.02	569	10	5690			
CB5P	417		22°	4100	.99	120	10	1200			

		FID Temp	FID Reading
~~FK 080803~~	418	29	8100
~~FK 080803~~	419	24	+11000
~~FK CW1 080803~~	420	29	4100
CW2 080803	421	22	+11000
CW3 080803	422	26	+11000
CW4 080803	423	22	6300
CB1 080803	424	24	3800
CB2 080803	425	25	1080
Land Farm	426	22	50
PI PIN 080903	427	31	2100
PI O 080903	428	29	9150

Weight	16:30	Petro Flag
0.77	1:30	730
0.61	10:00	524
0.56	2:30	360
0.80	4:30	725
0.93	12	108
0.97	8:00	97

Well Pipes
24 x 2" @ ≈ 150cm
10 x Perf.
14 x Reg (No Perf.

Water & Hole Depths

	Water Depth	Hole Depth	Free Prod.	Pipe Height
MW8	187	229	No	33.0
MW7	148	196	No	18.5
IW35	169.5	~~300~~ 298.5	Yes 169	54.5
IW36	144.3	174.6	No	43.5
IW47	130	247	No	56.5
RW14	No	153	No	47.0
RW18	No	126	No	48
RW21	No	153	No	33.5
RW22	No	166.5	No	39
MW2	No	202.5	No	45
MW19	No	176.5	No	65.5
MW12	No	182	No	52
MW4	234	~~250~~ 249	No	51
MW5	No	287	No	106.4
RW4	188	250	No	43
IW34	234.1	235.5	No	53.5

198 213.5 NA 156 300

(1) Borehole Log

0-1.0m Silt / trace organic roots / moist / ~~brown~~ / trace clay

1.0-2.2m gray / silty clay ~~dark brown~~ gray / wet

2.2m-3.4m ~~silty clay~~ clayly silt / wet

(2)

0-1.2m Silt / trace organics roots / moist gray / little brown

1.2-2.4m clayly silt / wet dark gray

2.4-3.0 clayly silt / wet dark gray

(3)

0-1.0m Silt / organic roots ~~brown~~ / moist

1.0-2.0m silt / ~~wet~~ brown / gray

2.0-3.0m silt / wet ~~brown~~ gray / brown

(4)

0-1.0m Silt / Organic roots brown / gray Dry

1.0m-2.2m Silt / gray moist

2.2-3.4 silt / gray / wet

Location	Reading	101.162 Instrument Height
BM	1.162	
RW4	1.408	
Background		
LT3		
LT2		
LT1		
IW35		
IW47		
MW17		
MW8		

	Reading	Instrument Height	Back Sight	Elevation	
BM	1.162	101.162		100	
RW4 (TP 1)	1.408	~~100.897~~	-0.256	100.01	
LT4	~~[illegible]~~ 1.606		~~-.442~~ ~~-0.398~~		~~[illegible]~~ / 140.8

Well		Reading	Instrument Height	Back Sight	Elevation	
BM		~~1.442~~ 1.442	101.442		100	
TP1		1.776	101.192	1.526	99.666	
RW4	GS	1.706			99.486	
	TOC	1.260			99.932	
LT4	GS	1.490			99.702	
	TOC	0.800			100.392	Read - IH = Ele
TP2		1.306	100.946	1.090	99.886	Ele + BS = IH (New
LT3	GS	2.110			98.836	
	TOC	1.328			99.618	
LT2	GS	2.782			98.164	
	TOC	1.996			98.95	
IW47	GS	2.738			98.208	
	TOC	2.206			98.740	
LT1	GS	2.69			98.256	
	TOC	1.95			98.996	
IW35	GS	2.634			98.312	
		2.086			98.86	
MW17	GS	2.570			98.376	
	TOC	2.340			98.606	
MW8	GS	2.000			98.946	
	TOC	1.678			99.268	
TP3		1.02	101.522	1.596	99.926	
BM		1.536				

LW2

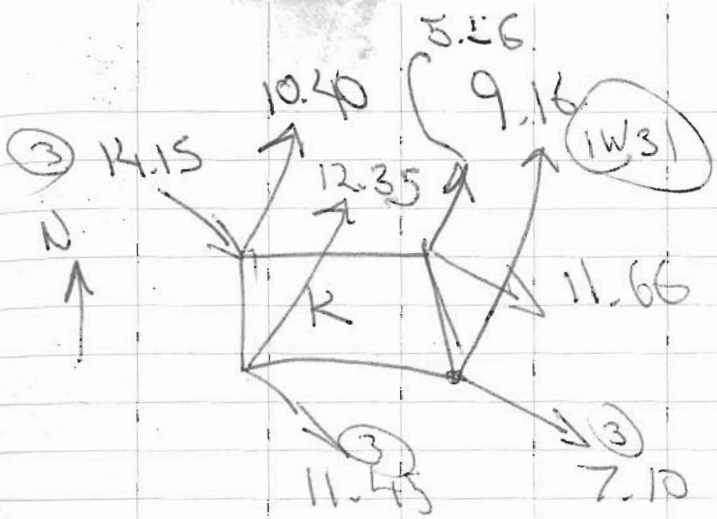
IW36 → LW2 = 6.99m
IW47 → LW2 = 10.80m

LW1

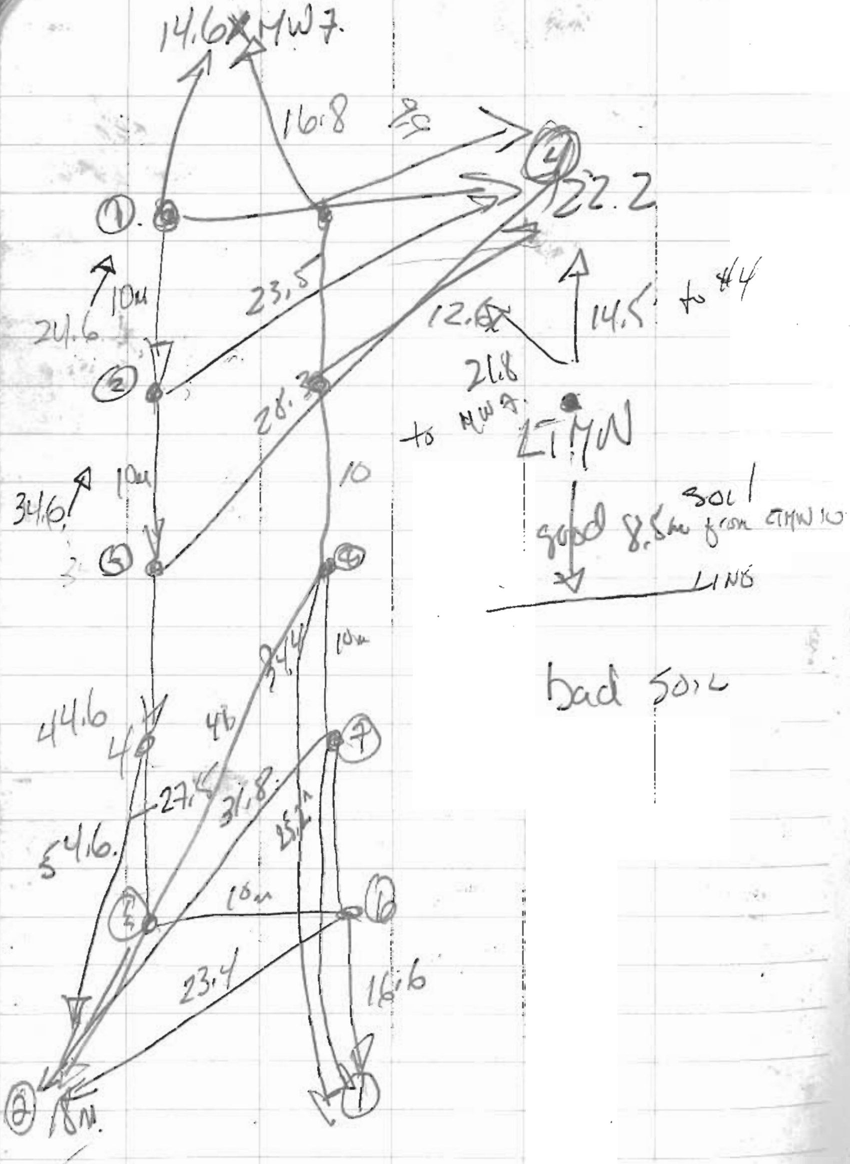
IW36 → LW1 = 7.53m
IW35 → LW1 = 7.98m

RW16 → LW3 = 21.79m
RW18 → LW3 = 2.20m

RW2 → LW4 = 22.74m
RW3 → LW4 = 14.89m



	FID	WEIGHT	PETRO	TBY
CF1	150	.99	132	40
CF2	530	.99	226	42
CF3	450	.99	326	44
CF4	560	1.00	299	38
CF5	310	1.02	364	
CF6	140	1.01	400	26
CF7	460	1.00	344.	40
CF8	250	1.01	242	38
CF9	440	.99	187	40
CF10	210	1.0	223.	40



14.6
MW7
16.8
22.2
23.5
10m
24.6
12.6
14.5 to #4
21.8
to MW7
CTMW
10m
34.6
10
soil
good 8.5m from CTMW10
LINE
10m
44.6
46
27.4
31.8
54.6
10m
bad soil
23.4
16.6
18M

Appendix F
Analytical Results

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
BAY R 1338-36 AVE NE
CALGARY, AB
CANADA T2E 6T6

Attention: KURT KURE

Report Date: 2003/07/18

Your P.O. #: 2698
Your Project #: 5435-03
Site: EXCAVATION

ANALYTICAL REPORT

MAXXAM JOB #: A312963
Received: 2003/07/15, 10:00

Sample Matrix: Soil
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX (MSD)	12	2003/07/15	2003/07/16	CAL SOP# 0048 E1034R4	GC/MS-PURGE & TRA
Moisture (ccme)	12	2003/07/17	2003/07/17	CAL SOP# 0028	GRAVIMETRIC
Gravimetric Heavy Hydrocarbon (F4G)	12	N/A	2003/07/16	CAL SOP# 0065	CCME
F1 (CCME Hydrocarbons C6-C10)	12	2003/07/15	2003/07/15	CAL SOP# 0066	CCME
Particle Size by Wet Sieve (75 micron)	12	2003/07/17	2003/07/17	CAL SOP# 0104	GRAVIMETRIC
F2 - F4 (CCME Hydrocarbons)	12	2003/07/15	2003/07/16	CAL SOP# 0066	CCME

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

AM/ls1
encl.

Total Cover pages: 1

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071203-29	Maxxam Sample Number	:	458041
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	23	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	28	%	SIEV	31472	0.01	0.02
Sieve - Pan	72	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071203-29	Maxxam Sample Number	:	458041
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1100	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	21000	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	700	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	160	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	(931)	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071203-29	Maxxam Sample Number	:	458041
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.07	mg/kg	80.0 TO 80.0	31270	0.03	0.06
Purgeable (MeOH) Toluene	1.65	mg/kg	111.0 TO 111.0	31270	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.36	mg/kg	136.0 TO 136.0	31270	0.03	0.06
Purgeable (MeOH) m & p-Xylene	27.0	mg/kg	139.0 TO 139.0	31270	0.07	0.14
Purgeable (MeOH) o-Xylene	32.0	mg/kg	144.0 TO 144.0	31270	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	114	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-118	Maxxam Sample Number	:	458042
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	16	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	31	%	SIEV	31472	0.01	0.02
Sieve - Pan	69	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

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Sample Description	:	071303-118	Maxxam Sample Number	:	458042
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1800	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	3500	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	280	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	90	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	(586)	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.31	mg/kg	80.0 TO 80.0	31270	0.03	0.06
Purgeable (MeOH) Toluene	1.13	mg/kg	111.0 TO 111.0	31270	0.03	0.06
Purgeable (MeOH) Ethylbenzene	4.77	mg/kg	136.0 TO 136.0	31270	0.03	0.06
Purgeable (MeOH) m & p-Xylene	105	mg/kg	139.0 TO 139.0	31270	0.06	0.12
Purgeable (MeOH) o-Xylene	59.1	mg/kg	144.0 TO 144.0	31270	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	104	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071203-33	Maxxam Sample Number	:	458043
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	17	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	35	%	SIEV	31472	0.01	0.02
Sieve - Pan	65	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Sample Description	:	071203-33	Maxxam Sample Number	:	458043
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	3100	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	15000	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	100	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Sample Description	:	071203-33	Maxxam Sample Number	:	458043
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.66	mg/kg	80.0 TO 80.0	31270	0.03	0.06
Purgeable (MeOH) Toluene	0.16	mg/kg	111.0 TO 111.0	31270	0.03	0.06
Purgeable (MeOH) Ethylbenzene	23.2	mg/kg	136.0 TO 136.0	31270	0.03	0.06
Purgeable (MeOH) m & p-Xylene	40.6	mg/kg	139.0 TO 139.0	31270	0.06	0.12
Purgeable (MeOH) o-Xylene	2.63	mg/kg	144.0 TO 144.0	31270	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	94	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071203-42	Maxxam Sample Number	:	458044
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	20	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	14	%	SIEV	31472	0.01	0.02
Sieve - Pan	86	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
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Sample Description	:	071203-42	Maxxam Sample Number	:	458044
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1600	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	13000	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	110	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Sample Description	:	071203-42	Maxxam Sample Number	:	458044
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.04)	mg/kg	80.0 TO 80.0	31270	0.03	0.06
Purgeable (MeOH) Toluene	(0.05)	mg/kg	111.0 TO 111.0	31270	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.92	mg/kg	136.0 TO 136.0	31270	0.03	0.06
Purgeable (MeOH) m & p-Xylene	5.50	mg/kg	139.0 TO 139.0	31270	0.06	0.12
Purgeable (MeOH) o-Xylene	2.81	mg/kg	144.0 TO 144.0	31270	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	104	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Site Reference: EXCAVATION

Sample Description	:	071203-41	Maxxam Sample Number	:	458045
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	14	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	29	%	SIEV	31472	0.01	0.02
Sieve - Pan	71	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
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Sample Description	:	071203-41	Maxxam Sample Number	:	458045
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2400	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	4000	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	85	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Sample Description	:	071203-41	Maxxam Sample Number	:	458045
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.03	mg/kg	80.0 TO 80.0	31270	0.03	0.06
Purgeable (MeOH) Toluene	<0.03	mg/kg	111.0 TO 111.0	31270	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.14	mg/kg	136.0 TO 136.0	31270	0.03	0.06
Purgeable (MeOH) m & p-Xylene	73.6	mg/kg	139.0 TO 139.0	31270	0.06	0.12
Purgeable (MeOH) o-Xylene	145	mg/kg	144.0 TO 144.0	31270	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-119	Maxxam Sample Number	:	458046
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	20	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	13	%	SIEV	31472	0.01	0.02
Sieve - Pan	87	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Sample Description	:	071303-119	Maxxam Sample Number	:	458046
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	270	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	1300	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	210	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Sample Description	:	071303-119	Maxxam Sample Number	:	458046
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.08	mg/kg	80.0 TO 80.0	31270	0.03	0.06
Purgeable (MeOH) Toluene	0.15	mg/kg	111.0 TO 111.0	31270	0.03	0.06
Purgeable (MeOH) Ethylbenzene	1.41	mg/kg	136.0 TO 136.0	31270	0.03	0.06
Purgeable (MeOH) m & p-Xylene	15.4	mg/kg	139.0 TO 139.0	31270	0.06	0.12
Purgeable (MeOH) o-Xylene	10.2	mg/kg	144.0 TO 144.0	31270	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	102	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071203-68	Maxxam Sample Number	:	458047
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	17	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	21	%	SIEV	31472	0.01	0.02
Sieve - Pan	79	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071203-68	Maxxam Sample Number	:	458047
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	250	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	980	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	120	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071203-68	Maxxam Sample Number	:	458047
Sample Date & Time	:	2003/07/12	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.03	mg/kg	80.0 TO 80.0	31270	0.03	0.06
Purgeable (MeOH) Toluene	0.71	mg/kg	111.0 TO 111.0	31270	0.03	0.06
Purgeable (MeOH) Ethylbenzene	1.83	mg/kg	136.0 TO 136.0	31270	0.03	0.06
Purgeable (MeOH) m & p-Xylene	26.3	mg/kg	139.0 TO 139.0	31270	0.06	0.12
Purgeable (MeOH) o-Xylene	20.4	mg/kg	144.0 TO 144.0	31270	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-102	Maxxam Sample Number	:	458048
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	23	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	1.3	%	SIEV	31472	0.01	0.02
Sieve - Pan	99	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-102	Maxxam Sample Number	:	458048
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	60	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	43	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	<10	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-102	Maxxam Sample Number	:	458048
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.35	mg/kg	80.0 TO 80.0	31270	0.03	0.06
Purgeable (MeOH) Toluene	2.48	mg/kg	111.0 TO 111.0	31270	0.03	0.06
Purgeable (MeOH) Ethylbenzene	1.88	mg/kg	136.0 TO 136.0	31270	0.03	0.06
Purgeable (MeOH) m & p-Xylene	14.7	mg/kg	139.0 TO 139.0	31270	0.07	0.14
Purgeable (MeOH) o-Xylene	5.51	mg/kg	144.0 TO 144.0	31270	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	107	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-97	Maxxam Sample Number	:	458049
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	21	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	2.9	%	SIEV	31472	0.01	0.02
Sieve - Pan	97	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-97	Maxxam Sample Number	:	458049
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	<10	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	<5	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	<10	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-97	Maxxam Sample Number	:	458049
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.04)	mg/kg	80.0 TO 80.0	31270	0.03	0.06
Purgeable (MeOH) Toluene	0.08	mg/kg	111.0 TO 111.0	31270	0.03	0.06
Purgeable (MeOH) Ethylbenzene	(0.05)	mg/kg	136.0 TO 136.0	31270	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.51	mg/kg	139.0 TO 139.0	31270	0.06	0.12
Purgeable (MeOH) o-Xylene	0.33	mg/kg	144.0 TO 144.0	31270	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	100	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-121	Maxxam Sample Number	:	458050
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	19	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	19	%	SIEV	31472	0.01	0.02
Sieve - Pan	81	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description : 071303-121
Sample Date & Time : 2003/07/13
Sampled By : MJ
Sample Type : Grab
Sample Received Date: 2003/07/15
Sample Station Code :

Maxxam Sample Number : 458050
Maxxam Job Number : CA312963
Sample Access :
Sample Matrix : Soil
Report Date : 2003/07/18

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	38	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	310	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	250	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	81	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	(551)	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-121	Maxxam Sample Number	:	458050
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.03	mg/kg	80.0 TO 80.0	31270	0.03	0.06
Purgeable (MeOH) Toluene	<0.03	mg/kg	111.0 TO 111.0	31270	0.03	0.06
Purgeable (MeOH) Ethylbenzene	<0.03	mg/kg	136.0 TO 136.0	31270	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.36	mg/kg	139.0 TO 139.0	31270	0.06	0.12
Purgeable (MeOH) o-Xylene	0.47	mg/kg	144.0 TO 144.0	31270	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	107	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-20	Maxxam Sample Number	:	458054
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	19	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	21	%	SIEV	31472	0.01	0.02
Sieve - Pan	79	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-20	Maxxam Sample Number	:	458054
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	47	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	460	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	47	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-20	Maxxam Sample Number	:	458054
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.03	mg/kg	80.0 TO 80.0	31270	0.03	0.06
Purgeable (MeOH) Toluene	<0.03	mg/kg	111.0 TO 111.0	31270	0.03	0.06
Purgeable (MeOH) Ethylbenzene	<0.03	mg/kg	136.0 TO 136.0	31270	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.40	mg/kg	139.0 TO 139.0	31270	0.06	0.12
Purgeable (MeOH) o-Xylene	0.57	mg/kg	144.0 TO 144.0	31270	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	108	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

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Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-99	Maxxam Sample Number	:	458055
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	27	%	BAL	31472	1	2
Sieve - #200 (>0.075mm -TS)	31	%	SIEV	31472	0.01	0.02
Sieve - Pan	69	%	SIEV	31472	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-99	Maxxam Sample Number	:	458055
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2600	mg/kg	GC/FID	31269	10	20
F2 (C10-C16 Hydrocarbons)	15000	mg/kg	GC/FID	31290	5	10
F3 (C16-C34 Hydrocarbons)	250	mg/kg	GC/FID	31290	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31290	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31291	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31290	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Sample Description	:	071303-99	Maxxam Sample Number	:	458055
Sample Date & Time	:	2003/07/13	Maxxam Job Number	:	CA312963
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/15	Report Date	:	2003/07/18
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	2.9	mg/kg	80.0 TO 80.0	31270	0.4	0.8
Purgeable (MeOH) Toluene	(0.5)	mg/kg	111.0 TO 111.0	31270	0.4	0.8
Purgeable (MeOH) Ethylbenzene	20.3	mg/kg	136.0 TO 136.0	31270	0.4	0.8
Purgeable (MeOH) m & p-Xylene	192	mg/kg	139.0 TO 139.0	31270	0.7	1.4
Purgeable (MeOH) o-Xylene	111	mg/kg	144.0 TO 144.0	31270	0.4	0.8
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	109	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #: 2698
Site Reference: EXCAVATION

Quality Assurance Report

Maxxam Job Number: CA312963

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QCLimits
312699	OJ	Calibration Check	F1 (C06-C10) - BTEX	2003/07/15		100	%	85 - 115
		QC STANDARD	F1 (C06-C10) - BTEX	2003/07/15		101	%	80 - 120
		SPIKE	F1 (C06-C10) - BTEX	2003/07/15		95	%	80 - 120
		BLANK	F1 (C06-C10) - BTEX	2003/07/15	<12		mg/kg	
		RPD	F1 (C06-C10) - BTEX	2003/07/15	NC		%	N/A
312700	SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/07/16		100	%	85 - 115
			Purgeable (MeOH) Toluene	2003/07/16		95	%	85 - 115
			Purgeable (MeOH) Ethylbenzene	2003/07/16		94	%	85 - 115
			Purgeable (MeOH) m & p-Xylene	2003/07/16		107	%	85 - 115
			Purgeable (MeOH) o-Xylene	2003/07/16		102	%	85 - 115
		SPIKE	Purgeable (MeOH) Benzene	2003/07/16		112	%	75 - 125
			Purgeable (MeOH) Toluene	2003/07/16		107	%	75 - 125
			Purgeable (MeOH) Ethylbenzene	2003/07/16		89	%	75 - 125
			Purgeable (MeOH) m & p-Xylene	2003/07/16		97	%	75 - 125
			Purgeable (MeOH) o-Xylene	2003/07/16		100	%	75 - 125
		BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/07/16		103	%	
			Purgeable (MeOH) Benzene	2003/07/16	<0.03		mg/kg	
			Purgeable (MeOH) Toluene	2003/07/16	<0.03		mg/kg	
			Purgeable (MeOH) Ethylbenzene	2003/07/16	<0.03		mg/kg	
			Purgeable (MeOH) m & p-Xylene	2003/07/16	<0.05		mg/kg	
			Purgeable (MeOH) o-Xylene	2003/07/16	<0.03		mg/kg	
		RPD	Purgeable (MeOH) Benzene	2003/07/16	NC		%	N/A
			Purgeable (MeOH) Toluene	2003/07/16	15.9		%	N/A
			Purgeable (MeOH) Ethylbenzene	2003/07/16	33.4		%	N/A
			Purgeable (MeOH) m & p-Xylene	2003/07/16	9.7		%	N/A
			Purgeable (MeOH) o-Xylene	2003/07/16	0.6		%	N/A
312906	VM	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/07/16		86	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/07/16		88	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/07/16		86	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/07/16		73	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/16		86	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/16		94	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/07/16		92	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/16		85	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/16		91	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/07/16	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/07/16	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/07/16	<8		mg/kg	
			Reached Baseline at C50	2003/07/16	YES		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2003/07/16	21.8		%	N/A
			F3 (C16-C34 Hydrocarbons)	2003/07/16	21.6		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/07/16	NC		%	N/A
			Reached Baseline at C50	2003/07/16	NC		%	N/A
312915	LC2	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/07/16	<500		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/07/16	NC		%	N/A
314720	RC	RPD	Moisture	2003/07/17	3.4		%	N/A
			Moisture	2003/07/17	2.6		%	N/A

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
BAY R 1338-36 AVE NE
CALGARY, AB
CANADA T2E 6T6

Attention: KURT KURE

Report Date: 2003/07/28

Your P.O. #: 2914
Your Project #: 5435-03, SHELL WEST CHANNEL
Site: NEAR AKLAVIK NWT

ANALYTICAL REPORT

MAXXAM JOB #: A313734
Received: 2003/07/22, 11:00

Sample Matrix: Soil
Samples Received: 25

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX (MSD)	24	2003/07/22	2003/07/26	CAL SOP# 0048 E1034R4	GC/MS-PURGE & TRAI
BTEX (MSD)	1	2003/07/24	2003/07/25	CAL SOP# 0048 E1034R4	GC/MS-PURGE & TRAI
Moisture (ccme)	24	2003/07/25	2003/07/25	CAL SOP# 0028	GRAVIMETRIC
Moisture (ccme)	1	2003/07/28	2003/07/28	CAL SOP# 0028	GRAVIMETRIC
Gravimetric Heavy Hydrocarbon (F4G)	12	N/A	2003/07/19	CAL SOP# 0065	CCME
Gravimetric Heavy Hydrocarbon (F4G)	12	N/A	2003/07/25	CAL SOP# 0065	CCME
Gravimetric Heavy Hydrocarbon (F4G)	1	N/A	2003/07/26	CAL SOP# 0065	CCME
F1 (CCME Hydrocarbons C6-C10)	24	2003/07/22	2003/07/25	CAL SOP# 0066	CCME
F1 (CCME Hydrocarbons C6-C10)	1	2003/07/24	2003/07/25	CAL SOP# 0066	CCME
Particle Size by Wet Sieve (75 micron)	25	2003/07/28	2003/07/28	CAL SOP# 0104	GRAVIMETRIC
F2 - F4 (CCME Hydrocarbons)	12	2003/07/24	2003/07/25	CAL SOP# 0066	CCME
F2 - F4 (CCME Hydrocarbons)	13	2003/07/25	2003/07/26	CAL SOP# 0066	CCME

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

AM/mc
encl.

Total Cover pages: 1

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EA071503-138	Maxxam Sample Number	:	462272
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	19	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	15	%	SIEV	322227	0.01	0.02
Sieve - Pan	85	%	SIEV	322227	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EA071503-138	Maxxam Sample Number	:	462272
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2000	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	9700	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	110	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318314	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EA071503-138	Maxxam Sample Number	:	462272
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	5.18	mg/kg	80.0 TO 80.0	318196	0.05	0.1
Purgeable (MeOH) Toluene	2.68	mg/kg	111.0 TO 111.0	318196	0.05	0.1
Purgeable (MeOH) Ethylbenzene	31.3	mg/kg	136.0 TO 136.0	318196	0.05	0.1
Purgeable (MeOH) m & p-Xylene	67.6	mg/kg	139.0 TO 139.0	318196	0.09	0.2
Purgeable (MeOH) o-Xylene	43.9	mg/kg	144.0 TO 144.0	318196	0.05	0.1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	101	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PI2A071503-164	Maxxam Sample Number	:	462273
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	16	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	23	%	SIEV	322227	0.01	0.02
Sieve - Pan	77	%	SIEV	322227	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PI2A071503-164	Maxxam Sample Number	:	462273
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2300	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	8100	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	44	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	318314	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PI2A071503-164	Maxxam Sample Number	:	462273
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.5	mg/kg	80.0 TO 80.0	318196	0.5	1
Purgeable (MeOH) Toluene	(0.8)	mg/kg	111.0 TO 111.0	318196	0.5	1
Purgeable (MeOH) Ethylbenzene	2.3	mg/kg	136.0 TO 136.0	318196	0.5	1
Purgeable (MeOH) m & p-Xylene	181	mg/kg	139.0 TO 139.0	318196	0.9	2
Purgeable (MeOH) o-Xylene	110	mg/kg	144.0 TO 144.0	318196	0.5	1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PF2A071503-165	Maxxam Sample Number	:	462274
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	18	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	20	%	SIEV	322227	0.01	0.02
Sieve - Pan	80	%	SIEV	322227	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PF2A071503-165	Maxxam Sample Number	:	462274
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1500	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	5200	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	80	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318314	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PF2A071503-165	Maxxam Sample Number	:	462274
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.2	mg/kg	80.0 TO 80.0	318196	0.2	0.4
Purgeable (MeOH) Toluene	<0.2	mg/kg	111.0 TO 111.0	318196	0.2	0.4
Purgeable (MeOH) Ethylbenzene	0.5	mg/kg	136.0 TO 136.0	318196	0.2	0.4
Purgeable (MeOH) m & p-Xylene	38.8	mg/kg	139.0 TO 139.0	318196	0.5	1
Purgeable (MeOH) o-Xylene	44.3	mg/kg	144.0 TO 144.0	318196	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PI4A071603-168	Maxxam Sample Number	:	462275
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	19	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	21	%	SIEV	322227	0.01	0.02
Sieve - Pan	79	%	SIEV	322227	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PI4A071603-168	Maxxam Sample Number	:	462275
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1600	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	7000	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	79	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318314	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PI4A071603-168	Maxxam Sample Number	:	462275
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.5	mg/kg	80.0 TO 80.0	318196	0.5	1
Purgeable (MeOH) Toluene	<0.5	mg/kg	111.0 TO 111.0	318196	0.5	1
Purgeable (MeOH) Ethylbenzene	(0.8)	mg/kg	136.0 TO 136.0	318196	0.5	1
Purgeable (MeOH) m & p-Xylene	92.9	mg/kg	139.0 TO 139.0	318196	1	2
Purgeable (MeOH) o-Xylene	63.2	mg/kg	144.0 TO 144.0	318196	0.5	1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PF4A071603-169	Maxxam Sample Number	:	462276
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	18	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	22	%	SIEV	322232	0.01	0.02
Sieve - Pan	78	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PF4A071603-169	Maxxam Sample Number	:	462276
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1600	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	6600	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	180	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318314	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PF4A071603-169	Maxxam Sample Number	:	462276
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.2	mg/kg	80.0 TO 80.0	318196	0.2	0.4
Purgeable (MeOH) Toluene	<0.2	mg/kg	111.0 TO 111.0	318196	0.2	0.4
Purgeable (MeOH) Ethylbenzene	0.4	mg/kg	136.0 TO 136.0	318196	0.2	0.4
Purgeable (MeOH) m & p-Xylene	56.1	mg/kg	139.0 TO 139.0	318196	0.5	1
Purgeable (MeOH) o-Xylene	56.1	mg/kg	144.0 TO 144.0	318196	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIA071603-161	Maxxam Sample Number	:	462277
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	18	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	20	%	SIEV	322232	0.01	0.02
Sieve - Pan	80	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIA071603-161	Maxxam Sample Number	:	462277
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2100	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	5200	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	130	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318314	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIA071603-161	Maxxam Sample Number	:	462277
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.5	mg/kg	80.0 TO 80.0	318196	0.5	1
Purgeable (MeOH) Toluene	<0.5	mg/kg	111.0 TO 111.0	318196	0.5	1
Purgeable (MeOH) Ethylbenzene	1.4	mg/kg	136.0 TO 136.0	318196	0.5	1
Purgeable (MeOH) m & p-Xylene	138	mg/kg	139.0 TO 139.0	318196	0.9	2
Purgeable (MeOH) o-Xylene	94.5	mg/kg	144.0 TO 144.0	318196	0.5	1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	100	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PFA071603-170	Maxxam Sample Number	:	462278
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	18	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	22	%	SIEV	322232	0.01	0.02
Sieve - Pan	78	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PFA071603-170	Maxxam Sample Number	:	462278
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1500	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	2100	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	140	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318314	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PFA071603-170	Maxxam Sample Number	:	462278
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.2	mg/kg	80.0 TO 80.0	318196	0.2	0.4
Purgeable (MeOH) Toluene	<0.2	mg/kg	111.0 TO 111.0	318196	0.2	0.4
Purgeable (MeOH) Ethylbenzene	(0.3)	mg/kg	136.0 TO 136.0	318196	0.2	0.4
Purgeable (MeOH) m & p-Xylene	47.1	mg/kg	139.0 TO 139.0	318196	0.5	1
Purgeable (MeOH) o-Xylene	53.5	mg/kg	144.0 TO 144.0	318196	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIA071603-173	Maxxam Sample Number	:	462279
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	22	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	16	%	SIEV	322232	0.01	0.02
Sieve - Pan	84	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIA071603-173	Maxxam Sample Number	:	462279
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1200	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	3600	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	160	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318314	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIA071603-173	Maxxam Sample Number	:	462279
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	6.6	mg/kg	80.0 TO 80.0	318196	0.2	0.4
Purgeable (MeOH) Toluene	2.0	mg/kg	111.0 TO 111.0	318196	0.2	0.4
Purgeable (MeOH) Ethylbenzene	16.5	mg/kg	136.0 TO 136.0	318196	0.2	0.4
Purgeable (MeOH) m & p-Xylene	43.0	mg/kg	139.0 TO 139.0	318196	0.4	0.8
Purgeable (MeOH) o-Xylene	20.7	mg/kg	144.0 TO 144.0	318196	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2A071603-174	Maxxam Sample Number	:	462280
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	19	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	23	%	SIEV	322232	0.01	0.02
Sieve - Pan	77	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2A071603-174	Maxxam Sample Number	:	462280
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2100	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	6900	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	160	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318314	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2A071603-174	Maxxam Sample Number	:	462280
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	4.1	mg/kg	80.0 TO 80.0	318196	0.3	0.6
Purgeable (MeOH) Toluene	9.8	mg/kg	111.0 TO 111.0	318196	0.3	0.6
Purgeable (MeOH) Ethylbenzene	24.4	mg/kg	136.0 TO 136.0	318196	0.3	0.6
Purgeable (MeOH) m & p-Xylene	99.6	mg/kg	139.0 TO 139.0	318196	0.6	1.2
Purgeable (MeOH) o-Xylene	46.5	mg/kg	144.0 TO 144.0	318196	0.3	0.6
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3A071603-175	Maxxam Sample Number	:	462281
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	21	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	22	%	SIEV	322232	0.01	0.02
Sieve - Pan	78	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3A071603-175	Maxxam Sample Number	:	462281
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2100	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	6200	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	140	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318314	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3A071603-175	Maxxam Sample Number	:	462281
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	10.9	mg/kg	80.0 TO 80.0	318196	0.5	1
Purgeable (MeOH) Toluene	23.8	mg/kg	111.0 TO 111.0	318196	0.5	1
Purgeable (MeOH) Ethylbenzene	34.1	mg/kg	136.0 TO 136.0	318196	0.5	1
Purgeable (MeOH) m & p-Xylene	128	mg/kg	139.0 TO 139.0	318196	0.9	2
Purgeable (MeOH) o-Xylene	61.3	mg/kg	144.0 TO 144.0	318196	0.5	1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	101	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB9A071603-176	Maxxam Sample Number	:	462282
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	23	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	22	%	SIEV	322232	0.01	0.02
Sieve - Pan	78	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB9A071603-176	Maxxam Sample Number	:	462282
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2000	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	8700	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	45	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318314	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB9A071603-176	Maxxam Sample Number	:	462282
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	10.6	mg/kg	80.0 TO 80.0	318196	0.5	1
Purgeable (MeOH) Toluene	18.0	mg/kg	111.0 TO 111.0	318196	0.5	1
Purgeable (MeOH) Ethylbenzene	43.0	mg/kg	136.0 TO 136.0	318196	0.5	1
Purgeable (MeOH) m & p-Xylene	136	mg/kg	139.0 TO 139.0	318196	1	2
Purgeable (MeOH) o-Xylene	71.1	mg/kg	144.0 TO 144.0	318196	0.5	1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CWA071603-178	Maxxam Sample Number	:	462283
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	20	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	22	%	SIEV	322232	0.01	0.02
Sieve - Pan	78	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CWA071603-178	Maxxam Sample Number	:	462283
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2400	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	58	mg/kg	GC/FID	318314	5	10
F3 (C16-C34 Hydrocarbons)	110	mg/kg	GC/FID	318314	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318314	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318316	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318314	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CWA071603-178	Maxxam Sample Number	:	462283
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	14.2	mg/kg	80.0 TO 80.0	318196	0.5	1
Purgeable (MeOH) Toluene	16.3	mg/kg	111.0 TO 111.0	318196	0.5	1
Purgeable (MeOH) Ethylbenzene	45.2	mg/kg	136.0 TO 136.0	318196	0.5	1
Purgeable (MeOH) m & p-Xylene	174	mg/kg	139.0 TO 139.0	318196	1	2
Purgeable (MeOH) o-Xylene	84.6	mg/kg	144.0 TO 144.0	318196	0.5	1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	100	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB5A071603-177	Maxxam Sample Number	:	462284
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	17	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	22	%	SIEV	322232	0.01	0.02
Sieve - Pan	78	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB5A071603-177	Maxxam Sample Number	:	462284
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	4000	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	24000	mg/kg	GC/FID	318317	5	10
F3 (C16-C34 Hydrocarbons)	400	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	(12)	mg/kg	GC/FID	318317	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB5A071603-177	Maxxam Sample Number	:	462284
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	7.4	mg/kg	80.0 TO 80.0	318196	0.9	2
Purgeable (MeOH) Toluene	(1.3)	mg/kg	111.0 TO 111.0	318196	0.9	2
Purgeable (MeOH) Ethylbenzene	79.7	mg/kg	136.0 TO 136.0	318196	0.9	2
Purgeable (MeOH) m & p-Xylene	178	mg/kg	139.0 TO 139.0	318196	2	4
Purgeable (MeOH) o-Xylene	148	mg/kg	144.0 TO 144.0	318196	0.9	2
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EB071503-145	Maxxam Sample Number	:	462285
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	19	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	23	%	SIEV	322232	0.01	0.02
Sieve - Pan	77	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EB071503-145	Maxxam Sample Number	:	462285
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2800	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	660	mg/kg	GC/FID	318317	5	10
F3 (C16-C34 Hydrocarbons)	200	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	318317	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EB071503-145	Maxxam Sample Number	:	462285
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	8.5	mg/kg	80.0 TO 80.0	318196	0.4	0.8
Purgeable (MeOH) Toluene	0.8	mg/kg	111.0 TO 111.0	318196	0.4	0.8
Purgeable (MeOH) Ethylbenzene	66.3	mg/kg	136.0 TO 136.0	318196	0.4	0.8
Purgeable (MeOH) m & p-Xylene	314	mg/kg	139.0 TO 139.0	318196	0.9	2
Purgeable (MeOH) o-Xylene	86.0	mg/kg	144.0 TO 144.0	318196	0.4	0.8
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	100	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PFB071503-159	Maxxam Sample Number	:	462286
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	18	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	21	%	SIEV	322232	0.01	0.02
Sieve - Pan	79	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PFB071503-159	Maxxam Sample Number	:	462286
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1800	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	3700	mg/kg	GC/FID	318317	4	8
F3 (C16-C34 Hydrocarbons)	150	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	318317	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PFB071503-159	Maxxam Sample Number	:	462286
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.5	mg/kg	80.0 TO 80.0	318196	0.5	1
Purgeable (MeOH) Toluene	2.2	mg/kg	111.0 TO 111.0	318196	0.5	1
Purgeable (MeOH) Ethylbenzene	16.8	mg/kg	136.0 TO 136.0	318196	0.5	1
Purgeable (MeOH) m & p-Xylene	108	mg/kg	139.0 TO 139.0	318196	1	2
Purgeable (MeOH) o-Xylene	45.8	mg/kg	144.0 TO 144.0	318196	0.5	1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIB071603-179	Maxxam Sample Number	:	462287
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	19	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	35	%	SIEV	322232	0.01	0.02
Sieve - Pan	65	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIB071603-179	Maxxam Sample Number	:	462287
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2300	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	3500	mg/kg	GC/FID	318317	5	10
F3 (C16-C34 Hydrocarbons)	83	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	318317	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIB071603-179	Maxxam Sample Number	:	462287
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	8.7	mg/kg	80.0 TO 80.0	318196	0.5	1
Purgeable (MeOH) Toluene	3.0	mg/kg	111.0 TO 111.0	318196	0.5	1
Purgeable (MeOH) Ethylbenzene	44.0	mg/kg	136.0 TO 136.0	318196	0.5	1
Purgeable (MeOH) m & p-Xylene	122	mg/kg	139.0 TO 139.0	318196	1	2
Purgeable (MeOH) o-Xylene	53.1	mg/kg	144.0 TO 144.0	318196	0.5	1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	100	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2B071603-180	Maxxam Sample Number	:	462288
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	22	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	15	%	SIEV	322232	0.01	0.02
Sieve - Pan	85	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2B071603-180	Maxxam Sample Number	:	462288
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2300	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	5400	mg/kg	GC/FID	318317	5	10
F3 (C16-C34 Hydrocarbons)	140	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318317	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2B071603-180	Maxxam Sample Number	:	462288
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	7.9	mg/kg	80.0 TO 80.0	318196	0.3	0.6
Purgeable (MeOH) Toluene	0.8	mg/kg	111.0 TO 111.0	318196	0.3	0.6
Purgeable (MeOH) Ethylbenzene	37.5	mg/kg	136.0 TO 136.0	318196	0.3	0.6
Purgeable (MeOH) m & p-Xylene	75.4	mg/kg	139.0 TO 139.0	318196	0.5	1
Purgeable (MeOH) o-Xylene	47.1	mg/kg	144.0 TO 144.0	318196	0.3	0.6
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	96	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3B071603-181	Maxxam Sample Number	:	462289
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	21	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	29	%	SIEV	322232	0.01	0.02
Sieve - Pan	71	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3B071603-181	Maxxam Sample Number	:	462289
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	450	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	820	mg/kg	GC/FID	318317	5	10
F3 (C16-C34 Hydrocarbons)	<10	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318317	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3B071603-181	Maxxam Sample Number	:	462289
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	3.2	mg/kg	80.0 TO 80.0	318196	0.2	0.4
Purgeable (MeOH) Toluene	1.2	mg/kg	111.0 TO 111.0	318196	0.2	0.4
Purgeable (MeOH) Ethylbenzene	8.0	mg/kg	136.0 TO 136.0	318196	0.2	0.4
Purgeable (MeOH) m & p-Xylene	15.4	mg/kg	139.0 TO 139.0	318196	0.3	0.6
Purgeable (MeOH) o-Xylene	5.2	mg/kg	144.0 TO 144.0	318196	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	101	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4B071603-182	Maxxam Sample Number	:	462290
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	22	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	33	%	SIEV	322232	0.01	0.02
Sieve - Pan	67	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4B071603-182	Maxxam Sample Number	:	462290
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1000	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	2800	mg/kg	GC/FID	318317	5	10
F3 (C16-C34 Hydrocarbons)	31	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318317	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4B071603-182	Maxxam Sample Number	:	462290
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	5.1	mg/kg	80.0 TO 80.0	318196	0.2	0.4
Purgeable (MeOH) Toluene	2.5	mg/kg	111.0 TO 111.0	318196	0.2	0.4
Purgeable (MeOH) Ethylbenzene	16.4	mg/kg	136.0 TO 136.0	318196	0.2	0.4
Purgeable (MeOH) m & p-Xylene	40.3	mg/kg	139.0 TO 139.0	318196	0.4	0.8
Purgeable (MeOH) o-Xylene	14.3	mg/kg	144.0 TO 144.0	318196	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW1B071603-183	Maxxam Sample Number	:	462291
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	20	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	32	%	SIEV	322232	0.01	0.02
Sieve - Pan	68	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW1B071603-183	Maxxam Sample Number	:	462291
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2200	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	390	mg/kg	GC/FID	318317	5	10
F3 (C16-C34 Hydrocarbons)	120	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318317	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW1B071603-183	Maxxam Sample Number	:	462291
Sample Date & Time	:	2003/07/16	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.7)	mg/kg	80.0 TO 80.0	318196	0.5	1
Purgeable (MeOH) Toluene	<0.5	mg/kg	111.0 TO 111.0	318196	0.5	1
Purgeable (MeOH) Ethylbenzene	12.7	mg/kg	136.0 TO 136.0	318196	0.5	1
Purgeable (MeOH) m & p-Xylene	139	mg/kg	139.0 TO 139.0	318196	1	2
Purgeable (MeOH) o-Xylene	42.4	mg/kg	144.0 TO 144.0	318196	0.5	1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EC071703-186	Maxxam Sample Number	:	462292
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	24	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	30	%	SIEV	322232	0.01	0.02
Sieve - Pan	70	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EC071703-186	Maxxam Sample Number	:	462292
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	710	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	23000	mg/kg	GC/FID	318317	5	10
F3 (C16-C34 Hydrocarbons)	430	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	33	mg/kg	GC/FID	318317	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EC071703-186	Maxxam Sample Number	:	462292
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.06)	mg/kg	80.0 TO 80.0	318196	0.05	0.1
Purgeable (MeOH) Toluene	0.56	mg/kg	111.0 TO 111.0	318196	0.05	0.1
Purgeable (MeOH) Ethylbenzene	0.37	mg/kg	136.0 TO 136.0	318196	0.05	0.1
Purgeable (MeOH) m & p-Xylene	7.5	mg/kg	139.0 TO 139.0	318196	0.1	0.2
Purgeable (MeOH) o-Xylene	10.8	mg/kg	144.0 TO 144.0	318196	0.05	0.1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	100	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PI1C071803-222	Maxxam Sample Number	:	462293
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	24	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	31	%	SIEV	322232	0.01	0.02
Sieve - Pan	69	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PI1C071803-222	Maxxam Sample Number	:	462293
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	240	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	5200	mg/kg	GC/FID	318317	5	10
F3 (C16-C34 Hydrocarbons)	460	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	100	mg/kg	GC/FID	318317	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
SAMPLE WAS NOT HOMOGENEOUS
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
SAMPLE WAS NOT HOMOGENEOUS
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PI1C071803-222	Maxxam Sample Number	:	462293
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.03	mg/kg	80.0 TO 80.0	318196	0.03	0.06
Purgeable (MeOH) Toluene	0.09	mg/kg	111.0 TO 111.0	318196	0.03	0.06
Purgeable (MeOH) Ethylbenzene	(0.04)	mg/kg	136.0 TO 136.0	318196	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.39	mg/kg	139.0 TO 139.0	318196	0.06	0.12
Purgeable (MeOH) o-Xylene	2.44	mg/kg	144.0 TO 144.0	318196	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PF1C071803-223	Maxxam Sample Number	:	462294
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	23	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	36	%	SIEV	322232	0.01	0.02
Sieve - Pan	64	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PF1C071803-223	Maxxam Sample Number	:	462294
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	190	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	2100	mg/kg	GC/FID	318317	5	10
F3 (C16-C34 Hydrocarbons)	310	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	318317	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PF1C071803-223	Maxxam Sample Number	:	462294
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.03	mg/kg	80.0 TO 80.0	318196	0.03	0.06
Purgeable (MeOH) Toluene	0.11	mg/kg	111.0 TO 111.0	318196	0.03	0.06
Purgeable (MeOH) Ethylbenzene	(0.04)	mg/kg	136.0 TO 136.0	318196	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.26	mg/kg	139.0 TO 139.0	318196	0.07	0.14
Purgeable (MeOH) o-Xylene	1.44	mg/kg	144.0 TO 144.0	318196	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIC071803-214	Maxxam Sample Number	:	462295
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	18	%	BAL	320599	1	2
Sieve - #200 (>0.075mm -TS)	32	%	SIEV	322232	0.01	0.02
Sieve - Pan	68	%	SIEV	322232	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIC071803-214	Maxxam Sample Number	:	462295
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1100	mg/kg	GC/FID	318254	10	20
F2 (C10-C16 Hydrocarbons)	4900	mg/kg	GC/FID	318317	5	10
F3 (C16-C34 Hydrocarbons)	180	mg/kg	GC/FID	318317	10	20
F4 (C34-C50 Hydrocarbons)	(9.5)	mg/kg	GC/FID	318317	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	318318	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	318317	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIC071803-214	Maxxam Sample Number	:	462295
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.3)	mg/kg	80.0 TO 80.0	318196	0.2	0.4
Purgeable (MeOH) Toluene	(0.3)	mg/kg	111.0 TO 111.0	318196	0.2	0.4
Purgeable (MeOH) Ethylbenzene	1.7	mg/kg	136.0 TO 136.0	318196	0.2	0.4
Purgeable (MeOH) m & p-Xylene	38.0	mg/kg	139.0 TO 139.0	318196	0.4	0.8
Purgeable (MeOH) o-Xylene	23.0	mg/kg	144.0 TO 144.0	318196	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PFC071803-226	Maxxam Sample Number	:	463587
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	19	%	BAL	321861	1	2
Sieve - #200 (>0.075mm -TS)	31	%	SIEV	322235	0.01	0.02
Sieve - Pan	69	%	SIEV	322235	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PFC071803-226	Maxxam Sample Number	:	463587
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1600	mg/kg	GC/FID	319991	10	20
F2 (C10-C16 Hydrocarbons)	6500	mg/kg	GC/FID	320313	5	10
F3 (C16-C34 Hydrocarbons)	220	mg/kg	GC/FID	320313	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	320313	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	320332	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	320313	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PFC071803-226	Maxxam Sample Number	:	463587
Sample Date & Time	:	2003/07/15	Maxxam Job Number	:	CA313734
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date		2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.06)	mg/kg	80.0 TO 80.0	319998	0.05	0.1
Purgeable (MeOH) Toluene	0.13	mg/kg	111.0 TO 111.0	319998	0.05	0.1
Purgeable (MeOH) Ethylbenzene	0.36	mg/kg	136.0 TO 136.0	319998	0.05	0.1
Purgeable (MeOH) m & p-Xylene	13.4	mg/kg	139.0 TO 139.0	319998	0.1	0.2
Purgeable (MeOH) o-Xylene	8.93	mg/kg	144.0 TO 144.0	319998	0.05	0.1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Quality Assurance Report

Maxxam Job Number: CA313734

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
318196	SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/07/26		97	%	85 - 115
			Purgeable (MeOH) Toluene	2003/07/26		103	%	85 - 115
			Purgeable (MeOH) Ethylbenzene	2003/07/26		104	%	85 - 115
			Purgeable (MeOH) m & p-Xylene	2003/07/26		96	%	85 - 115
			Purgeable (MeOH) o-Xylene	2003/07/26		95	%	85 - 115
		SPIKE	Purgeable (MeOH) Benzene	2003/07/26		86	%	75 - 125
			Purgeable (MeOH) Toluene	2003/07/26		95	%	75 - 125
			Purgeable (MeOH) Ethylbenzene	2003/07/26		84	%	75 - 125
			Purgeable (MeOH) m & p-Xylene	2003/07/26		80	%	75 - 125
			Purgeable (MeOH) o-Xylene	2003/07/26		90	%	75 - 125
		BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/07/26		99	%	
			Purgeable (MeOH) Benzene	2003/07/26	<0.03		mg/kg	
			Purgeable (MeOH) Toluene	2003/07/26	<0.03		mg/kg	
			Purgeable (MeOH) Ethylbenzene	2003/07/26	<0.03		mg/kg	
			Purgeable (MeOH) m & p-Xylene	2003/07/26	<0.05		mg/kg	
			Purgeable (MeOH) o-Xylene	2003/07/26	<0.03		mg/kg	
		RPD	Purgeable (MeOH) Benzene	2003/07/26	6.1		%	N/A
			Purgeable (MeOH) Toluene	2003/07/26	9.1		%	N/A
			Purgeable (MeOH) Ethylbenzene	2003/07/26	7.4		%	N/A
			Purgeable (MeOH) m & p-Xylene	2003/07/26	8.5		%	N/A
			Purgeable (MeOH) o-Xylene	2003/07/26	9.8		%	N/A
318254	OJ	Calibration Check	F1 (C06-C10) - BTEX	2003/07/25		100	%	85 - 115
		QC STANDARD	F1 (C06-C10) - BTEX	2003/07/25		99	%	80 - 120
		SPIKE	F1 (C06-C10) - BTEX	2003/07/25		93	%	80 - 120
		BLANK	F1 (C06-C10) - BTEX	2003/07/25	<12		mg/kg	
		RPD	F1 (C06-C10) - BTEX	2003/07/25	NC		%	N/A
318314	VM	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/07/25		102	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/07/25		112	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/07/25		107	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/07/25		71	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/25		91	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/25		111	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/07/25		110	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/25		112	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/25		94	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/07/25	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/07/25	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/07/25	<8		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2003/07/25	12.3		%	N/A
			F3 (C16-C34 Hydrocarbons)	2003/07/25	NC		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/07/25	NC		%	N/A
			Reached Baseline at C50	2003/07/25	NC		%	N/A
318316	LC2	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/07/25	<500		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/07/25	NC		%	N/A
318317	LC2	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/07/26		101	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/07/26		114	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/07/26		109	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/07/26		51	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/26		81	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/26		83	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/07/26		113	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/26		113	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/26		113	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/07/26	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/07/26	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/07/26	<8		mg/kg	
			Reached Baseline at C50	2003/07/26	YES		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2003/07/26	2.8		%	N/A

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Quality Assurance Report (Continued)

Maxxam Job Number: CA313734

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
318317	LC2	RPD	F3 (C16-C34 Hydrocarbons)	2003/07/26	NC		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/07/26	NC		%	N/A
			Reached Baseline at C50	2003/07/26	NC		%	N/A
318318	LC2	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/07/19	<500		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/07/19	NC		%	N/A
319991	OJ	Calibration Check	F1 (C06-C10) - BTEX	2003/07/25		102	%	85 - 115
		QC STANDARD	F1 (C06-C10) - BTEX	2003/07/25		104	%	80 - 120
		SPIKE	F1 (C06-C10) - BTEX	2003/07/25		96	%	80 - 120
		BLANK	F1 (C06-C10) - BTEX	2003/07/25	<12		mg/kg	
		RPD	F1 (C06-C10) - BTEX	2003/07/25	NC		%	N/A
319998	SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/07/25		98	%	85 - 115
			Purgeable (MeOH) Toluene	2003/07/25		97	%	85 - 115
			Purgeable (MeOH) Ethylbenzene	2003/07/25		98	%	85 - 115
			Purgeable (MeOH) m & p-Xylene	2003/07/25		96	%	85 - 115
			Purgeable (MeOH) o-Xylene	2003/07/25		97	%	85 - 115
		SPIKE	Purgeable (MeOH) Benzene	2003/07/25		82	%	75 - 125
			Purgeable (MeOH) Toluene	2003/07/25		88	%	75 - 125
			Purgeable (MeOH) Ethylbenzene	2003/07/25		83	%	75 - 125
			Purgeable (MeOH) m & p-Xylene	2003/07/25		78	%	75 - 125
			Purgeable (MeOH) o-Xylene	2003/07/25		91	%	75 - 125
		BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/07/25		98	%	
			Purgeable (MeOH) Benzene	2003/07/25	<0.03		mg/kg	
			Purgeable (MeOH) Toluene	2003/07/25	<0.03		mg/kg	
			Purgeable (MeOH) Ethylbenzene	2003/07/25	<0.03		mg/kg	
			Purgeable (MeOH) m & p-Xylene	2003/07/25	<0.05		mg/kg	
			Purgeable (MeOH) o-Xylene	2003/07/25	<0.03		mg/kg	
		RPD	Purgeable (MeOH) Benzene	2003/07/25	NC		%	N/A
			Purgeable (MeOH) Ethylbenzene	2003/07/25	NC		%	N/A
			Purgeable (MeOH) m & p-Xylene	2003/07/25	NC		%	N/A
			Purgeable (MeOH) o-Xylene	2003/07/25	NC		%	N/A
			Purgeable (MeOH) Toluene	2003/07/25	NC		%	N/A
320313	LC2	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/07/26		101	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/07/26		114	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/07/26		109	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/07/26		55	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/26		90	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/26		94	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/07/26		113	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/26		113	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/26		113	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/07/26	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/07/26	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/07/26	<8		mg/kg	
			Reached Baseline at C50	2003/07/26	YES		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2003/07/26	NC		%	N/A
			F3 (C16-C34 Hydrocarbons)	2003/07/26	NC		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/07/26	NC		%	N/A
			Reached Baseline at C50	2003/07/26	NC		%	N/A
320332	LC2	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/07/26	<500		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/07/26	NC		%	N/A
320599	RC	RPD	Moisture	2003/07/25	0.6		%	N/A
			Moisture	2003/07/25	4.5		%	N/A
321861	RC	RPD	Moisture	2003/07/28	2.1		%	N/A

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
BAY R 1338-36 AVE NE
CALGARY, AB
CANADA T2E 6T6

Attention: KURT KURE **Report Date: 2003/07/28**

Your P.O. #: 2914
Your Project #: 5435-03, SHELL WEST CHANNEL
Site: NEAR AKLAVIK NWT

ANALYTICAL REPORT

MAXXAM JOB #: A313736
Received: 2003/07/22, 11:00

Sample Matrix: Soil
Samples Received: 24

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX (MSD)	24	2003/07/22	2003/07/26	CAL SOP# 0048 E1034R4	GC/MS-PURGE & TRA
Moisture (ccme)	24	2003/07/28	2003/07/28	CAL SOP# 0028	GRAVIMETRIC
Gravimetric Heavy Hydrocarbon (F4G)	24	N/A	2003/07/26	CAL SOP# 0065	CCME
F1 (CCME Hydrocarbons C6-C10)	24	2003/07/22	2003/07/25	CAL SOP# 0066	CCME
Particle Size by Wet Sieve (75 micron)	24	2003/07/28	2003/07/28	CAL SOP# 0104	GRAVIMETRIC
F2 - F4 (CCME Hydrocarbons)	24	2003/07/25	2003/07/26	CAL SOP# 0066	CCME

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

AM/ls1
encl.

Total Cover pages: 1

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIC071703-187	Maxxam Sample Number	:	462298
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	21	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	33	%	SIEV	32223	0.01	0.02
Sieve - Pan	67	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIC071703-187	Maxxam Sample Number	:	462298
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	31	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	32	mg/kg	GC/FID	31831	5	10
F3 (C16-C34 Hydrocarbons)	75	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31831	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIC071703-187	Maxxam Sample Number	:	462298
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.03	mg/kg	80.0 TO 80.0	31826	0.03	0.06
Purgeable (MeOH) Toluene	0.09	mg/kg	111.0 TO 111.0	31826	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.08	mg/kg	136.0 TO 136.0	31826	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.30	mg/kg	139.0 TO 139.0	31826	0.06	0.12
Purgeable (MeOH) o-Xylene	0.16	mg/kg	144.0 TO 144.0	31826	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2C071703-188	Maxxam Sample Number	:	462299
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	22	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	38	%	SIEV	32223	0.01	0.02
Sieve - Pan	62	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2C071703-188	Maxxam Sample Number	:	462299
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	92	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	730	mg/kg	GC/FID	31831	5	10
F3 (C16-C34 Hydrocarbons)	230	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31831	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2C071703-188	Maxxam Sample Number	:	462299
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.03	mg/kg	80.0 TO 80.0	31826	0.03	0.06
Purgeable (MeOH) Toluene	0.06	mg/kg	111.0 TO 111.0	31826	0.03	0.06
Purgeable (MeOH) Ethylbenzene	(0.04)	mg/kg	136.0 TO 136.0	31826	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.14	mg/kg	139.0 TO 139.0	31826	0.07	0.14
Purgeable (MeOH) o-Xylene	0.10	mg/kg	144.0 TO 144.0	31826	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3C071703-189	Maxxam Sample Number	:	462300
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	23	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	34	%	SIEV	32223	0.01	0.02
Sieve - Pan	67	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3C071703-189	Maxxam Sample Number	:	462300
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	670	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	1700	mg/kg	GC/FID	31831	5	10
F3 (C16-C34 Hydrocarbons)	140	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31831	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3C071703-189	Maxxam Sample Number	:	462300
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.2)	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	<0.2	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	4.5	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	13.9	mg/kg	139.0 TO 139.0	31826	0.4	0.8
Purgeable (MeOH) o-Xylene	18.0	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4C071703-190	Maxxam Sample Number	:	462301
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	21	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	26	%	SIEV	32223	0.01	0.02
Sieve - Pan	74	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4C071703-190	Maxxam Sample Number	:	462301
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	650	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	3800	mg/kg	GC/FID	31831	5	10
F3 (C16-C34 Hydrocarbons)	200	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31831	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4C071703-190	Maxxam Sample Number	:	462301
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.84	mg/kg	80.0 TO 80.0	31826	0.03	0.06
Purgeable (MeOH) Toluene	3.20	mg/kg	111.0 TO 111.0	31826	0.03	0.06
Purgeable (MeOH) Ethylbenzene	12.4	mg/kg	136.0 TO 136.0	31826	0.03	0.06
Purgeable (MeOH) m & p-Xylene	47.1	mg/kg	139.0 TO 139.0	31826	0.06	0.12
Purgeable (MeOH) o-Xylene	25.4	mg/kg	144.0 TO 144.0	31826	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	96	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CWC071703-191	Maxxam Sample Number	:	462302
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	19	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	43	%	SIEV	32223	0.01	0.02
Sieve - Pan	57	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CWC071703-191	Maxxam Sample Number	:	462302
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	69	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	220	mg/kg	GC/FID	31831	5	10
F3 (C16-C34 Hydrocarbons)	180	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	42	mg/kg	GC/FID	31831	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CWC071703-191	Maxxam Sample Number	:	462302
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.06	mg/kg	80.0 TO 80.0	31826	0.03	0.06
Purgeable (MeOH) Toluene	0.16	mg/kg	111.0 TO 111.0	31826	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.18	mg/kg	136.0 TO 136.0	31826	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.39	mg/kg	139.0 TO 139.0	31826	0.07	0.14
Purgeable (MeOH) o-Xylene	0.58	mg/kg	144.0 TO 144.0	31826	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	ED071703-194	Maxxam Sample Number	:	462303
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	15	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	34	%	SIEV	32223	0.01	0.02
Sieve - Pan	66	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	ED071703-194	Maxxam Sample Number	:	462303
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1900	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	770	mg/kg	GC/FID	31831	5	10
F3 (C16-C34 Hydrocarbons)	140	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	31831	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	ED071703-194	Maxxam Sample Number	:	462303
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.7	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	1.2	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	0.8	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	62.4	mg/kg	139.0 TO 139.0	31826	0.4	0.8
Purgeable (MeOH) o-Xylene	41.6	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PID071803-217	Maxxam Sample Number	:	462304
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	17	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	26	%	SIEV	32223	0.01	0.02
Sieve - Pan	74	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PID071803-217	Maxxam Sample Number	:	462304
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2100	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	5000	mg/kg	GC/FID	31831	5	10
F3 (C16-C34 Hydrocarbons)	190	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	31831	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PID071803-217	Maxxam Sample Number	:	462304
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.0	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	1.6	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	9.2	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	61.9	mg/kg	139.0 TO 139.0	31826	0.5	1
Purgeable (MeOH) o-Xylene	39.8	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBID071703-202	Maxxam Sample Number	:	462305
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	17	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	28	%	SIEV	32223	0.01	0.02
Sieve - Pan	72	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBID071703-202	Maxxam Sample Number	:	462305
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2200	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	8500	mg/kg	GC/FID	31831	4	8
F3 (C16-C34 Hydrocarbons)	250	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	(14)	mg/kg	GC/FID	31831	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBID071703-202	Maxxam Sample Number	:	462305
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.7	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	0.5	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	1.1	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	51.6	mg/kg	139.0 TO 139.0	31826	0.4	0.8
Purgeable (MeOH) o-Xylene	24.1	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2D071703-203	Maxxam Sample Number	:	462306
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	16	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	19	%	SIEV	32223	0.01	0.02
Sieve - Pan	81	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2D071703-203	Maxxam Sample Number	:	462306
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1200	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	2900	mg/kg	GC/FID	31831	5	10
F3 (C16-C34 Hydrocarbons)	200	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	31831	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2D071703-203	Maxxam Sample Number	:	462306
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.8	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	1.1	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	1.3	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	62.2	mg/kg	139.0 TO 139.0	31826	0.5	1
Purgeable (MeOH) o-Xylene	36.5	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	100	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3D071703-204	Maxxam Sample Number	:	462307
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	20	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	19	%	SIEV	32223	0.01	0.02
Sieve - Pan	81	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3D071703-204	Maxxam Sample Number	:	462307
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	770	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	720	mg/kg	GC/FID	31831	5	10
F3 (C16-C34 Hydrocarbons)	85	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31831	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3D071703-204	Maxxam Sample Number	:	462307
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.5	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	1.3	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	4.3	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	20.9	mg/kg	139.0 TO 139.0	31826	0.4	0.8
Purgeable (MeOH) o-Xylene	7.6	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4D071703-205	Maxxam Sample Number	:	462308
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	20	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	27	%	SIEV	32223	0.01	0.02
Sieve - Pan	73	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4D071703-205	Maxxam Sample Number	:	462308
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	640	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	710	mg/kg	GC/FID	31831	5	10
F3 (C16-C34 Hydrocarbons)	100	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31831	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4D071703-205	Maxxam Sample Number	:	462308
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.1	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	0.5	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	3.7	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	23.4	mg/kg	139.0 TO 139.0	31826	0.4	0.8
Purgeable (MeOH) o-Xylene	11.8	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	100	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIC071803-215	Maxxam Sample Number	:	462309
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	18	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	30	%	SIEV	32223	0.01	0.02
Sieve - Pan	70	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIC071803-215	Maxxam Sample Number	:	462309
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1400	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	730	mg/kg	GC/FID	31831	5	10
F3 (C16-C34 Hydrocarbons)	120	mg/kg	GC/FID	31831	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	31831	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31831	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIC071803-215	Maxxam Sample Number	:	462309
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.6	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	1.0	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	5.7	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	64.3	mg/kg	139.0 TO 139.0	31826	0.5	1
Purgeable (MeOH) o-Xylene	37.2	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EE071703-198	Maxxam Sample Number	:	462310
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	20	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	20	%	SIEV	32223	0.01	0.02
Sieve - Pan	80	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EE071703-198	Maxxam Sample Number	:	462310
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	650	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	4300	mg/kg	GC/FID	31832	5	10
F3 (C16-C34 Hydrocarbons)	560	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	84	mg/kg	GC/FID	31832	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EE071703-198	Maxxam Sample Number	:	462310
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.1	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	(0.3)	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	2.7	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	17.6	mg/kg	139.0 TO 139.0	31826	0.4	0.8
Purgeable (MeOH) o-Xylene	14.1	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIE071803-218	Maxxam Sample Number	:	462311
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	14	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	30	%	SIEV	32223	0.01	0.02
Sieve - Pan	70	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Maxxam Analytics Inc

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIE071803-218	Maxxam Sample Number	:	462311
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	2000	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	6900	mg/kg	GC/FID	31832	4	8
F3 (C16-C34 Hydrocarbons)	210	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	30	mg/kg	GC/FID	31832	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIE071803-218	Maxxam Sample Number	:	462311
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.7	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	0.9	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	8.6	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	33.8	mg/kg	139.0 TO 139.0	31826	0.4	0.8
Purgeable (MeOH) o-Xylene	26.7	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIE071803-206	Maxxam Sample Number	:	462312
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	19	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	19	%	SIEV	32223	0.01	0.02
Sieve - Pan	81	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIE071803-206	Maxxam Sample Number	:	462312
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1300	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	5000	mg/kg	GC/FID	31832	5	10
F3 (C16-C34 Hydrocarbons)	130	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31832	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIE071803-206	Maxxam Sample Number	:	462312
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	2.6	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	(0.2)	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	22.3	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	24.0	mg/kg	139.0 TO 139.0	31826	0.4	0.8
Purgeable (MeOH) o-Xylene	18.6	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2E071803-207	Maxxam Sample Number	:	462313
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	20	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	32	%	SIEV	32223	0.01	0.02
Sieve - Pan	68	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2E071803-207	Maxxam Sample Number	:	462313
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	820	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	1400	mg/kg	GC/FID	31832	5	10
F3 (C16-C34 Hydrocarbons)	93	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31832	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2E071803-207	Maxxam Sample Number	:	462313
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.1	mg/kg	80.0 TO 80.0	31826	0.1	0.2
Purgeable (MeOH) Toluene	0.3	mg/kg	111.0 TO 111.0	31826	0.1	0.2
Purgeable (MeOH) Ethylbenzene	10.3	mg/kg	136.0 TO 136.0	31826	0.1	0.2
Purgeable (MeOH) m & p-Xylene	16.3	mg/kg	139.0 TO 139.0	31826	0.2	0.4
Purgeable (MeOH) o-Xylene	7.9	mg/kg	144.0 TO 144.0	31826	0.1	0.2
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3E071803-208	Maxxam Sample Number	:	462314
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	18	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	19	%	SIEV	32223	0.01	0.02
Sieve - Pan	81	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3E071803-208	Maxxam Sample Number	:	462314
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1200	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	2700	mg/kg	GC/FID	31832	5	10
F3 (C16-C34 Hydrocarbons)	130	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	31832	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3E071803-208	Maxxam Sample Number	:	462314
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.8	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	0.4	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	9.0	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	12.1	mg/kg	139.0 TO 139.0	31826	0.4	0.8
Purgeable (MeOH) o-Xylene	6.3	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	100	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4E071803-209	Maxxam Sample Number	:	462315
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	14	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	43	%	SIEV	32223	0.01	0.02
Sieve - Pan	57	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4E071803-209	Maxxam Sample Number	:	462315
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	35	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	230	mg/kg	GC/FID	31832	4	8
F3 (C16-C34 Hydrocarbons)	61	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	31832	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4E071803-209	Maxxam Sample Number	:	462315
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.63	mg/kg	80.0 TO 80.0	31826	0.03	0.06
Purgeable (MeOH) Toluene	0.07	mg/kg	111.0 TO 111.0	31826	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.86	mg/kg	136.0 TO 136.0	31826	0.03	0.06
Purgeable (MeOH) m & p-Xylene	1.34	mg/kg	139.0 TO 139.0	31826	0.06	0.12
Purgeable (MeOH) o-Xylene	0.65	mg/kg	144.0 TO 144.0	31826	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EF071703-201	Maxxam Sample Number	:	462316
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	16	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	35	%	SIEV	32223	0.01	0.02
Sieve - Pan	65	%	SIEV	32223	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EF071703-201	Maxxam Sample Number	:	462316
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1800	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	250	mg/kg	GC/FID	31832	4	8
F3 (C16-C34 Hydrocarbons)	94	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	31832	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	EF071703-201	Maxxam Sample Number	:	462316
Sample Date & Time	:	2003/07/17	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.1	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	2.6	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	4.8	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	28.3	mg/kg	139.0 TO 139.0	31826	0.4	0.8
Purgeable (MeOH) o-Xylene	23.4	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIF071803-220	Maxxam Sample Number	:	462317
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	19	%	BAL	32186	1	2
Sieve - #200 (>0.075mm -TS)	29	%	SIEV	32227	0.01	0.02
Sieve - Pan	71	%	SIEV	32227	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIF071803-220	Maxxam Sample Number	:	462317
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1700	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	4800	mg/kg	GC/FID	31832	5	10
F3 (C16-C34 Hydrocarbons)	150	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	(11)	mg/kg	GC/FID	31832	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	PIF071803-220	Maxxam Sample Number	:	462317
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.2	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	<0.2	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	0.4	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	42.8	mg/kg	139.0 TO 139.0	31826	0.5	1
Purgeable (MeOH) o-Xylene	40.2	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIF071803-210	Maxxam Sample Number	:	462318
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	17	%	BAL	32217	1	2
Sieve - #200 (>0.075mm -TS)	29	%	SIEV	32227	0.01	0.02
Sieve - Pan	71	%	SIEV	32227	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIF071803-210	Maxxam Sample Number	:	462318
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	20	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	<5	mg/kg	GC/FID	31832	5	10
F3 (C16-C34 Hydrocarbons)	<10	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID	31832	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CBIF071803-210	Maxxam Sample Number	:	462318
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.28	mg/kg	80.0 TO 80.0	31826	0.03	0.06
Purgeable (MeOH) Toluene	0.09	mg/kg	111.0 TO 111.0	31826	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.27	mg/kg	136.0 TO 136.0	31826	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.18	mg/kg	139.0 TO 139.0	31826	0.06	0.12
Purgeable (MeOH) o-Xylene	0.11	mg/kg	144.0 TO 144.0	31826	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2F071803-211	Maxxam Sample Number	:	462319
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	20	%	BAL	32217	1	2
Sieve - #200 (>0.075mm -TS)	18	%	SIEV	32227	0.01	0.02
Sieve - Pan	82	%	SIEV	32227	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2F071803-211	Maxxam Sample Number	:	462319
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	110	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	190	mg/kg	GC/FID	31832	5	10
F3 (C16-C34 Hydrocarbons)	140	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	(19)	mg/kg	GC/FID	31832	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2F071803-211	Maxxam Sample Number	:	462319
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.27	mg/kg	80.0 TO 80.0	31826	0.03	0.06
Purgeable (MeOH) Toluene	0.08	mg/kg	111.0 TO 111.0	31826	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.18	mg/kg	136.0 TO 136.0	31826	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.89	mg/kg	139.0 TO 139.0	31826	0.07	0.14
Purgeable (MeOH) o-Xylene	0.96	mg/kg	144.0 TO 144.0	31826	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3F071803-212	Maxxam Sample Number	:	462320
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	23	%	BAL	32217	1	2
Sieve - #200 (>0.075mm -TS)	17	%	SIEV	32227	0.01	0.02
Sieve - Pan	83	%	SIEV	32227	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3F071803-212	Maxxam Sample Number	:	462320
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	670	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	1400	mg/kg	GC/FID	31832	5	10
F3 (C16-C34 Hydrocarbons)	210	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	64	mg/kg	GC/FID	31832	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB3F071803-212	Maxxam Sample Number	:	462320
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.0	mg/kg	80.0 TO 80.0	31826	0.1	0.2
Purgeable (MeOH) Toluene	0.2	mg/kg	111.0 TO 111.0	31826	0.1	0.2
Purgeable (MeOH) Ethylbenzene	3.1	mg/kg	136.0 TO 136.0	31826	0.1	0.2
Purgeable (MeOH) m & p-Xylene	5.5	mg/kg	139.0 TO 139.0	31826	0.2	0.4
Purgeable (MeOH) o-Xylene	2.9	mg/kg	144.0 TO 144.0	31826	0.1	0.2
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4F071803-213	Maxxam Sample Number	:	462321
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	24	%	BAL	32217	1	2
Sieve - #200 (>0.075mm -TS)	15	%	SIEV	32227	0.01	0.02
Sieve - Pan	85	%	SIEV	32227	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4F071803-213	Maxxam Sample Number	:	462321
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1000	mg/kg	GC/FID	31825	10	20
F2 (C10-C16 Hydrocarbons)	69	mg/kg	GC/FID	31832	5	10
F3 (C16-C34 Hydrocarbons)	73	mg/kg	GC/FID	31832	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	31832	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	31832	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	31832	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB4F071803-213	Maxxam Sample Number	:	462321
Sample Date & Time	:	2003/07/18	Maxxam Job Number	:	CA313736
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/07/22	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.8	mg/kg	80.0 TO 80.0	31826	0.2	0.4
Purgeable (MeOH) Toluene	<0.2	mg/kg	111.0 TO 111.0	31826	0.2	0.4
Purgeable (MeOH) Ethylbenzene	6.5	mg/kg	136.0 TO 136.0	31826	0.2	0.4
Purgeable (MeOH) m & p-Xylene	5.8	mg/kg	139.0 TO 139.0	31826	0.4	0.8
Purgeable (MeOH) o-Xylene	0.7	mg/kg	144.0 TO 144.0	31826	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	101	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

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Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Quality Assurance Report

Maxxam Job Number: CA313736

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QCLimits
318259	OJ	Calibration Check	F1 (C06-C10) - BTEX	2003/07/25		100	%	85 - 115
		QC STANDARD	F1 (C06-C10) - BTEX	2003/07/25		100	%	80 - 120
		SPIKE	F1 (C06-C10) - BTEX	2003/07/25		92	%	80 - 120
		BLANK	F1 (C06-C10) - BTEX	2003/07/25	<12		mg/kg	
		RPD	F1 (C06-C10) - BTEX	2003/07/25	NC		%	N/A
318261	SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/07/26		98	%	85 - 115
			Purgeable (MeOH) Toluene	2003/07/26		99	%	85 - 115
			Purgeable (MeOH) Ethylbenzene	2003/07/26		101	%	85 - 115
			Purgeable (MeOH) m & p-Xylene	2003/07/26		100	%	85 - 115
			Purgeable (MeOH) o-Xylene	2003/07/26		100	%	85 - 115
		SPIKE	Purgeable (MeOH) Benzene	2003/07/26		86	%	75 - 125
			Purgeable (MeOH) Toluene	2003/07/26		95	%	75 - 125
			Purgeable (MeOH) Ethylbenzene	2003/07/26		84	%	75 - 125
			Purgeable (MeOH) m & p-Xylene	2003/07/26		80	%	75 - 125
			Purgeable (MeOH) o-Xylene	2003/07/26		90	%	75 - 125
		BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/07/26		96	%	
			Purgeable (MeOH) Benzene	2003/07/26	<0.03		mg/kg	
			Purgeable (MeOH) Toluene	2003/07/26	<0.03		mg/kg	
			Purgeable (MeOH) Ethylbenzene	2003/07/26	<0.03		mg/kg	
			Purgeable (MeOH) m & p-Xylene	2003/07/26	<0.05		mg/kg	
			Purgeable (MeOH) o-Xylene	2003/07/26	<0.03		mg/kg	
		RPD	Purgeable (MeOH) Benzene	2003/07/26	NC		%	N/A
			Purgeable (MeOH) Toluene	2003/07/26	NC		%	N/A
			Purgeable (MeOH) Ethylbenzene	2003/07/26	NC		%	N/A
			Purgeable (MeOH) m & p-Xylene	2003/07/26	NC		%	N/A
			Purgeable (MeOH) o-Xylene	2003/07/26	NC		%	N/A
318319	LC2	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/07/26		101	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/07/26		114	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/07/26		109	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/07/26		51	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/26		81	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/26		83	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/07/26		113	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/26		113	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/26		113	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/07/26	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/07/26	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/07/26	<8		mg/kg	
			Reached Baseline at C50	2003/07/26	YES		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2003/07/26	14.1		%	N/A
			F3 (C16-C34 Hydrocarbons)	2003/07/26	5.1		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/07/26	NC		%	N/A
			Reached Baseline at C50	2003/07/26	NC		%	N/A
318321	LC2	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/07/26		101	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/07/26		114	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/07/26		109	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/07/26		51	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/26		81	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/26		83	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/07/26		113	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/26		113	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/26		113	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/07/26	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/07/26	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/07/26	<8		mg/kg	
			Reached Baseline at C50	2003/07/26	YES		mg/kg	

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: 2914
Site Reference: NEAR AKLAVIK NWT

Quality Assurance Report (Continued)

Maxxam Job Number: CA313736

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QCLimits
318321	LC2	RPD	F2 (C10-C16 Hydrocarbons)	2003/07/26	13.5		%	N/A
			F3 (C16-C34 Hydrocarbons)	2003/07/26	NC		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/07/26	NC		%	N/A
			Reached Baseline at C50	2003/07/26	NC		%	N/A
318322	LC2	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/07/26	<500		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/07/26	NC		%	N/A
318323	LC2	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/07/26	<500		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/07/26	NC		%	N/A
321861	RC	RPD	Moisture	2003/07/28	2.1		%	N/A
			Moisture	2003/07/28	6.1		%	N/A
322176	RC	RPD	Moisture	2003/07/28	5.1		%	N/A

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
BAY R 1338-36 AVE NE
CALGARY, AB
CANADA T2E 6T6

Attention: KURT KURE

Report Date: 2003/08/01

Your Project #: 5435-03 SHELL WEST CHANNEL
Site: NEAR AKLAVIK, NWT
Your C.O.C. #: 39745

ANALYTICAL REPORT

MAXXAM JOB #: A314043
Received: 2003/07/24, 12:00

Sample Matrix: Soil
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX (MSD)	20	2003/07/25	2003/07/30	CAL SOP# 0048 E1034R4	GC/MS-PURGE &
Moisture (ccme)	20	2003/07/30	2003/07/30	CAL SOP# 0028	GRAVIMETRIC
Gravimetric Heavy Hydrocarbon (F4G)	20	N/A	2003/07/28	CAL SOP# 0065	CCME
F1 (CCME Hydrocarbons C6-C10)	20	2003/07/25	2003/07/30	CAL SOP# 0066	CCME
Particle Size by Wet Sieve (75 micron)	20	2003/07/29	2003/07/29	CAL SOP# 0104	GRAVIMETRIC
F2 - F4 (CCME Hydrocarbons)	20	2003/07/26	2003/07/28	CAL SOP# 0066	CCME

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

AM/jb1
encl.

Total Cover pages: 1

Maxxam Analytics Inc

Maxxam Job #: A314043
Report Date: 2003/08/01

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03 SHELL WEST CHANNEL
Site Reference: NEAR AKLAVIK, NWT
Sampler Initials: MJ

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		463906	463907	463908	463909	463910		
SamplingDate		2003/07/21	2003/07/21	2003/07/21	2003/07/21	2003/07/21		
	Units	**CB1G072103 - 271**	**CB2G072103 - 272**	**CB3G072103 - 273**	**CB4G072103 - 274**	**CB5G072103 - 275**	**DL**	**QA Batch**
Physical Properties								
Moisture	%	21	24	22	22	20	1	323834
Sieve - #200 (>0.075mm -TS)	%	13	15	32	37	49	0.01	323273
Sieve - Pan	%	87	85	68	63	51	0.01	323273
Please check for attached comments								

Maxxam ID		463911	463912	463913	463914	463915		
SamplingDate		2003/07/21	2003/07/21	2003/07/21	2003/07/21	2003/07/21		
	Units	**CW1G072103 - 276**	**CW2G072103 - 277**	**CB1J072103 - 278**	**CB2J072103 - 279**	**CB3J072103 - 280**	**DL**	**QA Batch**
Physical Properties								
Moisture	%	19	19	21	21	22	1	323834
Sieve - #200 (>0.075mm -TS)	%	29	11	17	23	33	0.01	323273
Sieve - Pan	%	71	89	83	77	67	0.01	323273
Please check for attached comments								

Maxxam ID		463916	463917	463918	463919	463920		
SamplingDate		2003/07/21	2003/07/21	2003/07/21	2003/07/21	2003/07/21		
	Units	**CB4J072103 - 281**	**CW1J072103 - 282**	**CW2J072103 - 283**	**CB1H072203 - 286**	**CB2H072203 - 287**	**DL**	**QA Batch**
Physical Properties								
Moisture	%	20	21	20	24	21	1	323834
Sieve - #200 (>0.075mm -TS)	%	23	14	31	63	22	0.01	323273
Sieve - Pan	%	77	86	69	37	78	0.01	323273
Please check for attached comments								

Maxxam ID		463921		463922	463923	463924		
SamplingDate		2003/07/21		2003/07/21	2003/07/21	2003/07/21		
	Units	**CB3H072203 - 288**	**QA Batch**	**CB4H072203 - 289**	**CW1H072203 - 290**	**CW2H072203 - 291**	**DL**	**QA Batch**
Physical Properties								
Moisture	%	22	323834	22	21	19	1	323834
Sieve - #200 (>0.075mm -TS)	%	29	323273	35	51	49	0.01	323290
Sieve - Pan	%	71	323273	65	49	51	0.01	323290
Please check for attached comments								

Maxxam Job #: A314043
Report Date: 2003/08/01

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03 SHELL WEST CHANNEL
Site Reference: NEAR AKLAVIK, NWT
Sampler Initials: MJ

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		463925		
SamplingDate		2003/07/21		
	Units	**CW3H07220 3 - 292**	**DL**	**QA Batch**
Physical Properties				
Moisture	%	14	1	323834
Sieve - #200 (>0.075mm -TS)	%	20	0.01	323290
Sieve - Pan	%	80	0.01	323290
Please check for attached comments				

Maxxam Analytics Inc

Maxxam Job #: A314043
Report Date: 2003/08/01

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03 SHELL WEST CHANNEL
Site Reference: NEAR AKLAVIK, NWT
Sampler Initials: MJ

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		463906	463907	463908	463909	463910		
SamplingDate		2003/07/21	2003/07/21	2003/07/21	2003/07/21	2003/07/21		
	Units	**CB1G072103 - 271**	**CB2G072103 - 272**	**CB3G072103 - 273**	**CB4G072103 - 274**	**CB5G072103 - 275**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon								
F1 (C06-C10) - BTEX	mg/kg	320	190	23	230	570	10	320275
F2 (C10-C16 Hydrocarbons)	mg/kg	1100	18	11	24	390	5	320418
F3 (C16-C34 Hydrocarbons)	mg/kg	82	61	80	78	53	10	320418
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	18	16	<10	10	320418
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	<500	<500	<500	<500	500	320424
Reached Baseline at C50	mg/kg	YES	YES	NO	NO	YES	N/A	320418

N/A = Not Applicable
Please check for attached comments

Maxxam ID		463911	463912	463913	463914		
SamplingDate		2003/07/21	2003/07/21	2003/07/21	2003/07/21		
	Units	**CW1G072103 - 276**	**CW2G072103 - 277**	**CB1J072103 - 278**	**CB2J072103 - 279**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	mg/kg	920	2600	82	20	10	320275
F2 (C10-C16 Hydrocarbons)	mg/kg	2200	6200	<5	<5	5	320418
F3 (C16-C34 Hydrocarbons)	mg/kg	140	130	<10	<10	10	320418
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	320418
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	<500	<500	<500	500	320424
Reached Baseline at C50	mg/kg	YES	YES	YES	YES	N/A	320418

N/A = Not Applicable
Please check for attached comments

Maxxam ID		463915	463916	463917	463918		
SamplingDate		2003/07/21	2003/07/21	2003/07/21	2003/07/21		
	Units	**CB3J072103 - 280**	**CB4J072103 - 281**	**CW1J072103 - 282**	**CW2J072103 - 283**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	mg/kg	21	340	340	1100	10	320275
F2 (C10-C16 Hydrocarbons)	mg/kg	<5	240	360	2600	5	320418
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	78	120	270	10	320418
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	320418
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	<500	<500	<500	500	320424
Reached Baseline at C50	mg/kg	YES	YES	YES	YES	N/A	320418

N/A = Not Applicable
Please check for attached comments

Maxxam Analytics Inc

Maxxam Job #: A314043
Report Date: 2003/08/01

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03 SHELL WEST CHANNEL
Site Reference: NEAR AKLAVIK, NWT
Sampler Initials: MJ

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		463919	463920	463921	463922		
SamplingDate		2003/07/21	2003/07/21	2003/07/21	2003/07/21		
	Units	**CB1H072203 - 286**	**CB2H072203 - 287**	**CB3H072203 - 288**	**CB4H072203 - 289**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	mg/kg	310	100	19	<10	10	320275
F2 (C10-C16 Hydrocarbons)	mg/kg	52	27	20	67	5	320418
F3 (C16-C34 Hydrocarbons)	mg/kg	78	65	200	250	10	320418
F4 (C34-C50 Hydrocarbons)	mg/kg	20	<10	61	110	10	320418
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	<500	<500	<500	500	320424
Reached Baseline at C50	mg/kg	NO	YES	NO	NO	N/A	320418

N/A = Not Applicable
Please check for attached comments

Maxxam ID		463923	463924		463925		
SamplingDate		2003/07/21	2003/07/21		2003/07/21		
	Units	**CW1H072203 - 290**	**CW2H072203 - 291**	**DL**	**CW3H072203 - 292**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	mg/kg	32	94	10	200	10	320275
F2 (C10-C16 Hydrocarbons)	mg/kg	300	360	5	370	4	320418
F3 (C16-C34 Hydrocarbons)	mg/kg	150	100	10	89	10	320418
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	10	<9	9	320418
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	<500	500	<500	500	320424
Reached Baseline at C50	mg/kg	YES	YES	N/A	YES	N/A	320418

N/A = Not Applicable
Please check for attached comments

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		463906		463907		463908		
SamplingDate		2003/07/21		2003/07/21		2003/07/21		
	Units	**CB1G072103 - 271**	**DL**	**CB2G072103 - 272**	**DL**	**CB3G072103 - 273**	**DL**	**QA Batch**
VOLATILES								
Purgeable (MeOH) Benzene	mg/kg	0.17	0.07	<0.2	0.2	0.72	0.03	320277
Purgeable (MeOH) Toluene	mg/kg	0.26	0.07	<0.2	0.2	0.06	0.03	320277
Purgeable (MeOH) Ethylbenzene	mg/kg	0.87	0.07	1.4	0.2	1.42	0.03	320277
Purgeable (MeOH) m & p-Xylene	mg/kg	7.9	0.1	3.6	0.3	0.38	0.06	320277
Purgeable (MeOH) o-Xylene	mg/kg	4.63	0.07	1.6	0.2	0.04	0.03	320277
Surrogate Recovery (%)								
Purgeable (MeOH) D8-TOLUENE (sur.)	%	94	N/A	104	N/A	98	N/A	320277

N/A = Not Applicable
Please check for attached comments

Maxxam ID		463909		463910		
SamplingDate		2003/07/21		2003/07/21		
	Units	**CB4G072103 - 274**	**DL**	**CB5G072103 - 275**	**DL**	**QA Batch**
VOLATILES						
Purgeable (MeOH) Benzene	mg/kg	1.76	0.03	0.9	0.2	320277
Purgeable (MeOH) Toluene	mg/kg	5.66	0.03	<0.2	0.2	320277
Purgeable (MeOH) Ethylbenzene	mg/kg	6.39	0.03	2.0	0.2	320277
Purgeable (MeOH) m & p-Xylene	mg/kg	15.3	0.07	18.0	0.4	320277
Purgeable (MeOH) o-Xylene	mg/kg	6.17	0.03	8.2	0.2	320277
Surrogate Recovery (%)						
Purgeable (MeOH) D8-TOLUENE (sur.)	%	98	N/A	96	N/A	320277

N/A = Not Applicable
Please check for attached comments

Maxxam ID		463911		463912		
SamplingDate		2003/07/21		2003/07/21		
	Units	**CW1G072103 - 276**	**DL**	**CW2G072103 - 277**	**DL**	**QA Batch**
VOLATILES						
Purgeable (MeOH) Benzene	mg/kg	0.5	0.2	4	1	320277
Purgeable (MeOH) Toluene	mg/kg	<0.2	0.2	6	1	320277
Purgeable (MeOH) Ethylbenzene	mg/kg	10.8	0.2	55.5	1	320277
Purgeable (MeOH) m & p-Xylene	mg/kg	46.0	0.5	246	2	320277
Purgeable (MeOH) o-Xylene	mg/kg	31.8	0.2	109	1	320277
Surrogate Recovery (%)						
Purgeable (MeOH) D8-TOLUENE (sur.)	%	96	N/A	94	N/A	320277

N/A = Not Applicable
Please check for attached comments

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		463913	463914	463915		
SamplingDate		2003/07/21	2003/07/21	2003/07/21		
	Units	**CB1J072103 - 278**	**CB2J072103 - 279**	**CB3J072103 - 280**	**DL**	**QA Batch**
VOLATILES						
Purgeable (MeOH) Benzene	mg/kg	0.21	0.16	0.31	0.03	320277
Purgeable (MeOH) Toluene	mg/kg	<0.03	0.05	<0.03	0.03	320277
Purgeable (MeOH) Ethylbenzene	mg/kg	1.57	0.45	0.55	0.03	320277
Purgeable (MeOH) m & p-Xylene	mg/kg	3.43	0.37	0.89	0.07	320277
Purgeable (MeOH) o-Xylene	mg/kg	0.24	0.07	0.31	0.03	320277
Surrogate Recovery (%)						
Purgeable (MeOH) D8-TOLUENE (sur.)	%	98	97	96	N/A	320277

N/A = Not Applicable
Please check for attached comments

Maxxam ID		463916		463917		
SamplingDate		2003/07/21		2003/07/21		
	Units	**CB4J072103 - 281**	**DL**	**CW1J072103 - 282**	**DL**	**QA Batch**
VOLATILES						
Purgeable (MeOH) Benzene	mg/kg	0.3	0.2	0.2	0.1	320277
Purgeable (MeOH) Toluene	mg/kg	<0.2	0.2	<0.1	0.1	320277
Purgeable (MeOH) Ethylbenzene	mg/kg	0.6	0.2	1.4	0.1	320277
Purgeable (MeOH) m & p-Xylene	mg/kg	3.6	0.4	8.2	0.2	320277
Purgeable (MeOH) o-Xylene	mg/kg	4.4	0.2	3.1	0.1	320277
Surrogate Recovery (%)						
Purgeable (MeOH) D8-TOLUENE (sur.)	%	103	N/A	97	N/A	320277

N/A = Not Applicable
Please check for attached comments

Maxxam ID		463918		463919		
SamplingDate		2003/07/21		2003/07/21		
	Units	**CW2J072103 - 283**	**DL**	**CB1H072203 - 286**	**DL**	**QA Batch**
VOLATILES						
Purgeable (MeOH) Benzene	mg/kg	<0.2	0.2	0.2	0.1	320277
Purgeable (MeOH) Toluene	mg/kg	<0.2	0.2	0.4	0.1	320277
Purgeable (MeOH) Ethylbenzene	mg/kg	0.4	0.2	0.9	0.1	320277
Purgeable (MeOH) m & p-Xylene	mg/kg	24.5	0.5	11.7	0.2	320277
Purgeable (MeOH) o-Xylene	mg/kg	34.5	0.2	7.5	0.1	320277
Surrogate Recovery (%)						
Purgeable (MeOH) D8-TOLUENE (sur.)	%	94	N/A	94	N/A	320277

N/A = Not Applicable
Please check for attached comments

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		463920		463921		
SamplingDate		2003/07/21		2003/07/21		
	Units	**CB2H072203 - 287**	**DL**	**CB3H072203 - 288**	**DL**	**QA Batch**
VOLATILES						
Purgeable (MeOH) Benzene	mg/kg	0.27	0.05	<0.03	0.03	320277
Purgeable (MeOH) Toluene	mg/kg	2.02	0.05	<0.03	0.03	320277
Purgeable (MeOH) Ethylbenzene	mg/kg	0.89	0.05	<0.03	0.03	320277
Purgeable (MeOH) m & p-Xylene	mg/kg	4.7	0.1	0.15	0.07	320277
Purgeable (MeOH) o-Xylene	mg/kg	2.87	0.05	0.10	0.03	320277
Surrogate Recovery (%)						
Purgeable (MeOH) D8-TOLUENE (sur.)	%	97	N/A	96	N/A	320277

N/A = Not Applicable
Please check for attached comments

Maxxam ID		463922	463923		463924		
SamplingDate		2003/07/21	2003/07/21		2003/07/21		
	Units	**CB4H072203 - 289**	**CW1H072203 - 290**	**DL**	**CW2H072203 - 291**	**DL**	**QA Batch**
VOLATILES							
Purgeable (MeOH) Benzene	mg/kg	<0.03	<0.03	0.03	0.06	0.05	320277
Purgeable (MeOH) Toluene	mg/kg	<0.03	<0.03	0.03	0.23	0.05	320277
Purgeable (MeOH) Ethylbenzene	mg/kg	<0.03	<0.03	0.03	0.08	0.05	320277
Purgeable (MeOH) m & p-Xylene	mg/kg	<0.06	<0.06	0.06	0.58	0.09	320277
Purgeable (MeOH) o-Xylene	mg/kg	0.05	<0.03	0.03	1.00	0.05	320277
Surrogate Recovery (%)							
Purgeable (MeOH) D8-TOLUENE (sur.)	%	97	94	N/A	97	N/A	320277

N/A = Not Applicable
Please check for attached comments

Maxxam ID		463925		
SamplingDate		2003/07/21		
	Units	**CW3H072203 - 292**	**DL**	**QA Batch**
VOLATILES				
Purgeable (MeOH) Benzene	mg/kg	<0.07	0.07	320277
Purgeable (MeOH) Toluene	mg/kg	0.19	0.07	320277
Purgeable (MeOH) Ethylbenzene	mg/kg	0.14	0.07	320277
Purgeable (MeOH) m & p-Xylene	mg/kg	0.8	0.1	320277
Purgeable (MeOH) o-Xylene	mg/kg	1.04	0.07	320277
Surrogate Recovery (%)				
Purgeable (MeOH) D8-TOLUENE (sur.)	%	95	N/A	320277

N/A = Not Applicable
Please check for attached comments

Results relate only to the items tested.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Attention: KURT KURE
Client Project #: 5435-03 SHELL WEST CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK, NWT

Quality Assurance Report

Maxxam Job Number: CA314043

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
320275	OJ	Calibration Check	F1 (C06-C10) - BTEX	2003/07/30		99	%	85 - 115
		QC STANDARD	F1 (C06-C10) - BTEX	2003/07/30		101	%	80 - 120
		SPIKE	F1 (C06-C10) - BTEX	2003/07/30		95	%	80 - 120
		BLANK	F1 (C06-C10) - BTEX	2003/07/30	<12		mg/kg	
		RPD	F1 (C06-C10) - BTEX	2003/07/30	NC		%	N/A
320277	SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/07/30		93	%	85 - 115
			Purgeable (MeOH) Toluene	2003/07/30		97	%	85 - 115
			Purgeable (MeOH) Ethylbenzene	2003/07/30		100	%	85 - 115
			Purgeable (MeOH) m & p-Xylene	2003/07/30		92	%	85 - 115
			Purgeable (MeOH) o-Xylene	2003/07/30		95	%	85 - 115
		SPIKE	Purgeable (MeOH) Benzene	2003/07/30		87	%	75 - 125
			Purgeable (MeOH) Toluene	2003/07/30		96	%	75 - 125
			Purgeable (MeOH) Ethylbenzene	2003/07/30		88	%	75 - 125
			Purgeable (MeOH) m & p-Xylene	2003/07/30		83	%	75 - 125
			Purgeable (MeOH) o-Xylene	2003/07/30		94	%	75 - 125
		BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/07/30		97	%	
			Purgeable (MeOH) Benzene	2003/07/30	<0.03		mg/kg	
			Purgeable (MeOH) Toluene	2003/07/30	<0.03		mg/kg	
			Purgeable (MeOH) Ethylbenzene	2003/07/30	<0.03		mg/kg	
			Purgeable (MeOH) m & p-Xylene	2003/07/30	<0.05		mg/kg	
			Purgeable (MeOH) o-Xylene	2003/07/30	<0.03		mg/kg	
		RPD	Purgeable (MeOH) Benzene	2003/07/30	NC		%	N/A
			Purgeable (MeOH) Toluene	2003/07/30	NC		%	N/A
			Purgeable (MeOH) Ethylbenzene	2003/07/30	5.2		%	N/A
			Purgeable (MeOH) m & p-Xylene	2003/07/30	0.7		%	N/A
			Purgeable (MeOH) o-Xylene	2003/07/30	10.8		%	N/A
320418	JMA	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/07/28		99	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/07/28		112	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/07/28		109	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/07/28		63	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/28		97	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/28		98	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/07/28		107	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/07/28		110	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/07/28		113	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/07/28	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/07/28	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/07/28	<8		mg/kg	
			Reached Baseline at C50	2003/07/28	YES		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2003/07/28	14.4		%	N/A
			F3 (C16-C34 Hydrocarbons)	2003/07/28	NC		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/07/28	NC		%	N/A
			Reached Baseline at C50	2003/07/28	NC		%	N/A
320424	LC2	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/07/28	<500		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/07/28	NC		%	N/A
323834	RC	RPD	Moisture	2003/07/30	5.0		%	N/A
			Moisture	2003/07/30	0		%	N/A

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
BAY R 1338-36 AVE NE
CALGARY, AB
CANADA T2E 6T6

Attention: KURT KURE

Report Date: 2003/07/28

Your Project #: 5435-03 SHELL WEST CHANNEL REM
Site: AKLAVIK, NWT

ANALYTICAL REPORT

MAXXAM JOB #: A314219
Received: 2003/07/24, 12:00

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX and purgeables (C3 to C10) (MSD)	1	N/A	2003/07/27	CAL SOP# 0048, EDM SOP# 0048	GC/MS-PURGE & TRA
Total Extractable Hydrocarbon C11-C30	1	N/A	2003/07/28	CAL SOP# 0063, EDM SOP# 0047	Mod. EPA 3610A, 800

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

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Total Cover pages: 1

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03 SHELL WEST CHANNEL REM
P.O. #:
Site Reference: AKLAVIK, NWT

Sample Description	:	WS 072203 - 293/294/294	Maxxam Sample Number	:	465067
Sample Date & Time	:	2003/07/21	Maxxam Job Number	:	CA314219
Sampled By	:		Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Water
Sample Received Date	:	2003/07/24	Report Date	:	2003/07/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable Benzene	<0.0004	mg/L	80.0 TO 80.0	32161	0.0004	0.0008
Purgeable Toluene	<0.0004	mg/L	111.0 TO 111.0	32161	0.0004	0.0008
Purgeable Ethylbenzene	<0.0004	mg/L	136.0 TO 136.0	32161	0.0004	0.0008
Purgeable m & p-Xylene	<0.0008	mg/L	139.0 TO 139.0	32161	0.0008	0.002
Purgeable o-Xylene	<0.0004	mg/L	144.0 TO 144.0	32161	0.0004	0.0008
Purgeable Total (C3-C10)	<0.1	mg/L		32161	0.1	0.2

Surrogate Recoveries (%):

D8-TOLUENE (sur.):	99	Control Limits: 88 - 110

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03 SHELL WEST CHANNEL REM
P.O. #:
Site Reference: AKLAVIK, NWT

Sample Description	:	WS 072203 - 293/294/294	Maxxam Sample Number	:	465067
Sample Date & Time	:	2003/07/21	Maxxam Job Number	:	CA314219
Sampled By	:		Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Water
Sample Received Date	:	2003/07/24	Report Date	:	2003/07/28
Sample Station Code	:				

Extractable Hydrocarbons by GC-FID

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
Extractable Hydrocarbons						
Undecanes (C11)	<0.02	mg/L	174.3 TO 196.0	32165	0.02	0.04
Dodecanes (C12)	<0.02	mg/L	196.1 TO 216.0	32165	0.02	0.04
Tridecanes (C13)	<0.02	mg/L	216.1 TO 236.0	32165	0.02	0.04
Tetradecanes (C14)	<0.02	mg/L	236.1 TO 253.0	32165	0.02	0.04
Pentadecanes (C15)	<0.02	mg/L	253.1 TO 271.0	32165	0.02	0.04
Hexadecanes (C16)	<0.02	mg/L	271.1 TO 287.0	32165	0.02	0.04
Heptadecanes (C17)	<0.02	mg/L	287.1 TO 302.0	32165	0.02	0.04
Octadecanes (C18)	<0.02	mg/L	302.1 TO 317.0	32165	0.02	0.04
Nonadecanes (C19)	<0.02	mg/L	317.1 TO 331.0	32165	0.02	0.04
Eicosanes (C20)	<0.02	mg/L	331.1 TO 344.0	32165	0.02	0.04
Heneicosanes (C21)	<0.02	mg/L	344.1 TO 357.0	32165	0.02	0.04
Docosanes (C22)	<0.02	mg/L	357.1 TO 366.0	32165	0.02	0.04
Tricosanes (C23)	<0.02	mg/L	366.1 TO 380.0	32165	0.02	0.04
Tetracosanes (C24)	<0.02	mg/L	380.1 TO 391.0	32165	0.02	0.04
Pentacosanes (C25)	<0.02	mg/L	391.1 TO 402.0	32165	0.02	0.04
Hexacosanes (C26)	<0.02	mg/L	402.1 TO 412.0	32165	0.02	0.04
Heptacosanes (C27)	<0.02	mg/L	412.1 TO 422.0	32165	0.02	0.04
Octacosanes (C28)	<0.02	mg/L	422.1 TO 432.0	32165	0.02	0.04
Nonacosanes (C29)	<0.02	mg/L	432.1 TO 441.0	32165	0.02	0.04
Triacosanes (C30)	<0.02	mg/L	441.1 TO 449.0	32165	0.02	0.04
Total Extractables C11 to C30	<0.5	mg/L		32165	0.5	1

Surrogate Recoveries (%):

OCTANE (sur.): 109 Control Limits: 66 - 131

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03 SHELL WEST CHANNEL REM
P.O. #:
Site Reference: AKLAVIK, NWT

Quality Assurance Report

Maxxam Job Number: CA314219

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QCLimits
321614	FL	Calibration Check	Purgeable Benzene	2003/07/27		104	%	85 - 115
			PurgeableToluene	2003/07/27		96	%	85 - 115
			Purgeable Ethylbenzene	2003/07/27		107	%	85 - 115
			Purgeable m & p-Xylene	2003/07/27		114	%	85 - 115
			Purgeable o-Xylene	2003/07/27		107	%	85 - 115
		SPIKE	Purgeable Benzene	2003/07/27		75	%	75 - 125
			PurgeableToluene	2003/07/27		76	%	75 - 125
			Purgeable Ethylbenzene	2003/07/27		77	%	75 - 125
			Purgeable m & p-Xylene	2003/07/27		81	%	75 - 125
			Purgeable o-Xylene	2003/07/27		77	%	75 - 125
		BLANK	Purgeable D8-TOLUENE (sur.)	2003/07/27		98	%	
			Purgeable Benzene	2003/07/27	<0.0004		mg/L	
			PurgeableToluene	2003/07/27	<0.0004		mg/L	
			Purgeable Ethylbenzene	2003/07/27	<0.0004		mg/L	
			Purgeable m & p-Xylene	2003/07/27	<0.0008		mg/L	
			Purgeable o-Xylene	2003/07/27	<0.0004		mg/L	
			Purgeable Total (C3-C10)	2003/07/27	<0.1		mg/L	
321656	LSH	Calibration Check	Undecanes (C11)	2003/07/28		112	%	75 - 125
			Pentadecanes (C15)	2003/07/28		120	%	75 - 125
			Heneicosanes (C21)	2003/07/28		121	%	75 - 125
			Triacosanes (C30)	2003/07/28		125	%	75 - 125
		BLANK	OCTANE (sur.)	2003/07/28		96	%	
			Undecanes (C11)	2003/07/28	<0.02		mg/L	
			Dodecanes (C12)	2003/07/28	<0.02		mg/L	
			Tridecanes (C13)	2003/07/28	<0.02		mg/L	
			Tetradecanes (C14)	2003/07/28	<0.02		mg/L	
			Pentadecanes (C15)	2003/07/28	<0.02		mg/L	
			Hexadecanes (C16)	2003/07/28	<0.02		mg/L	
			Heptadecanes (C17)	2003/07/28	<0.02		mg/L	
			Octadecanes (C18)	2003/07/28	<0.02		mg/L	
			Nonadecanes (C19)	2003/07/28	<0.02		mg/L	
			Eicosanes (C20)	2003/07/28	<0.02		mg/L	
			Heneicosanes (C21)	2003/07/28	<0.02		mg/L	
			Docosanes (C22)	2003/07/28	<0.02		mg/L	
			Tricosanes (C23)	2003/07/28	<0.02		mg/L	
			Tetracosanes (C24)	2003/07/28	<0.02		mg/L	
			Pentacosanes (C25)	2003/07/28	<0.02		mg/L	
			Hexacosanes (C26)	2003/07/28	<0.02		mg/L	
			Heptacosanes (C27)	2003/07/28	<0.02		mg/L	
			Octacosanes (C28)	2003/07/28	<0.02		mg/L	
			Nonacosanes (C29)	2003/07/28	<0.02		mg/L	
			Triacosanes (C30)	2003/07/28	<0.02		mg/L	
			Total Extractables C11 to C30	2003/07/28	<0.5		mg/L	

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
BAY R 1338-36 AVE NE
CALGARY, AB
CANADA T2E 6T6

Attention: KURT KURE

Report Date: 2003/08/13

Your Project #: 5435-03

ANALYTICAL REPORT

MAXXAM JOB #: A314707
Received: 2003/07/31, 10:15

Sample Matrix: Soil
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX (MSD)	6	2003/08/01	2003/08/05	CAL SOP# 0048 E1034R4	GC/MS-PURGE &
Moisture (ccme)	6	2003/08/07	2003/08/07	CAL SOP# 0028	GRAVIMETRIC
Gravimetric Heavy Hydrocarbon (F4G)	6	N/A	2003/08/06	CAL SOP# 0065	CCME
F1 (CCME Hydrocarbons C6-C10)	6	2003/08/01	2003/08/05	CAL SOP# 0066	CCME
Particle Size by Wet Sieve (75 micron)	6	2003/08/07	2003/08/07	CAL SOP# 0104	GRAVIMETRIC
F2 - F4 (CCME Hydrocarbons)	6	2003/08/05	2003/08/06	CAL SOP# 0066	CCME

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

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Total Cover pages: 1

Maxxam Job #: A314707
Report Date: 2003/08/13

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03
Site Reference:
Sampler Initials:

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		467641	467642	467643	467644		
SamplingDate		2003/07/27	2003/07/27	2003/07/27	2003/07/27		
	Units	**CB11O7270 3-326**	**CB11O7270 3-327**	**CB11O7270 3-328**	**CB11O7270 3-329**	**DL**	**QA Batch**
Physical Properties							
Moisture	%	22	23	20	21	1	328817
Sieve - #200 (>0.075mm -TS)	%	24	20	18	45	0.01	329150
Sieve - Pan	%	76	80	82	55	0.01	329150
Please check for attached comments							

Maxxam ID		467645	467646		
SamplingDate		2003/07/27	2003/07/27		
	Units	**CB11O7270 3-330**	**CB11O7270 3-331**	**DL**	**QA Batch**
Physical Properties					
Moisture	%	17	16	1	328817
Sieve - #200 (>0.075mm -TS)	%	24	27	0.01	329330
Sieve - Pan	%	76	73	0.01	329330
Please check for attached comments					

Maxxam Analytics Inc

Maxxam Job #: A314707
Report Date: 2003/08/13

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03
Site Reference:
Sampler Initials:

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		467641		467642	467643	467644		
SamplingDate		2003/07/27		2003/07/27	2003/07/27	2003/07/27		
	Units	**CB11O7270 3-326**	**DL**	**CB11O7270 3-327**	**CB11O7270 3-328**	**CB11O7270 3-329**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon								
F1 (C06-C10) - BTEX	mg/kg	45	10	230	47	22	10	325454
F2 (C10-C16 Hydrocarbons)	mg/kg	<5	5	1000	83	48	5	326640
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	10	120	97	<10	10	326640
F4 (C34-C50 Hydrocarbons)	mg/kg	<9	9	27	38	<10	10	326640
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	500	<500	<500	<500	500	326641
Reached Baseline at C50	mg/kg	YES	N/A	NO	NO	YES	N/A	326640

N/A = Not Applicable
Please check for attached comments

Maxxam ID		467645		467646		
SamplingDate		2003/07/27		2003/07/27		
	Units	**CB11O7270 3-330**	**DL**	**CB11O7270 3-331**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	mg/kg	790	10	500	10	325454
F2 (C10-C16 Hydrocarbons)	mg/kg	4600	5	50	4	326640
F3 (C16-C34 Hydrocarbons)	mg/kg	78	10	61	10	326640
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<9	9	326640
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	500	<500	500	326641
Reached Baseline at C50	mg/kg	YES	N/A	YES	N/A	326640

N/A = Not Applicable
Please check for attached comments

Maxxam Analytics Inc

Maxxam Job #: A314707
Report Date: 2003/08/13

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03
Site Reference:
Sampler Initials:

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		467641	467642		467643	467644		
SamplingDate		2003/07/27	2003/07/27		2003/07/27	2003/07/27		
	Units	**CB11O7270 3-326**	**CB11O7270 3-327**	**DL**	**CB11O7270 3-328**	**CB11O7270 3-329**	**DL**	**QA Batch**
VOLATILES								
Purgeable (MeOH) Benzene	mg/kg	0.06	0.23	0.03	0.04	0.04	0.03	325456
Purgeable (MeOH) Toluene	mg/kg	<0.03	<0.03	0.03	<0.03	<0.03	0.03	325456
Purgeable (MeOH) Ethylbenzene	mg/kg	0.15	0.22	0.03	0.06	0.08	0.03	325456
Purgeable (MeOH) m & p-Xylene	mg/kg	0.48	0.53	0.07	0.06	0.20	0.06	325456
Purgeable (MeOH) o-Xylene	mg/kg	0.39	0.63	0.03	0.07	0.28	0.03	325456
Surrogate Recovery (%)								
Purgeable (MeOH) D8-TOLUENE (sur.)	%	96	99	N/A	97	96	N/A	325456

N/A = Not Applicable
Please check for attached comments

Maxxam ID		467645	467646		
SamplingDate		2003/07/27	2003/07/27		
	Units	**CB11O7270 3-330**	**CB11O7270 3-331**	**DL**	**QA Batch**
VOLATILES					
Purgeable (MeOH) Benzene	mg/kg	<0.2	<0.2	0.2	325456
Purgeable (MeOH) Toluene	mg/kg	<0.2	<0.2	0.2	325456
Purgeable (MeOH) Ethylbenzene	mg/kg	0.3	<0.2	0.2	325456
Purgeable (MeOH) m & p-Xylene	mg/kg	5.1	11.6	0.4	325456
Purgeable (MeOH) o-Xylene	mg/kg	12.6	16.8	0.2	325456
Surrogate Recovery (%)					
Purgeable (MeOH) D8-TOLUENE (sur.)	%	96	97	N/A	325456

N/A = Not Applicable
Please check for attached comments

Results relate only to the items tested.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Quality Assurance Report

Maxxam Job Number: CA314707

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
325454	ZB	Calibration Check	F1 (C06-C10) - BTEX	2003/08/05		98	%	85 - 115
		QC STANDARD	F1 (C06-C10) - BTEX	2003/08/05		87	%	80 - 120
		SPIKE	F1 (C06-C10) - BTEX	2003/08/05		99	%	80 - 120
		BLANK	F1 (C06-C10) - BTEX	2003/08/05	<10		mg/kg	
		RPD	F1 (C06-C10) - BTEX	2003/08/05	NC		%	N/A
325456	SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/08/05		99	%	85 - 115
			Purgeable (MeOH) Toluene	2003/08/05		102	%	85 - 115
			Purgeable (MeOH) Ethylbenzene	2003/08/05		102	%	85 - 115
			Purgeable (MeOH) m & p-Xylene	2003/08/05		102	%	85 - 115
			Purgeable (MeOH) o-Xylene	2003/08/05		101	%	85 - 115
		SPIKE	Purgeable (MeOH) Benzene	2003/08/05		104	%	75 - 125
			Purgeable (MeOH) Toluene	2003/08/05		102	%	75 - 125
			Purgeable (MeOH) Ethylbenzene	2003/08/05		88	%	75 - 125
			Purgeable (MeOH) m & p-Xylene	2003/08/05		81	%	75 - 125
			Purgeable (MeOH) o-Xylene	2003/08/05		91	%	75 - 125
		BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/08/05		95	%	
			Purgeable (MeOH) Benzene	2003/08/05	<0.0004		mg/kg	
			Purgeable (MeOH) Toluene	2003/08/05	<0.0004		mg/kg	
			Purgeable (MeOH) Ethylbenzene	2003/08/05	<0.0004		mg/kg	
			Purgeable (MeOH) m & p-Xylene	2003/08/05	<0.0008		mg/kg	
			Purgeable (MeOH) o-Xylene	2003/08/05	<0.0004		mg/kg	
		RPD	Purgeable (MeOH) Benzene	2003/08/05	NC		%	N/A
			Purgeable (MeOH) Ethylbenzene	2003/08/05	NC		%	N/A
			Purgeable (MeOH) m & p-Xylene	2003/08/05	NC		%	N/A
			Purgeable (MeOH) o-Xylene	2003/08/05	NC		%	N/A
			Purgeable (MeOH) Toluene	2003/08/05	NC		%	N/A
326640	JMA	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/08/06		95	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/08/06		109	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/08/06		102	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/08/06		52	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/08/06		110	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/08/06		107	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/08/06		105	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/08/06		115	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/08/06		105	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/08/06	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/08/06	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/08/06	<8		mg/kg	
			Reached Baseline at C50	2003/08/06	YES		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2003/08/06	3.5		%	N/A
			F3 (C16-C34 Hydrocarbons)	2003/08/06	14.0		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/08/06	13.2		%	N/A
			Reached Baseline at C50	2003/08/06	NC		%	N/A
326641	JMA	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/08/06	<500		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/08/06	NC		%	N/A
328817	TN	RPD	Moisture	2003/08/07	0.9		%	N/A

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

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INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
BAY R 1338-36 AVE NE
CALGARY, AB
CANADA T2E 6T6

Attention: KURT KURE

Report Date: 2003/08/14

Your Project #: 5435-03

ANALYTICAL REPORT

MAXXAM JOB #: A315267
Received: 2003/08/07, 12:15

Sample Matrix: Soil
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX (MSD)	10	2003/08/08	2003/08/11	CAL SOP# 0048 E1034R4	GC/MS-PURGE & TRA
Moisture (ccme)	10	2003/08/12	2003/08/12	CAL SOP# 0028	GRAVIMETRIC
Gravimetric Heavy Hydrocarbon (F4G)	10	N/A	2003/08/11	CAL SOP# 0065	CCME
F1 (CCME Hydrocarbons C6-C10)	10	2003/08/08	2003/08/11	CAL SOP# 0066	CCME
Particle Size by Wet Sieve (75 micron)	10	2003/08/13	2003/08/13	CAL SOP# 0104	GRAVIMETRIC
F2 - F4 (CCME Hydrocarbons)	10	2003/08/08	2003/08/11	CAL SOP# 0066	CCME

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

AM/ls1
encl.

Total Cover pages: 1

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB1L080203-364	Maxxam Sample Number	:	470337
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	24	%	BAL	33211	1	2
Sieve - #200 (>0.075mm -TS)	15	%	SIEV	33319	0.01	0.02
Sieve - Pan	85	%	SIEV	33319	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB1L080203-364	Maxxam Sample Number	:	470337
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	550	mg/kg	GC/FID	32968	10	20
F2 (C10-C16 Hydrocarbons)	4300	mg/kg	GC/FID	32971	5	10
F3 (C16-C34 Hydrocarbons)	210	mg/kg	GC/FID	32971	10	20
F4 (C34-C50 Hydrocarbons)	40	mg/kg	GC/FID	32971	10	20
F4G sg (Gravimetric HC-Silica Gel)	0	mg/kg	GRAV	32971	N/A	N/A
Reached Baseline at C50	NO	mg/kg	GC/FID	32971	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB1L080203-364	Maxxam Sample Number	:	470337
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.70	mg/kg	80.0 TO 80.0	32968	0.03	0.06
Purgeable (MeOH) Toluene	0.06	mg/kg	111.0 TO 111.0	32968	0.03	0.06
Purgeable (MeOH) Ethylbenzene	4.54	mg/kg	136.0 TO 136.0	32968	0.03	0.06
Purgeable (MeOH) m & p-Xylene	7.75	mg/kg	139.0 TO 139.0	32968	0.06	0.12
Purgeable (MeOH) o-Xylene	5.15	mg/kg	144.0 TO 144.0	32968	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB2L080203-365	Maxxam Sample Number	:	470338
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	25	%	BAL	33211	1	2
Sieve - #200 (>0.075mm -TS)	24	%	SIEV	33319	0.01	0.02
Sieve - Pan	76	%	SIEV	33319	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB2L080203-365	Maxxam Sample Number	:	470338
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	1200	mg/kg	GC/FID	32968	10	20
F2 (C10-C16 Hydrocarbons)	5200	mg/kg	GC/FID	32971	5	10
F3 (C16-C34 Hydrocarbons)	200	mg/kg	GC/FID	32971	10	20
F4 (C34-C50 Hydrocarbons)	53	mg/kg	GC/FID	32971	10	20
F4G sg (Gravimetric HC-Silica Gel)	0	mg/kg	GRAV	32971	N/A	N/A
Reached Baseline at C50	NO	mg/kg	GC/FID	32971	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB2L080203-365	Maxxam Sample Number	:	470338
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.51	mg/kg	80.0 TO 80.0	32968	0.04	0.08
Purgeable (MeOH) Toluene	(0.07)	mg/kg	111.0 TO 111.0	32968	0.04	0.08
Purgeable (MeOH) Ethylbenzene	5.74	mg/kg	136.0 TO 136.0	32968	0.04	0.08
Purgeable (MeOH) m & p-Xylene	23.0	mg/kg	139.0 TO 139.0	32968	0.07	0.14
Purgeable (MeOH) o-Xylene	25.8	mg/kg	144.0 TO 144.0	32968	0.04	0.08
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB3L080203-366	Maxxam Sample Number	:	470339
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	24	%	BAL	33211	1	2
Sieve - #200 (>0.075mm -TS)	16	%	SIEV	33319	0.01	0.02
Sieve - Pan	84	%	SIEV	33319	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB3L080203-366	Maxxam Sample Number	:	470339
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	360	mg/kg	GC/FID	32968	10	20
F2 (C10-C16 Hydrocarbons)	630	mg/kg	GC/FID	32971	5	10
F3 (C16-C34 Hydrocarbons)	33	mg/kg	GC/FID	32971	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID	32971	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	32971	500	1000
Reached Baseline at C50	YES	mg/kg	GC/FID	32971	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB3L080203-366	Maxxam Sample Number	:	470339
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.48	mg/kg	80.0 TO 80.0	32968	0.03	0.06
Purgeable (MeOH) Toluene	0.10	mg/kg	111.0 TO 111.0	32968	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.75	mg/kg	136.0 TO 136.0	32968	0.03	0.06
Purgeable (MeOH) m & p-Xylene	11.6	mg/kg	139.0 TO 139.0	32968	0.06	0.12
Purgeable (MeOH) o-Xylene	4.94	mg/kg	144.0 TO 144.0	32968	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	98	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB4L080203-367	Maxxam Sample Number	:	470340
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	23	%	BAL	33211	1	2
Sieve - #200 (>0.075mm -TS)	29	%	SIEV	33319	0.01	0.02
Sieve - Pan	71	%	SIEV	33319	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB4L080203-367	Maxxam Sample Number	:	470340
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	180	mg/kg	GC/FID	32968	10	20
F2 (C10-C16 Hydrocarbons)	790	mg/kg	GC/FID	32971	5	10
F3 (C16-C34 Hydrocarbons)	120	mg/kg	GC/FID	32971	10	20
F4 (C34-C50 Hydrocarbons)	36	mg/kg	GC/FID	32971	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	32971	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	32971	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB4L080203-367	Maxxam Sample Number	:	470340
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.28	mg/kg	80.0 TO 80.0	32968	0.03	0.06
Purgeable (MeOH) Toluene	<0.03	mg/kg	111.0 TO 111.0	32968	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.58	mg/kg	136.0 TO 136.0	32968	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.89	mg/kg	139.0 TO 139.0	32968	0.07	0.14
Purgeable (MeOH) o-Xylene	1.65	mg/kg	144.0 TO 144.0	32968	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CW1L080203-368	Maxxam Sample Number	:	470341
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	20	%	BAL	33211	1	2
Sieve - #200 (>0.075mm -TS)	24	%	SIEV	33319	0.01	0.02
Sieve - Pan	76	%	SIEV	33319	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
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Sample Description	:	CW1L080203-368	Maxxam Sample Number	:	470341
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	580	mg/kg	GC/FID	32968	10	20
F2 (C10-C16 Hydrocarbons)	3700	mg/kg	GC/FID	32971	5	10
F3 (C16-C34 Hydrocarbons)	250	mg/kg	GC/FID	32971	10	20
F4 (C34-C50 Hydrocarbons)	32	mg/kg	GC/FID	32971	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	32971	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	32971	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CW1L080203-368	Maxxam Sample Number	:	470341
Sample Date & Time	:	2003/08/02	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.05)	mg/kg	80.0 TO 80.0	32968	0.03	0.06
Purgeable (MeOH) Toluene	0.12	mg/kg	111.0 TO 111.0	32968	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.06	mg/kg	136.0 TO 136.0	32968	0.03	0.06
Purgeable (MeOH) m & p-Xylene	9.54	mg/kg	139.0 TO 139.0	32968	0.06	0.12
Purgeable (MeOH) o-Xylene	23.5	mg/kg	144.0 TO 144.0	32968	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	95	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

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INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB1M080303-373	Maxxam Sample Number	:	470342
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	18	%	BAL	33211	1	2
Sieve - #200 (>0.075mm -TS)	42	%	SIEV	33319	0.01	0.02
Sieve - Pan	58	%	SIEV	33319	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB1M080303-373	Maxxam Sample Number	:	470342
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	330	mg/kg	GC/FID	32968	10	20
F2 (C10-C16 Hydrocarbons)	1600	mg/kg	GC/FID	32971	4	8
F3 (C16-C34 Hydrocarbons)	130	mg/kg	GC/FID	32971	10	20
F4 (C34-C50 Hydrocarbons)	34	mg/kg	GC/FID	32971	9	20
F4G sg (Gravimetric HC-Silica Gel)	(609)	mg/kg	GRAV	32971	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	32971	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB1M080303-373	Maxxam Sample Number	:	470342
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.17	mg/kg	80.0 TO 80.0	32968	0.03	0.06
Purgeable (MeOH) Toluene	<0.03	mg/kg	111.0 TO 111.0	32968	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.26	mg/kg	136.0 TO 136.0	32968	0.03	0.06
Purgeable (MeOH) m & p-Xylene	7.20	mg/kg	139.0 TO 139.0	32968	0.06	0.12
Purgeable (MeOH) o-Xylene	4.97	mg/kg	144.0 TO 144.0	32968	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB2M080303-374	Maxxam Sample Number	:	470343
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	22	%	BAL	33211	1	2
Sieve - #200 (>0.075mm -TS)	30	%	SIEV	33319	0.01	0.02
Sieve - Pan	70	%	SIEV	33319	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB2M080303-374	Maxxam Sample Number	:	470343
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	49	mg/kg	GC/FID	32968	10	20
F2 (C10-C16 Hydrocarbons)	63	mg/kg	GC/FID	32971	5	10
F3 (C16-C34 Hydrocarbons)	45	mg/kg	GC/FID	32971	10	20
F4 (C34-C50 Hydrocarbons)	33	mg/kg	GC/FID	32971	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	32971	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	32971	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Attention: KURT KURE
Client Project #: 5435-03
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Site Reference:

Sample Description	:	CB2M080303-374	Maxxam Sample Number	:	470343
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.21	mg/kg	80.0 TO 80.0	32968	0.03	0.06
Purgeable (MeOH) Toluene	<0.03	mg/kg	111.0 TO 111.0	32968	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.24	mg/kg	136.0 TO 136.0	32968	0.03	0.06
Purgeable (MeOH) m & p-Xylene	2.04	mg/kg	139.0 TO 139.0	32968	0.06	0.12
Purgeable (MeOH) o-Xylene	0.85	mg/kg	144.0 TO 144.0	32968	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB3M080303-375	Maxxam Sample Number	:	470344
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	25	%	BAL	33211	1	2
Sieve - #200 (>0.075mm -TS)	29	%	SIEV	33319	0.01	0.02
Sieve - Pan	71	%	SIEV	33319	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB3M080303-375	Maxxam Sample Number	:	470344
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	750	mg/kg	GC/FID	32968	10	20
F2 (C10-C16 Hydrocarbons)	2200	mg/kg	GC/FID	32971	5	10
F3 (C16-C34 Hydrocarbons)	190	mg/kg	GC/FID	32971	10	20
F4 (C34-C50 Hydrocarbons)	64	mg/kg	GC/FID	32971	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	32971	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	32971	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Attention: KURT KURE
Client Project #: 5435-03
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Site Reference:

Sample Description	:	CB3M080303-375	Maxxam Sample Number	:	470344
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.43	mg/kg	80.0 TO 80.0	32968	0.04	0.08
Purgeable (MeOH) Toluene	<0.04	mg/kg	111.0 TO 111.0	32968	0.04	0.08
Purgeable (MeOH) Ethylbenzene	2.19	mg/kg	136.0 TO 136.0	32968	0.04	0.08
Purgeable (MeOH) m & p-Xylene	7.63	mg/kg	139.0 TO 139.0	32968	0.07	0.14
Purgeable (MeOH) o-Xylene	0.25	mg/kg	144.0 TO 144.0	32968	0.04	0.08
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	96	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB4M080303-376	Maxxam Sample Number	:	470345
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	25	%	BAL	33211	1	2
Sieve - #200 (>0.075mm -TS)	37	%	SIEV	33319	0.01	0.02
Sieve - Pan	63	%	SIEV	33319	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB4M080303-376	Maxxam Sample Number	:	470345
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	550	mg/kg	GC/FID	32968	10	20
F2 (C10-C16 Hydrocarbons)	2400	mg/kg	GC/FID	32971	5	10
F3 (C16-C34 Hydrocarbons)	110	mg/kg	GC/FID	32971	10	20
F4 (C34-C50 Hydrocarbons)	31	mg/kg	GC/FID	32971	10	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	32971	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	32971	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CB4M080303-376	Maxxam Sample Number	:	470345
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.59	mg/kg	80.0 TO 80.0	32968	0.03	0.06
Purgeable (MeOH) Toluene	<0.03	mg/kg	111.0 TO 111.0	32968	0.03	0.06
Purgeable (MeOH) Ethylbenzene	1.30	mg/kg	136.0 TO 136.0	32968	0.03	0.06
Purgeable (MeOH) m & p-Xylene	5.21	mg/kg	139.0 TO 139.0	32968	0.07	0.14
Purgeable (MeOH) o-Xylene	1.25	mg/kg	144.0 TO 144.0	32968	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CW1M080303-377	Maxxam Sample Number	:	470346
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Physical Properties						
Moisture	15	%	BAL	33211	1	2
Sieve - #200 (>0.075mm -TS)	31	%	SIEV	33319	0.01	0.02
Sieve - Pan	69	%	SIEV	33319	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

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Attention: KURT KURE
Client Project #: 5435-03
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Site Reference:

Sample Description	:	CW1M080303-377	Maxxam Sample Number	:	470346
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	3100	mg/kg	GC/FID	32968	10	20
F2 (C10-C16 Hydrocarbons)	3700	mg/kg	GC/FID	32971	4	8
F3 (C16-C34 Hydrocarbons)	320	mg/kg	GC/FID	32971	10	20
F4 (C34-C50 Hydrocarbons)	31	mg/kg	GC/FID	32971	9	20
F4G sg (Gravimetric HC-Silica Gel)	<500	mg/kg	GRAV	32971	500	1000
Reached Baseline at C50	NO	mg/kg	GC/FID	32971	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Sample Description	:	CW1M080303-377	Maxxam Sample Number	:	470346
Sample Date & Time	:	2003/08/03	Maxxam Job Number	:	CA315267
Sampled By	:	BK	Sample Access	:	
Sample Type	:		SampleMatrix	:	Soil
Sample Received Date	:	2003/08/07	Report Date	:	2003/08/14
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.10	mg/kg	80.0 TO 80.0	32968	0.03	0.06
Purgeable (MeOH) Toluene	0.36	mg/kg	111.0 TO 111.0	32968	0.03	0.06
Purgeable (MeOH) Ethylbenzene	1.09	mg/kg	136.0 TO 136.0	32968	0.03	0.06
Purgeable (MeOH) m & p-Xylene	250	mg/kg	139.0 TO 139.0	32968	0.06	0.12
Purgeable (MeOH) o-Xylene	154	mg/kg	144.0 TO 144.0	32968	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	97	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Quality Assurance Report

Maxxam Job Number: CA315267

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QCLimits
329683	OJ	Calibration Check	F1 (C06-C10) - BTEX	2003/08/11		101	%	85 - 115
		QC STANDARD	F1 (C06-C10) - BTEX	2003/08/11		90	%	80 - 120
		SPIKE	F1 (C06-C10) - BTEX	2003/08/11		96	%	80 - 120
		BLANK	F1 (C06-C10) - BTEX	2003/08/11	<12		mg/kg	
		RPD	F1 (C06-C10) - BTEX	2003/08/11	NC		%	N/A
329684	SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/08/11		100	%	85 - 115
			Purgeable (MeOH) Toluene	2003/08/11		96	%	85 - 115
			Purgeable (MeOH) Ethylbenzene	2003/08/11		94	%	85 - 115
			Purgeable (MeOH) m & p-Xylene	2003/08/11		92	%	85 - 115
			Purgeable (MeOH) o-Xylene	2003/08/11		92	%	85 - 115
		SPIKE	Purgeable (MeOH) Benzene	2003/08/11		85	%	75 - 125
			Purgeable (MeOH) Toluene	2003/08/11		92	%	75 - 125
			Purgeable (MeOH) Ethylbenzene	2003/08/11		80	%	75 - 125
			Purgeable (MeOH) m & p-Xylene	2003/08/11		76	%	75 - 125
			Purgeable (MeOH) o-Xylene	2003/08/11		85	%	75 - 125
		BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/08/11		94	%	
			Purgeable (MeOH) Benzene	2003/08/11	<0.03		mg/kg	
			Purgeable (MeOH) Toluene	2003/08/11	<0.03		mg/kg	
			Purgeable (MeOH) Ethylbenzene	2003/08/11	<0.03		mg/kg	
			Purgeable (MeOH) m & p-Xylene	2003/08/11	<0.05		mg/kg	
			Purgeable (MeOH) o-Xylene	2003/08/11	<0.03		mg/kg	
		RPD	Purgeable (MeOH) Benzene	2003/08/11	NC		%	N/A
			Purgeable (MeOH) Ethylbenzene	2003/08/11	NC		%	N/A
			Purgeable (MeOH) m & p-Xylene	2003/08/11	NC		%	N/A
			Purgeable (MeOH) o-Xylene	2003/08/11	NC		%	N/A
			Purgeable (MeOH) Toluene	2003/08/11	NC		%	N/A
329710	DS4	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/08/11		101	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/08/11		114	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/08/11		110	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/08/11		79	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/08/11		104	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/08/11		115	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/08/11		113	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/08/11		113	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/08/11		119	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/08/11	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/08/11	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/08/11	<8		mg/kg	
			Reached Baseline at C50	2003/08/11	YES		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2003/08/11	13.9		%	N/A
			F3 (C16-C34 Hydrocarbons)	2003/08/11	27.7		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/08/11	22.2		%	N/A
			Reached Baseline at C50	2003/08/11	NC		%	N/A
329711	LC2	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/08/11	<500		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/08/11	17.0		%	N/A
332119	RC	RPD	Moisture	2003/08/12	4.0		%	N/A

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
BAY R 1338-36 AVE NE
CALGARY, AB
CANADA T2E 6T6

Attention: KURT KURE

Report Date: 2003/08/15

Your Project #: 5435-03

ANALYTICAL REPORT

MAXXAM JOB #: A315572
Received: 2003/08/11, 12:30

Sample Matrix: Soil
Samples Received: 25

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX (MSD)	20	2003/08/12	2003/08/13	CAL SOP# 0048 E1034R4	GC/MS-PURGE &
BTEX (MSD)	5	2003/08/13	2003/08/14	CAL SOP# 0048 E1034R4	GC/MS-PURGE &
Moisture (ccme)	25	2003/08/14	2003/08/14	CAL SOP# 0028	GRAVIMETRIC
Gravimetric Heavy Hydrocarbon (F4G)	25	N/A	2003/08/13	CAL SOP# 0065	CCME
F1 (CCME Hydrocarbons C6-C10)	20	2003/08/12	2003/08/14	CAL SOP# 0066	CCME
F1 (CCME Hydrocarbons C6-C10)	5	2003/08/13	2003/08/13	CAL SOP# 0066	CCME
Particle Size by Wet Sieve (75 micron)	25	2003/08/15	2003/08/15	CAL SOP# 0104	GRAVIMETRIC
F2 - F4 (CCME Hydrocarbons)	20	2003/08/12	2003/08/13	CAL SOP# 0066	CCME
F2 - F4 (CCME Hydrocarbons)	5	2003/08/13	2003/08/13	CAL SOP# 0066	CCME

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

AM/jb1
encl.

Total Cover pages: 1

Maxxam Analytics Inc

Maxxam Job #: A315572
Report Date: 2003/08/15

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03
Site Reference:
Sampler Initials:

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		472192	472194	472195	472196	472197		
SamplingDate		2003/08/06	2003/08/06	2003/08/06	2003/08/06	2003/08/06		
	Units	**CW1O080603-400**	**CW2O080603-401**	**CW3O080603-402**	**CW4O080603-403**	**CB1O080603-404**	**DL**	**QA Batch**
Physical Properties								
Moisture	%	24	24	26	26	26	1	333889
Sieve - #200 (>0.075mm -TS)	%	3.6	4.5	2.8	15	3.1	0.01	334815
Sieve - Pan	%	96	95	97	85	97	0.01	334815
Please check for attached comments								

Maxxam ID		472198	472199	472201	472202	472203		
SamplingDate		2003/08/06	2003/08/06	2003/08/06	2003/08/06	2003/08/06		
	Units	**CB2O080603-405**	**CB3O080603-406**	**CB4O080603-407**	**CB5O080603-408**	**CB6O080603-409**	**DL**	**QA Batch**
Physical Properties								
Moisture	%	26	26	25	26	26	1	333889
Sieve - #200 (>0.075mm -TS)	%	5.7	28	35	28	4.2	0.01	334815
Sieve - Pan	%	94	72	65	72	96	0.01	334815
Please check for attached comments								

Maxxam ID		472204	472205	472206	472207	472208		
SamplingDate		2003/08/06	2003/08/06	2003/08/06	2003/08/06	2003/08/06		
	Units	**CW1P080603-410**	**CW2P080603-411**	**CW3P080603-412**	**CB1P080603-413**	**CB2P080603-414**	**DL**	**QA Batch**
Physical Properties								
Moisture	%	29	27	23	24	23	1	333889
Sieve - #200 (>0.075mm -TS)	%	6.5	6.1	13	2.9	27	0.01	334815
Sieve - Pan	%	94	94	87	97	73	0.01	334815
Please check for attached comments								

Maxxam ID		472209	472210	472211	472212	472213		
SamplingDate		2003/08/06	2003/08/06	2003/08/06	2003/08/06	2003/08/06		
	Units	**CB3P080603-415**	**CB4P080603-416**	**CB5P080603-417**	**418**	**419**	**DL**	**QA Batch**
Physical Properties								
Moisture	%	27	26	20	27	24	1	333889
Sieve - #200 (>0.075mm -TS)	%	23	23	61	18	11	0.01	334815
Sieve - Pan	%	77	77	39	82	89	0.01	334815
Please check for attached comments								

Maxxam Job #: A315572
Report Date: 2003/08/15

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03
Site Reference:
Sampler Initials:

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		472753	472754	472755	472756	472757		
SamplingDate		2003/08/04	2003/08/04	2003/08/04	2003/08/04	2003/08/04		
	Units	**CB1N080403-391**	**CB2N080403-392**	**CB3N080403-393**	**CB4N080403-394**	**CW1N080403-395**	**DL**	**QA Batch**
Physical Properties								
Moisture	%	27	27	22	23	23	1	333889
Sieve - #200 (>0.075mm -TS)	%	37	29	22	43	13	0.01	334820
Sieve - Pan	%	63	71	78	57	87	0.01	334820

Please check for attached comments

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		472192	472194	472195	472196		
SamplingDate		2003/08/06	2003/08/06	2003/08/06	2003/08/06		
	Units	**CW1O080603-400**	**CW2O080603-401**	**CW3O080603-402**	**CW4O080603-403**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	mg/kg	2600	57	45	3200	10	331972
F2 (C10-C16 Hydrocarbons)	mg/kg	650	53	220	3700	5	331946
F3 (C16-C34 Hydrocarbons)	mg/kg	90	16	140	280	10	331946
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	331946
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	<500	<500	<500	500	331948
Reached Baseline at C50	mg/kg	YES	YES	YES	YES	N/A	331946

N/A = Not Applicable
Please check for attached comments

Maxxam ID		472197		472198		472199		
SamplingDate		2003/08/06		2003/08/06		2003/08/06		
	Units	**CB1O080603-404**	**DL**	**CB2O080603-405**	**DL**	**CB3O080603-406**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon								
F1 (C06-C10) - BTEX	mg/kg	1700	10	780	10	890	10	331972
F2 (C10-C16 Hydrocarbons)	mg/kg	1100	5	1200	6	490	5	331946
F3 (C16-C34 Hydrocarbons)	mg/kg	290	10	150	10	120	10	331946
F4 (C34-C50 Hydrocarbons)	mg/kg	28	10	<10	10	<10	10	331946
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	500	<500	500	<500	500	331948
Reached Baseline at C50	mg/kg	NO	N/A	YES	N/A	YES	N/A	331946

N/A = Not Applicable
Please check for attached comments

Maxxam ID		472201	472202	472203	472204		
SamplingDate		2003/08/06	2003/08/06	2003/08/06	2003/08/06		
	Units	**CB4O080603-407**	**CB5O080603-408**	**CB6O080603-409**	**CW1P080603-410**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	mg/kg	280	530	440	110	10	331972
F2 (C10-C16 Hydrocarbons)	mg/kg	29	58	440	37	5	331946
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	17	220	<10	10	331946
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	<10	75	<10	10	331946
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	<500	<500	<500	500	331948
Reached Baseline at C50	mg/kg	YES	YES	NO	YES	N/A	331946

N/A = Not Applicable
Please check for attached comments

Maxxam Analytics Inc

Maxxam Job #: A315572
Report Date: 2003/08/15

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03
Site Reference:
Sampler Initials:

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		472205	472206	472207	472208		
SamplingDate		2003/08/06	2003/08/06	2003/08/06	2003/08/06		
	Units	**CW2P080603-411**	**CW3P080603-412**	**CB1P080603-413**	**CB2P080603-414**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	mg/kg	2300	2800	1900	300	10	331972
F2 (C10-C16 Hydrocarbons)	mg/kg	6600	1800	580	250	5	331946
F3 (C16-C34 Hydrocarbons)	mg/kg	270	150	98	38	10	331946
F4 (C34-C50 Hydrocarbons)	mg/kg	15	14	<10	<10	10	331946
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	<500	<500	<500	500	331948
Reached Baseline at C50	mg/kg	YES	NO	YES	YES	N/A	331946

N/A = Not Applicable
Please check for attached comments

Maxxam ID		472209	472210	472211		
SamplingDate		2003/08/06	2003/08/06	2003/08/06		
	Units	**CB3P080603-415**	**CB4P080603-416**	**CB5P080603-417**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	mg/kg	880	790	990	10	331972
F2 (C10-C16 Hydrocarbons)	mg/kg	1200	3600	250	5	331946
F3 (C16-C34 Hydrocarbons)	mg/kg	190	170	40	10	331946
F4 (C34-C50 Hydrocarbons)	mg/kg	55	<10	<10	10	331946
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	<500	<500	500	331948
Reached Baseline at C50	mg/kg	NO	YES	YES	N/A	331946

N/A = Not Applicable
Please check for attached comments

Maxxam ID		472212		472213		472753		
SamplingDate		2003/08/06		2003/08/06		2003/08/04		
	Units	**418**	**DL**	**419**	**QA Batch**	**CB1N080403-391**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon								
F1 (C06-C10) - BTEX	mg/kg	2100	10	2000	331972	13	10	332922
F2 (C10-C16 Hydrocarbons)	mg/kg	8700	6	4000	331946	<5	5	332882
F3 (C16-C34 Hydrocarbons)	mg/kg	140	10	230	331946	83	10	332882
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	<10	331946	<10	10	332882
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	500	<500	331948	<500	500	332883
Reached Baseline at C50	mg/kg	YES	N/A	YES	331946	YES	N/A	332882

N/A = Not Applicable
Please check for attached comments

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		472754	472755	472756		
SamplingDate		2003/08/04	2003/08/04	2003/08/04		
	Units	**CB2N080403-392**	**CB3N080403-393**	**CB4N080403-394**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10) - BTEX	mg/kg	46	1100	860	10	332922
F2 (C10-C16 Hydrocarbons)	mg/kg	55	2300	1200	5	332882
F3 (C16-C34 Hydrocarbons)	mg/kg	240	11	<10	10	332882
F4 (C34-C50 Hydrocarbons)	mg/kg	110	<10	<10	10	332882
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	914	<500	<500	500	332883
Reached Baseline at C50	mg/kg	NO	YES	YES	N/A	332882

N/A = Not Applicable
Please check for attached comments

Maxxam ID		472757		
SamplingDate		2003/08/04		
	Units	**CW1N080403-395**	**DL**	**QA Batch**
Ext. Pet. Hydrocarbon				
F1 (C06-C10) - BTEX	mg/kg	1000	10	332922
F2 (C10-C16 Hydrocarbons)	mg/kg	710	6	332882
F3 (C16-C34 Hydrocarbons)	mg/kg	<10	10	332882
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	332882
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	<500	500	332883
Reached Baseline at C50	mg/kg	YES	N/A	332882

N/A = Not Applicable
Please check for attached comments

Maxxam Analytics Inc

Maxxam Job #: A315572
Report Date: 2003/08/15

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03
Site Reference:
Sampler Initials:

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		472192		472194	472195		
SamplingDate		2003/08/06		2003/08/06	2003/08/06		
	Units	**CW1O080603-400**	**DL**	**CW2O080603-401**	**CW3O080603-402**	**DL**	**QA Batch**
VOLATILES							
Purgeable (MeOH) Benzene	mg/kg	24.7	1	3.09	5.98	0.03	331974
Purgeable (MeOH) Toluene	mg/kg	137	1	7.57	0.30	0.03	331974
Purgeable (MeOH) Ethylbenzene	mg/kg	64.1	1	2.05	0.62	0.03	331974
Purgeable (MeOH) m & p-Xylene	mg/kg	247	2	6.82	0.58	0.07	331974
Purgeable (MeOH) o-Xylene	mg/kg	98.4	1	3.05	0.19	0.03	331974
Surrogate Recovery (%)							
Purgeable (MeOH) D8-TOLUENE (sur.)	%	96	N/A	97	97	N/A	331974

N/A = Not Applicable
Please check for attached comments

Maxxam ID		472196		472197		
SamplingDate		2003/08/06		2003/08/06		
	Units	**CW4O080603-403**	**DL**	**CB1O080603-404**	**DL**	**QA Batch**
VOLATILES						
Purgeable (MeOH) Benzene	mg/kg	48	10	20.0	1	331974
Purgeable (MeOH) Toluene	mg/kg	233	10	121	1	331974
Purgeable (MeOH) Ethylbenzene	mg/kg	108	10	41.9	1	331974
Purgeable (MeOH) m & p-Xylene	mg/kg	445	20	179	2	331974
Purgeable (MeOH) o-Xylene	mg/kg	174	10	68.4	1	331974
Surrogate Recovery (%)						
Purgeable (MeOH) D8-TOLUENE (sur.)	%	94	N/A	97	N/A	331974

N/A = Not Applicable
Please check for attached comments

Maxxam ID		472198	472199		472201		
SamplingDate		2003/08/06	2003/08/06		2003/08/06		
	Units	**CB2O080603-405**	**CB3O080603-406**	**DL**	**CB4O080603-407**	**DL**	**QA Batch**
VOLATILES							
Purgeable (MeOH) Benzene	mg/kg	8.8	14.2	0.3	3.51	0.03	331974
Purgeable (MeOH) Toluene	mg/kg	44.8	32.9	0.3	4.84	0.03	331974
Purgeable (MeOH) Ethylbenzene	mg/kg	14.3	19.3	0.3	2.81	0.03	331974
Purgeable (MeOH) m & p-Xylene	mg/kg	58.3	60.7	0.7	14.4	0.06	331974
Purgeable (MeOH) o-Xylene	mg/kg	23.2	21.9	0.3	5.70	0.03	331974
Surrogate Recovery (%)							
Purgeable (MeOH) D8-TOLUENE (sur.)	%	96	95	N/A	96	N/A	331974

N/A = Not Applicable
Please check for attached comments

Maxxam Analytics Inc

Maxxam Job #: A315572
Report Date: 2003/08/15

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Client Project #: 5435-03
Site Reference:
Sampler Initials:

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		472202		472203		472204		
SamplingDate		2003/08/06		2003/08/06		2003/08/06		
	Units	**CB5O080603-408**	**DL**	**CB6O080603-409**	**DL**	**CW1P080603-410**	**DL**	**QA Batch**
VOLATILES								
Purgeable (MeOH) Benzene	mg/kg	3.8	0.3	1.43	0.03	2.50	0.04	331974
Purgeable (MeOH) Toluene	mg/kg	8.5	0.3	1.11	0.03	1.81	0.04	331974
Purgeable (MeOH) Ethylbenzene	mg/kg	7.8	0.3	4.08	0.03	1.01	0.04	331974
Purgeable (MeOH) m & p-Xylene	mg/kg	51.7	0.7	19.6	0.07	3.74	0.07	331974
Purgeable (MeOH) o-Xylene	mg/kg	18.6	0.3	5.89	0.03	1.37	0.04	331974
Surrogate Recovery (%)								
Purgeable (MeOH) D8-TOLUENE (sur.)	%	95	N/A	98	N/A	96	N/A	331974

N/A = Not Applicable
Please check for attached comments

Maxxam ID		472205		472206		
SamplingDate		2003/08/06		2003/08/06		
	Units	**CW2P080603-411**	**DL**	**CW3P080603-412**	**DL**	**QA Batch**
VOLATILES						
Purgeable (MeOH) Benzene	mg/kg	14.2	0.4	4.8	0.5	331974
Purgeable (MeOH) Toluene	mg/kg	47.5	0.4	2.8	0.5	331974
Purgeable (MeOH) Ethylbenzene	mg/kg	27.4	0.4	40.1	0.5	331974
Purgeable (MeOH) m & p-Xylene	mg/kg	191	0.7	203	1	331974
Purgeable (MeOH) o-Xylene	mg/kg	94.6	0.4	79.2	0.5	331974
Surrogate Recovery (%)						
Purgeable (MeOH) D8-TOLUENE (sur.)	%	96	N/A	95	N/A	331974

N/A = Not Applicable
Please check for attached comments

Maxxam ID		472207		472208		
SamplingDate		2003/08/06		2003/08/06		
	Units	**CB1P080603-413**	**DL**	**CB2P080603-414**	**DL**	**QA Batch**
VOLATILES						
Purgeable (MeOH) Benzene	mg/kg	21.1	0.3	7.62	0.03	331974
Purgeable (MeOH) Toluene	mg/kg	102	0.3	7.05	0.03	331974
Purgeable (MeOH) Ethylbenzene	mg/kg	41.5	0.3	4.91	0.03	331974
Purgeable (MeOH) m & p-Xylene	mg/kg	156	0.7	17.7	0.07	331974
Purgeable (MeOH) o-Xylene	mg/kg	64.4	0.3	7.39	0.03	331974
Surrogate Recovery (%)						
Purgeable (MeOH) D8-TOLUENE (sur.)	%	97	N/A	98	N/A	331974

N/A = Not Applicable
Please check for attached comments

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		472209		472210		
SamplingDate		2003/08/06		2003/08/06		
	Units	**CB3P080603 -415**	**DL**	**CB4P080603 -416**	**DL**	**QA Batch**
VOLATILES						
Purgeable (MeOH) Benzene	mg/kg	7.6	0.4	1.62	0.03	331974
Purgeable (MeOH) Toluene	mg/kg	20.0	0.4	0.94	0.03	331974
Purgeable (MeOH) Ethylbenzene	mg/kg	12.0	0.4	1.51	0.03	331974
Purgeable (MeOH) m & p-Xylene	mg/kg	53.0	0.7	18.6	0.07	331974
Purgeable (MeOH) o-Xylene	mg/kg	24.6	0.4	3.42	0.03	331974
Surrogate Recovery (%)						
Purgeable (MeOH) D8-TOLUENE (sur.)	%	98	N/A	99	N/A	331974

N/A = Not Applicable
Please check for attached comments

Maxxam ID		472211		472212		472213		
SamplingDate		2003/08/06		2003/08/06		2003/08/06		
	Units	**CB5P080603 -417**	**DL**	**418**	**DL**	**419**	**DL**	**QA Batch**
VOLATILES								
Purgeable (MeOH) Benzene	mg/kg	6.6	0.5	7	1	3.8	0.3	331974
Purgeable (MeOH) Toluene	mg/kg	45.7	0.5	23.0	1	4.5	0.3	331974
Purgeable (MeOH) Ethylbenzene	mg/kg	18.0	0.5	11.3	1	27.4	0.3	331974
Purgeable (MeOH) m & p-Xylene	mg/kg	69.9	1	109	2	161	0.7	331974
Purgeable (MeOH) o-Xylene	mg/kg	27.2	0.5	64.6	1	69.6	0.3	331974
Surrogate Recovery (%)								
Purgeable (MeOH) D8-TOLUENE (sur.)	%	96	N/A	95	N/A	95	N/A	331974

N/A = Not Applicable
Please check for attached comments

Maxxam ID		472753	472754		472755		
SamplingDate		2003/08/04	2003/08/04		2003/08/04		
	Units	**CB1N080403 -391**	**CB2N080403 -392**	**DL**	**CB3N080403 -393**	**DL**	**QA Batch**
VOLATILES							
Purgeable (MeOH) Benzene	mg/kg	1.73	1.82	0.03	11.7	0.3	332923
Purgeable (MeOH) Toluene	mg/kg	<0.03	0.30	0.03	42.2	0.3	332923
Purgeable (MeOH) Ethylbenzene	mg/kg	1.18	2.87	0.03	21.8	0.3	332923
Purgeable (MeOH) m & p-Xylene	mg/kg	0.10	4.59	0.07	111	0.6	332923
Purgeable (MeOH) o-Xylene	mg/kg	<0.03	0.53	0.03	47.2	0.3	332923
Surrogate Recovery (%)							
Purgeable (MeOH) D8-TOLUENE (sur.)	%	97	99	N/A	98	N/A	332923

N/A = Not Applicable
Please check for attached comments

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		472756		472757		
SamplingDate		2003/08/04		2003/08/04		
	Units	**CB4N080403-394**	**DL**	**CW1N080403-395**	**DL**	**QA Batch**
VOLATILES						
Purgeable (MeOH) Benzene	mg/kg	5.0	0.3	11.0	0.2	332923
Purgeable (MeOH) Toluene	mg/kg	20.1	0.3	43.7	0.2	332923
Purgeable (MeOH) Ethylbenzene	mg/kg	14.3	0.3	23.5	0.2	332923
Purgeable (MeOH) m & p-Xylene	mg/kg	58.6	0.7	106	0.5	332923
Purgeable (MeOH) o-Xylene	mg/kg	21.9	0.3	41.8	0.2	332923
Surrogate Recovery (%)						
Purgeable (MeOH) D8-TOLUENE (sur.)	%	95	N/A	96	N/A	332923

N/A = Not Applicable
Please check for attached comments

Results relate only to the items tested.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL IN(
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Quality Assurance Report

Maxxam Job Number: CA315572

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
331946	VM	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/08/13		86	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/08/13		88	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/08/13		104	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/08/13		72	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/08/13		101	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/08/13		95	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/08/13		87	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/08/13		100	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/08/13		105	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/08/13	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/08/13	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/08/13	<8		mg/kg	
			Reached Baseline at C50	2003/08/13	YES		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2003/08/13	28.1		%	N/A
			F3 (C16-C34 Hydrocarbons)	2003/08/13	26.1		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/08/13	NC		%	N/A
			Reached Baseline at C50	2003/08/13	NC		%	N/A
331948	LC2	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/08/13	<500		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/08/13	NC		%	N/A
331972	OJ	Calibration Check	F1 (C06-C10) - BTEX	2003/08/14		103	%	85 - 115
		QC STANDARD	F1 (C06-C10) - BTEX	2003/08/14		106	%	80 - 120
		SPIKE	F1 (C06-C10) - BTEX	2003/08/14		101	%	80 - 120
		BLANK	F1 (C06-C10) - BTEX	2003/08/14	<12		mg/kg	
		RPD	F1 (C06-C10) - BTEX	2003/08/14	NC		%	N/A
331974	SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/08/13		109	%	85 - 115
			Purgeable (MeOH) Toluene	2003/08/13		101	%	85 - 115
			Purgeable (MeOH) Ethylbenzene	2003/08/13		95	%	85 - 115
			Purgeable (MeOH) m & p-Xylene	2003/08/13		91	%	85 - 115
			Purgeable (MeOH) o-Xylene	2003/08/13		93	%	85 - 115
		SPIKE	Purgeable (MeOH) Benzene	2003/08/13		88	%	75 - 125
			Purgeable (MeOH) Toluene	2003/08/13		95	%	75 - 125
			Purgeable (MeOH) Ethylbenzene	2003/08/13		83	%	75 - 125
			Purgeable (MeOH) m & p-Xylene	2003/08/13		76	%	75 - 125
			Purgeable (MeOH) o-Xylene	2003/08/13		87	%	75 - 125
		BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/08/13		93	%	
			Purgeable (MeOH) Benzene	2003/08/13	<0.03		mg/kg	
			Purgeable (MeOH) Toluene	2003/08/13	<0.03		mg/kg	
			Purgeable (MeOH) Ethylbenzene	2003/08/13	<0.03		mg/kg	
			Purgeable (MeOH) m & p-Xylene	2003/08/13	<0.05		mg/kg	
			Purgeable (MeOH) o-Xylene	2003/08/13	<0.03		mg/kg	
		RPD	Purgeable (MeOH) Benzene	2003/08/13	8.6		%	N/A
			Purgeable (MeOH) Toluene	2003/08/13	11.5		%	N/A
			Purgeable (MeOH) Ethylbenzene	2003/08/13	15.9		%	N/A
			Purgeable (MeOH) m & p-Xylene	2003/08/13	17.9		%	N/A
			Purgeable (MeOH) o-Xylene	2003/08/13	19.6		%	N/A
332882	DS4	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/08/13		93	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/08/13		107	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/08/13		104	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/08/13		68	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/08/13		90	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/08/13		104	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/08/13		94	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/08/13		97	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/08/13		108	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/08/13	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/08/13	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/08/13	<8		mg/kg	
			Reached Baseline at C50	2003/08/13	YES		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2003/08/13	NC		%	N/A
			F3 (C16-C34 Hydrocarbons)	2003/08/13	NC		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/08/13	NC		%	N/A

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC
Attention: KURT KURE
Client Project #: 5435-03
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: CA315572

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
332882	DS4	RPD	Reached Baseline at C50	2003/08/13	NC		%	N/A
332883	LC2	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/08/13	<500		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/08/13	NC		%	N/A
332922	OJ	Calibration Check	F1 (C06-C10) - BTEX	2003/08/13		102	%	85 - 115
		QC STANDARD	F1 (C06-C10) - BTEX	2003/08/13		93	%	80 - 120
		SPIKE	F1 (C06-C10) - BTEX	2003/08/13		102	%	80 - 120
		BLANK	F1 (C06-C10) - BTEX	2003/08/13	<12		mg/kg	
		RPD	F1 (C06-C10) - BTEX	2003/08/13	NC		%	N/A
332923	SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/08/14		92	%	85 - 115
			Purgeable (MeOH) Toluene	2003/08/14		107	%	85 - 115
			Purgeable (MeOH) Ethylbenzene	2003/08/14		98	%	85 - 115
			Purgeable (MeOH) m & p-Xylene	2003/08/14		98	%	85 - 115
			Purgeable (MeOH) o-Xylene	2003/08/14		95	%	85 - 115
		SPIKE	Purgeable (MeOH) Benzene	2003/08/14		91	%	75 - 125
			Purgeable (MeOH) Toluene	2003/08/14		97	%	75 - 125
			Purgeable (MeOH) Ethylbenzene	2003/08/14		85	%	75 - 125
			Purgeable (MeOH) m & p-Xylene	2003/08/14		78	%	75 - 125
			Purgeable (MeOH) o-Xylene	2003/08/14		89	%	75 - 125
		BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/08/14		96	%	
			Purgeable (MeOH) Benzene	2003/08/14	<0.03		mg/kg	
			Purgeable (MeOH) Toluene	2003/08/14	<0.03		mg/kg	
			Purgeable (MeOH) Ethylbenzene	2003/08/14	<0.03		mg/kg	
			Purgeable (MeOH) m & p-Xylene	2003/08/14	<0.05		mg/kg	
			Purgeable (MeOH) o-Xylene	2003/08/14	<0.03		mg/kg	
		RPD	Purgeable (MeOH) Benzene	2003/08/14	NC		%	N/A
			Purgeable (MeOH) Ethylbenzene	2003/08/14	NC		%	N/A
			Purgeable (MeOH) m & p-Xylene	2003/08/14	NC		%	N/A
			Purgeable (MeOH) o-Xylene	2003/08/14	NC		%	N/A
			Purgeable (MeOH) Toluene	2003/08/14	NC		%	N/A
333889	RC	RPD	Moisture	2003/08/14	1.7		%	N/A
			Moisture	2003/08/14	1.1		%	N/A
			Moisture	2003/08/14	2.1		%	N/A

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
BAY R 1338-36 AVE NE
CALGARY, AB
CANADA T2E 6T6

Attention: KURT KURE

Report Date: 2003/08/28

Your P.O. #: CALL
Your Project #: 5435-03, SHELL W. CHANNEL
Site: NEAR AKLAVIK NWT

ANALYTICAL REPORT

MAXXAM JOB #: A316386
Received: 2003/08/20, 8:30

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX and purgeables (C3 to C10) (MSD)	9	N/A	2003/08/25	CAL SOP# 0048, EDM SOP# 0048	GC/MS-PURGE &
Total Extractable Hydrocarbon C11-C30	9	N/A	2003/08/22	CAL SOP# 0063, EDM SOP# 0047	Mod. EPA 3610A,

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

AM/ns
encl.

Total Cover pages: 1

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW1	Maxxam Sample Number	:	476584
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable Benzene	(0.0005)	mg/L	80.0 TO 80.0	33808	0.0004	0.0008
Purgeable Toluene	<0.0004	mg/L	111.0 TO 111.0	33808	0.0004	0.0008
Purgeable Ethylbenzene	0.0018	mg/L	136.0 TO 136.0	33808	0.0004	0.0008
Purgeable m & p-Xylene	0.0020	mg/L	139.0 TO 139.0	33808	0.0008	0.002
Purgeable o-Xylene	<0.0004	mg/L	144.0 TO 144.0	33808	0.0004	0.0008
Purgeable Total (C3-C10)	<0.1	mg/L		33808	0.1	0.2

Surrogate Recoveries (%):

D8-TOLUENE (sur.):	99	Control Limits: 88 - 110

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW1	Maxxam Sample Number	:	476584
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Extractable Hydrocarbons by GC-FID

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
Extractable Hydrocarbons						
Undecanes (C11)	<0.02	mg/L	174.3 TO 196.0	33728	0.02	0.04
Dodecanes (C12)	<0.02	mg/L	196.1 TO 216.0	33728	0.02	0.04
Tridecanes (C13)	<0.02	mg/L	216.1 TO 236.0	33728	0.02	0.04
Tetradecanes (C14)	<0.02	mg/L	236.1 TO 253.0	33728	0.02	0.04
Pentadecanes (C15)	<0.02	mg/L	253.1 TO 271.0	33728	0.02	0.04
Hexadecanes (C16)	<0.02	mg/L	271.1 TO 287.0	33728	0.02	0.04
Heptadecanes (C17)	<0.02	mg/L	287.1 TO 302.0	33728	0.02	0.04
Octadecanes (C18)	<0.02	mg/L	302.1 TO 317.0	33728	0.02	0.04
Nonadecanes (C19)	<0.02	mg/L	317.1 TO 331.0	33728	0.02	0.04
Eicosanes (C20)	<0.02	mg/L	331.1 TO 344.0	33728	0.02	0.04
Heneicosanes (C21)	<0.02	mg/L	344.1 TO 357.0	33728	0.02	0.04
Docosanes (C22)	<0.02	mg/L	357.1 TO 366.0	33728	0.02	0.04
Tricosanes (C23)	<0.02	mg/L	366.1 TO 380.0	33728	0.02	0.04
Tetracosanes (C24)	<0.02	mg/L	380.1 TO 391.0	33728	0.02	0.04
Pentacosanes (C25)	<0.02	mg/L	391.1 TO 402.0	33728	0.02	0.04
Hexacosanes (C26)	<0.02	mg/L	402.1 TO 412.0	33728	0.02	0.04
Heptacosanes (C27)	<0.02	mg/L	412.1 TO 422.0	33728	0.02	0.04
Octacosanes (C28)	<0.02	mg/L	422.1 TO 432.0	33728	0.02	0.04
Nonacosanes (C29)	<0.02	mg/L	432.1 TO 441.0	33728	0.02	0.04
Triacosanes (C30)	<0.02	mg/L	441.1 TO 449.0	33728	0.02	0.04
Total Extractables C11 to C30	<0.5	mg/L		33728	0.5	1

Surrogate Recoveries (%):

OCTANE (sur.):	101	Control Limits: 66 - 131

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW2	Maxxam Sample Number	:	476585
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable Benzene	<0.0004	mg/L	80.0 TO 80.0	33808	0.0004	0.0008
Purgeable Toluene	<0.0004	mg/L	111.0 TO 111.0	33808	0.0004	0.0008
Purgeable Ethylbenzene	<0.0004	mg/L	136.0 TO 136.0	33808	0.0004	0.0008
Purgeable m & p-Xylene	<0.0008	mg/L	139.0 TO 139.0	33808	0.0008	0.002
Purgeable o-Xylene	<0.0004	mg/L	144.0 TO 144.0	33808	0.0004	0.0008
Purgeable Total (C3-C10)	<0.1	mg/L		33808	0.1	0.2
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 88 - 110				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW2	Maxxam Sample Number	:	476585
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Extractable Hydrocarbons by GC-FID

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
Extractable Hydrocarbons						
Undecanes (C11)	<0.02	mg/L	174.3 TO 196.0	33728	0.02	0.04
Dodecanes (C12)	<0.02	mg/L	196.1 TO 216.0	33728	0.02	0.04
Tridecanes (C13)	<0.02	mg/L	216.1 TO 236.0	33728	0.02	0.04
Tetradecanes (C14)	<0.02	mg/L	236.1 TO 253.0	33728	0.02	0.04
Pentadecanes (C15)	<0.02	mg/L	253.1 TO 271.0	33728	0.02	0.04
Hexadecanes (C16)	<0.02	mg/L	271.1 TO 287.0	33728	0.02	0.04
Heptadecanes (C17)	<0.02	mg/L	287.1 TO 302.0	33728	0.02	0.04
Octadecanes (C18)	<0.02	mg/L	302.1 TO 317.0	33728	0.02	0.04
Nonadecanes (C19)	<0.02	mg/L	317.1 TO 331.0	33728	0.02	0.04
Eicosanes (C20)	<0.02	mg/L	331.1 TO 344.0	33728	0.02	0.04
Heneicosanes (C21)	<0.02	mg/L	344.1 TO 357.0	33728	0.02	0.04
Docosanes (C22)	<0.02	mg/L	357.1 TO 366.0	33728	0.02	0.04
Tricosanes (C23)	<0.02	mg/L	366.1 TO 380.0	33728	0.02	0.04
Tetracosanes (C24)	<0.02	mg/L	380.1 TO 391.0	33728	0.02	0.04
Pentacosanes (C25)	<0.02	mg/L	391.1 TO 402.0	33728	0.02	0.04
Hexacosanes (C26)	<0.02	mg/L	402.1 TO 412.0	33728	0.02	0.04
Heptacosanes (C27)	<0.02	mg/L	412.1 TO 422.0	33728	0.02	0.04
Octacosanes (C28)	<0.02	mg/L	422.1 TO 432.0	33728	0.02	0.04
Nonacosanes (C29)	<0.02	mg/L	432.1 TO 441.0	33728	0.02	0.04
Triacosanes (C30)	<0.02	mg/L	441.1 TO 449.0	33728	0.02	0.04
Total Extractables C11 to C30	<0.5	mg/L		33728	0.5	1

Surrogate Recoveries (%):

OCTANE (sur.):	92	Control Limits: 66 - 131

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW3	Maxxam Sample Number	:	476586
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable Benzene	0.0009	mg/L	80.0 TO 80.0	33808	0.0004	0.0008
Purgeable Toluene	<0.0004	mg/L	111.0 TO 111.0	33808	0.0004	0.0008
Purgeable Ethylbenzene	<0.0004	mg/L	136.0 TO 136.0	33808	0.0004	0.0008
Purgeable m & p-Xylene	<0.0008	mg/L	139.0 TO 139.0	33808	0.0008	0.002
Purgeable o-Xylene	<0.0004	mg/L	144.0 TO 144.0	33808	0.0004	0.0008
Purgeable Total (C3-C10)	<0.1	mg/L		33808	0.1	0.2
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 88 - 110				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW3	Maxxam Sample Number	:	476586
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Extractable Hydrocarbons by GC-FID

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
Extractable Hydrocarbons						
Undecanes (C11)	<0.02	mg/L	174.3 TO 196.0	33728	0.02	0.04
Dodecanes (C12)	<0.02	mg/L	196.1 TO 216.0	33728	0.02	0.04
Tridecanes (C13)	<0.02	mg/L	216.1 TO 236.0	33728	0.02	0.04
Tetradecanes (C14)	<0.02	mg/L	236.1 TO 253.0	33728	0.02	0.04
Pentadecanes (C15)	<0.02	mg/L	253.1 TO 271.0	33728	0.02	0.04
Hexadecanes (C16)	<0.02	mg/L	271.1 TO 287.0	33728	0.02	0.04
Heptadecanes (C17)	<0.02	mg/L	287.1 TO 302.0	33728	0.02	0.04
Octadecanes (C18)	<0.02	mg/L	302.1 TO 317.0	33728	0.02	0.04
Nonadecanes (C19)	<0.02	mg/L	317.1 TO 331.0	33728	0.02	0.04
Eicosanes (C20)	<0.02	mg/L	331.1 TO 344.0	33728	0.02	0.04
Heneicosanes (C21)	<0.02	mg/L	344.1 TO 357.0	33728	0.02	0.04
Docosanes (C22)	<0.02	mg/L	357.1 TO 366.0	33728	0.02	0.04
Tricosanes (C23)	<0.02	mg/L	366.1 TO 380.0	33728	0.02	0.04
Tetracosanes (C24)	<0.02	mg/L	380.1 TO 391.0	33728	0.02	0.04
Pentacosanes (C25)	<0.02	mg/L	391.1 TO 402.0	33728	0.02	0.04
Hexacosanes (C26)	<0.02	mg/L	402.1 TO 412.0	33728	0.02	0.04
Heptacosanes (C27)	<0.02	mg/L	412.1 TO 422.0	33728	0.02	0.04
Octacosanes (C28)	<0.02	mg/L	422.1 TO 432.0	33728	0.02	0.04
Nonacosanes (C29)	<0.02	mg/L	432.1 TO 441.0	33728	0.02	0.04
Triacosanes (C30)	<0.02	mg/L	441.1 TO 449.0	33728	0.02	0.04
Total Extractables C11 to C30	<0.5	mg/L		33728	0.5	1

Surrogate Recoveries (%):

OCTANE (sur.):	89	Control Limits: 66 - 131

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW4	Maxxam Sample Number	:	476587
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable Benzene	<0.0004	mg/L	80.0 TO 80.0	33808	0.0004	0.0008
Purgeable Toluene	<0.0004	mg/L	111.0 TO 111.0	33808	0.0004	0.0008
Purgeable Ethylbenzene	<0.0004	mg/L	136.0 TO 136.0	33808	0.0004	0.0008
Purgeable m & p-Xylene	<0.0008	mg/L	139.0 TO 139.0	33808	0.0008	0.002
Purgeable o-Xylene	<0.0004	mg/L	144.0 TO 144.0	33808	0.0004	0.0008
Purgeable Total (C3-C10)	<0.1	mg/L		33808	0.1	0.2
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 88 - 110				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW4	Maxxam Sample Number	:	476587
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date:		2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Extractable Hydrocarbons by GC-FID

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
Extractable Hydrocarbons						
Undecanes (C11)	<0.02	mg/L	174.3 TO 196.0	33728	0.02	0.04
Dodecanes (C12)	<0.02	mg/L	196.1 TO 216.0	33728	0.02	0.04
Tridecanes (C13)	<0.02	mg/L	216.1 TO 236.0	33728	0.02	0.04
Tetradecanes (C14)	<0.02	mg/L	236.1 TO 253.0	33728	0.02	0.04
Pentadecanes (C15)	<0.02	mg/L	253.1 TO 271.0	33728	0.02	0.04
Hexadecanes (C16)	<0.02	mg/L	271.1 TO 287.0	33728	0.02	0.04
Heptadecanes (C17)	<0.02	mg/L	287.1 TO 302.0	33728	0.02	0.04
Octadecanes (C18)	<0.02	mg/L	302.1 TO 317.0	33728	0.02	0.04
Nonadecanes (C19)	<0.02	mg/L	317.1 TO 331.0	33728	0.02	0.04
Eicosanes (C20)	<0.02	mg/L	331.1 TO 344.0	33728	0.02	0.04
Heneicosanes (C21)	<0.02	mg/L	344.1 TO 357.0	33728	0.02	0.04
Docosanes (C22)	<0.02	mg/L	357.1 TO 366.0	33728	0.02	0.04
Tricosanes (C23)	<0.02	mg/L	366.1 TO 380.0	33728	0.02	0.04
Tetracosanes (C24)	<0.02	mg/L	380.1 TO 391.0	33728	0.02	0.04
Pentacosanes (C25)	<0.02	mg/L	391.1 TO 402.0	33728	0.02	0.04
Hexacosanes (C26)	<0.02	mg/L	402.1 TO 412.0	33728	0.02	0.04
Heptacosanes (C27)	<0.02	mg/L	412.1 TO 422.0	33728	0.02	0.04
Octacosanes (C28)	<0.02	mg/L	422.1 TO 432.0	33728	0.02	0.04
Nonacosanes (C29)	<0.02	mg/L	432.1 TO 441.0	33728	0.02	0.04
Triacosanes (C30)	<0.02	mg/L	441.1 TO 449.0	33728	0.02	0.04
Total Extractables C11 to C30	<0.5	mg/L		33728	0.5	1

Surrogate Recoveries (%):

OCTANE (sur.):	94	Control Limits: 66 - 131

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW5	Maxxam Sample Number	:	476588
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable Benzene	(0.0007)	mg/L	80.0 TO 80.0	33808	0.0004	0.0008
Purgeable Toluene	<0.0004	mg/L	111.0 TO 111.0	33808	0.0004	0.0008
Purgeable Ethylbenzene	<0.0004	mg/L	136.0 TO 136.0	33808	0.0004	0.0008
Purgeable m & p-Xylene	<0.0008	mg/L	139.0 TO 139.0	33808	0.0008	0.002
Purgeable o-Xylene	<0.0004	mg/L	144.0 TO 144.0	33808	0.0004	0.0008
Purgeable Total (C3-C10)	<0.1	mg/L		33808	0.1	0.2

Surrogate Recoveries (%):

D8-TOLUENE (sur.):	99	Control Limits: 88 - 110

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW5	Maxxam Sample Number	:	476588
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Extractable Hydrocarbons by GC-FID

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
Extractable Hydrocarbons						
Undecanes (C11)	<0.02	mg/L	174.3 TO 196.0	33728	0.02	0.04
Dodecanes (C12)	<0.02	mg/L	196.1 TO 216.0	33728	0.02	0.04
Tridecanes (C13)	<0.02	mg/L	216.1 TO 236.0	33728	0.02	0.04
Tetradecanes (C14)	<0.02	mg/L	236.1 TO 253.0	33728	0.02	0.04
Pentadecanes (C15)	<0.02	mg/L	253.1 TO 271.0	33728	0.02	0.04
Hexadecanes (C16)	<0.02	mg/L	271.1 TO 287.0	33728	0.02	0.04
Heptadecanes (C17)	<0.02	mg/L	287.1 TO 302.0	33728	0.02	0.04
Octadecanes (C18)	<0.02	mg/L	302.1 TO 317.0	33728	0.02	0.04
Nonadecanes (C19)	<0.02	mg/L	317.1 TO 331.0	33728	0.02	0.04
Eicosanes (C20)	<0.02	mg/L	331.1 TO 344.0	33728	0.02	0.04
Heneicosanes (C21)	<0.02	mg/L	344.1 TO 357.0	33728	0.02	0.04
Docosanes (C22)	<0.02	mg/L	357.1 TO 366.0	33728	0.02	0.04
Tricosanes (C23)	<0.02	mg/L	366.1 TO 380.0	33728	0.02	0.04
Tetracosanes (C24)	<0.02	mg/L	380.1 TO 391.0	33728	0.02	0.04
Pentacosanes (C25)	<0.02	mg/L	391.1 TO 402.0	33728	0.02	0.04
Hexacosanes (C26)	<0.02	mg/L	402.1 TO 412.0	33728	0.02	0.04
Heptacosanes (C27)	<0.02	mg/L	412.1 TO 422.0	33728	0.02	0.04
Octacosanes (C28)	<0.02	mg/L	422.1 TO 432.0	33728	0.02	0.04
Nonacosanes (C29)	<0.02	mg/L	432.1 TO 441.0	33728	0.02	0.04
Triacosanes (C30)	<0.02	mg/L	441.1 TO 449.0	33728	0.02	0.04
Total Extractables C11 to C30	<0.5	mg/L		33728	0.5	1

Surrogate Recoveries (%):

OCTANE (sur.):	83	Control Limits: 66 - 131

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW6	Maxxam Sample Number	:	476589
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable Benzene	<0.0004	mg/L	80.0 TO 80.0	33808	0.0004	0.0008
Purgeable Toluene	<0.0004	mg/L	111.0 TO 111.0	33808	0.0004	0.0008
Purgeable Ethylbenzene	<0.0004	mg/L	136.0 TO 136.0	33808	0.0004	0.0008
Purgeable m & p-Xylene	<0.0008	mg/L	139.0 TO 139.0	33808	0.0008	0.002
Purgeable o-Xylene	<0.0004	mg/L	144.0 TO 144.0	33808	0.0004	0.0008
Purgeable Total (C3-C10)	<0.1	mg/L		33808	0.1	0.2
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	99	Control Limits: 88 - 110				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW6	Maxxam Sample Number	:	476589
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Extractable Hydrocarbons by GC-FID

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
Extractable Hydrocarbons						
Undecanes (C11)	<0.02	mg/L	174.3 TO 196.0	33728	0.02	0.04
Dodecanes (C12)	<0.02	mg/L	196.1 TO 216.0	33728	0.02	0.04
Tridecanes (C13)	<0.02	mg/L	216.1 TO 236.0	33728	0.02	0.04
Tetradecanes (C14)	<0.02	mg/L	236.1 TO 253.0	33728	0.02	0.04
Pentadecanes (C15)	<0.02	mg/L	253.1 TO 271.0	33728	0.02	0.04
Hexadecanes (C16)	<0.02	mg/L	271.1 TO 287.0	33728	0.02	0.04
Heptadecanes (C17)	<0.02	mg/L	287.1 TO 302.0	33728	0.02	0.04
Octadecanes (C18)	<0.02	mg/L	302.1 TO 317.0	33728	0.02	0.04
Nonadecanes (C19)	<0.02	mg/L	317.1 TO 331.0	33728	0.02	0.04
Eicosanes (C20)	<0.02	mg/L	331.1 TO 344.0	33728	0.02	0.04
Heneicosanes (C21)	<0.02	mg/L	344.1 TO 357.0	33728	0.02	0.04
Docosanes (C22)	<0.02	mg/L	357.1 TO 366.0	33728	0.02	0.04
Tricosanes (C23)	<0.02	mg/L	366.1 TO 380.0	33728	0.02	0.04
Tetracosanes (C24)	<0.02	mg/L	380.1 TO 391.0	33728	0.02	0.04
Pentacosanes (C25)	<0.02	mg/L	391.1 TO 402.0	33728	0.02	0.04
Hexacosanes (C26)	<0.02	mg/L	402.1 TO 412.0	33728	0.02	0.04
Heptacosanes (C27)	<0.02	mg/L	412.1 TO 422.0	33728	0.02	0.04
Octacosanes (C28)	<0.02	mg/L	422.1 TO 432.0	33728	0.02	0.04
Nonacosanes (C29)	<0.02	mg/L	432.1 TO 441.0	33728	0.02	0.04
Triacosanes (C30)	<0.02	mg/L	441.1 TO 449.0	33728	0.02	0.04
Total Extractables C11 to C30	<0.5	mg/L		33728	0.5	1

Surrogate Recoveries (%):

OCTANE (sur.):	87	Control Limits: 66 - 131

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW7	Maxxam Sample Number	:	476590
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable Benzene	0.198	mg/L	80.0 TO 80.0	33808	0.0004	0.0008
Purgeable Toluene	0.136	mg/L	111.0 TO 111.0	33808	0.0004	0.0008
Purgeable Ethylbenzene	0.0602	mg/L	136.0 TO 136.0	33808	0.0004	0.0008
Purgeable m & p-Xylene	0.253	mg/L	139.0 TO 139.0	33808	0.0008	0.002
Purgeable o-Xylene	0.108	mg/L	144.0 TO 144.0	33808	0.0004	0.0008
Purgeable Total (C3-C10)	1.2	mg/L		33808	0.1	0.2

Surrogate Recoveries (%):

D8-TOLUENE (sur.):	99	Control Limits: 88 - 110

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW7	Maxxam Sample Number	:	476590
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Extractable Hydrocarbons by GC-FID

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
Extractable Hydrocarbons						
Undecanes (C11)	0.07	mg/L	174.3 TO 196.0	33728	0.02	0.04
Dodecanes (C12)	0.13	mg/L	196.1 TO 216.0	33728	0.02	0.04
Tridecanes (C13)	0.17	mg/L	216.1 TO 236.0	33728	0.02	0.04
Tetradecanes (C14)	0.22	mg/L	236.1 TO 253.0	33728	0.02	0.04
Pentadecanes (C15)	0.16	mg/L	253.1 TO 271.0	33728	0.02	0.04
Hexadecanes (C16)	0.14	mg/L	271.1 TO 287.0	33728	0.02	0.04
Heptadecanes (C17)	0.09	mg/L	287.1 TO 302.0	33728	0.02	0.04
Octadecanes (C18)	0.06	mg/L	302.1 TO 317.0	33728	0.02	0.04
Nonadecanes (C19)	0.04	mg/L	317.1 TO 331.0	33728	0.02	0.04
Eicosanes (C20)	(0.03)	mg/L	331.1 TO 344.0	33728	0.02	0.04
Heneicosanes (C21)	(0.03)	mg/L	344.1 TO 357.0	33728	0.02	0.04
Docosanes (C22)	(0.02)	mg/L	357.1 TO 366.0	33728	0.02	0.04
Tricosanes (C23)	(0.02)	mg/L	366.1 TO 380.0	33728	0.02	0.04
Tetracosanes (C24)	<0.02	mg/L	380.1 TO 391.0	33728	0.02	0.04
Pentacosanes (C25)	(0.02)	mg/L	391.1 TO 402.0	33728	0.02	0.04
Hexacosanes (C26)	<0.02	mg/L	402.1 TO 412.0	33728	0.02	0.04
Heptacosanes (C27)	<0.02	mg/L	412.1 TO 422.0	33728	0.02	0.04
Octacosanes (C28)	<0.02	mg/L	422.1 TO 432.0	33728	0.02	0.04
Nonacosanes (C29)	<0.02	mg/L	432.1 TO 441.0	33728	0.02	0.04
Triacosanes (C30)	<0.02	mg/L	441.1 TO 449.0	33728	0.02	0.04
Total Extractables C11 to C30	1.2	mg/L		33728	0.5	1

Surrogate Recoveries (%):

OCTANE (sur.):	84	Control Limits: 66 - 131

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW8	Maxxam Sample Number	:	476591
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable Benzene	0.0078	mg/L	80.0 TO 80.0	33808	0.0004	0.0008
Purgeable Toluene	<0.0004	mg/L	111.0 TO 111.0	33808	0.0004	0.0008
Purgeable Ethylbenzene	<0.0004	mg/L	136.0 TO 136.0	33808	0.0004	0.0008
Purgeable m & p-Xylene	<0.0008	mg/L	139.0 TO 139.0	33808	0.0008	0.002
Purgeable o-Xylene	<0.0004	mg/L	144.0 TO 144.0	33808	0.0004	0.0008
Purgeable Total (C3-C10)	<0.1	mg/L		33808	0.1	0.2

Surrogate Recoveries (%):

D8-TOLUENE (sur.):	100	Control Limits: 88 - 110

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW8	Maxxam Sample Number	:	476591
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Extractable Hydrocarbons by GC-FID

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
Extractable Hydrocarbons						
Undecanes (C11)	<0.02	mg/L	174.3 TO 196.0	33728	0.02	0.04
Dodecanes (C12)	<0.02	mg/L	196.1 TO 216.0	33728	0.02	0.04
Tridecanes (C13)	<0.02	mg/L	216.1 TO 236.0	33728	0.02	0.04
Tetradecanes (C14)	<0.02	mg/L	236.1 TO 253.0	33728	0.02	0.04
Pentadecanes (C15)	<0.02	mg/L	253.1 TO 271.0	33728	0.02	0.04
Hexadecanes (C16)	<0.02	mg/L	271.1 TO 287.0	33728	0.02	0.04
Heptadecanes (C17)	<0.02	mg/L	287.1 TO 302.0	33728	0.02	0.04
Octadecanes (C18)	<0.02	mg/L	302.1 TO 317.0	33728	0.02	0.04
Nonadecanes (C19)	<0.02	mg/L	317.1 TO 331.0	33728	0.02	0.04
Eicosanes (C20)	<0.02	mg/L	331.1 TO 344.0	33728	0.02	0.04
Heneicosanes (C21)	<0.02	mg/L	344.1 TO 357.0	33728	0.02	0.04
Docosanes (C22)	<0.02	mg/L	357.1 TO 366.0	33728	0.02	0.04
Tricosanes (C23)	<0.02	mg/L	366.1 TO 380.0	33728	0.02	0.04
Tetracosanes (C24)	<0.02	mg/L	380.1 TO 391.0	33728	0.02	0.04
Pentacosanes (C25)	<0.02	mg/L	391.1 TO 402.0	33728	0.02	0.04
Hexacosanes (C26)	<0.02	mg/L	402.1 TO 412.0	33728	0.02	0.04
Heptacosanes (C27)	<0.02	mg/L	412.1 TO 422.0	33728	0.02	0.04
Octacosanes (C28)	<0.02	mg/L	422.1 TO 432.0	33728	0.02	0.04
Nonacosanes (C29)	<0.02	mg/L	432.1 TO 441.0	33728	0.02	0.04
Triacosanes (C30)	<0.02	mg/L	441.1 TO 449.0	33728	0.02	0.04
Total Extractables C11 to C30	<0.5	mg/L		33728	0.5	1

Surrogate Recoveries (%):

OCTANE (sur.):	86	Control Limits: 66 - 131

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW9	Maxxam Sample Number	:	476592
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable Benzene	0.0038	mg/L	80.0 TO 80.0	33808	0.0004	0.0008
Purgeable Toluene	<0.0004	mg/L	111.0 TO 111.0	33808	0.0004	0.0008
Purgeable Ethylbenzene	<0.0004	mg/L	136.0 TO 136.0	33808	0.0004	0.0008
Purgeable m & p-Xylene	<0.0008	mg/L	139.0 TO 139.0	33808	0.0008	0.002
Purgeable o-Xylene	<0.0004	mg/L	144.0 TO 144.0	33808	0.0004	0.0008
Purgeable Total (C3-C10)	<0.1	mg/L		33808	0.1	0.2

Surrogate Recoveries (%):

D8-TOLUENE (sur.):	99	Control Limits: 88 - 110

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	LTMW9	Maxxam Sample Number	:	476592
Sample Date & Time	:	2003/08/13	Maxxam Job Number	:	CA316386
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Water
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Extractable Hydrocarbons by GC-FID

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
Extractable Hydrocarbons						
Undecanes (C11)	<0.02	mg/L	174.3 TO 196.0	33728	0.02	0.04
Dodecanes (C12)	<0.02	mg/L	196.1 TO 216.0	33728	0.02	0.04
Tridecanes (C13)	<0.02	mg/L	216.1 TO 236.0	33728	0.02	0.04
Tetradecanes (C14)	<0.02	mg/L	236.1 TO 253.0	33728	0.02	0.04
Pentadecanes (C15)	<0.02	mg/L	253.1 TO 271.0	33728	0.02	0.04
Hexadecanes (C16)	<0.02	mg/L	271.1 TO 287.0	33728	0.02	0.04
Heptadecanes (C17)	<0.02	mg/L	287.1 TO 302.0	33728	0.02	0.04
Octadecanes (C18)	<0.02	mg/L	302.1 TO 317.0	33728	0.02	0.04
Nonadecanes (C19)	<0.02	mg/L	317.1 TO 331.0	33728	0.02	0.04
Eicosanes (C20)	<0.02	mg/L	331.1 TO 344.0	33728	0.02	0.04
Heneicosanes (C21)	<0.02	mg/L	344.1 TO 357.0	33728	0.02	0.04
Docosanes (C22)	<0.02	mg/L	357.1 TO 366.0	33728	0.02	0.04
Tricosanes (C23)	<0.02	mg/L	366.1 TO 380.0	33728	0.02	0.04
Tetracosanes (C24)	<0.02	mg/L	380.1 TO 391.0	33728	0.02	0.04
Pentacosanes (C25)	<0.02	mg/L	391.1 TO 402.0	33728	0.02	0.04
Hexacosanes (C26)	<0.02	mg/L	402.1 TO 412.0	33728	0.02	0.04
Heptacosanes (C27)	<0.02	mg/L	412.1 TO 422.0	33728	0.02	0.04
Octacosanes (C28)	<0.02	mg/L	422.1 TO 432.0	33728	0.02	0.04
Nonacosanes (C29)	<0.02	mg/L	432.1 TO 441.0	33728	0.02	0.04
Triacosanes (C30)	<0.02	mg/L	441.1 TO 449.0	33728	0.02	0.04
Total Extractables C11 to C30	<0.5	mg/L		33728	0.5	1

Surrogate Recoveries (%):

OCTANE (sur.):	81	Control Limits: 66 - 131

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #: CALL
Site Reference: NEAR AKLAVIK NWT

Quality Assurance Report

Maxxam Job Number: CA316386

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
337284	AR	Calibration Check	Undecanes (C11)	2003/08/22		95	%	75 - 125
			Pentadecanes (C15)	2003/08/22		100	%	75 - 125
			Heneicosanes (C21)	2003/08/22		107	%	75 - 125
			Triacosanes (C30)	2003/08/22		108	%	75 - 125
		BLANK	OCTANE (sur.)	2003/08/22		119	%	66 - 131
			Undecanes (C11)	2003/08/22	<0.02		mg/L	
			Dodecanes (C12)	2003/08/22	<0.02		mg/L	
			Tridecanes (C13)	2003/08/22	<0.02		mg/L	
			Tetradecanes (C14)	2003/08/22	<0.02		mg/L	
			Pentadecanes (C15)	2003/08/22	<0.02		mg/L	
			Hexadecanes (C16)	2003/08/22	<0.02		mg/L	
			Heptadecanes (C17)	2003/08/22	<0.02		mg/L	
			Octadecanes (C18)	2003/08/22	<0.02		mg/L	
			Nonadecanes (C19)	2003/08/22	<0.02		mg/L	
			Eicosanes (C20)	2003/08/22	<0.02		mg/L	
			Heneicosanes (C21)	2003/08/22	<0.02		mg/L	
			Docosanes (C22)	2003/08/22	<0.02		mg/L	
			Tricosanes (C23)	2003/08/22	<0.02		mg/L	
			Tetracosanes (C24)	2003/08/22	<0.02		mg/L	
			Pentacosanes (C25)	2003/08/22	<0.02		mg/L	
			Hexacosanes (C26)	2003/08/22	<0.02		mg/L	
			Heptacosanes (C27)	2003/08/22	<0.02		mg/L	
			Octacosanes (C28)	2003/08/22	<0.02		mg/L	
			Nonacosanes (C29)	2003/08/22	<0.02		mg/L	
			Triacosanes (C30)	2003/08/22	<0.02		mg/L	
			Total Extractables C11 to C30	2003/08/22	<0.5		mg/L	
338088	CR	Calibration Check	Purgeable Benzene	2003/08/25		97	%	85 - 115
			PurgeableToluene	2003/08/25		89	%	85 - 115
			Purgeable Ethylbenzene	2003/08/25		92	%	85 - 115
			Purgeable m & p-Xylene	2003/08/25		98	%	85 - 115
			Purgeable o-Xylene	2003/08/25		92	%	85 - 115
		SPIKE	Purgeable Benzene	2003/08/25		81	%	75 - 125
			PurgeableToluene	2003/08/25		77	%	75 - 125
			Purgeable Ethylbenzene	2003/08/25		75	%	75 - 125
			Purgeable m & p-Xylene	2003/08/25		76	%	75 - 125
			Purgeable o-Xylene	2003/08/25		77	%	75 - 125
		BLANK	Purgeable D8-TOLUENE (sur.)	2003/08/25		99	%	88 - 110
			Purgeable Benzene	2003/08/25	<0.0004		mg/L	
			PurgeableToluene	2003/08/25	<0.0004		mg/L	
			Purgeable Ethylbenzene	2003/08/25	<0.0004		mg/L	
			Purgeable m & p-Xylene	2003/08/25	<0.0008		mg/L	
			Purgeable o-Xylene	2003/08/25	<0.0004		mg/L	
			Purgeable Total (C3-C10)	2003/08/25	<0.1		mg/L	

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
BAY R 1338-36 AVE NE
CALGARY, AB
CANADA T2E 6T6

Attention: KURT KURE **Report Date: 2003/08/28**

Your Project #: 5435-03, SHELL W. CHANNEL
Site: NEAR AKLAVIK NWT

ANALYTICAL REPORT

MAXXAM JOB #: A316387
Received: 2003/08/20, 8:30

Sample Matrix: Soil
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX (MSD)	6	2003/08/20	2003/08/25	CAL SOP# 0048 E1034R4	GC/MS-PURGE & TRA
Moisture (ccme)	6	2003/08/25	2003/08/25	CAL SOP# 0028	GRAVIMETRIC
Gravimetric Heavy Hydrocarbon (F4G)	6	N/A	2003/08/21	CAL SOP# 0065	CCME
F1 (CCME Hydrocarbons C6-C10)	6	2003/08/20	2003/08/25	CAL SOP# 0066	CCME
Particle Size by Wet Sieve (75 micron)	6	2003/08/26	2003/08/26	CAL SOP# 0104	GRAVIMETRIC
F2 - F4 (CCME Hydrocarbons)	6	2003/08/20	2003/08/21	CAL SOP# 0066	CCME

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

AM/ls1
encl.

Total Cover pages: 1

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW1K080803-420	Maxxam Sample Number	:	476593
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	22	%	BAL		34047	1	2
Sieve - #200 (>0.075mm -TS)	5.8	%	SIEV		34150	0.01	0.02
Sieve - Pan	94	%	SIEV		34150	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW1K080803-420	Maxxam Sample Number	:	476593
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	2100	mg/kg	GC/FID		33731	10	20
F2 (C10-C16 Hydrocarbons)	6600	mg/kg	GC/FID		33730	5	10
F3 (C16-C34 Hydrocarbons)	85	mg/kg	GC/FID		33730	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID		33730	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		33730	300	600
Reached Baseline at C50	YES	mg/kg	GC/FID		33730	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW1K080803-420	Maxxam Sample Number	:	476593
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	2.2	mg/kg	80.0 TO 80.0	33731	0.5	1
Purgeable (MeOH) Toluene	<0.5	mg/kg	111.0 TO 111.0	33731	0.5	1
Purgeable (MeOH) Ethylbenzene	2.7	mg/kg	136.0 TO 136.0	33731	0.5	1
Purgeable (MeOH) m & p-Xylene	178	mg/kg	139.0 TO 139.0	33731	1	2
Purgeable (MeOH) o-Xylene	35.3	mg/kg	144.0 TO 144.0	33731	0.5	1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	107	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW2K080803-421	Maxxam Sample Number	:	476594
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	15	%	BAL		34047	1	2
Sieve - #200 (>0.075mm -TS)	24	%	SIEV		34150	0.01	0.02
Sieve - Pan	76	%	SIEV		34150	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW2K080803-421	Maxxam Sample Number	:	476594
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	1500	mg/kg	GC/FID		33731	10	20
F2 (C10-C16 Hydrocarbons)	3700	mg/kg	GC/FID		33730	5	10
F3 (C16-C34 Hydrocarbons)	(17)	mg/kg	GC/FID		33730	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID		33730	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		33730	300	600
Reached Baseline at C50	YES	mg/kg	GC/FID		33730	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW2K080803-421	Maxxam Sample Number	:	476594
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.3)	mg/kg	80.0 TO 80.0	33731	0.2	0.4
Purgeable (MeOH) Toluene	(0.2)	mg/kg	111.0 TO 111.0	33731	0.2	0.4
Purgeable (MeOH) Ethylbenzene	<0.2	mg/kg	136.0 TO 136.0	33731	0.2	0.4
Purgeable (MeOH) m & p-Xylene	40.1	mg/kg	139.0 TO 139.0	33731	0.4	0.8
Purgeable (MeOH) o-Xylene	19.2	mg/kg	144.0 TO 144.0	33731	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	104	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW3K080803-422	Maxxam Sample Number	:	476595
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	14	%	BAL		34047	1	2
Sieve - #200 (>0.075mm -TS)	19	%	SIEV		34150	0.01	0.02
Sieve - Pan	81	%	SIEV		34150	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW3K080803-422	Maxxam Sample Number	:	476595
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	2000	mg/kg	GC/FID		33731	10	20
F2 (C10-C16 Hydrocarbons)	4700	mg/kg	GC/FID		33730	4	8
F3 (C16-C34 Hydrocarbons)	62	mg/kg	GC/FID		33730	10	20
F4 (C34-C50 Hydrocarbons)	<9	mg/kg	GC/FID		33730	9	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		33730	300	600
Reached Baseline at C50	YES	mg/kg	GC/FID		33730	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW3K080803-422	Maxxam Sample Number	:	476595
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.2)	mg/kg	80.0 TO 80.0	33731	0.2	0.4
Purgeable (MeOH) Toluene	(0.3)	mg/kg	111.0 TO 111.0	33731	0.2	0.4
Purgeable (MeOH) Ethylbenzene	(0.2)	mg/kg	136.0 TO 136.0	33731	0.2	0.4
Purgeable (MeOH) m & p-Xylene	60.8	mg/kg	139.0 TO 139.0	33731	0.4	0.8
Purgeable (MeOH) o-Xylene	43.4	mg/kg	144.0 TO 144.0	33731	0.2	0.4
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	104	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW4K080803-423	Maxxam Sample Number	:	476596
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	19	%	BAL		34047	1	2
Sieve - #200 (>0.075mm -TS)	12	%	SIEV		34150	0.01	0.02
Sieve - Pan	88	%	SIEV		34150	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
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P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW4K080803-423	Maxxam Sample Number	:	476596
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	1900	mg/kg	GC/FID		33731	10	20
F2 (C10-C16 Hydrocarbons)	4800	mg/kg	GC/FID		33730	5	10
F3 (C16-C34 Hydrocarbons)	(12)	mg/kg	GC/FID		33730	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID		33730	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		33730	300	600
Reached Baseline at C50	YES	mg/kg	GC/FID		33730	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CW4K080803-423	Maxxam Sample Number	:	476596
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.3	mg/kg	80.0 TO 80.0	33731	0.3	0.6
Purgeable (MeOH) Toluene	<0.3	mg/kg	111.0 TO 111.0	33731	0.3	0.6
Purgeable (MeOH) Ethylbenzene	(0.5)	mg/kg	136.0 TO 136.0	33731	0.3	0.6
Purgeable (MeOH) m & p-Xylene	123	mg/kg	139.0 TO 139.0	33731	0.6	1.2
Purgeable (MeOH) o-Xylene	41.2	mg/kg	144.0 TO 144.0	33731	0.3	0.6
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	103	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB1K080803-424	Maxxam Sample Number	:	476597
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	20	%	BAL		34047	1	2
Sieve - #200 (>0.075mm -TS)	13	%	SIEV		34150	0.01	0.02
Sieve - Pan	87	%	SIEV		34150	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB1K080803-424	Maxxam Sample Number	:	476597
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	1000	mg/kg	GC/FID		33731	10	20
F2 (C10-C16 Hydrocarbons)	840	mg/kg	GC/FID		33730	5	10
F3 (C16-C34 Hydrocarbons)	(14)	mg/kg	GC/FID		33730	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID		33730	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		33730	300	600
Reached Baseline at C50	YES	mg/kg	GC/FID		33730	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB1K080803-424	Maxxam Sample Number	:	476597
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.4	mg/kg	80.0 TO 80.0	33731	0.1	0.2
Purgeable (MeOH) Toluene	<0.1	mg/kg	111.0 TO 111.0	33731	0.1	0.2
Purgeable (MeOH) Ethylbenzene	1.0	mg/kg	136.0 TO 136.0	33731	0.1	0.2
Purgeable (MeOH) m & p-Xylene	14.1	mg/kg	139.0 TO 139.0	33731	0.2	0.4
Purgeable (MeOH) o-Xylene	0.2	mg/kg	144.0 TO 144.0	33731	0.1	0.2
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	102	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL W. CHANNEL
P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2K080803-425	Maxxam Sample Number	:	476598
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	22	%	BAL		34047	1	2
Sieve - #200 (>0.075mm -TS)	6.0	%	SIEV		34150	0.01	0.02
Sieve - Pan	94	%	SIEV		34150	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2K080803-425	Maxxam Sample Number	:	476598
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	130	mg/kg	GC/FID		33731	10	20
F2 (C10-C16 Hydrocarbons)	270	mg/kg	GC/FID		33730	5	10
F3 (C16-C34 Hydrocarbons)	92	mg/kg	GC/FID		33730	10	20
F4 (C34-C50 Hydrocarbons)	35	mg/kg	GC/FID		33730	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		33730	300	600
Reached Baseline at C50	NO	mg/kg	GC/FID		33730	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

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P.O. #:
Site Reference: NEAR AKLAVIK NWT

Sample Description	:	CB2K080803-425	Maxxam Sample Number	:	476598
Sample Date & Time	:	2003/08/08	Maxxam Job Number	:	CA316387
Sampled By	:	MJ	Sample Access	:	
Sample Type	:	Composite	SampleMatrix	:	Soil
Sample Received Date	:	2003/08/20	Report Date	:	2003/08/28
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	1.82	mg/kg	80.0 TO 80.0	33731	0.03	0.06
Purgeable (MeOH) Toluene	<0.03	mg/kg	111.0 TO 111.0	33731	0.03	0.06
Purgeable (MeOH) Ethylbenzene	1.39	mg/kg	136.0 TO 136.0	33731	0.03	0.06
Purgeable (MeOH) m & p-Xylene	2.59	mg/kg	139.0 TO 139.0	33731	0.07	0.14
Purgeable (MeOH) o-Xylene	1.30	mg/kg	144.0 TO 144.0	33731	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	102	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

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Quality Assurance Report

Maxxam Job Number: CA316387

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QCLimits
337308	DS4	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/08/21		100	%	85 - 115
			F3 (C16-C34 Hydrocarbons)	2003/08/21		114	%	85 - 115
			F4 (C34-C50 Hydrocarbons)	2003/08/21		111	%	85 - 115
		QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/08/21		68	%	50 - 120
			F3 (C16-C34 Hydrocarbons)	2003/08/21		102	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/08/21		92	%	80 - 120
		SPIKE	F2 (C10-C16 Hydrocarbons)	2003/08/21		108	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2003/08/21		111	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2003/08/21		110	%	80 - 120
		BLANK	F2 (C10-C16 Hydrocarbons)	2003/08/21	<4		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2003/08/21	<9		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2003/08/21	<8		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2003/08/21	28.4		%	N/A
			F3 (C16-C34 Hydrocarbons)	2003/08/21	NC		%	N/A
			F4 (C34-C50 Hydrocarbons)	2003/08/21	NC		%	N/A
			Reached Baseline at C50	2003/08/21	NC		%	N/A
337309	AF	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/08/21	<300		mg/kg	
		RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/08/21	NC		%	N/A
337318	SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/08/25		113	%	85 - 115
			Purgeable (MeOH) Toluene	2003/08/25		103	%	85 - 115
			Purgeable (MeOH) Ethylbenzene	2003/08/25		101	%	85 - 115
			Purgeable (MeOH) m & p-Xylene	2003/08/25		112	%	85 - 115
			Purgeable (MeOH) o-Xylene	2003/08/25		104	%	85 - 115
		SPIKE	Purgeable (MeOH) Benzene	2003/08/25		99	%	75 - 125
			Purgeable (MeOH) Toluene	2003/08/25		94	%	75 - 125
			Purgeable (MeOH) Ethylbenzene	2003/08/25		84	%	75 - 125
			Purgeable (MeOH) m & p-Xylene	2003/08/25		91	%	75 - 125
			Purgeable (MeOH) o-Xylene	2003/08/25		93	%	75 - 125
		BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/08/25		101	%	80 - 117
			Purgeable (MeOH) Benzene	2003/08/25	<0.03		mg/kg	
			Purgeable (MeOH) Toluene	2003/08/25	<0.03		mg/kg	
			Purgeable (MeOH) Ethylbenzene	2003/08/25	<0.03		mg/kg	
			Purgeable (MeOH) m & p-Xylene	2003/08/25	<0.05		mg/kg	
			Purgeable (MeOH) o-Xylene	2003/08/25	<0.03		mg/kg	
		RPD	Purgeable (MeOH) Benzene	2003/08/25	NC		%	N/A
			Purgeable (MeOH) Toluene	2003/08/25	NC		%	N/A
			Purgeable (MeOH) Ethylbenzene	2003/08/25	NC		%	N/A
			Purgeable (MeOH) m & p-Xylene	2003/08/25	2.4		%	N/A
			Purgeable (MeOH) o-Xylene	2003/08/25	1.6		%	N/A
337319	OJ	Calibration Check	F1 (C06-C10) - BTEX	2003/08/25		100	%	85 - 115
		QC STANDARD	F1 (C06-C10) - BTEX	2003/08/25		100	%	80 - 120
		SPIKE	F1 (C06-C10) - BTEX	2003/08/25		102	%	80 - 120
		BLANK	F1 (C06-C10) - BTEX	2003/08/25	<12		mg/kg	
		RPD	F1 (C06-C10) - BTEX	2003/08/25	5.6		%	N/A
340471	RC	RPD	Moisture	2003/08/25	3.5		%	N/A

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference
BTEX (MSD) Holding time exceeded
Gravimetric Heavy Hydrocarbon (F4G) Holding time exceeded

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
BAY R 1338-36 AVE NE
CALGARY, AB
CANADA T2E 6T6

Attention: KURT KURE

Report Date: 2003/09/02

Your P.O. #: CALL
Your Project #: 5435-03, SHELL WEST CHANNEL
Site: EXCAVATION

ANALYTICAL REPORT

MAXXAM JOB #: A317177
Received: 2003/08/27, 11:45

Sample Matrix: Soil
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX (MSD)	10	2003/08/27	2003/08/29	CAL SOP# 0048 E1034R4	GC/MS-PURGE & TRAP
Moisture (ccme)	10	2003/09/02	2003/09/02	CAL SOP# 0028	GRAVIMETRIC
Gravimetric Heavy Hydrocarbon (F4G)	10	N/A	2003/09/02	CAL SOP# 0065	CCME
F1 (CCME Hydrocarbons C6-C10)	10	2003/08/28	2003/08/30	CAL SOP# 0066	CCME
Particle Size by Wet Sieve (75 micron)	10	2003/09/02	2003/09/02	CAL SOP# 0104	GRAVIMETRIC
F2 - F4 (CCME Hydrocarbons)	10	2003/08/28	2003/08/29	CAL SOP# 0066	CCME

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

AM/skr
encl.

Total cover pages: 1

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F1	Maxxam Sample Number	:	480751
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	19	%	BAL		346408	1	2
Sieve - #200 (>0.075mm -TS)	23	%	SIEV		346266	0.01	0.02
Sieve - Pan	77	%	SIEV		346266	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F1	Maxxam Sample Number	:	480751
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date		2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	54	mg/kg	GC/FID		343133	10	20
F2 (C10-C16 Hydrocarbons)	480	mg/kg	GC/FID		343139	5	10
F3 (C16-C34 Hydrocarbons)	180	mg/kg	GC/FID		343139	10	20
F4 (C34-C50 Hydrocarbons)	(12)	mg/kg	GC/FID		343139	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		343140	300	600
Reached Baseline at C50	YES	mg/kg	GC/FID		343139	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F1	Maxxam Sample Number	:	480751
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.03	mg/kg	80.0 TO 80.0	343003	0.03	0.06
Purgeable (MeOH) Toluene	<0.03	mg/kg	111.0 TO 111.0	343003	0.03	0.06
Purgeable (MeOH) Ethylbenzene	(0.04)	mg/kg	136.0 TO 136.0	343003	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.32	mg/kg	139.0 TO 139.0	343003	0.06	0.12
Purgeable (MeOH) o-Xylene	0.21	mg/kg	144.0 TO 144.0	343003	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	102	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F2	Maxxam Sample Number	:	480752
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	20	%	BAL		346408	1	2
Sieve - #200 (>0.075mm -TS)	19	%	SIEV		346266	0.01	0.02
Sieve - Pan	81	%	SIEV		346266	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F2	Maxxam Sample Number	:	480752
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date		2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	330	mg/kg	GC/FID		343133	10	20
F2 (C10-C16 Hydrocarbons)	880	mg/kg	GC/FID		343139	5	10
F3 (C16-C34 Hydrocarbons)	240	mg/kg	GC/FID		343139	10	20
F4 (C34-C50 Hydrocarbons)	58	mg/kg	GC/FID		343139	10	20
F4G sg (Gravimetric HC-Silica Gel)	(584)	mg/kg	GRAV		343140	300	600
Reached Baseline at C50	NO	mg/kg	GC/FID		343139	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F2	Maxxam Sample Number	:	480752
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.15	mg/kg	80.0 TO 80.0	343003	0.05	0.1
Purgeable (MeOH) Toluene	0.54	mg/kg	111.0 TO 111.0	343003	0.05	0.1
Purgeable (MeOH) Ethylbenzene	0.30	mg/kg	136.0 TO 136.0	343003	0.05	0.1
Purgeable (MeOH) m & p-Xylene	7.3	mg/kg	139.0 TO 139.0	343003	0.1	0.2
Purgeable (MeOH) o-Xylene	4.36	mg/kg	144.0 TO 144.0	343003	0.05	0.1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	102	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F3	Maxxam Sample Number	:	480753
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	17	%	BAL		346408	1	2
Sieve - #200 (>0.075mm -TS)	19	%	SIEV		346266	0.01	0.02
Sieve - Pan	81	%	SIEV		346266	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F3	Maxxam Sample Number	:	480753
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	270	mg/kg	GC/FID		343133	10	20
F2 (C10-C16 Hydrocarbons)	3000	mg/kg	GC/FID		343139	5	10
F3 (C16-C34 Hydrocarbons)	260	mg/kg	GC/FID		343139	10	20
F4 (C34-C50 Hydrocarbons)	23	mg/kg	GC/FID		343139	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		343140	300	600
Reached Baseline at C50	YES	mg/kg	GC/FID		343139	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F3	Maxxam Sample Number	:	480753
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.04)	mg/kg	80.0 TO 80.0	343003	0.03	0.06
Purgeable (MeOH) Toluene	0.08	mg/kg	111.0 TO 111.0	343003	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.07	mg/kg	136.0 TO 136.0	343003	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.87	mg/kg	139.0 TO 139.0	343003	0.06	0.12
Purgeable (MeOH) o-Xylene	1.55	mg/kg	144.0 TO 144.0	343003	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	105	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F4	Maxxam Sample Number	:	480754
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	18	%	BAL		346408	1	2
Sieve - #200 (>0.075mm -TS)	23	%	SIEV		346266	0.01	0.02
Sieve - Pan	77	%	SIEV		346266	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F4	Maxxam Sample Number	:	480754
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	350	mg/kg	GC/FID		343133	10	20
F2 (C10-C16 Hydrocarbons)	2400	mg/kg	GC/FID		343139	5	10
F3 (C16-C34 Hydrocarbons)	230	mg/kg	GC/FID		343139	10	20
F4 (C34-C50 Hydrocarbons)	(18)	mg/kg	GC/FID		343139	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		343140	300	600
Reached Baseline at C50	YES	mg/kg	GC/FID		343139	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F4	Maxxam Sample Number	:	480754
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.06)	mg/kg	80.0 TO 80.0	343003	0.04	0.08
Purgeable (MeOH) Toluene	0.09	mg/kg	111.0 TO 111.0	343003	0.04	0.08
Purgeable (MeOH) Ethylbenzene	0.10	mg/kg	136.0 TO 136.0	343003	0.04	0.08
Purgeable (MeOH) m & p-Xylene	1.42	mg/kg	139.0 TO 139.0	343003	0.09	0.2
Purgeable (MeOH) o-Xylene	3.34	mg/kg	144.0 TO 144.0	343003	0.04	0.08
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	104	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F5	Maxxam Sample Number	:	480755
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	17	%	BAL		346408	1	2
Sieve - #200 (>0.075mm -TS)	23	%	SIEV		346266	0.01	0.02
Sieve - Pan	77	%	SIEV		346266	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F5	Maxxam Sample Number	:	480755
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	530	mg/kg	GC/FID		343133	10	20
F2 (C10-C16 Hydrocarbons)	3000	mg/kg	GC/FID		343139	5	10
F3 (C16-C34 Hydrocarbons)	160	mg/kg	GC/FID		343139	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID		343139	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		343140	300	600
Reached Baseline at C50	YES	mg/kg	GC/FID		343139	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description : 2003-23-08-F5
Sample Date & Time : 2003/08/23
Sampled By : SAY
Sample Type : Grab
Sample Received Date : 2003/08/27
Sample Station Code :

Maxxam Sample Number : 480755
Maxxam Job Number : CA317177
Sample Access :
Sample Matrix : Soil
Report Date : 2003/09/02

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.06	mg/kg	80.0 TO 80.0	343003	0.03	0.06
Purgeable (MeOH) Toluene	0.10	mg/kg	111.0 TO 111.0	343003	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.20	mg/kg	136.0 TO 136.0	343003	0.03	0.06
Purgeable (MeOH) m & p-Xylene	5.53	mg/kg	139.0 TO 139.0	343003	0.06	0.12
Purgeable (MeOH) o-Xylene	5.95	mg/kg	144.0 TO 144.0	343003	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	104	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F6	Maxxam Sample Number	:	480756
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	17	%	BAL		346408	1	2
Sieve - #200 (>0.075mm -TS)	24	%	SIEV		346266	0.01	0.02
Sieve - Pan	76	%	SIEV		346266	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F6	Maxxam Sample Number	:	480756
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	350	mg/kg	GC/FID		343133	10	20
F2 (C10-C16 Hydrocarbons)	1200	mg/kg	GC/FID		343139	5	10
F3 (C16-C34 Hydrocarbons)	160	mg/kg	GC/FID		343139	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID		343139	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		343140	300	600
Reached Baseline at C50	YES	mg/kg	GC/FID		343139	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F6	Maxxam Sample Number	:	480756
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.16	mg/kg	80.0 TO 80.0	343003	0.03	0.06
Purgeable (MeOH) Toluene	0.62	mg/kg	111.0 TO 111.0	343003	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.40	mg/kg	136.0 TO 136.0	343003	0.03	0.06
Purgeable (MeOH) m & p-Xylene	5.12	mg/kg	139.0 TO 139.0	343003	0.06	0.12
Purgeable (MeOH) o-Xylene	3.75	mg/kg	144.0 TO 144.0	343003	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	103	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F7	Maxxam Sample Number	:	480757
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	17	%	BAL		346408	1	2
Sieve - #200 (>0.075mm -TS)	21	%	SIEV		346266	0.01	0.02
Sieve - Pan	79	%	SIEV		346266	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F7	Maxxam Sample Number	:	480757
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	320	mg/kg	GC/FID		343133	10	20
F2 (C10-C16 Hydrocarbons)	1000	mg/kg	GC/FID		343139	5	10
F3 (C16-C34 Hydrocarbons)	55	mg/kg	GC/FID		343139	10	20
F4 (C34-C50 Hydrocarbons)	<10	mg/kg	GC/FID		343139	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		343140	300	600
Reached Baseline at C50	YES	mg/kg	GC/FID		343139	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F7	Maxxam Sample Number	:	480757
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.07)	mg/kg	80.0 TO 80.0	343003	0.05	0.1
Purgeable (MeOH) Toluene	0.11	mg/kg	111.0 TO 111.0	343003	0.05	0.1
Purgeable (MeOH) Ethylbenzene	0.10	mg/kg	136.0 TO 136.0	343003	0.05	0.1
Purgeable (MeOH) m & p-Xylene	1.74	mg/kg	139.0 TO 139.0	343003	0.09	0.2
Purgeable (MeOH) o-Xylene	2.41	mg/kg	144.0 TO 144.0	343003	0.05	0.1
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	95	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F8	Maxxam Sample Number	:	480758
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	20	%	BAL		346408	1	2
Sieve - #200 (>0.075mm -TS)	19	%	SIEV		346266	0.01	0.02
Sieve - Pan	81	%	SIEV		346266	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F8	Maxxam Sample Number	:	480758
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	220	mg/kg	GC/FID		343133	10	20
F2 (C10-C16 Hydrocarbons)	1000	mg/kg	GC/FID		343139	5	10
F3 (C16-C34 Hydrocarbons)	300	mg/kg	GC/FID		343139	10	20
F4 (C34-C50 Hydrocarbons)	70	mg/kg	GC/FID		343139	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		343140	300	600
Reached Baseline at C50	NO	mg/kg	GC/FID		343139	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F8	Maxxam Sample Number	:	480758
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	(0.05)	mg/kg	80.0 TO 80.0	343003	0.03	0.06
Purgeable (MeOH) Toluene	0.10	mg/kg	111.0 TO 111.0	343003	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.11	mg/kg	136.0 TO 136.0	343003	0.03	0.06
Purgeable (MeOH) m & p-Xylene	2.06	mg/kg	139.0 TO 139.0	343003	0.06	0.12
Purgeable (MeOH) o-Xylene	1.96	mg/kg	144.0 TO 144.0	343003	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	105	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
() = Result < RDL and is subject to reduced levels of confidence
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F9	Maxxam Sample Number	:	480759
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	22	%	BAL		346408	1	2
Sieve - #200 (>0.075mm -TS)	18	%	SIEV		346266	0.01	0.02
Sieve - Pan	82	%	SIEV		346266	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F9	Maxxam Sample Number	:	480759
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	200	mg/kg	GC/FID		343133	10	20
F2 (C10-C16 Hydrocarbons)	120	mg/kg	GC/FID		343139	5	10
F3 (C16-C34 Hydrocarbons)	250	mg/kg	GC/FID		343139	10	20
F4 (C34-C50 Hydrocarbons)	120	mg/kg	GC/FID		343139	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		343140	300	600
Reached Baseline at C50	NO	mg/kg	GC/FID		343139	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F9	Maxxam Sample Number	:	480759
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	0.18	mg/kg	80.0 TO 80.0	343003	0.03	0.06
Purgeable (MeOH) Toluene	0.45	mg/kg	111.0 TO 111.0	343003	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.47	mg/kg	136.0 TO 136.0	343003	0.03	0.06
Purgeable (MeOH) m & p-Xylene	6.17	mg/kg	139.0 TO 139.0	343003	0.06	0.12
Purgeable (MeOH) o-Xylene	3.46	mg/kg	144.0 TO 144.0	343003	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	103	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F10	Maxxam Sample Number	:	480760
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Physical Properties							
Moisture	20	%	BAL		346408	1	2
Sieve - #200 (>0.075mm -TS)	18	%	SIEV		346266	0.01	0.02
Sieve - Pan	82	%	SIEV		346266	0.01	0.02

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F10	Maxxam Sample Number	:	480760
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Petroleum Hydrocarbons (CCME Tier 1)

PARAMETER DESCRIPTION	RESULTS	Units	INST.	PARMN Code	QA/QC Batch	MDL	RDL
Ext. Pet. Hydrocarbon							
F1 (C06-C10) - BTEX	65	mg/kg	GC/FID		343133	10	20
F2 (C10-C16 Hydrocarbons)	130	mg/kg	GC/FID		343139	5	10
F3 (C16-C34 Hydrocarbons)	260	mg/kg	GC/FID		343139	10	20
F4 (C34-C50 Hydrocarbons)	60	mg/kg	GC/FID		343139	10	20
F4G sg (Gravimetric HC-Silica Gel)	<300	mg/kg	GRAV		343140	300	600
Reached Baseline at C50	NO	mg/kg	GC/FID		343139	N/A	N/A

N/A = Not Applicable
MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Results for F1, (F1-BTEX), and BTEX are reported on a dry weight basis.
F2,F3 and F4 are reported on a dry weight basis. Silica gel cleanup was used on F2, F3 and F4.
F4G is reported on a dry weight basis. Silica gel cleanup was used for F4G.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Sample Description	:	2003-23-08-F10	Maxxam Sample Number	:	480760
Sample Date & Time	:	2003/08/23	Maxxam Job Number	:	CA317177
Sampled By	:	SAY	Sample Access	:	
Sample Type	:	Grab	Sample Matrix	:	Soil
Sample Received Date	:	2003/08/27	Report Date	:	2003/09/02
Sample Station Code	:				

Volatile Organics by GC-MS

PARAMETER DESCRIPTION	RESULTS	Units	BOILING RANGE °C	QA/QC Batch	MDL	RDL
VOLATILES						
Purgeable (MeOH) Benzene	<0.03	mg/kg	80.0 TO 80.0	343003	0.03	0.06
Purgeable (MeOH) Toluene	0.09	mg/kg	111.0 TO 111.0	343003	0.03	0.06
Purgeable (MeOH) Ethylbenzene	0.06	mg/kg	136.0 TO 136.0	343003	0.03	0.06
Purgeable (MeOH) m & p-Xylene	0.83	mg/kg	139.0 TO 139.0	343003	0.07	0.14
Purgeable (MeOH) o-Xylene	0.67	mg/kg	144.0 TO 144.0	343003	0.03	0.06
Surrogate Recoveries (%):						
D8-TOLUENE (sur.):	106	Control Limits: 80 - 117				

MDL = Method Detection Limit - Calculated on the basis of the instrument detection level, the dilution used, and the weight of the sample.
RDL = Reliable Detection Limit (2 x MDL)
Results are not corrected for surrogate or moisture values unless otherwise stated.

Maxxam Analytics Inc

INUVIALUIT ENVIRONMENTAL & GEOTECHNICAL INC.
Attention: KURT KURE
Client Project #: 5435-03, SHELL WEST CHANNEL
P.O. #: CALL
Site Reference: EXCAVATION

Quality Assurance Report

Maxxam Job Number: CA317177

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
343003 SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/08/29		100	%	85 - 115
		Purgeable (MeOH) Toluene	2003/08/29		106	%	85 - 115
		Purgeable (MeOH) Ethylbenzene	2003/08/29		104	%	85 - 115
		Purgeable (MeOH) m & p-Xylene	2003/08/29		100	%	85 - 115
		Purgeable (MeOH) o-Xylene	2003/08/29		110	%	85 - 115
	SPIKE	Purgeable (MeOH) Benzene	2003/08/29		107	%	75 - 125
		Purgeable (MeOH) Toluene	2003/08/29		102	%	75 - 125
		Purgeable (MeOH) Ethylbenzene	2003/08/29		84	%	75 - 125
		Purgeable (MeOH) m & p-Xylene	2003/08/29		90	%	75 - 125
		Purgeable (MeOH) o-Xylene	2003/08/29		98	%	75 - 125
	BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/08/29		104	%	80 - 117
		Purgeable (MeOH) Benzene	2003/08/29	<0.03		mg/kg	
		Purgeable (MeOH) Toluene	2003/08/29	<0.03		mg/kg	
		Purgeable (MeOH) Ethylbenzene	2003/08/29	<0.03		mg/kg	
		Purgeable (MeOH) m & p-Xylene	2003/08/29	<0.05		mg/kg	
		Purgeable (MeOH) o-Xylene	2003/08/29	<0.03		mg/kg	
	RPD	Purgeable (MeOH) Benzene	2003/08/29	NC		%	N/A
		Purgeable (MeOH) Toluene	2003/08/29	NC		%	N/A
		Purgeable (MeOH) Ethylbenzene	2003/08/29	NC		%	N/A
		Purgeable (MeOH) m & p-Xylene	2003/08/29	NC		%	N/A
		Purgeable (MeOH) o-Xylene	2003/08/29	NC		%	N/A
343133 OJ	Calibration Check	F1 (C06-C10) - BTEX	2003/08/30		100	%	85 - 115
	QC STANDARD	F1 (C06-C10) - BTEX	2003/08/30		102	%	80 - 120
	SPIKE	F1 (C06-C10) - BTEX	2003/08/30		99	%	80 - 120
	BLANK	F1 (C06-C10) - BTEX	2003/08/30	<12		mg/kg	
	RPD	F1 (C06-C10) - BTEX	2003/08/30	NC		%	N/A
343139 JMA	Calibration Check	F2 (C10-C16 Hydrocarbons)	2003/08/29		102	%	85 - 115
		F3 (C16-C34 Hydrocarbons)	2003/08/29		110	%	85 - 115
		F4 (C34-C50 Hydrocarbons)	2003/08/29		108	%	85 - 115
	QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/08/29		86	%	50 - 120
		F3 (C16-C34 Hydrocarbons)	2003/08/29		112	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2003/08/29		118	%	80 - 120
	SPIKE	F2 (C10-C16 Hydrocarbons)	2003/08/29		116	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2003/08/29		116	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2003/08/29		110	%	80 - 120
	BLANK	F2 (C10-C16 Hydrocarbons)	2003/08/29	<4		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2003/08/29	<9		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2003/08/29	<8		mg/kg	
		Reached Baseline at C50	2003/08/29	YES		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2003/08/29	7.8		%	N/A
		F3 (C16-C34 Hydrocarbons)	2003/08/29	1.5		%	N/A
		F4 (C34-C50 Hydrocarbons)	2003/08/29	NC		%	N/A
		Reached Baseline at C50	2003/08/29	NC		%	N/A
343140 LC2	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/09/02	<300		mg/kg	
	RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/09/02	NC		%	N/A
346408 CP	RPD	Moisture	2003/09/02	2.2		%	N/A

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

Appendix G
Permits and Approvals

Inuvialuit Land Administration

P.O. Box 290, Tuktoyaktuk, NT X0E 1C0
Tel: (867) 977-2202 • Fax: (867) 977-2467

FACSIMILE

TO: Mike DATE: June 30, 2003

PHONE: 3256

FAX: 1 867 777 ~~2449~~

COVER + 6

FROM:

- ☐ James Thorbourne, Chief Land Administrator
- ☐ Calvin Pokiak, Assistant Land Administrator
- ☑ Ethan Sawchuk, Land Management Officer
- ☐ Mardy Semmler, Land Management Officer
- ☐ Jim Taggart, Land Management Officer
- ☐ Felix Horne, Land Management Officer – Inuvik Office
- ☐ Richard Vladars, GIS Specialist
- ☐ Tina Steen, Office Manager
- ☒ Janet Elias, Secretary/Receptionist

Originals: ☐ To be mailed ☒ Not to be mailed

RE: LA03AS024 - Shell West Channel Remediation - LU Permit Class 'C'

COMMENTS:

Inuvialuit Land Administration
P.O. BOX 290
Tuktoyaktuk, N.W.T. X0E 1C0
Telephone: (867) 977-2202 or 977-2466
Fax: (867) 977-2467

June 30, 2003

Randy Hetman
DAR/Construction Manager
Shell Canada Limited
400-4th Ave SW
Calgary, AB T2P 0J4
Fax: (403) 269-7948

Dear Mr. Hetman:

RE: ILA03AS024 – Shell West Channel Remediation – Land Use Permit Class 'C'

Attached is Land Use Permit ILA03AS024 for the Shell Canada Limited West Channel 2003 Remediation Program granted by the Inuvialuit Land Administration (ILA) in accordance with the ILA Rules and Procedures. The Administrator has approved this Land Use Permit for a period commencing July 1, 2003 and expiring October 31, 2003. The granting and scope of this permit reflects information contained in the Application, Project Description as modified, and additional submissions.

Compliance with the terms of this permit does not absolve the Permittee from a responsibility to comply with the requirements of all applicable Federal, Territorial and Municipal Legislation.

If you have any questions feel free to contact ILA at (867) 977-2202.

Sincerely,

Ethan Sawchuk
Land Management Officer

Attachment: ILA Permit ILA03AS24
ILA Terms and Conditions

c.c. Mike Muller

Inuvialuit Land Administration
Land Use Permit

RIGHT NUMBER: ILA03AS024

TYPE OF RIGHT: Land Use Permit Type "C"

Subject to the Inuvialuit Land Administration Rules and Procedures and the attached terms and conditions, this Right is hereby granted to ***Shell Canada Limited*** *to proceed with the operations described in the application of* ***May 9, 2003*** *to access Inuvialuit Lands situated at/near* ***[illegible]NT on 7 (1)(a)*** *for the purpose of conducting the* ***West Channel 2003 Remediation Program.***

Commencement Date: July 1, 2003 **Expiry Date:** October 31, 2003

This Right may not be [illegible]d, extended, discontinued, suspended or cancelled without notification and [illegible] Inuvialuit Land Administration pursuant to the ILA Rules and Procedures.

Dated this 30th day of June, 2003 at Tuktoyaktuk, Northwest Territories and signed by:

James Thorbourne
Land Administrator
Inuvialuit Land Administration

CONDITIONS ANNEXED TO AND FORMING PART OF LAND USE PERMIT NUMBER ILA03AS024

Part A: Scope of Permit

1. This permit entitles **Shell Canada Limited** to conduct the following activities:

   a) **Reclamation at the Shell West Channel Site.**

2. The Permit is issued subject to the conditions contained herein with respect to the use of land for the activities and area identified in Part A, Item 1 of this permit.

3. Compliance with the terms and conditions of this permit does not absolve the Permittee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

Part B: Definitions

"Administrator" means the Administrator of the Inuvialuit Land Administration named pursuant to the By-Laws of the IRC;

"Agreement" means the *Western Arctic Claim – Inuvialuit Final Agreement (IFA)*;

"ILA" means the Inuvialuit Land Administration;

"Sewage" means all toilet wastes and grey water;

Part C: Conditions Applying to All Activities as per Section 6 (14) Obligations of a Right of the ILA Rules and Procedures

1. The Holder shall comply with and be bound by the provisions of the Inuvialuit Land Administration Rules and Procedures (ILA Rules) and by the laws of general application. [Sec. 6(14) (c) & 3 (2)] — PROVISIONS AND LAWS

2. The Holder shall carry out the Operation solely at the Holders own risk and shall have no right of action against the Inuvialuit for alleged loss or damage arising therefrom. Granted of Access to Inuvialuit Land by the Inuvialuit does not create the responsibility on their part for damages suffered by the user. [Sec. 4(10)] — RIGHT HOLDER'S RISK

3. This Right is granted to the Holder with the understanding that the Holder shall pay a fair compensation for Access to Inuvialuit Land as per Schedules set out in the ILA Rules. [Sec. 6(14) (d)] — COMPENSATION FOR ACCESS

	The Holder shall compensate the Inuvialuit for any damage to Inuvialuit Lands or for any diminution of the value of Inuvialuit interest in such Lands. [Sec. 6(14) (c)]	COMPENSATION FOR LAND DAMAGE
4	The Holder shall compensate the Inuvialuit or any directly affected third person(s) for any damage or accidents caused as a result of the Occupancy or Operation(s) carried out during the Term of the Right. [Sec. 6(14) (f)]	COMPENSATION DURING OCCUPANCY
5.	The Holder has the obligation to provide Inuvialuit employment and opportunities for Inuvialuit businesses as well as arrangements for education and training programs for Inuvialuit. [Sec. 6(14) (g) & (h), 6(16) (b)]	EMPLOYMENT
6.	Not withstanding the expiry or termination of this Right, the Holder remains responsible for his obligations arising under the terms and conditions of the Right or under the Rules until such a time as the ILA Administrator issues a Letter of Clearance. [Sec. 6(30)]	OBLIGATIONS
7.	The ILA Administrator may, after notification to the Holder, cancel this Right where the Holder has violated, or continues to violate after having been informed by the ILA Administrator, any terms and conditions as set out in this Agreement. [Sec. 5(5)]	CANCELLATION
8.	The Holder shall endeavour to discharge all obligations and terminate all cleanup and land reclamation measures within one year after the termination of the Right. [Sec. 6 (31)]	RECLAMATION AND CLEAN UP
9.	The ILA Administrator shall conduct inspections on a regular basis during the term of this Right with Inspection Fees and any associated travel or lodging costs payable by the Holder. [Sec. 8(4) to 8(6)]	INSPECTIONS

Part D: Conditions Applying to All Activities as per Section 6 (20) Variable Terms and Conditions of the ILA Rules and Procedures

LOCATION AND AREA

1.	The Permittee shall not conduct this land use operation on any lands not designated in the accepted application.	PLANS
2.	The Permittee shall use existing lines or roads where possible.	EXISTING LINES/ROADS

TIME

3.	The Permittee's Field Supervisor shall contact the Administrator at (867) 977-2202 at least seventy-two (72) hours prior to the commencement of this land use operation.	CONTACT ADMINISTRATOR

4. The Permittee shall advise the Administrator at least ten (10) days prior to the completion of the land use operation of (a) the plan for removal or storage of equipment and materials, and (b) when final clean-up and restoration of the land used will be completed. REPORTS BEFORE REMOVAL

5. The Administrator reserves the right to impose closure of any area to the Permittee in periods when dangers to natural resources are severe. CLOSURE

TYPE AND SIZE OF EQUIPMENT

6. The Permittee shall not use any equipment except of the type, size, and number that is listed in the accepted application. ONLY APPROVED EQUIPMENT

METHODS AND TECHNIQUES

7. The Permittee shall not clear areas larger than identified in the accepted application. MINIMIZE AREA CLEARED

TYPE, LOCATION, CAPACITY AND OPERATION OF ALL FACILITIES

8. The Permittee shall ensure that the land use area is kept clean at all times. CLEAN WORK AREA

CONTROL OR PREVENTION OF PONDING OF WATER, FLOODING, EROSION, SLIDES AND SUBSIDENCE OF LAND

9. The Permittee shall not cut any stream bank. STREAM BANKS

10. The Permittee shall prepare the site in such a manner as to prevent rutting of the ground surface and shall suspend overland travel of equipment at the first sign of rutting. PREVENTION OF RUTTING

USE, STORAGE, HANDLING AND ULTIMATE DISPOSAL OF ANY CHEMICAL OR TOXIC MATERIAL

11. The Permittee shall dispose of all combustible waste petroleum products by removal to an approved disposal site. WASTE PETROLEUM DISPOSAL

12. The Permittee shall report **all spills** immediately to ILA and the 24 hour Spill Report Line (867) 920-8130, which is in accordance with instructions contained in "Spill Report" form N.W.T. 1752/0593. REPORT CHEMICAL AND PETROLEUM SPILLS

WILDLIFE AND FISHERIES HABITAT

13. The Permittee shall not destroy or damage beaver dams or lodges. BEAVER DAMS/LODGES

14. The Permittee shall not destroy or damage muskrat lodges. MUSKRAT

LODGES

15. The Permittee shall use food handling and garbage disposal procedures that do not attract bears. — BEAR/MAN CONFLICT

16. The Permittee shall not feed or harass wildlife. — WILDLIFE

17. The Permittee shall construct and maintain the water intake with an adequate screening device to prevent entrainment of fish. — PREVENT ENTRAINMENT

STORAGE, HANDLING AND DISPOSAL OF REFUSE OR SEWAGE

18. The Permittee shall dispose of all sewage and grey water in a manner approved by the Administrator. — SEWAGE DISPOSAL

19. The Permittee shall remove all plastics, scrap metal, discarded machinery, parts, barrels and kegs, buildings and building material. — REMOVE WASTE MATERIAL

PROTECTION OF HISTORICAL, ARCHAEOLOGICAL AND BURIAL SITES

20. The Permittee shall not operate any vehicle within one hundred (150) metres of a known or suspected archaeological, historical or traditional land use site. — OPERATE VEHICLE

21. The Permittee shall not remove, disturb or displace any archaeological specimen or site. — DISTURBANCE OF SITE

22. The Permittee shall immediately cease any activity which disturbs an archaeological, historical, and/or burial site and contact the Inuvialuit Land Administration at (867) 977-2202 should an archaeological site or specimen be encountered or disturbed by any land use activity. — CONTACTS

23. The Permittee shall ensure that all persons working under authority of the permit are aware of these conditions concerning archaeological sites and the land use activity. — NOTIFICATION TO EMPLOYEES

FUEL STORAGE

24. The Permittee shall report weekly, in writing, to the Administrator the location (including GPS coordinates), quantity and type of all fuel caches. — REPORT FUEL LOCATION

25. The Permittee shall not place any fuel storage containers within one hundred (100) metres of the normal high water mark of any water body unless otherwise approved by the administrator. — FUEL BY STREAM

26. The Permittee shall not allow petroleum products to spread to surrounding lands or into water bodies. — FUEL CONTAINMENT

FUEL CONTAINERS

27. The Permittee shall ensure that all fuel with a volume exceeding 4,000 litres, and including all aviation fuel (regardless of volume) is stored in appropriate double-walled tanks.

FUEL DYKES

28. The Holder shall take all precautions to prevent the possibility of migration of spilled fuel over the ground surface or through seepage into the ground, if facilities are stationary for more than seven (7) days, by:

a) maintaining a dyke around any stationary fuel container where the container has a capacity exceeding four thousand (4,000) litres; and
b) ensuring that the dyke(s) and the area enclosed by the dyke(s) is impermeable to fuel products at all times; and
c) ensuring that the volumetric capacity of the dyked area shall, at all times, be equal to the capacity of the largest fuel container plus ten (10) percent of the total capacity of all other fuel containers placed therein.

CHECK FOR LEAKS

29. The Permittee shall:

(a) examine all fuel storage containers for leaks a minimum of twice every day, or twice every shift, whatever is the greater; and
(b) repair all leaks immediately.

MARK CONTAINERS

30. The Permittee shall mark all fuel containers, including 45-gallon drums, with the Permittee's name and permit number. Fuel drums must be stored in an approved berm, maintained to eliminate leakage.

SPILL KITS

31. The Permittee shall ensure that a spill kit and haz-mat/drip trays are located, levelled and secured at each refuelling station.

HAZ-MAT/DRIP TRAYS

32. The Permittee shall ensure that all equipment, stopped or parked, should have a haz-mat/drip tray under it, or be sufficiently diapered. Leaking equipment should be repaired immediately.

REFUELLING OPERATIVES

33. Experienced and trained operatives be responsible for all refuelling, including monitoring, repairs and maintenance.

RESTORATION OF THE LANDS

RE-ESTABLISH VEGETATION

34. The Permittee shall commence and foster revegetation on the land used, as directed by the Administrator, within one (1) year of the completion of the land use operation.

CLEAN-UP

35. The Permittee shall complete all clean-up and restoration of the lands used prior to the expiry date of this Permit or as approved in writing by the Administrator.

DISPLAY OF PERMITS AND PERMIT NUMBERS

36. The Permittee shall display a copy of this Permit in each campsite established to carry out this land use operation. DISPLAY PERMIT

MATTERS CONSISTENT WITH THE REGULATIONS

37. The Permittee shall provide in writing to the Administrator, at least seventy-two (72) hours prior to commencement of this land use operation, the following information: IDENTIFY AGENT
    (a) person, or persons, in charge of the field operation to whom notices, orders, and reports may be served;
    (b) alternates; and
    (c) all methods for contacting the above person(s).

38. The Permittee shall, while preparing the access road or seismic lines, make every effort to avoid covering or destroying traps or snares that may be found along these routes. TRAPS PROTECTION

39. The Permittee shall submit to the Administrator an update of the contingency plan, for chemical and petroleum spills, and the emergency response plans if there are any changes in the operation during the life of the permit. CONTINGENCY /EMERGENCY RESPONSE PLAN

40. The Permittee shall submit in writing to the Administrator, all amendment requests prior to the proposed amended activity commencing AMENDMENTS

41. Environmental Monitors shall be hired through the ILA for the duration of this land use operation. ENVIRONMENTAL MONITOR