



Petro-Canada  
P.O. Box 2844  
Calgary, Alberta T2P 3E3  
Telephone (403) 296-5428  
Facsimile (403) 296-3176

December 21, 2006

Mr. Gordon Wray  
Northwest Territories Water Board  
P.O. Box 1326  
2<sup>nd</sup> Floor Goga Cho Building  
Yellowknife, NT X1A 2N9

COPY	
BOARD	6
G. W.	1
E. A.	1
W. RES.	OKG
NMDO	1
FILE	1788

Dear Mr. Wray:

**Re: 2006 Sump Monitoring Report – Nuna I-30**

This letter is a follow up to Petro-Canada's letter dated June 28, 2006 from Mr. John Kerkhoven, Manager Stakeholder Relations.

On September 5, 2006, water sampling of two ponded areas was undertaken by IEG Consultants under guidance from WorleyParsons Komex. The objective of this sampling was to satisfy the requirements of the Board's letter dated June 19, 2006.

Please find attached a copy of the WorleyParsons Komex report documenting the results of the summer site inspection and pond sampling. Based on the conclusions of the report, and that the sump cap is still completely intact and square Petro-Canada does not believe that the integrity of the sump has been compromised at this stage but commits to continued monitoring for another year.

Aerial Photo 2 within the report clearly shows a drainage pattern that lies to the north of the wellhead, connecting to the ponded area at the west of the sump. Petro-Canada contends that the existing pond is part of this drainage and that this condition is a result of choosing the sump site during winter conditions with snow cover.

Petro-Canada is committed to responsible care of our reclaimed leases and encourages open discussions regarding reclamation issues. If continued monitoring indicates that the integrity of the sump, Petro-Canada will promptly submit a reclamation plan.

We trust this response is satisfactory, but should you have any questions, please contact the undersigned at (403) 296-6368.

Respectfully,

Rod Daniels  
Water and Liability Advisor

cc      Don Thompson, Superintendent, Drilling Logistics  
          John Kerkhoven, Manager, Stakeholder Relations





# WorleyParsons Komex

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15 December 2006

Mr Rod Daniels  
Petro-Canada  
150 – 6<sup>th</sup> Ave. SW  
Calgary, AB. T2P 3E3

Dear Sir:

## RE: 2006 SITE VISIT AND SURFACE WATER SAMPLING AT THE NUNA I-30 WELLSITE – WATER LICENCE N7L1-1788



Environment & Water Resources  
Suite 100, 4500 - 16 Avenue NW  
Calgary, AB T3B 0M6 CANADA  
Telephone: +1 403 247 0200  
Toll-Free: 1 800 668 6772  
Facsimile: +1 403 247 4811  
worleyparsons.com

Proj. No.: C64620000  
File Loc.: Calgary

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Please consider the following information in response to the requirements outlined by the NWT Water Board in a letter dated June 19, 2006 regarding concerns with surface water ponding adjacent to the Nuna I-30 drilling sump. The I-30 wellsite is located in the Mackenzie Delta area at Latitude 69° 09' 34.5" N and Longitude 133° 20' 09" W.

The site visit and water sampling was conducted by IEG Consultants personnel under guidance from WorleyParsons Komex on September 5, 2006. Photographs from the site visit are provided in Photos 1 through 10. The following items were noted during the 2006 site visit:

- Surface water ponding was present adjacent to the sumps in two locations (Photo 2). The approximate maximum depth of the larger pond (Photo 5) is 1.5 m to 2.0 m, with the deepest ponding at the north end. The approximate maximum depth of the smaller pond (Photo 8) is 0.75 m.
- Restricted vegetation growth was present on the two sumps (Photos 6 and 7). Terrestrial plants were submerged to a depth of approximately 0.6 m in the ponded areas (Photo 5).
- Surface cracking was observed along the east, west, north and south sides of the large sump mound (Photo 6).
- Instrumentation is present on site (Photos 9 and 10). Some of this instrumentation is broken.

### Actions

At the request of the NWT Water Board (letter dated June 19, 2006), water samples were taken from two locations of surface water ponding on site. A background surface water location approximately 2 km from the site was also sampled and submitted for laboratory analysis.

Results have been tabulated (Tables 1 through 3B) and compared against CCME Freshwater Aquatic Life and CCME Livestock Watering guidelines in addition to background water chemistry. Surface



# WorleyParsons Komex

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water chemistry from the two ponded areas is generally consistent with background conditions with the exception of some soluble salt levels.

A comparison of reported ponded water data with CCME guidelines indicates that all measured parameters are below CCME Livestock Watering guidelines, where applicable, and the majority of measured parameters are below CCME Freshwater Aquatic Life guidelines. Please note that reported concentrations of nitrite, cadmium, copper, silver and thallium in several samples (including background samples) are below laboratory detection limits. However, due to the elevated calcium concentrations in the samples, the laboratory method detection limits applied for these parameters are above the CCME Freshwater Aquatic guideline values. The attached data should be interpreted with caution, as more than one data set is required to establish or confirm any trends.

We trust that this information provides a suitable summary of the 2006 site visit and water sampling conducted at the Nuna I-30 wellsite. If you have any questions or require clarification on any of the information presented please contact the undersigned at your convenience.

If you have any questions or further information requirements please contact the undersigned.

Sincerely,  
WorleyParsons Komex

A handwritten signature in blue ink that appears to read "T.A. Spedding".

Tim Spedding, M.Sc., P.Ag. (AB), Geol. I.T. (AB)  
Staff Soil Scientist

A handwritten signature in blue ink that appears to read "Ann Glatiotis".

Ann Glatiotis, B.Sc.  
Manager, Contaminated Sites

## **TABLES**

**Table 1**

Water Quality Analytical Results: Indicators, Ions, Nitrogen and Physical Parameters

PROJECT NO.: CS44520000	PHYSICAL										INDICATORS										CATIONS, ANIONS & ION BALANCE										NITROGEN PARAMETERS		ION		MICROTOX	
	Sample Location	pH	T <sub>°C</sub>	E <sub>°C</sub>	TDS	Total Hard as CaCO <sub>3</sub>	Chloride:Cl	Sulfate:SO <sub>4</sub>	TOT Alk as CaCO <sub>3</sub>	Total Hard as CaCO <sub>3</sub>	Manganese:O	TDS<calculated	Calcium:D	Potassium:D	Sodium:D	Potassium:T	Sodium:D	Chromium	Barbiturate	Hydroxide	Iron Balance %	N	NO <sub>2</sub> -NO <sub>3</sub>	NO <sub>2</sub> -NO <sub>3</sub>	NO <sub>2</sub> -NO <sub>3</sub>	PC 50 / 15 min										
CCME Freshwater Aquatic Life 2010	—	8.5 ± 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
CCME Livestock 1990	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
NUMA 1-30 SWM8-01	05-Sep-06	8.2	1.050	191	445	335	0.982	0.117	1,360	279	86.7	67.3	88.4	31	233	<5	<5	103	41.05*	0.7	0.7	<5	<5	>100%	<5	<5	>100%	<5	<5							
NUMA 1-30 SWM8-02	05-Sep-06	8.1	828	142	127	575	0.155	0.13	1,180	238	80.5	21.3	23.8	23	173	<5	<5	107	41.05*	5.9*	5.9	<5	<5	>100%	<5	<5	>100%	<5	<5							
Background	05-Sep-06	81.4	4.8*	41	<5	14	3.1	0.65*	0.062	36	7.9	5.1	<0.5	<0.1	8	<5	<5	Low EC	<0.05*	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5							
NUMA 1-30 SWM8-03 BKGD	05-Sep-06	81.4	4.8*	41	<5	14	3.1	0.65*	0.062	36	7.9	5.1	<0.5	<0.1	8	<5	<5	Low EC	<0.05*	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5							

NOTES:

1. .... In guideline range denotes no criteria for that parameter.

2. .... In detail data row(s) denotes parameter not analyzed.

3. Highlighting indicates parameters above applied guideline/criteria

4. Superscript '1' denotes values exceeding CCME Freshwater Aquatic Life 2006

(Canadian Environmental Quality Guidelines for the Protection of Aquatic Life (CCME, 1989 and Update, last update v6 2006).)

5. Superscript '2' denotes values exceeding CCME Livestock 1990

(Canadian Environmental Quality Guidelines for Livestock (CCME, 1989 and Update, last update v5 2005).)

6. Superscript '3' and box outline denotes values below laboratory detection limits which are above CCME Freshwater Aquatic guideline.

Canadian Environmental Quality Guidelines for Livestock (CCME, 1989 and Update, last update v6 2005).

When reported 'As N': 1987 value refined in 2005 documentation

NO<sub>2</sub>-NO<sub>3</sub> as N

When reported 'As N': 1987 value refined in 2005 documentation

NO<sub>2</sub> as N

When reported 'As N': 1987 value refined in 2005 documentation

Canadian Environmental Quality Guidelines for the Protection of Aquatic Life (CCME, 1989 and Update, last update v6 2006).

NO<sub>2</sub> as N

Guideline for NO<sub>2</sub> as N, for reporting as just 'NO<sub>2</sub>', the guideline is 13 mg/L

Guideline for NO<sub>2</sub> as N, for reporting as just 'NO<sub>2</sub>', the guideline is 0.06 mg/L

**Table 2****Water Quality Analytical Results: Dissolved Hydrocarbons**

PROJECT NO.: C64620000		BTEX				SELECT HYDROCARBONS	
Sample Location	Date (d-m-y)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes-total (mg/L)	TEH (C <sub>11</sub> -C <sub>30</sub> ) (mg/L)	TVH (C <sub>5</sub> -C <sub>10</sub> ) (mg/L)
CCME Freshwater Aquatic Life, 2006		0.37	0.002	0.09	--	--	--
CCME Livestock, 1999		--	0.024	0.0024	--	--	--
NUNA I-30 SW06-01	05-Sep-06	<0.0005	<0.0005	<0.0005	<0.0005	0.83	<0.1
NUNA I-30 SW06-02	05-Sep-06	<0.0005	<0.0005	<0.0005	<0.0005	1.1	<0.1

**NOTES:**

1. -- In guideline row(s) denotes no criteria for that parameter.
2. Highlighting indicates parameters above applied guideline/criteria
3. Superscript <sup>1</sup> denotes values exceeding CCME Freshwater Aquatic Life, 2006  
(Canadian Environmental Quality Guidelines for the Protection of Aquatic Life (CCME, 1999 and Updates, last update v6 2006).)
4. Superscript <sup>2</sup> denotes values exceeding CCME Livestock, 1999  
(Canadian Environmental Quality Guidelines for Livestock (CCME, 1999 and Updates, last update v5 2005).)

**Table 3A**  
**Water Quality Analytical Results: Dissolved Metals**

PROJECT NO.: CR4620000	Sample Location (d-m-y)	DISSOLVED METALS AND TRACE ELEMENTS											
		Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Silver (mg/L)	Tin (mg/L)	Zinc (mg/L)	
CCME Freshwater Aquatic Life, 2006	0.1	—	—	0.000017	—	0.002 + 0.004	0.01 + 0.007	—	0.073	0.025 + 0.15	0.0001	—	
CCME Livestock, 1990	5	—	—	0.1	5	0.08	0.05	1	0.5	0.1	—	—	
NUNA-1-0 SW06-01	05-Sep-06	<0.025	0.320	<0.050	<0.10	<0.0350	<0.0015	<0.0050 <sup>2</sup>	<0.025	<0.00020	<0.00010	0.931	
NUNA-1-0 SW06-02	05-Sep-06	0.03	0.061	<0.001	0.06	<0.001 <sup>3</sup>	<0.005	<0.002	0.004	<0.005	<0.011	<0.005 <sup>4</sup>	
Background													
NUNA-1-0 SW06-03 BKGD	05-Sep-06	0.271 <sup>1</sup>	<0.020	<0.010	<0.10	0.00025 <sup>1</sup>	0.0015	0.00137	0.00032 <sup>1</sup>	<0.00050	<0.00020	0.00049	<0.00020
<b>NOTES:</b>													
1. — In guideline row(s) denotes no criteria for that parameter.													
2. Highlighted indicate parameters above applied guideline limits.													
3. Canadian Environmental Quality Guidelines for the Protection of Aquatic Life (CCME, 1989 and Updates, last update v6 2009.)													
4. Subscript <sup>2</sup> denotes values exceeding CCME Livestock, 1989 (Canadian Environmental Quality Guidelines for Livestock (CCME, 1989 and Updates, last update v5 2005).)													
5. Subscript <sup>3</sup> and box outline denotes values below laboratory detection limits which are above CCME Freshwater Aquatic guidelines. Laboratory detection limits were raised due to calcium levels in samples.													
Canadian Environmental Quality Guidelines for Livestock (CCME, 1989 and Updates, last update v5 2005).													
Copper:D 0.5 mg/L for sheep. 1.0 mg/L for cattle. 5.0 mg/L for swine and poultry.													
Aluminum:D 0.005 mg/L pH 6.5; [CaCO <sub>3</sub> ] > 4.0 mg/L DO > 2.0 mg/L													
Lead:D 0.1 mg/L pH 6.5; [CaCO <sub>3</sub> ] > 2.0 mg/L													
Cadmium:D 10 [P,8]/log(hardness)] - 3.2;													
Copper:D 0.002 mg/L Hardness[CaCO <sub>3</sub> ] = 0-120 mg/L 0.003 mg/L Hardness[CaCO <sub>3</sub> ] = 120-180 mg/L 0.004 mg/L Hardness[CaCO <sub>3</sub> ] = > 180 mg/L													
Lead:D 0.007 mg/L Hardness[CaCO <sub>3</sub> ] = > 180 mg/L 0.001 mg/L Hardness[CaCO <sub>3</sub> ] = 0-40 mg/L 0.004 mg/L Hardness[CaCO <sub>3</sub> ] = 120-180 mg/L 0.002 mg/L Hardness[CaCO <sub>3</sub> ] = 180-220 mg/L													
Nickel:D 0.025 mg/L Hardness[CaCO <sub>3</sub> ] = 0-80 mg/L 0.005 mg/L Hardness[CaCO <sub>3</sub> ] = 80-120 mg/L 0.010 mg/L Hardness[CaCO <sub>3</sub> ] = 120-180 mg/L 0.015 mg/L Hardness[CaCO <sub>3</sub> ] = > 180 mg/L													



## **PHOTOS**



**WorleyParsons Komex**

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PHOTO 1: Nuna I-30 site (September 6, 2006)

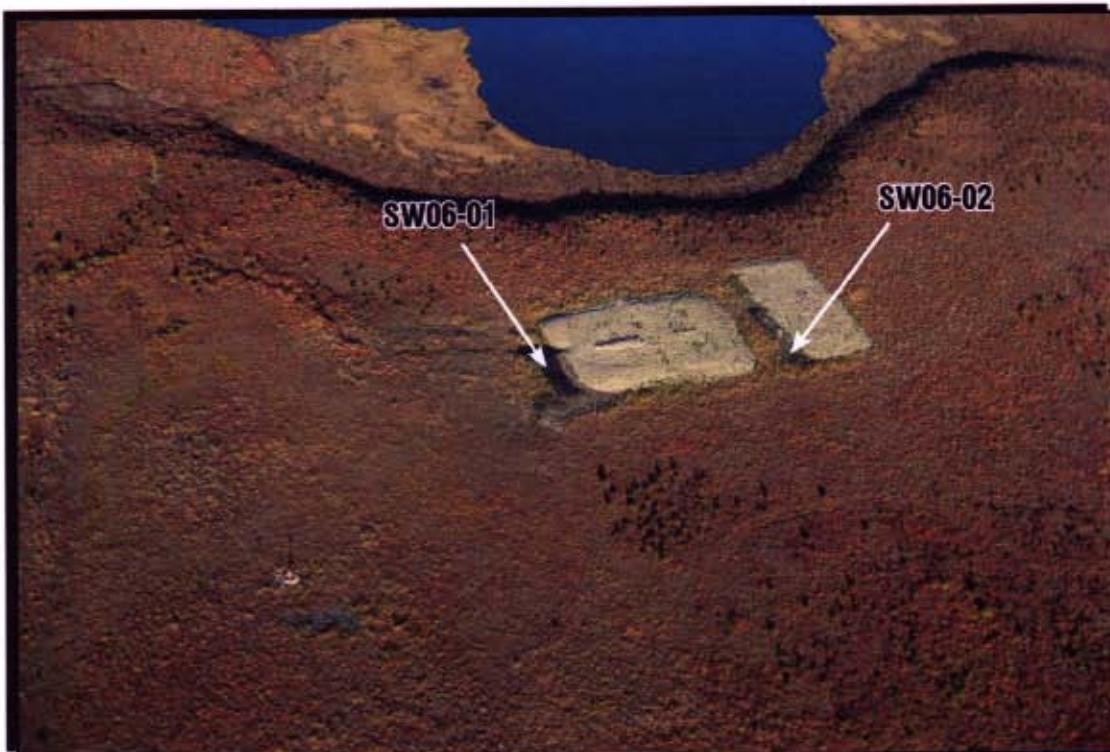


PHOTO 2: Nuna I-30 site showing surface water sampling locations.

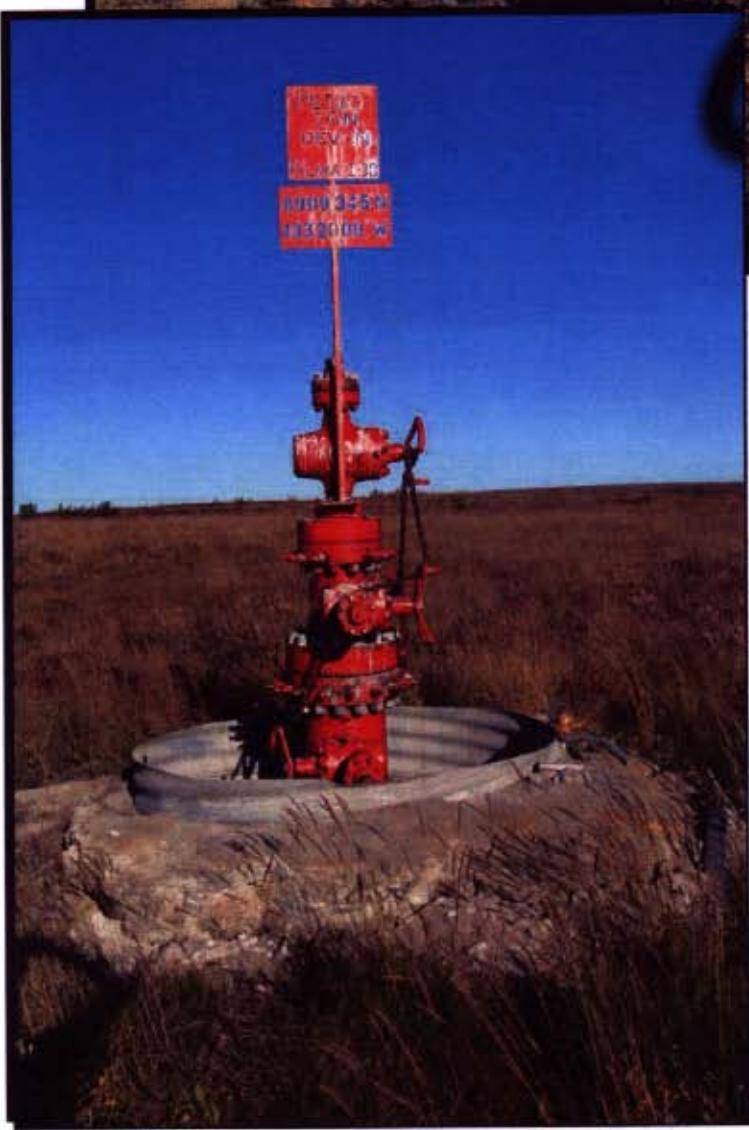


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▲PHOTO 3: Nuna I-30 site.



◀PHOTO 4: Wellhead.



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**PHOTO 5:** Ponding adjacent to drilling sump. Sample SW06-01 taken from this pond.



**PHOTO 6:** Edge of drilling sump.



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**PHOTO 7:** Vegetation cover on drilling sump cap.



**PHOTO 8:** Ponding between two sums. Sample SW06-02 taken from this ponding.



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**PHOTO 9:** Broken thermistor.



**PHOTO 10:** Cable and cable box on edge of sump.

## **APPENDICES**

## **APPENDIX I LABORATORY DATA**



**Environmental Division**

**PRELIMINARY RESULTS**

WORLEYPARSONS CANADA LTD  
ATTN: DIXIE WARREN  
100 4500 16 AVE NW  
CALGARY AB T3B 0M6

Reported On: 21-NOV-06 08:34 AM  
Revision: 1

Lab Work Order #: **L430346**

Date Received: **07-SEP-06**

**Project P.O. #:**

**Job Reference:**

**Legal Site Desc:**

**CofC Numbers:** 199210

**Other Information:**

**Comments:** ADDITIONAL 11-NOV-06 10:48  
Detection limits raised for ICPMS freshwater aquatic life metals for L430346-1 (total and dissolved) and -2 (total) due to calcium levels in samples. 21-Nov-06.

ROY JONES  
General Manager, Edmonton

For any questions about this report please contact your Account Manager:

**ERIN ANDERSON**

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.  
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU  
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

## ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L430346-1	NUNA I-30 SW06-01								
Sampled By:	S.B./R.C. on 05-SEP-06								
Matrix:	GRAB								
BTEX, TVH and TEH									
TEH (C11-C30)	0.93	0.05	mg/L	10-SEP-06	11-SEP-06	IC	R441453		
BTEX and TVH (C5-C10)	<0.0005	0.0005	mg/L	09-SEP-06	09-SEP-06	KEB	R441096		
Benzene	<0.0005	0.0005	mg/L	09-SEP-06	09-SEP-06	KEB	R441098		
Toluene	<0.0005	0.0005	mg/L	09-SEP-06	09-SEP-06	KEB	R441098		
Ethylbenzene	<0.0005	0.0005	mg/L	09-SEP-06	09-SEP-06	KEB	R441098		
Xylenes	<0.0005	0.0005	mg/L	09-SEP-06	09-SEP-06	KEB	R441098		
Total Volatiles	<0.1	0.1	mg/L	09-SEP-06	09-SEP-06	KEB	R441098		
Dissolved Metals in Water (CCME)									
Diss. Metals in Water by ICPMS (CCME)									
Aluminum (Al)-Dissolved	<0.025	0.025	mg/L		20-NOV-06	MSB	R467285		
Antimony (Sb)-Dissolved	<0.0025	0.0025	mg/L		20-NOV-06	MSB	R467285		
Arsenic (As)-Dissolved	<0.0025	0.0025	mg/L		20-NOV-06	MSB	R467285		
Beryllium (Be)-Dissolved	<0.0050	0.005	mg/L		20-NOV-06	MSB	R467285		
Cadmium (Cd)-Dissolved	<0.000085	0.00008	mg/L		20-NOV-06	MSB	R467285		
5									
Chromium (Cr)-Dissolved	<0.0050	0.005	mg/L		20-NOV-06	MSB	R467285		
Cobalt (Co)-Dissolved	<0.0015	0.0015	mg/L		20-NOV-06	MSB	R467285		
Copper (Cu)-Dissolved	<0.0050	0.005	mg/L		20-NOV-06	MSB	R467285		
Lead (Pb)-Dissolved	<0.0025	0.0025	mg/L		20-NOV-06	MSB	R467285		
Lithium (Li)-Dissolved	0.028	0.025	mg/L		20-NOV-06	MSB	R467285		
Manganese(Mn)-Dissolved	0.126	0.0015	mg/L		20-NOV-06	MSB	R467285		
Molybdenum (Mo)-Dissolved	<0.0050	0.005	mg/L		20-NOV-06	MSB	R467285		
Nickel (Ni)-Dissolved	0.0061	0.005	mg/L		20-NOV-06	MSB	R467285		
Selenium (Se)-Dissolved	<0.0050	0.005	mg/L		20-NOV-06	MSB	R467285		
Silver (Ag)-Dissolved	<0.00010	0.0001	mg/L		20-NOV-06	MSB	R467285		
Thallium (Tl)-Dissolved	<0.0010	0.001	mg/L		20-NOV-06	MSB	R467285		
Tin (Sn)-Dissolved	<0.0025	0.0025	mg/L		20-NOV-06	MSB	R467285		
Uranium (U)-Dissolved	0.0037	0.001	mg/L		20-NOV-06	MSB	R467285		
Zinc (Zn)-Dissolved	<0.025	0.025	mg/L		20-NOV-06	MSB	R467285		
Diss. Metals in Water by ICPAES (CCME)									
Barium (Ba)-Dissolved	0.320	0.02	mg/L		20-NOV-06	A.R	R467252		
Boron (B)-Dissolved	<0.10	0.1	mg/L		20-NOV-06	A.R	R467252		
Calcium (Ca)-Dissolved	277	0.1	mg/L		20-NOV-06	A.R	R467252		
Iron (Fe)-Dissolved	0.102	0.03	mg/L		20-NOV-06	A.R	R467252		
Magnesium (Mg)-Dissolved	82.3	0.1	mg/L		20-NOV-06	A.R	R467252		
Potassium (K)-Dissolved	69.4	2	mg/L		20-NOV-06	A.R	R467252		
Sodium (Na)-Dissolved	31.6	2	mg/L		20-NOV-06	A.R	R467252		
Titanium (Ti)-Dissolved	<0.010	0.01	mg/L		20-NOV-06	A.R	R467252		
Vanadium (V)-Dissolved	<0.030	0.03	mg/L		20-NOV-06	A.R	R467252		
Diss. Mercury in Water by CVAFS (CCME)									
Mercury (Hg)-Dissolved	<0.000020	0.00002	mg/L		20-NOV-06	MSB	R467165		
Total Metals in Water (CCME)									
Total Metals in Water by ICPMS (CCME)									
Aluminum (Al)-Total	<0.025	0.025	mg/L		20-NOV-06	MSB	R467285		
Antimony (Sb)-Total	<0.0025	0.0025	mg/L		20-NOV-06	MSB	R467285		
Arsenic (As)-Total	<0.0025	0.0025	mg/L		20-NOV-06	MSB	R467285		
Beryllium (Be)-Total	<0.0050	0.005	mg/L		20-NOV-06	MSB	R467285		
Cadmium (Cd)-Total	<0.000085	0.00008	mg/L		20-NOV-06	MSB	R467285		
5									
Chromium (Cr)-Total	<0.0050	0.005	mg/L		20-NOV-06	MSB	R467285		
Cobalt (Co)-Total	<0.0015	0.0015	mg/L		20-NOV-06	MSB	R467285		
Copper (Cu)-Total	<0.0050	0.005	mg/L		20-NOV-06	MSB	R467285		

## ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L430346-1	NUNA I-30 SW06-01								
Sampled By:	S.B./R.C. on 05-SEP-06								
Matrix:	GRAB								
<b>Total Metals in Water (CCME)</b>									
<b>Total Metals in Water by ICPMS (CCME)</b>									
Lead (Pb)-Total	<0.0025	0.0025	mg/L			20-NOV-06	MSB	R467285	
Lithium (Li)-Total	0.029	0.025	mg/L			20-NOV-06	MSB	R467285	
Manganese (Mn)-Total	0.126	0.0015	mg/L			20-NOV-06	MSB	R467285	
Molybdenum (Mo)-Total	<0.0050	0.005	mg/L			20-NOV-06	MSB	R467285	
Nickel (Ni)-Total	0.0057	0.005	mg/L			20-NOV-06	MSB	R467285	
Selenium (Se)-Total	<0.0050	0.005	mg/L			20-NOV-06	MSB	R467285	
Silver (Ag)-Total	<0.00010	0.0001	mg/L			20-NOV-06	MSB	R467285	
Thallium (Tl)-Total	<0.0010	0.001	mg/L			20-NOV-06	MSB	R467285	
Tin (Sn)-Total	<0.0025	0.0025	mg/L			20-NOV-06	MSB	R467285	
Uranium (U)-Total	0.0037	0.001	mg/L			20-NOV-06	MSB	R467285	
Zinc, (Total)	<0.025	0.025	mg/L			20-NOV-06	MSB	R467285	
<b>Total Metals in Water by ICPAES (CCME)</b>									
Barium (Ba)-Total	0.323	0.02	mg/L			20-NOV-06	A.R	R467252	
Boron (B)-Total	<0.10	0.1	mg/L			20-NOV-06	A.R	R467252	
Calcium (Ca)-Total	278	0.1	mg/L			20-NOV-06	A.R	R467252	
Iron (Fe)-Total	0.439	0.03	mg/L			20-NOV-06	A.R	R467252	
Magnesium (Mg)-Total	83.0	0.1	mg/L			20-NOV-06	A.R	R467252	
Potassium (K)-Total	72.4	2	mg/L			20-NOV-06	A.R	R467252	
Sodium (Na)-Total	32.2	2	mg/L			20-NOV-06	A.R	R467252	
Titanium (Ti)-Total	<0.010	0.01	mg/L			20-NOV-06	A.R	R467252	
Vanadium (V)-Total	<0.030	0.03	mg/L			20-NOV-06	A.R	R467252	
<b>Total Mercury in Water by CVAFS (CCME)</b>									
Mercury (Hg)-Total	<0.000020	0.00002	mg/L			20-NOV-06	MSB	R467165	
<b>Hardness</b>									
Hardness (as CaCO <sub>3</sub> )	1030	0.7	mg/L			20-NOV-06			
<b>Total Metals</b>									
<b>Total Trace Metals</b>									
Silver (Ag)	<0.005	0.005	mg/L			08-SEP-06	QLI	R439787	
Aluminum (Al)	0.03	0.01	mg/L			08-SEP-06	QLI	R439787	
Boron (B)	0.07	0.05	mg/L			08-SEP-06	QLI	R439787	
Barium (Ba)	0.369	0.003	mg/L			08-SEP-06	QLI	R439787	
Beryllium (Be)	<0.002	0.002	mg/L			08-SEP-06	QLI	R439787	
Cadmium (Cd)	<0.001	0.001	mg/L			08-SEP-06	QLI	R439787	
Cobalt (Co)	<0.002	0.002	mg/L			08-SEP-06	QLI	R439787	
Chromium (Cr)	0.010	0.005	mg/L			08-SEP-06	QLI	R439787	
Copper (Cu)	0.004	0.001	mg/L			08-SEP-06	QLI	R439787	
Molybdenum (Mo)	<0.005	0.005	mg/L			08-SEP-06	QLI	R439787	
Nickel (Ni)	0.016	0.002	mg/L			08-SEP-06	QLI	R439787	
Lead (Pb)	<0.005	0.005	mg/L			08-SEP-06	QLI	R439787	
Tin (Sn)	<0.05	0.05	mg/L			08-SEP-06	QLI	R439787	
Strontium (Sr)	1.23	0.002	mg/L			08-SEP-06	QLI	R439787	
Titanium (Ti)	0.003	0.001	mg/L			08-SEP-06	QLI	R439787	
Thallium (Tl)	<0.05	0.05	mg/L			08-SEP-06	QLI	R439787	
Vanadium (V)	0.003	0.001	mg/L			08-SEP-06	QLI	R439787	
Zinc (Zn)	0.006	0.001	mg/L			08-SEP-06	QLI	R439787	
<b>Total Major Metals</b>									
Calcium (Ca)	247	0.5	mg/L			08-SEP-06	HAS	R439618	
Potassium (K)	68.4	0.1	mg/L			08-SEP-06	HAS	R439618	
Magnesium (Mg)	72.5	0.1	mg/L			08-SEP-06	HAS	R439618	
Sodium (Na)	30	1	mg/L			08-SEP-06	HAS	R439618	
Iron (Fe)	0.388	0.005	mg/L			08-SEP-06	HAS	R439618	

## ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L430346-1 NUNA I-30 SW06-01								
Sampled By: S.B./R.C. on 05-SEP-06								
Matrix: GRAB								
<b>Total Metals</b>								
<b>Total Major Metals</b>								
Manganese (Mn)	0.118	0.001	mg/L		08-SEP-06	HAS	R439618	
Special Request	See Attached				14-SEP-06	PB	R443524	
Total Suspended Solids	<3	3	mg/L		08-SEP-06	ZOW	R439573	
<b>Major Ions &amp; Dissolved Metals</b>								
Iron (Fe)-Dissolved	0.092	0.005	mg/L		08-SEP-06	HAS	R439615	
Manganese (Mn)-Dissolved	0.117	0.001	mg/L		08-SEP-06	HAS	R439615	
Chloride (Cl)	445	1	mg/L		08-SEP-06	NG	R439672	
Nitrate+Nitrite-N	0.7	0.1	mg/L		08-SEP-06	KMY	R439733	
Nitrate-N	0.7	0.1	mg/L		08-SEP-06	KMY	R439733	
Nitrite-N	<0.05	0.05	mg/L		08-SEP-06	KMY	R439733	
<b>pH, Conductivity and Total Alkalinity</b>								
pH	8.2	0.1	pH		09-SEP-06	JL1	R439821	
Conductivity (EC)	1820	0.2	uS/cm		09-SEP-06	JL1	R439821	
Bicarbonate (HCO3)	233	5	mg/L		09-SEP-06	JL1	R439821	
Carbonate (CO3)	<5	5	mg/L		09-SEP-06	JL1	R439821	
Hydroxide (OH)	<5	5	mg/L		09-SEP-06	JL1	R439821	
Alkalinity, Total (as CaCO3)	191	5	mg/L		09-SEP-06	JL1	R439821	
<b>Ion Balance Calculation</b>								
Ion Balance	103	%			12-SEP-06			
TDS (Calculated)	1360	mg/L			12-SEP-06			
Hardness (as CaCO3)	1050	mg/L			12-SEP-06			
<b>ICP metals and SO4 for routine water</b>								
Calcium (Ca)	279	0.5	mg/L		12-SEP-06	JWU	R440696	
Potassium (K)	67.3	0.5	mg/L		12-SEP-06	JWU	R440696	
Magnesium (Mg)	86.7	0.1	mg/L		12-SEP-06	JWU	R440696	
Sodium (Na)	31	1	mg/L		12-SEP-06	JWU	R440696	
Sulfate (SO4)	335	0.5	mg/L		12-SEP-06	JWU	R440696	
<b>Dissolved Trace Metals</b>								
Silver (Ag)	<0.005	0.005	mg/L		08-SEP-06	QLI	R439786	
Aluminum (Al)	<0.01	0.01	mg/L		08-SEP-06	QLI	R439786	
Boron (B)	0.06	0.05	mg/L		08-SEP-06	QLI	R439786	
Barium (Ba)	0.279	0.003	mg/L		08-SEP-06	QLI	R439786	
Beryllium (Be)	<0.001	0.001	mg/L		08-SEP-06	QLI	R439786	
Cadmium (Cd)	<0.001	0.001	mg/L		08-SEP-06	QLI	R439786	
Cobalt (Co)	<0.002	0.002	mg/L		08-SEP-06	QLI	R439786	
Chromium (Cr)	0.012	0.005	mg/L		08-SEP-06	QLI	R439786	
Copper (Cu)	0.004	0.001	mg/L		08-SEP-06	QLI	R439786	
Molybdenum (Mo)	<0.005	0.005	mg/L		08-SEP-06	QLI	R439786	
Nickel (Ni)	0.012	0.002	mg/L		08-SEP-06	QLI	R439786	
Lead (Pb)	<0.005	0.005	mg/L		08-SEP-06	QLI	R439786	
Tin (Sn)	<0.05	0.05	mg/L		08-SEP-06	QLI	R439786	
Strontium (Sr)	0.931	0.005	mg/L		08-SEP-06	QLI	R439786	
Titanium (Ti)	0.001	0.001	mg/L		08-SEP-06	QLI	R439786	
Thallium (Tl)	<0.05	0.05	mg/L		08-SEP-06	QLI	R439786	
Vanadium (V)	0.004	0.001	mg/L		08-SEP-06	QLI	R439786	
Zinc (Zn)	0.004	0.001	mg/L		08-SEP-06	QLI	R439786	

## ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L430346-2 NUNA I-30 SW06-02								
Sampled By: S.B./R.C. on 05-SEP-06								
Matrix: GRAB								
<b>BTEX, TVH and TEH</b>								
TEH (C11-C30)	1.1	0.05	mg/L	10-SEP-06	11-SEP-06	IC	R441453	
<b>BTEX and TVH (C5-C10)</b>								
Benzene	<0.0005	0.0005	mg/L	09-SEP-06	09-SEP-06	KEB	R441098	
Toluene	<0.0005	0.0005	mg/L	09-SEP-06	09-SEP-06	KEB	R441098	
Ethylbenzene	<0.0005	0.0005	mg/L	09-SEP-06	09-SEP-06	KEB	R441098	
Xylenes	<0.0005	0.0005	mg/L	09-SEP-06	09-SEP-06	KEB	R441098	
Total Volatiles	<0.1	0.1	mg/L	09-SEP-06	09-SEP-06	KEB	R441098	
<b>Total Metals in Water (CCME)</b>								
<b>Total Metals in Water by ICPMS (CCME)</b>								
Aluminum (Al)-Total	0.023	0.01	mg/L	20-NOV-06	MSB	R467285		
Antimony (Sb)-Total	<0.0010	0.001	mg/L	20-NOV-06	MSB	R467285		
Arsenic (As)-Total	0.0013	0.001	mg/L	20-NOV-06	MSB	R467285		
Beryllium (Be)-Total	<0.0020	0.002	mg/L	20-NOV-06	MSB	R467285		
Cadmium (Cd)-Total	<0.000034	0.00003	mg/L	20-NOV-06	MSB	R467285		
4								
Chromium (Cr)-Total	<0.0020	0.002	mg/L	20-NOV-06	MSB	R467285		
Cobalt (Co)-Total	0.00065	0.0006	mg/L	20-NOV-06	MSB	R467285		
Copper (Cu)-Total	0.0032	0.002	mg/L	20-NOV-06	MSB	R467285		
Lead (Pb)-Total	<0.0010	0.001	mg/L	20-NOV-06	MSB	R467285		
Lithium (Li)-Total	0.022	0.01	mg/L	20-NOV-06	MSB	R467285		
Manganese (Mn)-Total	0.136	0.0006	mg/L	20-NOV-06	MSB	R467285		
Molybdenum (Mo)-Total	<0.0020	0.002	mg/L	20-NOV-06	MSB	R467285		
Nickel (Ni)-Total	0.0035	0.002	mg/L	20-NOV-06	MSB	R467285		
Selenium (Se)-Total	<0.0020	0.002	mg/L	20-NOV-06	MSB	R467285		
Silver (Ag)-Total	<0.000040	0.00004	mg/L	20-NOV-06	MSB	R467285		
Thallium (Tl)-Total	<0.00040	0.0004	mg/L	20-NOV-06	MSB	R467285		
Tin (Sn)-Total	<0.0010	0.001	mg/L	20-NOV-06	MSB	R467285		
Uranium (U)-Total	0.00576	0.0004	mg/L	20-NOV-06	MSB	R467285		
Zinc, (Total)	<0.010	0.01	mg/L	20-NOV-06	MSB	R467285		
<b>Total Metals in Water by ICPAES (CCME)</b>								
Barium (Ba)-Total	0.102	0.02	mg/L	20-NOV-06	A.R	R467252		
Boron (B)-Total	<0.10	0.1	mg/L	20-NOV-06	A.R	R467252		
Calcium (Ca)-Total	253	0.1	mg/L	20-NOV-06	A.R	R467252		
Iron (Fe)-Total	0.239	0.03	mg/L	20-NOV-06	A.R	R467252		
Magnesium (Mg)-Total	79.3	0.1	mg/L	20-NOV-06	A.R	R467252		
Potassium (K)-Total	23.5	2	mg/L	20-NOV-06	A.R	R467252		
Sodium (Na)-Total	23.6	2	mg/L	20-NOV-06	A.R	R467252		
Titanium (Ti)-Total	<0.010	0.01	mg/L	20-NOV-06	A.R	R467252		
Vanadium (V)-Total	<0.030	0.03	mg/L	20-NOV-06	A.R	R467252		
<b>Total Mercury in Water by CVAFS (CCME)</b>								
Mercury (Hg)-Total	<0.000020	0.00002	mg/L	20-NOV-06	MSB	R467165		
<b>Hardness</b>								
Hardness (as CaCO <sub>3</sub> )	861	2	mg/L	20-NOV-06				
<b>Total Metals</b>								
<b>Total Trace Metals</b>								
Silver (Ag)	<0.005	0.005	mg/L	08-SEP-06	QLI	R439787		
Aluminum (Al)	0.05	0.01	mg/L	08-SEP-06	QLI	R439787		
Boron (B)	0.07	0.05	mg/L	08-SEP-06	QLI	R439787		
Barium (Ba)	0.111	0.003	mg/L	08-SEP-06	QLI	R439787		
Beryllium (Be)	<0.002	0.002	mg/L	08-SEP-06	QLI	R439787		
Cadmium (Cd)	<0.001	0.001	mg/L	08-SEP-06	QLI	R439787		
Cobalt (Co)	<0.002	0.002	mg/L	08-SEP-06	QLI	R439787		

## ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L430346-2 NUNA I-30 SW06-02								
Sampled By: S.B./R.C. on 05-SEP-06								
Matrix: GRAB								
<b>Total Metals</b>								
<b>Total Trace Metals</b>								
Chromium (Cr)	<0.005	0.005	mg/L		08-SEP-06	QLI	R439787	
Copper (Cu)	0.004	0.001	mg/L		08-SEP-06	QLI	R439787	
Molybdenum (Mo)	<0.005	0.005	mg/L		08-SEP-06	QLI	R439787	
Nickel (Ni)	0.014	0.002	mg/L		08-SEP-06	QLI	R439787	
Lead (Pb)	<0.005	0.005	mg/L		08-SEP-06	QLI	R439787	
Tin (Sn)	<0.05	0.05	mg/L		08-SEP-06	QLI	R439787	
Strontium (Sr)	0.929	0.002	mg/L		08-SEP-06	QLI	R439787	
Titanium (Ti)	0.003	0.001	mg/L		08-SEP-06	QLI	R439787	
Thallium (Tl)	<0.05	0.05	mg/L		08-SEP-06	QLI	R439787	
Vanadium (V)	0.002	0.001	mg/L		08-SEP-06	QLI	R439787	
Zinc (Zn)	0.007	0.001	mg/L		08-SEP-06	QLI	R439787	
<b>Total Major Metals</b>								
Calcium (Ca)	228	0.5	mg/L		08-SEP-06	HAS	R439618	
Potassium (K)	23.8	0.1	mg/L		08-SEP-06	HAS	R439618	
Magnesium (Mg)	71.1	0.1	mg/L		08-SEP-06	HAS	R439618	
Sodium (Na)	22	1	mg/L		08-SEP-06	HAS	R439618	
Iron (Fe)	0.227	0.005	mg/L		08-SEP-06	HAS	R439618	
Manganese (Mn)	0.136	0.001	mg/L		08-SEP-06	HAS	R439618	
Special Request	See Attached					14-SEP-06	PB	R443524
Total Suspended Solids	<3	3	mg/L		08-SEP-06	ZOW	R439573	
<b>Major Ions &amp; Dissolved Metals</b>								
Iron (Fe)-Dissolved	0.155	0.005	mg/L		08-SEP-06	HAS	R439615	
Manganese (Mn)-Dissolved	0.130	0.001	mg/L		08-SEP-06	HAS	R439615	
Chloride (Cl)	127	1	mg/L		08-SEP-06	NG	R439672	
Nitrate+Nitrite-N	5.9	0.1	mg/L		08-SEP-06	KMY	R439733	
Nitrate-N	5.9	0.1	mg/L		08-SEP-06	KMY	R439733	
Nitrite-N	<0.05	0.05	mg/L		08-SEP-06	KMY	R439733	
<b>pH, Conductivity and Total Alkalinity</b>								
pH	8.1	0.1	pH		09-SEP-06	JL1	R439821	
Conductivity (EC)	1420	0.2	uS/cm		09-SEP-06	JL1	R439821	
Bicarbonate (HCO3)	173	5	mg/L		09-SEP-06	JL1	R439821	
Carbonate (CO3)	<5	5	mg/L		09-SEP-06	JL1	R439821	
Hydroxide (OH)	<5	5	mg/L		09-SEP-06	JL1	R439821	
Alkalinity, Total (as CaCO3)	142	5	mg/L		09-SEP-06	JL1	R439821	
<b>Ion Balance Calculation</b>								
Ion Balance	107		%		12-SEP-06			
TDS (Calculated)	1180		mg/L		12-SEP-06			
Hardness (as CaCO3)	928		mg/L		12-SEP-06			
<b>ICP metals and SO4 for routine water</b>								
Calcium (Ca)	239	0.5	mg/L		12-SEP-06	JWU	R440696	
Potassium (K)	21.3	0.5	mg/L		12-SEP-06	JWU	R440696	
Magnesium (Mg)	80.5	0.1	mg/L		12-SEP-06	JWU	R440696	
Sodium (Na)	23	1	mg/L		12-SEP-06	JWU	R440696	
Sulfate (SO4)	575	0.5	mg/L		12-SEP-06	JWU	R440696	
<b>Dissolved Trace Metals</b>								
Silver (Ag)	<0.005	0.005	mg/L		08-SEP-06	QLI	R439786	
Aluminum (Al)	0.03	0.01	mg/L		08-SEP-06	QLI	R439786	
Boron (B)	0.06	0.05	mg/L		08-SEP-06	QLI	R439786	
Barium (Ba)	0.091	0.003	mg/L		08-SEP-06	QLI	R439786	

## ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L430346-2 NUNA I-30 SW06-02								
Sampled By: S.B./R.C. on 05-SEP-06								
Matrix: GRAB								
<b>Major Ions &amp; Dissolved Metals</b>								
<b>Dissolved Trace Metals</b>								
Beryllium (Be)	<0.001	0.001	mg/L		08-SEP-06	QLI	R439786	
Cadmium (Cd)	<0.001	0.001	mg/L		08-SEP-06	QLI	R439786	
Cobalt (Co)	<0.002	0.002	mg/L		08-SEP-06	QLI	R439786	
Chromium (Cr)	<0.005	0.005	mg/L		08-SEP-06	QLI	R439786	
Copper (Cu)	0.004	0.001	mg/L		08-SEP-06	QLI	R439786	
Molybdenum (Mo)	<0.005	0.005	mg/L		08-SEP-06	QLI	R439786	
Nickel (Ni)	0.011	0.002	mg/L		08-SEP-06	QLI	R439786	
Lead (Pb)	<0.005	0.005	mg/L		08-SEP-06	QLI	R439786	
Tin (Sn)	<0.05	0.05	mg/L		08-SEP-06	QLI	R439786	
Strontium (Sr)	0.719	0.005	mg/L		08-SEP-06	QLI	R439786	
Titanium (Ti)	0.001	0.001	mg/L		08-SEP-06	QLI	R439786	
Thallium (Tl)	<0.05	0.05	mg/L		08-SEP-06	QLI	R439786	
Vanadium (V)	0.001	0.001	mg/L		08-SEP-06	QLI	R439786	
Zinc (Zn)	0.013	0.001	mg/L		08-SEP-06	QLI	R439786	

## ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L430346-3 NUNA I-30 SW06-03 BK6D Sampled By: S.B./R.C. on 05-SEP-06 Matrix: GRAB								
<b>Dissolved Metals in Water (CCME)</b>								
Diss. Metals in Water by ICPMS (CCME)	0.271	0.005	mg/L		20-NOV-06	MSB	R467285	
Aluminum (Al)-Dissolved	0.00132	0.0005	mg/L		20-NOV-06	MSB	R467285	
Antimony (Sb)-Dissolved	0.00074	0.0005	mg/L		20-NOV-06	MSB	R467285	
Arsenic (As)-Dissolved	<0.0010	0.001	mg/L		20-NOV-06	MSB	R467285	
Beryllium (Be)-Dissolved	0.000025	0.00001	mg/L		20-NOV-06	MSB	R467285	
Cadmium (Cd)-Dissolved		7			20-NOV-06	MSB	R467285	
Chromium (Cr)-Dissolved	0.0015	0.001	mg/L		20-NOV-06	MSB	R467285	
Cobalt (Co)-Dissolved	0.00107	0.0003	mg/L		20-NOV-06	MSB	R467285	
Copper (Cu)-Dissolved	0.0032	0.001	mg/L		20-NOV-06	MSB	R467285	
Lead (Pb)-Dissolved	<0.00050	0.0005	mg/L		20-NOV-06	MSB	R467285	
Lithium (Li)-Dissolved	<0.0050	0.005	mg/L		20-NOV-06	MSB	R467285	
Manganese(Mn)-Dissolved	0.0975	0.0003	mg/L		20-NOV-06	MSB	R467285	
Molybdenum (Mo)-Dissolved	<0.0010	0.001	mg/L		20-NOV-06	MSB	R467285	
Nickel (Ni)-Dissolved	0.0049	0.001	mg/L		20-NOV-06	MSB	R467285	
Selenium (Se)-Dissolved	<0.000020	0.00002	mg/L		20-NOV-06	MSB	R467285	
Silver (Ag)-Dissolved	<0.000020	0.0002	mg/L		20-NOV-06	MSB	R467285	
Thallium (Tl)-Dissolved	<0.00050	0.0005	mg/L		20-NOV-06	MSB	R467285	
Tin (Sn)-Dissolved	<0.00020	0.0002	mg/L		20-NOV-06	MSB	R467285	
Uranium (U)-Dissolved	0.0198	0.005	mg/L		20-NOV-06	MSB	R467285	
Zinc (Zn)-Dissolved					20-NOV-06	A.R	R467246	
<b>Diss. Metals in Water by ICPAES (CCME)</b>								
Barium (Ba)-Dissolved	<0.020	0.02	mg/L		20-NOV-06	A.R	R467246	
Boron (B)-Dissolved	<0.10	0.1	mg/L		20-NOV-06	A.R	R467246	
Calcium (Ca)-Dissolved	9.10	0.1	mg/L		20-NOV-06	A.R	R467246	
Iron (Fe)-Dissolved	0.647	0.03	mg/L		20-NOV-06	A.R	R467246	
Magnesium (Mg)-Dissolved	5.49	0.1	mg/L		20-NOV-06	A.R	R467246	
Potassium (K)-Dissolved	<2.0	2	mg/L		20-NOV-06	A.R	R467246	
Sodium (Na)-Dissolved	7.0	2	mg/L		20-NOV-06	A.R	R467246	
Titanium (Ti)-Dissolved	<0.010	0.01	mg/L		20-NOV-06	A.R	R467246	
Vanadium (V)-Dissolved	<0.030	0.03	mg/L		20-NOV-06	A.R	R467246	
<b>Diss. Mercury in Water by CVAFS (CCME)</b>								
Mercury (Hg)-Dissolved	<0.000020	0.00002	mg/L		20-NOV-06	MSB	R467165	
<b>Total Metals in Water (CCME)</b>								
<b>Total Metals in Water by ICPMS (CCME)</b>								
Aluminum (Al)-Total	0.270	0.005	mg/L		20-NOV-06	MSB	R467285	
Antimony (Sb)-Total	0.00092	0.0005	mg/L		20-NOV-06	MSB	R467285	
Arsenic (As)-Total	0.00072	0.0005	mg/L		20-NOV-06	MSB	R467285	
Beryllium (Be)-Total	<0.0010	0.001	mg/L		20-NOV-06	MSB	R467285	
Cadmium (Cd)-Total	0.000029	0.00001	mg/L		20-NOV-06	MSB	R467285	
Chromium (Cr)-Total		7			20-NOV-06	MSB	R467285	
Cobalt (Co)-Total	0.0015	0.001	mg/L		20-NOV-06	MSB	R467285	
Copper (Cu)-Total	0.00094	0.0003	mg/L		20-NOV-06	MSB	R467285	
Lead (Pb)-Total	0.0013	0.001	mg/L		20-NOV-06	MSB	R467285	
Lithium (Li)-Total	<0.00050	0.0005	mg/L		20-NOV-06	MSB	R467285	
Manganese (Mn)-Total	<0.0050	0.005	mg/L		20-NOV-06	MSB	R467285	
Molybdenum (Mo)-Total	0.102	0.0003	mg/L		20-NOV-06	MSB	R467285	
Nickel (Ni)-Total	<0.0010	0.001	mg/L		20-NOV-06	MSB	R467285	
Selenium (Se)-Total	<0.000020	0.00002	mg/L		20-NOV-06	MSB	R467285	
Silver (Ag)-Total	<0.000020	0.0002	mg/L		20-NOV-06	MSB	R467285	
Thallium (Tl)-Total					20-NOV-06	MSB	R467285	

## ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L430346-3 NUNA I-30 SW06-03 BK6D								
Sampled By: S.B./R.C. on 05-SEP-06								
Matrix: GRAB								
<b>Total Metals in Water (CCME)</b>								
<b>Total Metals in Water by ICPMS (CCME)</b>								
Tin (Sn)-Total	<0.00050	0.0005	mg/L		20-NOV-06	MSB	R467285	
Uranium (U)-Total	<0.00020	0.0002	mg/L		20-NOV-06	MSB	R467285	
Zinc, (Total)	0.0190	0.005	mg/L		20-NOV-06	MSB	R467285	
<b>Total Metals in Water by ICPAES (CCME)</b>								
Barium (Ba)-Total	<0.020	0.02	mg/L		20-NOV-06	A.R	R467246	
Boron (B)-Total	<0.10	0.1	mg/L		20-NOV-06	A.R	R467246	
Calcium (Ca)-Total	8.19	0.1	mg/L		20-NOV-06	A.R	R467246	
Iron (Fe)-Total	0.657	0.03	mg/L		20-NOV-06	A.R	R467246	
Magnesium (Mg)-Total	5.37	0.1	mg/L		20-NOV-06	A.R	R467246	
Potassium (K)-Total	<2.0	2	mg/L		20-NOV-06	A.R	R467246	
Sodium (Na)-Total	6.2	2	mg/L		20-NOV-06	A.R	R467246	
Titanium (Ti)-Total	<0.010	0.01	mg/L		20-NOV-06	A.R	R467246	
Vanadium (V)-Total	<0.030	0.03	mg/L		20-NOV-06	A.R	R467246	
<b>Total Mercury in Water by CVAFS (CCME)</b>								
Mercury (Hg)-Total	<0.000020	0.00002	mg/L		20-NOV-06	MSB	R467165	
<b>Hardness</b>								
Hardness (as CaCO <sub>3</sub> )	45.3	0.7	mg/L		20-NOV-06			
<b>Total Metals</b>								
<b>Total Trace Metals</b>								
Silver (Ag)	<0.005	0.005	mg/L		12-SEP-06	MCHU	R441884	
Aluminum (Al)	0.26	0.01	mg/L		12-SEP-06	MCHU	R441884	
Boron (B)	<0.05	0.05	mg/L		12-SEP-06	MCHU	R441884	
Barium (Ba)	0.019	0.003	mg/L		12-SEP-06	MCHU	R441884	
Beryllium (Be)	<0.002	0.002	mg/L		12-SEP-06	MCHU	R441884	
Cadmium (Cd)	<0.001	0.001	mg/L		12-SEP-06	MCHU	R441884	
Cobalt (Co)	<0.002	0.002	mg/L		12-SEP-06	MCHU	R441884	
Chromium (Cr)	<0.005	0.005	mg/L		12-SEP-06	MCHU	R441884	
Copper (Cu)	0.001	0.001	mg/L		12-SEP-06	MCHU	R441884	
Molybdenum (Mo)	<0.005	0.005	mg/L		12-SEP-06	MCHU	R441884	
Nickel (Ni)	0.005	0.002	mg/L		12-SEP-06	MCHU	R441884	
Lead (Pb)	<0.005	0.005	mg/L		12-SEP-06	MCHU	R441884	
Tin (Sn)	<0.05	0.05	mg/L		12-SEP-06	MCHU	R441884	
Strontium (Sr)	0.030	0.002	mg/L		12-SEP-06	MCHU	R441884	
Titanium (Ti)	0.001	0.001	mg/L		12-SEP-06	MCHU	R441884	
Thallium (Tl)	<0.05	0.05	mg/L		12-SEP-06	MCHU	R441884	
Vanadium (V)	<0.001	0.001	mg/L		12-SEP-06	MCHU	R441884	
Zinc (Zn)	0.017	0.001	mg/L		12-SEP-06	MCHU	R441884	
<b>Total Major Metals</b>								
Calcium (Ca)	7.5	0.5	mg/L		12-SEP-06	HAS	R440981	
Potassium (K)	<0.1	0.1	mg/L		12-SEP-06	HAS	R440981	
Magnesium (Mg)	4.5	0.1	mg/L		12-SEP-06	HAS	R440981	
Sodium (Na)	6	1	mg/L		12-SEP-06	HAS	R440981	
Iron (Fe)	0.586	0.005	mg/L		12-SEP-06	HAS	R440981	
Manganese (Mn)	0.097	0.001	mg/L		12-SEP-06	HAS	R440981	
<b>Major Ions &amp; Dissolved Metals</b>								
Iron (Fe)-Dissolved	0.550	0.005	mg/L		08-SEP-06	HAS	R439615	
Manganese (Mn)-Dissolved	0.092	0.001	mg/L		08-SEP-06	HAS	R439615	
Chloride (Cl)	14	1	mg/L		08-SEP-06	NG	R439672	
Nitrate+Nitrite-N	<0.1	0.1	mg/L		08-SEP-06	KMY	R439733	
Nitrate-N	<0.1	0.1	mg/L		08-SEP-06	KMY	R439733	

## ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L430346-3	NUNA I-30 SW06-03 BK6D								
Sampled By:	S.B./R.C. on 05-SEP-06								
Matrix:	GRAB								
<b>Major Ions &amp; Dissolved Metals</b>									
Nitrite-N	<0.05			0.05	mg/L		08-SEP-06	KMY	R439733
<b>pH, Conductivity and Total Alkalinity</b>									
pH	4.8			0.1	pH		09-SEP-06	JL1	R439821
Conductivity (EC)	91.4			0.2	uS/cm		09-SEP-06	JL1	R439821
Bicarbonate (HCO3)	<5			5	mg/L		09-SEP-06	JL1	R439821
Carbonate (CO3)	<5			5	mg/L		09-SEP-06	JL1	R439821
Hydroxide (OH)	<5			5	mg/L		09-SEP-06	JL1	R439821
Alkalinity, Total (as CaCO3)	<5			5	mg/L		09-SEP-06	JL1	R439821
<b>Ion Balance Calculation</b>									
Ion Balance	Low EC	BL:INT			%		12-SEP-06		
TDS (Calculated)	36				mg/L		12-SEP-06		
Hardness (as CaCO3)	41				mg/L		12-SEP-06		
<b>ICP metals and SO4 for routine water</b>									
Calcium (Ca)	7.9			0.5	mg/L		12-SEP-06	JWU	R440696
Potassium (K)	<0.5			0.5	mg/L		12-SEP-06	JWU	R440696
Magnesium (Mg)	5.1			0.1	mg/L		12-SEP-06	JWU	R440696
Sodium (Na)	6			1	mg/L		12-SEP-06	JWU	R440696
Sulfate (SO4)	3.1			0.5	mg/L		12-SEP-06	JWU	R440696
<b>Dissolved Trace Metals</b>									
Silver (Ag)	<0.005			0.005	mg/L		08-SEP-06	QLI	R439786
Aluminum (Al)	0.24			0.01	mg/L		08-SEP-06	QLI	R439786
Boron (B)	<0.05			0.05	mg/L		08-SEP-06	QLI	R439786
Barium (Ba)	0.018			0.003	mg/L		08-SEP-06	QLI	R439786
Beryllium (Be)	<0.001			0.001	mg/L		08-SEP-06	QLI	R439786
Cadmium (Cd)	<0.001			0.001	mg/L		08-SEP-06	QLI	R439786
Cobalt (Co)	<0.002			0.002	mg/L		08-SEP-06	QLI	R439786
Chromium (Cr)	<0.005			0.005	mg/L		08-SEP-06	QLI	R439786
Copper (Cu)	0.004			0.001	mg/L		08-SEP-06	QLI	R439786
Molybdenum (Mo)	<0.005			0.005	mg/L		08-SEP-06	QLI	R439786
Nickel (Ni)	0.004			0.002	mg/L		08-SEP-06	QLI	R439786
Lead (Pb)	<0.005			0.005	mg/L		08-SEP-06	QLI	R439786
Tin (Sn)	<0.05			0.05	mg/L		08-SEP-06	QLI	R439786
Strontium (Sr)	0.032			0.005	mg/L		08-SEP-06	QLI	R439786
Titanium (Ti)	<0.001			0.001	mg/L		08-SEP-06	QLI	R439786
Thallium (Tl)	<0.05			0.05	mg/L		08-SEP-06	QLI	R439786
Vanadium (V)	<0.001			0.001	mg/L		08-SEP-06	QLI	R439786
Zinc (Zn)	0.022			0.001	mg/L		08-SEP-06	QLI	R439786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## Reference Information

**Sample Parameter Qualifier key listed:**

Qualifier	Description			
BL:INT	Balance Reviewed: Interference Or Non-Measured Component			
<b>Methods Listed (if applicable):</b>				
ALS Test Code	Matrix	Test Description	Preparation Method Reference(Based On)	Analytical Method Reference(Based On)
BTX,TVH-CL	Water	BTEX and TVH (C5-C10)  TVH includes BTEX contribution.	EPA 5030B	EPA 5030/8015& 8260-P&T GC-MS/FID
CL-ED	Water	Chloride (Cl)		APHA 4500 Cl E-Colorimetry
ETL-ROUTINE-ICP-ED	Water	ICP metals and SO4 for routine water		APHA 3120 B-ICP-OES
FE-DIS-ED	Water	Iron (Fe)-Dissolved		EPA 200.7
HARDNESS-CALC-VA	Water	Hardness  Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.		APHA 2340B
HG-DIS-CCME-CVAFS-VA	Water	Diss. Mercury in Water by CVAFS (CCME)  This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).		EPA 3005A/245.7
HG-TOT-CCME-CVAFS-VA	Water	Total Mercury in Water by CVAFS (CCME)  This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).		EPA 245.7
IONBALANCE-ED	Water	Ion Balance Calculation		APHA 1030E
MET-DIS-CCME-ICP-VA	Water	Diss. Metals in Water by ICPAES (CCME)  This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).		EPA SW-846 3005A/6010B
MET-DIS-CCME-MS-VA	Water	Diss. Metals in Water by ICPMS (CCME)  This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).		EPA SW-846 3005A/6020
MET-TOT-CCME-ICP-VA	Water	Total Metals in Water by ICPAES (CCME)  This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).		EPA SW-846 3005A/6010B
MET-TOT-CCME-MS-VA	Water	Total Metals in Water by ICPMS (CCME)  This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).		EPA SW-846 3005A/6020
MET1-DIS-ED	Water	Dissolved Trace Metals		EPA 6020
MET1-TOT-ED	Water	Total Trace Metals	EPA3015	EPA 6020
MET2-TOT-ED	Water	Total Major Metals	EPA3015	EPA 200.7

## Reference Information

MN-DIS-ED	Water	Manganese (Mn)-Dissolved	EPA 200.7
N2N3-ED	Water	Nitrate+Nitrite-N	APHA 4500 NO3H-Colorimetry
NO2-ED	Water	Nitrite-N	APHA 4500 NO2B-Colorimetry
NO3-ED	Water	Nitrate-N	APHA 4500 NO3H-Colorimetry
PH/EC/ALK-ED	Water	pH, Conductivity and Total Alkalinity	APHA 4500-H, 2510, 2320
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric
TEH-CL	Water	TEH (C11-C30)	EPA 3550B EPA 3510/8000-GC-FID

\*\* Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.

Chain of Custody numbers:

199210

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
CL	ALS LABORATORY GROUP - CALGARY, ALBERTA, CANADA	ED	ALS LABORATORY GROUP - EDMONTON, ALBERTA, CANADA
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

**GLOSSARY OF REPORT TERMS**

**Surr** - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds. The reported surrogate recovery value provides a measure of method efficiency. The Laboratory control limits are determined under column heading D.L.

**mg/kg (units)** - unit of concentration based on mass, parts per million

**mg/L (units)** - unit of concentration based on volume, parts per million

< - Less than

**D.L. - Detection Limit**

**N/A** - Result not available. Refer to qualifier code and definition for explanation

**Test results reported relate only to the samples as received by the laboratory.**

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

UNLESS OTHERWISE STATED, SAMPLES ARE NOT CORRECTED FOR CLIENT FIELD BLANKS.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

## ENVIRO-TEST Routine Water Chemistry Report

L430346

Lab ID	Sample ID				Lab ID	Sample ID			
L430346-1	NUNA I-30 SW06-01				L430346-2	NUNA I-30 SW06-02			
Sample Date:	05-SEP-06				Sample Date:	05-SEP-06			
Matrix:	GRAB				Matrix:	GRAB			
Ion Balance	Result 103	UNITS %	MEQ/L 3.82	MEQ % 8	Ion Balance	Result 107	UNITS %	MEQ/L 2.84	MEQ % 7
Routine Anions					Routine Anions				
Bicarbonate	233	mg/L	0	0	Bicarbonate	173	mg/L	0	0
Carbonate	<5	mg/L	0	0	Carbonate	<5	mg/L	0	0
Hydroxide	<5	mg/L	0	0	Hydroxide	<5	mg/L	0	0
Chloride	445	mg/L	12.55	26	Chloride	127	mg/L	3.58	9
Sulfate	335	mg/L	6.97	15	Sulfate	575	mg/L	11.97	31
Nitrate+Nitrite-N	0.7	mg/L	0.05	0	Nitrate+Nitrite-N	5.9	mg/L	0.42	1
Anion Sum			23.40	49	Anion Sum			18.81	48
Routine Cations					Routine Cations				
Calcium	279	mg/L	13.92	29	Calcium	239	mg/L	11.93	31
Magnesium	86.7	mg/L	7.14	15	Magnesium	80.5	mg/L	6.63	17
Sodium	31	mg/L	1.35	3	Sodium	23	mg/L	1.00	3
Potassium	67.3	mg/L	1.72	4	Potassium	21.3	mg/L	0.54	1
Ammonium	0	mg/L	0	0	Ammonium	0	mg/L	0	0
Cation Surr			24.13	51	Cation Surr			20.10	52
L430346-3	NUNA I-30 SW06-03 BK6D								
Sample Date:	05-SEP-06								
Matrix:	GRAB								
Ion Balance	Result Low EC	UNITS %	MEQ/L 0	MEQ % 0					
Routine Anions									
Bicarbonate	<5	mg/L	0	0					
Carbonate	<5	mg/L	0	0					
Hydroxide	<5	mg/L	0	0					
Chloride	14	mg/L	0.39	26					
Sulfate	3.1	mg/L	0.06	4					
Nitrate+Nitrite-N	<0.1	mg/L	0	0					
Anion Sum			0.46	30					
Routine Cations									
Calcium	7.9	mg/L	0.39	26					
Magnesium	5.1	mg/L	0.42	27					
Sodium	6	mg/L	0.26	17					
Potassium	<0.5	mg/L	0	0					
Ammonium	0	mg/L	0	0					
Cation Surr			1.07	70					

## ALS LABORATORY GROUP SOIL SALINITY CONVERSION

L430346

Lab ID	Sample ID					Lab ID	Sample ID					

"Calculations are as per:  
Methods of Analysis for Soils, Plants and Waters  
Homer D. Chapman and Parker F. Pratt  
University of California, Riverside, Cl.  
August, 1961."



**Environmental Division**

**ALS Laboratory Group Quality Control Report**

Workorder: L430346

Report Date: 21-NOV-06

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**Client:** WORLEYPARSONS CANADA LTD  
100 4500 16 AVE NW  
CALGARY AB T3B 0M6

**Contact:** DIXIE WARREN

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTX,TVH-CL	Water							
Batch	R441098							
WG495417-2	DUP	L430346-1						
Benzene		<0.0005	<0.0005	RPD-NA	mg/L	N/A	26	10-SEP-06
Ethylbenzene		<0.0005	<0.0005	RPD-NA	mg/L	N/A	26	10-SEP-06
Toluene		<0.0005	<0.0005	RPD-NA	mg/L	N/A	26	10-SEP-06
Total Volatiles		<0.1	<0.1	RPD-NA	mg/L	N/A	26	10-SEP-06
Xylenes		<0.0005	<0.0005	RPD-NA	mg/L	N/A	26	10-SEP-06
WG495417-4	LCS							
Benzene		99		%		81-120	09-SEP-06	
Ethylbenzene		98		%		82-120	09-SEP-06	
Toluene		101		%		82-119	09-SEP-06	
Total Volatiles		92		%		80-119	09-SEP-06	
Xylenes		100		%		81-124	09-SEP-06	
WG495417-1	MB							
Benzene		<0.0005		mg/L		0.0005	09-SEP-06	
Ethylbenzene		<0.0005		mg/L		0.0005	09-SEP-06	
Toluene		<0.0005		mg/L		0.0005	09-SEP-06	
Total Volatiles		<0.1		mg/L		0.1	09-SEP-06	
Xylenes		<0.0005		mg/L		0.0005	09-SEP-06	
WG495417-3	MS	L430346-2						
Benzene		103		%		74-127	09-SEP-06	
Ethylbenzene		106		%		67-132	09-SEP-06	
Toluene		103		%		68-131	09-SEP-06	
Total Volatiles		94		%		66-127	09-SEP-06	
Xylenes		107		%		68-136	09-SEP-06	
CL-ED	Water							
Batch	R439672							
WG493322-13	DUP	L430346-1						
Chloride (Cl)		445	437		mg/L	1.9	6.5	08-SEP-06
WG493322-17	DUP	L430523-1						
Chloride (Cl)		12	12		mg/L	1.0	6.5	08-SEP-06
WG493322-23	DUP	L430227-1						
Chloride (Cl)		11	11		mg/L	0.77	6.5	08-SEP-06
WG493322-9	DUP	L429254-12						
Chloride (Cl)		2	2	J	mg/L	0	4	08-SEP-06
WG493322-2	LCS							

# ALS Laboratory Group Quality Control Report

Workorder: L430346

Report Date: 21-NOV-06

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-ED	Water							
Batch	R439672							
WG493322-2	LCS							
Chloride (Cl)			103		%		92-112	08-SEP-06
WG493322-3	LCS							
Chloride (Cl)			106		%		93-113	08-SEP-06
WG493322-1	MB							
Chloride (Cl)			<1		mg/L		1	08-SEP-06
Chloride (Cl)			<1		mg/L		1	08-SEP-06
WG493322-10	MS	L429254-12						
Chloride (Cl)			105		%		86-117	08-SEP-06
WG493322-14	MS	L430346-1						
Chloride (Cl)			92		%		86-117	08-SEP-06
WG493322-18	MS	L430523-1						
Chloride (Cl)			111		%		86-117	08-SEP-06
WG493322-24	MS	L430227-1						
Chloride (Cl)			101		%		86-117	08-SEP-06
ETL-ROUTINE-ICP-ED	Water							
Batch	R440696							
WG494803-4	CRM	ION-915_WATER						
Calcium (Ca)			108		%		94-114	12-SEP-06
Magnesium (Mg)			108		%		91-111	12-SEP-06
Potassium (K)			101		%		94-117	12-SEP-06
Sodium (Na)			106		%		95-114	12-SEP-06
Sulfate (SO4)			100		%		81-115	12-SEP-06
WG494803-11	DUP	L430895-18						
Calcium (Ca)			65.2	64.7	mg/L	0.73	14	12-SEP-06
Magnesium (Mg)			41.4	41.2	mg/L	0.66	10	12-SEP-06
Potassium (K)			10.3	10.5	mg/L	1.4	15	12-SEP-06
Sodium (Na)			570	550	mg/L	3.7	10	12-SEP-06
Sulfate (SO4)			337	324	mg/L	3.9	10	12-SEP-06
WG494803-13	DUP	L431462-6						
Calcium (Ca)			386	439	mg/L	1.9	14	13-SEP-06
Magnesium (Mg)			66.3	71.1	mg/L	0.76	10	13-SEP-06
Potassium (K)			2.6	2.4	J	0.0	2	13-SEP-06
Sodium (Na)			8	9	J	0	4	13-SEP-06
Sulfate (SO4)			897	923	mg/L	2.9	10	13-SEP-06
WG494803-5	DUP	L430346-3						

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>ETL-ROUTINE-ICP-ED</b> Water								
Batch	R440696							
WG494803-5	DUP	L430346-3						
Calcium (Ca)		7.9	8.0		mg/L	1.3	14	12-SEP-06
Magnesium (Mg)		5.1	5.2		mg/L	3.0	10	12-SEP-06
Potassium (K)		<0.5	<0.5	RPD-NA	mg/L	N/A	15	12-SEP-06
Sodium (Na)		6	7	J	mg/L	0	4	12-SEP-06
Sulfate (SO4)		3.1	3.6	J	mg/L	0.5	2	12-SEP-06
WG494803-7	DUP	L430609-12						
Calcium (Ca)		386	382		mg/L	0.91	14	12-SEP-06
Magnesium (Mg)		147	147		mg/L	0.16	10	12-SEP-06
Potassium (K)		14.1	13.8		mg/L	1.8	15	12-SEP-06
Sodium (Na)		3260	3270		mg/L	0.30	10	12-SEP-06
Sulfate (SO4)		6930	6960		mg/L	0.36	10	12-SEP-06
WG494803-1	MB							
Calcium (Ca)			<0.5		mg/L		2.5	12-SEP-06
Magnesium (Mg)			<0.1		mg/L		0.5	12-SEP-06
Potassium (K)			<0.5		mg/L		2.5	12-SEP-06
Sodium (Na)			<1		mg/L		5	12-SEP-06
Sulfate (SO4)			<0.5		mg/L		2.5	12-SEP-06
WG494803-12	MS	L430895-18						
Calcium (Ca)			97		%		87-121	12-SEP-06
Magnesium (Mg)			98		%		82-116	12-SEP-06
Potassium (K)			95		%		88-115	12-SEP-06
Sodium (Na)			101		%		87-119	12-SEP-06
Sulfate (SO4)			100		%		82-121	12-SEP-06
WG494803-14	MS	L431462-6						
Calcium (Ca)			93		%		87-121	13-SEP-06
Magnesium (Mg)			107		%		82-116	13-SEP-06
Potassium (K)			104		%		88-115	13-SEP-06
Sodium (Na)			103		%		87-119	13-SEP-06
Sulfate (SO4)			97		%		82-121	13-SEP-06
WG494803-8	MS	L430609-12						
Calcium (Ca)			98		%		87-121	12-SEP-06
Magnesium (Mg)			99		%		82-116	12-SEP-06
Potassium (K)			105		%		88-115	12-SEP-06
Sodium (Na)			119		%		87-119	12-SEP-06

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ETL-ROUTINE-ICP-ED	Water							
Batch R440696								
WG494803-8 MS Sulfate (SO4)		L430609-12	82	G	%		82-121	12-SEP-06
FE-DIS-ED	Water							
Batch R439615								
WG493221-2 DUP Iron (Fe)-Dissolved		L430354-7	0.640	0.686	mg/L	6.9	26	08-SEP-06
WG493221-1 MB Iron (Fe)-Dissolved			<0.005		mg/L		0.005	08-SEP-06
WG493221-3 MS Iron (Fe)-Dissolved		L430354-7	100		%		63-138	08-SEP-06
HG-TOT-CCME-CVAFS-VA	Water							
Batch R467165								
WG526940-2 CRM Mercury (Hg)-Total		VA-HG-WATRM	104		%		88-112	20-NOV-06
WG526940-1 MB Mercury (Hg)-Total			<0.000020		mg/L		0.00002	20-NOV-06
MET-DIS-CCME-MS-VA	Water							
Batch R467176								
WG525509-4 CRM Aluminum (Al)-Dissolved		VA-HIGH-WATRM	101		%		90-110	20-NOV-06
Antimony (Sb)-Dissolved			107		%		90-110	20-NOV-06
Arsenic (As)-Dissolved			99		%		90-110	20-NOV-06
Beryllium (Be)-Dissolved			104		%		90-110	20-NOV-06
Cadmium (Cd)-Dissolved			97		%		90-110	20-NOV-06
Chromium (Cr)-Dissolved			100		%		90-110	20-NOV-06
Cobalt (Co)-Dissolved			99		%		90-110	20-NOV-06
Copper (Cu)-Dissolved			101		%		90-110	20-NOV-06
Lead (Pb)-Dissolved			104		%		90-110	20-NOV-06
Lithium (Li)-Dissolved			100		%		90-110	20-NOV-06
Manganese(Mn)-Dissolved			98		%		90-110	20-NOV-06
Molybdenum (Mo)-Dissolved			101		%		90-110	20-NOV-06
Nickel (Ni)-Dissolved			97		%		90-110	20-NOV-06
Selenium (Se)-Dissolved			98		%		90-110	20-NOV-06
Silver (Ag)-Dissolved			101		%		90-110	20-NOV-06

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
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MET-DIS-CCME-MS-VA	Water							
Batch	R467176							
WG525509-4	CRM	VA-HIGH-WATRM						
Thallium (Tl)-Dissolved			102		%		85-115	20-NOV-06
Tin (Sn)-Dissolved			99		%		90-110	20-NOV-06
Uranium (U)-Dissolved			104		%		90-110	20-NOV-06
Zinc (Zn)-Dissolved			101		%		85-115	20-NOV-06
MET1-DIS-ED	Water							
Batch	R439786							
WG493039-2	CRM	1643E_WATER						
Aluminum (Al)			107		%		91-123	08-SEP-06
Barium (Ba)			105		%		88-109	08-SEP-06
Beryllium (Be)			84		%		78-113	08-SEP-06
Boron (B)			92		%		80-116	08-SEP-06
Cadmium (Cd)			97		%		87-109	08-SEP-06
Chromium (Cr)			94		%		91-116	08-SEP-06
Cobalt (Co)			101		%		89-109	08-SEP-06
Copper (Cu)			100		%		90-112	08-SEP-06
Lead (Pb)			96		%		89-110	08-SEP-06
Molybdenum (Mo)			95		%		88-111	08-SEP-06
Nickel (Ni)			101		%		88-110	08-SEP-06
Strontium (Sr)			103		%		84-119	08-SEP-06
Vanadium (V)			89		%		88-114	08-SEP-06
Zinc (Zn)			97		%		78-119	08-SEP-06
WG493039-1	MB							
Aluminum (Al)			<0.01		mg/L		0.05	08-SEP-06
Barium (Ba)			<0.003		mg/L		0.015	08-SEP-06
Beryllium (Be)			<0.001		mg/L		0.005	08-SEP-06
Boron (B)			<0.05		mg/L		0.25	08-SEP-06
Cadmium (Cd)			<0.001		mg/L		0.005	08-SEP-06
Chromium (Cr)			<0.005		mg/L		0.025	08-SEP-06
Cobalt (Co)			<0.002		mg/L		0.01	08-SEP-06
Copper (Cu)			<0.001		mg/L		0.005	08-SEP-06
Lead (Pb)			<0.005		mg/L		0.025	08-SEP-06
Molybdenum (Mo)			<0.005		mg/L		0.025	08-SEP-06
Nickel (Ni)			<0.002		mg/L		0.01	08-SEP-06

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET1-DIS-ED	Water							
Batch	R439786							
WG493039-1 MB								
Phosphorus (P)			<0.1		mg/L	0.5	08-SEP-06	
Silver (Ag)			<0.005		mg/L	0.025	08-SEP-06	
Strontium (Sr)			<0.005		mg/L	0.025	08-SEP-06	
Thallium (Tl)			<0.05		mg/L	0.25	08-SEP-06	
Tin (Sn)			<0.05		mg/L	0.25	08-SEP-06	
Titanium (Ti)			<0.001		mg/L	0.005	08-SEP-06	
Vanadium (V)			<0.001		mg/L	0.005	08-SEP-06	
Zinc (Zn)			<0.001		mg/L	0.005	08-SEP-06	
MET1-TOT-ED	Water							
Batch	R439787							
WG493455-1 MB								
Aluminum (Al)			<0.01		mg/L	0.05	08-SEP-06	
Barium (Ba)			<0.003		mg/L	0.015	08-SEP-06	
Beryllium (Be)			<0.002		mg/L	0.01	08-SEP-06	
Boron (B)			<0.05		mg/L	0.25	08-SEP-06	
Cadmium (Cd)			<0.001		mg/L	0.005	08-SEP-06	
Chromium (Cr)			<0.005		mg/L	0.025	08-SEP-06	
Cobalt (Co)			<0.002		mg/L	0.01	08-SEP-06	
Copper (Cu)			<0.001		mg/L	0.005	08-SEP-06	
Lead (Pb)			<0.005		mg/L	0.025	08-SEP-06	
Molybdenum (Mo)			<0.005		mg/L	0.025	08-SEP-06	
Nickel (Ni)			<0.002		mg/L	0.01	08-SEP-06	
Phosphorus (P)			0.09		mg/L	0.25	08-SEP-06	
Silver (Ag)			<0.005		mg/L	0.025	08-SEP-06	
Strontium (Sr)			<0.002	B	mg/L	0.01	08-SEP-06	
Thallium (Tl)			<0.05		mg/L	0.25	08-SEP-06	
Tin (Sn)			<0.05		mg/L	0.25	08-SEP-06	
Titanium (Ti)			<0.001		mg/L	0.005	08-SEP-06	
Vanadium (V)			<0.001		mg/L	0.005	08-SEP-06	
Zinc (Zn)			<0.001		mg/L	0.005	08-SEP-06	

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET1-TOT-ED	Water							
Batch	R441884							
WG494817-2	DUP	L430577-1						
Aluminum (Al)		0.57	0.58		mg/L	1.5	18	12-SEP-06
Barium (Ba)		0.177	0.176		mg/L	0.50	15	12-SEP-06
Beryllium (Be)		<0.002	<0.002	RPD-NA	mg/L	N/A	26	12-SEP-06
Boron (B)		0.22	0.22	J	mg/L	0.00	0.2	12-SEP-06
Cadmium (Cd)		<0.001	<0.001	RPD-NA	mg/L	N/A	31	12-SEP-06
Chromium (Cr)		<0.005	<0.005	RPD-NA	mg/L	N/A	28	12-SEP-06
Cobalt (Co)		<0.002	<0.002	RPD-NA	mg/L	N/A	15	12-SEP-06
Copper (Cu)		0.003	0.003	J	mg/L	0.000	0.004	12-SEP-06
Lead (Pb)		<0.005	<0.005	RPD-NA	mg/L	N/A	24	12-SEP-06
Molybdenum (Mo)		0.010	0.009	J	mg/L	0.001	0.02	12-SEP-06
Nickel (Ni)		0.002	0.002	J	mg/L	0.000	0.008	12-SEP-06
Phosphorus (P)		0.07	0.07	J	mg/L	0.00	0.2	12-SEP-06
Silver (Ag)		<0.005	<0.005	RPD-NA	mg/L	N/A	33	12-SEP-06
Strontium (Sr)		0.727	0.728		mg/L	0.18	9.5	12-SEP-06
Thallium (Tl)		<0.05	<0.05	RPD-NA	mg/L	N/A	26	12-SEP-06
Tin (Sn)		<0.05	<0.05	RPD-NA	mg/L	N/A	17	12-SEP-06
Titanium (Ti)		0.003	0.004	J	mg/L	0.000	0.004	12-SEP-06
Vanadium (V)		0.002	0.002	J	mg/L	0.000	0.004	12-SEP-06
Zinc (Zn)		0.003	0.003	J	mg/L	0.000	0.004	12-SEP-06
WG494817-1	MB							
Aluminum (Al)		<0.01			mg/L	0.05	12-SEP-06	
Barium (Ba)		<0.003			mg/L	0.015	12-SEP-06	
Beryllium (Be)		<0.002			mg/L	0.01	12-SEP-06	
Boron (B)		<0.05			mg/L	0.25	12-SEP-06	
Cadmium (Cd)		<0.001			mg/L	0.005	12-SEP-06	
Chromium (Cr)		<0.005			mg/L	0.025	12-SEP-06	
Cobalt (Co)		<0.002			mg/L	0.01	12-SEP-06	
Copper (Cu)		<0.001			mg/L	0.005	12-SEP-06	
Lead (Pb)		<0.005			mg/L	0.025	12-SEP-06	
Molybdenum (Mo)		<0.005			mg/L	0.025	12-SEP-06	
Nickel (Ni)		<0.002			mg/L	0.01	12-SEP-06	
Phosphorus (P)		0.06			mg/L	0.25	12-SEP-06	
Silver (Ag)		<0.005			mg/L	0.025	12-SEP-06	

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET1-TOT-ED	Water							
Batch	R441884							
WG494817-1	MB							
Strontium (Sr)			<0.002	B	mg/L		0.01	12-SEP-06
Thallium (Tl)			<0.05		mg/L		0.25	12-SEP-06
Tin (Sn)			<0.05		mg/L		0.25	12-SEP-06
Titanium (Ti)			<0.001		mg/L		0.005	12-SEP-06
Vanadium (V)			<0.001		mg/L		0.005	12-SEP-06
Zinc (Zn)			<0.001		mg/L		0.005	12-SEP-06
WG494817-3	MS	L430577-2						
Aluminum (Al)			91		%		71-131	12-SEP-06
Barium (Ba)			85		%		69-123	12-SEP-06
Beryllium (Be)			94		%		68-132	12-SEP-06
Boron (B)			95		%		71-128	12-SEP-06
Cadmium (Cd)			96		%		83-114	12-SEP-06
Chromium (Cr)			97		%		78-120	12-SEP-06
Cobalt (Co)			95		%		84-114	12-SEP-06
Copper (Cu)			94		%		73-124	12-SEP-06
Lead (Pb)			98		%		80-121	12-SEP-06
Molybdenum (Mo)			94		%		80-121	12-SEP-06
Nickel (Ni)			92		%		78-118	12-SEP-06
Phosphorus (P)			92		%		67-134	12-SEP-06
Silver (Ag)			82		%		21-154	12-SEP-06
Strontium (Sr)			79	E	%		49-144	12-SEP-06
Thallium (Tl)			101		%		80-123	12-SEP-06
Tin (Sn)			100		%		81-120	12-SEP-06
Titanium (Ti)			96		%		72-128	12-SEP-06
Vanadium (V)			96		%		74-125	12-SEP-06
Zinc (Zn)			85		%		60-131	12-SEP-06
MET2-TOT-ED	Water							
Batch	R439618							
WG493455-1	MB							
Calcium (Ca)			<0.5		mg/L		2.5	08-SEP-06
Iron (Fe)			<0.005		mg/L		0.025	08-SEP-06
Magnesium (Mg)			<0.1		mg/L		0.5	08-SEP-06
Manganese (Mn)			<0.001		mg/L		0.005	08-SEP-06

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET2-TOT-ED	Water							
Batch	R439618							
WG493455-1	MB							
Potassium (K)			<0.1		mg/L		0.5	08-SEP-06
Sodium (Na)			<1		mg/L		5	08-SEP-06
Batch	R440981							
WG494817-2	DUP	L430577-1						
Calcium (Ca)		44.3	44.4		mg/L	0.24	11	12-SEP-06
Iron (Fe)		0.045	0.048	J	mg/L	0.003	0.02	12-SEP-06
Magnesium (Mg)		19.1	19.1		mg/L	0.14	10	12-SEP-06
Manganese (Mn)		0.018	0.018		mg/L	0.0	10	12-SEP-06
Potassium (K)		2.3	2.3		mg/L	0.57	10	12-SEP-06
Sodium (Na)		25	25		mg/L	1.4	10	12-SEP-06
WG494817-1	MB							
Calcium (Ca)			<0.5		mg/L		2.5	12-SEP-06
Iron (Fe)			<0.005		mg/L		0.025	12-SEP-06
Magnesium (Mg)			<0.1		mg/L		0.5	12-SEP-06
Manganese (Mn)			<0.001		mg/L		0.005	12-SEP-06
Potassium (K)			<0.1		mg/L		0.5	12-SEP-06
Sodium (Na)			<1		mg/L		5	12-SEP-06
WG494817-3	MS	L430577-2						
Calcium (Ca)			69		%		50-132	12-SEP-06
Iron (Fe)			93		%		84-117	12-SEP-06
Magnesium (Mg)			78		%		62-122	12-SEP-06
Manganese (Mn)			95		%		79-119	12-SEP-06
Potassium (K)			103		%		72-122	12-SEP-06
Sodium (Na)			77		%		64-127	12-SEP-06
MN-DIS-ED	Water							
Batch	R439615							
WG493221-2	DUP	L430354-7						
Manganese (Mn)-Dissolved		2.56	2.59		mg/L	1.2	26	08-SEP-06
WG493221-1	MB							
Manganese (Mn)-Dissolved			<0.001		mg/L		0.001	08-SEP-06
WG493221-3	MS	L430354-7						
Manganese (Mn)-Dissolved			95		%		63-138	08-SEP-06
N2N3-ED	Water							

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N2N3-ED	Water							
Batch	R439733							
WG493397-11	DUP	L430609-22						
Nitrate+Nitrite-N		<0.1	<0.1	RPD-NA	mg/L	N/A	6.9	08-SEP-06
WG493397-4	DUP	L428851-4						
Nitrate+Nitrite-N		<0.1	<0.1	RPD-NA	mg/L	N/A	6.9	08-SEP-06
WG493397-6	DUP	L429254-14						
Nitrate+Nitrite-N		<0.1	<0.1	RPD-NA	mg/L	N/A	6.9	08-SEP-06
WG493397-8	DUP	L430419-1						
Nitrate+Nitrite-N		0.1	0.1	J	mg/L	0.0	0.4	08-SEP-06
WG493397-9	DUP	L430354-9						
Nitrate+Nitrite-N		<0.1	<0.1	RPD-NA	mg/L	N/A	6.9	08-SEP-06
WG493397-3	LCS							
Nitrate+Nitrite-N			97		%		87-113	08-SEP-06
WG493397-2	MB							
Nitrate+Nitrite-N			<0.1		mg/L		0.1	08-SEP-06
WG493397-10	MS	L430609-6						
Nitrate+Nitrite-N			97		%		76-121	08-SEP-06
WG493397-12	MS	L430637-4						
Nitrate+Nitrite-N			93		%		76-121	08-SEP-06
WG493397-5	MS	L429254-4						
Nitrate+Nitrite-N			100		%		76-121	08-SEP-06
WG493397-7	MS	L430354-1						
Nitrate+Nitrite-N			96		%		76-121	08-SEP-06
NO2-ED	Water							
Batch	R439733							
WG493397-11	DUP	L430609-22						
Nitrite-N		<0.05	<0.05	RPD-NA	mg/L	N/A	6.5	08-SEP-06
WG493397-4	DUP	L428851-4						
Nitrite-N		<0.05	<0.05	RPD-NA	mg/L	N/A	6.5	08-SEP-06
WG493397-6	DUP	L429254-14						
Nitrite-N		<0.05	<0.05	RPD-NA	mg/L	N/A	6.5	08-SEP-06
WG493397-8	DUP	L430419-1						
Nitrite-N		<0.05	<0.05	RPD-NA	mg/L	N/A	6.5	08-SEP-06
WG493397-9	DUP	L430354-9						
Nitrite-N		<0.05	<0.05	RPD-NA	mg/L	N/A	6.5	08-SEP-06
WG493397-3	LCS							
Nitrite-N			100		%		90-110	08-SEP-06
WG493397-2	MB							
Nitrite-N			<0.05		mg/L		0.05	08-SEP-06

# ALS Laboratory Group Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-ED	Water							
Batch	R439733							
WG493397-10	MS	L430609-6						
Nitrite-N			104		%		88-113	08-SEP-06
WG493397-12	MS	L430637-4						
Nitrite-N			100		%		88-113	08-SEP-06
WG493397-5	MS	L429254-4						
Nitrite-N			102		%		88-113	08-SEP-06
WG493397-7	MS	L430354-1						
Nitrite-N			101		%		88-113	08-SEP-06
NO3-ED	Water							
Batch	R439733							
WG493397-11	DUP	L430609-22						
Nitrate-N			<0.1	<0.1	RPD-NA	mg/L	N/A	8.7
WG493397-9	DUP	L430354-9						
Nitrate-N			<0.1	<0.1	RPD-NA	mg/L	N/A	8.7
PH/EC/ALK-ED	Water							
Batch	R439821							
WG493657-6	DUP	L430336-2						
Alkalinity, Total (as CaCO3)			6	6	J	mg/L	0	20
Bicarbonate (HCO3)			8	7	J	mg/L	0	20
Carbonate (CO3)			<5	<5	RPD-NA	mg/L	N/A	26
Conductivity (EC)			47.1	47.0	J	uS/cm	0.1	10
Hydroxide (OH)			<5	<5	RPD-NA	mg/L	N/A	26
pH			7.0	7.0	J	pH	0.0	0.2
WG493657-7	DUP	L430609-22						
Alkalinity, Total (as CaCO3)			146	146		mg/L	0.048	6.5
Bicarbonate (HCO3)			178	178		mg/L	0.050	26
Carbonate (CO3)			<5	<5	RPD-NA	mg/L	N/A	26
Conductivity (EC)			316	317		uS/cm	0.32	7.1
Hydroxide (OH)			<5	<5	RPD-NA	mg/L	N/A	26
pH			8.1	8.1	J	pH	0.0	0.2
WG493657-2	LCS							
Conductivity (EC)			98		%		94-106	08-SEP-06
WG493657-3	LCS							
pH			7.0		pH		6.9-7.1	08-SEP-06
WG493657-4	LCS							
Alkalinity, Total (as CaCO3)			97		%		90-110	08-SEP-06

# ALS Laboratory Group Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	Water							
Batch R439821								
WG493657-5 LCS								
Conductivity (EC)			49500		uS/cm		40600-622	08-SEP-06
WG493657-1 MB								
Alkalinity, Total (as CaCO3)			<5		mg/L		5	08-SEP-06
Bicarbonate (HCO3)			<5		mg/L		5	08-SEP-06
Carbonate (CO3)			<5		mg/L		5	08-SEP-06
Hydroxide (OH)			<5		mg/L		5	08-SEP-06
SOLIDS-TOTSUS-ED	Water							
Batch R439573								
WG493420-3 DUP		L430712-1						
Total Suspended Solids			50	53	mg/L	5.8	14	08-SEP-06
WG493420-2 LCS								
Total Suspended Solids			96		%		83-111	08-SEP-06
WG493420-1 MB								
Total Suspended Solids			<3		mg/L		3	08-SEP-06
TEH-CL	Water							
Batch R441453								
WG495688-3 DUP		L430643-1						
TEH (C11-C30)			1.2	1.4	mg/L	15	33	11-SEP-06
WG495688-2 MB								
TEH (C11-C30)			<0.05		mg/L		0.05	12-SEP-06
WG495688-4 MB								
TEH (C11-C30)			<0.05		mg/L		0.05	12-SEP-06

# ALS Laboratory Group Quality Control Report

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## Legend:

Limit	99% Confidence Interval (Laboratory Control Limits)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

## Qualifier:

RPD-NA Relative Percent Difference Not Available due to result(s) being less than detection limit.

A Method blank exceeds acceptance limit. Blank correction not applied, unless the qualifier "RAMB" (result adjusted for method blank) appears in the Analytical Report.

B Method blank result exceeds acceptance limit, however, it is less than 5% of sample concentration. Blank correction not applied.

E Matrix spike recovery may fall outside the acceptance limits due to high sample background.

F Silver recovery low, likely due to elevated chloride levels in sample.

G Outlier - No assignable cause for nonconformity has been determined.

J Duplicate results and limit(s) are expressed in terms of absolute difference.

K The sample referenced above is of a non-standard matrix type; standard QC acceptance criteria may not be achievable.

L Low matrix spike recovery due to instability of spiked analyte in the sample matrix.

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**MICROBIOLOGY ANALYSIS REPORT****REPORT #:** 060918-8**FILE:** ALS-060918-8**WO#:** 06-CHZ**P.O#** 430346**CLIENT:** ALS Laboratory Group  
9936-67 Ave  
Edmonton, AB, T6E 0P5**ATTENTION:** ALSED Reporting  
PH: 780-413-5227  
Fax: 780-437-2680**SAMPLE DESCRIPTION:** Water Samples.**DATE & TIME OF SAMPLE RECEIPT:** September 08, 2006 / 9:24 AM**TEST PERFORMED:** Microtox Testing (Proto # 1601)**TEST START DATE:** September 14, 2006**COMPLETION DATE:** September 18, 2006**CERTIFICATE OF ANALYSIS:** Please see page 2.

The report shall not be reproduced, except in full, without the written authority of PBR Laboratories.

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**CERTIFICATE OF ANALYSIS****Table 1. Water Samples: Microtox Testing.**

PBR ID	Client Sample No.	Client ID	Microtox Result (Proto # 1601)
06-CHZ-01	L430346-1	NUNA I-30 SW06-01	IC 50 / 15min = >100% 95% Confidence range = n/a
06-CHZ-02	L430346-2	NUNA I-30 SW06-02	IC 50 / 15min = >100% 95% Confidence range = n/a

**Sample was subcontracted to Maxxam Analytical Inc., Edmonton.***Approved by:* \_\_\_\_\_

Narayan Pokharel, Ph.D.

DATE:

# ETL EnviroTest

## CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM CANADA TOLL FREE 1-800-668-9878

Pg 1 of 1  
www.envirotest.com

A DIVISION OF ETL ENVIRONMENTAL INC.

REPORT TO:	DATE: <u>Sept 6/2006</u>										ETL LAB WORK ORDER # <u>L430346</u>	
COMPANY: Worley Parsons Komex	REPORT DISTRIBUTION: ALL FINAL RESULTS WILL BE MAILED										SERVICE REQUESTED	
CONTACT: Tim Spedding	<input checked="" type="checkbox"/> FAX <input type="checkbox"/>										<input checked="" type="checkbox"/> REGULAR SERVICE (DEFAULT)	
ADDRESS: 100, 4500 - 16 <sup>th</sup> ave N.W.	<input type="checkbox"/> EMAIL 1: <u>tim.spedding@worleyparcn.com</u>										<input type="checkbox"/> PRIORITY SERVICE (50% SURCHARGE)	
Calgary AB T3B 0M6	<input type="checkbox"/> EMAIL 2: <u>skirr@kahn.com</u>										<input type="checkbox"/> EMERGENCY SERVICE (100% SURCHARGE) See note.	
PHONE: 403-286-3663 FAX: 403 247-4811	INDICATE BOTTLES: FILTERED/PRESERVED (F/P) ►										<input type="checkbox"/> HAZARDOUS? (Y/N)	
INVOICE TO: SAME <sup>①</sup> IN	JOB #										<input type="checkbox"/> LAB SAMPLE#	
COMPANY:											HIGHLY CONTAMINATED? (Y/N)	
CONTACT:											NUMBER OF CONTAINERS	
ADDRESS:												
PHONE:												
FAX:												
SAMPLE ID	SAMPLING LOCATION	SAMPLED BY / DATE / TIME	SAMPLING METHOD	SAMPLE TYPE	ANALYSIS REQUEST					SAMPLE CONDITION		
Nuna I-30 SW06-01	Nuna I-30	SB/R.C. Septs	Grob	water	<input checked="" type="checkbox"/> FROZEN							
Nuna I-30 SW06-02		SB/R.C.	↓	↓	<input checked="" type="checkbox"/> MEAN TEMPERATURE							
Nuna I-30 SW06-03	SW06	SB	↓	↓	<input checked="" type="checkbox"/> COLD							
											<input type="checkbox"/> AMBIENT	
											<input type="checkbox"/> SAMPLE CONDITION ACCEPTABLE UPON RECEIPT? (Y/N)	
NOTES & CONDITIONS:	2. Turnaround times will vary dependent on complexity of analysis & Lab workload at time of submission. Please contact the Lab to confirm turnaround time.										NOTE: 3. All hazardous samples submitted must be labeled to comply with WHMIS and TDG regulations. This must include the nature of the hazard, as well as a contact name & phone number that the Lab can contact for further information. Failure to properly complete all portions of this form may delay analysis.	
GUIDELINES / REGULATIONS												SPECIAL INSTRUCTIONS / NATURE OF HAZARDOUS MATERIAL
RELIQUIDISHED BY: <u>Sen Bird</u>	DATE & TIME: <u>Sept. 6 1:00 am</u>	RECEIVED BY: <u>Sen Bird</u>	DATE & TIME: <u>07-09-06 10:49</u>	DATE & TIME: <u>07-09-06 10:49</u>								
RELIQUIDISHED BY: <u>Sen Bird</u>	DATE & TIME: <u> </u>	RECEIVED BY: <u> </u>	DATE & TIME: <u> </u>	DATE & TIME: <u> </u>								

REFER TO BACK FOR SAMPLING INFORMATION & REGIONAL LOCATIONS

WHITE - REPORT COPY, PINK - FILE COPY, YELLOW - CLIENT COPY

REVISED FEBRUARY 2004