MERG Report 2004-4

Examination of Natural Attenuation of Metals in Aqueous Solution by Soils in Northern Environments

By Access Consulting Group

March 2004

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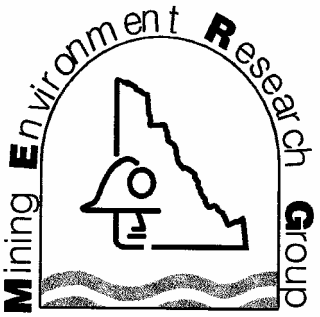

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Examination of Natural Attenuation of Metals in Aqueous Solution by Soils in Northern Environments

Data Report

March 2004

Submitted to

Mining Environment Research Group
Yukon

By

ACCESS CONSULTING GROUP
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1 INTRODUCTION

1.1 PURPOSE

The purpose of this data report is to describe the investigation by Access Consulting Group (ACG) into the ability of local organic soils to naturally attenuate metal laden effluent from the Galkeno 300 Adit located at the now idle mining operation of the former United Keno Hill Mine.

1.2 PROJECT CONTEXT

In May 2003, the proposal for this project was submitted to the Mining Environment Research Group (MERG). At that time Nevada Pacific Gold Ltd. (NPG) was in charge of water treatment operations at the Elsa Property, the location for this project. Subsequent to approval of the MERG project, on June 11, 2003, NPG terminated its option to purchase the property, thereby dissolving its previously accepted responsibility to act as the agent of the Yukon Territorial Government (YTG) to maintain the water treatment systems and monitor effluent water quality at various locations of the property. As of June 11, 2003 YTG assumed direct responsibility for care and control of the site.

YTG entered into a contribution agreement with the Nacho Nyak Dun Development Corporation (NND DC) to provide care and maintenance services. Access was retained by the NND DC to provide technical management of the project.

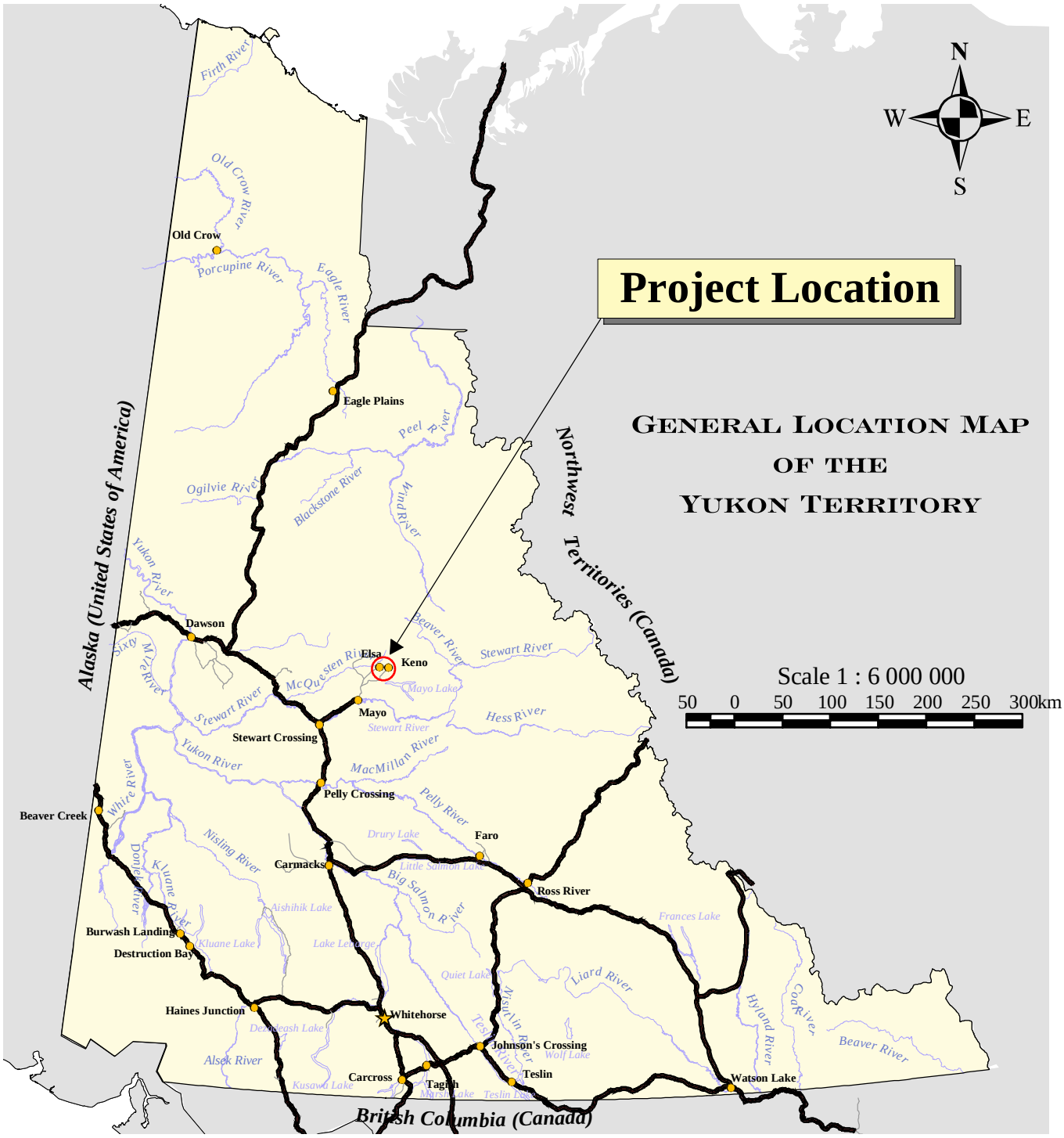
ACG proceeded with MERG project activities, conducting desktop research and collecting baseline soil and water quality samples in July. On September 2, 2003 YTG was formally made aware that as a result of the July field inspection under MERG, ACG was of the opinion that the flow from the Galkeno Adit was likely reporting directly to fish bearing waters. Various Yukon and Federal Government Departments and agencies including the Department of Fisheries and Oceans, the Department of Environment, Water Resources, and Energy Mines and Resources met on September 5, 2003 to discuss the situation. As a result of the meeting, YTG decided to redirect the Galkeno 300 flow via pipeline into the forested dispersion area that it previously occupied.

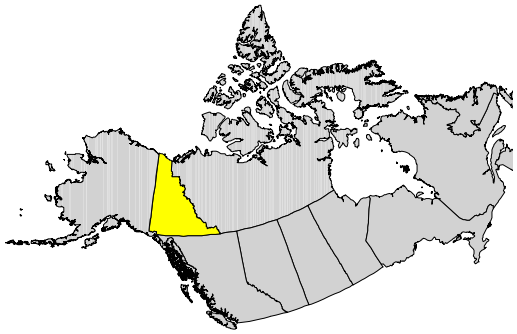
Following this decision, the MERG project goals and objectives had to be modified to adapt to the new circumstances at Galkeno 300. Although modifications were made, the main objective of the proposed project, which is to document the natural attenuation process within local soils, remained the same. In keeping with this objective, lysimeters, and drive point and standpipe piezometers were installed down hydraulic gradient of the redirected Galkeno 300 flow so that soil attenuation processes could be monitored.

1.3 SITE BACKGROUND

The Galkeno 300 Adit is an abandoned mine working located on Galena Hill, near Elsa, Yukon. Figure 1 displays a map of the Yukon with the general location of this project while Figure 2 shows a more detailed overview of the area. United Keno Hill Mines (UKHM) previously operated the mine in the 1950's and 1960's, as well as a series of other adits located down the hillside. In recent years the Galkeno 300 Adit has started producing significant volumes of metal laden waters (>150 ppm zinc, and as much as 50 litres/second flow, according to Hatch Associates, 2003). This metal laden effluent from the Galkeno 300 Adit is flowing down the hillside, east towards Christal Creek, which flows into the South McQuesten River, a known Chinook salmon spawning river.

In the summer of 2000, a site investigation was undertaken into the natural attenuation of metals in shallow soils along the Galkeno 300 drainage flow path as part of a Master Thesis and previous work undertaken by Environment Canada, (MacGregor, 2002, Natural Attenuation of Aqueous Zinc in Shallow Soils Over Permafrost Downslope of Galkeno 300 Mine Adit, United Keno Hill Mines, Central Yukon). MacGregor's work demonstrated that attenuated zinc is found largely in the oxide and organic soil fractions, and that zinc, when bound to oxide and organic material, is stable under current environmental conditions. This work along with studies of the use of land application treatment technologies at various mines sites (e.g. Brewery Creek Mine) indicate that land application of metal laden waters can result in renovation through natural soil attenuation mechanisms.





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Drawn By: NS	Figure 1.
Checked By: DDC	Date: March 24, 2004
File: D:\Project\MERG-03-01\ArcMap\mxd\Figure1.mxd	

1.4 PROJECT OBJECTIVES

The overall objective of this project is to document the natural attenuation process within local soils, and their applicability as a northern mine wastewater treatment technology.

When YTG resumed control of the site on June 11, 2003 and the new discharge pipe was installed at Galkeno 300, the MERG project goals and objectives were modified to adapt to the new situation. The original project objectives included the following:

- Evaluate baseline geotechnical and soil conditions, soil and vegetation metals levels and establish monitoring points down gradient of the Galkeno 300 Adit;
- Setup an effluent distribution system to soil renovation area;
- Distribution system operation;
- Conduct sampling program (soils, vegetation and metals levels); and
- Assess and report on attenuation capacity of local soils.

By and large the original project objectives have been followed, however, once YTG resumed control of the site on June 11, 2003, not all of the objectives could be pursued. The modified goals of this northern mine site soil attenuation research project are as follows:

- Document baseline soil and groundwater metals levels and establish monitoring stations down gradient of the Galkeno 300 Adit;
- Construct a controlled effluent distribution system to a soil renovation area;
- Conduct sampling program (soils and water metals levels); and
- Document the apparent attenuation capacity of local soils.

The following report discusses how and to what extent these goals have been accomplished and presents a summary of preliminary data collected.

2 MONITORING PROGRAM

2.1 GALKENO 300 FLOW PATH

Dylan MacGregor, a university graduate student, had previously conducted a site investigation of the Galkeno 300 Adit discharge.[1] In 2000, after Dylan MacGregor had conducted his site investigation, heavy equipment was used for the installation of new power poles on the power line directly below the Galkeno 300 Adit. It is thought that this activity interrupted the previously established adit effluent flow down the hillside. Rather, the flow path traversed down the power line instead of crossing it and percolating through the soil and ground cover vegetation as it had done before. According to MacGregor, the original flow path was providing significant reduction in zinc through the natural attenuation capacity of the soil. An increase in zinc levels observed by ACG in 2003 at Christal Creek suggested that this previously effective attenuation mechanism was no longer functioning to the same extent, possibly due to the fact that the flow path has been altered by the power line improvements as discussed above.

Access conducted a visual confirmation inspection and photo-documentation of the entire flow path from the adit, down the hillside along the power line, and into Christal Creek on July 17 and 18, 2003. Please refer to Figure 2 for the flow path observed on these dates. The investigation confirmed that the flow path of zinc rich water travels over a waste rock dump and down the hill along the power line, remaining on the surface for as much as 80% of its flow. It appeared that the mechanism responsible for zinc attenuation seemed to be no longer available to the flow path, resulting in increased zinc levels reported at Christal Creek.

Access presented this situation to the Yukon Government and the decision was made to redirect the flow from the adit into a pipe, and into the area previously known to provide attenuation of metals from the discharge. Consequently, the original MERG project goal of piping the Galkeno 300 effluent through small hoses was modified by the instalment of the YTG piping system.

[1] UBC Masters Thesis, D. MacGregor, 2002, “Natural Attenuation of Aqueous Zinc in Shallow Soils Over Permafrost Downslope of Galkeno 300 Mine Adit, United Keno Hill Mines, Central Yukon”.

2.2 SAMPLING PROGRAM

A sampling program was devised to monitor and provide insight into the attenuation of zinc by land application. A number of drive point piezometers, lysimeters and standpipe piezometers were installed down hydraulic gradient of the redirected Galkeno 300 flow so that soil attenuation processes can be monitored. The sample stations were arranged into three 'fences' in a perpendicular-linear fashion so that samples can be collected at various stages of down gradient flow.

A number of groundwater and surface water sample stations were established at various locations in the anticipated flow path during August 17-23, September 17 and September 24-28, 2003. The anticipated flow path was based on the proposed location of the pipeline terminus, examination of macro and micro topographic conditions, and evidence of historic flow. The monitoring station locations were grouped into three fences (Figure 2) and are described below.

2.2.1 Fence 1

At Fence 1, located approximately 60 meters down gradient from the proposed pipeline terminus, three lysimeters were installed that enable the sampling of the soil pore water. In between the lysimeters, two drive point piezometers were installed that allow sampling of ground water. Soil samples were collected at each of the lysimeters locations during their installation. In addition, surface water samples were collected once redirected surface water flow was apparent.

To collect a sample from the lysimeters, a vacuum hand pump was used to create a vacuum of about 50 centibars within the lysimeters. The lysimeters were allowed to set for a period of time under the vacuum, causing the moisture to move from the soil into the sampler. The water samples were collected by inserting tubing, attached to a syringe, into the sampler and drawing the soil water up through the tubing into the syringe. Samples were collected from the drive point piezometers through Waterra Tubing equipped with a foot valve. Soil samples were collected from each soil horizon encountered during installation of the lysimeters.

Refer to Appendix A for a summary of water quality data, Appendix B for a soils data summary, and Appendix C for all laboratory data. A typical lysimeter installation is shown in Plate 1. Please refer to Appendix D for a drawing of a typical lysimeter installation.

Plate 1: Typical Lysimeter Installation on Fence 1.

2.2.2 Fence 2

Fence 2 sample stations were installed approximately 160 meters down gradient from the proposed pipeline terminus. Four drive point piezometers were installed with two lysimeters installed between drive points where there was historical evidence of flow. Soil samples were collected from each soil horizon encountered during installation of the drive points. Surface water samples were also collected once redirected surface water flow was apparent. Sampling procedures used for the sample stations in fence 2 are the same as for those in fence 1. As mentioned above, all summary of data is contained in Appendices A through C. A typical drive point piezometer installation is shown in Plate 2.

Plate 2: Typical Drive Point Piezometer Installation.

2.2.3 Fence 3

Fence 3 sample sites are all located on the No Cash Haul Road roughly 600-650 meters down gradient from the proposed pipeline terminus. Seven standpipe piezometers were installed to monitor ground water quality. Surface water samples were also collected along the road once redirected surface water flow was apparent. Samples were collected from the standpipe piezometers through Waterra Tubing equipped with a foot valve. A typical standpipe piezometer installation is shown in Plate 3.

Plate 3: Typical Standpipe Piezometer Installation on Fence 3.

2.2.4 Surface Water Sampling

In addition to the fences established in the land application, supplementary surface water sampling and monitoring has been undertaken at various critical locations along the flow path. Surface water samples have been collected at the following locations:

- End-of-pipe discharge;
- Upstream of culvert at Galkeno 900 road entrance;
- High volume stream discharge to ditch along Galkeno 900 access road; and
- Upstream of culvert at Silver Trail Highway

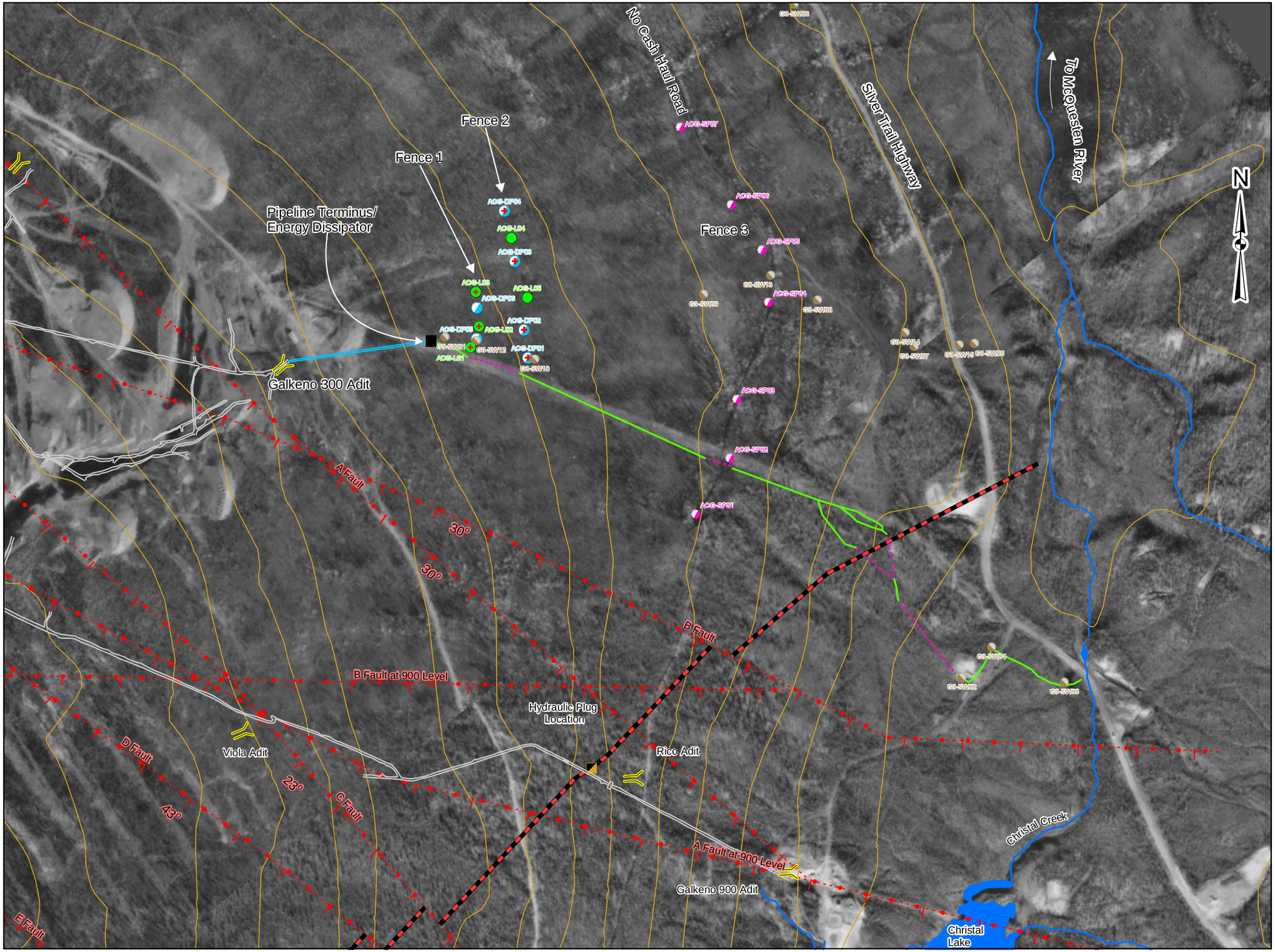
Any other evidence of new flows was also sampled. See Figure 2 for location of additional surface water sample sites. An example of a surface water sample site at Galkeno 300 is shown in Plate 4.

Plate 4: Example of Surface Water Flow Observed at Galkeno 300.

2.2.5 Sampling and Monitoring Schedule

Environmental baseline soil and water sampling was undertaken prior redirection of the Galkeno 300 flow path into the discharge area. Starting in October 2003, post flow redirection, monthly sampling was to continue for 6 consecutive months. The following discussion of the sampling program results describes why this proposed sampling and monitoring schedule was not met.

Examination of Natural Attenuation of Metals in Aqueous Solution by Soils in Northern Environments Data Report



Legend:

- Topographical Contours
- Creeks
- Faults, Projected to Surface, Dip * (23°)
- Known Ore Veins, Projected to Surface *
- Underground Workings, UKHM Ltd.
- Adit

Galkeno 300 Main Flowpath

- Pipeline (Oct 1, 2003)
- Observed Above Ground (July 17 & 18, 2003)
- Inferred Underground

Sample Sites

Established Sept 15-19, 2003

- Soil
- Standpipe Piezometer
- Drive Point Piezometer
- Lysimeter

Established Oct 16 and Nov 28, 2003

- Surface Water Station

* After M. P. Phillips, 2002

Air Photos NW95030-38 and NW95030-67
North West Geomatics Ltd., 1995

Project Area Overview

1:6,250

0 25 50 100 150 200 250 m

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Drawn by: PI/NS	Checked by: DDC
Date: February 11, 2004	**Figure 2**

Our File: D:\Project\MERG-03-01\ArcMap\mxd\AreaOverview.mxd

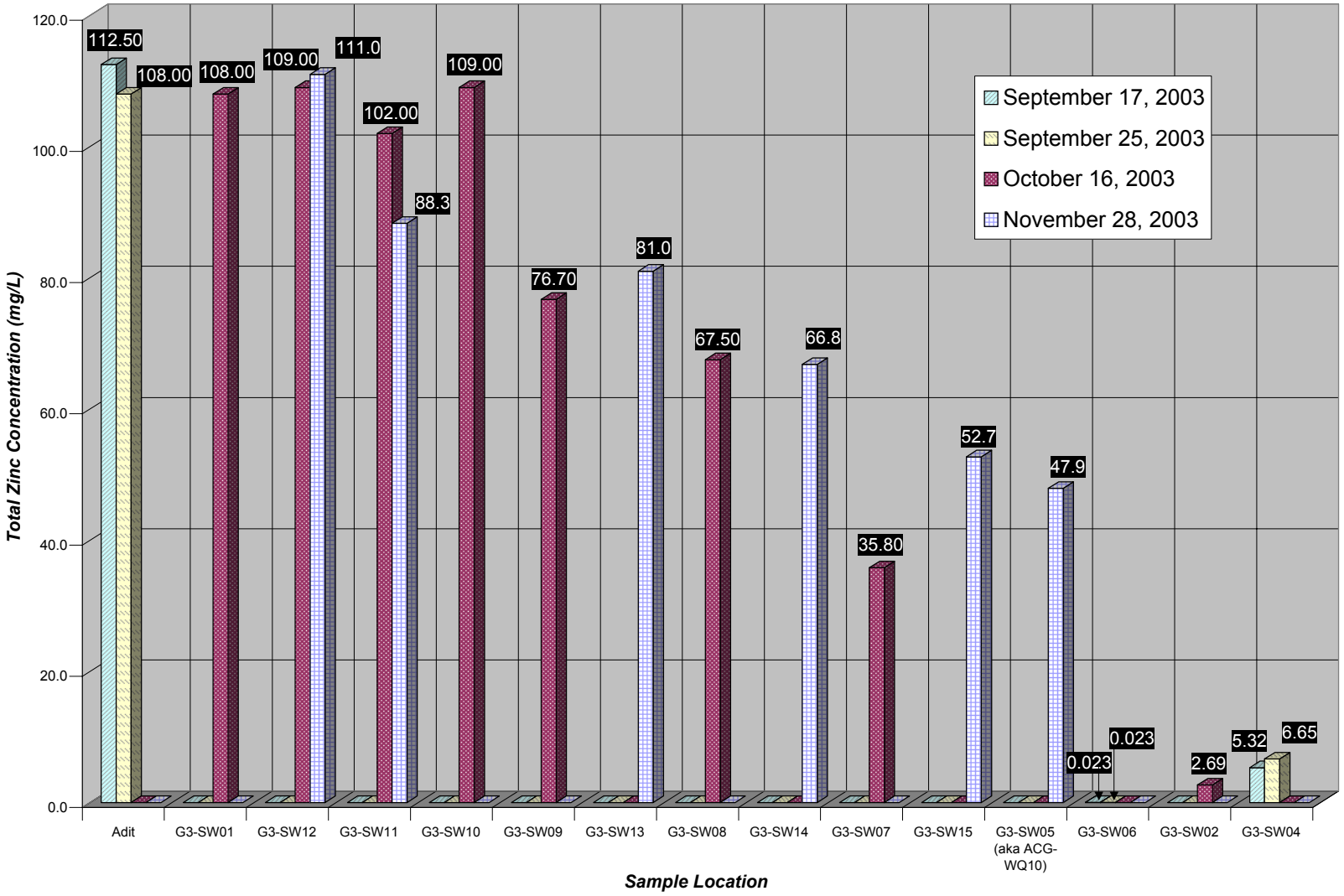
3 SAMPLING PROGRAM RESULTS DISCUSSION

Sampling events occurred both pre-redirection and post-redirection of the Galkeno 300 flow path. Baseline soil and water samples were collected on July 17, 2003 from the Galkeno 300 hillside. Soil and water samples were collected again on September 17 and 25, 2003 at the newly installed monitoring stations, prior to the Galkeno 300 effluent flow redirection. Post-redirection water sampling occurred on October 16 and November 28, 2003. Due to the inadequate winter conditions encountered during the November sampling event, no further sampling has occurred. During this event, so few useable water samples (all surface water) were obtained that it was decided not to continue with winter sampling. No ground water samples were collected at the three fences, as no water was available in the shallow installations.

A summary of water quality data from pre-redirection sampling (September 17 and 25, 2003) and post-redirection sampling (October 16 and November 28, 2003) is located in Appendix A. The data from soils sampling on September 17, 2003 (pre-redirection), is summarized in Appendix B. Laboratory results from all sampling events are located in Appendix C.

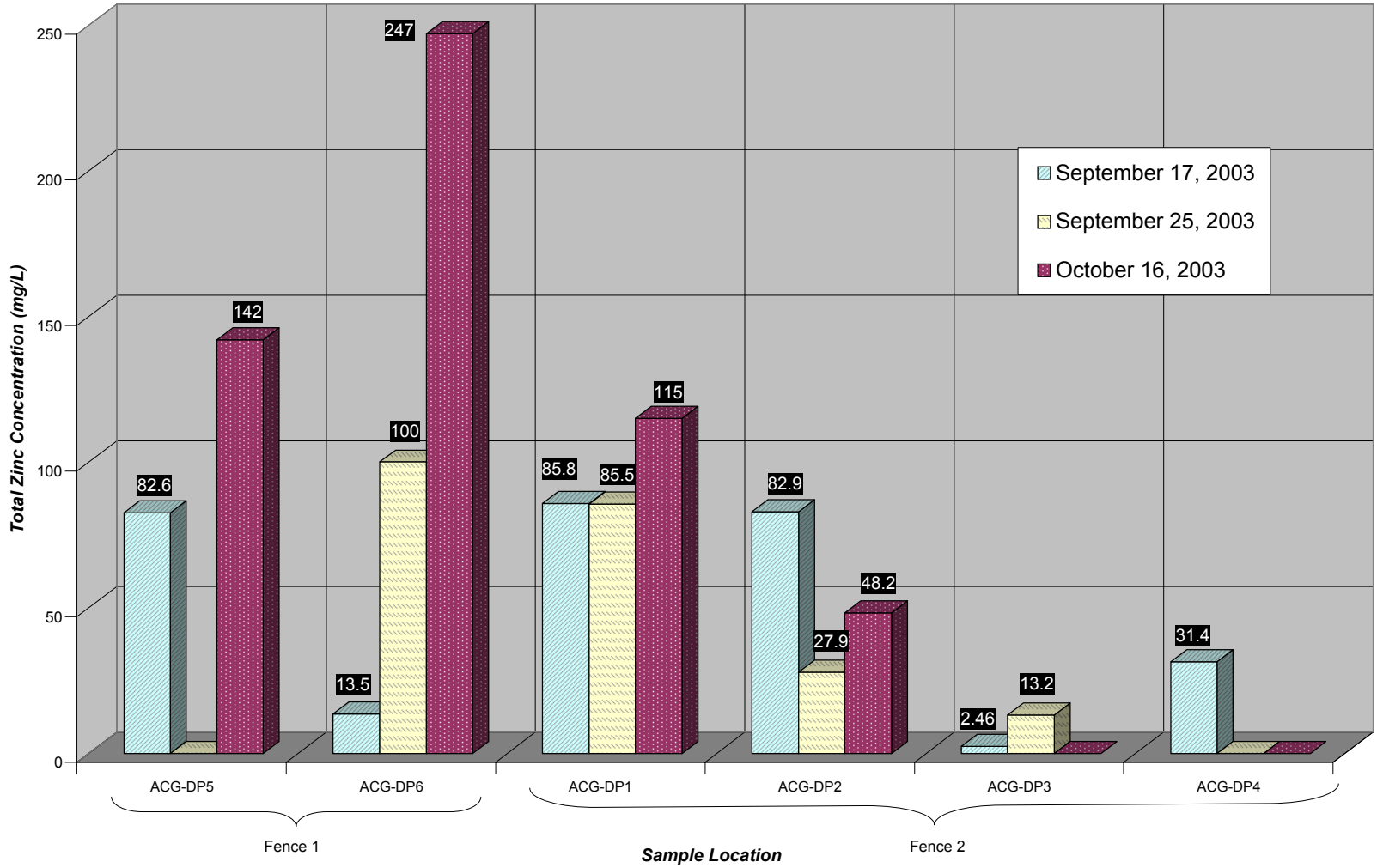
Soil samples were analysed for total metals and particle sizes while water samples were analysed for total metals, and occasionally dissolved metals and physical and aggregate properties. Zinc was chosen as the metal of interest since it is the main contaminant of concern for the site, and because it is an indicator of the presence of other metals. Zinc, cadmium and iron concentrations observed in water samples collected from the Galkeno 300 flow path are displayed in the following Figures 3 to 11. For each of the three parameters, concentrations in surface water samples are presented with the sample locations generally arranged to be decreasing in elevation left to right. Next, the metal concentrations observed in ground water collected from the drive point piezometers in fences 1 and 2 are presented. Finally, the metal concentrations in ground water collected from the standpipe piezometers in fence 3, is shown.

Figure 3: Total Zinc (mg/L) Observed in Surface Water Samples from the Galkeno 300 Flow Path, Pre-Redirection (Sept 17 & 25) and Post-Redirection (Oct 16 & Nov 28) in 2003, Generally Decreasing in Elevation



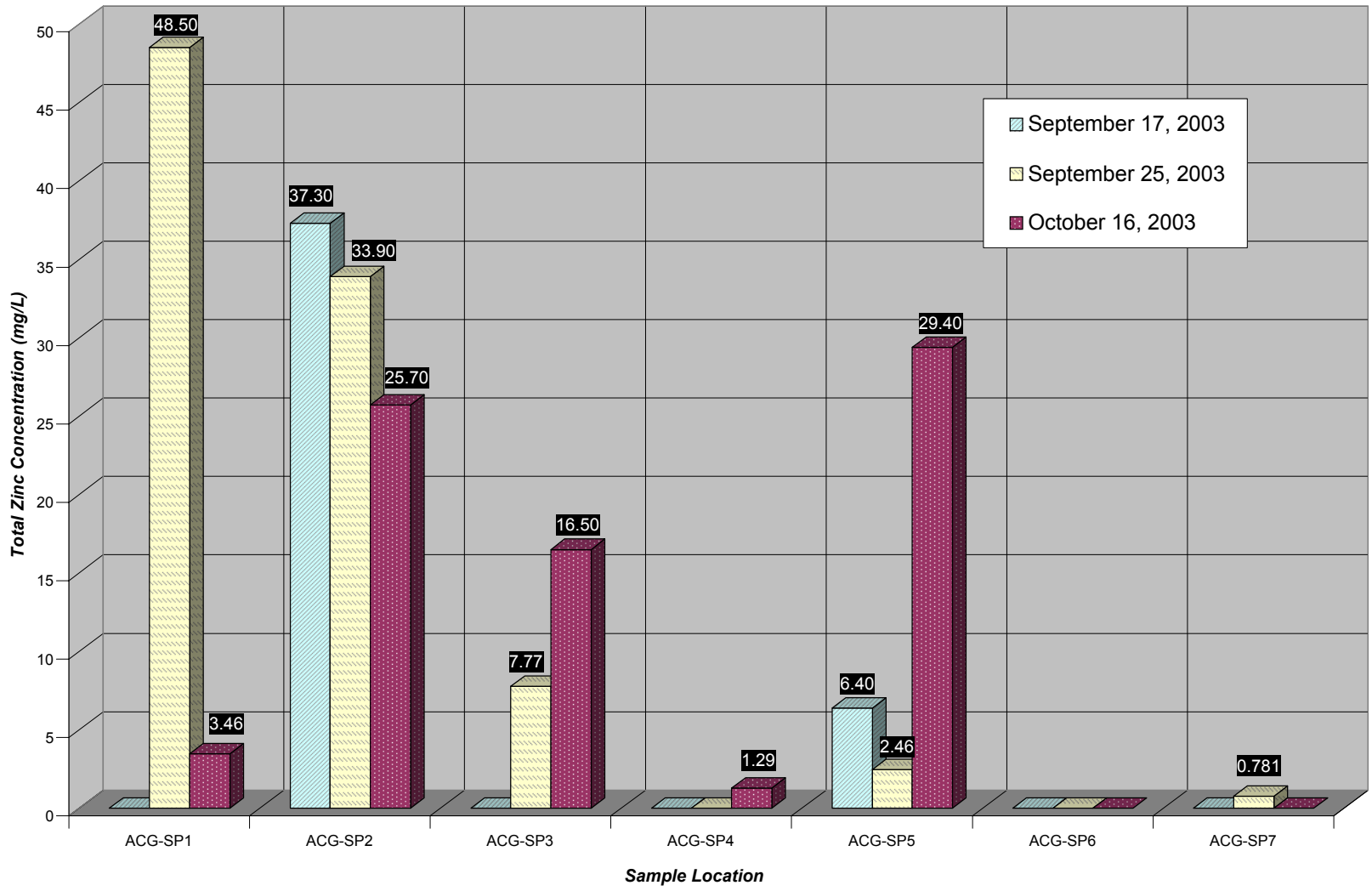
Note: A value of zero indicates that no sample was collected on that date.

Figure 4: Total Zinc (mg/L) Observed in Ground Water Samples from Drive Point Piezometers in Fence 1 and 2 at Galkeno 300, Pre-Redirection (Sept 17 & 25) and Post Redirection (Oct 16) in 2003



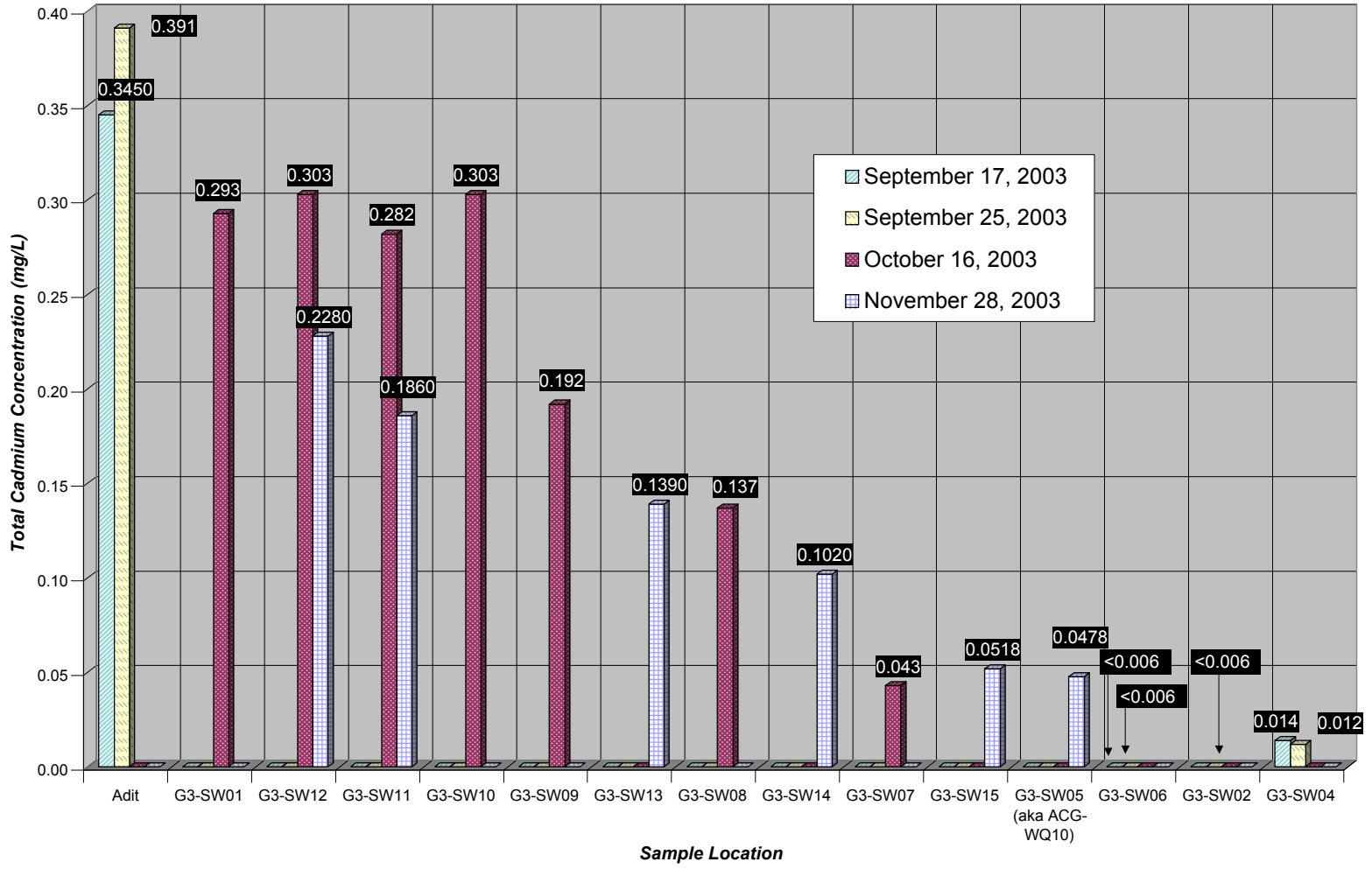
Note: A value of zero indicates that no sample was collected on that date.

Figure 5: Total Zinc (mg/L) Observed in Ground Water Samples from Standpipe Piezometers in Fence 3 at Galkeno 300, Pre-Redirection (Sept 17 & 25) and Post Redirection (Oct 16) in 2003



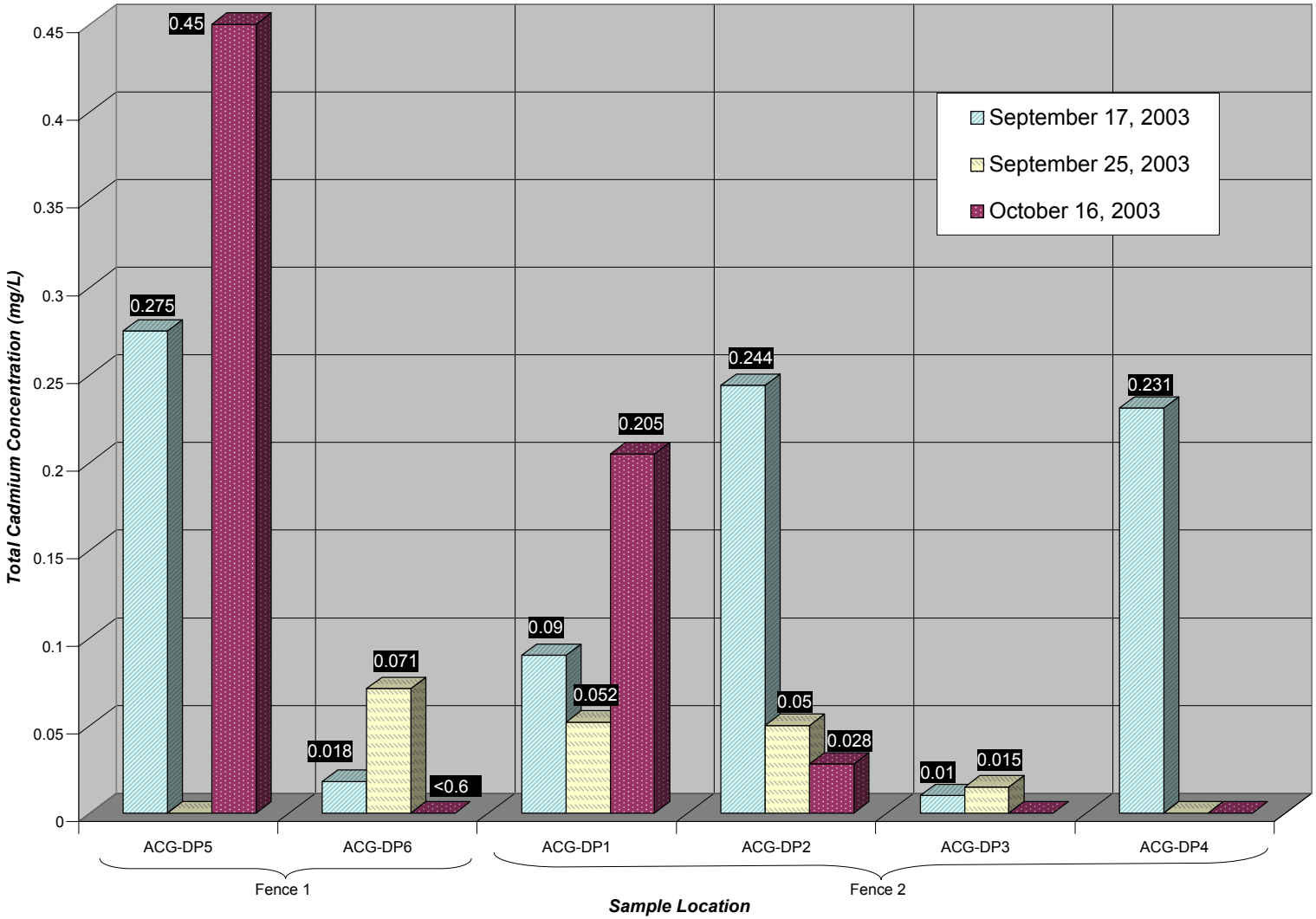
Note: A value of zero indicates that no sample was collected on that date.

Figure 6: Total Cadmium (mg/L) Observed in Surface Water Samples from the Galkeno 300 Flow Path, Pre-Redirection (Sept 17 & 25) and Post-Redirection (Oct 16 & Nov 28) in 2003, Generally Decreasing in Elevation



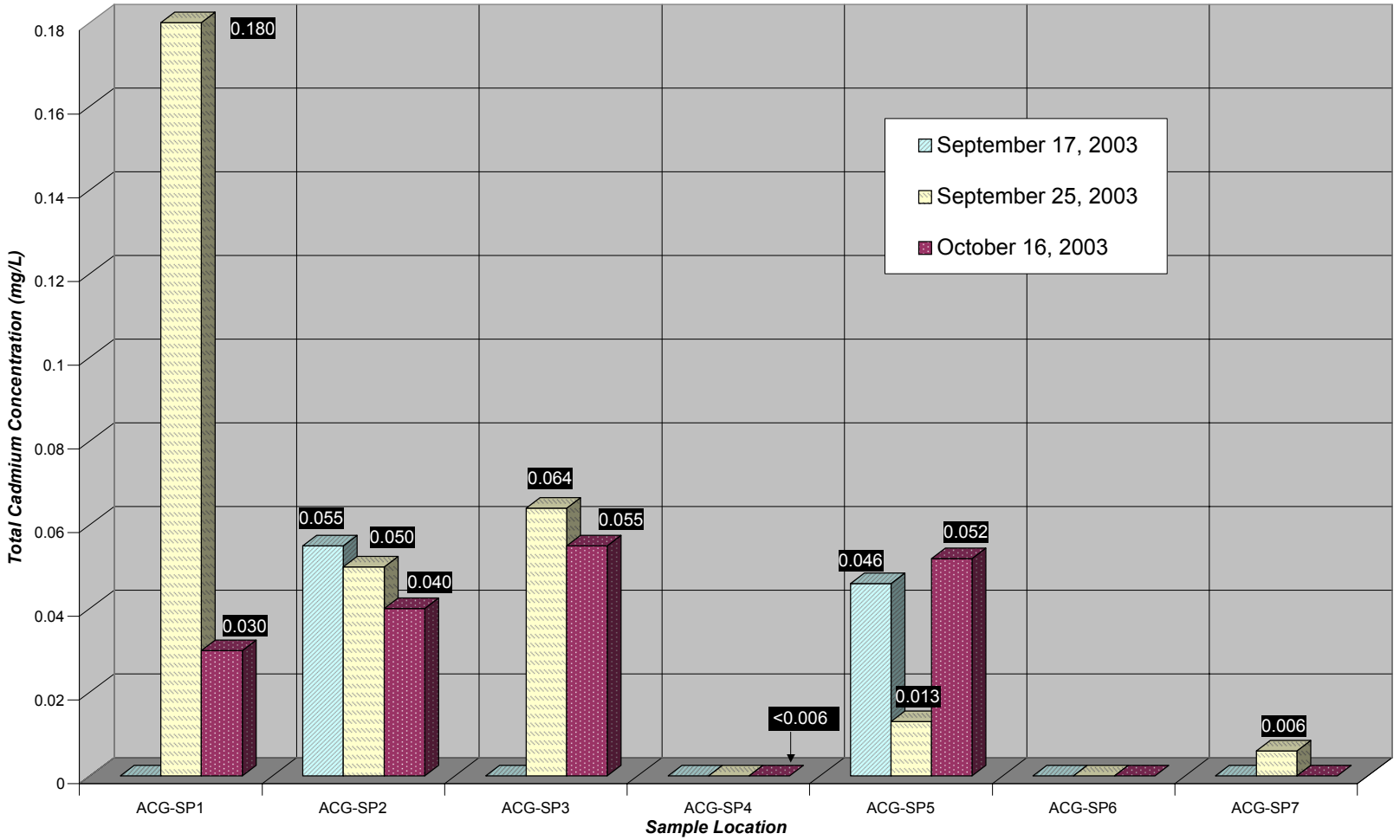
Note: A value of zero indicates that no sample was collected on that date.

Figure 7: Total Cadmium (mg/L) Observed in Ground Water Samples from Drive Point Piezometers in Fence 1 and 2 at Galkeno 300, Pre-Redirection (Sept 17 & 25) and Post Redirection (Oct 16) in 2003



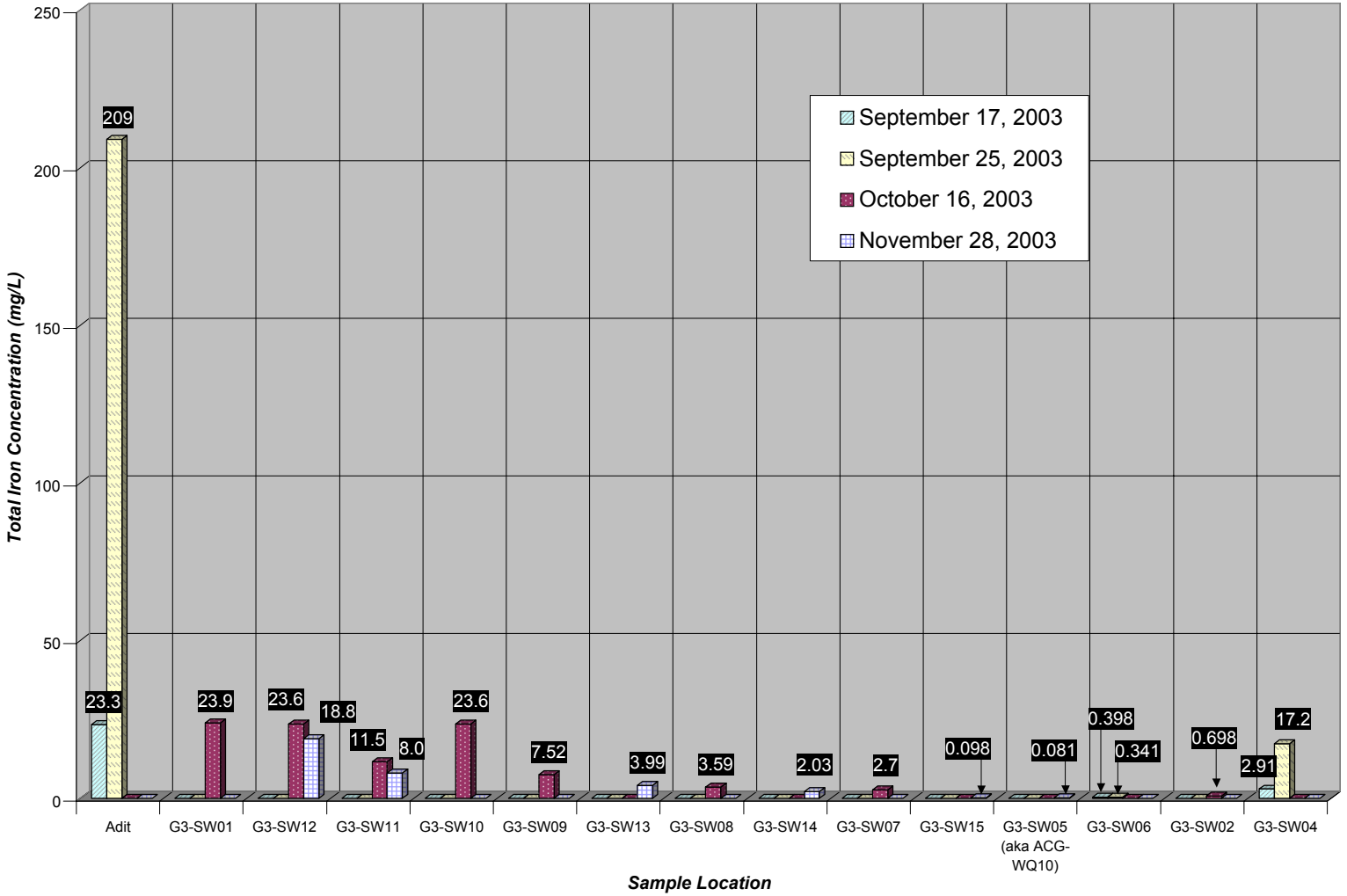
Note: A value of zero indicates that no sample was collected on that date.

Figure 8: Total Cadmium Observed in Ground Water Samples from Standpipe Piezometers in Fence 3 at Galkeno 300, Pre-Redirection (Sept 17 & 25) and Post-Redirection (Oct 16) in 2003



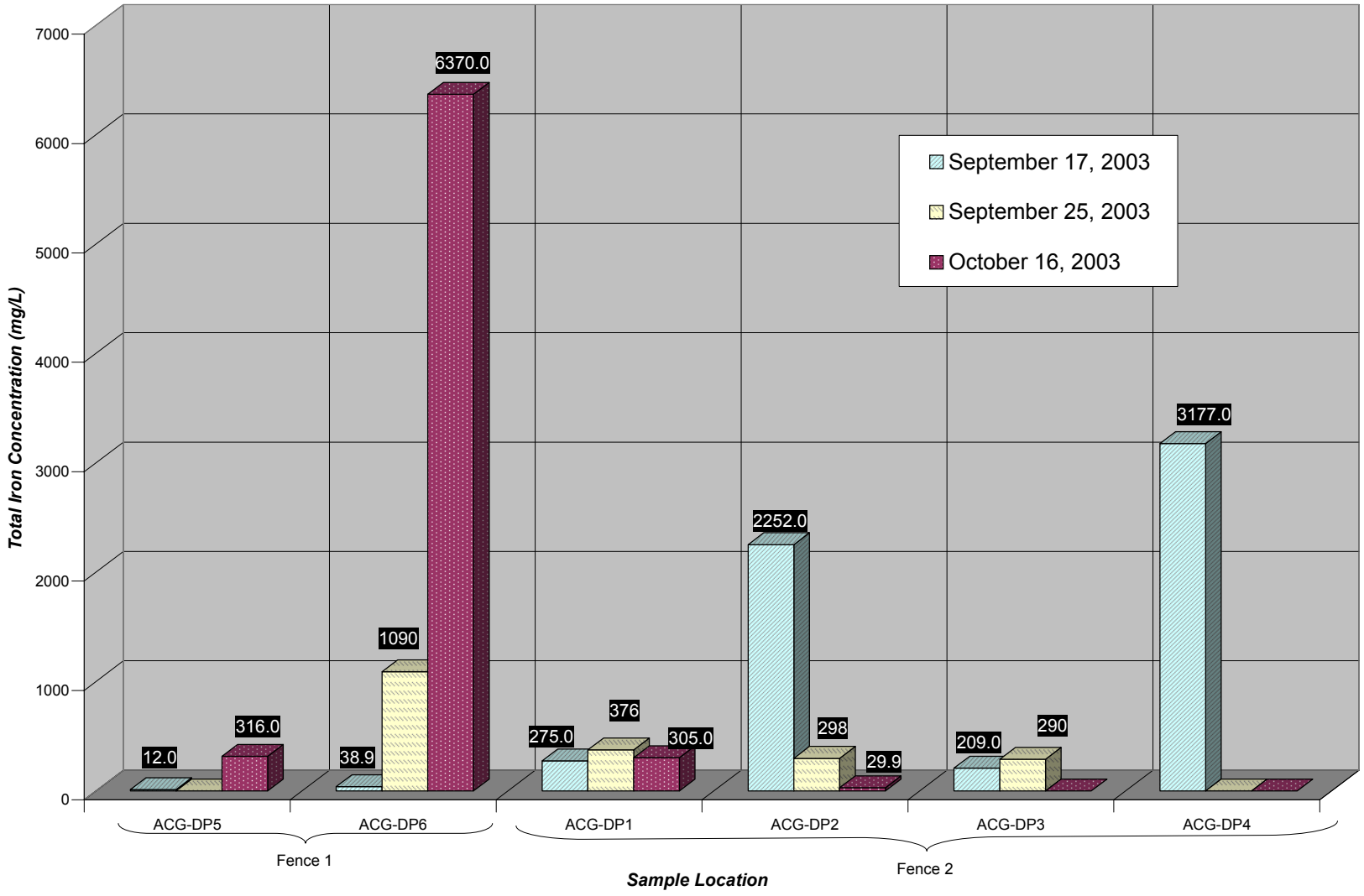
Note: A value of zero indicates that no sample was collected on that date.

Figure 9: Total Iron (mg/L) Observed in Surface Water Samples from the Galkeno 300 Flow Path, Pre-Redirection (Sept 17 & 25) and Post-Redirection (Oct 16 & Nov 28) in 2003, Generally Decreasing in Elevation



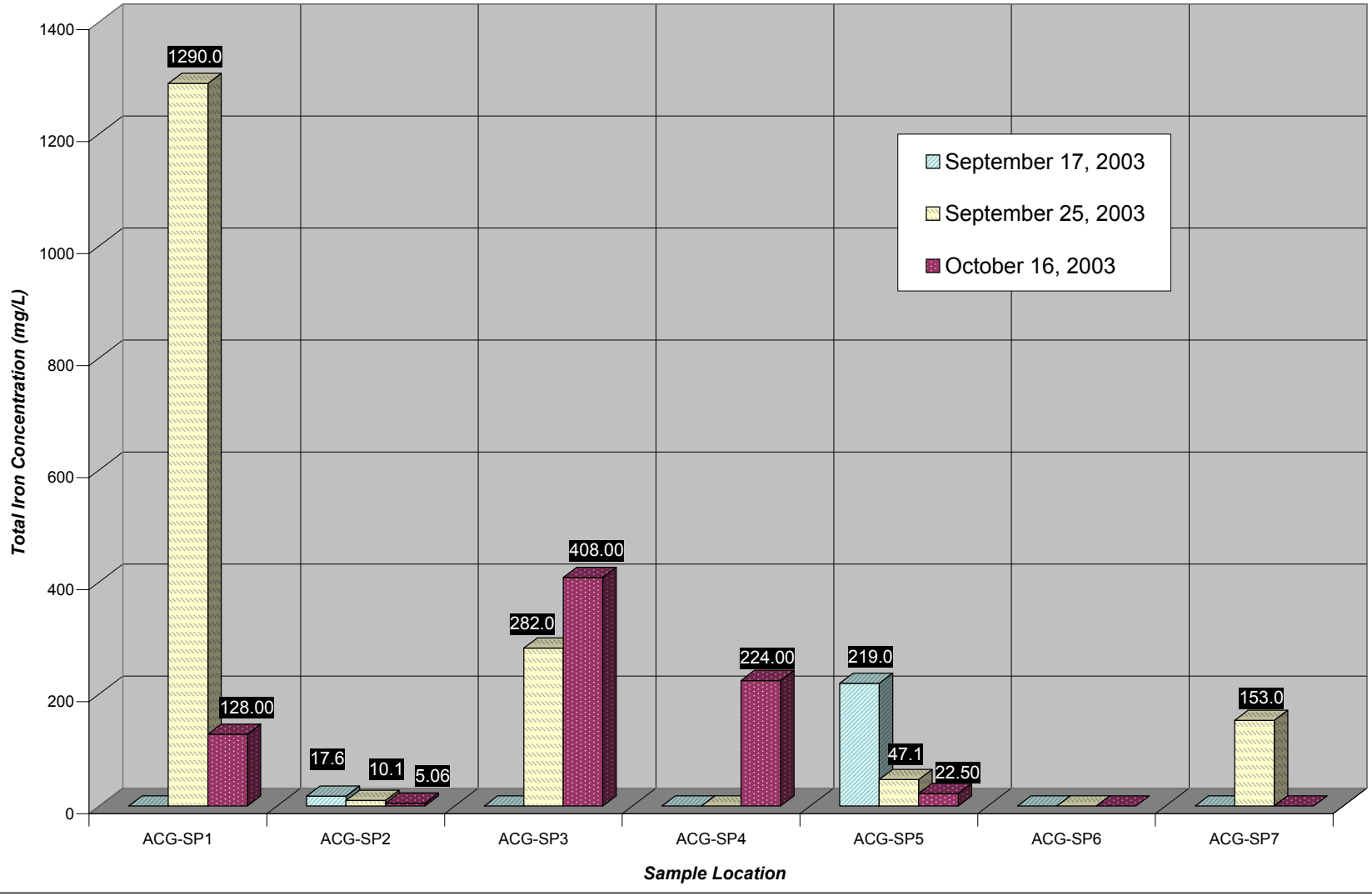
Note: A value of zero indicates that no sample was collected on that date.

Figure 10: Total Iron (mg/L) Observed in Ground Water Samples from Drive Point Piezometers in Fence 1 and 2 at Galkeno 300, Pre-Redirection (Sept 17 & 25) and Post-Redirection (Oct 16) in 2003



Note: A value of zero indicates that no sample was collected on that date.

Figure 11: Total Iron (mg/L) Observed in Ground Water Samples from Standpipe Piezometers in Fence 3 at Galkeno 300, Pre-Redirection (Sept 17 & 25) and Post-Redirection (Oct 16) in 2003



Note: A value of zero indicates that no sample was collected on that date.

Data from the November 28, 2003 sampling event has not been included in the presentation of ground water quality data in the figures. The reason for this purposeful omission is that due to winter freezing conditions only two ground water samples were obtained from drive point piezometers during the sampling event. The two drive points yielded samples because they were located directly in the Galkeno 300 flow path, and the surface water had infiltrated the drive point piezometers. The samples were, however, extremely turbid and murky and total metals results were so elevated as to not be comparable with results previously obtained. The results are included in the water quality summary in Appendix A, but not the figures.

In all of the figures there appears to be a trend of decreasing metals concentration with decreasing gradient (i.e. as the sample sites progress away from the adit down the mountain side). Another apparent trend that appears, where both pre-redirection and post-redirection sampling has occurred, is the increase in metals concentrations observed at the sample stations over time. This is a reasonable trend considering the realignment of the metal laden Galkeno 300 effluent to the area.

Lysimeters in Fences 1 and 2 were sampled for the first time on October 16, 2003 and three of the five lysimeters yielded samples. An effort to sample the lysimeters was made again on November 28, 2003, which was unsuccessful due to winter freezing conditions. The zinc, cadmium, and iron concentrations for the three lysimeters samples are presented in the following table.

Table 1: Total Metals Concentration Observed in Ground Water Samples Collected from Lysimeters at Galkeno 300

Location Description	Lysimeter 2-Fence 1	Lysimeter 3-Fence 1	Lysimeter 4-Fence 2
Station ID	**ACG-L2**	**ACG-L3**	**ACG-L4**
Date	16-Oct-03	16-Oct-03	16-Oct-03
***Total Metals* (mg/L)**			
Zinc	2.31	4.26	0.024
Cadmium	< 0.006	0.010	< 0.006
Iron	0.035	0.014	0.083

As so few data has been collected from the lysimeters no correlations can be made at this time.

Some additional parameters of interest are summarised in the following Tables 2 and 3. Zinc has also been included because, as mentioned previously, it is the main contaminant of concern and is an indicator of the presence of other metals. Table 2 shows results from the surface water samples and Table 3 shows the results from the drive point and stand pipe piezometers.

Table 2: Parameters of Interest Measured in Surface Water Samples from the Galkeno 300 Flow Path, Pre-Redirection (September 17 and 25) and Post-Redirection (October 16 and November 28) in 2003.

General Decrease in Elevation

Sample Location	Date	Zinc (mg/L)	Sulphate (mg/L)	Total Copper (mg/L)	Total Lead (mg/L)	Total Arsenic (mg/L)	pH (pH units)	Conductivity (uS/cm)
G300 Adit	17-Sep-03	112.50	1040.0	<0.006	<0.06	0.090	6.340	1640.0
	25-Sep-03	108.00	1060.0	0.047	1.510	1.110	6.320	1610.0
G3-SW01	16-Oct-03	108.00	1030.0	<0.006	<0.06	0.130	6.380	1630.0
G3-SW12	16-Oct-03	109.00	1100.0	<0.006	<0.06	0.110	6.390	1540.0
	28-Nov-03	111.00	1440.0	<0.001	0.177	0.070	6.900	-
G3-SW11	16-Oct-03	102.00	1010.0	<0.006	<0.06	<0.06	6.430	1600.0
	28-Nov-03*	88.30	1160.0	<0.001	0.083	<0.02	6.700	-
G3-SW10	16-Oct-03	109.00	1070.0	<0.006	<0.06	0.110	6.380	1580.0
G3-SW09	16-Oct-03	76.70	-	<0.006	<0.06	<0.06	-	-
G3-SW13	28-Nov-03	81.00	1060.0	0.010	0.013	<0.02	6.300	-
G3-SW08	16-Oct-03	67.50	-	<0.006	<0.06	<0.06	-	-
G3-SW14	28-Nov-03	66.80	-	0.003	0.009	<0.02	-	-
G3-SW07	16-Oct-03	35.80	-	<0.006	<0.06	<0.06	-	-
G3-SW15	28-Nov-03	52.70	-	0.004	<0.006	<0.02	-	-
G3-SW05	28-Nov-03	47.90	-	<0.001	<0.006	<0.02	-	-
G3-SW06	17-Sep-03	0.023	14.7	<0.006	<0.06	<0.06	6.790	75.0
	25-Sep-03	0.023	16.2	<0.006	<0.06	<0.06	6.860	76.0
G3-SW02	16-Oct-03	2.69	-	<0.006	<0.06	<0.06	-	-
G3-SW04	17-Sep-03	5.32	934.0	<0.006	<0.06	<0.06	7.560	1650.0
	25-Sep-03	6.65	1100.0	0.007	<0.06	<0.06	7.670	1760.0

Table 3: Parameters of Interest Measured in Ground Water Samples from Drive Point Piezometers in Fences 1 and 2, and Standpipe Piezometers in Fence 3 at Galkeno 300, Pre-Redirection (September 17 and 25) and Post-Redirection (October 16 and November 28) in 2003.

Sample Location	Date	Zinc (mg/L)	Sulphate (mg/L)	Total Copper (mg/L)	Total Lead (mg/L)	Total Arsenic (mg/L)	pH (pH units)	Conductivity (uS/cm)
Fence 1								
ACG-DP5	17-Sep-03	82.60	-	<0.006	0.07	<0.06	-	-
	16-Oct-03	142.00	-	0.402	2.65	0.30	-	-
	28-Nov-03	1620.00	1110.0	17.000	93.20	4.00	6.70	-
ACG-DP6	17-Sep-03	13.50	-	0.031	0.16	0.08	-	-
	25-Sep-03	100.00	-	1.260	4.71	2.76	-	-
	16-Oct-03	247.00	-	7.180	27.30	15.50	-	-
Fence 2								
ACG-DP1	17-Sep-03	85.80	-	0.553	0.87	0.91	-	-
	25-Sep-03	85.50	-	0.523	1.04	1.35	-	-
	16-Oct-03	115.00	-	0.540	1.05	1.54	-	-
	28-Nov-03	1730.00	1170.0	7.200	11.30	14.00	7.00	-
ACG-DP2	17-Sep-03	82.90	-	2.480	6.09	3.64	-	-
	25-Sep-03	27.90	-	0.390	0.98	0.66	-	-
	16-Oct-03	48.20	-	0.018	0.19	<0.06	-	-
ACG-DP3	17-Sep-03	2.46	-	0.308	0.43	0.80	-	-
	25-Sep-03	13.20	-	0.427	0.60	1.18	-	-
ACG-DP4	17-Sep-03	31.40	-	2.290	21.00	3.65	-	-
Fence 3								
ACG-SP1	25-Sep-03	48.50	986.0	5.720	2.39	2.83	6.34	1460.0
	16-Oct-03	3.46	15.6	0.296	0.48	0.18	6.44	59.0
ACG-SP2	17-Sep-03	37.30	-	<0.006	0.08	<0.06	-	-
	25-Sep-03	33.90	-	0.119	<0.06	<0.06	-	-
	16-Oct-03	25.70	1530.0	<0.006	<0.06	<0.06	6.21	2090.0
ACG-SP3	25-Sep-03	7.77	16.4	0.665	1.13	0.41	6.19	71.0
	16-Oct-03	16.50	982.0	1.480	0.81	0.80	6.58	1650.0
ACG-SP4	16-Oct-03	1.29	908.0	0.340	0.24	0.35	7.16	1510.0
ACG-SP5	17-Sep-03	6.40	-	0.133	0.20	0.20	-	-
	25-Sep-03	2.46	825.0	0.023	<0.06	<0.06	7.20	1390.0
	16-Oct-03	29.40	891.0	<0.006	<0.06	<0.06	6.61	1520.0
ACG-SP7	25-Sep-03	0.78	246.0	0.219	0.31	0.33	6.15	497.0

Note: The two November 28, 2003 samples have been included (ACG-DP5 and ACG-DP1) in the above table. Note the elevated concentrations of nearly every parameter measured, which was due to the turbidity of the collected samples.

These additional parameters, along with others not shown here (See Appendix A) appear to be consistent with the trend observed in Figures 3 through 11. That being, the aqueous concentration of metals in the discharge water appears to decrease with decreasing mountain-side elevation.

Data from soil samples collected on September 17, 2003 from Fences 1 and 2 is summarized in Appendix B. As previously mentioned, there is no post-redirection set of soil quality data to compare with and no interpretations can be conducted at this time with respect to soil metal attenuation capacities.

4 CLOSURE

As previously mentioned considerable physical changes were made to the discharge regime of the Galkeno 300 Adit as a result of property management changes and observations respecting the effect of the Galkeno 300 Adit discharge on the downstream receiving environment. As a result, the objectives of this MERG project were modified and efforts to fully complete all of these revised project objectives were unfeasible.

As so few data has been collected so far, no distinct trends or conclusions can be made about the attenuation process that may be occurring in the soil at Galkeno 300. Baseline soil conditions and metals levels have, however, been documented (Appendix B). Monitoring stations have been established down gradient of the Galkeno 300 effluent distribution system/pipeline (Figure 2), a sampling program was conducted, and documentation of the apparent attenuation capacity of local soils was under way, until winter freezing conditions halted these activities.

Accordingly, this MERG project report will serve primarily as a data report, presenting that information the authors were able to collect. By the very nature of the project parameter changes and the concomitant limitations of the data that was collected, the authors are unable, at the time of this writing, to provide a useful discussion of the results or draw conclusions, with respect to the attenuation of metals in local soils.

Notwithstanding the challenges and changes that this project faced, the resources that MERG and ACG have expended on this project were not done so in vein. The baseline data that has been collected can be used in concert with additional post disturbance

data that can be collected at a later time to complete the comparison and measurement of soil attenuation capacities. Technical management of the Elsa property, and the Galkeno 300 Adit discharge itself, will certainly include provisions for additional and ongoing environmental monitoring, which can be focussed toward yielding additional information on the capacity of those soils to attenuate the waters from the adit discharge. It is also anticipated that gathering and assessing this type of information will be a key part of other more comprehensive projects and experimental exercises that will seek to develop suitable long-term closure strategies for the Elsa Property as a whole.

In addition, the monitoring infrastructure that was installed for this project and the information that this project has provided has proved a valuable resource to the managers at YTG and Environment Canada in advancing their associated management objectives for the Galkeno 300 Adit and the receiving environs downstream.

5 REFERENCES

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Examination of Natural Attenuation of Metals in Aqueous Solution by Soils in Northern Environments

Data Report

APPENDIX A

WATER QUALITY DATA SUMMARY

Examination of Natural Attenuation of Metals
in Aqueous Solution by Soils in Northern Environments

Data Report - Appendix A - Water Quality Data Summary

Location Description	Lysimeter 1 - Fence 1				Lysimeter 2 - Fence 1				Lysimeter 3 - Fence 1				Lysimeter 4 - Fence 2				Lysimeter 5 - Fence 2				Drive Point Piezometer #5 - Fence 1					Drive Point Piezometer #6 - Fence 1				Drive Point Piezometer #1 - Fence 2				Drive Point Piezometer #2 - Fence 2			
Sampler	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI
Station ID	ACG-L1				ACG-L2				ACG-L3				ACG-L4				ACG-L5				ACG-DP5					ACG-DP6				ACG-DP1				ACG-DP2			
Lab	n/a	n/a	n/a	n/a	n/a	n/a	PESC	n/a	n/a	n/a	PESC	n/a	n/a	n/a	PESC	n/a	n/a	n/a	n/a	n/a	PESC	n/a	PESC	PESC	NW	PESC	PESC	PESC	n/a	PESC	PESC	PESC	NW	PESC	PESC	PESC	n/a
Lab Lot ID	n/a	n/a	n/a	n/a	n/a	n/a	94695	n/a	n/a	n/a	94696	n/a	n/a	n/a	94697	n/a	n/a	n/a	n/a	n/a	93644	n/a	94700	94701	273254-3	93645	93904	94702	n/a	93646	93901	94698	273254-1	93647	93902	94699	n/a
Date	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03
Parameter [1]																					Duplicate															
Dissolved Metals (Trace)																																				
Aluminum	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.05	n/s	< 0.05	< 0.05	<0.01	< 0.05	< 0.05	-	n/s	< 0.05	< 0.05	< 0.05	-	< 0.05	-	-	n/s
Antimony	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.05	n/s	< 0.05	< 0.05	0.04	< 0.05	< 0.05	-	n/s	< 0.05	< 0.05	< 0.05	-	< 0.05	-	-	n/s
Arsenic	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.05	n/s	0.05	0.05	<0.02	< 0.05	< 0.05	-	n/s	< 0.05	< 0.05	< 0.05	-	< 0.05	-	-	n/s
Barium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	0.026	n/s	0.013	0.009	0.0143	0.015	0.015	-	n/s	0.021	0.023	0.018	-	0.018	-	-	n/s
Beryllium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.001	n/s	< 0.001	< 0.001	<0.0006	< 0.001	< 0.001	-	n/s	< 0.001	< 0.001	< 0.001	-	< 0.001	-	-	n/s
Bismuth	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	<0.02	-	-	-	n/s	-	-	-	-	-	-	-	n/s
Boron	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	0.02	0.02	-	< 0.01	0.02	-	n/s	< 0.01	0.01	0.02	-	< 0.01	-	-	n/s
Cadmium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	0.284	n/s	0.351	0.326	0.273	0.016	<0.005	-	n/s	0.027	0.008	0.134	-	< 0.005	-	-	n/s
Calcium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	169	n/s	174	168	197	156	158	-	n/s	199	194	200	-	175	-	-	n/s
Chromium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.005	n/s	< 0.005	< 0.005	0.02	< 0.005	< 0.005	-	n/s	< 0.005	< 0.005	< 0.005	-	< 0.005	-	-	n/s
Cobalt	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	0.083	n/s	0.090	0.087	0.087	0.043	< 0.005	-	n/s	0.013	0.006	0.010	-	< 0.005	-	-	n/s
Copper	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	0.257	n/s	< 0.005	< 0.005	<0.001	0.260	0.263	-	n/s	0.261	0.262	< 0.005	-	0.257	-	-	n/s
Iron	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.005	n/s	0.012	0.006	<0.002	< 0.005	< 0.005	-	n/s	0.086	< 0.005	< 0.005	-	< 0.005	-	-	n/s
Lead	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.05	n/s	< 0.05	< 0.05	0.009	< 0.05	< 0.05	-	n/s	< 0.05	< 0.05	< 0.05	-	< 0.05	-	-	n/s
Lithium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	0.021	-	-	-	n/s	-	-	-	-	-	-	-	n/s
Magnesium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	42.2	n/s	41.7	35.6	45.9	42.4	46.7	-	n/s	48.1	48.3	46.8	-	41.1	-	-	n/s
Manganese	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	161	n/s	136	143	129	24.9	4.22	-	n/s	68.2	41.8	88	-	38.8	-	-	n/s
Molybdenum	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	0.02	n/s	0.02	0.02	<0.01	0.01	0.02	-	n/s	0.02	0.02	0.02	-	0.02	-	-	n/s
Nickel	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	0.40	n/s	0.33	0.36	0.414	0.09	< 0.02	-	n/s	0.12	0.03	0.25	-	0.03	-	-	n/s
Phosphorus	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.1	n/s	< 0.1	< 0.1	<0.06	< 0.1	< 0.1	-	n/s	< 0.1	< 0.1	< 0.1	-	< 0.1	-	-	n/s
Potassium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	0.8	n/s	0.9	0.5	0.4	1.4	1.1	-	n/s	1.6	1.1	1.1	-	0.7	-	-	n/s
Selenium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.05	n/s	< 0.05	< 0.05	0.15	< 0.05	< 0.05	-	n/s	< 0.05	< 0.05	< 0.05	-	< 0.05	-	-	n/s
Silicon	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	5.23	n/s	3.45	3.32	6.9	5.68	1.11	-	n/s	4.26	2.46	4.02	-	3.91	-	-	n/s
Silver	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	< 0.01	< 0.01	<0.002	< 0.01	< 0.01	-	n/s	< 0.01	< 0.01	< 0.01	-	< 0.01	-	-	n/s
Sodium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	2.0	n/s	2.7	1.6	1.67	4.5	5.3	-	n/s	4.9	4.4	2.7	-	3	-	-	n/s
Strontium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	0.313	n/s	0.307	0.273	0.3	0.244	0.206	-	n/s	0.397	0.380	0.404	-	0.311	-	-	n/s
Sulphur	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	319	n/s	339	333	370	202	167	-	n/s	270	250	317	-	221	-	-	n/s
Thorium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	<0.005	-	-	-	n/s	-	-	-	-	-	-	-	n/s
Tin	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	0.10	n/s	0.09	0.09	0.036	0.10	0.09	-	n/s	0.10	0.10	0.09	-	0.10	-	-	n/s
Titanium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.002	n/s	< 0.002	< 0.002	<0.001	< 0.002	< 0.002	-	n/s	< 0.002	< 0.002	< 0.002	-	< 0.002	-	-	n/s
Uranium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	<0.06	-	-	-	n/s	-	-	-	-	-	-	-	n/s
Vanadium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	< 0.01	< 0.01	<0.001	< 0.01	< 0.01	-	n/s	< 0.01	< 0.01	< 0.01	-	< 0.01	-	-	n/s
Zinc	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	95.600	n/s	99.500	88.700	86.000	11.600	0.140	-	n/s	35.100	10.600	74.900	-	1.560	-	-	n/s
Zirconium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	<0.005	-	-	-	n/s	-	-	-	-	-	-	-	n/s
Total Metals (Trace)																																				
Aluminum	n/s	n/s	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	0.16	n/s	n/s	n/s	n/s	n/s	7.14	n/s	162	603	3520	15.4	385	1680	n/s	120	157	167	1280	940	153	14.6	n/s
Antimony	n/s	n/s	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	n/s	< 0.06	n/s	< 0.06	< 0.06	<0.2	< 0.06	< 0.06	< 6	n/s	< 0.06	< 0.06	< 0.06	<0.02	< 0.06	< 0.06	< 0.06	n/s
Arsenic	n/s	n/s	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	n/s	< 0.06	n/s	0.300	1.070	4.000	0.080	2.760	15.500	n/s	0.910	1.350	1.540	14.000	3.640	0.660	< 0.06	n/s
Barium	n/s	n/s	n/s	n/s	n/s	n/s	0.030	n/s	n/s	n/s	0.028	n/s	n/s	n/s	0.008	n/s	n/s	n/s	n/s	n/s	0.318	n/s	7.21	28.1	275	0.669	13.3	70.5	n/s	1.8	2.83	2.73	36	29.7	4.4	0.446	n/s
Beryllium	n/s	n/s	n/s	n/s	n/s	n/s	< 0.001	n/s	n/s	n/s	< 0.001	n/s	n/s	n/s	< 0.001	n/s	n/s	n/s	n/s	n/s	< 0.001	n/s	0.008	0.005	<0.005	< 0.001	< 0.001	0.09	n/s	< 0.001	0.008	0.010	<0.005	0.106	0.008	< 0.001	n/s
Bismuth	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	<0.2	-	-	-	n/s	-	-	-	<0.2	-	-	-	n/s
Boron	n/s	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.1	n/s	< 0.01	< 0.01	< 0.01		< 0.01	< 0.01	< 0.01	n/s
Cadmium	n/s	n/s	n/s	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	0.010	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	n/s	n/s	0.275	n/s	0.45	0.96	6.5	0.018	0.071	<0.6	n/s	0.09	0.052	0.205	3.61	0.244	0.05	0.028	n/s
Calcium	n/s	n/s	n/s	n/s	n/s	n/s	66.4	n/s	n/s	n/s	131	n/s	n/s	n/s	45.8	n/s	n/s	n/s	n/s	n/s	167	n/s	198	327	2960	139	277	799	n/s	248	260	318	3220	505	273	268	n/s
Chromium	n/s	n/s	n/s	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	n/s	n/s	0.015	n/s	0.347	1.15	6.9	0.031	0.853	4.88	n/s	0.253	0.303	0.416	2.4	1.95	0.378	0.080	n/s
Cobalt	n/s	n/s	n/s	n/s	n/s	n/s	0.011	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	n/s	n/s	0.085	n/s	0.252	0.743	6	0.049	0.421	2.07	n/s	0.100	0.133	0.146	1.9	0.859	0.165	0.018	n/s
Copper	n/s	n/s	n/s	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	n/s	n/s	< 0.006	n/s	0.4020	1.7400	17.0000	0.0310	1.2600	7.1800	n/s	0.5530	0.5230	0.5400	7.2000	2.4800	0.3900	0.0180	n/s
Iron	n/s	n/s	n/s	n/s	n/s	n/s	0.035	n/s	n/s	n/s	0.014	n/s	n/s	n/s	0.083	n/s	n/s	n/s	n/s	n/s	12.00	n/s	316.00	1320.00	8200.00	38.90	1090.00	6370.00	n/s	275.00	376.00	305.00	3900.00	2252.00	298.00	29.90	n/s
Lead	n/s	n/s	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	n/s	0.070	n/s	2.650	10.000	93.200	0.160	4.710	27.300	n/s	0.870	1.040	1.050	11.300	6.090	0.980	0.190	n/s
Lithium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	3.3	-	-	-	n/s	-	-	-	1.4	-	-	-	n/s
Magnesium	n/s	n/s	n/s	n/s	n/s	n/s	18.8	n/s	n/s	n/s	26.3	n/s	n/s	n/s	14.2	n/s	n/s	n/s	n/s	n/s	42.5	n/s	96.1	272	1730	42.2	179	801	n/s	108	120	140	1240	411	105	60.4	n/s
Manganese	n/s	n/s	n/s	n/s	n/s	n/s	15.9	n/s	n/s	n/s	1.21	n/s	n/s	n/s	0.061	n/s	n/s	n/s	n/s	n/s	126	n/s	154	217	2230	21.8	41.1	125	n/s	67.4	46.7	80.5	1660	148	52.3	42.4	n/s
Molybdenum	n/s	n/s	n/s	n/s	n/s	n/s	0.15	n/s	n/s	n/s	0.05	n/s	n/s	n/s	0.09	n/s	n/s	n/s	n/s	n/s	0.01	n/s	0.05	0.14	<0.1	0.02	0.11	0.6	n/s	0.04	0.05	0.05	<0.1	0.12	0.04	0.02	n/s
Nickel	n/s	n/s	n/s	n/s	n/s	n/s	0.02	n/s	n/s	n/s	< 0.02	n/s	n/s	n/s	< 0.02	n/s	n/s	n/s	n/s	n/s	0.41	n/s	0.88	2.70	16.8	0.12	1.53	7.2	n/s	0.59	0.58	0.88	8.8	3.69	0.64	0.20	n/s
Phosphorus	n/s	n/s	n/s	n/s	n/s	n/s	< 0.1	n/s	n/s	n/s	0.1	n/s	n/s	n/s	< 0.1	n/s	n/s	n/s	n/s	n/s	0.2	n/s	8.1	37	336	0.5	22.8	163	n/s	5.6	9.8	12.1	147	43.4	7.3	1.4	n/s
Potassium	n/s	n/s	n/s	n/s	n/s	n/s	10.8	n/s	n/s	n/s	7.8	n/s	n/s	n/s	10.4	n/s	n/s	n/s	n/s	n/s	2.1	n/s	17.4	48.3	210	4.6	43.6	< 6	n/s	20.8	24.4	25.9	200	74.2	17.7	11.6	n/s
Selenium	n/s	n/s	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	n/s	< 0.06	n/s	0.08	0.15	<0.2	< 0.06	0.16	173	n/s	0.06	< 0.06	0.07	4	0.12	< 0.06	< 0.06	n/s
Silicon	n/s	n/s	n/s	n/s	n/s	n/s	5.80	n/s	n/s	n/s	5.96	n/s	n/s	n/s	5.23	n/s	n/s	n/s	n/s	n/s	14.6	n/s	102	111	3890	27.1	113	0.7	n/s	57.9	90.4	108	1740	124	99.9	26.3	n/s
Silver	n/s	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	0.03	0.11	0.5	< 0.01	0.11	21	n/s	< 0.01	< 0.01	< 0.01	<0.02	0.08	0.01	< 0.01	n/s
Sodium	n/s	n/s	n/s	n/s	n/s	n/s	505	n/s	n/s	n/s	465	n/s	n/s	n/s	259	n/s	n/s	n/s	n/s	n/s	2.1	n/s	3.8	7.0	56	4.5	8.4	4.80	n/s	7.4	5.9	5.1	33	9.4	5.2	5.1	n/s
Strontium	n/s	n/s	n/s	n/s	n/s	n/s	0.445	n/s	n/s	n/s	0.596	n/s	n/s	n/s	0.268	n/s	n/s	n/s	n/s	n/s	0.327	n/s	0.709	2.01	13.2	0.245	1.19	207	n/s	0.659	0.759	0.891	6.2	2.52	0.784	0.555	n/s
Sulphur	n/s	n/s	n/s	n/s	n/s	n/s	414	n/s	n/s	n/s	427	n/s	n/s	n/s	212	n/s	n/s	n/s	n/s	n/s	321	n/s	309	297	3370	182	143	< 0.6	n/s	271	215	290	3420	202	226	297	n/s
Thorium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	1.7	-	-	-	n/s	-	-	-	<0.05	-	-	-	n/s
Tin	n/s	n/s	n/s	n/s	n/s	n/s	0.07	n/s	n/s	n/s	0.07	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	n/s	0.08	n/s	< 0.06	< 0.06	1.7	0.07	< 0.06	36	n/s	0.06	< 0.06	< 0.06	1.1	< 0.06	< 0.06	0.07	n/s
Titanium	n/s	n/s	n/s	n/s	n/s	n/s	< 0.002	n/s	n/s	n/s	< 0.002	n/s	n/s	n/s	0.007	n/s	n/s	n/s	n/s	n/s	0.201	n/s	4.78	17.8	92.5	0.349	8.14	5.5	n/s	2.67	3.52	3.79	31.2	18.0	4.06	0.503	n/s
Uranium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	<0.6	-	-	-	n/s	-	-	-	<0.6	-	-	-	n/s
Vanadium	n/s	n/s	n/s	n/s	n/s	n/s	0.63	n/s	n/s	n/s	0.31	n/s	n/s	n/s	0.79	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	0.47	1.73	9.7	0.04	1.08	6	n/s	0.32	0.42	0.45	3.3	2.24	0.41	0.04	n/s
Zinc	n/s	n/s	n/s	n/s	n/s	n/s	2.310	n/s	n/s	n/s	4.260	n/s	n/s	n/s	0.024	n/s	n/s	n/s	n/s	n/s	82.6	n/s	142	190	1620	13.5	100	247	n/s	85.8	85.5	115	1730	82.9	27.9	48.2	n/s
Zirconium	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	0.9	-	-	-	n/s	-	-	-	<0.05	-	-	-	n/s
Metals																																				
Hardness, Ca and Mg - calc. (mg $CaCO_3$/L)	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	595	n/s	606	566	-	563	586	-	n/s	694	684	691	-	607	-	-	n/s
Hardness, Total - calc. (mg $CaCO_3$/L)	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	1040	n/s	1010	962	-	627	595	-	n/s	873	777	966	-	680	-	-	n/s
Physical and Aggregate Properties																																				
Alkalinity Tot-pH 4.5 (mg $CaCO_3$/L)	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	31	-	-	-	n/s	-	-	-	80	-	-	-	n/s
Chloride (Cl)	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	<0.5	-	-	-	n/s	-	-	-	0.55	-	-	-	n/s
Flouride (F)	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	0.11	-	-	-	n/s	-	-	-	0.06	-	-	-	n/s
Sulphate (SO4)	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	1110.000	-	-	-	n/s	-	-	-	1170.000	-	-	-	n/s
Bromide (Br)	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	-	-	-	-	n/s	-	-	-	-	-	-	-	n/s
Nitrate as N	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	-	-	-	-	n/s	-	-	-	-	-	-	-	n/s
Nitrite as N	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	-	-	-	-	n/s	-	-	-	-	-	-	-	n/s
Phosphorous - Ortho as P	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	-	-	-	-	n/s	-	-	-	-	-	-	-	n/s
pH (pH Units)	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	6.700	-	-	-	n/s	-	-	-	7.000	-	-	-	n/s
Residue, Filterable (TDS)	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	-	-	-	-	n/s	-	-	-	-	-	-	-	n/s
Residue, Nonfilterable (NFR/TSS)	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	-	-	-	-	n/s	-	-	-	-	-	-	-	n/s
Hydroxide	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	<5	-	-	-	n/s	-	-	-	<5	-	-	-	n/s
Carbonate	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	<6	-	-	-	n/s	-	-	-	<6	-	-	-	n/s
Bicarbonate	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	38	-	-	-	n/s	-	-	-	98	-	-	-	n/s
Conductivity (uS/cm)	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	n/s	-	n/s	-	-	-	-	-	-	n/s	-	-	-	-	-	-	-	n/s

Notes: [1] All units are in mg/L unless otherwise indicated. PESC - Pacific Environmental Science Center (Environment Canada) NW - Norwest Labs

Location Description	Drive Point Piezometer #3 - Fence 2				Drive Point Piezometer #4 - Fence 2				Stand-Pipe Piezometer #1 - Fence 3			
Sampler	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI
Station ID	ACG-DP3				ACG-DP4				ACG-SP1			
Lab	PESC	PESC	n/a	n/a	PESC	n/a	n/a	n/a	n/a	PESC	PESC	n/a
Lab Lot ID	93648	93903	n/a	n/a	93649	n/a	n/a	n/a	n/a	93910	94690	n/a
Date	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03
Parameter [1]												
Dissolved Metals (Trace)												
Aluminum	< 0.05	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.05	0.13	n/s
Antimony	< 0.05	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.05	< 0.05	n/s
Arsenic	< 0.05	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.05	< 0.05	n/s
Barium	0.023	-	n/s	n/s	-	n/s	n/s	n/s	n/s	0.017	0.046	n/s
Beryllium	< 0.001	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.001	< 0.001	n/s
Bismuth	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Boron	< 0.01	-	n/s	n/s	-	n/s	n/s	n/s	n/s	0.02	< 0.01	n/s
Cadmium	< 0.005	-	n/s	n/s	-	n/s	n/s	n/s	n/s	0.012	< 0.005	n/s
Calcium	99.1	-	n/s	n/s	-	n/s	n/s	n/s	n/s	327	7.5	n/s
Chromium	< 0.005	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.005	< 0.005	n/s
Cobalt	< 0.005	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.005	< 0.005	n/s
Copper	0.261	-	n/s	n/s	-	n/s	n/s	n/s	n/s	0.264	< 0.005	n/s
Iron	< 0.005	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.005	0.081	n/s
Lead	< 0.05	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.05	< 0.05	n/s
Lithium	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Magnesium	39.9	-	n/s	n/s	-	n/s	n/s	n/s	n/s	59.6	1.8	n/s
Manganese	5.1	-	n/s	n/s	-	n/s	n/s	n/s	n/s	0.726	0.011	n/s
Molybdenum	0.02	-	n/s	n/s	-	n/s	n/s	n/s	n/s	0.02	< 0.01	n/s
Nickel	< 0.02	-	n/s	n/s	-	n/s	n/s	n/s	n/s	0.07	< 0.02	n/s
Phosphorus	< 0.1	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.1	< 0.1	n/s
Potassium	1.0	-	n/s	n/s	-	n/s	n/s	n/s	n/s	2.4	< 0.1	n/s
Selenium	< 0.05	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.05	< 0.05	n/s
Silicon	3.12	-	n/s	n/s	-	n/s	n/s	n/s	n/s	6.52	3.08	n/s
Silver	< 0.01	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.01	< 0.01	n/s
Sodium	4.1	-	n/s	n/s	-	n/s	n/s	n/s	n/s	3.8	0.5	n/s
Strontium	0.193	-	n/s	n/s	-	n/s	n/s	n/s	n/s	0.803	0.023	n/s
Sulphur	114	-	n/s	n/s	-	n/s	n/s	n/s	n/s	318	5.74	n/s
Thorium	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Tin	0.08	-	n/s	n/s	-	n/s	n/s	n/s	n/s	0.11	< 0.05	n/s
Titanium	< 0.002	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.002	< 0.002	n/s
Uranium	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s			n/s
Vanadium	< 0.01	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.01	< 0.01	n/s
Zinc	0.558	-	n/s	n/s	-	n/s	n/s	n/s	n/s	12.900	0.067	n/s
Zirconium	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Total Metals (Trace)												
Aluminum	78.9	117	n/s	n/s	1750	n/s	n/s	n/s	n/s	435	56.5	n/s
Antimony	< 0.06	< 0.06	n/s	n/s	0.10	n/s	n/s	n/s	n/s	< 0.06	< 0.06	n/s
Arsenic	0.800	1.180	n/s	n/s	3.650	n/s	n/s	n/s	n/s	2.830	0.180	n/s
Barium	1.42	2	n/s	n/s	51.2	n/s	n/s	n/s	n/s	9.96	1.98	n/s
Beryllium	0.002	0.007	n/s	n/s	0.185	n/s	n/s	n/s	n/s	< 0.001	0.004	n/s
Bismuth	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Boron	< 0.01	< 0.01	n/s	n/s	0.06	n/s	n/s	n/s	n/s	< 0.01	< 0.01	n/s
Cadmium	0.01	0.015	n/s	n/s	0.231	n/s	n/s	n/s	n/s	0.1800	0.0300	n/s
Calcium	156	177	n/s	n/s	488	n/s	n/s	n/s	n/s	450	22.7	n/s
Chromium	0.210	0.327	n/s	n/s	2.55	n/s	n/s	n/s	n/s	0.578	0.093	n/s
Cobalt	0.079	0.122	n/s	n/s	1.69	n/s	n/s	n/s	n/s	0.513	0.085	n/s
Copper	0.3080	0.4270	n/s	n/s	2.2900	n/s	n/s	n/s	n/s	5.7200	0.2960	n/s
Iron	209.00	290.00	n/s	n/s	3177.00	n/s	n/s	n/s	n/s	1290.00	128.00	n/s
Lead	0.430	0.600	n/s	n/s	21.000	n/s	n/s	n/s	n/s	2.390	0.480	n/s
Lithium	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Magnesium	84.0	109	n/s	n/s	440	n/s	n/s	n/s	n/s	198	19.1	n/s
Manganese	4.77	7.86	n/s	n/s	225	n/s	n/s	n/s	n/s	107	10	n/s
Molybdenum	0.04	0.04	n/s	n/s	0.15	n/s	n/s	n/s	n/s	0.10	0.02	n/s
Nickel	0.29	0.47	n/s	n/s	4.29	n/s	n/s	n/s	n/s	1.57	0.17	n/s
Phosphorus	5.0	6.8	n/s	n/s	80.5	n/s	n/s	n/s	n/s	18.0	2.4	n/s
Potassium	14.2	19.7	n/s	n/s	109	n/s	n/s	n/s	n/s	38.4	7.1	n/s
Selenium	< 0.06	< 0.06	n/s	n/s	0.27	n/s	n/s	n/s	n/s	0.18	< 0.06	n/s
Silicon	61.1	94.7	n/s	n/s	125	n/s	n/s	n/s	n/s	121	64.9	n/s
Silver	< 0.01	< 0.01	n/s	n/s	0.40	n/s	n/s	n/s	n/s	0.03	0.01	n/s
Sodium	3.4	4.7	n/s	n/s	13.6	n/s	n/s	n/s	n/s	5.7	1.1	n/s
Strontium	0.386	0.542	n/s	n/s	3.74	n/s	n/s	n/s	n/s	2.03	0.120	n/s
Sulphur	80.4	81.9	n/s	n/s	67.0	n/s	n/s	n/s	n/s	278	5.08	n/s
Thorium	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Tin	0.06	< 0.06	n/s	n/s	0.13	n/s	n/s	n/s	n/s	< 0.06	< 0.06	n/s
Titanium	1.8	2.55	n/s	n/s	20.6	n/s	n/s	n/s	n/s	7.76	1.47	n/s
Uranium	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Vanadium	0.21	0.32	n/s	n/s	3.57	n/s	n/s	n/s	n/s	1.32	0.16	n/s
Zinc	2.46	13.2	n/s	n/s	31.4	n/s	n/s	n/s	n/s	48.50	3.46	n/s
Zirconium	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Metals												
Hardness, Ca and Mg - calc. (mg $CaCO_3$/L)	412	-	n/s	n/s	-	n/s	n/s	n/s	n/s	1.32	0.16	n/s
Hardness, Total - calc. (mg $CaCO_3$/L)	423	-	n/s	n/s	-	n/s	n/s	n/s	n/s	48.5	3.46	n/s
Physical and Aggregate Properties												
Alkalinity Tot-pH 4.5 (mg $CaCO_3$/L)	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	73.4	10.3	n/s
Chloride (Cl)	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	1.0	0.3	n/s
Flouride (F)	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	0.03	0.02	n/s
Sulphate (SO4)	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	986.000	15.600	n/s
Bromide (Br)	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.05	< 0.05	n/s
Nitrate as N	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	0.178	0.483	n/s
Nitrite as N	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.005	< 0.005	n/s
Phosphorous - Ortho as P	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	< 0.05	< 0.05	n/s
pH (pH Units)	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	6.340	6.440	n/s
Residue, Filterable (TDS)	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Residue, Nonfilterable (NFR/TSS)	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	9530	n/s
Hydroxide	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Carbonate	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Bicarbonate	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	-	n/s
Conductivity (uS/cm)	-	-	n/s	n/s	-	n/s	n/s	n/s	n/s	1460.00	59.00	n/s

Location Description	Stand-Pipe Piezometer #2 - Fence 3				Stand-Pipe Piezometer #3 - Fence 3				Stand-Pipe Piezometer #4 - Fence 3			
Sampler	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI
Station ID	ACG-SP2				ACG-SP3				ACG-SP4			
Lab	PESC	PESC	PESC	n/a	n/a	PESC	PESC	n/a	n/a	n/a	PESC	n/a
Lab Lot ID	93653	93914	94691	n/a	n/a	93909	94692	n/a	n/a	n/a	94693	n/a
Date	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03
Parameter [1]												
Dissolved Metals (Trace)												
Aluminum	-	< 0.05	< 0.05	n/s	n/s	-	2.56	n/s	n/s	n/s	< 0.05	n/s
Antimony	-	< 0.05	< 0.05	n/s	n/s	-	< 0.06	n/s	n/s	n/s	< 0.05	n/s
Arsenic	-	< 0.05	< 0.05	n/s	n/s	-	< 0.06	n/s	n/s	n/s	< 0.05	n/s
Barium	-	0.004	0.003	n/s	n/s	-	0.114	n/s	n/s	n/s	0.022	n/s
Beryllium	-	< 0.001	< 0.001	n/s	n/s	-	< 0.001	n/s	n/s	n/s	< 0.001	n/s
Bismuth	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Boron	-	< 0.01	0.01	n/s	n/s	-	< 0.01	n/s	n/s	n/s	< 0.01	n/s
Cadmium	-	0.038	0.031	n/s	n/s	-	0.040	n/s	n/s	n/s	< 0.005	n/s
Calcium	-	377	393	n/s	n/s	-	363	n/s	n/s	n/s	265	n/s
Chromium	-	< 0.005	< 0.005	n/s	n/s	-	< 0.006	n/s	n/s	n/s	< 0.005	n/s
Cobalt	-	< 0.005	< 0.005	n/s	n/s	-	0.009	n/s	n/s	n/s	< 0.005	n/s
Copper	-	0.257	< 0.005	n/s	n/s	-	< 0.006	n/s	n/s	n/s	< 0.005	n/s
Iron	-	< 0.005	< 0.005	n/s	n/s	-	5.06	n/s	n/s	n/s	< 0.005	n/s
Lead	-	< 0.05	< 0.05	n/s	n/s	-	< 0.06	n/s	n/s	n/s	< 0.05	n/s
Lithium	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Magnesium	-	53.0	62.1	n/s	n/s	-	53.0	n/s	n/s	n/s	61.5	n/s
Manganese	-	56.8	18.4	n/s	n/s	-	40.3	n/s	n/s	n/s	0.006	n/s
Molybdenum	-	0.02	0.02	n/s	n/s	-	0.01	n/s	n/s	n/s	0.02	n/s
Nickel	-	0.22	0.19	n/s	n/s	-	0.20	n/s	n/s	n/s	< 0.02	n/s
Phosphorus	-	< 0.1	< 0.1	n/s	n/s	-	0.2	n/s	n/s	n/s	< 0.1	n/s
Potassium	-	1.6	1.8	n/s	n/s	-	2.1	n/s	n/s	n/s	0.3	n/s
Selenium	-	< 0.05	< 0.05	n/s	n/s	-	< 0.06	n/s	n/s	n/s	< 0.05	n/s
Silicon	-	7.45	6.15	n/s	n/s	-	9.76	n/s	n/s	n/s	4.05	n/s
Silver	-	< 0.01	< 0.01	n/s	n/s	-	< 0.01	n/s	n/s	n/s	< 0.01	n/s
Sodium	-	4.1	4.7	n/s	n/s	-	3.8	n/s	n/s	n/s	2.4	n/s
Strontium	-	0.926	0.985	n/s	n/s	-	0.918	n/s	n/s	n/s	0.449	n/s
Sulphur	-	443	441	n/s	n/s	-	389	n/s	n/s	n/s	272	n/s
Thorium	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Tin	-	0.12	0.11	n/s	n/s	-	0.07	n/s	n/s	n/s	0.10	n/s
Titanium	-	< 0.002	< 0.002	n/s	n/s	-	0.056	n/s	n/s	n/s	< 0.002	n/s
Uranium	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Vanadium	-	< 0.01	< 0.01	n/s	n/s	-	< 0.01	n/s	n/s	n/s	< 0.01	n/s
Zinc	-	39.900	28.500	n/s	n/s	-	25.700	n/s	n/s	n/s	0.179	n/s
Zirconium	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Total Metals (Trace)												
Aluminum	7.06	4.04	2.56	n/s	n/s	134	138	n/s	n/s	n/s	57.4	n/s
Antimony	< 0.06	< 0.06	< 0.06	n/s	n/s	< 0.06	< 0.06	n/s	n/s	n/s	< 0.06	n/s
Arsenic	< 0.06	< 0.06	< 0.06	n/s	n/s	0.410	0.800	n/s	n/s	n/s	0.350	n/s
Barium	0.242	0.168	0.114	n/s	n/s	4	3.38	n/s	n/s	n/s	1.56	n/s
Beryllium	< 0.001	< 0.001	< 0.001	n/s	n/s	0.009	0.008	n/s	n/s	n/s	0.005	n/s
Bismuth	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Boron	< 0.01	< 0.01	< 0.01	n/s	n/s	0.01	< 0.01	n/s	n/s	n/s	< 0.01	n/s
Cadmium	0.0550	0.0500	0.0400	n/s	n/s	0.0640	0.0550	n/s	n/s	n/s	< 0.006	n/s
Calcium	360	359	363	n/s	n/s	41.9	359	n/s	n/s	n/s	308	n/s
Chromium	0.011	0.006	< 0.006	n/s	n/s	0.205	0.206	n/s	n/s	n/s	0.061	n/s
Cobalt	0.019	0.016	0.009	n/s	n/s	0.183	0.168	n/s	n/s	n/s	0.072	n/s
Copper	< 0.006	0.1190	< 0.006	n/s	n/s	0.6650	1.4800	n/s	n/s	n/s	0.3400	n/s
Iron	17.60	10.10	5.06	n/s	n/s	282.00	408.00	n/s	n/s	n/s	224.00	n/s
Lead	0.080	< 0.06	< 0.06	n/s	n/s	1.130	0.810	n/s	n/s	n/s	0.240	n/s
Lithium	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Magnesium	61.5	57.4	53.0	n/s	n/s	39.0	100	n/s	n/s	n/s	83.2	n/s
Manganese	81.6	73.1	40.3	n/s	n/s	20.7	33.3	n/s	n/s	n/s	3.41	n/s
Molybdenum	0.01	0.01	0.01	n/s	n/s	0.03	0.04	n/s	n/s	n/s	0.04	n/s
Nickel	0.28	0.24	0.20	n/s	n/s	0.39	0.44	n/s	n/s	n/s	0.24	n/s
Phosphorus	0.4	0.4	0.2	n/s	n/s	4.7	7.2	n/s	n/s	n/s	7.8	n/s
Potassium	3.5	2.7	2.1	n/s	n/s	15.5	15.8	n/s	n/s	n/s	9.1	n/s
Selenium	< 0.06	< 0.06	< 0.06	n/s	n/s	< 0.06	< 0.06	n/s	n/s	n/s	< 0.06	n/s
Silicon	16.2	12.3	9.76	n/s	n/s	79.8	93.3	n/s	n/s	n/s	78.6	n/s
Silver	< 0.01	< 0.01	< 0.01	n/s	n/s	0.02	< 0.01	n/s	n/s	n/s	< 0.01	n/s
Sodium	4.2	4.4	3.8	n/s	n/s	2.4	3.3	n/s	n/s	n/s	2.4	n/s
Strontium	0.967	0.990	0.918	n/s	n/s	0.268	1.11	n/s	n/s	n/s	0.628	n/s
Sulphur	420	399	389	n/s	n/s	6.53	296	n/s	n/s	n/s	276	n/s
Thorium	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Tin	0.06	0.06	0.07	n/s	n/s	< 0.06	< 0.06	n/s	n/s	n/s	< 0.06	n/s
Titanium	0.157	0.099	0.056	n/s	n/s	3.19	3.31	n/s	n/s	n/s	0.944	n/s
Uranium	-	-	-	n/s	n/s			n/s	n/s	n/s	-	n/s
Vanadium	< 0.01	< 0.01	< 0.01	n/s	n/s	0.35	0.45	n/s	n/s	n/s	0.09	n/s
Zinc	37.30	33.90	25.70	n/s	n/s	7.77	16.50	n/s	n/s	n/s	1.29	n/s
Zirconium	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Metals												
Hardness, Ca and Mg - calc. (mg $CaCO_3$/L)	-	1160	1240	n/s	n/s	-	940	n/s	n/s	n/s	914	n/s
Hardness, Total - calc. (mg $CaCO_3$/L)	-	1330	1310	n/s	n/s	-	952	n/s	n/s	n/s	914	n/s
Physical and Aggregate Properties												
Alkalinity Tot-pH 4.5 (mg $CaCO_3$/L)	-	-	42.3	n/s	n/s	14.3	80.4	n/s	n/s	n/s	82.6	n/s
Chloride (Cl)	-	-	0.8	n/s	n/s	0.3	6.4	n/s	n/s	n/s	0.3	n/s
Flouride (F)	-	-	0.04	n/s	n/s	0.03	0.05	n/s	n/s	n/s	0.02	n/s
Sulphate (SO4)	-	-	1530.000	n/s	n/s	16.400	982.000	n/s	n/s	n/s	908.000	n/s
Bromide (Br)	-	-	< 0.05	n/s	n/s	< 0.05	< 0.05	n/s	n/s	n/s	< 0.05	n/s
Nitrate as N	-	-	0.460	n/s	n/s	0.459	0.415	n/s	n/s	n/s	0.222	n/s
Nitrite as N	-	-	< 0.005	n/s	n/s	< 0.005	0.007	n/s	n/s	n/s	< 0.005	n/s
Phosphorous - Ortho as P	-	-	< 0.05	n/s	n/s	< 0.05	< 0.05	n/s	n/s	n/s	< 0.05	n/s
pH (pH Units)	-	-	6.210	n/s	n/s	6.190	6.580	n/s	n/s	n/s	7.160	n/s
Residue, Filterable (TDS)	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Residue, Nonfilterable (NFR/TSS)	-	-	247	n/s	n/s	-	11500	n/s	n/s	n/s	1650	n/s
Hydroxide	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Carbonate	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Bicarbonate	-	-	-	n/s	n/s	-	-	n/s	n/s	n/s	-	n/s
Conductivity (uS/cm)	-	-	2090.00	n/s	n/s	71.00	1650.00	n/s	n/s	n/s	1510.00	n/s

Location Description	Stand-Pipe Piezometer #5 - Fence 3				Stand-Pipe Piezometer #6 - Fence 3				Stand-Pipe Piezometer #7 - Fence 3			
Sampler	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI
Station ID	ACG-SP5				ACG-SP6				ACG-SP7			
Lab	PESC	PESC	PESC	n/a	n/a	n/a	n/a	n/a	n/a	PESC	n/a	n/a
Lab Lot ID	93654	93907	94694	n/a	n/a	n/a	n/a	n/a	n/a	93908	n/a	n/a
Date	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03
Parameter [1]												
Dissolved Metals (Trace)												
Aluminum	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	n/s	n/s	0.09	n/s	n/s
Antimony	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s
Arsenic	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s
Barium	-	0.015	0.021	n/s	n/s	n/s	n/s	n/s	n/s	0.040	n/s	n/s
Beryllium	-	< 0.001	< 0.001	n/s	n/s	n/s	n/s	n/s	n/s	< 0.001	n/s	n/s
Bismuth	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Boron	-	0.03	0.02	n/s	n/s	n/s	n/s	n/s	n/s	0.01	n/s	n/s
Cadmium	-	< 0.005	0.045	n/s	n/s	n/s	n/s	n/s	n/s	< 0.005	n/s	n/s
Calcium	-	284	241	n/s	n/s	n/s	n/s	n/s	n/s	81.3	n/s	n/s
Chromium	-	< 0.005	< 0.005	n/s	n/s	n/s	n/s	n/s	n/s	< 0.005	n/s	n/s
Cobalt	-	< 0.005	< 0.005	n/s	n/s	n/s	n/s	n/s	n/s	< 0.005	n/s	n/s
Copper	-	0.259	< 0.005	n/s	n/s	n/s	n/s	n/s	n/s	0.265	n/s	n/s
Iron	-	< 0.005	0.007	n/s	n/s	n/s	n/s	n/s	n/s	0.035	n/s	n/s
Lead	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s
Lithium	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Magnesium	-	56.5	48.4	n/s	n/s	n/s	n/s	n/s	n/s	19.5	n/s	n/s
Manganese	-	0.005	22.8	n/s	n/s	n/s	n/s	n/s	n/s	1.52	n/s	n/s
Molybdenum	-	0.02	0.02	n/s	n/s	n/s	n/s	n/s	n/s	0.01	n/s	n/s
Nickel	-	< 0.02	0.07	n/s	n/s	n/s	n/s	n/s	n/s	0.03	n/s	n/s
Phosphorus	-	< 0.1	< 0.1	n/s	n/s	n/s	n/s	n/s	n/s	< 0.1	n/s	n/s
Potassium	-	0.3	0.5	n/s	n/s	n/s	n/s	n/s	n/s	1.6	n/s	n/s
Selenium	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s
Silicon	-	4.54	3.57	n/s	n/s	n/s	n/s	n/s	n/s	4.77	n/s	n/s
Silver	-	< 0.01	< 0.01	n/s	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	n/s
Sodium	-	3.1	2.2	n/s	n/s	n/s	n/s	n/s	n/s	2.6	n/s	n/s
Strontium	-	0.634	0.525	n/s	n/s	n/s	n/s	n/s	n/s	0.271	n/s	n/s
Sulphur	-	284	302	n/s	n/s	n/s	n/s	n/s	n/s	95.7	n/s	n/s
Thorium	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Tin	-	0.11	0.10	n/s	n/s	n/s	n/s	n/s	n/s	0.08	n/s	n/s
Titanium	-	< 0.002	< 0.002	n/s	n/s	n/s	n/s	n/s	n/s	< 0.002	n/s	n/s
Uranium	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Vanadium	-	< 0.01	< 0.01	n/s	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	n/s
Zinc	-	1.110	27.600	n/s	n/s	n/s	n/s	n/s	n/s	0.127	n/s	n/s
Zirconium	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Total Metals (Trace)												
Aluminum	37.4	11.6	6.20	n/s	n/s	n/s	n/s	n/s	n/s	53.6	n/s	n/s
Antimony	< 0.06	< 0.06	< 0.06	n/s	n/s	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s
Arsenic	0.200	< 0.06	< 0.06	n/s	n/s	n/s	n/s	n/s	n/s	0.330	n/s	n/s
Barium	0.615	0.248	0.137	n/s	n/s	n/s	n/s	n/s	n/s	1.28	n/s	n/s
Beryllium	0.001	0.002	< 0.001	n/s	n/s	n/s	n/s	n/s	n/s	0.005	n/s	n/s
Bismuth	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Boron	< 0.01	< 0.01	< 0.01	n/s	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	n/s
Cadmium	0.0460	0.0130	0.0520	n/s	n/s	n/s	n/s	n/s	n/s	0.0060	n/s	n/s
Calcium	263	243	263	n/s	n/s	n/s	n/s	n/s	n/s	80.0	n/s	n/s
Chromium	0.047	0.018	0.008	n/s	n/s	n/s	n/s	n/s	n/s	0.102	n/s	n/s
Cobalt	0.074	0.021	0.014	n/s	n/s	n/s	n/s	n/s	n/s	0.072	n/s	n/s
Copper	0.1330	0.0230	< 0.006	n/s	n/s	n/s	n/s	n/s	n/s	0.2190	n/s	n/s
Iron	219.00	47.10	22.50	n/s	n/s	n/s	n/s	n/s	n/s	153.00	n/s	n/s
Lead	0.200	< 0.06	< 0.06	n/s	n/s	n/s	n/s	n/s	n/s	0.310	n/s	n/s
Lithium	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Magnesium	71.6	52.0	52.8	n/s	n/s	n/s	n/s	n/s	n/s	35.7	n/s	n/s
Manganese	15.9	4.59	28.7	n/s	n/s	n/s	n/s	n/s	n/s	4.47	n/s	n/s
Molybdenum	0.03	0.02	0.02	n/s	n/s	n/s	n/s	n/s	n/s	0.03	n/s	n/s
Nickel	0.24	0.07	0.11	n/s	n/s	n/s	n/s	n/s	n/s	0.19	n/s	n/s
Phosphorus	7.8	1.4	0.5	n/s	n/s	n/s	n/s	n/s	n/s	3.7	n/s	n/s
Potassium	5.7	2.7	1.9	n/s	n/s	n/s	n/s	n/s	n/s	7.7	n/s	n/s
Selenium	< 0.06	< 0.06	< 0.06	n/s	n/s	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s
Silicon	50.2	18.8	13.2	n/s	n/s	n/s	n/s	n/s	n/s	61.1	n/s	n/s
Silver	< 0.01	< 0.01	< 0.01	n/s	n/s	n/s	n/s	n/s	n/s	< 0.01	n/s	n/s
Sodium	2.7	2.8	2.3	n/s	n/s	n/s	n/s	n/s	n/s	3.2	n/s	n/s
Strontium	0.635	0.560	0.594	n/s	n/s	n/s	n/s	n/s	n/s	0.351	n/s	n/s
Sulphur	260	231	310	n/s	n/s	n/s	n/s	n/s	n/s	71.9	n/s	n/s
Thorium	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Tin	0.07	0.06	0.07	n/s	n/s	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s
Titanium	0.451	0.181	0.080	n/s	n/s	n/s	n/s	n/s	n/s	1.47	n/s	n/s
Uranium				n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Vanadium	0.05	0.02	< 0.01	n/s	n/s	n/s	n/s	n/s	n/s	0.13	n/s	n/s
Zinc	6.40	2.46	29.40	n/s	n/s	n/s	n/s	n/s	n/s	0.781	n/s	n/s
Zirconium	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Metals												
Hardness, Ca and Mg - calc. (mg $CaCO_3$/L)	-	941	801	n/s	n/s	n/s	n/s	n/s	n/s	283	n/s	n/s
Hardness, Total - calc. (mg $CaCO_3$/L)	-	943	886	n/s	n/s	n/s	n/s	n/s	n/s	287	n/s	n/s
Physical and Aggregate Properties												
Alkalinity Tot-pH 4.5 (mg $CaCO_3$/L)	-	80.9	42.0	n/s	n/s	n/s	n/s	n/s	n/s	15.9	n/s	n/s
Chloride (Cl)	-	0.4	< 0.1	n/s	n/s	n/s	n/s	n/s	n/s	0.7	n/s	n/s
Flouride (F)	-	0.07	0.04	n/s	n/s	n/s	n/s	n/s	n/s	0.03	n/s	n/s
Sulphate (SO4)	-	825.000	891.000	n/s	n/s	n/s	n/s	n/s	n/s	246.000	n/s	n/s
Bromide (Br)	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s
Nitrate as N	-	0.988	0.350	n/s	n/s	n/s	n/s	n/s	n/s	0.002	n/s	n/s
Nitrite as N	-	< 0.005	< 0.005	n/s	n/s	n/s	n/s	n/s	n/s	< 0.005	n/s	n/s
Phosphorous - Ortho as P	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s
pH (pH Units)	-	7.200	6.610	n/s	n/s	n/s	n/s	n/s	n/s	6.150	n/s	n/s
Residue, Filterable (TDS)	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Residue, Nonfilterable (NFR/TSS)	-	-	363	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Hydroxide	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Carbonate	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Bicarbonate	-	-	-	n/s	n/s	n/s	n/s	n/s	n/s	-	n/s	n/s
Conductivity (uS/cm)	-	1390.00	1520.00	n/s	n/s	n/s	n/s	n/s	n/s	497.00	n/s	n/s

Notes: [1] All units are in mg/L unless otherwise indicat

Location Description	Galkeno 300 Adit				Pipe Discharge to Land Application				Surface Water Flowing Through ACG-DP5				~10 m from ACG-DP1 Towards Powerline on Oct 16,03 Flowing Through ACG-DP1 on Nov 28,03			
Sampler	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI	DB	DB	DB	NS,PI
Station ID	Adit				G3-SW01				G3-SW12				G3-SW11			
Lab	PESC	PESC	n/a	n/a	n/a	n/a	PESC	n/a	n/a	n/a	PESC	NW	n/a	n/a	PESC	NW
Lab Lot ID	93650	93911	n/a	n/a	n/a	n/a	94706	n/a	n/a	n/a	94704	273254-4	n/a	n/a	94703	273254-2
Date	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03
Parameter [1]																
Dissolved Metals (Trace)																
Aluminum	< 0.05	< 0.05	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s	n/s	< 0.05	<0.01	n/s	n/s	< 0.05	<0.01
Antimony	< 0.05	< 0.05	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s	n/s	< 0.05	0.08	n/s	n/s	< 0.05	0.03
Arsenic	0.08	0.06	n/s	n/s	n/s	n/s	0.09	n/s	n/s	n/s	0.06	<0.02	n/s	n/s	0.08	<0.02
Barium	0.006	0.008	n/s	n/s	n/s	n/s	0.007	n/s	n/s	n/s	0.007	0.0056	n/s	n/s	0.009	0.0068
Beryllium	0.001	< 0.001	n/s	n/s	n/s	n/s	0.001	n/s	n/s	n/s	0.001	<0.0006	n/s	n/s	< 0.001	<0.0006
Bismuth	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	<0.02	n/s	n/s	-	<0.02
Boron	< 0.01	< 0.01	n/s	n/s	n/s	n/s	0.01	n/s	n/s	n/s	0.02	-	n/s	n/s	0.02	-
Cadmium	0.374	0.364	n/s	n/s	n/s	n/s	0.311	n/s	n/s	n/s	0.313	0.305	n/s	n/s	0.286	0.236
Calcium	178	181	n/s	n/s	n/s	n/s	176	n/s	n/s	n/s	184	260	n/s	n/s	166	195
Chromium	< 0.005	< 0.005	n/s	n/s	n/s	n/s	< 0.005	n/s	n/s	n/s	< 0.005	0.032	n/s	n/s	< 0.005	0.021
Cobalt	0.101	0.108	n/s	n/s	n/s	n/s	0.102	n/s	n/s	n/s	0.102	0.135	n/s	n/s	0.090	0.096
Copper	0.256	0.255	n/s	n/s	n/s	n/s	< 0.005	n/s	n/s	n/s	< 0.005	<0.001	n/s	n/s	< 0.005	<0.001
Iron	14.3	7.78	n/s	n/s	n/s	n/s	14.7	n/s	n/s	n/s	10.2	15.8	n/s	n/s	4.97	6.91
Lead	< 0.05	< 0.05	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s	n/s	< 0.05	<0.005	n/s	n/s	< 0.05	<0.005
Lithium	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.035	n/s	n/s	-	0.026
Magnesium	37.8	39.4	n/s	n/s	n/s	n/s	38.5	n/s	n/s	n/s	36.5	53.8	n/s	n/s	35.6	41.6
Manganese	162	172	n/s	n/s	n/s	n/s	160	n/s	n/s	n/s	158	208	n/s	n/s	154	135
Molybdenum	0.02	0.02	n/s	n/s	n/s	n/s	0.02	n/s	n/s	n/s	0.02	<0.01	n/s	n/s	0.02	<0.01
Nickel	0.41	0.42	n/s	n/s	n/s	n/s	0.40	n/s	n/s	n/s	0.42	0.505	n/s	n/s	0.36	0.37
Phosphorus	< 0.1	< 0.1	n/s	n/s	n/s	n/s	< 0.1	n/s	n/s	n/s	< 0.1	<0.06	n/s	n/s	< 0.1	<0.06
Potassium	0.6	0.7	n/s	n/s	n/s	n/s	0.7	n/s	n/s	n/s	0.6	<0.3	n/s	n/s	0.6	<0.3
Selenium	< 0.05	< 0.05	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s	n/s	< 0.05	0.1	n/s	n/s	< 0.05	0.15
Silicon	4.84	4.74	n/s	n/s	n/s	n/s	3.94	n/s	n/s	n/s	3.82	5.4	n/s	n/s	3.49	4.1
Silver	< 0.01	< 0.01	n/s	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	<0.002	n/s	n/s	< 0.01	<0.002
Sodium	1.7	1.7	n/s	n/s	n/s	n/s	1.6	n/s	n/s	n/s	1.7	2.36	n/s	n/s	1.6	1.7
Strontium	0.3	0.306	n/s	n/s	n/s	n/s	0.288	n/s	n/s	n/s	0.302	0.298	n/s	n/s	0.271	0.242
Sulphur	349	353	n/s	n/s	n/s	n/s	351	n/s	n/s	n/s	366	480	n/s	n/s	325	386
Thorium	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	<0.005	n/s	n/s	-	<0.005
Tin	0.10	0.10	n/s	n/s	n/s	n/s	0.09	n/s	n/s	n/s	0.09	0.034	n/s	n/s	0.09	0.022
Titanium	< 0.002	< 0.002	n/s	n/s	n/s	n/s	< 0.002	n/s	n/s	n/s	< 0.002	<0.001	n/s	n/s	< 0.002	<0.001
Uranium	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	<0.06	n/s	n/s	-	<0.06
Vanadium	< 0.01	< 0.01	n/s	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	<0.001	n/s	n/s	< 0.01	<0.001
Zinc	131.6	131.9	n/s	n/s	n/s	n/s	118	n/s	n/s	n/s	118	153	n/s	n/s	112	100
Zirconium	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	<0.005	n/s	n/s	-	<0.005
Total Metals (Trace)																
Aluminum	0.14	9.45	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	0.06	0.18	n/s	n/s	0.76	0.72
Antimony	< 0.06	< 0.06	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	0.06	n/s	n/s	< 0.06	0.06
Arsenic	0.09	1.11	n/s	n/s	n/s	n/s	0.13	n/s	n/s	n/s	0.11	0.07	n/s	n/s	< 0.06	<0.02
Barium	0.010	0.172	n/s	n/s	n/s	n/s	0.006	n/s	n/s	n/s	0.006	0.0057	n/s	n/s	0.033	0.0357
Beryllium	< 0.001	0.004	n/s	n/s	n/s	n/s	< 0.001	n/s	n/s	n/s	< 0.001	<0.0006	n/s	n/s	< 0.001	<0.0006
Bismuth	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	<0.02	n/s	n/s	-	<0.02
Boron	< 0.01	< 0.01	n/s	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	-	n/s	n/s	< 0.01	-
Cadmium	0.3450	0.3910	n/s	n/s	n/s	n/s	0.2930	n/s	n/s	n/s	0.3030	0.2280	n/s	n/s	0.2820	0.1860
Calcium	163	166	n/s	n/s	n/s	n/s	165	n/s	n/s	n/s	171	208	n/s	n/s	166	198
Chromium	< 0.006	0.013	n/s	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	< 0.006	0.016	n/s	n/s	< 0.006	0.013
Cobalt	0.089	0.139	n/s	n/s	n/s	n/s	0.091	n/s	n/s	n/s	0.094	0.094	n/s	n/s	0.087	0.076
Copper	< 0.006	0.047	n/s	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	< 0.006	<0.001	n/s	n/s	< 0.006	<0.001
Iron	23.3000	209.0000	n/s	n/s	n/s	n/s	23.9000	n/s	n/s	n/s	23.6000	18.8000	n/s	n/s	11.5000	8.0000
Lead	< 0.06	1.51	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	0.177	n/s	n/s	< 0.06	0.083
Lithium	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.021	n/s	n/s	-	0.018
Magnesium	35.9	35.8	n/s	n/s	n/s	n/s	36.3	n/s	n/s	n/s	37.0	42.4	n/s	n/s	36.9	40.6
Manganese	143	142	n/s	n/s	n/s	n/s	144	n/s	n/s	n/s	145	147	n/s	n/s	141	120
Molybdenum	0.01	0.01	n/s	n/s	n/s	n/s	0.01	n/s	n/s	n/s	0.01	<0.01	n/s	n/s	0.01	<0.01
Nickel	0.37	0.41	n/s	n/s	n/s	n/s	0.38	n/s	n/s	n/s	0.40	0.352	n/s	n/s	0.37	0.287
Phosphorus	< 0.1	0.7	n/s	n/s	n/s	n/s	< 0.1	n/s	n/s	n/s	< 0.1	<0.06	n/s	n/s	< 0.1	0.06
Potassium	0.6	1.8	n/s	n/s	n/s	n/s	0.6	n/s	n/s	n/s	0.6	<0.3	n/s	n/s	0.7	0.6
Selenium	< 0.06	0.06	n/s	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	0.07	n/s	n/s	< 0.06	0.08
Silicon	3.55	19.5	n/s	n/s	n/s	n/s	3.98	n/s	n/s	n/s	4.15	4.4	n/s	n/s	4.88	4
Silver	< 0.01	0.04	n/s	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	<0.002	n/s	n/s	< 0.01	<0.002
Sodium	1.3	2.0	n/s	n/s	n/s	n/s	1.4	n/s	n/s	n/s	1.4	1.69	n/s	n/s	1.5	1.36
Strontium	0.278	0.314	n/s	n/s	n/s	n/s	0.273	n/s	n/s	n/s	0.285	0.219	n/s	n/s	0.280	0.194
Sulphur	338	297	n/s	n/s	n/s	n/s	323	n/s	n/s	n/s	333	373	n/s	n/s	331	353
Thorium	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	<0.006	n/s	n/s	-	<0.006
Tin	0.07	0.07	n/s	n/s	n/s	n/s	0.07	n/s	n/s	n/s	0.07	0.028	n/s	n/s	0.07	0.047
Titanium	< 0.002	0.304	n/s	n/s	n/s	n/s	< 0.002	n/s	n/s	n/s	< 0.002	<0.001	n/s	n/s	0.027	0.024
Uranium	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	<0.07	n/s	n/s	-	<0.07
Vanadium	< 0.01	< 0.01	n/s	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	<0.001	n/s	n/s	< 0.01	<0.001
Zinc	112.50	108.00	n/s	n/s	n/s	n/s	108.00	n/s	n/s	n/s	109.00	111.00	n/s	n/s	102.00	88.30
Zirconium	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	<0.006	n/s	n/s	-	<0.006
Metals																
Hardness, Ca and Mg - calc. (mg $CaCO_3$/L)	601	615	n/s	n/s	n/s	n/s	598	n/s	n/s	n/s	609	-	n/s	n/s	560	-
Hardness, Total - calc. (mg $CaCO_3$/L)	1120	1150	n/s	n/s	n/s	n/s	1100	n/s	n/s	n/s	1100	-	n/s	n/s	1020	-
Physical and Aggregate Properties																
Alkalinity Tot-pH 4.5 (mg $CaCO_3$/L)	45.6	37.5	n/s	n/s	n/s	n/s	39.4	n/s	n/s	n/s	25.8	33	n/s	n/s	31.0	29
Chloride (Cl)	1.0	1.0	n/s	n/s	n/s	n/s	0.8	n/s	n/s	n/s	0.7	<0.5	n/s	n/s	0.7	<0.5
Flouride (F)	0.42	0.26	n/s	n/s	n/s	n/s	0.30	n/s	n/s	n/s	0.30	0.23	n/s	n/s	0.26	0.2
Sulphate (SO4)	1040.000	1060.000	n/s	n/s	n/s	n/s	1030.000	n/s	n/s	n/s	1100.000	1440.000	n/s	n/s	1010.000	1160.000
Bromide (Br)	< 0.05	< 0.05	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s	n/s	< 0.05	-	n/s	n/s	< 0.05	-
Nitrate as N	0.089	0.068	n/s	n/s	n/s	n/s	0.042	n/s	n/s	n/s	0.046	-	n/s	n/s	0.055	-
Nitrite as N	< 0.005	< 0.005	n/s	n/s	n/s	n/s	< 0.005	n/s	n/s	n/s	< 0.005	-	n/s	n/s	< 0.005	-
Phosphorous - Ortho as P	< 0.05	< 0.05	n/s	n/s	n/s	n/s	< 0.05	n/s	n/s	n/s	< 0.05	-	n/s	n/s	< 0.05	-
pH (pH Units)	6.340	6.320	n/s	n/s	n/s	n/s	6.380	n/s	n/s	n/s	6.390	6.900	n/s	n/s	6.430	6.700
Residue, Filterable (TDS)	1840	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	-	n/s	n/s	-	-
Residue, Nonfilterable (NFR/TSS)	61	-	n/s	n/s	n/s	n/s	41	n/s	n/s	n/s	52	-	n/s	n/s	49	-
Hydroxide	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	<5	n/s	n/s	-	<5
Carbonate	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	<6	n/s	n/s	-	<6
Bicarbonate	-	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	40	n/s	n/s	-	35
Conductivity (uS/cm)	1640.000	1610.000	n/s	n/s	n/s	n/s	1630.000	n/s	n/s	n/s	1540.000	-	n/s	n/s	1600.000	-

Location Description	~10m Below ACG-DP1				Galkeno 300 Flow Path (Traverse - A) Up Gradient of Haul Road				Point of Flow Crossing Old Haul Road Between ACG-SP4&5				Galkeno 300 Flow Path (Traverse - B) Down Gradient of Haul Road			
Sampler	DB	DB	DB	NS,PI	DB	DB	RM	NS,PI,TR	DB	DB	DB	NS,PI	DB	DB	RM	NS,PI,TR
Station ID	G3-SW10				G3-SW09				G3-SW13				G3-SW08			
Lab	n/a	n/a	PESC	n/a	n/a	n/a	PESC	n/a	n/a	n/a	n/a	NW	n/a	n/a	PESC	n/a
Lab Lot ID	n/a	n/a	94705	n/a	n/a	n/a	94707	n/a	n/a	n/a	n/a	273254-5	n/a	n/a	94708	n/a
Date	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03
Parameter [1]																
Dissolved Metals (Trace)																
Aluminum	n/s	n/s	< 0.05	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.02	n/s	n/s	-	n/s
Antimony	n/s	n/s	< 0.05	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.03	n/s	n/s	-	n/s
Arsenic	n/s	n/s	0.06	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.02	n/s	n/s	-	n/s
Barium	n/s	n/s	0.007	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.0309	n/s	n/s	-	n/s
Beryllium	n/s	n/s	0.001	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.0006	n/s	n/s	-	n/s
Bismuth	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.02	n/s	n/s	-	n/s
Boron	n/s	n/s	0.02	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	-	n/s
Cadmium	n/s	n/s	0.313	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.138	n/s	n/s	-	n/s
Calcium	n/s	n/s	184	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	218	n/s	n/s	-	n/s
Chromium	n/s	n/s	< 0.005	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.011	n/s	n/s	-	n/s
Cobalt	n/s	n/s	0.102	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.045	n/s	n/s	-	n/s
Copper	n/s	n/s	< 0.005	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.001	n/s	n/s	-	n/s
Iron	n/s	n/s	10.2	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.002	n/s	n/s	-	n/s
Lead	n/s	n/s	< 0.05	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.005	n/s	n/s	-	n/s
Lithium	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.022	n/s	n/s	-	n/s
Magnesium	n/s	n/s	36.5	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	44	n/s	n/s	-	n/s
Manganese	n/s	n/s	158	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	117	n/s	n/s	-	n/s
Molybdenum	n/s	n/s	0.02	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.01	n/s	n/s	-	n/s
Nickel	n/s	n/s	0.42	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.257	n/s	n/s	-	n/s
Phosphorus	n/s	n/s	< 0.1	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.06	n/s	n/s	-	n/s
Potassium	n/s	n/s	0.6	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.4	n/s	n/s	-	n/s
Selenium	n/s	n/s	< 0.05	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.02	n/s	n/s	-	n/s
Silicon	n/s	n/s	3.82	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	4.2	n/s	n/s	-	n/s
Silver	n/s	n/s	< 0.01	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.002	n/s	n/s	-	n/s
Sodium	n/s	n/s	1.7	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	1.75	n/s	n/s	-	n/s
Strontium	n/s	n/s	0.302	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.297	n/s	n/s	-	n/s
Sulphur	n/s	n/s	366	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	354	n/s	n/s	-	n/s
Thorium	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.005	n/s	n/s	-	n/s
Tin	n/s	n/s	0.09	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.035	n/s	n/s	-	n/s
Titanium	n/s	n/s	< 0.002	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.001	n/s	n/s	-	n/s
Uranium	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.06	n/s	n/s	-	n/s
Vanadium	n/s	n/s	< 0.01	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.001	n/s	n/s	-	n/s
Zinc	n/s	n/s	118	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	84.7	n/s	n/s	-	n/s
Zirconium	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.005	n/s	n/s	-	n/s
Total Metals (Trace)																
Aluminum	n/s	n/s	0.06	n/s	n/s	n/s	3.50	n/s	n/s	n/s	n/s	1.48	n/s	n/s	2.70	n/s
Antimony	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	0.04	n/s	n/s	< 0.06	n/s
Arsenic	n/s	n/s	0.11	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	<0.02	n/s	n/s	< 0.06	n/s
Barium	n/s	n/s	0.006	n/s	n/s	n/s	0.109	n/s	n/s	n/s	n/s	0.0753	n/s	n/s	0.093	n/s
Beryllium	n/s	n/s	< 0.001	n/s	n/s	n/s	< 0.001	n/s	n/s	n/s	n/s	<0.0006	n/s	n/s	< 0.001	n/s
Bismuth	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.02	n/s	n/s	-	n/s
Boron	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	n/s	-	n/s	n/s	< 0.01	n/s
Cadmium	n/s	n/s	0.3030	n/s	n/s	n/s	0.1920	n/s	n/s	n/s	n/s	0.1390	n/s	n/s	0.1370	n/s
Calcium	n/s	n/s	171	n/s	n/s	n/s	173	n/s	n/s	n/s	n/s	242	n/s	n/s	180	n/s
Chromium	n/s	n/s	< 0.006	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	n/s	0.013	n/s	n/s	< 0.006	n/s
Cobalt	n/s	n/s	0.094	n/s	n/s	n/s	0.046	n/s	n/s	n/s	n/s	0.046	n/s	n/s	0.038	n/s
Copper	n/s	n/s	< 0.006	n/s	n/s	n/s	< 0.006	n/s	n/s	n/s	n/s	0.01	n/s	n/s	< 0.006	n/s
Iron	n/s	n/s	23.6000	n/s	n/s	n/s	7.5200	n/s	n/s	n/s	n/s	3.9900	n/s	n/s	3.5900	n/s
Lead	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	0.013	n/s	n/s	< 0.06	n/s
Lithium	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	0.02	n/s	n/s	-	n/s
Magnesium	n/s	n/s	37.0	n/s	n/s	n/s	37.9	n/s	n/s	n/s	n/s	48.8	n/s	n/s	37.8	n/s
Manganese	n/s	n/s	145	n/s	n/s	n/s	99.1	n/s	n/s	n/s	n/s	111	n/s	n/s	93.7	n/s
Molybdenum	n/s	n/s	0.01	n/s	n/s	n/s	0.01	n/s	n/s	n/s	n/s	<0.01	n/s	n/s	0.01	n/s
Nickel	n/s	n/s	0.40	n/s	n/s	n/s	0.27	n/s	n/s	n/s	n/s	0.254	n/s	n/s	0.22	n/s
Phosphorus	n/s	n/s	< 0.1	n/s	n/s	n/s	0.2	n/s	n/s	n/s	n/s	0.17	n/s	n/s	0.1	n/s
Potassium	n/s	n/s	0.6	n/s	n/s	n/s	1.1	n/s	n/s	n/s	n/s	0.4	n/s	n/s	0.9	n/s
Selenium	n/s	n/s	< 0.06	n/s	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	0.07	n/s	n/s	< 0.06	n/s
Silicon	n/s	n/s	4.15	n/s	n/s	n/s	8.68	n/s	n/s	n/s	n/s	5.2	n/s	n/s	7.37	n/s
Silver	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	n/s	<0.002	n/s	n/s	< 0.01	n/s
Sodium	n/s	n/s	1.4	n/s	n/s	n/s	1.6	n/s	n/s	n/s	n/s	1.67	n/s	n/s	1.5	n/s
Strontium	n/s	n/s	0.285	n/s	n/s	n/s	0.332	n/s	n/s	n/s	n/s	0.291	n/s	n/s	0.347	n/s
Sulphur	n/s	n/s	333	n/s	n/s	n/s	301	n/s	n/s	n/s	n/s	386	n/s	n/s	300	n/s
Thorium	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.006	n/s	n/s	-	n/s
Tin	n/s	n/s	0.07	n/s	n/s	n/s	0.07	n/s	n/s	n/s	n/s	0.032	n/s	n/s	0.07	n/s
Titanium	n/s	n/s	< 0.002	n/s	n/s	n/s	0.110	n/s	n/s	n/s	n/s	0.048	n/s	n/s	0.088	n/s
Uranium	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.07	n/s	n/s	-	n/s
Vanadium	n/s	n/s	< 0.01	n/s	n/s	n/s	< 0.01	n/s	n/s	n/s	n/s	<0.001	n/s	n/s	< 0.01	n/s
Zinc	n/s	n/s	109.00	n/s	n/s	n/s	76.70	n/s	n/s	n/s	n/s	81.00	n/s	n/s	67.50	n/s
Zirconium	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.006	n/s	n/s	-	n/s
Metals																
Hardness, Ca and Mg - calc. (mg $CaCO_3$/L)	n/s	n/s	587	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	-	n/s
Hardness, Total - calc. (mg $CaCO_3$/L)	n/s	n/s	1020	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	-	n/s
Physical and Aggregate Properties																
Alkalinity Tot-pH 4.5 (mg $CaCO_3$/L)	n/s	n/s	32.5	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	10	n/s	n/s	-	n/s
Chloride (Cl)	n/s	n/s	0.7	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.5	n/s	n/s	-	n/s
Flouride (F)	n/s	n/s	0.25	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.05	n/s	n/s	-	n/s
Sulphate (SO4)	n/s	n/s	1070.000	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	1060.000	n/s	n/s	-	n/s
Bromide (Br)	n/s	n/s	< 0.05	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	-	n/s
Nitrate as N	n/s	n/s	0.061	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	-	n/s
Nitrite as N	n/s	n/s	< 0.005	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	-	n/s
Phosphorous - Ortho as P	n/s	n/s	< 0.05	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	-	n/s
pH (pH Units)	n/s	n/s	6.380	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	6.300	n/s	n/s	-	n/s
Residue, Filterable (TDS)	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	-	n/s
Residue, Nonfilterable (NFR/TSS)	n/s	n/s	234	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	-	n/s
Hydroxide	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<5	n/s	n/s	-	n/s
Carbonate	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	<6	n/s	n/s	-	n/s
Bicarbonate	n/s	n/s	-	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	13	n/s	n/s	-	n/s
Conductivity (uS/cm)	n/s	n/s	1580.000	n/s	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	-	n/s

Notes: [1] All units are in mg/L unless otherwise indicat

Location Description	Galkeno 300 Flow Path Upstream of Culvert #4 at Silver Trail Highway				Galkeno 300 Flow Path (Traverse - C) Upstream of Culvert #4 at Silver Trail Highway				Galkeno 300 Flow Bisecting Silver Trail Highway Above Culvert #4				Culvert #4 at Silver Trail Highway				Main Highway Culvert (Most Northern Surface Water Sample Site)				Galkeno 300 Flow Path (Traverse - D) at Galkeno 900 Road				Galkeno 300 Flow Path in Ditch of Galkeno 900 Road Above Culvert #1				Detection Limit	CCME Guidelines
Sampler	DB	DB	DB	TR	DB	DB	RM	NS,PI,TR	DB	DB	DB	TR	DB	DB	DB	TR	DB	DB	DB	NS,PI,TR	DB	DB	RM	NS,PI,TR	DB	DB	DB	NS,PI,TR		
Station ID	G3-SW14				G3-SW07				G3-SW15				G3-SW05 (aka ACG-WQ10)				G3-SW06				G3-SW02				G3-SW04				(mostly Norwest Labs)	Water: Freshwater Aquatic Life
Lab	n/a	n/a	n/a	NW	n/a	n/a	PESC	n/a	n/a	n/a	n/a	NW	n/a	n/a	n/a	NW	n/a	n/a	PESC	n/a	n/a	n/a	PESC	n/a	n/a	n/a	PESC	n/a		
Lab Lot ID	n/a	n/a	n/a	273254-6	n/a	n/a	94709	n/a	n/a	n/a	n/a	273254-7	n/a	n/a	n/a	273254-8	n/a	n/a	94710	n/a	n/a	n/a	94710	n/a	n/a	n/a	94710	n/a		
Date	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03	17-Sep-03	25-Sep-03	16-Oct-03	28-Nov-03		
Parameter [1]																														
Dissolved Metals (Trace)																														
Aluminum	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.08	0.08	n/s	n/s	n/s	n/s	-	n/s	< 0.05	< 0.05	n/s	n/s	0.01	0.005-0.1
Antimony	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	-	n/s	< 0.05	< 0.05	n/s	n/s	0.02	
Arsenic	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	-	n/s	< 0.05	< 0.05	n/s	n/s	0.02	0.005
Barium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.030	0.038	n/s	n/s	n/s	n/s	-	n/s	0.049	0.064	n/s	n/s	0.0005	
Beryllium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.001	< 0.001	n/s	n/s	n/s	n/s	-	n/s	< 0.001	< 0.001	n/s	n/s	0.0005	
Bismuth	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	0.02	
Boron	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.01	0.02	n/s	n/s	n/s	n/s	-	n/s	< 0.01	< 0.01	n/s	n/s	0.01	
Cadmium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.005	< 0.005	n/s	n/s	n/s	n/s	-	n/s	0.012	0.008	n/s	n/s	0.0005	0.000017
Calcium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	8.5	10.2	n/s	n/s	n/s	n/s	-	n/s	331	381	n/s	n/s	0.01	
Chromium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.005	< 0.005	n/s	n/s	n/s	n/s	-	n/s	< 0.005	< 0.005	n/s	n/s	0.001	
Cobalt	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.005	< 0.005	n/s	n/s	n/s	n/s	-	n/s	< 0.005	< 0.005	n/s	n/s	0.001	
Copper	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.259	< 0.005	n/s	n/s	n/s	n/s	-	n/s	0.260	0.258	n/s	n/s	0.001	0.002-0.004
Iron	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.023	0.022	n/s	n/s	n/s	n/s	-	n/s	0.188	0.013	n/s	n/s	0.002	0.3
Lead	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	-	n/s	< 0.05	< 0.05	n/s	n/s	0.005	0.001-0.007
Lithium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	0.005	
Magnesium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	2.3	2.7	n/s	n/s	n/s	n/s	-	n/s	52.1	54.5	n/s	n/s	0.01	
Manganese	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.037	0.001	n/s	n/s	n/s	n/s	-	n/s	0.339	0.473	n/s	n/s	0.0005	
Molybdenum	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.01	< 0.01	n/s	n/s	n/s	n/s	-	n/s	0.02	0.02	n/s	n/s	0.01	0.073
Nickel	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.02	< 0.02	n/s	n/s	n/s	n/s	-	n/s	0.03	0.03	n/s	n/s	0.001	0.025-0.15
Phosphorus	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.1	< 0.1	n/s	n/s	n/s	n/s	-	n/s	< 0.1	< 0.1	n/s	n/s	0.05	
Potassium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.1	< 0.1	n/s	n/s	n/s	n/s	-	n/s	1.1	1.1	n/s	n/s	0.3	
Selenium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	-	n/s	< 0.05	< 0.05	n/s	n/s	0.02	0.001
Silicon	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	2.96	3.24	n/s	n/s	n/s	n/s	-	n/s	5.46	5.49	n/s	n/s	0.05	
Silver	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.01	< 0.01	n/s	n/s	n/s	n/s	-	n/s	< 0.01	< 0.01	n/s	n/s	0.002	0.0001
Sodium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.5	0.4	n/s	n/s	n/s	n/s	-	n/s	3.2	3.5	n/s	n/s	0.05	
Strontium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.024	0.029	n/s	n/s	n/s	n/s	-	n/s	0.863	1.03	n/s	n/s	0.005	
Sulphur	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	5.33	5.25	n/s	n/s	n/s	n/s	-	n/s	300	357	n/s	n/s	0.2	
Thorium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	0.005	
Tin	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	-	n/s	0.11	0.12	n/s	n/s	0.005	
Titanium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.002	< 0.002	n/s	n/s	n/s	n/s	-	n/s	< 0.002	< 0.002	n/s	n/s	0.001	
Uranium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-			n/s	n/s	n/s	n/s	-	n/s			n/s	n/s	0.06	
Vanadium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.01	< 0.01	n/s	n/s	n/s	n/s	-	n/s	< 0.01	< 0.01	n/s	n/s	0.001	
Zinc	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.032	0.012	n/s	n/s	n/s	n/s	-	n/s	5.79	4.63	n/s	n/s	0.001	0.03
Zirconium	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	0.005	
Total Metals (Trace)																														
Aluminum	n/s	n/s	n/s	0.84	n/s	n/s	1.87	n/s	n/s	n/s	n/s	0.07	n/s	n/s	n/s	0.04	0.28	0.23	n/s	n/s	n/s	n/s	0.26	n/s	1.67	9.27	n/s	n/s	0.01	0.005-0.1
Antimony	n/s	n/s	n/s	0.03	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	<0.02	n/s	n/s	n/s	0.06	< 0.06	< 0.06	n/s	n/s	n/s	n/s	< 0.06	n/s	< 0.06	< 0.06	n/s	n/s	0.02	
Arsenic	n/s	n/s	n/s	<0.02	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	<0.02	n/s	n/s	n/s	<0.02	< 0.06	< 0.06	n/s	n/s	n/s	n/s	< 0.06	n/s	< 0.06	< 0.06	n/s	n/s	0.02	0.005
Barium	n/s	n/s	n/s	0.0456	n/s	n/s	0.059	n/s	n/s	n/s	n/s	0.042	n/s	n/s	n/s	0.0389	0.039	0.042	n/s	n/s	n/s	n/s	0.053	n/s	0.075	0.267	n/s	n/s	0.0005	
Beryllium	n/s	n/s	n/s	<0.0006	n/s	n/s	< 0.001	n/s	n/s	n/s	n/s	<0.0006	n/s	n/s	n/s	<0.0006	< 0.001	< 0.001	n/s	n/s	n/s	n/s	< 0.001	n/s	< 0.001	< 0.001	n/s	n/s	0.0005	
Bismuth	n/s	n/s	n/s	<0.02	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.02	n/s	n/s	n/s	<0.02	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	0.02	
Boron	n/s	n/s	n/s	-	n/s	n/s	< 0.01	n/s	n/s	n/s	n/s		n/s	n/s	n/s		< 0.01	< 0.01	n/s	n/s	n/s	n/s	< 0.01	n/s	< 0.01	< 0.01	n/s	n/s	0.01	
Cadmium	n/s	n/s	n/s	0.1020	n/s	n/s	0.0430	n/s	n/s	n/s	n/s	0.0518	n/s	n/s	n/s	0.0478	< 0.006	< 0.006	n/s	n/s	n/s	n/s	< 0.006	n/s	0.014	0.012	n/s	n/s	0.0005	0.000017
Calcium	n/s	n/s	n/s	283	n/s	n/s	227	n/s	n/s	n/s	n/s	269	n/s	n/s	n/s	289	9.2	10.7	n/s	n/s	n/s	n/s	347	n/s	302	344	n/s	n/s	0.01	
Chromium	n/s	n/s	n/s	0.012	n/s	n/s	< 0.006	n/s	n/s	n/s	n/s	0.009	n/s	n/s	n/s	0.009	< 0.006	< 0.006	n/s	n/s	n/s	n/s	< 0.006	n/s	< 0.006	0.013	n/s	n/s	0.001	
Cobalt	n/s	n/s	n/s	0.026	n/s	n/s	< 0.006	n/s	n/s	n/s	n/s	0.01	n/s	n/s	n/s	0.01	< 0.006	< 0.006	n/s	n/s	n/s	n/s	< 0.006	n/s	< 0.006	0.009	n/s	n/s	0.001	
Copper	n/s	n/s	n/s	0.003	n/s	n/s	< 0.006	n/s	n/s	n/s	n/s	0.004	n/s	n/s	n/s	<0.001	< 0.006	< 0.006	n/s	n/s	n/s	n/s	< 0.006	n/s	< 0.006	0.007	n/s	n/s	0.001	0.002-0.004
Iron	n/s	n/s	n/s	2.0300	n/s	n/s	2.7000	n/s	n/s	n/s	n/s	0.0980	n/s	n/s	n/s	0.0810	0.398	0.341	n/s	n/s	n/s	n/s	0.6980	n/s	2.91	17.2	n/s	n/s	0.002	0.3
Lead	n/s	n/s	n/s	0.009	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	<0.006	n/s	n/s	n/s	<0.006	< 0.06	< 0.06	n/s	n/s	n/s	n/s	< 0.06	n/s	< 0.06	< 0.06	n/s	n/s	0.005	0.001-0.007
Lithium	n/s	n/s	n/s	0.019	n/s	n/s	-	n/s	n/s	n/s	n/s	0.018	n/s	n/s	n/s	0.019	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	0.005	
Magnesium	n/s	n/s	n/s	55.3	n/s	n/s	45.6	n/s	n/s	n/s	n/s	48.1	n/s	n/s	n/s	51.9	2.3	2.8	n/s	n/s	n/s	n/s	32.3	n/s	48.3	55.0	n/s	n/s	0.01	
Manganese	n/s	n/s	n/s	89.6	n/s	n/s	44.3	n/s	n/s	n/s	n/s	78.9	n/s	n/s	n/s	71.7	0.027	0.012	n/s	n/s	n/s	n/s	0.158	n/s	0.346	0.723	n/s	n/s	0.0005	
Molybdenum	n/s	n/s	n/s	0.01	n/s	n/s	0.01	n/s	n/s	n/s	n/s	<0.01	n/s	n/s	n/s	<0.01	< 0.01	< 0.01	n/s	n/s	n/s	n/s	0.01	n/s	0.01	0.01	n/s	n/s	0.01	0.073
Nickel	n/s	n/s	n/s	0.217	n/s	n/s	0.12	n/s	n/s	n/s	n/s	0.13	n/s	n/s	n/s	0.122	< 0.02	< 0.02	n/s	n/s	n/s	n/s	< 0.02	n/s	0.04	0.06	n/s	n/s	0.001	0.025-0.15
Phosphorus	n/s	n/s	n/s	0.16	n/s	n/s	0.1	n/s	n/s	n/s	n/s	<0.06	n/s	n/s	n/s	<0.06	< 0.1	< 0.1	n/s	n/s	n/s	n/s	< 0.1	n/s	0.1	0.5	n/s	n/s	0.05	
Potassium	n/s	n/s	n/s	0.4	n/s	n/s	0.7	n/s	n/s	n/s	n/s	<0.3	n/s	n/s	n/s	0.7	0.1	< 0.1	n/s	n/s	n/s	n/s	0.7	n/s	1.3	2.7	n/s	n/s	0.3	
Selenium	n/s	n/s	n/s	<0.02	n/s	n/s	< 0.06	n/s	n/s	n/s	n/s	0.03	n/s	n/s	n/s	<0.02	< 0.06	< 0.06	n/s	n/s	n/s	n/s	< 0.06	n/s	< 0.06	< 0.06	n/s	n/s	0.02	0.001
Silicon	n/s	n/s	n/s	5.3	n/s	n/s	6.79	n/s	n/s	n/s	n/s	4.7	n/s	n/s	n/s	4.7	2.81	3.11	n/s	n/s	n/s	n/s	4.11	n/s	6.08	16.9	n/s	n/s	0.05	
Silver	n/s	n/s	n/s	<0.002	n/s	n/s	< 0.01	n/s	n/s	n/s	n/s	<0.002	n/s	n/s	n/s	<0.002	< 0.01	< 0.01	n/s	n/s	n/s	n/s	< 0.01	n/s	< 0.01	< 0.01	n/s	n/s	0.002	0.0001
Sodium	n/s	n/s	n/s	1.77	n/s	n/s	1.6	n/s	n/s	n/s	n/s	1.74	n/s	n/s	n/s	1.73	0.4	0.4	n/s	n/s	n/s	n/s	2.0	n/s	2.6	3.4	n/s	n/s	0.05	
Strontium	n/s	n/s	n/s	0.342	n/s	n/s	0.466	n/s	n/s	n/s	n/s	0.393	n/s	n/s	n/s	0.379	0.025	0.028	n/s	n/s	n/s	n/s	0.879	n/s	0.792	0.966	n/s	n/s	0.005	
Sulphur	n/s	n/s	n/s	422	n/s	n/s	302	n/s	n/s	n/s	n/s	360	n/s	n/s	n/s	383	4.90	4.96	n/s	n/s	n/s	n/s	328	n/s	311	312	n/s	n/s	0.2	
Thorium	n/s	n/s	n/s	<0.006	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.006	n/s	n/s	n/s	<0.006	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	0.005	
Tin	n/s	n/s	n/s	0.039	n/s	n/s	0.07	n/s	n/s	n/s	n/s	0.028	n/s	n/s	n/s	0.048	< 0.06	< 0.06	n/s	n/s	n/s	n/s	0.06	n/s	0.07	< 0.06	n/s	n/s	0.005	
Titanium	n/s	n/s	n/s	0.028	n/s	n/s	0.064	n/s	n/s	n/s	n/s	<0.001	n/s	n/s	n/s	<0.001	0.006	0.033	n/s	n/s	n/s	n/s	0.009	n/s	0.043	0.261	n/s	n/s	0.001	
Uranium	n/s	n/s	n/s	<0.07	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.07	n/s	n/s	n/s	<0.07	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	0.06	
Vanadium	n/s	n/s	n/s	<0.001	n/s	n/s	< 0.01	n/s	n/s	n/s	n/s	<0.001	n/s	n/s	n/s	<0.001	< 0.01	< 0.01	n/s	n/s	n/s	n/s	< 0.01	n/s	< 0.01	0.02	n/s	n/s	0.001	
Zinc	n/s	n/s	n/s	66.80	n/s	n/s	35.80	n/s	n/s	n/s	n/s	52.70	n/s	n/s	n/s	47.90	0.023	0.023	n/s	n/s	n/s	n/s	2.690	n/s	5.32	6.65	n/s	n/s	0.001	0.03
Zirconium	n/s	n/s	n/s	<0.006	n/s	n/s	-	n/s	n/s	n/s	n/s	<0.006	n/s	n/s	n/s	<0.006	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	0.005	
Metals																														
Hardness, Ca and Mg - calc. (mg $CaCO_3$/L)	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	30.8	36.6	n/s	n/s	n/s	n/s	-	n/s	1040	1180	n/s	n/s	0.4	
Hardness, Total - calc. (mg $CaCO_3$/L)	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	31.7	37.0	n/s	n/s	n/s	n/s	-	n/s	1050	1190	n/s	n/s	0.4	
Physical and Aggregate Properties																														
Alkalinity Tot-pH 4.5 (mg $CaCO_3$/L)	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	15.7	19.4	n/s	n/s	n/s	n/s	-	n/s	114	117	n/s	n/s	5	
Chloride (Cl)	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.1	0.1	n/s	n/s	n/s	n/s	-	n/s	0.4	0.7	n/s	n/s	0.05	
Flouride (F)	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.02	0.02	n/s	n/s	n/s	n/s	-	n/s	0.04	< 0.01	n/s	n/s	0.05	
Sulphate (SO4)	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	14.7	16.2	n/s	n/s	n/s	n/s	-	n/s	934	1100	n/s	n/s	0.6	
Bromide (Br)	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	-	n/s	< 0.05	< 0.05	n/s	n/s	0.05	
Nitrate as N	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	0.345	0.487	n/s	n/s	n/s	n/s	-	n/s	0.250	0.271	n/s	n/s	0.002	
Nitrite as N	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.005	< 0.005	n/s	n/s	n/s	n/s	-	n/s	< 0.005	< 0.005	n/s	n/s	0.005	
Phosphorous - Ortho as P	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	< 0.05	< 0.05	n/s	n/s	n/s	n/s	-	n/s	< 0.05	< 0.05	n/s	n/s	0.05	
pH (pH Units)	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	6.79	6.86	n/s	n/s	n/s	n/s	-	n/s	7.56	7.67	n/s	n/s	0.1	
Residue, Filterable (TDS)	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	1	
Residue, Nonfilterable (NFR/TSS)	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	1	
Hydroxide	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	5	
Carbonate	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	5	
Bicarbonate	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	-	-	n/s	n/s	n/s	n/s	-	n/s	-	-	n/s	n/s	5	
Conductivity (uS/cm)	n/s	n/s	n/s	-	n/s	n/s	-	n/s	n/s	n/s	n/s	-	n/s	n/s	n/s	-	75	76	n/s	n/s	n/s	n/s	-	n/s	1650	1760	n/s	n/s	2	

Notes: [1] All units are in mg/L unless otherwise indicat

Examination of Natural Attenuation of Metals in Aqueous Solution by Soils in Northern Environments

Data Report

APPENDIX B

SOILS DATA SUMMARY

Examination of Natural Attenuation of Metals
in Aqueous Solution by Soils in Northern Environments

Data Report
Appendix B - Soils Data Summary

Location Description	Units	Lysimeter 1 - Fence 1			Lysimeter 2 - Fence 1			Lysimeter 3 - Fence 1			Drive Point 1 - Fence 2		Drive Point 2 - Fence 2		Drive Point 3 - Fence 2		Drive Point 4 - Fence 2		Lysimeter 4 - Fence 2	Lysimeter 5 - Fence 2	Detection Limit
Sampler		DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	
Station ID		ACG-L1			ACG-L2			ACG-L3			ACG-DP1		ACG-DP2		ACG-DP3		ACG-DP4		ACG-L4	ACG-L5	
Date		17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	17-Sep-03	
Lab Order No.		93703	93704	93705	93706	93707	93708	93709	93710	93711	93712	93713	93714	93715	93716	93717	93718	93719	93720	93721	
Sample Depth		0 - 15 cm	15 - 25 cm	62 cm	10 - 16 cm	16 - 22 cm	67 cm	0 - 12 cm	12 - 24 cm	65 cm	0 - 12 cm	12 - 20 cm	8 - 18 cm	18 - 25 cm	0 - 4 cm	4 - 15 cm	0 - 10 cm	10 - 20 cm	73 cm	75 cm	
Soil Description		dark brown organic	light grey silty/sand, 0.5 cm gravel	silty clay/loamy, ice grains, permafrost at bottom	dark brown organic, slightly discolored orange with moss roots	silty/clay with orange staining, 1 cm gravel	silty/clay with gravel and collvium/moist soil	light orange frozen mossy layer with 25% dark organic with staining	light grey sandy/silt with gravel, minor orange staining	silty/clay with gravel & collvium/very wet	dark brown organic	light brown, silty/sand, no gravel, bottom 1" filled with water	dark brown organic	light grey silty/clay, minor discoloration, 0.25 cm gravel	light brown organic mixed with dark organic, moss roots	light grey/greenish silty clay with gravel	brownish/black organics, frozen, moss roots	light brown silty/sand, orange discoloration, no gravel, little moisture	silty/sandy clay with large gravel	silty/sand clay with gravel colluvium, bottom 1" filled with water	
Parameter[1]																					
Particle Size Analysis																					
D: Dry Seive, 2.00 mm, % < by wt.	% (W/W)	97.66	99.48	99.33	94.42	86.66	66.85	96.27	99.36	64.47	98.22	90.52	97.45	99.99	97.31	66.41	93.39	99.92	54.46	54.42	0.01
G: Wet Seive 0.250 mm, % entire sample by wt.	% (W/W)	94.37	99.10	98.52	81.66	77.29	49.55	84.35	94.83	48.34	95.69	81.43	89.96	99.60	94.65	48.07	80.53	97.01	39.68	35.69	0.01
H: Wet Seive 0.125 mm, % entire sample by wt.	% (W/W)	92.43	98.59	97.78	78.49	74.73	46.48	79.29	91.60	43.71	94.68	77.46	85.72	98.03	92.09	44.63	77.81	90.15	36.41	32.19	0.01
K: Pipette, 0.053 mm, % < by wt.	% (W/W)	87.24	91.05	90.79	75.59	63.42	34.19	70.86	74.38	33.01	86.83	60.37	79.41	81.43	80.22	37.61	72.36	66.14	28.00	22.94	0.01
M: Pipette, 0.002 mm % < by wt.	% (W/W)	27.32	21.67	23.54	18.43	0.36	5.30	22.24	13.73	6.43	22.47	11.16	19.31	12.59	18.67	6.53	16.75	14.82	5.38	4.38	0.01
N: Gravel, >2.00 mm, dry sieve, % < by wt.	% (W/W)	2.34	0.52	0.67	5.58	13.34	33.15	3.73	0.64	35.53	1.78	9.48	2.55	0.01	2.69	33.59	6.61	0.08	45.54	45.58	0.01
O: Sand, <2.00 mm>0.053 mm, pipet, % entire sample by wt.	% (W/W)	12.46	8.43	8.54	18.84	23.24	32.66	25.40	24.97	31.46	11.39	30.15	20.06	18.57	17.10	28.81	21.03	33.77	26.46	31.48	0.01
P: Silt, <0.053 mm>0.002 mm, pipet, % entire sample by wt.	% (W/W)	58.52	69.38	67.25	57.16	63.06	28.89	48.62	60.65	26.58	64.36	49.21	58.58	68.84	61.54	31.08	55.60	51.32	22.62	18.56	0.01
Q: Clay, <0.002 mm, pipet, % entire sample by wt.	% (W/W)	26.68	21.67	23.54	18.43	0.36	5.30	22.24	13.73	6.43	22.47	11.16	18.81	12.59	18.67	6.53	16.75	14.82	5.38	4.38	0.01
Textural Category CSSC[2]	None	SiltClaLom	Silt Loam	Silt Loam	Silt Loam	Silt Loam	Loam	Silt Loam	Silt Loam	Loam	Silt Loam	Silt Loam	Silt Loam	Silt Loam	Silt Loam	Loam	Silt Loam	Silt Loam	Loam	Sandy Loam	
Total Metals (ICP)																					
Aluminum	ug/g (dry)	8710	16200	16300	4620	13100	10800	6870	11500	9760	13700	10700	5090	11500	12600	13000	1100	13200	13300	12300	8
Antimony	ug/g (dry)	11	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	8
Arsenic	ug/g (dry)	71	11	23	12	22	16	20	< 8	73	71	41	12	34	55	52	< 8	43	50	54	8
Barium	ug/g (dry)	493	647	579	1220	323	380	181	257	249	413	324	949	257	258	242	65.6	261	370	273	0.2
Beryllium	ug/g (dry)	0.5	0.6	0.6	0.3	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.3	0.5	0.7	0.7	< 0.2	0.6	0.7	0.6	0.2
Boron	ug/g (dry)	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	2
Cadmium	ug/g (dry)	92.3	13.6	28.1	79.4	3.9	4.1	59.4	1.7	6.5	26.8	13.5	36.4	7.1	102	3.3	5.0	0.9	5.0	3.2	0.8
Calcium	ug/g (dry)	17400	8860	6090	17100	2650	2650	24200	3250	7130	4530	3330	12200	3880	9450	3390	27100	4390	5140	3520	20
Chromium	ug/g (dry)	11.8	23.7	23.9	4.0	22.0	19.3	6.0	18.8	17.9	21.6	18.0	5.8	18.9	17.9	20.8	1.7	18.7	20.2	20.3	0.8
Cobalt	ug/g (dry)	14.0	11.1	10.4	144	9.9	7.1	3.3	3.8	10.7	19.2	8.5	79.3	6.2	32.3	9.2	3.0	12.2	15.1	9.6	0.8
Copper	ug/g (dry)	21.7	16.9	17.8	5.2	13.1	16.1	18.3	10.2	34.4	29.3	20.0	33.6	17.9	17.8	23.5	6.9	13.4	23.4	21.5	0.8
Iron	ug/g (dry)	11600	20700	20300	11000	18800	20100	33800	11600	29900	31500	23200	9900	18500	25300	24200	2120	24400	26400	26800	0.8
Lead	ug/g (dry)	321	124	179	108	170	116	380	107	96	145	95	48	68	154	131	41	162	143	103	8
Magnesium	ug/g (dry)	2890	4890	4850	1540	4170	4080	1530	3200	5460	4450	3640	1360	4520	3990	4080	1850	3560	4150	4140	20
Manganese	ug/g (dry)	19600	1190	3810	47810	746	578	1340	127	549	4420	1240	54930	595	5950	368	639	619	972	451	0.2
Molybdenum	ug/g (dry)	< 2	< 2	< 2	5	2	< 2	< 2	< 2	3	2	2	< 2	2	3	3	< 2	2	2	3	2
Nickel	ug/g (dry)	82	31	46	83	23	20	29	13	32	45	28	69	22	31	22	4	17	27	24	3
Phosphorus	ug/g (dry)	721	771	724	1190	592	718	1360	656	1230	873	875	1150	1170	1010	934	802	765	987	1020	20
Potassium	ug/g (dry)	548	676	730	392	467	449	323	543	692	691	475	363	634	676	562	412	503	548	576	20
Selenium	ug/g (dry)	9	< 8	< 8	18	< 8	< 8	< 8	< 8	< 8	< 8	< 8	20	< 8	< 8	< 8	< 8	< 8	< 8	< 8	8
Silicon	ug/g (dry)	504	786	698	106	792	571	208	514	694	568	554	150	594	456	728	72	665	605	679	8
Silver	ug/g (dry)	6	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	2
Sodium	ug/g (dry)	< 20	55	55	104	42	47	25	61	60	54	51	< 20	63	63	54	22	46	54	50	20
Strontium	ug/g (dry)	75.3	53.2	42.0	66.0	19.9	22.8	97.8	25.1	30.0	29.7	23.6	61.2	25.1	34.9	21.9	81.5	21.8	28.8	23.9	0.2
Sulphur	ug/g (dry)	1610	904	1050	3370	465	344	3500	686	402	1330	736	3340	370	1120	301	4890	481	512	343	8
Tin	ug/g (dry)	8	< 8	< 8	9	< 8	< 8	< 8	< 8	< 8	< 8	< 8	8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	8
Titanium	ug/g (dry)	109	120	116	69.9	177	249	117	226	230	160	171	78.7	239	124	214	40.0	175	145	218	0.3
Vanadium	ug/g (dry)	20	36	39	8	40	35	15	27	31	39	34	5	32	39	39	3	39	37	38	2
Zinc	ug/g (dry)	13100	2380	4390	8880	1080	591	5230	89.7	643	4030	1670	7010	819	1010	262	205.000	155	305	487	0.3
Total Metals (ICP-MS)																					
Arsenic	ug/g (dry)	60.7	11.7	20.6	10.6	19.9	15.3	17.7	5.5	63.9	61.9	35.1	10.0	30.9	47.1	45.6	3.5	38.3	43.7	47.5	0.1
Selenium	ug/g (dry)	1.5	1.5	2.0	0.4	0.4	0.5	1.5	< 0.2	< 0.2	0.5	0.4	1.3	0.6	0.5	1.0	0.4	0.6	0.8	0.3	0.2

[1] The above results were reported by the Pacific Environmental Science Centre

[2] CSSC: Canadian System of Soil Classification

Examination of Natural Attenuation of Metals in Aqueous Solution by Soils in Northern Environments

Data Report

APPENDIX C

LABORATORY DATA

2645 Dollarton Highwa y
North Vancouver, BC. Canada V7H - 1B1
Phone (604) 924-2500 Fax (604) 924-2555

Final Analytical Results with QC data

PESC FOLDER # : 200300620

Location:	UKHM
Type of Sample:	Fresh Water/General Soil (Soil)
Submitted By:	Benoit Godin Environment Canada 91782 Alaska Hwy Whitehorse, YT Canada Y1A 5B7 Phone: 867-667-4592 Fax: 867-667-7962
Logged In:	Friday July 25, 2003
Completed:	Friday September 5, 2003 (1194 results)
Client Code:	2561-101 2561-101 EP YUKON ENV ASSESSMENT
Sample Priority:	Normal

Authorized by: _____

Richard Strub
QA Officer

Notes:

RICHARD, SEND SECOND COPY OF REPORT TO E.SOPROVICH. SEND REPORTS IN EXCEL AND HARD COPY.

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Order No: 91873 - ACG-WQ-G3-09 250 ML **Start Date: 7/17/03 12:00:00AM**				
Nutrients				
NH3				
Nitrogen, Ammonia as N	FWGE	0.088	0.005	mg/L
Order No: 91874 - ACG-WQ-G3-09 1 L BOTTLE **Start Date: 7/17/03 12:00:00AM**				
General				
Alkalinity Tot-pH4.5				
Alkalinity to pH 4.5	FWGE	28.6	0.5	mg CaCO3 / L
ICA (Sulphate)				
Sulphate (SO4)	FWGE	1030	50	mg/L
pH				
pH	FWGE	5.92	0.01	pH Units
Residue: Filterable				
Residue, Filterable (TSS)	FWGE	1880	10	mg/L
Residue: Nonfilt.				
Residue, Nonfilterable (NFR)	FWGE	27	5	mg/L
Specific Conductance				
Conductivity	FWGE	1620	2	uS/cm
Nutrients				
NO2				
Nitrogen, Nitrite as N	FWGE	< 0.002	0.002	mg/L
NO23				
Nitrogen, Nitrate + Nitrite as N	FWGE	0.039	0.002	mg/L
Total Phosphorus				
Phosphorus, Total as P	FWGE	< 0.002	0.002	mg/L
Order No: 91875 - ACG-WQ-G3-01 **Start Date: 7/17/03 12:00:00AM**				
Metals				
Hardness CaMg extr.				
Hardness,Calcium+Magnesium - calc.	FWGE	813	0.4	mg CaCO3 / L
Hardness Total extr.				
Hardness, Total - calc.	FWGE	2120	0.4	mg CaCO3 / L
ICP Extractable				
Aluminum (Al)	FWGE	118	3	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	0.24	0.05	mg/L
Barium (Ba)	FWGE	0.534	0.001	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Berylium (Be)	FWGE	0.019	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.705	0.005	mg/L
Calcium (Ca)	FWGE	207	0.1	mg/L
Chromium (Cr)	FWGE	0.161	0.005	mg/L
Cobalt (Co)	FWGE	0.231	0.005	mg/L
Copper (Cu)	FWGE	1.79	0.005	mg/L
Iron (Fe)	FWGE	178	0.005	mg/L
Lead (Pb)	FWGE	2.73	0.05	mg/L
Magnesium (Mg)	FWGE	72.1	0.1	mg/L
Manganese (Mn)	FWGE	190	0.05	mg/L
Molybdenum (Mo)	FWGE	0.02	0.01	mg/L
Nickel (Ni)	FWGE	0.84	0.02	mg/L
Phosphorus (P)	FWGE	4.9	0.1	mg/L
Potassium (K)	FWGE	5.6	0.1	mg/L
Selenium (Se)	FWGE	0.10	0.05	mg/L
Silicon (Si)	FWGE	89	3	mg/L
Silver (Ag)	FWGE	0.04	0.01	mg/L
Sodium (Na)	FWGE	3.3	0.1	mg/L
Strontium (Sr)	FWGE	0.529	0.001	mg/L
Sulfur (S)	FWGE	318	0.05	mg/L
Tin (Sn)	FWGE	0.07	0.05	mg/L
Titanium (Ti)	FWGE	0.875	0.002	mg/L
Vanadium (V)	FWGE	0.22	0.01	mg/L
Zinc (Zn)	FWGE	128	0.1	mg/L
ICP Total				
Aluminum (Al)	FWGE	350	3	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	0.40	0.06	mg/L
Barium (Ba)	FWGE	11.4	0.05	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.705	0.006	mg/L
Calcium (Ca)	FWGE	220	0.1	mg/L
Chromium (Cr)	FWGE	0.486	0.006	mg/L
Cobalt (Co)	FWGE	0.360	0.006	mg/L
Copper (Cu)	FWGE	2.34	0.006	mg/L
Iron (Fe)	FWGE	577	0.3	mg/L
Lead (Pb)	FWGE	3.36	0.06	mg/L
Magnesium (Mg)	FWGE	147	0.1	mg/L
Manganese (Mn)	FWGE	207	0.05	mg/L
Molybdenum (Mo)	FWGE	0.09	0.01	mg/L
Nickel (Ni)	FWGE	1.51	0.02	mg/L
Phosphorus (P)	FWGE	11.8	0.1	mg/L
Potassium (K)	FWGE	25.3	0.1	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	102	3	mg/L
Silver (Ag)	FWGE	0.13	0.01	mg/L
Sodium (Na)	FWGE	5.1	0.1	mg/L
Strontium (Sr)	FWGE	1.27	0.001	mg/L
Sulfur (S)	FWGE	310	0.06	mg/L
Tin (Sn)	FWGE	< 0.06	0.06	mg/L
Titanium (Ti)	FWGE	6.4	0.1	mg/L
Vanadium (V)	FWGE	0.74	0.01	mg/L
Zinc (Zn)	FWGE	135	0.1	mg/L
ICPMS Total				
Arsenic (As)	FWGE	216	0.1	ug/L
Cadmium (Cd)	FWGE	775	0.01	ug/L
Lead (Pb)	FWGE	3420	0.01	ug/L
Selenium (Se)	FWGE	7.2	0.2	ug/L
Silver (Ag)	FWGE	59.7	0.02	ug/L

Order No: 91876 - ACG-WQ-G3-02
Start Date: 7/17/03 12:00:00AM

Metals				
Hardness CaMg extr.				
Hardness,Calcium+Magnesium - calc.	FWGE	604	0.4	mg CaCO3 / L
Hardness Total extr.				
Hardness, Total - calc.	FWGE	1210	0.4	mg CaCO3 / L
ICP Extractable				
Aluminum (Al)	FWGE	0.52	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	0.52	0.05	mg/L
Barium (Ba)	FWGE	0.015	0.001	mg/L
Berylium (Be)	FWGE	0.005	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.552	0.005	mg/L
Calcium (Ca)	FWGE	178	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	0.094	0.005	mg/L
Copper (Cu)	FWGE	< 0.005	0.005	mg/L
Iron (Fe)	FWGE	52.6	0.005	mg/L
Lead (Pb)	FWGE	0.27	0.05	mg/L
Magnesium (Mg)	FWGE	38.7	0.1	mg/L
Manganese (Mn)	FWGE	160	0.05	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.43	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.7	0.1	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Selenium (Se)	FWGE	0.05	0.05	mg/L
Silicon (Si)	FWGE	5.60	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	1.6	0.1	mg/L
Strontium (Sr)	FWGE	0.295	0.001	mg/L
Sulfur (S)	FWGE	343	0.05	mg/L
Tin (Sn)	FWGE	0.07	0.05	mg/L
Titanium (Ti)	FWGE	0.038	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	142	0.1	mg/L
ICP Total				
Aluminum (Al)	FWGE	0.81	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	0.45	0.06	mg/L
Barium (Ba)	FWGE	0.019	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.574	0.006	mg/L
Calcium (Ca)	FWGE	180	0.1	mg/L
Chromium (Cr)	FWGE	< 0.006	0.006	mg/L
Cobalt (Co)	FWGE	0.095	0.006	mg/L
Copper (Cu)	FWGE	< 0.006	0.006	mg/L
Iron (Fe)	FWGE	52.8	0.006	mg/L
Lead (Pb)	FWGE	0.26	0.06	mg/L
Magnesium (Mg)	FWGE	38.6	0.1	mg/L
Manganese (Mn)	FWGE	165	0.05	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.44	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.7	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	6.26	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	1.5	0.1	mg/L
Strontium (Sr)	FWGE	0.316	0.001	mg/L
Sulfur (S)	FWGE	333	0.06	mg/L
Tin (Sn)	FWGE	0.07	0.06	mg/L
Titanium (Ti)	FWGE	0.041	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	144	0.1	mg/L
ICPMS Total				
Arsenic (As)	FWGE	393	0.1	ug/L
Cadmium (Cd)	FWGE	518	0.01	ug/L
Copper (Cu)	FWGE	38.5	0.05	ug/L
Lead (Pb)	FWGE	243	0.01	ug/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Selenium (Se)	FWGE	< 0.2	0.2	ug/L
Silver (Ag)	FWGE	1.11	0.02	ug/L

Order No: 91877 - ACG-WQ-G3-03
Start Date: 7/17/03 12:00:00AM

Metals

Hardness CaMg extr.

Hardness,Calcium+Magnesium - calc.	FWGE	612	0.4	mg CaCO3 / L

Hardness Total extr.

Hardness, Total - calc.	FWGE	1010	0.4	mg CaCO3 / L

ICP Extractable

Aluminum (Al)	FWGE	0.21	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	0.07	0.05	mg/L
Barium (Ba)	FWGE	0.016	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.390	0.005	mg/L
Calcium (Ca)	FWGE	180	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	0.024	0.005	mg/L
Copper (Cu)	FWGE	0.009	0.005	mg/L
Iron (Fe)	FWGE	0.086	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	39.6	0.1	mg/L
Manganese (Mn)	FWGE	128	0.05	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.41	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.9	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	4.69	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	1.7	0.1	mg/L
Strontium (Sr)	FWGE	0.367	0.001	mg/L
Sulfur (S)	FWGE	334	0.05	mg/L
Tin (Sn)	FWGE	0.07	0.05	mg/L
Titanium (Ti)	FWGE	0.041	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	106	0.1	mg/L

ICP Total

Aluminum (Al)	FWGE	0.25	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	< 0.06	0.06	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Barium (Ba)	FWGE	0.016	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.421	0.006	mg/L
Calcium (Ca)	FWGE	187	0.1	mg/L
Chromium (Cr)	FWGE	< 0.006	0.006	mg/L
Cobalt (Co)	FWGE	0.025	0.006	mg/L
Copper (Cu)	FWGE	0.014	0.006	mg/L
Iron (Fe)	FWGE	0.098	0.006	mg/L
Lead (Pb)	FWGE	< 0.06	0.06	mg/L
Magnesium (Mg)	FWGE	39.9	0.1	mg/L
Manganese (Mn)	FWGE	136	0.05	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.43	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.9	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	5.12	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	1.6	0.1	mg/L
Strontium (Sr)	FWGE	0.413	0.001	mg/L
Sulfur (S)	FWGE	335	0.06	mg/L
Tin (Sn)	FWGE	0.07	0.06	mg/L
Titanium (Ti)	FWGE	0.040	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	110	0.1	mg/L
ICPMS Total				
Arsenic (As)	FWGE	2.5	0.1	ug/L
Cadmium (Cd)	FWGE	364	0.01	ug/L
Copper (Cu)	FWGE	51.1	0.05	ug/L
Lead (Pb)	FWGE	2.18	0.01	ug/L
Selenium (Se)	FWGE	0.2	0.2	ug/L
Silver (Ag)	FWGE	0.14	0.02	ug/L

Order No: 91878 - ACG-WQ-G3-04
Start Date: 7/17/03 12:00:00AM

Metals				
Hardness CaMg extr.				
Hardness,Calcium+Magnesium - calc.	FWGE	754	0.4	mg CaCO3 / L
Hardness Total extr.				
Hardness, Total - calc.	FWGE	1090	0.4	mg CaCO3 / L
ICP Extractable				
Aluminum (Al)	FWGE	1.22	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Arsenic (As)	FWGE	0.06	0.05	mg/L
Barium (Ba)	FWGE	0.065	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.290	0.005	mg/L
Calcium (Ca)	FWGE	226	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	0.040	0.005	mg/L
Copper (Cu)	FWGE	0.019	0.005	mg/L
Iron (Fe)	FWGE	2.43	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	45.9	0.1	mg/L
Manganese (Mn)	FWGE	109	0.05	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.36	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	1.3	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	6.44	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	2.0	0.1	mg/L
Strontium (Sr)	FWGE	0.584	0.001	mg/L
Sulfur (S)	FWGE	359	0.05	mg/L
Tin (Sn)	FWGE	0.07	0.05	mg/L
Titanium (Ti)	FWGE	0.068	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	80.4	0.002	mg/L
ICP Total				
Aluminum (Al)	FWGE	2.86	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	< 0.06	0.06	mg/L
Barium (Ba)	FWGE	0.091	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.309	0.006	mg/L
Calcium (Ca)	FWGE	236	0.1	mg/L
Chromium (Cr)	FWGE	< 0.006	0.006	mg/L
Cobalt (Co)	FWGE	0.042	0.006	mg/L
Copper (Cu)	FWGE	0.029	0.006	mg/L
Iron (Fe)	FWGE	3.6	0.006	mg/L
Lead (Pb)	FWGE	< 0.06	0.06	mg/L
Magnesium (Mg)	FWGE	46.7	0.1	mg/L
Manganese (Mn)	FWGE	114	0.05	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.38	0.02	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	1.6	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	9.57	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	2.1	0.1	mg/L
Strontium (Sr)	FWGE	0.679	0.001	mg/L
Sulfur (S)	FWGE	356	0.06	mg/L
Tin (Sn)	FWGE	0.07	0.06	mg/L
Titanium (Ti)	FWGE	0.131	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	85.6	0.1	mg/L
ICPMS Total				
Arsenic (As)	FWGE	3.1	0.1	ug/L
Cadmium (Cd)	FWGE	277	0.01	ug/L
Copper (Cu)	FWGE	57.5	0.05	ug/L
Lead (Pb)	FWGE	4.63	0.01	ug/L
Selenium (Se)	FWGE	0.5	0.2	ug/L
Silver (Ag)	FWGE	0.15	0.02	ug/L

Order No: 91879 - ACG-WQ-G3-05
Start Date: 7/17/03 12:00:00AM

Metals				
Hardness CaMg extr.				
Hardness,Calcium+Magnesium - calc.	FWGE	1010	0.4	mg CaCO3 / L
Hardness Total extr.				
Hardness, Total - calc.	FWGE	1310	0.4	mg CaCO3 / L
ICP Extractable				
Aluminum (Al)	FWGE	1.60	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	0.06	0.05	mg/L
Barium (Ba)	FWGE	0.118	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.200	0.005	mg/L
Calcium (Ca)	FWGE	318	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	0.065	0.005	mg/L
Copper (Cu)	FWGE	0.030	0.005	mg/L
Iron (Fe)	FWGE	5.51	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	51.6	0.1	mg/L
Manganese (Mn)	FWGE	103	0.05	mg/L
Molybdenum (Mo)	FWGE	0.02	0.01	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Nickel (Ni)	FWGE	0.37	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	2.3	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	7.48	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	3.1	0.1	mg/L
Strontium (Sr)	FWGE	0.962	0.001	mg/L
Sulfur (S)	FWGE	439	0.05	mg/L
Tin (Sn)	FWGE	0.08	0.05	mg/L
Titanium (Ti)	FWGE	0.072	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	66.3	0.002	mg/L
ICP Total				
Aluminum (Al)	FWGE	3.98	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	< 0.06	0.06	mg/L
Barium (Ba)	FWGE	0.161	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.204	0.006	mg/L
Calcium (Ca)	FWGE	310	0.1	mg/L
Chromium (Cr)	FWGE	< 0.006	0.006	mg/L
Cobalt (Co)	FWGE	0.065	0.006	mg/L
Copper (Cu)	FWGE	0.040	0.006	mg/L
Iron (Fe)	FWGE	9.6	0.006	mg/L
Lead (Pb)	FWGE	< 0.06	0.06	mg/L
Magnesium (Mg)	FWGE	51.5	0.1	mg/L
Manganese (Mn)	FWGE	113	0.05	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.36	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	2.7	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	11.6	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	3.2	0.1	mg/L
Strontium (Sr)	FWGE	1.03	0.001	mg/L
Sulfur (S)	FWGE	406	0.06	mg/L
Tin (Sn)	FWGE	0.06	0.06	mg/L
Titanium (Ti)	FWGE	0.139	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	71.7	0.1	mg/L
ICPMS Total				
Arsenic (As)	FWGE	4.5	0.1	ug/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Cadmium (Cd)	FWGE	177	0.01	ug/L
Copper (Cu)	FWGE	66.4	0.05	ug/L
Lead (Pb)	FWGE	4.17	0.01	ug/L
Selenium (Se)	FWGE	0.5	0.2	ug/L
Silver (Ag)	FWGE	0.13	0.02	ug/L

Order No: 91880 - ACG-WQ-G3-06
Start Date: 7/17/03 12:00:00AM

Metals

Hardness CaMg extr.

Hardness,Calcium+Magnesium - calc.	FWGE	997	0.4	mg CaCO3 / L

Hardness Total extr.

Hardness, Total - calc.	FWGE	1260	0.4	mg CaCO3 / L

ICP Extractable

Aluminum (Al)	FWGE	< 0.05	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	< 0.05	0.05	mg/L
Barium (Ba)	FWGE	0.026	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.071	0.005	mg/L
Calcium (Ca)	FWGE	313	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	0.094	0.005	mg/L
Copper (Cu)	FWGE	< 0.005	0.005	mg/L
Iron (Fe)	FWGE	0.388	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	52.5	0.1	mg/L
Manganese (Mn)	FWGE	99.7	0.05	mg/L
Molybdenum (Mo)	FWGE	0.02	0.01	mg/L
Nickel (Ni)	FWGE	0.31	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	1.9	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	5.87	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	3.0	0.1	mg/L
Strontium (Sr)	FWGE	0.832	0.001	mg/L
Sulfur (S)	FWGE	402	0.05	mg/L
Tin (Sn)	FWGE	0.08	0.05	mg/L
Titanium (Ti)	FWGE	0.023	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	50.6	0.002	mg/L

ICP Total

Aluminum (Al)	FWGE	< 0.06	0.06	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	< 0.06	0.06	mg/L
Barium (Ba)	FWGE	0.028	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.078	0.006	mg/L
Calcium (Ca)	FWGE	333	0.1	mg/L
Chromium (Cr)	FWGE	< 0.006	0.006	mg/L
Cobalt (Co)	FWGE	0.102	0.006	mg/L
Copper (Cu)	FWGE	< 0.006	0.006	mg/L
Iron (Fe)	FWGE	0.425	0.006	mg/L
Lead (Pb)	FWGE	< 0.06	0.06	mg/L
Magnesium (Mg)	FWGE	54.1	0.1	mg/L
Manganese (Mn)	FWGE	106	0.05	mg/L
Molybdenum (Mo)	FWGE	< 0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.33	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	2.0	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	6.65	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	3.2	0.1	mg/L
Strontium (Sr)	FWGE	0.985	0.001	mg/L
Sulfur (S)	FWGE	422	0.06	mg/L
Tin (Sn)	FWGE	0.06	0.06	mg/L
Titanium (Ti)	FWGE	0.024	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	53.0	0.1	mg/L
ICPMS Total				
Arsenic (As)	FWGE	2.0	0.1	ug/L
Cadmium (Cd)	FWGE	68.8	0.01	ug/L
Copper (Cu)	FWGE	4.69	0.05	ug/L
Lead (Pb)	FWGE	0.37	0.01	ug/L
Selenium (Se)	FWGE	0.2	0.2	ug/L
Silver (Ag)	FWGE	0.05	0.02	ug/L

Order No: 91881 - ACG-WQ-G3-07
Start Date: 7/17/03 12:00:00AM

Metals				
Hardness CaMg extr.				
Hardness,Calcium+Magnesium - calc.	FWGE	969	0.4	mg CaCO3 / L
Hardness Total extr.				
Hardness, Total - calc.	FWGE	1150	0.4	mg CaCO3 / L
ICP Extractable				
Aluminum (Al)	FWGE	< 0.05	0.05	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	< 0.05	0.05	mg/L
Barium (Ba)	FWGE	0.005	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.039	0.005	mg/L
Calcium (Ca)	FWGE	308	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	0.007	0.005	mg/L
Copper (Cu)	FWGE	< 0.005	0.005	mg/L
Iron (Fe)	FWGE	< 0.005	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	48.8	0.1	mg/L
Manganese (Mn)	FWGE	66	0.05	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.27	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	1.5	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	5.67	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	2.6	0.1	mg/L
Strontium (Sr)	FWGE	0.773	0.001	mg/L
Sulfur (S)	FWGE	378	0.05	mg/L
Tin (Sn)	FWGE	0.08	0.05	mg/L
Titanium (Ti)	FWGE	0.022	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	41.9	0.002	mg/L
ICP Total				
Aluminum (Al)	FWGE	< 0.06	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	< 0.06	0.06	mg/L
Barium (Ba)	FWGE	0.005	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.045	0.006	mg/L
Calcium (Ca)	FWGE	358	0.1	mg/L
Chromium (Cr)	FWGE	< 0.006	0.006	mg/L
Cobalt (Co)	FWGE	0.008	0.006	mg/L
Copper (Cu)	FWGE	< 0.006	0.006	mg/L
Iron (Fe)	FWGE	< 0.006	0.006	mg/L
Lead (Pb)	FWGE	< 0.06	0.06	mg/L
Magnesium (Mg)	FWGE	54.6	0.1	mg/L
Manganese (Mn)	FWGE	70.3	0.05	mg/L
Molybdenum (Mo)	FWGE	< 0.01	0.01	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Nickel (Ni)	FWGE	0.32	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	1.7	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	6.86	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	3.0	0.1	mg/L
Strontium (Sr)	FWGE	1.01	0.001	mg/L
Sulfur (S)	FWGE	420	0.06	mg/L
Tin (Sn)	FWGE	< 0.06	0.06	mg/L
Titanium (Ti)	FWGE	0.025	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	47.8	0.1	mg/L
ICPMS Total				
Arsenic (As)	FWGE	1.1	0.1	ug/L
Cadmium (Cd)	FWGE	39	0.01	ug/L
Copper (Cu)	FWGE	1.48	0.05	ug/L
Lead (Pb)	FWGE	0.28	0.01	ug/L
Selenium (Se)	FWGE	0.3	0.2	ug/L
Silver (Ag)	FWGE	0.06	0.02	ug/L

Order No: 91882 - ACG-WQ-G3-08
Start Date: 7/17/03 12:00:00AM

Metals				
Hardness CaMg extr.				
Hardness,Calcium+Magnesium - calc.	FWGE	1100	0.4	mg CaCO3 / L
Hardness Total extr.				
Hardness, Total - calc.	FWGE	1100	0.4	mg CaCO3 / L
ICP Extractable				
Aluminum (Al)	FWGE	< 0.05	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	< 0.05	0.05	mg/L
Barium (Ba)	FWGE	0.006	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	< 0.005	0.005	mg/L
Calcium (Ca)	FWGE	395	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	< 0.005	0.005	mg/L
Copper (Cu)	FWGE	< 0.005	0.005	mg/L
Iron (Fe)	FWGE	0.370	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	26.4	0.1	mg/L
Manganese (Mn)	FWGE	0.107	0.001	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	< 0.02	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	1.0	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	1.74	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	2.1	0.1	mg/L
Strontium (Sr)	FWGE	1.06	0.001	mg/L
Sulfur (S)	FWGE	343	0.05	mg/L
Tin (Sn)	FWGE	0.10	0.05	mg/L
Titanium (Ti)	FWGE	0.039	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	0.975	0.002	mg/L
ICP Total				
Aluminum (Al)	FWGE	0.10	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	< 0.06	0.06	mg/L
Barium (Ba)	FWGE	0.007	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	< 0.006	0.006	mg/L
Calcium (Ca)	FWGE	430	0.1	mg/L
Chromium (Cr)	FWGE	< 0.006	0.006	mg/L
Cobalt (Co)	FWGE	< 0.006	0.006	mg/L
Copper (Cu)	FWGE	< 0.006	0.006	mg/L
Iron (Fe)	FWGE	0.449	0.006	mg/L
Lead (Pb)	FWGE	< 0.06	0.06	mg/L
Magnesium (Mg)	FWGE	26.4	0.1	mg/L
Manganese (Mn)	FWGE	0.113	0.001	mg/L
Molybdenum (Mo)	FWGE	< 0.01	0.01	mg/L
Nickel (Ni)	FWGE	< 0.02	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	1.0	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	2.10	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	1.9	0.1	mg/L
Strontium (Sr)	FWGE	1.28	0.001	mg/L
Sulfur (S)	FWGE	350	0.06	mg/L
Tin (Sn)	FWGE	< 0.06	0.06	mg/L
Titanium (Ti)	FWGE	0.042	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	0.913	0.002	mg/L
ICPMS Total				
Arsenic (As)	FWGE	6.1	0.1	ug/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Cadmium (Cd)	FWGE	3.56	0.01	ug/L
Copper (Cu)	FWGE	2.56	0.05	ug/L
Lead (Pb)	FWGE	2.99	0.01	ug/L
Selenium (Se)	FWGE	0.7	0.2	ug/L
Silver (Ag)	FWGE	0.07	0.02	ug/L

Order No: 91883 - ACG-WQ-G3-09
Start Date: 7/17/03 12:00:00AM

Metals

Hardness CaMg extr.

Hardness,Calcium+Magnesium - calc.	FWGE	529	0.4	mg CaCO3 / L

Hardness Total extr.

Hardness, Total - calc.	FWGE	1020	0.4	mg CaCO3 / L

ICP Extractable

Aluminum (Al)	FWGE	< 0.05	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	0.20	0.05	mg/L
Barium (Ba)	FWGE	0.006	0.001	mg/L
Berylium (Be)	FWGE	0.002	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.447	0.005	mg/L
Calcium (Ca)	FWGE	155	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	0.088	0.005	mg/L
Copper (Cu)	FWGE	< 0.005	0.005	mg/L
Iron (Fe)	FWGE	20.3	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	34.4	0.1	mg/L
Manganese (Mn)	FWGE	152	0.05	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.36	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.6	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	3.80	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	1.4	0.1	mg/L
Strontium (Sr)	FWGE	0.251	0.001	mg/L
Sulfur (S)	FWGE	312	0.05	mg/L
Tin (Sn)	FWGE	0.07	0.05	mg/L
Titanium (Ti)	FWGE	0.041	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	117	0.1	mg/L

ICP Total

Aluminum (Al)	FWGE	0.07	0.06	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	0.15	0.06	mg/L
Barium (Ba)	FWGE	0.007	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.517	0.006	mg/L
Calcium (Ca)	FWGE	183	0.1	mg/L
Chromium (Cr)	FWGE	< 0.006	0.006	mg/L
Cobalt (Co)	FWGE	0.100	0.006	mg/L
Copper (Cu)	FWGE	< 0.006	0.006	mg/L
Iron (Fe)	FWGE	24.8	0.006	mg/L
Lead (Pb)	FWGE	< 0.06	0.06	mg/L
Magnesium (Mg)	FWGE	39.7	0.1	mg/L
Manganese (Mn)	FWGE	164	0.05	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.43	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.7	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	4.53	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	1.6	0.1	mg/L
Strontium (Sr)	FWGE	0.329	0.001	mg/L
Sulfur (S)	FWGE	339	0.06	mg/L
Tin (Sn)	FWGE	0.07	0.06	mg/L
Titanium (Ti)	FWGE	0.045	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	123	0.1	mg/L
ICPMS Total				
Arsenic (As)	FWGE	124	0.1	ug/L
Cadmium (Cd)	FWGE	459	0.01	ug/L
Cadmium (Cd)	FWGE	516	0.01	ug/L
Copper (Cu)	FWGE	9.72	0.05	ug/L
Lead (Pb)	FWGE	17.5	0.01	ug/L
Selenium (Se)	FWGE	0.4	0.2	ug/L
Silver (Ag)	FWGE	0.12	0.02	ug/L

Order No: 91898 - ACG-S-G3-01
Start Date: 7/17/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSO	98.31	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSO	63.62	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSO	55.52	0.01	% (W/W)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
K: Pipette, 0.053mm, % < by wt.	SOSO	48.00	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSO	12.49	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSO	1.69	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSO	50.31	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSO	35.51	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSO	12.49	0.01	% (W/W)
Textural Category CSSC	SOSO	loam		None
Metals				
ICP Total				
Aluminum (Al)	SOSO	3210	8	ug/g (dry)
Antimony (Sb)	SOSO	18	8	ug/g (dry)
Arsenic (As)	SOSO	1720	8	ug/g (dry)
Barium (Ba)	SOSO	77.0	0.2	ug/g (dry)
Berylium (Be)	SOSO	32.0	0.2	ug/g (dry)
Boron (B)	SOSO	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSO	93.3	0.8	ug/g (dry)
Calcium (Ca)	SOSO	4430	20	ug/g (dry)
Chromium (Cr)	SOSO	4.2	0.8	ug/g (dry)
Cobalt (Co)	SOSO	8.3	0.8	ug/g (dry)
Copper (Cu)	SOSO	135	0.8	ug/g (dry)
Iron (Fe)	SOSO	112800	0.8	ug/g (dry)
Lead (Pb)	SOSO	1070	8	ug/g (dry)
Magnesium (Mg)	SOSO	1310	20	ug/g (dry)
Manganese (Mn)	SOSO	3030	0.2	ug/g (dry)
Molybdenum (Mo)	SOSO	< 2	2	ug/g (dry)
Nickel (Ni)	SOSO	57	3	ug/g (dry)
Phosphorus (P)	SOSO	196	20	ug/g (dry)
Potassium (K)	SOSO	190	20	ug/g (dry)
Selenium (Se)	SOSO	< 8	8	ug/g (dry)
Silicon (Si)	SOSO	901	8	ug/g (dry)
Silver (Ag)	SOSO	64	2	ug/g (dry)
Sodium (Na)	SOSO	< 20	20	ug/g (dry)
Strontium (Sr)	SOSO	14.8	0.2	ug/g (dry)
Sulfur (S)	SOSO	17600	8	ug/g (dry)
Tin (Sn)	SOSO	15	8	ug/g (dry)
Titanium (Ti)	SOSO	60.0	0.3	ug/g (dry)
Vanadium (V)	SOSO	19	2	ug/g (dry)
Zinc (Zn)	SOSO	26100	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSO	1613	0.1	ug/g (dry)
Selenium (Se)	SOSO	2.01	0.2	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Order No: 91901 - ACG-S-G3-02 **Start Date: 7/17/03 12:00:00AM**				
Soilcon				
Part Size Std Texcat				
D: Dry Seive, 2.00mm, % < by wt.	SOSO	96.50	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSO	92.34	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSO	88.10	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSO	68.18	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSO	16.47	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSO	3.50	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSO	28.32	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSO	51.71	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSO	16.47	0.01	% (W/W)
Textural Category CSSC	SOSO	silt loam		None
Metals				
ICP Total				
Aluminum (Al)	SOSO	9440	8	ug/g (dry)
Antimony (Sb)	SOSO	< 8	8	ug/g (dry)
Arsenic (As)	SOSO	128	8	ug/g (dry)
Barium (Ba)	SOSO	248	0.2	ug/g (dry)
Berylium (Be)	SOSO	2.1	0.2	ug/g (dry)
Boron (B)	SOSO	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSO	10.4	0.8	ug/g (dry)
Calcium (Ca)	SOSO	2780	20	ug/g (dry)
Chromium (Cr)	SOSO	16.5	0.8	ug/g (dry)
Cobalt (Co)	SOSO	9.7	0.8	ug/g (dry)
Copper (Cu)	SOSO	56.3	0.8	ug/g (dry)
Iron (Fe)	SOSO	29000	0.8	ug/g (dry)
Lead (Pb)	SOSO	243	8	ug/g (dry)
Magnesium (Mg)	SOSO	3550	20	ug/g (dry)
Manganese (Mn)	SOSO	2860	0.2	ug/g (dry)
Molybdenum (Mo)	SOSO	< 2	2	ug/g (dry)
Nickel (Ni)	SOSO	24	3	ug/g (dry)
Phosphorus (P)	SOSO	755	20	ug/g (dry)
Potassium (K)	SOSO	420	20	ug/g (dry)
Selenium (Se)	SOSO	< 8	8	ug/g (dry)
Silicon (Si)	SOSO	1100	8	ug/g (dry)
Silver (Ag)	SOSO	27	2	ug/g (dry)
Sodium (Na)	SOSO	41	20	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Strontium (Sr)	SOSO	20.3	0.2	ug/g (dry)
Sulfur (S)	SOSO	1560	8	ug/g (dry)
Tin (Sn)	SOSO	< 8	8	ug/g (dry)
Titanium (Ti)	SOSO	252	0.3	ug/g (dry)
Vanadium (V)	SOSO	28	2	ug/g (dry)
Zinc (Zn)	SOSO	1750	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSO	124	0.1	ug/g (dry)
Selenium (Se)	SOSO	1.56	0.2	ug/g (dry)

Order No: 91902 - ACG-S-G3-03
Start Date: 7/17/03 12:00:00AM

Soilcon				
Part Size Std Texcat				
D: Dry Seive, 2.00mm, % < by wt.	SOSO	98.77	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSO	98.33	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSO	98.21	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSO	93.39	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSO	15.52	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSO	1.23	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSO	5.38	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSO	77.87	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSO	15.52	0.01	% (W/W)
Textural Category CSSC	SOSO	silt loam		None
Metals				
ICP Total				
Aluminum (Al)	SOSO	13300	8	ug/g (dry)
Antimony (Sb)	SOSO	< 8	8	ug/g (dry)
Arsenic (As)	SOSO	19	8	ug/g (dry)
Barium (Ba)	SOSO	380	0.2	ug/g (dry)
Berylium (Be)	SOSO	1.4	0.2	ug/g (dry)
Boron (B)	SOSO	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSO	13.1	0.8	ug/g (dry)
Calcium (Ca)	SOSO	3340	20	ug/g (dry)
Chromium (Cr)	SOSO	25.4	0.8	ug/g (dry)
Cobalt (Co)	SOSO	9.3	0.8	ug/g (dry)
Copper (Cu)	SOSO	59.9	0.8	ug/g (dry)
Iron (Fe)	SOSO	21100	0.8	ug/g (dry)
Lead (Pb)	SOSO	225	8	ug/g (dry)
Magnesium (Mg)	SOSO	5000	20	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Manganese (Mn)	SOSO	1090	0.2	ug/g (dry)
Molybdenum (Mo)	SOSO	3	2	ug/g (dry)
Nickel (Ni)	SOSO	36	3	ug/g (dry)
Phosphorus (P)	SOSO	913	20	ug/g (dry)
Potassium (K)	SOSO	710	20	ug/g (dry)
Selenium (Se)	SOSO	< 8	8	ug/g (dry)
Silicon (Si)	SOSO	1480	8	ug/g (dry)
Silver (Ag)	SOSO	27	2	ug/g (dry)
Sodium (Na)	SOSO	76	20	ug/g (dry)
Strontium (Sr)	SOSO	29.2	0.2	ug/g (dry)
Sulfur (S)	SOSO	450	8	ug/g (dry)
Tin (Sn)	SOSO	< 8	8	ug/g (dry)
Titanium (Ti)	SOSO	388	0.3	ug/g (dry)
Vanadium (V)	SOSO	40	2	ug/g (dry)
Zinc (Zn)	SOSO	1920	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSO	19.3	0.1	ug/g (dry)
Selenium (Se)	SOSO	1.46	0.2	ug/g (dry)

Order No: 91903 - ACG-S-G3-04
Start Date: 7/17/03 12:00:00AM

Soilcon				
Part Size Std Texcat				
D: Dry Seive, 2.00mm, % < by wt.	SOSO	91.59	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSO	81.33	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSO	78.99	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSO	61.72	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSO	9.07	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSO	8.41	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSO	29.87	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSO	52.64	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSO	9.07	0.01	% (W/W)
Textural Category CSSC	SOSO	silt loam		None
Metals				
ICP Total				
Aluminum (Al)	SOSO	9250	8	ug/g (dry)
Antimony (Sb)	SOSO	< 8	8	ug/g (dry)
Arsenic (As)	SOSO	9	8	ug/g (dry)
Barium (Ba)	SOSO	403	0.2	ug/g (dry)
Berylium (Be)	SOSO	1.2	0.2	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Boron (B)	SOSO	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSO	6.0	0.8	ug/g (dry)
Calcium (Ca)	SOSO	2860	20	ug/g (dry)
Chromium (Cr)	SOSO	17.6	0.8	ug/g (dry)
Cobalt (Co)	SOSO	5.9	0.8	ug/g (dry)
Copper (Cu)	SOSO	62.2	0.8	ug/g (dry)
Iron (Fe)	SOSO	21000	0.8	ug/g (dry)
Lead (Pb)	SOSO	40	8	ug/g (dry)
Magnesium (Mg)	SOSO	3090	20	ug/g (dry)
Manganese (Mn)	SOSO	743	0.2	ug/g (dry)
Molybdenum (Mo)	SOSO	2	2	ug/g (dry)
Nickel (Ni)	SOSO	20	3	ug/g (dry)
Phosphorus (P)	SOSO	724	20	ug/g (dry)
Potassium (K)	SOSO	408	20	ug/g (dry)
Selenium (Se)	SOSO	< 8	8	ug/g (dry)
Silicon (Si)	SOSO	1130	8	ug/g (dry)
Silver (Ag)	SOSO	3	2	ug/g (dry)
Sodium (Na)	SOSO	46	20	ug/g (dry)
Strontium (Sr)	SOSO	23.3	0.2	ug/g (dry)
Sulfur (S)	SOSO	1160	8	ug/g (dry)
Tin (Sn)	SOSO	< 8	8	ug/g (dry)
Titanium (Ti)	SOSO	254	0.3	ug/g (dry)
Vanadium (V)	SOSO	31	2	ug/g (dry)
Zinc (Zn)	SOSO	804	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSO	10.2	0.1	ug/g (dry)
Selenium (Se)	SOSO	1.03	0.2	ug/g (dry)

Order No: 91904 - ACG-S-G3-05
Start Date: 7/17/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSO	78.30	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSO	61.71	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSO	57.89	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSO	47.56	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSO	10.39	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSO	21.70	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSO	30.74	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSO	37.17	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSO	10.39	0.01	% (W/W)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Textural Category CSSC	SOSO	loam		None
Metals				
ICP Total				
Aluminum (Al)	SOSO	12800	8	ug/g (dry)
Antimony (Sb)	SOSO	< 8	8	ug/g (dry)
Arsenic (As)	SOSO	61	8	ug/g (dry)
Barium (Ba)	SOSO	282	0.2	ug/g (dry)
Berylium (Be)	SOSO	1.7	0.2	ug/g (dry)
Boron (B)	SOSO	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSO	7.3	0.8	ug/g (dry)
Calcium (Ca)	SOSO	4480	20	ug/g (dry)
Chromium (Cr)	SOSO	23.0	0.8	ug/g (dry)
Cobalt (Co)	SOSO	13.7	0.8	ug/g (dry)
Copper (Cu)	SOSO	36.0	0.8	ug/g (dry)
Iron (Fe)	SOSO	24200	0.8	ug/g (dry)
Lead (Pb)	SOSO	73	8	ug/g (dry)
Magnesium (Mg)	SOSO	4920	20	ug/g (dry)
Manganese (Mn)	SOSO	1090	0.2	ug/g (dry)
Molybdenum (Mo)	SOSO	3	2	ug/g (dry)
Nickel (Ni)	SOSO	34	3	ug/g (dry)
Phosphorus (P)	SOSO	1210	20	ug/g (dry)
Potassium (K)	SOSO	705	20	ug/g (dry)
Selenium (Se)	SOSO	< 8	8	ug/g (dry)
Silicon (Si)	SOSO	1230	8	ug/g (dry)
Silver (Ag)	SOSO	12	2	ug/g (dry)
Sodium (Na)	SOSO	53	20	ug/g (dry)
Strontium (Sr)	SOSO	27.1	0.2	ug/g (dry)
Sulfur (S)	SOSO	533	8	ug/g (dry)
Tin (Sn)	SOSO	< 8	8	ug/g (dry)
Titanium (Ti)	SOSO	184	0.3	ug/g (dry)
Vanadium (V)	SOSO	42	2	ug/g (dry)
Zinc (Zn)	SOSO	1340	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSO	59.1	0.1	ug/g (dry)
Selenium (Se)	SOSO	1.19	0.2	ug/g (dry)

Order No: 91905 - ACG-S-G3-06
Start Date: 7/17/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSO	47.01	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSO	31.23	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSO	28.64	0.01	% (W/W)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
K: Pipette, 0.053mm, % < by wt.	SOSO	23.11	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSO	4.17	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSO	52.99	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSO	23.90	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSO	18.94	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSO	4.17	0.01	% (W/W)
Textural Category CSSC	SOSO	loam		None
Metals				
ICP Total				
Aluminum (Al)	SOSO	9150	8	ug/g (dry)
Antimony (Sb)	SOSO	< 8	8	ug/g (dry)
Arsenic (As)	SOSO	55	8	ug/g (dry)
Barium (Ba)	SOSO	320	0.2	ug/g (dry)
Berylium (Be)	SOSO	1.3	0.2	ug/g (dry)
Boron (B)	SOSO	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSO	10.9	0.8	ug/g (dry)
Calcium (Ca)	SOSO	5450	20	ug/g (dry)
Chromium (Cr)	SOSO	18.5	0.8	ug/g (dry)
Cobalt (Co)	SOSO	24.5	0.8	ug/g (dry)
Copper (Cu)	SOSO	20.2	0.8	ug/g (dry)
Iron (Fe)	SOSO	20600	0.8	ug/g (dry)
Lead (Pb)	SOSO	65	8	ug/g (dry)
Magnesium (Mg)	SOSO	3830	20	ug/g (dry)
Manganese (Mn)	SOSO	4550	0.2	ug/g (dry)
Molybdenum (Mo)	SOSO	3	2	ug/g (dry)
Nickel (Ni)	SOSO	41	3	ug/g (dry)
Phosphorus (P)	SOSO	973	20	ug/g (dry)
Potassium (K)	SOSO	480	20	ug/g (dry)
Selenium (Se)	SOSO	< 8	8	ug/g (dry)
Silicon (Si)	SOSO	964	8	ug/g (dry)
Silver (Ag)	SOSO	< 2	2	ug/g (dry)
Sodium (Na)	SOSO	34	20	ug/g (dry)
Strontium (Sr)	SOSO	31.6	0.2	ug/g (dry)
Sulfur (S)	SOSO	651	8	ug/g (dry)
Tin (Sn)	SOSO	< 8	8	ug/g (dry)
Titanium (Ti)	SOSO	127	0.3	ug/g (dry)
Vanadium (V)	SOSO	30	2	ug/g (dry)
Zinc (Zn)	SOSO	2040	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSO	51.1	0.1	ug/g (dry)
Selenium (Se)	SOSO	1.28	0.2	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Order No: 91906 - ACG-S-G3-07 **Start Date: 7/17/03 12:00:00AM**				
Soilcon				
Part Size Std Texcat				
D: Dry Seive, 2.00mm, % < by wt.	SOSO	50.63	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSO	21.43	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSO	16.40	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSO	9.36	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSO	1.29	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSO	49.37	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSO	41.27	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSO	8.07	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSO	1.29	0.01	% (W/W)
Textural Category CSSC	SOSO	loamy sand		None
Metals				
ICP Total				
Aluminum (Al)	SOSO	7420	8	ug/g (dry)
Antimony (Sb)	SOSO	< 8	8	ug/g (dry)
Arsenic (As)	SOSO	45	8	ug/g (dry)
Barium (Ba)	SOSO	175	0.2	ug/g (dry)
Berylium (Be)	SOSO	1.0	0.2	ug/g (dry)
Boron (B)	SOSO	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSO	11.6	0.8	ug/g (dry)
Calcium (Ca)	SOSO	5080	20	ug/g (dry)
Chromium (Cr)	SOSO	14.4	0.8	ug/g (dry)
Cobalt (Co)	SOSO	21.7	0.8	ug/g (dry)
Copper (Cu)	SOSO	18.1	0.8	ug/g (dry)
Iron (Fe)	SOSO	17700	0.8	ug/g (dry)
Lead (Pb)	SOSO	58	8	ug/g (dry)
Magnesium (Mg)	SOSO	3150	20	ug/g (dry)
Manganese (Mn)	SOSO	6470	0.2	ug/g (dry)
Molybdenum (Mo)	SOSO	3	2	ug/g (dry)
Nickel (Ni)	SOSO	38	3	ug/g (dry)
Phosphorus (P)	SOSO	1450	20	ug/g (dry)
Potassium (K)	SOSO	440	20	ug/g (dry)
Selenium (Se)	SOSO	< 8	8	ug/g (dry)
Silicon (Si)	SOSO	1030	8	ug/g (dry)
Silver (Ag)	SOSO	8	2	ug/g (dry)
Sodium (Na)	SOSO	28	20	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Strontium (Sr)	SOSO	26.1	0.2	ug/g (dry)
Sulfur (S)	SOSO	495	8	ug/g (dry)
Tin (Sn)	SOSO	< 8	8	ug/g (dry)
Titanium (Ti)	SOSO	243	0.3	ug/g (dry)
Vanadium (V)	SOSO	25	2	ug/g (dry)
Zinc (Zn)	SOSO	4490	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSO	44.2	0.1	ug/g (dry)
Selenium (Se)	SOSO	0.97	0.2	ug/g (dry)

Order No: 91907 - ACG-S-G3-08
Start Date: 7/17/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSO	100	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSO	99.77	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSO	99.50	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSO	98.27	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSO	14.39	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSO	< 0.01	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSO	1.73	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSO	83.88	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSO	14.39	0.01	% (W/W)
Textural Category CSSC	SOSO	silt loam		None

Metals

ICP Total

Aluminum (Al)	SOSO	14000	8	ug/g (dry)
Antimony (Sb)	SOSO	< 8	8	ug/g (dry)
Arsenic (As)	SOSO	20	8	ug/g (dry)
Barium (Ba)	SOSO	623	0.2	ug/g (dry)
Berylium (Be)	SOSO	6.8	0.2	ug/g (dry)
Boron (B)	SOSO	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSO	3.5	0.8	ug/g (dry)
Calcium (Ca)	SOSO	2500	20	ug/g (dry)
Chromium (Cr)	SOSO	25.2	0.8	ug/g (dry)
Cobalt (Co)	SOSO	7.9	0.8	ug/g (dry)
Copper (Cu)	SOSO	75.2	0.8	ug/g (dry)
Iron (Fe)	SOSO	52100	0.8	ug/g (dry)
Lead (Pb)	SOSO	35	8	ug/g (dry)
Magnesium (Mg)	SOSO	4760	20	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Manganese (Mn)	SOSO	776	0.2	ug/g (dry)
Molybdenum (Mo)	SOSO	3	2	ug/g (dry)
Nickel (Ni)	SOSO	28	3	ug/g (dry)
Phosphorus (P)	SOSO	747	20	ug/g (dry)
Potassium (K)	SOSO	673	20	ug/g (dry)
Selenium (Se)	SOSO	< 8	8	ug/g (dry)
Silicon (Si)	SOSO	1510	8	ug/g (dry)
Silver (Ag)	SOSO	< 2	2	ug/g (dry)
Sodium (Na)	SOSO	56	20	ug/g (dry)
Strontium (Sr)	SOSO	31.1	0.2	ug/g (dry)
Sulfur (S)	SOSO	7270	8	ug/g (dry)
Tin (Sn)	SOSO	< 8	8	ug/g (dry)
Titanium (Ti)	SOSO	314	0.3	ug/g (dry)
Vanadium (V)	SOSO	43	2	ug/g (dry)
Zinc (Zn)	SOSO	687	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSO	22.5	0.1	ug/g (dry)
Selenium (Se)	SOSO	1.19	0.2	ug/g (dry)

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Environment Canada Environnement Canada

Final Analytical Results with QC data

PESC FOLDER # : 200300833

Location:	UNITED KENO MILL MINES (UKHM)
Type of Sample:	Soil (Bottom Sediment) (SOSE)
Submitted By:	Vic Enns Environment Canada 91782 Alaska Hwy Whitehorse, YT Canada Y1A 5B7 Phone: 867-667-4592 Fax: 867-667-7962
Logged In:	Thursday October 2, 2003
Completed:	Tuesday January 13, 2004 (779 results)
Client Code:	2562-101 2562-101 EP YUKON POLLUTION ABATEMENT
Sample Priority:	High

Authorized by: _____

Richard Strub
QA Officer

Notes:

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Order No: 93703 - 1=ACG-03-S001A				
Start Date: 17/09/03 12:00:00AM				
Soilcon				
Part Size Std Texcat				
D: Dry Seive, 2.00mm, % < by wt.	SOSE	97.66	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	94.37	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	92.43	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	87.24	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	27.32	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	2.34	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	12.46	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	58.52	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	26.68	0.01	% (W/W)
Textural Category CSSC	SOSE	SiltClaLom		None

USDA, CSSC, Textural Category; Small sample sent. Require >80g of the dry <2mm portion.
Small sample size & calculated loss after digestion of >50%, may compromise results.
Particle density of 2.65 g/cm3 is assumed for this method.
Generally samples with large volumes of organic matter residue are not suitable for this method and may bias pipette results. Calculations have been applied to adjust for this bias.
Textural category based on mineral fraction only.
Please note mineral fraction represents < 50% of entire sample.

Metals				
ICP Total				
Aluminum (Al)	SOSE	8710	8	ug/g (dry)
Antimony (Sb)	SOSE	11	8	ug/g (dry)
Arsenic (As)	SOSE	71	8	ug/g (dry)
Barium (Ba)	SOSE	493	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.5	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	92.3	0.8	ug/g (dry)
Calcium (Ca)	SOSE	17400	20	ug/g (dry)
Chromium (Cr)	SOSE	11.8	0.8	ug/g (dry)
Cobalt (Co)	SOSE	14.0	0.8	ug/g (dry)
Copper (Cu)	SOSE	21.7	0.8	ug/g (dry)
Iron (Fe)	SOSE	11600	0.8	ug/g (dry)
Lead (Pb)	SOSE	321	8	ug/g (dry)
Magnesium (Mg)	SOSE	2890	20	ug/g (dry)
Manganese (Mn)	SOSE	19600	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	< 2	2	ug/g (dry)
Nickel (Ni)	SOSE	82	3	ug/g (dry)
Phosphorus (P)	SOSE	721	20	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Potassium (K)	SOSE	548	20	ug/g (dry)
Selenium (Se)	SOSE	9	8	ug/g (dry)
Silicon (Si)	SOSE	504	8	ug/g (dry)
Silver (Ag)	SOSE	6	2	ug/g (dry)
Sodium (Na)	SOSE	< 20	20	ug/g (dry)
Strontium (Sr)	SOSE	75.3	0.2	ug/g (dry)
Sulfur (S)	SOSE	1610	8	ug/g (dry)
Tin (Sn)	SOSE	8	8	ug/g (dry)
Titanium (Ti)	SOSE	109	0.3	ug/g (dry)
Vanadium (V)	SOSE	20	2	ug/g (dry)
Zinc (Zn)	SOSE	13100	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	60.7	0.1	ug/g (dry)
Selenium (Se)	SOSE	1.5	0.2	ug/g (dry)

Order No: 93704 - 2=ACG-03-S001B
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	99.48	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	99.10	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	98.59	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	91.05	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	21.67	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	0.52	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	8.43	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	69.38	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	21.67	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None

USDA, CSSC, Textural Category

Metals

ICP Total

Aluminum (Al)	SOSE	16200	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	11	8	ug/g (dry)
Barium (Ba)	SOSE	647	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.6	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	13.6	0.8	ug/g (dry)
Calcium (Ca)	SOSE	8860	20	ug/g (dry)
Chromium (Cr)	SOSE	23.7	0.8	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Cobalt (Co)	SOSE	11.1	0.8	ug/g (dry)
Copper (Cu)	SOSE	16.9	0.8	ug/g (dry)
Iron (Fe)	SOSE	20700	0.8	ug/g (dry)
Lead (Pb)	SOSE	124	8	ug/g (dry)
Magnesium (Mg)	SOSE	4890	20	ug/g (dry)
Manganese (Mn)	SOSE	1190	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	< 2	2	ug/g (dry)
Nickel (Ni)	SOSE	31	3	ug/g (dry)
Phosphorus (P)	SOSE	771	20	ug/g (dry)
Potassium (K)	SOSE	676	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	786	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	55	20	ug/g (dry)
Strontium (Sr)	SOSE	53.2	0.2	ug/g (dry)
Sulfur (S)	SOSE	904	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	120	0.3	ug/g (dry)
Vanadium (V)	SOSE	36	2	ug/g (dry)
Zinc (Zn)	SOSE	2380	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	11.7	0.1	ug/g (dry)
Selenium (Se)	SOSE	1.5	0.2	ug/g (dry)

Order No: 93705 - 3=ACG-03-S001C
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	99.33	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	98.52	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	97.78	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	90.79	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	23.54	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	0.67	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	8.54	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	67.25	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	23.54	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None

USDA, CSSC, Textural Category

Metals

ICP Total

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Aluminum (Al)	SOSE	16300	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	23	8	ug/g (dry)
Barium (Ba)	SOSE	579	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.6	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	28.1	0.8	ug/g (dry)
Calcium (Ca)	SOSE	6090	20	ug/g (dry)
Chromium (Cr)	SOSE	23.9	0.8	ug/g (dry)
Cobalt (Co)	SOSE	10.4	0.8	ug/g (dry)
Copper (Cu)	SOSE	17.8	0.8	ug/g (dry)
Iron (Fe)	SOSE	20300	0.8	ug/g (dry)
Lead (Pb)	SOSE	179	8	ug/g (dry)
Magnesium (Mg)	SOSE	4850	20	ug/g (dry)
Manganese (Mn)	SOSE	3810	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	< 2	2	ug/g (dry)
Nickel (Ni)	SOSE	46	3	ug/g (dry)
Phosphorus (P)	SOSE	724	20	ug/g (dry)
Potassium (K)	SOSE	730	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	698	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	55	20	ug/g (dry)
Strontium (Sr)	SOSE	42.0	0.2	ug/g (dry)
Sulfur (S)	SOSE	1050	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	116	0.3	ug/g (dry)
Vanadium (V)	SOSE	39	2	ug/g (dry)
Zinc (Zn)	SOSE	4390	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	20.6	0.1	ug/g (dry)
Selenium (Se)	SOSE	2.0	0.2	ug/g (dry)

Order No: 93706 - 4=ACG-03-S002A
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	94.42	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	81.66	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	78.49	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	75.59	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	18.43	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	5.58	0.01	% (W/W)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	18.84	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	57.16	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	18.43	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None

USDA, CSSC, Textural Category; <33g sample sent. Require >80g of the dry <2mm portion.
Small sample size & large volume of organic matter residue, may compromise results.
Particle density of 2.65 g/cm3 is assumed for this method.
Generally, samples with large volumes of organic matter residue are not suitable for this method and may bias pipette results. Textural category based on mineral fraction only.

Metals

ICP Total

Aluminum (Al)	SOSE	4620	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	12	8	ug/g (dry)
Barium (Ba)	SOSE	1220	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.3	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	79.4	0.8	ug/g (dry)
Calcium (Ca)	SOSE	17100	20	ug/g (dry)
Chromium (Cr)	SOSE	4.0	0.8	ug/g (dry)
Cobalt (Co)	SOSE	144	0.8	ug/g (dry)
Copper (Cu)	SOSE	5.2	0.8	ug/g (dry)
Iron (Fe)	SOSE	11000	0.8	ug/g (dry)
Lead (Pb)	SOSE	108	8	ug/g (dry)
Magnesium (Mg)	SOSE	1540	20	ug/g (dry)
Manganese (Mn)	SOSE	47810	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	5	2	ug/g (dry)
Nickel (Ni)	SOSE	83	3	ug/g (dry)
Phosphorus (P)	SOSE	1190	20	ug/g (dry)
Potassium (K)	SOSE	392	20	ug/g (dry)
Selenium (Se)	SOSE	18	8	ug/g (dry)
Silicon (Si)	SOSE	106	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	104	20	ug/g (dry)
Strontium (Sr)	SOSE	66.0	0.2	ug/g (dry)
Sulfur (S)	SOSE	3370	8	ug/g (dry)
Tin (Sn)	SOSE	9	8	ug/g (dry)
Titanium (Ti)	SOSE	69.9	0.3	ug/g (dry)
Vanadium (V)	SOSE	8	2	ug/g (dry)
Zinc (Zn)	SOSE	8880	0.3	ug/g (dry)

ICPMS Total

Arsenic (As)	SOSE	10.6	0.1	ug/g (dry)
Selenium (Se)	SOSE	0.4	0.2	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Order No: 93707 - 5=ACG-03-S002B				
Start Date: 17/09/03 12:00:00AM				
Soilcon				
Part Size Std Texcat				
D: Dry Seive, 2.00mm, % < by wt.	SOSE	86.66	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	77.29	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	74.73	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	63.42	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	0.36	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	13.34	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	23.24	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	63.06	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	0.36	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None
USDA, CSSC, Textural Category				
Metals				
ICP Total				
Aluminum (Al)	SOSE	13100	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	22	8	ug/g (dry)
Barium (Ba)	SOSE	323	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.5	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	3.9	0.8	ug/g (dry)
Calcium (Ca)	SOSE	2650	20	ug/g (dry)
Chromium (Cr)	SOSE	22.0	0.8	ug/g (dry)
Cobalt (Co)	SOSE	9.9	0.8	ug/g (dry)
Copper (Cu)	SOSE	13.1	0.8	ug/g (dry)
Iron (Fe)	SOSE	18800	0.8	ug/g (dry)
Lead (Pb)	SOSE	170	8	ug/g (dry)
Magnesium (Mg)	SOSE	4170	20	ug/g (dry)
Manganese (Mn)	SOSE	746	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	2	2	ug/g (dry)
Nickel (Ni)	SOSE	23	3	ug/g (dry)
Phosphorus (P)	SOSE	592	20	ug/g (dry)
Potassium (K)	SOSE	467	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	792	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	42	20	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Strontium (Sr)	SOSE	19.9	0.2	ug/g (dry)
Sulfur (S)	SOSE	465	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	177	0.3	ug/g (dry)
Vanadium (V)	SOSE	40	2	ug/g (dry)
Zinc (Zn)	SOSE	1080	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	19.9	0.1	ug/g (dry)
Selenium (Se)	SOSE	0.4	0.2	ug/g (dry)

Order No: 93708 - 6=ACG-03-S002C
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	66.85	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	49.55	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	46.48	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	34.19	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	5.30	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	33.15	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	32.66	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	28.89	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	5.30	0.01	% (W/W)
Textural Category CSSC	SOSE	Loam		None

USDA, CSSC, Textural Category

Metals

ICP Total

Aluminum (Al)	SOSE	10800	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	16	8	ug/g (dry)
Barium (Ba)	SOSE	380	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.5	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	4.1	0.8	ug/g (dry)
Calcium (Ca)	SOSE	2650	20	ug/g (dry)
Chromium (Cr)	SOSE	19.3	0.8	ug/g (dry)
Cobalt (Co)	SOSE	7.1	0.8	ug/g (dry)
Copper (Cu)	SOSE	16.1	0.8	ug/g (dry)
Iron (Fe)	SOSE	20100	0.8	ug/g (dry)
Lead (Pb)	SOSE	116	8	ug/g (dry)
Magnesium (Mg)	SOSE	4080	20	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Manganese (Mn)	SOSE	578	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	< 2	2	ug/g (dry)
Nickel (Ni)	SOSE	20	3	ug/g (dry)
Phosphorus (P)	SOSE	718	20	ug/g (dry)
Potassium (K)	SOSE	449	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	571	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	47	20	ug/g (dry)
Strontium (Sr)	SOSE	22.8	0.2	ug/g (dry)
Sulfur (S)	SOSE	344	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	249	0.3	ug/g (dry)
Vanadium (V)	SOSE	35	2	ug/g (dry)
Zinc (Zn)	SOSE	591	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	15.3	0.1	ug/g (dry)
Selenium (Se)	SOSE	0.5	0.2	ug/g (dry)

Order No: 93709 - 7=ACG-03-S003A
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	96.27	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	84.35	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	79.29	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	70.86	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	22.24	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	3.73	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	25.40	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	48.62	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	22.24	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None

USDA, CSSC, Textural Category; < 31g sample sent. Require > 80g of the dry <2mm portion.
Small sample size & calculated loss after digestion of >57%, may compromise results.
Textural category based on mineral fraction only.
Please note mineral fraction represents <40% of entire sample.

Metals

ICP Total

Aluminum (Al)	SOSE	6870	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	20	8	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Barium (Ba)	SOSE	181	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.6	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	59.4	0.8	ug/g (dry)
Calcium (Ca)	SOSE	24200	20	ug/g (dry)
Chromium (Cr)	SOSE	6.0	0.8	ug/g (dry)
Cobalt (Co)	SOSE	3.3	0.8	ug/g (dry)
Copper (Cu)	SOSE	18.3	0.8	ug/g (dry)
Iron (Fe)	SOSE	33800	0.8	ug/g (dry)
Lead (Pb)	SOSE	380	8	ug/g (dry)
Magnesium (Mg)	SOSE	1530	20	ug/g (dry)
Manganese (Mn)	SOSE	1340	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	< 2	2	ug/g (dry)
Nickel (Ni)	SOSE	29	3	ug/g (dry)
Phosphorus (P)	SOSE	1360	20	ug/g (dry)
Potassium (K)	SOSE	323	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	208	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	25	20	ug/g (dry)
Strontium (Sr)	SOSE	97.8	0.2	ug/g (dry)
Sulfur (S)	SOSE	3500	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	117	0.3	ug/g (dry)
Vanadium (V)	SOSE	15	2	ug/g (dry)
Zinc (Zn)	SOSE	5230	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	17.7	0.1	ug/g (dry)
Selenium (Se)	SOSE	1.5	0.2	ug/g (dry)

Order No: 93710 - 8=ACG-03-S003B
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	99.36	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	94.83	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	91.60	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	74.38	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	13.73	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	0.64	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	24.97	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	60.65	0.01	% (W/W)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	13.73	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None
USDA, CSSC, Textural Category				
Metals				
ICP Total				
Aluminum (Al)	SOSE	11500	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	< 8	8	ug/g (dry)
Barium (Ba)	SOSE	257	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.5	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	1.7	0.8	ug/g (dry)
Calcium (Ca)	SOSE	3250	20	ug/g (dry)
Chromium (Cr)	SOSE	18.8	0.8	ug/g (dry)
Cobalt (Co)	SOSE	3.8	0.8	ug/g (dry)
Copper (Cu)	SOSE	10.2	0.8	ug/g (dry)
Iron (Fe)	SOSE	11600	0.8	ug/g (dry)
Lead (Pb)	SOSE	107	8	ug/g (dry)
Magnesium (Mg)	SOSE	3200	20	ug/g (dry)
Manganese (Mn)	SOSE	127	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	< 2	2	ug/g (dry)
Nickel (Ni)	SOSE	13	3	ug/g (dry)
Phosphorus (P)	SOSE	656	20	ug/g (dry)
Potassium (K)	SOSE	543	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	514	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	61	20	ug/g (dry)
Strontium (Sr)	SOSE	25.1	0.2	ug/g (dry)
Sulfur (S)	SOSE	686	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	226	0.3	ug/g (dry)
Vanadium (V)	SOSE	27	2	ug/g (dry)
Zinc (Zn)	SOSE	89.7	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	5.5	0.1	ug/g (dry)
Selenium (Se)	SOSE	< 0.2	0.2	ug/g (dry)

Order No: 93711 - 9=ACG-03-S003C
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	64.47	0.01	% (W/W)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	48.34	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	43.71	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	33.01	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	6.43	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	35.53	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	31.46	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	26.58	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	6.43	0.01	% (W/W)
Textural Category CSSC	SOSE	Loam		None
USDA, CSSC, Textural Category				
Metals				
ICP Total				
Aluminum (Al)	SOSE	9760	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	73	8	ug/g (dry)
Barium (Ba)	SOSE	249	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.6	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	6.5	0.8	ug/g (dry)
Calcium (Ca)	SOSE	7130	20	ug/g (dry)
Chromium (Cr)	SOSE	17.9	0.8	ug/g (dry)
Cobalt (Co)	SOSE	10.7	0.8	ug/g (dry)
Copper (Cu)	SOSE	34.4	0.8	ug/g (dry)
Iron (Fe)	SOSE	29900	0.8	ug/g (dry)
Lead (Pb)	SOSE	96	8	ug/g (dry)
Magnesium (Mg)	SOSE	5460	20	ug/g (dry)
Manganese (Mn)	SOSE	549	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	3	2	ug/g (dry)
Nickel (Ni)	SOSE	32	3	ug/g (dry)
Phosphorus (P)	SOSE	1230	20	ug/g (dry)
Potassium (K)	SOSE	692	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	694	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	60	20	ug/g (dry)
Strontium (Sr)	SOSE	30.0	0.2	ug/g (dry)
Sulfur (S)	SOSE	402	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	230	0.3	ug/g (dry)
Vanadium (V)	SOSE	31	2	ug/g (dry)
Zinc (Zn)	SOSE	643	0.3	ug/g (dry)
ICPMS Total				

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Arsenic (As)	SOSE	63.9	0.1	ug/g (dry)
Selenium (Se)	SOSE	< 0.2	0.2	ug/g (dry)

Order No: 93712 - 10=ACG-03-S004A
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	98.22	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	95.69	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	94.68	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	86.83	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	22.47	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	1.78	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	11.39	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	64.36	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	22.47	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None

USDA, CSSC, Textural Category; samll sample sent. REquire >80g of the dry <2mm portion.

Metals

ICP Total

Aluminum (Al)	SOSE	13700	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	71	8	ug/g (dry)
Barium (Ba)	SOSE	413	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.6	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	26.8	0.8	ug/g (dry)
Calcium (Ca)	SOSE	4530	20	ug/g (dry)
Chromium (Cr)	SOSE	21.6	0.8	ug/g (dry)
Cobalt (Co)	SOSE	19.2	0.8	ug/g (dry)
Copper (Cu)	SOSE	29.3	0.8	ug/g (dry)
Iron (Fe)	SOSE	31500	0.8	ug/g (dry)
Lead (Pb)	SOSE	145	8	ug/g (dry)
Magnesium (Mg)	SOSE	4450	20	ug/g (dry)
Manganese (Mn)	SOSE	4420	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	2	2	ug/g (dry)
Nickel (Ni)	SOSE	45	3	ug/g (dry)
Phosphorus (P)	SOSE	873	20	ug/g (dry)
Potassium (K)	SOSE	691	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	568	8	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	54	20	ug/g (dry)
Strontium (Sr)	SOSE	29.7	0.2	ug/g (dry)
Sulfur (S)	SOSE	1330	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	160	0.3	ug/g (dry)
Vanadium (V)	SOSE	39	2	ug/g (dry)
Zinc (Zn)	SOSE	4030	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	61.9	0.1	ug/g (dry)
Selenium (Se)	SOSE	0.5	0.2	ug/g (dry)

Order No: 93713 - 11=ACG-03-S004B
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	90.52	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	81.43	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	77.46	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	60.37	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	11.16	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	9.48	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	30.15	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	49.21	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	11.16	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None

USDA, CSSC, Textural Category

Metals

ICP Total

Aluminum (Al)	SOSE	10700	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	41	8	ug/g (dry)
Barium (Ba)	SOSE	324	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.6	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	13.5	0.8	ug/g (dry)
Calcium (Ca)	SOSE	3330	20	ug/g (dry)
Chromium (Cr)	SOSE	18.0	0.8	ug/g (dry)
Cobalt (Co)	SOSE	8.5	0.8	ug/g (dry)
Copper (Cu)	SOSE	20.0	0.8	ug/g (dry)
Iron (Fe)	SOSE	23200	0.8	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Lead (Pb)	SOSE	95	8	ug/g (dry)
Magnesium (Mg)	SOSE	3640	20	ug/g (dry)
Manganese (Mn)	SOSE	1240	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	2	2	ug/g (dry)
Nickel (Ni)	SOSE	28	3	ug/g (dry)
Phosphorus (P)	SOSE	875	20	ug/g (dry)
Potassium (K)	SOSE	475	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	554	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	51	20	ug/g (dry)
Strontium (Sr)	SOSE	23.6	0.2	ug/g (dry)
Sulfur (S)	SOSE	736	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	171	0.3	ug/g (dry)
Vanadium (V)	SOSE	34	2	ug/g (dry)
Zinc (Zn)	SOSE	1670	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	35.1	0.1	ug/g (dry)
Selenium (Se)	SOSE	0.4	0.2	ug/g (dry)

Order No: 93714 - 12=ACG-03-S005A
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	97.45	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	89.96	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	85.72	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	79.41	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	19.31	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	2.55	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	20.06	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	58.58	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	18.81	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None

USDA, CSSC, Textural Category; Samll sample sent. REquire >80g of the dry <2mm portion.
Small saple size & calculated loss after digestion of >61%, may compromise results.
Particle density of 2.65 g/cm3 is assumed for this method.
Generally, samples with large volumes of organic matter residue are not suitable for this method and may bias pipette results. Calculations have been applied to adjust for this bias.
Textural category based on mineral fraction only.
Please note mineral fraction represents < 39% of entire sampel.

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Metals				
ICP Total				
Aluminum (Al)	SOSE	5090	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	12	8	ug/g (dry)
Barium (Ba)	SOSE	949	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.3	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	36.4	0.8	ug/g (dry)
Calcium (Ca)	SOSE	12200	20	ug/g (dry)
Chromium (Cr)	SOSE	5.8	0.8	ug/g (dry)
Cobalt (Co)	SOSE	79.3	0.8	ug/g (dry)
Copper (Cu)	SOSE	33.6	0.8	ug/g (dry)
Iron (Fe)	SOSE	9900	0.8	ug/g (dry)
Lead (Pb)	SOSE	48	8	ug/g (dry)
Magnesium (Mg)	SOSE	1360	20	ug/g (dry)
Manganese (Mn)	SOSE	54930	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	< 2	2	ug/g (dry)
Nickel (Ni)	SOSE	69	3	ug/g (dry)
Phosphorus (P)	SOSE	1150	20	ug/g (dry)
Potassium (K)	SOSE	363	20	ug/g (dry)
Selenium (Se)	SOSE	20	8	ug/g (dry)
Silicon (Si)	SOSE	150	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	< 20	20	ug/g (dry)
Strontium (Sr)	SOSE	61.2	0.2	ug/g (dry)
Sulfur (S)	SOSE	3340	8	ug/g (dry)
Tin (Sn)	SOSE	8	8	ug/g (dry)
Titanium (Ti)	SOSE	78.7	0.3	ug/g (dry)
Vanadium (V)	SOSE	5	2	ug/g (dry)
Zinc (Zn)	SOSE	7010	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	10.0	0.1	ug/g (dry)
Selenium (Se)	SOSE	1.3	0.2	ug/g (dry)

Order No: 93715 - 13=ACG-03-S005B
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat				
D: Dry Seive, 2.00mm, % < by wt.	SOSE	99.99	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	99.60	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	98.03	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	81.43	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	12.59	0.01	% (W/W)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	0.01	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	18.57	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	68.84	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	12.59	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None
USDA, CSSC, Textural Category				
Metals				
ICP Total				
Aluminum (Al)	SOSE	11500	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	34	8	ug/g (dry)
Barium (Ba)	SOSE	257	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.5	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	7.1	0.8	ug/g (dry)
Calcium (Ca)	SOSE	3880	20	ug/g (dry)
Chromium (Cr)	SOSE	18.9	0.8	ug/g (dry)
Cobalt (Co)	SOSE	6.2	0.8	ug/g (dry)
Copper (Cu)	SOSE	17.9	0.8	ug/g (dry)
Iron (Fe)	SOSE	18500	0.8	ug/g (dry)
Lead (Pb)	SOSE	68	8	ug/g (dry)
Magnesium (Mg)	SOSE	4520	20	ug/g (dry)
Manganese (Mn)	SOSE	595	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	2	2	ug/g (dry)
Nickel (Ni)	SOSE	22	3	ug/g (dry)
Phosphorus (P)	SOSE	1170	20	ug/g (dry)
Potassium (K)	SOSE	634	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	594	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	63	20	ug/g (dry)
Strontium (Sr)	SOSE	25.1	0.2	ug/g (dry)
Sulfur (S)	SOSE	370	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	239	0.3	ug/g (dry)
Vanadium (V)	SOSE	32	2	ug/g (dry)
Zinc (Zn)	SOSE	819	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	30.9	0.1	ug/g (dry)
Selenium (Se)	SOSE	0.6	0.2	ug/g (dry)

Order No: 93716 - 14=ACG-03-S006A
Start Date: 17/09/03 12:00:00AM

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Soilcon				
Part Size Std Texcat				
D: Dry Seive, 2.00mm, % < by wt.	SOSE	97.31	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	94.65	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	92.09	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	80.22	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	18.67	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	2.69	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	17.10	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	61.54	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	18.67	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None
USDA, CSSC, Textural Category; small sample sent. REquire >80g of the dry <2mm portion.				
Metals				
ICP Total				
Aluminum (Al)	SOSE	12600	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	55	8	ug/g (dry)
Barium (Ba)	SOSE	258	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.7	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	102	0.8	ug/g (dry)
Calcium (Ca)	SOSE	9450	20	ug/g (dry)
Chromium (Cr)	SOSE	17.9	0.8	ug/g (dry)
Cobalt (Co)	SOSE	32.3	0.8	ug/g (dry)
Copper (Cu)	SOSE	17.8	0.8	ug/g (dry)
Iron (Fe)	SOSE	25300	0.8	ug/g (dry)
Lead (Pb)	SOSE	154	8	ug/g (dry)
Magnesium (Mg)	SOSE	3990	20	ug/g (dry)
Manganese (Mn)	SOSE	5950	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	3	2	ug/g (dry)
Nickel (Ni)	SOSE	31	3	ug/g (dry)
Phosphorus (P)	SOSE	1010	20	ug/g (dry)
Potassium (K)	SOSE	676	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	456	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	63	20	ug/g (dry)
Strontium (Sr)	SOSE	34.9	0.2	ug/g (dry)
Sulfur (S)	SOSE	1120	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Titanium (Ti)	SOSE	124	0.3	ug/g (dry)
Vanadium (V)	SOSE	39	2	ug/g (dry)
Zinc (Zn)	SOSE	1010	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	47.1	0.1	ug/g (dry)
Selenium (Se)	SOSE	0.5	0.2	ug/g (dry)

Order No: 93717 - 15=ACG-03-S006B
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	66.41	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	48.07	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	44.63	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	37.61	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	6.53	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	33.59	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	28.81	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	31.08	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	6.53	0.01	% (W/W)
Textural Category CSSC	SOSE	Loam		None

USDA, CSSC, Textural Category

Metals

ICP Total

Aluminum (Al)	SOSE	13000	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	52	8	ug/g (dry)
Barium (Ba)	SOSE	242	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.7	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	3.3	0.8	ug/g (dry)
Calcium (Ca)	SOSE	3390	20	ug/g (dry)
Chromium (Cr)	SOSE	20.8	0.8	ug/g (dry)
Cobalt (Co)	SOSE	9.2	0.8	ug/g (dry)
Copper (Cu)	SOSE	23.5	0.8	ug/g (dry)
Iron (Fe)	SOSE	24200	0.8	ug/g (dry)
Lead (Pb)	SOSE	131	8	ug/g (dry)
Magnesium (Mg)	SOSE	4080	20	ug/g (dry)
Manganese (Mn)	SOSE	368	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	3	2	ug/g (dry)
Nickel (Ni)	SOSE	22	3	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Phosphorus (P)	SOSE	934	20	ug/g (dry)
Potassium (K)	SOSE	562	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	728	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	54	20	ug/g (dry)
Strontium (Sr)	SOSE	21.9	0.2	ug/g (dry)
Sulfur (S)	SOSE	301	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	214	0.3	ug/g (dry)
Vanadium (V)	SOSE	39	2	ug/g (dry)
Zinc (Zn)	SOSE	262	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	45.6	0.1	ug/g (dry)
Selenium (Se)	SOSE	1.0	0.2	ug/g (dry)

Order No: 93718 - 16=ACG-03-S007A
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	93.39	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	80.53	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	77.81	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	72.36	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	16.75	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	6.61	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	21.03	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	55.60	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	16.75	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None

USDA, CSSC, Textural Category; <33g sample sent. Require >80g of the dry <2mm portion.
Small sample portion & calculated loss after digestion of >66%, may compromise results.
Textural category based on mineral fraction only.
Please note mineral fraction represents less than 34% of entire sample.

Metals

ICP Total

Aluminum (Al)	SOSE	1100	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	< 8	8	ug/g (dry)
Barium (Ba)	SOSE	65.6	0.2	ug/g (dry)
Berylium (Be)	SOSE	< 0.2	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Cadmium (Cd)	SOSE	5.0	0.8	ug/g (dry)
Calcium (Ca)	SOSE	27100	20	ug/g (dry)
Chromium (Cr)	SOSE	1.7	0.8	ug/g (dry)
Cobalt (Co)	SOSE	3.0	0.8	ug/g (dry)
Copper (Cu)	SOSE	6.9	0.8	ug/g (dry)
Iron (Fe)	SOSE	2120	0.8	ug/g (dry)
Lead (Pb)	SOSE	41	8	ug/g (dry)
Magnesium (Mg)	SOSE	1850	20	ug/g (dry)
Manganese (Mn)	SOSE	639	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	< 2	2	ug/g (dry)
Nickel (Ni)	SOSE	4	3	ug/g (dry)
Phosphorus (P)	SOSE	802	20	ug/g (dry)
Potassium (K)	SOSE	412	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	72	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	22	20	ug/g (dry)
Strontium (Sr)	SOSE	81.5	0.2	ug/g (dry)
Sulfur (S)	SOSE	4890	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	40.0	0.3	ug/g (dry)
Vanadium (V)	SOSE	3	2	ug/g (dry)
Zinc (Zn)	SOSE	205	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	3.5	0.1	ug/g (dry)
Selenium (Se)	SOSE	0.4	0.2	ug/g (dry)

Order No: 93719 - 17=ACG-03-S007B
Start Date: 17/09/03 12:00:00AM

Soilcon

Part Size Std Texcat

D: Dry Seive, 2.00mm, % < by wt.	SOSE	99.92	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	97.01	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	90.15	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	66.14	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	14.82	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	0.08	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	33.77	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	51.32	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	14.82	0.01	% (W/W)
Textural Category CSSC	SOSE	Silt Loam		None

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
USDA, CSSC, Textural Category				
Metals				
ICP Total				
Aluminum (Al)	SOSE	13200	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	43	8	ug/g (dry)
Barium (Ba)	SOSE	261	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.6	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	0.9	0.8	ug/g (dry)
Calcium (Ca)	SOSE	4390	20	ug/g (dry)
Chromium (Cr)	SOSE	18.7	0.8	ug/g (dry)
Cobalt (Co)	SOSE	12.2	0.8	ug/g (dry)
Copper (Cu)	SOSE	13.4	0.8	ug/g (dry)
Iron (Fe)	SOSE	24400	0.8	ug/g (dry)
Lead (Pb)	SOSE	162	8	ug/g (dry)
Magnesium (Mg)	SOSE	3560	20	ug/g (dry)
Manganese (Mn)	SOSE	619	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	2	2	ug/g (dry)
Nickel (Ni)	SOSE	17	3	ug/g (dry)
Phosphorus (P)	SOSE	765	20	ug/g (dry)
Potassium (K)	SOSE	503	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	665	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	46	20	ug/g (dry)
Strontium (Sr)	SOSE	21.8	0.2	ug/g (dry)
Sulfur (S)	SOSE	481	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	175	0.3	ug/g (dry)
Vanadium (V)	SOSE	39	2	ug/g (dry)
Zinc (Zn)	SOSE	155	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	38.3	0.1	ug/g (dry)
Selenium (Se)	SOSE	0.6	0.2	ug/g (dry)

Order No: 93720 - 18=ACG-03-S008
Start Date: 17/09/03 12:00:00AM

Soilcon				
Part Size Std Texcat				
D: Dry Seive, 2.00mm, % < by wt.	SOSE	54.46	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	39.68	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	36.41	0.01	% (W/W)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
K: Pipette, 0.053mm, % < by wt.	SOSE	28.00	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	5.38	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	45.54	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	26.46	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	22.62	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	5.38	0.01	% (W/W)
Textural Category CSSC	SOSE	Loam		None
USDA, CSSC, Textural Category				
Metals				
ICP Total				
Aluminum (Al)	SOSE	13300	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	50	8	ug/g (dry)
Barium (Ba)	SOSE	370	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.7	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	5.0	0.8	ug/g (dry)
Calcium (Ca)	SOSE	5140	20	ug/g (dry)
Chromium (Cr)	SOSE	20.2	0.8	ug/g (dry)
Cobalt (Co)	SOSE	15.1	0.8	ug/g (dry)
Copper (Cu)	SOSE	23.4	0.8	ug/g (dry)
Iron (Fe)	SOSE	26400	0.8	ug/g (dry)
Lead (Pb)	SOSE	143	8	ug/g (dry)
Magnesium (Mg)	SOSE	4150	20	ug/g (dry)
Manganese (Mn)	SOSE	972	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	2	2	ug/g (dry)
Nickel (Ni)	SOSE	27	3	ug/g (dry)
Phosphorus (P)	SOSE	987	20	ug/g (dry)
Potassium (K)	SOSE	548	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	605	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	54	20	ug/g (dry)
Strontium (Sr)	SOSE	28.8	0.2	ug/g (dry)
Sulfur (S)	SOSE	512	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	145	0.3	ug/g (dry)
Vanadium (V)	SOSE	37	2	ug/g (dry)
Zinc (Zn)	SOSE	305	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	43.7	0.1	ug/g (dry)
Selenium (Se)	SOSE	0.8	0.2	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Order No: 93721 - 19=ACG-03-S009				
Start Date: 17/09/03 12:00:00AM				
Soilcon				
Part Size Std Texcat				
D: Dry Seive, 2.00mm, % < by wt.	SOSE	54.42	0.01	% (W/W)
G: Wet Seive 0.250mm, % entire sample by wt.	SOSE	35.69	0.01	% (W/W)
H: Wet Seive 0.125mm, % entire sample by wt.	SOSE	32.19	0.01	% (W/W)
K: Pipette, 0.053mm, % < by wt.	SOSE	22.94	0.01	% (W/W)
M: Pipette, 0.002mm, % < by wt.	SOSE	4.38	0.01	% (W/W)
N: Gravel, >2.00mm, dry sieve, % < by wt.	SOSE	45.58	0.01	% (W/W)
O: Sand, <2.00mm>0.053mm, pipet, % entire sample by wt.	SOSE	31.48	0.01	% (W/W)
P. Silt, <0.053mm>0.002mm, pipet, % entire sample by wt.	SOSE	18.56	0.01	% (W/W)
Q: Clay, <0.002mm, pipet, % entire sample by wt.	SOSE	4.38	0.01	% (W/W)
Textural Category CSSC	SOSE	Sandy Loam		None
USDA, CSSC, Textural Category				
Metals				
ICP Total				
Aluminum (Al)	SOSE	12300	8	ug/g (dry)
Antimony (Sb)	SOSE	< 8	8	ug/g (dry)
Arsenic (As)	SOSE	54	8	ug/g (dry)
Barium (Ba)	SOSE	273	0.2	ug/g (dry)
Berylium (Be)	SOSE	0.6	0.2	ug/g (dry)
Boron (B)	SOSE	< 2	2	ug/g (dry)
Cadmium (Cd)	SOSE	3.2	0.8	ug/g (dry)
Calcium (Ca)	SOSE	3520	20	ug/g (dry)
Chromium (Cr)	SOSE	20.3	0.8	ug/g (dry)
Cobalt (Co)	SOSE	9.6	0.8	ug/g (dry)
Copper (Cu)	SOSE	21.5	0.8	ug/g (dry)
Iron (Fe)	SOSE	26800	0.8	ug/g (dry)
Lead (Pb)	SOSE	103	8	ug/g (dry)
Magnesium (Mg)	SOSE	4140	20	ug/g (dry)
Manganese (Mn)	SOSE	451	0.2	ug/g (dry)
Molybdenum (Mo)	SOSE	3	2	ug/g (dry)
Nickel (Ni)	SOSE	24	3	ug/g (dry)
Phosphorus (P)	SOSE	1020	20	ug/g (dry)
Potassium (K)	SOSE	576	20	ug/g (dry)
Selenium (Se)	SOSE	< 8	8	ug/g (dry)
Silicon (Si)	SOSE	679	8	ug/g (dry)
Silver (Ag)	SOSE	< 2	2	ug/g (dry)
Sodium (Na)	SOSE	50	20	ug/g (dry)

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Strontium (Sr)	SOSE	23.9	0.2	ug/g (dry)
Sulfur (S)	SOSE	343	8	ug/g (dry)
Tin (Sn)	SOSE	< 8	8	ug/g (dry)
Titanium (Ti)	SOSE	218	0.3	ug/g (dry)
Vanadium (V)	SOSE	38	2	ug/g (dry)
Zinc (Zn)	SOSE	487	0.3	ug/g (dry)
ICPMS Total				
Arsenic (As)	SOSE	47.5	0.1	ug/g (dry)
Selenium (Se)	SOSE	0.3	0.2	ug/g (dry)

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North Vancouver, BC. Canada V7H - 1B1
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Environment Canada Environnement Canada

Final Analytical Results with QC data

PESC FOLDER # : 200300817

Location:	UNITED KENO HILL MINES (UKHM)
Type of Sample:	Fresh Water/General (FWGE) Fresh Water/General (FWGE) Fresh Water/General (FWGE) Fresh Water/General (FWGE) Fresh Water/General (FWGE) Fresh Water/General (FWGE) Fresh Water/General (FWGE) Fresh Water/General (FWGE) Fresh Water/General (FWGE) Fresh Water/General (FWGE) Fresh Water/General (FWGE)
Submitted By:	Vic Enns Environment Canada 91782 Alaska Hwy Whitehorse, YT Canada Y1A 5B7 Phone: 867-667-4592 Fax: 867-667-7962
Logged In:	Tuesday September 30, 2003
Completed:	Thursday October 23, 2003 (822 results)
Client Code:	2562-101 2562-101 EP YUKON POLLUTION ABATEMENT
Sample Priority:	High

Authorized by: _____

Richard Strub
QA Officer

Notes:

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Order No: 93644 - ACG-DP5				
Start Date: 9/17/03 12:00:00AM				
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	FWGE	595	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	FWGE	1040	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	FWGE	< 0.05	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	< 0.05	0.05	mg/L
Barium (Ba)	FWGE	0.026	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.284	0.005	mg/L
Calcium (Ca)	FWGE	169	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	0.083	0.005	mg/L
Copper (Cu)	FWGE	0.257	0.005	mg/L
Iron (Fe)	FWGE	< 0.005	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	42.2	0.1	mg/L
Manganese (Mn)	FWGE	161	0.001	mg/L
Molybdenum (Mo)	FWGE	0.02	0.01	mg/L
Nickel (Ni)	FWGE	0.40	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.8	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	5.23	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	2.0	0.1	mg/L
Strontium (Sr)	FWGE	0.313	0.001	mg/L
Sulfur (S)	FWGE	319	0.05	mg/L
Tin (Sn)	FWGE	0.10	0.05	mg/L
Titanium (Ti)	FWGE	< 0.002	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	95.6	0.002	mg/L
ICP Total				
Aluminum (Al)	FWGE	7.14	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	< 0.06	0.06	mg/L
Barium (Ba)	FWGE	0.318	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.275	0.006	mg/L
Calcium (Ca)	FWGE	167	0.1	mg/L
Chromium (Cr)	FWGE	0.015	0.006	mg/L
Cobalt (Co)	FWGE	0.085	0.006	mg/L
Copper (Cu)	FWGE	< 0.006	0.006	mg/L
Iron (Fe)	FWGE	12	0.006	mg/L
Lead (Pb)	FWGE	0.07	0.06	mg/L
Magnesium (Mg)	FWGE	42.5	0.1	mg/L
Manganese (Mn)	FWGE	126	0.001	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.41	0.02	mg/L
Phosphorus (P)	FWGE	0.2	0.1	mg/L
Potassium (K)	FWGE	2.1	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	14.6	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	2.1	0.1	mg/L
Strontium (Sr)	FWGE	0.327	0.001	mg/L
Sulfur (S)	FWGE	321	0.06	mg/L
Tin (Sn)	FWGE	0.08	0.06	mg/L
Titanium (Ti)	FWGE	0.201	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	82.6	0.002	mg/L

Order No: 93645 - ACG-DP6
Start Date: 9/17/03 12:00:00AM

Metals

Hardness CaMg diss.

Hardness,Calcium+Magnesium - calc.	FWGE	563	0.4	mg CaCO3 / L

Hardness Total diss.

Hardness, Total - calc.	FWGE	627	0.4	mg CaCO3 / L

ICP Dissolved

Aluminum (Al)	FWGE	< 0.05	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	< 0.05	0.05	mg/L
Barium (Ba)	FWGE	0.015	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.016	0.005	mg/L
Calcium (Ca)	FWGE	156	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	0.043	0.005	mg/L
Copper (Cu)	FWGE	0.260	0.005	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Iron (Fe)	FWGE	< 0.005	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	42.4	0.1	mg/L
Manganese (Mn)	FWGE	24.9	0.001	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.09	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	1.4	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	5.68	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	4.5	0.1	mg/L
Strontium (Sr)	FWGE	0.244	0.001	mg/L
Sulfur (S)	FWGE	202	0.05	mg/L
Tin (Sn)	FWGE	0.10	0.05	mg/L
Titanium (Ti)	FWGE	< 0.002	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	11.6	0.002	mg/L
ICP Total				
Aluminum (Al)	FWGE	15.4	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	0.08	0.06	mg/L
Barium (Ba)	FWGE	0.669	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.018	0.006	mg/L
Calcium (Ca)	FWGE	139	0.1	mg/L
Chromium (Cr)	FWGE	0.031	0.006	mg/L
Cobalt (Co)	FWGE	0.049	0.006	mg/L
Copper (Cu)	FWGE	0.031	0.006	mg/L
Iron (Fe)	FWGE	38.9	0.006	mg/L
Lead (Pb)	FWGE	0.16	0.06	mg/L
Magnesium (Mg)	FWGE	42.2	0.1	mg/L
Manganese (Mn)	FWGE	21.8	0.001	mg/L
Molybdenum (Mo)	FWGE	0.02	0.01	mg/L
Nickel (Ni)	FWGE	0.12	0.02	mg/L
Phosphorus (P)	FWGE	0.5	0.1	mg/L
Potassium (K)	FWGE	4.6	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	27.1	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	4.5	0.1	mg/L
Strontium (Sr)	FWGE	0.245	0.001	mg/L
Sulfur (S)	FWGE	182	0.06	mg/L
Tin (Sn)	FWGE	0.07	0.06	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Titanium (Ti)	FWGE	0.349	0.002	mg/L
Vanadium (V)	FWGE	0.04	0.01	mg/L
Zinc (Zn)	FWGE	13.5	0.002	mg/L

Order No: 93646 - ACG-DP1
Start Date: 9/17/03 12:00:00AM

Metals

Hardness CaMg diss.

Hardness,Calcium+Magnesium - calc.	FWGE	694	0.4	mg CaCO3 / L

Hardness Total diss.

Hardness, Total - calc.	FWGE	873	0.4	mg CaCO3 / L

ICP Dissolved

Aluminum (Al)	FWGE	< 0.05	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	< 0.05	0.05	mg/L
Barium (Ba)	FWGE	0.021	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.027	0.005	mg/L
Calcium (Ca)	FWGE	199	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	0.013	0.005	mg/L
Copper (Cu)	FWGE	0.261	0.005	mg/L
Iron (Fe)	FWGE	0.086	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	48.1	0.1	mg/L
Manganese (Mn)	FWGE	68.2	0.001	mg/L
Molybdenum (Mo)	FWGE	0.02	0.01	mg/L
Nickel (Ni)	FWGE	0.12	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	1.6	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	4.26	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	4.9	0.1	mg/L
Strontium (Sr)	FWGE	0.397	0.001	mg/L
Sulfur (S)	FWGE	270	0.05	mg/L
Tin (Sn)	FWGE	0.10	0.05	mg/L
Titanium (Ti)	FWGE	< 0.002	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	35.1	0.002	mg/L

ICP Total

Aluminum (Al)	FWGE	120	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Arsenic (As)	FWGE	0.91	0.06	mg/L
Barium (Ba)	FWGE	1.8	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.090	0.006	mg/L
Calcium (Ca)	FWGE	248	0.1	mg/L
Chromium (Cr)	FWGE	0.253	0.006	mg/L
Cobalt (Co)	FWGE	0.100	0.006	mg/L
Copper (Cu)	FWGE	0.553	0.006	mg/L
Iron (Fe)	FWGE	275	0.006	mg/L
Lead (Pb)	FWGE	0.87	0.06	mg/L
Magnesium (Mg)	FWGE	108	0.1	mg/L
Manganese (Mn)	FWGE	67.4	0.001	mg/L
Molybdenum (Mo)	FWGE	0.04	0.01	mg/L
Nickel (Ni)	FWGE	0.59	0.02	mg/L
Phosphorus (P)	FWGE	5.6	0.1	mg/L
Potassium (K)	FWGE	20.8	0.1	mg/L
Selenium (Se)	FWGE	0.06	0.06	mg/L
Silicon (Si)	FWGE	57.9	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	7.4	0.1	mg/L
Strontium (Sr)	FWGE	0.659	0.001	mg/L
Sulfur (S)	FWGE	271	0.06	mg/L
Tin (Sn)	FWGE	0.06	0.06	mg/L
Titanium (Ti)	FWGE	2.67	0.002	mg/L
Vanadium (V)	FWGE	0.32	0.01	mg/L
Zinc (Zn)	FWGE	85.8	0.002	mg/L

Order No: 93647 - ACG-DP2
Start Date: 9/17/03 12:00:00AM

Metals

Hardness CaMg diss.

Hardness,Calcium+Magnesium - calc.	FWGE	607	0.4	mg CaCO3 / L

Hardness Total diss.

Hardness, Total - calc.	FWGE	680	0.4	mg CaCO3 / L

ICP Dissolved

Aluminum (Al)	FWGE	< 0.05	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	< 0.05	0.05	mg/L
Barium (Ba)	FWGE	0.018	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	< 0.005	0.005	mg/L
Calcium (Ca)	FWGE	175	0.1	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	< 0.005	0.005	mg/L
Copper (Cu)	FWGE	0.257	0.005	mg/L
Iron (Fe)	FWGE	< 0.005	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	41.1	0.1	mg/L
Manganese (Mn)	FWGE	38.8	0.001	mg/L
Molybdenum (Mo)	FWGE	0.02	0.01	mg/L
Nickel (Ni)	FWGE	0.03	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.7	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	3.91	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	3.0	0.1	mg/L
Strontium (Sr)	FWGE	0.311	0.001	mg/L
Sulfur (S)	FWGE	221	0.05	mg/L
Tin (Sn)	FWGE	0.10	0.05	mg/L
Titanium (Ti)	FWGE	< 0.002	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	1.56	0.002	mg/L
ICP Total				
Aluminum (Al)	FWGE	940	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	3.64	0.06	mg/L
Barium (Ba)	FWGE	29.7	0.001	mg/L
Berylium (Be)	FWGE	0.106	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.244	0.006	mg/L
Calcium (Ca)	FWGE	505	0.1	mg/L
Chromium (Cr)	FWGE	1.95	0.006	mg/L
Cobalt (Co)	FWGE	0.859	0.006	mg/L
Copper (Cu)	FWGE	2.48	0.006	mg/L
Iron (Fe)	FWGE	2252	0.006	mg/L
Lead (Pb)	FWGE	6.09	0.06	mg/L
Magnesium (Mg)	FWGE	411	0.1	mg/L
Manganese (Mn)	FWGE	148	0.001	mg/L
Molybdenum (Mo)	FWGE	0.12	0.01	mg/L
Nickel (Ni)	FWGE	3.69	0.02	mg/L
Phosphorus (P)	FWGE	43.4	0.1	mg/L
Potassium (K)	FWGE	74.2	0.1	mg/L
Selenium (Se)	FWGE	0.12	0.06	mg/L
Silicon (Si)	FWGE	124	0.06	mg/L
Silver (Ag)	FWGE	0.08	0.01	mg/L
Sodium (Na)	FWGE	9.4	0.1	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Strontium (Sr)	FWGE	2.52	0.001	mg/L
Sulfur (S)	FWGE	202	0.06	mg/L
Tin (Sn)	FWGE	< 0.06	0.06	mg/L
Titanium (Ti)	FWGE	18.0	0.002	mg/L
Vanadium (V)	FWGE	2.24	0.01	mg/L
Zinc (Zn)	FWGE	82.9	0.002	mg/L

Order No: 93648 - ACG-DP3
Start Date: 9/17/03 12:00:00AM

Metals

Hardness CaMg diss.

Hardness,Calcium+Magnesium - calc.	FWGE	412	0.4	mg CaCO3 / L

Hardness Total diss.

Hardness, Total - calc.	FWGE	423	0.4	mg CaCO3 / L

ICP Dissolved

Aluminum (Al)	FWGE	< 0.05	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	< 0.05	0.05	mg/L
Barium (Ba)	FWGE	0.023	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	< 0.005	0.005	mg/L
Calcium (Ca)	FWGE	99.1	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	< 0.005	0.005	mg/L
Copper (Cu)	FWGE	0.261	0.005	mg/L
Iron (Fe)	FWGE	< 0.005	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	39.9	0.1	mg/L
Manganese (Mn)	FWGE	5.1	0.001	mg/L
Molybdenum (Mo)	FWGE	0.02	0.01	mg/L
Nickel (Ni)	FWGE	< 0.02	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	1.0	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	3.12	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	4.1	0.1	mg/L
Strontium (Sr)	FWGE	0.193	0.001	mg/L
Sulfur (S)	FWGE	114	0.05	mg/L
Tin (Sn)	FWGE	0.08	0.05	mg/L
Titanium (Ti)	FWGE	< 0.002	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	0.558	0.002	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
ICP Total				
Aluminum (Al)	FWGE	78.9	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	0.80	0.06	mg/L
Barium (Ba)	FWGE	1.42	0.001	mg/L
Berylium (Be)	FWGE	0.002	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.010	0.006	mg/L
Calcium (Ca)	FWGE	156	0.1	mg/L
Chromium (Cr)	FWGE	0.210	0.006	mg/L
Cobalt (Co)	FWGE	0.079	0.006	mg/L
Copper (Cu)	FWGE	0.308	0.006	mg/L
Iron (Fe)	FWGE	209	0.006	mg/L
Lead (Pb)	FWGE	0.43	0.06	mg/L
Magnesium (Mg)	FWGE	84.0	0.1	mg/L
Manganese (Mn)	FWGE	4.77	0.001	mg/L
Molybdenum (Mo)	FWGE	0.04	0.01	mg/L
Nickel (Ni)	FWGE	0.29	0.02	mg/L
Phosphorus (P)	FWGE	5.0	0.1	mg/L
Potassium (K)	FWGE	14.2	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	61.1	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	3.4	0.1	mg/L
Strontium (Sr)	FWGE	0.386	0.001	mg/L
Sulfur (S)	FWGE	80.4	0.06	mg/L
Tin (Sn)	FWGE	0.06	0.06	mg/L
Titanium (Ti)	FWGE	1.8	0.002	mg/L
Vanadium (V)	FWGE	0.21	0.01	mg/L
Zinc (Zn)	FWGE	2.46	0.002	mg/L

Order No: 93649 - ACG-DP4
Start Date: 9/17/03 12:00:00AM

Metals

ICP Total				
Aluminum (Al)	FWGE	1750	0.06	mg/L
Antimony (Sb)	FWGE	0.10	0.06	mg/L
Arsenic (As)	FWGE	3.65	0.06	mg/L
Barium (Ba)	FWGE	51.2	0.001	mg/L
Berylium (Be)	FWGE	0.185	0.001	mg/L
Boron (B)	FWGE	0.06	0.01	mg/L
Cadmium (Cd)	FWGE	0.231	0.006	mg/L
Calcium (Ca)	FWGE	488	0.1	mg/L
Chromium (Cr)	FWGE	2.55	0.006	mg/L
Cobalt (Co)	FWGE	1.69	0.006	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Copper (Cu)	FWGE	2.29	0.006	mg/L
Iron (Fe)	FWGE	3177	0.006	mg/L
Lead (Pb)	FWGE	21.0	0.06	mg/L
Magnesium (Mg)	FWGE	440	0.1	mg/L
Manganese (Mn)	FWGE	225	0.001	mg/L
Molybdenum (Mo)	FWGE	0.15	0.01	mg/L
Nickel (Ni)	FWGE	4.29	0.02	mg/L
Phosphorus (P)	FWGE	80.5	0.1	mg/L
Potassium (K)	FWGE	109	0.1	mg/L
Selenium (Se)	FWGE	0.27	0.06	mg/L
Silicon (Si)	FWGE	125	0.06	mg/L
Silver (Ag)	FWGE	0.40	0.01	mg/L
Sodium (Na)	FWGE	13.6	0.1	mg/L
Strontium (Sr)	FWGE	3.74	0.001	mg/L
Sulfur (S)	FWGE	67.0	0.06	mg/L
Tin (Sn)	FWGE	0.13	0.06	mg/L
Titanium (Ti)	FWGE	20.6	0.002	mg/L
Vanadium (V)	FWGE	3.57	0.01	mg/L
Zinc (Zn)	FWGE	31.4	0.002	mg/L

Order No: 93650 - G300 ADIT
Start Date: 9/17/03 12:00:00AM

General

Alkalinity Tot-pH4.5

Alkalinity to pH 4.5	FWGE	45.6	0.5	mg CaCO3 / L

ICA (Cl F SO4)

Chloride (Cl)	FWGE	1.0	0.1	mg/L
Fluoride (F)	FWGE	0.42	0.01	mg/L
Sulphate (SO4)	FWGE	1040	30	mg/L

ICA (NO2 NO3 PO4 Br)

Bromide (Br)	FWGE	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	FWGE	0.089	0.002	mg/L
Nitrogen, Nitrite as N	FWGE	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	FWGE	< 0.05	0.05	mg/L

pH

pH	FWGE	6.34	0.01	pH Units

Residue: Filterable

Residue, Filterable (TDS)	FWGE	1840	10	mg/L

Residue: Nonfilt.

Residue, Nonfilterable (NFR/TSS)	FWGE	61	5	mg/L

Specific Conductance

Conductivity	FWGE	1640	2	uS/cm

Metals

Hardness CaMg diss.

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Hardness,Calcium+Magnesium - calc.	FWGE	601	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	FWGE	1120	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	FWGE	< 0.05	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	0.08	0.05	mg/L
Barium (Ba)	FWGE	0.006	0.001	mg/L
Berylium (Be)	FWGE	0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.374	0.005	mg/L
Calcium (Ca)	FWGE	178	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	0.101	0.005	mg/L
Copper (Cu)	FWGE	0.256	0.005	mg/L
Iron (Fe)	FWGE	14.3	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	37.8	0.1	mg/L
Manganese (Mn)	FWGE	162	0.001	mg/L
Molybdenum (Mo)	FWGE	0.02	0.01	mg/L
Nickel (Ni)	FWGE	0.41	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.6	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	4.84	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	1.7	0.1	mg/L
Strontium (Sr)	FWGE	0.300	0.001	mg/L
Sulfur (S)	FWGE	349	0.05	mg/L
Tin (Sn)	FWGE	0.10	0.05	mg/L
Titanium (Ti)	FWGE	< 0.002	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	131.6	0.002	mg/L
ICP Total				
Aluminum (Al)	FWGE	0.14	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	0.09	0.06	mg/L
Barium (Ba)	FWGE	0.010	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.345	0.006	mg/L
Calcium (Ca)	FWGE	163	0.1	mg/L
Chromium (Cr)	FWGE	< 0.006	0.006	mg/L
Cobalt (Co)	FWGE	0.089	0.006	mg/L
Copper (Cu)	FWGE	< 0.006	0.006	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Iron (Fe)	FWGE	23.3	0.006	mg/L
Lead (Pb)	FWGE	< 0.06	0.06	mg/L
Magnesium (Mg)	FWGE	35.9	0.1	mg/L
Manganese (Mn)	FWGE	143	0.001	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.37	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.6	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	3.55	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	1.3	0.1	mg/L
Strontium (Sr)	FWGE	0.278	0.001	mg/L
Sulfur (S)	FWGE	338	0.06	mg/L
Tin (Sn)	FWGE	0.07	0.06	mg/L
Titanium (Ti)	FWGE	< 0.002	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	112.5	0.002	mg/L
Nutrients				
NH3				
Nitrogen, Ammonia as N	FWGE	0.062	0.005	mg/L

Order No: 93651 - U/S OF G300 CULVERT(LMK 020)
Start Date: 9/17/03 12:00:00AM

General				
Alkalinity Tot-pH4.5				
Alkalinity to pH 4.5	FWGE	114	0.5	mg CaCO3 / L
ICA (Cl F SO4)				
Chloride (Cl)	FWGE	0.4	0.1	mg/L
Fluoride (F)	FWGE	0.04	0.01	mg/L
Sulphate (SO4)	FWGE	934	30	mg/L
ICA (NO2 NO3 PO4 Br)				
Bromide (Br)	FWGE	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	FWGE	0.250	0.002	mg/L
Nitrogen, Nitrite as N	FWGE	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	FWGE	< 0.05	0.05	mg/L
pH				
pH	FWGE	7.56	0.01	pH Units
Specific Conductance				
Conductivity	FWGE	1650	2	uS/cm
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	FWGE	1040	0.4	mg CaCO3 / L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Hardness Total diss.				
Hardness, Total - calc.	FWGE	1050	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	FWGE	< 0.05	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L
Arsenic (As)	FWGE	< 0.05	0.05	mg/L
Barium (Ba)	FWGE	0.049	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.012	0.005	mg/L
Calcium (Ca)	FWGE	331	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	< 0.005	0.005	mg/L
Copper (Cu)	FWGE	0.260	0.005	mg/L
Iron (Fe)	FWGE	0.188	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	52.1	0.1	mg/L
Manganese (Mn)	FWGE	0.339	0.001	mg/L
Molybdenum (Mo)	FWGE	0.02	0.01	mg/L
Nickel (Ni)	FWGE	0.03	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	1.1	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	5.46	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	3.2	0.1	mg/L
Strontium (Sr)	FWGE	0.863	0.001	mg/L
Sulfur (S)	FWGE	300	0.05	mg/L
Tin (Sn)	FWGE	0.11	0.05	mg/L
Titanium (Ti)	FWGE	< 0.002	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	5.79	0.002	mg/L
ICP Total				
Aluminum (Al)	FWGE	1.67	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	< 0.06	0.06	mg/L
Barium (Ba)	FWGE	0.075	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.014	0.006	mg/L
Calcium (Ca)	FWGE	302	0.1	mg/L
Chromium (Cr)	FWGE	< 0.006	0.006	mg/L
Cobalt (Co)	FWGE	< 0.006	0.006	mg/L
Copper (Cu)	FWGE	< 0.006	0.006	mg/L
Iron (Fe)	FWGE	2.91	0.006	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Lead (Pb)	FWGE	< 0.06	0.06	mg/L
Magnesium (Mg)	FWGE	48.3	0.1	mg/L
Manganese (Mn)	FWGE	0.346	0.001	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.04	0.02	mg/L
Phosphorus (P)	FWGE	0.1	0.1	mg/L
Potassium (K)	FWGE	1.3	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	6.08	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	2.6	0.1	mg/L
Strontium (Sr)	FWGE	0.792	0.001	mg/L
Sulfur (S)	FWGE	311	0.06	mg/L
Tin (Sn)	FWGE	0.07	0.06	mg/L
Titanium (Ti)	FWGE	0.043	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	5.32	0.002	mg/L
Order No: 93652 - MAIN ROAD SURFACE WATER (LMK 021)				
Start Date: 9/17/03 12:00:00AM				
General				
Alkalinity Tot-pH4.5				
Alkalinity to pH 4.5	FWGE	15.7	0.5	mg CaCO3 / L
ICA (Cl F SO4)				
Chloride (Cl)	FWGE	0.1	0.1	mg/L
Fluoride (F)	FWGE	0.02	0.01	mg/L
Sulphate (SO4)	FWGE	14.7	0.5	mg/L
ICA (NO2 NO3 PO4 Br)				
Bromide (Br)	FWGE	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	FWGE	0.345	0.002	mg/L
Nitrogen, Nitrite as N	FWGE	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	FWGE	< 0.05	0.05	mg/L
pH				
pH	FWGE	6.79	0.01	pH Units
Specific Conductance				
Conductivity	FWGE	75	2	uS/cm
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	FWGE	30.8	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	FWGE	31.7	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	FWGE	0.08	0.05	mg/L
Antimony (Sb)	FWGE	< 0.05	0.05	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Arsenic (As)	FWGE	< 0.05	0.05	mg/L
Barium (Ba)	FWGE	0.030	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	< 0.005	0.005	mg/L
Calcium (Ca)	FWGE	8.5	0.1	mg/L
Chromium (Cr)	FWGE	< 0.005	0.005	mg/L
Cobalt (Co)	FWGE	< 0.005	0.005	mg/L
Copper (Cu)	FWGE	0.259	0.005	mg/L
Iron (Fe)	FWGE	0.023	0.005	mg/L
Lead (Pb)	FWGE	< 0.05	0.05	mg/L
Magnesium (Mg)	FWGE	2.3	0.1	mg/L
Manganese (Mn)	FWGE	0.037	0.001	mg/L
Molybdenum (Mo)	FWGE	< 0.01	0.01	mg/L
Nickel (Ni)	FWGE	< 0.02	0.02	mg/L
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.1	0.1	mg/L
Selenium (Se)	FWGE	< 0.05	0.05	mg/L
Silicon (Si)	FWGE	2.96	0.05	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	0.5	0.1	mg/L
Strontium (Sr)	FWGE	0.024	0.001	mg/L
Sulfur (S)	FWGE	5.33	0.05	mg/L
Tin (Sn)	FWGE	< 0.05	0.05	mg/L
Titanium (Ti)	FWGE	< 0.002	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	0.032	0.002	mg/L
ICP Total				
Aluminum (Al)	FWGE	0.28	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	< 0.06	0.06	mg/L
Barium (Ba)	FWGE	0.039	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	< 0.006	0.006	mg/L
Calcium (Ca)	FWGE	9.2	0.1	mg/L
Chromium (Cr)	FWGE	< 0.006	0.006	mg/L
Cobalt (Co)	FWGE	< 0.006	0.006	mg/L
Copper (Cu)	FWGE	< 0.006	0.006	mg/L
Iron (Fe)	FWGE	0.398	0.006	mg/L
Lead (Pb)	FWGE	< 0.06	0.06	mg/L
Magnesium (Mg)	FWGE	2.3	0.1	mg/L
Manganese (Mn)	FWGE	0.027	0.001	mg/L
Molybdenum (Mo)	FWGE	< 0.01	0.01	mg/L
Nickel (Ni)	FWGE	< 0.02	0.02	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Phosphorus (P)	FWGE	< 0.1	0.1	mg/L
Potassium (K)	FWGE	0.1	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	2.81	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	0.4	0.1	mg/L
Strontium (Sr)	FWGE	0.025	0.001	mg/L
Sulfur (S)	FWGE	4.90	0.06	mg/L
Tin (Sn)	FWGE	< 0.06	0.06	mg/L
Titanium (Ti)	FWGE	0.006	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L
Zinc (Zn)	FWGE	0.023	0.002	mg/L

Order No: 93653 - HAUL RD (POWERLINE)
Start Date: 9/17/03 12:00:00AM

Metals

ICP Total

Aluminum (Al)	FWGE	7.06	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	< 0.06	0.06	mg/L
Barium (Ba)	FWGE	0.242	0.001	mg/L
Berylium (Be)	FWGE	< 0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.055	0.006	mg/L
Calcium (Ca)	FWGE	360	0.1	mg/L
Chromium (Cr)	FWGE	0.011	0.006	mg/L
Cobalt (Co)	FWGE	0.019	0.006	mg/L
Copper (Cu)	FWGE	< 0.006	0.006	mg/L
Iron (Fe)	FWGE	17.6	0.006	mg/L
Lead (Pb)	FWGE	0.08	0.06	mg/L
Magnesium (Mg)	FWGE	61.5	0.1	mg/L
Manganese (Mn)	FWGE	81.6	0.001	mg/L
Molybdenum (Mo)	FWGE	0.01	0.01	mg/L
Nickel (Ni)	FWGE	0.28	0.02	mg/L
Phosphorus (P)	FWGE	0.4	0.1	mg/L
Potassium (K)	FWGE	3.5	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	16.2	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	4.2	0.1	mg/L
Strontium (Sr)	FWGE	0.967	0.001	mg/L
Sulfur (S)	FWGE	420	0.06	mg/L
Tin (Sn)	FWGE	0.06	0.06	mg/L
Titanium (Ti)	FWGE	0.157	0.002	mg/L
Vanadium (V)	FWGE	< 0.01	0.01	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Zinc (Zn)	FWGE	37.3	0.002	mg/L

Order No: 93654 - HAUL RD (OLD SP-LMK 019)
Start Date: 9/17/03 12:00:00AM

Metals

ICP Total

Aluminum (Al)	FWGE	37.4	0.06	mg/L
Antimony (Sb)	FWGE	< 0.06	0.06	mg/L
Arsenic (As)	FWGE	0.20	0.06	mg/L
Barium (Ba)	FWGE	0.615	0.001	mg/L
Berylium (Be)	FWGE	0.001	0.001	mg/L
Boron (B)	FWGE	< 0.01	0.01	mg/L
Cadmium (Cd)	FWGE	0.046	0.006	mg/L
Calcium (Ca)	FWGE	263	0.1	mg/L
Chromium (Cr)	FWGE	0.047	0.006	mg/L
Cobalt (Co)	FWGE	0.074	0.006	mg/L
Copper (Cu)	FWGE	0.133	0.006	mg/L
Iron (Fe)	FWGE	219	0.006	mg/L
Lead (Pb)	FWGE	0.20	0.06	mg/L
Magnesium (Mg)	FWGE	71.6	0.1	mg/L
Manganese (Mn)	FWGE	15.9	0.001	mg/L
Molybdenum (Mo)	FWGE	0.03	0.01	mg/L
Nickel (Ni)	FWGE	0.24	0.02	mg/L
Phosphorus (P)	FWGE	7.8	0.1	mg/L
Potassium (K)	FWGE	5.7	0.1	mg/L
Selenium (Se)	FWGE	< 0.06	0.06	mg/L
Silicon (Si)	FWGE	50.2	0.06	mg/L
Silver (Ag)	FWGE	< 0.01	0.01	mg/L
Sodium (Na)	FWGE	2.7	0.1	mg/L
Strontium (Sr)	FWGE	0.635	0.001	mg/L
Sulfur (S)	FWGE	260	0.06	mg/L
Tin (Sn)	FWGE	0.07	0.06	mg/L
Titanium (Ti)	FWGE	0.451	0.002	mg/L
Vanadium (V)	FWGE	0.05	0.01	mg/L
Zinc (Zn)	FWGE	6.4	0.002	mg/L

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Environment Canada Environnement Canada

Final Analytical Results with QC data

PESC FOLDER # : 200300849

Location:	UNITED KENO HILL MINES(UKHM)
Type of Sample:	Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT) Waste Water / Other (WWOT)
Submitted By:	Vic Enns Environment Canada 91782 Alaska Hwy Whitehorse, YT Canada Y1A 5B7 Phone: 867-667-4592 Fax: 867-667-7962
Logged In:	Wednesday October 8, 2003
Completed:	Monday November 3, 2003 (828 results)
Client Code:	2562-101 2562-101 EP YUKON POLLUTION ABATEMENT
Sample Priority:	High

Authorized by: _____

Richard Strub
QA Officer

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Order No: 93901 - 12=ACG-DP1				**Arrival Temperature: 7N/A**
Start Date: 9/25/03 12:00:00AM				
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	WWOT	684	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	WWOT	777	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
Arsenic (As)	WWOT	< 0.05	0.05	mg/L
Barium (Ba)	WWOT	0.023	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.008	0.005	mg/L
Calcium (Ca)	WWOT	194	0.1	mg/L
Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
Cobalt (Co)	WWOT	0.006	0.005	mg/L
Copper (Cu)	WWOT	0.262	0.005	mg/L
Iron (Fe)	WWOT	< 0.005	0.005	mg/L
Lead (Pb)	WWOT	< 0.05	0.05	mg/L
Magnesium (Mg)	WWOT	48.3	0.1	mg/L
Manganese (Mn)	WWOT	41.8	0.001	mg/L
Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
Nickel (Ni)	WWOT	0.03	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	1.1	0.1	mg/L
Selenium (Se)	WWOT	< 0.05	0.05	mg/L
Silicon (Si)	WWOT	2.46	0.05	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	4.4	0.1	mg/L
Strontium (Sr)	WWOT	0.380	0.001	mg/L
Sulfur (S)	WWOT	250	0.05	mg/L
Tin (Sn)	WWOT	0.10	0.05	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	10.6	0.002	mg/L
ICP Total				
Aluminum (Al)	WWOT	157	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	1.35	0.06	mg/L
Barium (Ba)	WWOT	2.83	0.001	mg/L
Berylium (Be)	WWOT	0.008	0.001	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.052	0.006	mg/L
Calcium (Ca)	WWOT	260	0.1	mg/L
Chromium (Cr)	WWOT	0.303	0.006	mg/L
Cobalt (Co)	WWOT	0.133	0.006	mg/L
Copper (Cu)	WWOT	0.523	0.006	mg/L
Iron (Fe)	WWOT	376	0.06	mg/L
Lead (Pb)	WWOT	1.04	0.06	mg/L
Magnesium (Mg)	WWOT	120	0.1	mg/L
Manganese (Mn)	WWOT	46.7	0.01	mg/L
Molybdenum (Mo)	WWOT	0.05	0.01	mg/L
Nickel (Ni)	WWOT	0.58	0.02	mg/L
Phosphorus (P)	WWOT	9.8	0.1	mg/L
Potassium (K)	WWOT	24.4	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	90.4	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	5.9	0.1	mg/L
Strontium (Sr)	WWOT	0.759	0.001	mg/L
Sulfur (S)	WWOT	215	0.06	mg/L
Tin (Sn)	WWOT	< 0.06	0.06	mg/L
Titanium (Ti)	WWOT	3.52	0.002	mg/L
Vanadium (V)	WWOT	0.42	0.01	mg/L
Zinc (Zn)	WWOT	85.5	0.002	mg/L

Order No: 93902 - 13=ACG-DP2
Start Date: 9/25/03 12:00:00AM

Metals

ICP Total

Aluminum (Al)	WWOT	153	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	0.66	0.06	mg/L
Barium (Ba)	WWOT	4.4	0.001	mg/L
Berylium (Be)	WWOT	0.008	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.050	0.006	mg/L
Calcium (Ca)	WWOT	273	0.1	mg/L
Chromium (Cr)	WWOT	0.378	0.006	mg/L
Cobalt (Co)	WWOT	0.165	0.006	mg/L
Copper (Cu)	WWOT	0.390	0.006	mg/L
Iron (Fe)	WWOT	298	0.06	mg/L
Lead (Pb)	WWOT	0.98	0.06	mg/L
Magnesium (Mg)	WWOT	105	0.1	mg/L
Manganese (Mn)	WWOT	52.3	0.01	mg/L
Molybdenum (Mo)	WWOT	0.04	0.01	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Nickel (Ni)	WWOT	0.64	0.02	mg/L
Phosphorus (P)	WWOT	7.3	0.1	mg/L
Potassium (K)	WWOT	17.7	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	99.9	0.06	mg/L
Silver (Ag)	WWOT	0.01	0.01	mg/L
Sodium (Na)	WWOT	5.2	0.1	mg/L
Strontium (Sr)	WWOT	0.784	0.001	mg/L
Sulfur (S)	WWOT	226	0.06	mg/L
Tin (Sn)	WWOT	< 0.06	0.06	mg/L
Titanium (Ti)	WWOT	4.06	0.002	mg/L
Vanadium (V)	WWOT	0.41	0.01	mg/L
Zinc (Zn)	WWOT	27.9	0.002	mg/L

Order No: 93903 - 14=ACG-DP3
Start Date: 9/25/03 12:00:00AM

Metals

ICP Total

Aluminum (Al)	WWOT	117	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	1.18	0.06	mg/L
Barium (Ba)	WWOT	2	0.001	mg/L
Berylium (Be)	WWOT	0.007	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.015	0.006	mg/L
Calcium (Ca)	WWOT	177	0.1	mg/L
Chromium (Cr)	WWOT	0.327	0.006	mg/L
Cobalt (Co)	WWOT	0.122	0.006	mg/L
Copper (Cu)	WWOT	0.427	0.006	mg/L
Iron (Fe)	WWOT	290	0.06	mg/L
Lead (Pb)	WWOT	0.60	0.06	mg/L
Magnesium (Mg)	WWOT	109	0.1	mg/L
Manganese (Mn)	WWOT	7.86	0.001	mg/L
Molybdenum (Mo)	WWOT	0.04	0.01	mg/L
Nickel (Ni)	WWOT	0.47	0.02	mg/L
Phosphorus (P)	WWOT	6.8	0.1	mg/L
Potassium (K)	WWOT	19.7	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	94.7	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	4.7	0.1	mg/L
Strontium (Sr)	WWOT	0.542	0.001	mg/L
Sulfur (S)	WWOT	81.9	0.06	mg/L
Tin (Sn)	WWOT	< 0.06	0.06	mg/L
Titanium (Ti)	WWOT	2.55	0.002	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Vanadium (V)	WWOT	0.32	0.01	mg/L
Zinc (Zn)	WWOT	13.2	0.002	mg/L

Order No: 93904 - 15=ACG-DP6
Start Date: 9/25/03 12:00:00AM

Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	WWOT	586	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	WWOT	595	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
Arsenic (As)	WWOT	< 0.05	0.05	mg/L
Barium (Ba)	WWOT	0.015	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	0.02	0.01	mg/L
Cadmium (Cd)	WWOT	< 0.005	0.005	mg/L
Calcium (Ca)	WWOT	158	0.1	mg/L
Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
Copper (Cu)	WWOT	0.263	0.005	mg/L
Iron (Fe)	WWOT	< 0.005	0.005	mg/L
Lead (Pb)	WWOT	< 0.05	0.05	mg/L
Magnesium (Mg)	WWOT	46.7	0.1	mg/L
Manganese (Mn)	WWOT	4.22	0.001	mg/L
Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
Nickel (Ni)	WWOT	< 0.02	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	1.1	0.1	mg/L
Selenium (Se)	WWOT	< 0.05	0.05	mg/L
Silicon (Si)	WWOT	1.11	0.05	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	5.3	0.1	mg/L
Strontium (Sr)	WWOT	0.206	0.001	mg/L
Sulfur (S)	WWOT	167	0.05	mg/L
Tin (Sn)	WWOT	0.09	0.05	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	0.140	0.002	mg/L
ICP Total				
Aluminum (Al)	WWOT	385	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	2.76	0.06	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Barium (Ba)	WWOT	13.3	0.01	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.071	0.006	mg/L
Calcium (Ca)	WWOT	277	0.1	mg/L
Chromium (Cr)	WWOT	0.853	0.006	mg/L
Cobalt (Co)	WWOT	0.421	0.006	mg/L
Copper (Cu)	WWOT	1.26	0.006	mg/L
Iron (Fe)	WWOT	1090	0.06	mg/L
Lead (Pb)	WWOT	4.71	0.06	mg/L
Magnesium (Mg)	WWOT	179	0.1	mg/L
Manganese (Mn)	WWOT	41.1	0.01	mg/L
Molybdenum (Mo)	WWOT	0.11	0.01	mg/L
Nickel (Ni)	WWOT	1.53	0.02	mg/L
Phosphorus (P)	WWOT	22.8	0.1	mg/L
Potassium (K)	WWOT	43.6	0.1	mg/L
Selenium (Se)	WWOT	0.16	0.06	mg/L
Silicon (Si)	WWOT	113	0.06	mg/L
Silver (Ag)	WWOT	0.11	0.01	mg/L
Sodium (Na)	WWOT	8.4	0.1	mg/L
Strontium (Sr)	WWOT	1.19	0.001	mg/L
Sulfur (S)	WWOT	143	0.06	mg/L
Tin (Sn)	WWOT	< 0.06	0.06	mg/L
Titanium (Ti)	WWOT	8.14	0.002	mg/L
Vanadium (V)	WWOT	1.08	0.01	mg/L
Zinc (Zn)	WWOT	100	0.002	mg/L

Order No: 93905 - 16=MAIN RD SURFACE WATER (LMK 021)
Start Date: 9/25/03 12:00:00AM

General

Alkalinity Tot-pH4.5				
Alkalinity to pH 4.5	WWOT	19.4	0.5	mg CaCO3 / L
ICA (Cl F SO4)				
Chloride (Cl)	WWOT	0.1	0.1	mg/L
Fluoride (F)	WWOT	0.02	0.01	mg/L
Sulphate (SO4)	WWOT	16.2	0.5	mg/L
ICA (NO2 NO3 PO4 Br)				
Bromide (Br)	WWOT	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	WWOT	0.487	0.002	mg/L
Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH				
pH	WWOT	6.86	0.01	pH Units
Specific Conductance				
Conductivity	WWOT	76	2	uS/cm

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	WWOT	36.6	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	WWOT	37.0	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	WWOT	0.08	0.05	mg/L
Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
Arsenic (As)	WWOT	< 0.05	0.05	mg/L
Barium (Ba)	WWOT	0.038	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	0.02	0.01	mg/L
Cadmium (Cd)	WWOT	< 0.005	0.005	mg/L
Calcium (Ca)	WWOT	10.2	0.1	mg/L
Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
Copper (Cu)	WWOT	< 0.005	0.005	mg/L
Iron (Fe)	WWOT	0.022	0.005	mg/L
Lead (Pb)	WWOT	< 0.05	0.05	mg/L
Magnesium (Mg)	WWOT	2.7	0.1	mg/L
Manganese (Mn)	WWOT	0.001	0.001	mg/L
Molybdenum (Mo)	WWOT	< 0.01	0.01	mg/L
Nickel (Ni)	WWOT	< 0.02	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	< 0.1	0.1	mg/L
Selenium (Se)	WWOT	< 0.05	0.05	mg/L
Silicon (Si)	WWOT	3.24	0.05	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	0.4	0.1	mg/L
Strontium (Sr)	WWOT	0.029	0.001	mg/L
Sulfur (S)	WWOT	5.25	0.05	mg/L
Tin (Sn)	WWOT	< 0.05	0.05	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	0.012	0.002	mg/L
ICP Total				
Aluminum (Al)	WWOT	0.23	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.042	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	< 0.006	0.006	mg/L
Calcium (Ca)	WWOT	10.7	0.1	mg/L
Chromium (Cr)	WWOT	< 0.006	0.006	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Cobalt (Co)	WWOT	< 0.006	0.006	mg/L
Copper (Cu)	WWOT	< 0.006	0.006	mg/L
Iron (Fe)	WWOT	0.341	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	2.8	0.1	mg/L
Manganese (Mn)	WWOT	0.012	0.001	mg/L
Molybdenum (Mo)	WWOT	< 0.01	0.01	mg/L
Nickel (Ni)	WWOT	< 0.02	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	< 0.1	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	3.11	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	0.4	0.1	mg/L
Strontium (Sr)	WWOT	0.028	0.001	mg/L
Sulfur (S)	WWOT	4.96	0.06	mg/L
Tin (Sn)	WWOT	< 0.06	0.06	mg/L
Titanium (Ti)	WWOT	0.033	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	0.023	0.002	mg/L

Order No: 93906 - 17=U/S G900 CULVERT(LMK 020)
Start Date: 9/25/03 12:00:00AM

General				
Alkalinity Tot-pH4.5				
Alkalinity to pH 4.5	WWOT	117	0.5	mg CaCO3 / L
ICA (Cl F SO4)				
Chloride (Cl)	WWOT	0.7	0.1	mg/L
Fluoride (F)	WWOT	< 0.01	0.01	mg/L
Sulphate (SO4)	WWOT	1100	30	mg/L
ICA (NO2 NO3 PO4 Br)				
Bromide (Br)	WWOT	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	WWOT	0.271	0.002	mg/L
Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH				
pH	WWOT	7.67	0.01	pH Units
Specific Conductance				
Conductivity	WWOT	1760	2	uS/cm
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	WWOT	1180	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	WWOT	1190	0.4	mg CaCO3 / L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
ICP Dissolved				
Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
Arsenic (As)	WWOT	< 0.05	0.05	mg/L
Barium (Ba)	WWOT	0.064	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.008	0.005	mg/L
Calcium (Ca)	WWOT	381	0.1	mg/L
Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
Copper (Cu)	WWOT	0.258	0.005	mg/L
Iron (Fe)	WWOT	0.013	0.005	mg/L
Lead (Pb)	WWOT	< 0.05	0.05	mg/L
Magnesium (Mg)	WWOT	54.5	0.1	mg/L
Manganese (Mn)	WWOT	0.473	0.001	mg/L
Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
Nickel (Ni)	WWOT	0.03	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	1.1	0.1	mg/L
Selenium (Se)	WWOT	< 0.05	0.05	mg/L
Silicon (Si)	WWOT	5.49	0.05	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	3.5	0.1	mg/L
Strontium (Sr)	WWOT	1.03	0.001	mg/L
Sulfur (S)	WWOT	357	0.05	mg/L
Tin (Sn)	WWOT	0.12	0.05	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	4.63	0.002	mg/L
ICP Total				
Aluminum (Al)	WWOT	9.27	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.267	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.021	0.006	mg/L
Calcium (Ca)	WWOT	344	0.1	mg/L
Chromium (Cr)	WWOT	0.013	0.006	mg/L
Cobalt (Co)	WWOT	0.009	0.006	mg/L
Copper (Cu)	WWOT	0.007	0.006	mg/L
Iron (Fe)	WWOT	17.2	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	55.0	0.1	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Manganese (Mn)	WWOT	0.723	0.001	mg/L
Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
Nickel (Ni)	WWOT	0.06	0.02	mg/L
Phosphorus (P)	WWOT	0.5	0.1	mg/L
Potassium (K)	WWOT	2.7	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	16.9	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	3.4	0.1	mg/L
Strontium (Sr)	WWOT	0.966	0.001	mg/L
Sulfur (S)	WWOT	312	0.06	mg/L
Tin (Sn)	WWOT	< 0.06	0.06	mg/L
Titanium (Ti)	WWOT	0.261	0.002	mg/L
Vanadium (V)	WWOT	0.02	0.01	mg/L
Zinc (Zn)	WWOT	6.65	0.002	mg/L

Order No: 93907 - 18=ACG-SP5
Start Date: 9/25/03 12:00:00AM

General				
Alkalinity Tot-pH4.5				
Alkalinity to pH 4.5	WWOT	80.9	0.5	mg CaCO3 / L
ICA (Cl F SO4)				
Chloride (Cl)	WWOT	0.4	0.1	mg/L
Fluoride (F)	WWOT	0.07	0.01	mg/L
Sulphate (SO4)	WWOT	825	30	mg/L
ICA (NO2 NO3 PO4 Br)				
Bromide (Br)	WWOT	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	WWOT	0.988	0.004	mg/L
Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH				
pH	WWOT	7.20	0.01	pH Units
Specific Conductance				
Conductivity	WWOT	1390	2	uS/cm
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	WWOT	941	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	WWOT	943	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
Arsenic (As)	WWOT	< 0.05	0.05	mg/L
Barium (Ba)	WWOT	0.015	0.001	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	0.03	0.01	mg/L
Cadmium (Cd)	WWOT	< 0.005	0.005	mg/L
Calcium (Ca)	WWOT	284	0.1	mg/L
Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
Copper (Cu)	WWOT	0.259	0.005	mg/L
Iron (Fe)	WWOT	< 0.005	0.005	mg/L
Lead (Pb)	WWOT	< 0.05	0.05	mg/L
Magnesium (Mg)	WWOT	56.5	0.1	mg/L
Manganese (Mn)	WWOT	0.005	0.001	mg/L
Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
Nickel (Ni)	WWOT	< 0.02	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	0.3	0.1	mg/L
Selenium (Se)	WWOT	< 0.05	0.05	mg/L
Silicon (Si)	WWOT	4.54	0.05	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	3.1	0.1	mg/L
Strontium (Sr)	WWOT	0.634	0.001	mg/L
Sulfur (S)	WWOT	284	0.05	mg/L
Tin (Sn)	WWOT	0.11	0.05	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	1.11	0.002	mg/L
ICP Total				
Aluminum (Al)	WWOT	11.6	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.248	0.001	mg/L
Berylium (Be)	WWOT	0.002	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.013	0.006	mg/L
Calcium (Ca)	WWOT	243	0.1	mg/L
Chromium (Cr)	WWOT	0.018	0.006	mg/L
Cobalt (Co)	WWOT	0.021	0.006	mg/L
Copper (Cu)	WWOT	0.023	0.006	mg/L
Iron (Fe)	WWOT	47.1	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	52.0	0.1	mg/L
Manganese (Mn)	WWOT	4.59	0.001	mg/L
Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
Nickel (Ni)	WWOT	0.07	0.02	mg/L
Phosphorus (P)	WWOT	1.4	0.1	mg/L
Potassium (K)	WWOT	2.7	0.1	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	18.8	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	2.8	0.1	mg/L
Strontium (Sr)	WWOT	0.560	0.001	mg/L
Sulfur (S)	WWOT	231	0.06	mg/L
Tin (Sn)	WWOT	0.06	0.06	mg/L
Titanium (Ti)	WWOT	0.181	0.002	mg/L
Vanadium (V)	WWOT	0.02	0.01	mg/L
Zinc (Zn)	WWOT	2.46	0.002	mg/L
Order No: 93908 - 19=ACG-SP7				
Start Date: 9/25/03 12:00:00AM				
General				
Alkalinity Tot-pH4.5				
Alkalinity to pH 4.5	WWOT	15.9	0.5	mg CaCO3 / L
ICA (Cl F SO4)				
Chloride (Cl)	WWOT	0.7	0.1	mg/L
Fluoride (F)	WWOT	0.03	0.01	mg/L
Sulphate (SO4)	WWOT	246	10	mg/L
ICA (NO2 NO3 PO4 Br)				
Bromide (Br)	WWOT	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	WWOT	0.002	0.002	mg/L
Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH				
pH	WWOT	6.15	0.01	pH Units
Specific Conductance				
Conductivity	WWOT	497	2	uS/cm
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	WWOT	283	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	WWOT	287	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	WWOT	0.09	0.05	mg/L
Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
Arsenic (As)	WWOT	< 0.05	0.05	mg/L
Barium (Ba)	WWOT	0.040	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	0.01	0.01	mg/L
Cadmium (Cd)	WWOT	< 0.005	0.005	mg/L
Calcium (Ca)	WWOT	81.3	0.1	mg/L
Chromium (Cr)	WWOT	< 0.005	0.005	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
Copper (Cu)	WWOT	0.265	0.005	mg/L
Iron (Fe)	WWOT	0.035	0.005	mg/L
Lead (Pb)	WWOT	< 0.05	0.05	mg/L
Magnesium (Mg)	WWOT	19.5	0.1	mg/L
Manganese (Mn)	WWOT	1.52	0.001	mg/L
Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
Nickel (Ni)	WWOT	0.03	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	1.6	0.1	mg/L
Selenium (Se)	WWOT	< 0.05	0.05	mg/L
Silicon (Si)	WWOT	4.77	0.05	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	2.6	0.1	mg/L
Strontium (Sr)	WWOT	0.271	0.001	mg/L
Sulfur (S)	WWOT	95.7	0.05	mg/L
Tin (Sn)	WWOT	0.08	0.05	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	0.127	0.002	mg/L
ICP Total				
Aluminum (Al)	WWOT	53.6	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	0.33	0.06	mg/L
Barium (Ba)	WWOT	1.28	0.001	mg/L
Berylium (Be)	WWOT	0.005	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.006	0.006	mg/L
Calcium (Ca)	WWOT	80.0	0.1	mg/L
Chromium (Cr)	WWOT	0.102	0.006	mg/L
Cobalt (Co)	WWOT	0.072	0.006	mg/L
Copper (Cu)	WWOT	0.219	0.006	mg/L
Iron (Fe)	WWOT	153	0.006	mg/L
Lead (Pb)	WWOT	0.31	0.06	mg/L
Magnesium (Mg)	WWOT	35.7	0.1	mg/L
Manganese (Mn)	WWOT	4.47	0.001	mg/L
Molybdenum (Mo)	WWOT	0.03	0.01	mg/L
Nickel (Ni)	WWOT	0.19	0.02	mg/L
Phosphorus (P)	WWOT	3.7	0.1	mg/L
Potassium (K)	WWOT	7.7	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	61.1	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	3.2	0.1	mg/L
Strontium (Sr)	WWOT	0.351	0.001	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Sulfur (S)	WWOT	71.9	0.06	mg/L
Tin (Sn)	WWOT	< 0.06	0.06	mg/L
Titanium (Ti)	WWOT	1.47	0.002	mg/L
Vanadium (V)	WWOT	0.13	0.01	mg/L
Zinc (Zn)	WWOT	0.781	0.002	mg/L

Order No: 93909 - 20=ACG-SP3
Start Date: 9/25/03 12:00:00AM

General

Alkalinity Tot-pH4.5

Alkalinity to pH 4.5	WWOT	14.3	0.5	mg CaCO3 / L

ICA (Cl F SO4)

Chloride (Cl)	WWOT	0.3	0.1	mg/L
Fluoride (F)	WWOT	0.03	0.01	mg/L
Sulphate (SO4)	WWOT	16.4	0.5	mg/L

ICA (NO2 NO3 PO4 Br)

Bromide (Br)	WWOT	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	WWOT	0.459	0.002	mg/L
Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L

pH

pH	WWOT	6.19	0.01	pH Units

Specific Conductance

Conductivity	WWOT	71	2	uS/cm

Metals

ICP Total

Aluminum (Al)	WWOT	134	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	0.41	0.06	mg/L
Barium (Ba)	WWOT	4	0.001	mg/L
Berylium (Be)	WWOT	0.009	0.001	mg/L
Boron (B)	WWOT	0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.064	0.006	mg/L
Calcium (Ca)	WWOT	41.9	0.1	mg/L
Chromium (Cr)	WWOT	0.205	0.006	mg/L
Cobalt (Co)	WWOT	0.183	0.006	mg/L
Copper (Cu)	WWOT	0.665	0.006	mg/L
Iron (Fe)	WWOT	282	0.06	mg/L
Lead (Pb)	WWOT	1.13	0.06	mg/L
Magnesium (Mg)	WWOT	39.0	0.1	mg/L
Manganese (Mn)	WWOT	20.7	0.01	mg/L
Molybdenum (Mo)	WWOT	0.03	0.01	mg/L
Nickel (Ni)	WWOT	0.39	0.02	mg/L
Phosphorus (P)	WWOT	4.7	0.1	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Potassium (K)	WWOT	15.5	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	79.8	0.06	mg/L
Silver (Ag)	WWOT	0.02	0.01	mg/L
Sodium (Na)	WWOT	2.4	0.1	mg/L
Strontium (Sr)	WWOT	0.268	0.001	mg/L
Sulfur (S)	WWOT	6.53	0.06	mg/L
Tin (Sn)	WWOT	< 0.06	0.06	mg/L
Titanium (Ti)	WWOT	3.19	0.002	mg/L
Vanadium (V)	WWOT	0.35	0.01	mg/L
Zinc (Zn)	WWOT	7.77	0.002	mg/L
Order No: 93910 - 21=ACG-SP1				
Start Date: 9/25/03 12:00:00AM				
General				
Alkalinity Tot-pH4.5				
Alkalinity to pH 4.5	WWOT	73.4	0.5	mg CaCO3 / L
ICA (Cl F SO4)				
Chloride (Cl)	WWOT	1.0	0.1	mg/L
Fluoride (F)	WWOT	0.03	0.01	mg/L
Sulphate (SO4)	WWOT	986	30	mg/L
ICA (NO2 NO3 PO4 Br)				
Bromide (Br)	WWOT	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	WWOT	0.178	0.002	mg/L
Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH				
pH	WWOT	6.34	0.01	pH Units
Specific Conductance				
Conductivity	WWOT	1460	2	uS/cm
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	WWOT	1060	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	WWOT	1090	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
Arsenic (As)	WWOT	< 0.05	0.05	mg/L
Barium (Ba)	WWOT	0.017	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	0.02	0.01	mg/L
Cadmium (Cd)	WWOT	0.012	0.005	mg/L
Calcium (Ca)	WWOT	327	0.1	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
Copper (Cu)	WWOT	0.264	0.005	mg/L
Iron (Fe)	WWOT	< 0.005	0.005	mg/L
Lead (Pb)	WWOT	< 0.05	0.05	mg/L
Magnesium (Mg)	WWOT	59.6	0.1	mg/L
Manganese (Mn)	WWOT	0.726	0.001	mg/L
Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
Nickel (Ni)	WWOT	0.07	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	2.4	0.1	mg/L
Selenium (Se)	WWOT	< 0.05	0.05	mg/L
Silicon (Si)	WWOT	6.52	0.05	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	3.8	0.1	mg/L
Strontium (Sr)	WWOT	0.803	0.001	mg/L
Sulfur (S)	WWOT	318	0.05	mg/L
Tin (Sn)	WWOT	0.11	0.05	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	12.9	0.002	mg/L
ICP Total				
Aluminum (Al)	WWOT	435	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	2.83	0.06	mg/L
Barium (Ba)	WWOT	9.96	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.180	0.006	mg/L
Calcium (Ca)	WWOT	450	0.1	mg/L
Chromium (Cr)	WWOT	0.578	0.006	mg/L
Cobalt (Co)	WWOT	0.513	0.006	mg/L
Copper (Cu)	WWOT	5.72	0.006	mg/L
Iron (Fe)	WWOT	1290	0.6	mg/L
Lead (Pb)	WWOT	2.39	0.06	mg/L
Magnesium (Mg)	WWOT	198	0.1	mg/L
Manganese (Mn)	WWOT	107	0.1	mg/L
Molybdenum (Mo)	WWOT	0.10	0.01	mg/L
Nickel (Ni)	WWOT	1.57	0.02	mg/L
Phosphorus (P)	WWOT	18.0	0.1	mg/L
Potassium (K)	WWOT	38.4	0.1	mg/L
Selenium (Se)	WWOT	0.18	0.06	mg/L
Silicon (Si)	WWOT	121	0.06	mg/L
Silver (Ag)	WWOT	0.03	0.01	mg/L
Sodium (Na)	WWOT	5.7	0.1	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Strontium (Sr)	WWOT	2.03	0.001	mg/L
Sulfur (S)	WWOT	278	0.06	mg/L
Tin (Sn)	WWOT	< 0.06	0.06	mg/L
Titanium (Ti)	WWOT	7.76	0.002	mg/L
Vanadium (V)	WWOT	1.32	0.01	mg/L
Zinc (Zn)	WWOT	48.5	0.002	mg/L

Order No: 93911 - 22=G300 ADIT DISCHARGE
Start Date: 9/25/03 12:00:00AM

General				
Alkalinity Tot-pH4.5				
Alkalinity to pH 4.5	WWOT	37.5	0.5	mg CaCO3 / L
ICA (Cl F SO4)				
Chloride (Cl)	WWOT	1.0	0.1	mg/L
Fluoride (F)	WWOT	0.26	0.01	mg/L
Sulphate (SO4)	WWOT	1060	30	mg/L
ICA (NO2 NO3 PO4 Br)				
Bromide (Br)	WWOT	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	WWOT	0.068	0.002	mg/L
Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH				
pH	WWOT	6.32	0.01	pH Units
Specific Conductance				
Conductivity	WWOT	1610	2	uS/cm
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	WWOT	615	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	WWOT	1150	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
Arsenic (As)	WWOT	0.06	0.05	mg/L
Barium (Ba)	WWOT	0.008	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.364	0.005	mg/L
Calcium (Ca)	WWOT	181	0.1	mg/L
Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
Cobalt (Co)	WWOT	0.108	0.005	mg/L
Copper (Cu)	WWOT	0.255	0.005	mg/L
Iron (Fe)	WWOT	7.78	0.005	mg/L
Lead (Pb)	WWOT	< 0.05	0.05	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Magnesium (Mg)	WWOT	39.4	0.1	mg/L
Manganese (Mn)	WWOT	172	0.001	mg/L
Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
Nickel (Ni)	WWOT	0.42	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	0.7	0.1	mg/L
Selenium (Se)	WWOT	< 0.05	0.05	mg/L
Silicon (Si)	WWOT	4.74	0.05	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	1.7	0.1	mg/L
Strontium (Sr)	WWOT	0.306	0.001	mg/L
Sulfur (S)	WWOT	353	0.05	mg/L
Tin (Sn)	WWOT	0.10	0.05	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	131.9	0.002	mg/L
ICP Total				
Aluminum (Al)	WWOT	9.45	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	1.11	0.06	mg/L
Barium (Ba)	WWOT	0.172	0.001	mg/L
Berylium (Be)	WWOT	0.004	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.391	0.006	mg/L
Calcium (Ca)	WWOT	166	0.1	mg/L
Chromium (Cr)	WWOT	0.013	0.006	mg/L
Cobalt (Co)	WWOT	0.139	0.006	mg/L
Copper (Cu)	WWOT	0.047	0.006	mg/L
Iron (Fe)	WWOT	209	0.6	mg/L
Lead (Pb)	WWOT	1.51	0.06	mg/L
Magnesium (Mg)	WWOT	35.8	0.1	mg/L
Manganese (Mn)	WWOT	142	0.1	mg/L
Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
Nickel (Ni)	WWOT	0.41	0.02	mg/L
Phosphorus (P)	WWOT	0.7	0.1	mg/L
Potassium (K)	WWOT	1.8	0.1	mg/L
Selenium (Se)	WWOT	0.06	0.06	mg/L
Silicon (Si)	WWOT	19.5	0.06	mg/L
Silver (Ag)	WWOT	0.04	0.01	mg/L
Sodium (Na)	WWOT	2.0	0.1	mg/L
Strontium (Sr)	WWOT	0.314	0.001	mg/L
Sulfur (S)	WWOT	297	0.06	mg/L
Tin (Sn)	WWOT	0.07	0.06	mg/L
Titanium (Ti)	WWOT	0.304	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Zinc (Zn)	WWOT	108	0.2	mg/L
Order No: 93912 - 23=G900 SEEP				
Start Date: 9/25/03 12:00:00AM				
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	WWOT	1100	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	WWOT	1100	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
Arsenic (As)	WWOT	< 0.05	0.05	mg/L
Barium (Ba)	WWOT	0.004	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.012	0.005	mg/L
Calcium (Ca)	WWOT	372	0.1	mg/L
Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
Copper (Cu)	WWOT	0.256	0.005	mg/L
Iron (Fe)	WWOT	0.014	0.005	mg/L
Lead (Pb)	WWOT	< 0.05	0.05	mg/L
Magnesium (Mg)	WWOT	40.2	0.1	mg/L
Manganese (Mn)	WWOT	1.78	0.001	mg/L
Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
Nickel (Ni)	WWOT	0.03	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	0.7	0.1	mg/L
Selenium (Se)	WWOT	< 0.05	0.05	mg/L
Silicon (Si)	WWOT	2.32	0.05	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	2.3	0.1	mg/L
Strontium (Sr)	WWOT	0.771	0.001	mg/L
Sulfur (S)	WWOT	357	0.05	mg/L
Tin (Sn)	WWOT	0.12	0.05	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	1.74	0.002	mg/L
ICP Total				
Aluminum (Al)	WWOT	0.22	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.010	0.001	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.013	0.006	mg/L
Calcium (Ca)	WWOT	355	0.1	mg/L
Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
Cobalt (Co)	WWOT	< 0.006	0.006	mg/L
Copper (Cu)	WWOT	0.108	0.006	mg/L
Iron (Fe)	WWOT	0.768	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	34.3	0.1	mg/L
Manganese (Mn)	WWOT	1.77	0.001	mg/L
Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
Nickel (Ni)	WWOT	0.03	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	0.7	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	1.97	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	1.9	0.1	mg/L
Strontium (Sr)	WWOT	0.752	0.001	mg/L
Sulfur (S)	WWOT	316	0.06	mg/L
Tin (Sn)	WWOT	< 0.06	0.06	mg/L
Titanium (Ti)	WWOT	0.062	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	1.49	0.002	mg/L

Order No: 93913 - 24=G900 DITCH
Start Date: 9/25/03 12:00:00AM

Gen eral				
Alkalinity Tot-pH4.5				
Alkalinity to pH 4.5	WWOT	125	0.5	mg CaCO3 / L
ICA (Cl F SO4)				
Chloride (Cl)	WWOT	0.4	0.1	mg/L
Fluoride (F)	WWOT	< 0.01	0.01	mg/L
Sulphate (SO4)	WWOT	1130	30	mg/L
ICA (NO2 NO3 PO4 Br)				
Bromide (Br)	WWOT	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	WWOT	0.284	0.002	mg/L
Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH				
pH	WWOT	7.96	0.01	pH Units
Specific Conductance				
Conductivity	WWOT	1890	2	uS/cm

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Metals				
Hardness CaMg diss.				
Hardness,Calcium+Magnesium - calc.	WWOT	1230	0.4	mg CaCO3 / L
Hardness Total diss.				
Hardness, Total - calc.	WWOT	1240	0.4	mg CaCO3 / L
ICP Dissolved				
Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
Arsenic (As)	WWOT	< 0.05	0.05	mg/L
Barium (Ba)	WWOT	0.071	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.009	0.005	mg/L
Calcium (Ca)	WWOT	388	0.1	mg/L
Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
Copper (Cu)	WWOT	0.256	0.005	mg/L
Iron (Fe)	WWOT	< 0.005	0.005	mg/L
Lead (Pb)	WWOT	< 0.05	0.05	mg/L
Magnesium (Mg)	WWOT	63.1	0.1	mg/L
Manganese (Mn)	WWOT	0.465	0.001	mg/L
Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
Nickel (Ni)	WWOT	0.03	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	1.2	0.1	mg/L
Selenium (Se)	WWOT	< 0.05	0.05	mg/L
Silicon (Si)	WWOT	5.46	0.05	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	3.4	0.1	mg/L
Strontium (Sr)	WWOT	1.05	0.001	mg/L
Sulfur (S)	WWOT	363	0.05	mg/L
Tin (Sn)	WWOT	0.12	0.05	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	5.82	0.002	mg/L
ICP Total				
Aluminum (Al)	WWOT	12	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.301	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.028	0.006	mg/L
Calcium (Ca)	WWOT	368	0.1	mg/L
Chromium (Cr)	WWOT	0.016	0.006	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Cobalt (Co)	WWOT	0.010	0.006	mg/L
Copper (Cu)	WWOT	0.014	0.006	mg/L
Iron (Fe)	WWOT	22.4	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	57.2	0.1	mg/L
Manganese (Mn)	WWOT	0.870	0.001	mg/L
Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
Nickel (Ni)	WWOT	0.07	0.02	mg/L
Phosphorus (P)	WWOT	0.6	0.1	mg/L
Potassium (K)	WWOT	3.3	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	20.8	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	3.8	0.1	mg/L
Strontium (Sr)	WWOT	1.06	0.001	mg/L
Sulfur (S)	WWOT	323	0.06	mg/L
Tin (Sn)	WWOT	< 0.06	0.06	mg/L
Titanium (Ti)	WWOT	0.350	0.002	mg/L
Vanadium (V)	WWOT	0.03	0.01	mg/L
Zinc (Zn)	WWOT	8.24	0.002	mg/L

Order No: 93914 - 25=ACG-SP2
Start Date: 9/25/03 12:00:00AM

Metals

Hardness CaMg diss.

Hardness,Calcium+Magnesium - calc.	WWOT	1160	0.4	mg CaCO3 / L

Hardness Total diss.

Hardness, Total - calc.	WWOT	1330	0.4	mg CaCO3 / L

ICP Dissolved

Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
Arsenic (As)	WWOT	< 0.05	0.05	mg/L
Barium (Ba)	WWOT	0.004	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.038	0.005	mg/L
Calcium (Ca)	WWOT	377	0.1	mg/L
Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
Copper (Cu)	WWOT	0.257	0.005	mg/L
Iron (Fe)	WWOT	< 0.005	0.005	mg/L
Lead (Pb)	WWOT	< 0.05	0.05	mg/L
Magnesium (Mg)	WWOT	53.0	0.1	mg/L
Manganese (Mn)	WWOT	56.8	0.001	mg/L

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
Nickel (Ni)	WWOT	0.22	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	1.6	0.1	mg/L
Selenium (Se)	WWOT	< 0.05	0.05	mg/L
Silicon (Si)	WWOT	7.45	0.05	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	4.1	0.1	mg/L
Strontium (Sr)	WWOT	0.926	0.001	mg/L
Sulfur (S)	WWOT	443	0.05	mg/L
Tin (Sn)	WWOT	0.12	0.05	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	39.9	0.002	mg/L
ICP Total				
Aluminum (Al)	WWOT	4.04	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.168	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.050	0.006	mg/L
Calcium (Ca)	WWOT	359	0.1	mg/L
Chromium (Cr)	WWOT	0.006	0.006	mg/L
Cobalt (Co)	WWOT	0.016	0.006	mg/L
Copper (Cu)	WWOT	0.119	0.006	mg/L
Iron (Fe)	WWOT	10.1	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	57.4	0.1	mg/L
Manganese (Mn)	WWOT	73.1	0.1	mg/L
Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
Nickel (Ni)	WWOT	0.24	0.02	mg/L
Phosphorus (P)	WWOT	0.4	0.1	mg/L
Potassium (K)	WWOT	2.7	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	12.3	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	4.4	0.1	mg/L
Strontium (Sr)	WWOT	0.990	0.001	mg/L
Sulfur (S)	WWOT	399	0.06	mg/L
Tin (Sn)	WWOT	0.06	0.06	mg/L
Titanium (Ti)	WWOT	0.099	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	33.9	0.002	mg/L

PESC Pacific Environmental Science Centre
2645 Dollarton Highway
North Vancouver, BC. Canada V7H - 1B1
Phone (604) 924-2500 Fax (604) 924-2555

Environment Canada Environnement Canada

Friday November 7, 2003 At 4:13PM

Final Analytical Results with QC data

PESC FOLDER # : 200300935

Location:	UNITED KENO HILL MINES(UKHM)
Type of Sample:	Waste Water / Other (WWOT)
	Waste Water / Other (WWOT)
	Waste Water / Other (WWOT)
	Waste Water / Other (WWOT)
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	Waste Water / Other (WWOT)
Submitted By:	Vic Enns Environment Canada 91782 Alaska Hwy Whitehorse, YT Canada Y1A 5B7 Phone: 867-667-4592 Fax: 867-667-7962
Logged In:	##########
Completed:	Friday November 7, 2003 (1088 results)
Client Code:	2562-101 2562-101 EP YUKON POLLUTION ABATEMENT
Sample Priority:	High

Authorized by:

Richard Strub
QA Officer

Notes:

Location: UNITED KENO HILL MINES(UKHM) **PESC FOLDER # : 200300935**

TEST DESCRIPTION	MATRIX	RESULT	MDL	UNITS
Order No: 94690 - ACG-SP1				**Arrival Temperature: 9N/A**
Start Date: 10/16/03 12:00:00AM				
General				
Alkalinity Tot-pH4.5				
Alkalnity, Total	WWOT	10.3	0.5	mg CaCO3 / L
ICA (Cl F SO4)				
Chloride (Cl)	WWOT	0.3	0.1	mg/L
Fluoride (F)	WWOT	0.02	0.01	mg/L
Sulphate (SO4)	WWOT	15.6	0.5	mg/L
ICA (NO2 NO3 PO4 Br)				
Bromide (Br)	WWOT	< 0.05	0.05	mg/L
Nitrogen, Nitrate as N	WWOT	0.483	0.002	mg/L
Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH				
pH	WWOT	6.44	0.01	pH Units
Residue: Nonfilt.				
Residue, Nonfilterable (NFR/TSS)	WWOT	9530	5	mg/L
Specific Conductance				
Conductivity	WWOT	59	2	uS/cm
Metals				
Hardness CaMg diss.				

	Hardness,Calcium+Magnesium - calc.	WWOT	26.0	0.4	mg CaCO3 / L
Hardness Total diss.					
	Hardness, Total - calc.	WWOT	26.8	0.4	mg CaCO3 / L
ICP Dissolved					
	Aluminum (Al)	WWOT	0.13	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	< 0.05	0.05	mg/L
	Barium (Ba)	WWOT	0.046	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	< 0.005	0.005	mg/L
	Calcium (Ca)	WWOT	7.5	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	0.081	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	1.8	0.1	mg/L
	Manganese (Mn)	WWOT	0.011	0.001	mg/L
	Molybdenum (Mo)	WWOT	< 0.01	0.01	mg/L
	Nickel (Ni)	WWOT	< 0.02	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	< 0.1	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	3.08	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	0.5	0.1	mg/L
	Strontium (Sr)	WWOT	0.023	0.001	mg/L
	Sulfur (S)	WWOT	5.74	0.05	mg/L
	Tin (Sn)	WWOT	< 0.05	0.05	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	0.067	0.002	mg/L
ICP Total					
	Aluminum (Al)	WWOT	56.5	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	0.18	0.06	mg/L
	Barium (Ba)	WWOT	1.98	0.001	mg/L
	Berylium (Be)	WWOT	0.004	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.030	0.006	mg/L
	Calcium (Ca)	WWOT	22.7	0.1	mg/L
	Chromium (Cr)	WWOT	0.093	0.006	mg/L
	Cobalt (Co)	WWOT	0.085	0.006	mg/L
	Copper (Cu)	WWOT	0.296	0.006	mg/L
	Iron (Fe)	WWOT	128	0.006	mg/L
	Lead (Pb)	WWOT	0.48	0.06	mg/L
	Magnesium (Mg)	WWOT	19.1	0.1	mg/L
	Manganese (Mn)	WWOT	10	0.01	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.17	0.02	mg/L
	Phosphorus (P)	WWOT	2.4	0.1	mg/L
	Potassium (K)	WWOT	7.1	0.1	mg/L
	Selenium (Se)	WWOT	< 0.06	0.06	mg/L
	Silicon (Si)	WWOT	64.9	0.06	mg/L
	Silver (Ag)	WWOT	0.01	0.01	mg/L
	Sodium (Na)	WWOT	1.1	0.1	mg/L
	Strontium (Sr)	WWOT	0.120	0.001	mg/L
	Sulfur (S)	WWOT	5.08	0.06	mg/L
	Tin (Sn)	WWOT	< 0.06	0.06	mg/L
	Titanium (Ti)	WWOT	1.47	0.002	mg/L
	Vanadium (V)	WWOT	0.16	0.01	mg/L
	Zinc (Zn)	WWOT	3.46	0.002	mg/L

Order No: 94691 - ACG-SP2

Start Date: 10/16/03 12:00:00AM

General

Alkalinity Tot-pH4.5					
	Alkalinity to pH 4.5	WWOT	42.3	0.5	mg CaCO3 / L
ICA (Cl F SO4)					
	Chloride (Cl)	WWOT	0.8	0.1	mg/L
	Fluoride (F)	WWOT	0.04	0.01	mg/L
	Sulphate (SO4)	WWOT	1530	50	mg/L
ICA (NO2 NO3 PO4 Br)					
	Bromide (Br)	WWOT	< 0.05	0.05	mg/L
	Nitrogen, Nitrate as N	WWOT	0.460	0.002	mg/L
	Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
	Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH					
	pH	WWOT	6.21	0.01	pH Units
Residue: Nonfilt.					

	Residue, Nonfilterable (NFR/TSS)	WWOT	247	5	mg/L
Specific Conductance					
	Conductivity	WWOT	2090	2	uS/cm
Metals					
Hardness CaMg diss.					
	Hardness,Calcium+Magnesium - calc.	WWOT	1240	0.4	mg CaCO3 / L
Hardness Total diss.					
	Hardness, Total - calc.	WWOT	1310	0.4	mg CaCO3 / L
ICP Dissolved					
	Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	< 0.05	0.05	mg/L
	Barium (Ba)	WWOT	0.003	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.031	0.005	mg/L
	Calcium (Ca)	WWOT	393	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	< 0.005	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	62.1	0.1	mg/L
	Manganese (Mn)	WWOT	18.4	0.01	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.19	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	1.8	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	6.15	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	4.7	0.1	mg/L
	Strontium (Sr)	WWOT	0.985	0.001	mg/L
	Sulfur (S)	WWOT	441	0.05	mg/L
	Tin (Sn)	WWOT	0.11	0.05	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	28.5	0.002	mg/L
ICP Total					
	Aluminum (Al)	WWOT	2.56	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	< 0.06	0.06	mg/L
	Barium (Ba)	WWOT	0.114	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.040	0.006	mg/L
	Calcium (Ca)	WWOT	363	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
	Cobalt (Co)	WWOT	0.009	0.006	mg/L
	Copper (Cu)	WWOT	< 0.006	0.006	mg/L
	Iron (Fe)	WWOT	5.06	0.006	mg/L
	Lead (Pb)	WWOT	< 0.06	0.06	mg/L
	Magnesium (Mg)	WWOT	53.0	0.1	mg/L
	Manganese (Mn)	WWOT	40.3	0.01	mg/L
	Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
	Nickel (Ni)	WWOT	0.20	0.02	mg/L
	Phosphorus (P)	WWOT	0.2	0.1	mg/L
	Potassium (K)	WWOT	2.1	0.1	mg/L
	Selenium (Se)	WWOT	< 0.06	0.06	mg/L
	Silicon (Si)	WWOT	9.76	0.06	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	3.8	0.1	mg/L
	Strontium (Sr)	WWOT	0.918	0.001	mg/L
	Sulfur (S)	WWOT	389	0.06	mg/L
	Tin (Sn)	WWOT	0.07	0.06	mg/L
	Titanium (Ti)	WWOT	0.056	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	25.7	0.002	mg/L

Order No: 94692 - ACG-SP3

Start Date: 10/16/03 12:00:00AM

General					
Alkalinity Tot-pH4.5					
	Alkalinity to pH 4.5	WWOT	80.4	0.5	mg CaCO3 / L
ICA (Cl F SO4)					
	Chloride (Cl)	WWOT	6.4	0.2	mg/L
	Fluoride (F)	WWOT	0.05	0.01	mg/L
	Sulphate (SO4)	WWOT	982	30	mg/L
ICA (NO2 NO3 PO4 Br)					
	Bromide (Br)	WWOT	< 0.05	0.05	mg/L
	Nitrogen, Nitrate as N	WWOT	0.415	0.002	mg/L

	Nitrogen, Nitrite as N	WWOT	0.007	0.005	mg/L
	Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH					
	pH	WWOT	6.58	0.01	pH Units
Residue: Nonfilt.					
	Residue, Nonfilterable (NFR/TSS)	WWOT	11500	5	mg/L
Specific Conductance					
	Conductivity	WWOT	1650	2	uS/cm
Metals					
Hardness CaMg diss.					
	Hardness,Calcium+Magnesium - calc.	WWOT	940	0.4	mg CaCO3 / L
Hardness Total diss.					
	Hardness, Total - calc.	WWOT	952	0.4	mg CaCO3 / L
ICP Dissolved					
	Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	< 0.05	0.05	mg/L
	Barium (Ba)	WWOT	0.016	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.010	0.005	mg/L
	Calcium (Ca)	WWOT	291	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	< 0.005	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	51.5	0.1	mg/L
	Manganese (Mn)	WWOT	1.24	0.001	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.03	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	1.2	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	4.36	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	2.5	0.1	mg/L
	Strontium (Sr)	WWOT	0.664	0.001	mg/L
	Sulfur (S)	WWOT	332	0.05	mg/L
	Tin (Sn)	WWOT	0.10	0.05	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	6.67	0.002	mg/L
ICP Total					
	Aluminum (Al)	WWOT	138	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	0.80	0.06	mg/L
	Barium (Ba)	WWOT	3.38	0.001	mg/L
	Berylium (Be)	WWOT	0.008	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.055	0.006	mg/L
	Calcium (Ca)	WWOT	359	0.1	mg/L
	Chromium (Cr)	WWOT	0.206	0.006	mg/L
	Cobalt (Co)	WWOT	0.168	0.006	mg/L
	Copper (Cu)	WWOT	1.48	0.006	mg/L
	Iron (Fe)	WWOT	408	0.06	mg/L
	Lead (Pb)	WWOT	0.81	0.06	mg/L
	Magnesium (Mg)	WWOT	100	0.1	mg/L
	Manganese (Mn)	WWOT	33.3	0.01	mg/L
	Molybdenum (Mo)	WWOT	0.04	0.01	mg/L
	Nickel (Ni)	WWOT	0.44	0.02	mg/L
	Phosphorus (P)	WWOT	7.2	0.1	mg/L
	Potassium (K)	WWOT	15.8	0.1	mg/L
	Selenium (Se)	WWOT	< 0.06	0.06	mg/L
	Silicon (Si)	WWOT	93.3	0.06	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	3.3	0.1	mg/L
	Strontium (Sr)	WWOT	1.11	0.001	mg/L
	Sulfur (S)	WWOT	296	0.06	mg/L
	Tin (Sn)	WWOT	< 0.06	0.06	mg/L
	Titanium (Ti)	WWOT	3.31	0.002	mg/L
	Vanadium (V)	WWOT	0.45	0.01	mg/L
	Zinc (Zn)	WWOT	16.5	0.002	mg/L

Order No: 94693 - ACG-SP4

Start Date: 10/16/03 12:00:00AM

General					
Alkalinity Tot-pH4.5					
	Alkalinity to pH 4.5	WWOT	82.6	0.5	mg CaCO3 / L
ICA (Cl F SO4)					
	Chloride (Cl)	WWOT	0.3	0.1	mg/L

	Fluoride (F)	WWOT	0.02	0.01	mg/L
	Sulphate (SO4)	WWOT	908	30	mg/L
ICA (NO2 NO3 PO4 Br)					
	Bromide (Br)	WWOT	< 0.05	0.05	mg/L
	Nitrogen, Nitrate as N	WWOT	0.222	0.002	mg/L
	Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
	Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH					
	pH	WWOT	7.16	0.01	pH Units
Residue: Nonfilt.					
	Residue, Nonfilterable (NFR/TSS)	WWOT	1650	5	mg/L
Specific Conductance					
	Conductivity	WWOT	1510	2	uS/cm
Metals					
Hardness CaMg diss.					
	Hardness,Calcium+Magnesium - calc.	WWOT	914	0.4	mg CaCO3 / L
Hardness Total diss.					
	Hardness, Total - calc.	WWOT	914	0.4	mg CaCO3 / L
ICP Dissolved					
	Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	< 0.05	0.05	mg/L
	Barium (Ba)	WWOT	0.022	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	< 0.005	0.005	mg/L
	Calcium (Ca)	WWOT	265	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	< 0.005	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	61.5	0.1	mg/L
	Manganese (Mn)	WWOT	0.006	0.001	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	< 0.02	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	0.3	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	4.05	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	2.4	0.1	mg/L
	Strontium (Sr)	WWOT	0.449	0.001	mg/L
	Sulfur (S)	WWOT	272	0.05	mg/L
	Tin (Sn)	WWOT	0.10	0.05	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	0.179	0.002	mg/L
ICP Total					
	Aluminum (Al)	WWOT	57.4	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	0.35	0.06	mg/L
	Barium (Ba)	WWOT	1.56	0.001	mg/L
	Berylium (Be)	WWOT	0.005	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	< 0.006	0.006	mg/L
	Calcium (Ca)	WWOT	308	0.1	mg/L
	Chromium (Cr)	WWOT	0.061	0.006	mg/L
	Cobalt (Co)	WWOT	0.072	0.006	mg/L
	Copper (Cu)	WWOT	0.340	0.006	mg/L
	Iron (Fe)	WWOT	224	0.06	mg/L
	Lead (Pb)	WWOT	0.24	0.06	mg/L
	Magnesium (Mg)	WWOT	83.2	0.1	mg/L
	Manganese (Mn)	WWOT	3.41	0.001	mg/L
	Molybdenum (Mo)	WWOT	0.04	0.01	mg/L
	Nickel (Ni)	WWOT	0.24	0.02	mg/L
	Phosphorus (P)	WWOT	7.8	0.1	mg/L
	Potassium (K)	WWOT	9.1	0.1	mg/L
	Selenium (Se)	WWOT	< 0.06	0.06	mg/L
	Silicon (Si)	WWOT	78.6	0.06	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	2.4	0.1	mg/L
	Strontium (Sr)	WWOT	0.628	0.001	mg/L
	Sulfur (S)	WWOT	276	0.06	mg/L
	Tin (Sn)	WWOT	< 0.06	0.06	mg/L
	Titanium (Ti)	WWOT	0.944	0.002	mg/L
	Vanadium (V)	WWOT	0.09	0.01	mg/L
	Zinc (Zn)	WWOT	1.29	0.002	mg/L

Order No: 94694 - ACG-SP5

Start Date: 10/16/03 12:00:00AM

General					
Alkalinity Tot-pH4.5					
	Alkalinity to pH 4.5	WWOT	42.0	0.5	mg CaCO3 / L
ICA (Cl F SO4)					
	Chloride (Cl)	WWOT	< 0.1	0.1	mg/L
	Fluoride (F)	WWOT	0.04	0.01	mg/L
	Sulphate (SO4)	WWOT	891	30	mg/L
ICA (NO2 NO3 PO4 Br)					
	Bromide (Br)	WWOT	< 0.05	0.05	mg/L
	Nitrogen, Nitrate as N	WWOT	0.350	0.002	mg/L
	Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
	Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH					
	pH	WWOT	6.61	0.01	pH Units
Residue: Nonfilt.					
	Residue, Nonfilterable (NFR/TSS)	WWOT	363	5	mg/L
Specific Conductance					
	Conductivity	WWOT	1520	2	uS/cm
Metals					
Hardness CaMg diss.					
	Hardness,Calcium+Magnesium - calc.	WWOT	801	0.4	mg CaCO3 / L
Hardness Total diss.					
	Hardness, Total - calc.	WWOT	886	0.4	mg CaCO3 / L
ICP Dissolved					
	Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	< 0.05	0.05	mg/L
	Barium (Ba)	WWOT	0.021	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	0.02	0.01	mg/L
	Cadmium (Cd)	WWOT	0.045	0.005	mg/L
	Calcium (Ca)	WWOT	241	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	< 0.005	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	0.007	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	48.4	0.1	mg/L
	Manganese (Mn)	WWOT	22.8	0.01	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.07	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	0.5	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	3.57	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	2.2	0.1	mg/L
	Strontium (Sr)	WWOT	0.525	0.001	mg/L
	Sulfur (S)	WWOT	302	0.05	mg/L
	Tin (Sn)	WWOT	0.10	0.05	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	27.6	0.002	mg/L
ICP Total					
	Aluminum (Al)	WWOT	6.20	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	< 0.06	0.06	mg/L
	Barium (Ba)	WWOT	0.137	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.052	0.006	mg/L
	Calcium (Ca)	WWOT	263	0.1	mg/L
	Chromium (Cr)	WWOT	0.008	0.006	mg/L
	Cobalt (Co)	WWOT	0.014	0.006	mg/L
	Copper (Cu)	WWOT	< 0.006	0.006	mg/L
	Iron (Fe)	WWOT	22.5	0.006	mg/L
	Lead (Pb)	WWOT	< 0.06	0.06	mg/L
	Magnesium (Mg)	WWOT	52.8	0.1	mg/L
	Manganese (Mn)	WWOT	28.7	0.01	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.11	0.02	mg/L
	Phosphorus (P)	WWOT	0.5	0.1	mg/L
	Potassium (K)	WWOT	1.9	0.1	mg/L
	Selenium (Se)	WWOT	< 0.06	0.06	mg/L
	Silicon (Si)	WWOT	13.2	0.06	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	2.3	0.1	mg/L
	Strontium (Sr)	WWOT	0.594	0.001	mg/L
	Sulfur (S)	WWOT	310	0.06	mg/L
	Tin (Sn)	WWOT	0.07	0.06	mg/L
	Titanium (Ti)	WWOT	0.080	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L

	Zinc (Zn)	WWOT	29.4	0.002	mg/L

Order No: 94695 - ACG-L2

Start Date: 10/16/03 12:00:00AM

Metals

ICP Total

Aluminum (Al)	WWOT	< 0.06	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.030	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	< 0.006	0.006	mg/L
Calcium (Ca)	WWOT	66.4	0.1	mg/L
Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
Cobalt (Co)	WWOT	0.011	0.006	mg/L
Copper (Cu)	WWOT	< 0.006	0.006	mg/L
Iron (Fe)	WWOT	0.035	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	18.8	0.1	mg/L
Manganese (Mn)	WWOT	15.9	0.01	mg/L
Molybdenum (Mo)	WWOT	0.15	0.01	mg/L
Nickel (Ni)	WWOT	0.02	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	10.8	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	5.80	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	505	1	mg/L
Strontium (Sr)	WWOT	0.445	0.001	mg/L
Sulfur (S)	WWOT	414	0.06	mg/L
Tin (Sn)	WWOT	0.07	0.06	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	0.63	0.01	mg/L
Zinc (Zn)	WWOT	2.31	0.002	mg/L

Order No: 94696 - ACG-L3

Start Date: 10/16/03 12:00:00AM

Metals

ICP Total

Aluminum (Al)	WWOT	< 0.06	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.028	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.010	0.006	mg/L
Calcium (Ca)	WWOT	131	0.1	mg/L
Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
Cobalt (Co)	WWOT	< 0.006	0.006	mg/L
Copper (Cu)	WWOT	< 0.006	0.006	mg/L
Iron (Fe)	WWOT	0.014	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	26.3	0.1	mg/L
Manganese (Mn)	WWOT	1.21	0.001	mg/L
Molybdenum (Mo)	WWOT	0.05	0.01	mg/L
Nickel (Ni)	WWOT	< 0.02	0.02	mg/L
Phosphorus (P)	WWOT	0.1	0.1	mg/L
Potassium (K)	WWOT	7.8	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	5.96	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	465	0.1	mg/L
Strontium (Sr)	WWOT	0.596	0.001	mg/L
Sulfur (S)	WWOT	427	0.06	mg/L
Tin (Sn)	WWOT	0.07	0.06	mg/L
Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
Vanadium (V)	WWOT	0.31	0.01	mg/L
Zinc (Zn)	WWOT	4.26	0.002	mg/L

Order No: 94697 - ACG-L4

Start Date: 10/16/03 12:00:00AM

Metals

ICP Total

Aluminum (Al)	WWOT	0.16	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.008	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L

	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	< 0.006	0.006	mg/L
	Calcium (Ca)	WWOT	45.8	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
	Cobalt (Co)	WWOT	< 0.006	0.006	mg/L
	Copper (Cu)	WWOT	< 0.006	0.006	mg/L
	Iron (Fe)	WWOT	0.083	0.006	mg/L
	Lead (Pb)	WWOT	< 0.06	0.06	mg/L
	Magnesium (Mg)	WWOT	14.2	0.1	mg/L
	Manganese (Mn)	WWOT	0.061	0.001	mg/L
	Molybdenum (Mo)	WWOT	0.09	0.01	mg/L
	Nickel (Ni)	WWOT	< 0.02	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	10.4	0.1	mg/L
	Selenium (Se)	WWOT	< 0.06	0.06	mg/L
	Silicon (Si)	WWOT	5.23	0.06	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	259	0.1	mg/L
	Strontium (Sr)	WWOT	0.268	0.001	mg/L
	Sulfur (S)	WWOT	212	0.06	mg/L
	Tin (Sn)	WWOT	< 0.06	0.06	mg/L
	Titanium (Ti)	WWOT	0.007	0.002	mg/L
	Vanadium (V)	WWOT	0.79	0.01	mg/L
	Zinc (Zn)	WWOT	0.024	0.002	mg/L

Order No: 94698 - ACG-DP1

Start Date: 10/16/03 12:00:00AM

Metals

Hardness CaMg diss.					
	Hardness,Calcium+Magnesium - calc.	WWOT	691	0.4	mg CaCO3 / L
Hardness Total diss.					
	Hardness, Total - calc.	WWOT	966	0.4	mg CaCO3 / L
ICP Dissolved					
	Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	< 0.05	0.05	mg/L
	Barium (Ba)	WWOT	0.018	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	0.02	0.01	mg/L
	Cadmium (Cd)	WWOT	0.134	0.005	mg/L
	Calcium (Ca)	WWOT	200	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	0.010	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	< 0.005	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	46.8	0.1	mg/L
	Manganese (Mn)	WWOT	88	0.1	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.25	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	1.1	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	4.02	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	2.7	0.1	mg/L
	Strontium (Sr)	WWOT	0.404	0.001	mg/L
	Sulfur (S)	WWOT	317	0.05	mg/L
	Tin (Sn)	WWOT	0.09	0.05	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	74.9	0.002	mg/L
ICP Total					
	Aluminum (Al)	WWOT	167	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	1.54	0.06	mg/L
	Barium (Ba)	WWOT	2.73	0.001	mg/L
	Berylium (Be)	WWOT	0.010	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.205	0.006	mg/L
	Calcium (Ca)	WWOT	318	0.1	mg/L
	Chromium (Cr)	WWOT	0.416	0.006	mg/L
	Cobalt (Co)	WWOT	0.146	0.006	mg/L
	Copper (Cu)	WWOT	0.540	0.006	mg/L
	Iron (Fe)	WWOT	305	0.06	mg/L
	Lead (Pb)	WWOT	1.05	0.06	mg/L
	Magnesium (Mg)	WWOT	140	0.1	mg/L
	Manganese (Mn)	WWOT	80.5	0.1	mg/L
	Molybdenum (Mo)	WWOT	0.05	0.01	mg/L
	Nickel (Ni)	WWOT	0.88	0.02	mg/L
	Phosphorus (P)	WWOT	12.1	0.1	mg/L

	Potassium (K)	WWOT	25.9	0.1	mg/L
	Selenium (Se)	WWOT	0.07	0.06	mg/L
	Silicon (Si)	WWOT	108	0.06	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	5.1	0.1	mg/L
	Strontium (Sr)	WWOT	0.891	0.001	mg/L
	Sulfur (S)	WWOT	290	0.06	mg/L
	Tin (Sn)	WWOT	< 0.06	0.06	mg/L
	Titanium (Ti)	WWOT	3.79	0.002	mg/L
	Vanadium (V)	WWOT	0.45	0.01	mg/L
	Zinc (Zn)	WWOT	115	0.02	mg/L

Order No: 94699 - ACG-DP2

Start Date: 10/16/03 12:00:00AM

Metals

ICP Total

	Aluminum (Al)	WWOT	14.6	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	< 0.06	0.06	mg/L
	Barium (Ba)	WWOT	0.446	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.028	0.006	mg/L
	Calcium (Ca)	WWOT	268	0.1	mg/L
	Chromium (Cr)	WWOT	0.080	0.006	mg/L
	Cobalt (Co)	WWOT	0.018	0.006	mg/L
	Copper (Cu)	WWOT	0.018	0.006	mg/L
	Iron (Fe)	WWOT	29.9	0.006	mg/L
	Lead (Pb)	WWOT	0.19	0.06	mg/L
	Magnesium (Mg)	WWOT	60.4	0.1	mg/L
	Manganese (Mn)	WWOT	42.4	0.01	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.20	0.02	mg/L
	Phosphorus (P)	WWOT	1.4	0.1	mg/L
	Potassium (K)	WWOT	11.6	0.1	mg/L
	Selenium (Se)	WWOT	< 0.06	0.06	mg/L
	Silicon (Si)	WWOT	26.3	0.06	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	5.1	0.1	mg/L
	Strontium (Sr)	WWOT	0.555	0.001	mg/L
	Sulfur (S)	WWOT	297	0.06	mg/L
	Tin (Sn)	WWOT	0.07	0.06	mg/L
	Titanium (Ti)	WWOT	0.503	0.002	mg/L
	Vanadium (V)	WWOT	0.04	0.01	mg/L
	Zinc (Zn)	WWOT	48.2	0.002	mg/L

Order No: 94700 - ACG-DP5

Start Date: 10/16/03 12:00:00AM

Metals

Hardness CaMg diss.

	Hardness,Calcium+Magnesium - calc.	WWOT	606	0.4	mg CaCO3 / L

Hardness Total diss.

	Hardness, Total - calc.	WWOT	1010	0.4	mg CaCO3 / L

ICP Dissolved

	Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	0.05	0.05	mg/L
	Barium (Ba)	WWOT	0.013	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	0.02	0.01	mg/L
	Cadmium (Cd)	WWOT	0.351	0.005	mg/L
	Calcium (Ca)	WWOT	174	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	0.090	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	0.012	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	41.7	0.1	mg/L
	Manganese (Mn)	WWOT	136	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.33	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	0.9	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	3.45	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	2.7	0.1	mg/L
	Strontium (Sr)	WWOT	0.307	0.001	mg/L
	Sulfur (S)	WWOT	339	0.05	mg/L
	Tin (Sn)	WWOT	0.09	0.05	mg/L

	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	99.5	0.002	mg/L
ICP Total					
	Aluminum (Al)	WWOT	162	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	0.30	0.06	mg/L
	Barium (Ba)	WWOT	7.21	0.001	mg/L
	Berylium (Be)	WWOT	0.008	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.450	0.006	mg/L
	Calcium (Ca)	WWOT	198	0.1	mg/L
	Chromium (Cr)	WWOT	0.347	0.006	mg/L
	Cobalt (Co)	WWOT	0.252	0.006	mg/L
	Copper (Cu)	WWOT	0.402	0.006	mg/L
	Iron (Fe)	WWOT	316	0.4	mg/L
	Lead (Pb)	WWOT	2.65	0.06	mg/L
	Magnesium (Mg)	WWOT	96.1	0.1	mg/L
	Manganese (Mn)	WWOT	154	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.05	0.01	mg/L
	Nickel (Ni)	WWOT	0.88	0.02	mg/L
	Phosphorus (P)	WWOT	8.1	0.1	mg/L
	Potassium (K)	WWOT	17.4	0.1	mg/L
	Selenium (Se)	WWOT	0.08	0.06	mg/L
	Silicon (Si)	WWOT	102	0.06	mg/L
	Silver (Ag)	WWOT	0.03	0.01	mg/L
	Sodium (Na)	WWOT	3.8	0.1	mg/L
	Strontium (Sr)	WWOT	0.709	0.001	mg/L
	Sulfur (S)	WWOT	309	0.06	mg/L
	Tin (Sn)	WWOT	< 0.06	0.06	mg/L
	Titanium (Ti)	WWOT	4.78	0.002	mg/L
	Vanadium (V)	WWOT	0.47	0.01	mg/L
	Zinc (Zn)	WWOT	142	0.1	mg/L

Order No: 94701 - ACG-DP5 DUPLICATE

Start Date: 10/16/03 12:00:00AM

Metals

Hardness CaMg diss.					
	Hardness,Calcium+Magnesium - calc.	WWOT	566	0.4	mg CaCO3 / L
Hardness Total diss.					
	Hardness, Total - calc.	WWOT	962	0.4	mg CaCO3 / L
ICP Dissolved					
	Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	0.05	0.05	mg/L
	Barium (Ba)	WWOT	0.009	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	0.02	0.01	mg/L
	Cadmium (Cd)	WWOT	0.326	0.005	mg/L
	Calcium (Ca)	WWOT	168	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	0.087	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	0.006	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	35.6	0.1	mg/L
	Manganese (Mn)	WWOT	143	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.36	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	0.5	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	3.32	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	1.6	0.1	mg/L
	Strontium (Sr)	WWOT	0.273	0.001	mg/L
	Sulfur (S)	WWOT	333	0.05	mg/L
	Tin (Sn)	WWOT	0.09	0.05	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	88.7	0.002	mg/L
ICP Total					
	Aluminum (Al)	WWOT	603	4	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	1.07	0.06	mg/L
	Barium (Ba)	WWOT	28.1	0.06	mg/L
	Berylium (Be)	WWOT	0.005	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.960	0.006	mg/L
	Calcium (Ca)	WWOT	327	0.1	mg/L
	Chromium (Cr)	WWOT	1.15	0.006	mg/L

	Cobalt (Co)	WWOT	0.743	0.006	mg/L
	Copper (Cu)	WWOT	1.74	0.006	mg/L
	Iron (Fe)	WWOT	1320	0.4	mg/L
	Lead (Pb)	WWOT	10	4	mg/L
	Magnesium (Mg)	WWOT	272	6	mg/L
	Manganese (Mn)	WWOT	217	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.14	0.01	mg/L
	Nickel (Ni)	WWOT	2.70	0.02	mg/L
	Phosphorus (P)	WWOT	37	6	mg/L
	Potassium (K)	WWOT	48.3	0.1	mg/L
	Selenium (Se)	WWOT	0.15	0.06	mg/L
	Silicon (Si)	WWOT	111	0.06	mg/L
	Silver (Ag)	WWOT	0.11	0.01	mg/L
	Sodium (Na)	WWOT	7.0	0.1	mg/L
	Strontium (Sr)	WWOT	2.01	0.001	mg/L
	Sulfur (S)	WWOT	297	0.06	mg/L
	Tin (Sn)	WWOT	< 0.06	0.06	mg/L
	Titanium (Ti)	WWOT	17.8	0.1	mg/L
	Vanadium (V)	WWOT	1.73	0.01	mg/L
	Zinc (Zn)	WWOT	190	0.1	mg/L

Order No: 94702 - ACG-DP6

Start Date: 10/16/03 12:00:00AM

Metals

ICP Total

	Aluminum (Al)	WWOT	1680	0.6	mg/L
	Antimony (Sb)	WWOT	< 6	6	mg/L
	Arsenic (As)	WWOT	15.5	0.6	mg/L
	Arsenic (As)	WWOT	15	6	mg/L
	Barium (Ba)	WWOT	70.5	0.01	mg/L
	Berylium (Be)	WWOT	0.09	0.01	mg/L
	Boron (B)	WWOT	< 0.1	0.1	mg/L
	Cadmium (Cd)	WWOT	< 0.6	0.6	mg/L
	Calcium (Ca)	WWOT	799	1	mg/L
	Chromium (Cr)	WWOT	5.1	0.6	mg/L
	Chromium (Cr)	WWOT	4.88	0.06	mg/L
	Cobalt (Co)	WWOT	2.2	0.6	mg/L
	Cobalt (Co)	WWOT	2.07	0.06	mg/L
	Copper (Cu)	WWOT	7.18	0.06	mg/L
	Iron (Fe)	WWOT	6370	0.4	mg/L
	Lead (Pb)	WWOT	26	6	mg/L
	Lead (Pb)	WWOT	27.3	0.6	mg/L
	Magnesium (Mg)	WWOT	801	1	mg/L
	Manganese (Mn)	WWOT	125	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.6	0.1	mg/L
	Nickel (Ni)	WWOT	7.2	0.2	mg/L
	Nickel (Ni)	WWOT	7	2	mg/L
	Phosphorus (P)	WWOT	160	1	mg/L
	Potassium (K)	WWOT	163	1	mg/L
	Selenium (Se)	WWOT	< 6	6	mg/L
	Silicon (Si)	WWOT	173	0.6	mg/L
	Silver (Ag)	WWOT	0.7	0.1	mg/L
	Sodium (Na)	WWOT	21	1	mg/L
	Sodium (Na)	WWOT	22	10	mg/L
	Strontium (Sr)	WWOT	4.80	0.01	mg/L
	Sulfur (S)	WWOT	207	0.6	mg/L
	Tin (Sn)	WWOT	< 0.6	0.6	mg/L
	Titanium (Ti)	WWOT	36	0.02	mg/L
	Vanadium (V)	WWOT	5.5	0.1	mg/L
	Vanadium (V)	WWOT	6	1	mg/L
	Zinc (Zn)	WWOT	247	0.02	mg/L

Order No: 94703 - 10M FROM ACG-DP1 TOWARD POWERLINE ON FENCE 2

Start Date: 10/16/03 12:00:00AM

General

Alkalinity Tot-pH4.5

	Alkalinity to pH 4.5	WWOT	31.0	0.5	mg CaCO3 / L

ICA (Cl F SO4)

	Chloride (Cl)	WWOT	0.7	0.1	mg/L
	Fluoride (F)	WWOT	0.26	0.01	mg/L
	Sulphate (SO4)	WWOT	1010	30	mg/L

ICA (NO2 NO3 PO4 Br)

	Bromide (Br)	WWOT	< 0.05	0.05	mg/L
	Nitrogen, Nitrate as N	WWOT	0.055	0.002	mg/L
	Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
	Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L

pH

	pH	WWOT	6.43	0.01	pH Units

Residue: Nonfilt.

	Residue, Nonfilterable (NFR/TSS)	WWOT	49	5	mg/L

Specific Conductance					
	Conductivity	WWOT	1600	2	uS/cm
Metals					
Hardness CaMg diss.					
	Hardness,Calcium+Magnesium - calc.	WWOT	560	0.4	mg CaCO3 / L
Hardness Total diss.					
	Hardness, Total - calc.	WWOT	1020	0.4	mg CaCO3 / L
ICP Dissolved					
	Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	0.08	0.05	mg/L
	Barium (Ba)	WWOT	0.009	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	0.02	0.01	mg/L
	Cadmium (Cd)	WWOT	0.286	0.005	mg/L
	Calcium (Ca)	WWOT	166	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	0.090	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	4.97	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	35.6	0.1	mg/L
	Manganese (Mn)	WWOT	154	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.36	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	0.6	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	3.49	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	1.6	0.1	mg/L
	Strontium (Sr)	WWOT	0.271	0.001	mg/L
	Sulfur (S)	WWOT	325	0.05	mg/L
	Tin (Sn)	WWOT	0.09	0.05	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	112	0.1	mg/L
ICP Total					
	Aluminum (Al)	WWOT	0.76	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	< 0.06	0.06	mg/L
	Barium (Ba)	WWOT	0.033	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.282	0.006	mg/L
	Calcium (Ca)	WWOT	166	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
	Cobalt (Co)	WWOT	0.087	0.006	mg/L
	Copper (Cu)	WWOT	< 0.006	0.006	mg/L
	Iron (Fe)	WWOT	11.5	0.006	mg/L
	Lead (Pb)	WWOT	< 0.06	0.06	mg/L
	Magnesium (Mg)	WWOT	36.9	0.1	mg/L
	Manganese (Mn)	WWOT	141	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
	Nickel (Ni)	WWOT	0.37	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	0.7	0.1	mg/L
	Selenium (Se)	WWOT	< 0.06	0.06	mg/L
	Silicon (Si)	WWOT	4.88	0.06	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	1.5	0.1	mg/L
	Strontium (Sr)	WWOT	0.280	0.001	mg/L
	Sulfur (S)	WWOT	331	0.06	mg/L
	Tin (Sn)	WWOT	0.07	0.06	mg/L
	Titanium (Ti)	WWOT	0.027	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	102	0.1	mg/L

Order No: 94704 - STREAM FLOWING DIRECTING THROUGH ACG-DP5

Start Date: 10/16/03 12:00:00AM

General					
Alkalinity Tot-pH4.5					
	Alkalinity to pH 4.5	WWOT	25.8	0.5	mg CaCO3 / L
ICA (Cl F SO4)					
	Chloride (Cl)	WWOT	0.7	0.1	mg/L
	Fluoride (F)	WWOT	0.30	0.01	mg/L
	Sulphate (SO4)	WWOT	1100	30	mg/L
ICA (NO2 NO3 PO4 Br)					
	Bromide (Br)	WWOT	< 0.05	0.05	mg/L
	Nitrogen, Nitrate as N	WWOT	0.046	0.002	mg/L
	Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L

	Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH					
	pH	WWOT	6.39	0.01	pH Units
Residue: Nonfilt.					
	Residue, Nonfilterable (NFR/TSS)	WWOT	52	5	mg/L
Specific Conductance					
	Conductivity	WWOT	1540	2	uS/cm
Metals					
Hardness CaMg diss.					
	Hardness,Calcium+Magnesium - calc.	WWOT	609	0.4	mg CaCO3 / L
Hardness Total diss.					
	Hardness, Total - calc.	WWOT	1100	0.4	mg CaCO3 / L
ICP Dissolved					
	Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	0.06	0.05	mg/L
	Barium (Ba)	WWOT	0.007	0.001	mg/L
	Berylium (Be)	WWOT	0.001	0.001	mg/L
	Boron (B)	WWOT	0.02	0.01	mg/L
	Cadmium (Cd)	WWOT	0.313	0.005	mg/L
	Calcium (Ca)	WWOT	184	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	0.102	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	10.2	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	36.5	0.1	mg/L
	Manganese (Mn)	WWOT	158	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.42	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	0.6	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	3.82	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	1.7	0.1	mg/L
	Strontium (Sr)	WWOT	0.302	0.001	mg/L
	Sulfur (S)	WWOT	366	0.05	mg/L
	Tin (Sn)	WWOT	0.09	0.05	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	118	0.1	mg/L
ICP Total					
	Aluminum (Al)	WWOT	0.06	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	0.11	0.06	mg/L
	Barium (Ba)	WWOT	0.006	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.303	0.006	mg/L
	Calcium (Ca)	WWOT	171	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
	Cobalt (Co)	WWOT	0.094	0.006	mg/L
	Copper (Cu)	WWOT	< 0.006	0.006	mg/L
	Iron (Fe)	WWOT	23.6	0.006	mg/L
	Lead (Pb)	WWOT	< 0.06	0.06	mg/L
	Magnesium (Mg)	WWOT	37.0	0.1	mg/L
	Manganese (Mn)	WWOT	145	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
	Nickel (Ni)	WWOT	0.40	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	0.6	0.1	mg/L
	Selenium (Se)	WWOT	< 0.06	0.06	mg/L
	Silicon (Si)	WWOT	4.15	0.06	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	1.4	0.1	mg/L
	Strontium (Sr)	WWOT	0.285	0.001	mg/L
	Sulfur (S)	WWOT	333	0.06	mg/L
	Tin (Sn)	WWOT	0.07	0.06	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	109	0.1	mg/L

Order No: 94705 - 10M BELOW ACG-DP1

Start Date: 10/16/03 12:00:00AM

General					
Alkalinity Tot-pH4.5					
	Alkalinity to pH 4.5	WWOT	32.5	0.5	mg CaCO3 / L
ICA (Cl F SO4)					
	Chloride (Cl)	WWOT	0.7	0.1	mg/L
	Fluoride (F)	WWOT	0.25	0.01	mg/L

	Sulphate (SO4)	WWOT	1070	30	mg/L
ICA (NO2 NO3 PO4 Br)					
	Bromide (Br)	WWOT	< 0.05	0.05	mg/L
	Nitrogen, Nitrate as N	WWOT	0.061	0.002	mg/L
	Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
	Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH					
	pH	WWOT	6.38	0.01	pH Units
Residue: Nonfilt.					
	Residue, Nonfilterable (NFR/TSS)	WWOT	234	5	mg/L
Specific Conductance					
	Conductivity	WWOT	1580	2	uS/cm
Metals					
Hardness CaMg diss.					
	Hardness,Calcium+Magnesium - calc.	WWOT	587	0.4	mg CaCO3 / L
Hardness Total diss.					
	Hardness, Total - calc.	WWOT	1020	0.4	mg CaCO3 / L
ICP Dissolved					
	Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	0.07	0.05	mg/L
	Barium (Ba)	WWOT	0.010	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	0.02	0.01	mg/L
	Cadmium (Cd)	WWOT	0.290	0.005	mg/L
	Calcium (Ca)	WWOT	174	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	0.093	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	4.72	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	37.1	0.1	mg/L
	Manganese (Mn)	WWOT	143	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.37	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	0.6	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	3.63	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	1.6	0.1	mg/L
	Strontium (Sr)	WWOT	0.288	0.001	mg/L
	Sulfur (S)	WWOT	369	0.05	mg/L
	Tin (Sn)	WWOT	0.09	0.05	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	103	0.1	mg/L
ICP Total					
	Aluminum (Al)	WWOT	4.19	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	< 0.06	0.06	mg/L
	Barium (Ba)	WWOT	0.121	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.281	0.006	mg/L
	Calcium (Ca)	WWOT	166	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
	Cobalt (Co)	WWOT	0.088	0.006	mg/L
	Copper (Cu)	WWOT	< 0.006	0.006	mg/L
	Iron (Fe)	WWOT	16.6	0.006	mg/L
	Lead (Pb)	WWOT	< 0.06	0.06	mg/L
	Magnesium (Mg)	WWOT	37.3	0.1	mg/L
	Manganese (Mn)	WWOT	140	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
	Nickel (Ni)	WWOT	0.37	0.02	mg/L
	Phosphorus (P)	WWOT	0.3	0.1	mg/L
	Potassium (K)	WWOT	1.2	0.1	mg/L
	Selenium (Se)	WWOT	< 0.06	0.06	mg/L
	Silicon (Si)	WWOT	10.2	0.06	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	1.7	0.1	mg/L
	Strontium (Sr)	WWOT	0.287	0.001	mg/L
	Sulfur (S)	WWOT	323	0.06	mg/L
	Tin (Sn)	WWOT	0.07	0.06	mg/L
	Titanium (Ti)	WWOT	0.152	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	103	0.1	mg/L

Order No: 94706 - PIPE DISCHARGE TO LAND APPLICATION

Start Date: 10/16/03 12:00:00AM

General

Alkalinity Tot-pH4.5					
	Alkalinity to pH 4.5	WWOT	39.4	0.5	mg CaCO3 / L
ICA (Cl F SO4)					
	Chloride (Cl)	WWOT	0.8	0.1	mg/L
	Fluoride (F)	WWOT	0.30	0.01	mg/L
	Sulphate (SO4)	WWOT	1030	30	mg/L
ICA (NO2 NO3 PO4 Br)					
	Bromide (Br)	WWOT	< 0.05	0.05	mg/L
	Nitrogen, Nitrate as N	WWOT	0.042	0.002	mg/L
	Nitrogen, Nitrite as N	WWOT	< 0.005	0.005	mg/L
	Phosphorus, Ortho as P	WWOT	< 0.05	0.05	mg/L
pH					
	pH	WWOT	6.38	0.01	pH Units
Residue: Nonfilt.					
	Residue, Nonfilterable (NFR/TSS)	WWOT	41	5	mg/L
Specific Conductance					
	Conductivity	WWOT	1630	2	uS/cm
Metals					
Hardness CaMg diss.					
	Hardness,Calcium+Magnesium - calc.	WWOT	598	0.4	mg CaCO3 / L
Hardness Total diss.					
	Hardness, Total - calc.	WWOT	1100	0.4	mg CaCO3 / L
ICP Dissolved					
	Aluminum (Al)	WWOT	< 0.05	0.05	mg/L
	Antimony (Sb)	WWOT	< 0.05	0.05	mg/L
	Arsenic (As)	WWOT	0.09	0.05	mg/L
	Barium (Ba)	WWOT	0.007	0.001	mg/L
	Berylium (Be)	WWOT	0.001	0.001	mg/L
	Boron (B)	WWOT	0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.311	0.005	mg/L
	Calcium (Ca)	WWOT	176	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.005	0.005	mg/L
	Cobalt (Co)	WWOT	0.102	0.005	mg/L
	Copper (Cu)	WWOT	< 0.005	0.005	mg/L
	Iron (Fe)	WWOT	14.7	0.005	mg/L
	Lead (Pb)	WWOT	< 0.05	0.05	mg/L
	Magnesium (Mg)	WWOT	38.5	0.1	mg/L
	Manganese (Mn)	WWOT	160	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.02	0.01	mg/L
	Nickel (Ni)	WWOT	0.40	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	0.7	0.1	mg/L
	Selenium (Se)	WWOT	< 0.05	0.05	mg/L
	Silicon (Si)	WWOT	3.94	0.05	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	1.6	0.1	mg/L
	Strontium (Sr)	WWOT	0.288	0.001	mg/L
	Sulfur (S)	WWOT	351	0.05	mg/L
	Tin (Sn)	WWOT	0.09	0.05	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	118	0.1	mg/L
ICP Total					
	Aluminum (Al)	WWOT	< 0.06	0.06	mg/L
	Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
	Arsenic (As)	WWOT	0.13	0.06	mg/L
	Barium (Ba)	WWOT	0.006	0.001	mg/L
	Berylium (Be)	WWOT	< 0.001	0.001	mg/L
	Boron (B)	WWOT	< 0.01	0.01	mg/L
	Cadmium (Cd)	WWOT	0.293	0.006	mg/L
	Calcium (Ca)	WWOT	165	0.1	mg/L
	Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
	Cobalt (Co)	WWOT	0.091	0.006	mg/L
	Copper (Cu)	WWOT	< 0.006	0.006	mg/L
	Iron (Fe)	WWOT	23.9	0.006	mg/L
	Lead (Pb)	WWOT	< 0.06	0.06	mg/L
	Magnesium (Mg)	WWOT	36.3	0.1	mg/L
	Manganese (Mn)	WWOT	144	0.06	mg/L
	Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
	Nickel (Ni)	WWOT	0.38	0.02	mg/L
	Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
	Potassium (K)	WWOT	0.6	0.1	mg/L
	Selenium (Se)	WWOT	< 0.06	0.06	mg/L
	Silicon (Si)	WWOT	3.98	0.06	mg/L
	Silver (Ag)	WWOT	< 0.01	0.01	mg/L
	Sodium (Na)	WWOT	1.4	0.1	mg/L
	Strontium (Sr)	WWOT	0.273	0.001	mg/L
	Sulfur (S)	WWOT	323	0.06	mg/L
	Tin (Sn)	WWOT	0.07	0.06	mg/L
	Titanium (Ti)	WWOT	< 0.002	0.002	mg/L
	Vanadium (V)	WWOT	< 0.01	0.01	mg/L
	Zinc (Zn)	WWOT	108	0.1	mg/L

Order No: 94707 - GALKENO 300 FLOW PATH TRAVERSE A

Start Date: 10/16/03 12:00:00AM

Metals

ICP Total

Aluminum (Al)	WWOT	3.50	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.109	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.192	0.006	mg/L
Calcium (Ca)	WWOT	173	0.1	mg/L
Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
Cobalt (Co)	WWOT	0.046	0.006	mg/L
Copper (Cu)	WWOT	< 0.006	0.006	mg/L
Iron (Fe)	WWOT	7.52	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	37.9	0.1	mg/L
Manganese (Mn)	WWOT	99.1	0.06	mg/L
Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
Nickel (Ni)	WWOT	0.27	0.02	mg/L
Phosphorus (P)	WWOT	0.2	0.1	mg/L
Potassium (K)	WWOT	1.1	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	8.68	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	1.6	0.1	mg/L
Strontium (Sr)	WWOT	0.332	0.001	mg/L
Sulfur (S)	WWOT	301	0.06	mg/L
Tin (Sn)	WWOT	0.07	0.06	mg/L
Titanium (Ti)	WWOT	0.110	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	76.7	0.002	mg/L

Order No: 94708 - GALKENO 300 FLOW PATH TRAVERSE B

Start Date: 10/16/03 12:00:00AM

Metals

ICP Total

Aluminum (Al)	WWOT	2.70	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.093	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	0.137	0.006	mg/L
Calcium (Ca)	WWOT	180	0.1	mg/L
Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
Cobalt (Co)	WWOT	0.038	0.006	mg/L
Copper (Cu)	WWOT	< 0.006	0.006	mg/L
Iron (Fe)	WWOT	3.59	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	37.8	0.1	mg/L
Manganese (Mn)	WWOT	93.7	0.06	mg/L
Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
Nickel (Ni)	WWOT	0.22	0.02	mg/L
Phosphorus (P)	WWOT	0.1	0.1	mg/L
Potassium (K)	WWOT	0.9	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	7.37	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	1.5	0.1	mg/L
Strontium (Sr)	WWOT	0.347	0.001	mg/L
Sulfur (S)	WWOT	300	0.06	mg/L
Tin (Sn)	WWOT	0.07	0.06	mg/L
Titanium (Ti)	WWOT	0.088	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	67.5	0.002	mg/L

Order No: 94709 - GALKENO 300 FLOW PATH TRAVERSE C

Start Date: 10/16/03 12:00:00AM

Metals

ICP Total

Aluminum (Al)	WWOT	1.87	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.059	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L

Cadmium (Cd)	WWOT	0.043	0.006	mg/L
Calcium (Ca)	WWOT	227	0.1	mg/L
Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
Cobalt (Co)	WWOT	< 0.006	0.006	mg/L
Copper (Cu)	WWOT	< 0.006	0.006	mg/L
Iron (Fe)	WWOT	2.7	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	45.6	0.1	mg/L
Manganese (Mn)	WWOT	44.3	0.01	mg/L
Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
Nickel (Ni)	WWOT	0.12	0.02	mg/L
Phosphorus (P)	WWOT	0.1	0.1	mg/L
Potassium (K)	WWOT	0.7	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	6.79	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	1.6	0.1	mg/L
Strontium (Sr)	WWOT	0.466	0.001	mg/L
Sulfur (S)	WWOT	302	0.06	mg/L
Tin (Sn)	WWOT	0.07	0.06	mg/L
Titanium (Ti)	WWOT	0.064	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	35.8	0.002	mg/L

Order No: 94710 - GALKENO 300 FLOW PATH TRAVERSE D

Start Date: 10/16/03 12:00:00AM

Metals

ICP Total

Aluminum (Al)	WWOT	0.26	0.06	mg/L
Antimony (Sb)	WWOT	< 0.06	0.06	mg/L
Arsenic (As)	WWOT	< 0.06	0.06	mg/L
Barium (Ba)	WWOT	0.053	0.001	mg/L
Berylium (Be)	WWOT	< 0.001	0.001	mg/L
Boron (B)	WWOT	< 0.01	0.01	mg/L
Cadmium (Cd)	WWOT	< 0.006	0.006	mg/L
Calcium (Ca)	WWOT	347	0.1	mg/L
Chromium (Cr)	WWOT	< 0.006	0.006	mg/L
Cobalt (Co)	WWOT	< 0.006	0.006	mg/L
Copper (Cu)	WWOT	< 0.006	0.006	mg/L
Iron (Fe)	WWOT	0.698	0.006	mg/L
Lead (Pb)	WWOT	< 0.06	0.06	mg/L
Magnesium (Mg)	WWOT	32.3	0.1	mg/L
Manganese (Mn)	WWOT	0.158	0.001	mg/L
Molybdenum (Mo)	WWOT	0.01	0.01	mg/L
Nickel (Ni)	WWOT	< 0.02	0.02	mg/L
Phosphorus (P)	WWOT	< 0.1	0.1	mg/L
Potassium (K)	WWOT	0.7	0.1	mg/L
Selenium (Se)	WWOT	< 0.06	0.06	mg/L
Silicon (Si)	WWOT	4.11	0.06	mg/L
Silver (Ag)	WWOT	< 0.01	0.01	mg/L
Sodium (Na)	WWOT	2.0	0.1	mg/L
Strontium (Sr)	WWOT	0.879	0.001	mg/L
Sulfur (S)	WWOT	328	0.06	mg/L
Tin (Sn)	WWOT	0.06	0.06	mg/L
Titanium (Ti)	WWOT	0.009	0.002	mg/L
Vanadium (V)	WWOT	< 0.01	0.01	mg/L
Zinc (Zn)	WWOT	2.69	0.002	mg/L

Location: UNITED KENO HILL MINES(UKHM) **PESC FOLDER # : 200300935**

QC Information:

ANALYTE	ALIQ#	EXPECTED	RESULT	% REC	DIL'N	MDL	QC TYPE

Alkalinity Tot-pH4.5 UNITS: mg CaCO3 / L MATRIX: WWOT

ANALYTE	ALIQ#	EXPECTED	RESULT	% REC	DIL'N	MDL	QC TYPE
Alkalinity to pH 4.5	95104-1	100	101	101.0	1	0.5	REF
Alkalinity to pH 4.5	95106-1		42.4	107.6	1	0.5	REP
Alkalnity, Total	95101-1	< MDL	< 0.5		1	0.5	BLE

Hardness CaMg diss. UNITS: mg CaCO3 / L MATRIX: WWOT

ANALYTE	ALIQ#	EXPECTED	RESULT	% REC	DIL'N	MDL	QC TYPE
Hardness,Calcium+Magnesium - calc.	95040-1		< 0.4		1	0.4	BLE
Hardness,Calcium+Magnesium - calc.	95044-1		443		1	0.4	REP
Hardness,Calcium+Magnesium - calc.	95046-1		565		1	0.4	REP

Hardness Total diss. UNITS: mg CaCO3 / L MATRIX: WWOT

ANALYTE	ALIQ#	EXPECTED	RESULT	% REC	DIL'N	MDL	QC TYPE
Hardness, Total - calc.	95040-1		< 0.4		1	0.4	BLE
Hardness, Total - calc.	95044-1		445		1	0.4	REP

Report Transmission Cover Page

Norwest Labs
#104, 19575-55 A Ave.
Surrey, BC. V3S 8P8
Phone: **(604) 514-3322**
Fax: **(604) 514-3323**

Bill to: Access Mining Consultants Ltd.
Report to: Access Mining Consultants Ltd.
204D Strickland Street
Whitehorse, YT, Canada
Y1A 2J8
Attn: Nichole Speiss
Sampled By:
Company:

Project
ID: NND-03-05
Name: G300 Flow Redirection
Location: ELSA
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **273254**
Control Number: E 01272
Date Received: Dec 03, 2003
Date Reported: Dec 11, 2003
Report Number: 491677

Copies	Contact	Company	Address				
1	Nichole Speiss	Access Mining Consultants Ltd.	204D Strickland Street Whitehorse, YT Y1A 2J8		Fax Email Custom Email		Post x Pickup Courier
			Phone: (867) 668-6463 Fax: (867) 667-6680 Email: nichole@accessconsulting.ca		Web Email Notification		Hand

_____ # OF PAGES IN THIS TRANSMISSION

Report Transmission Notes
Agreement Notes
Lot Notes
Sample Notes:

Notes to Clients

Agreement Notes

Lot Notes:

Sample Notes:

Reports associated with this Lot

Id/Format/Reported Date	Id/Format/Reported Date	Id/Format/Reported Date
491677 Envir2 3 Smp & DL		

Comment:
See Methodology and Notes page of Analytical Report for all comments pertaining to this report.

If this report transmission is not satisfactory, please send report requirements to the address at the top of this page.

Analytical Report

Norwest Labs
#104, 19575-55 A Ave.
Surrey, BC. V3S 8P8
Phone: (604) 514-3322
Fax: (604) 514-3323

Bill to: Access Mining Consultants Ltd.
Report to: Access Mining Consultants Ltd.
204D Strickland Street
Whitehorse, YT, Canada
Y1A 2J8
Attn: Nichole Speiss
Sampled By:
Company:

Project ID: NND-03-05
Name: G300 Flow Redirection
Location: ELSA
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **273254**
Control Number: E 01272
Date Received: Dec 03, 2003
Date Reported: Dec 11, 2003
Report Number: 491677

			NWL Number	273254-1	273254-2	273254-3	
			Sample Date				
			Sample Description	ACG-DP1 28-Nov-03	G3-SW11 28-Nov-03	ACG-DP5 28-Nov-03	
			Matrix	Water - General	Water - General	Water - General	
Analyte		**Units**		**Results**	**Results**	**Results**	**Detection Limit**
Metals Dissolved (Trace)							
Aluminum	Dissolved	mg/L		-	<0.01	<0.01	0.01
Antimony	Dissolved	mg/L		-	0.03	0.04	0.02
Arsenic	Dissolved	mg/L		-	<0.02	<0.02	0.02
Barium	Dissolved	mg/L		-	0.0068	0.0143	0.0005
Beryllium	Dissolved	mg/L		-	<0.0006	<0.0006	0.0005
Bismuth	Dissolved	mg/L		-	<0.02	<0.02	0.02
Cadmium	Dissolved	mg/L		-	0.236	0.273	0.0005
Calcium	Dissolved	mg/L		-	195	197	0.01
Chromium	Dissolved	mg/L		-	0.021	0.020	0.001
Cobalt	Dissolved	mg/L		-	0.096	0.087	0.001
Copper	Dissolved	mg/L		-	<0.001	<0.001	0.001
Iron	Dissolved	mg/L		-	6.91	<0.002	0.002
Lead	Dissolved	mg/L		-	<0.005	0.009	0.005
Lithium	Dissolved	mg/L		-	0.026	0.021	0.005
Magnesium	Dissolved	mg/L		-	41.6	45.9	0.01
Manganese	Dissolved	mg/L		-	135	129	0.0005
Molybdenum	Dissolved	mg/L		-	<0.01	<0.01	0.01
Nickel	Dissolved	mg/L		-	0.370	0.414	0.001
Phosphorus	Dissolved	mg/L		-	<0.06	<0.06	0.05
Potassium	Dissolved	mg/L		-	<0.3	0.4	0.3
Selenium	Dissolved	mg/L		-	0.15	0.15	0.02
Silicon	Dissolved	mg/L		-	4.1	6.9	0.05
Silver	Dissolved	mg/L		-	<0.002	<0.002	0.002
Sodium	Dissolved	mg/L		-	1.70	1.67	0.05
Strontium	Dissolved	mg/L		-	0.242	0.300	0.005
Sulphur	Dissolved	mg/L		-	386	370	0.2
Sulphate (SO4)	Dissolved	mg/L		1170	1160	1110	0.6
Thorium	Dissolved	mg/L		-	<0.005	<0.005	0.005
Tin	Dissolved	mg/L		-	0.022	0.036	0.005
Titanium	Dissolved	mg/L		-	<0.001	<0.001	0.001
Uranium	Dissolved	mg/L		-	<0.06	<0.06	0.06
Vanadium	Dissolved	mg/L		-	<0.001	<0.001	0.001
Zinc	Dissolved	mg/L		-	100	86.0	0.001
Zirconium	Dissolved	mg/L		-	<0.005	<0.005	0.005
Metals Total (Trace)							

NORWEST LABS

Norwest Labs
#104, 19575-55 A Ave.
Surrey, BC. V3S 8P8
Phone: (604) 514-3322
Fax: (604) 514-3323

Analytical Report

Bill to: Access Mining Consultants Ltd.
Report to: Access Mining Consultants Ltd.
204D Strickland Street
Whitehorse, YT, Canada
Y1A 2J8
Attn: Nichole Speiss
Sampled By:
Company:

Project ID: NND-03-05
Name: G300 Flow Redirection
Location: ELSA
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **273254**
Control Number: E 01272
Date Received: Dec 03, 2003
Date Reported: Dec 11, 2003
Report Number: 491677

	NWL Number	273254-1	273254-2	273254-3	
	Sample Date				
	Sample Description	ACG-DP1 28-Nov-03	G3-SW11 28-Nov-03	ACG-DP5 28-Nov-03	
	Matrix	Water - General	Water - General	Water - General	
Analyte	**Units**	**Results**	**Results**	**Results**	**Detection Limit**
Metals Total (Trace) - Continued					
Aluminum Total	mg/L	1280	0.72	3520	0.01
Antimony Total	mg/L	<0.2	0.06	<0.2	0.02
Arsenic Total	mg/L	14.0	<0.02	4.00	0.02
Barium Total	mg/L	36.0	0.0357	275	0.0005
Beryllium Total	mg/L	<0.005	<0.0006	<0.005	0.0005
Bismuth Total	mg/L	<0.2	<0.02	<0.2	0.02
Cadmium Total	mg/L	3.61	0.186	6.50	0.0005
Calcium Total	mg/L	3220	198	2960	0.01
Chromium Total	mg/L	2.40	0.013	6.90	0.001
Cobalt Total	mg/L	1.90	0.076	6.00	0.001
Copper Total	mg/L	7.20	<0.001	17.0	0.001
Iron Total	mg/L	3900	8.00	8200	0.002
Lead Total	mg/L	11.3	0.083	93.2	0.005
Lithium Total	mg/L	1.40	0.018	3.30	0.005
Magnesium Total	mg/L	1240	40.6	1730	0.01
Manganese Total	mg/L	1660	120	2230	0.0005
Molybdenum Total	mg/L	<0.1	<0.01	<0.1	0.01
Nickel Total	mg/L	8.80	0.287	16.8	0.001
Phosphorus Total	mg/L	147	0.06	336	0.05
Potassium Total	mg/L	200	0.6	210	0.3
Selenium Total	mg/L	4.00	0.08	<0.2	0.02
Silicon Total	mg/L	1740	4.0	3890	0.05
Silver Total	mg/L	<0.02	<0.002	0.500	0.002
Sodium Total	mg/L	33.0	1.36	56.0	0.05
Strontium Total	mg/L	6.20	0.194	13.2	0.005
Sulphur Total	mg/L	3420	353	3370	0.2
Thorium Total	mg/L	<0.05	<0.006	1.70	0.005
Tin Total	mg/L	1.10	0.047	1.70	0.005
Titanium Total	mg/L	31.2	0.024	92.5	0.001
Uranium Total	mg/L	<0.6	<0.07	<0.6	0.06
Vanadium Total	mg/L	3.30	<0.001	9.70	0.001
Zinc Total	mg/L	1730	88.3	1620	0.001
Zirconium Total	mg/L	<0.05	<0.006	0.900	0.005
Routine Water					
pH Water	pH	7.0	6.7	6.7	0.1

NORWEST LABS

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Fax: (604) 514-3323

Analytical Report

Bill to: Access Mining Consultants Ltd.
Report to: Access Mining Consultants Ltd.
204D Strickland Street
Whitehorse, YT, Canada
Y1A 2J8
Attn: Nichole Speiss
Sampled By:
Company:

Project ID: NND-03-05
Name: G300 Flow Redirection
Location: ELSA
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **273254**
Control Number: E 01272
Date Received: Dec 03, 2003
Date Reported: Dec 11, 2003
Report Number: 491677

	NWL Number	273254-1	273254-2	273254-3	
	Sample Date				
	Sample Description	ACG-DP1 28-Nov-03	G3-SW11 28-Nov-03	ACG-DP5 28-Nov-03	
	Matrix	Water - General	Water - General	Water - General	
Analyte		**Units**	**Results**	**Results**	**Results**	**Detection Limit**
Routine Water - Continued						
Chloride	Dissolved	mg/L	0.55	<0.5	<0.5	0.05
Fluoride		mg/L	0.06	0.20	0.11	0.05
Hydroxide	Water	mg/L	<5	<5	<5	5
Carbonate	Water	mg/L	<6	<6	<6	5
Bicarbonate	Water	mg/L	98	35	38	5
T-Alkalinity	as CaCO3	mg/L	80	29	31	5

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Attn: Nichole Speiss
Sampled By:
Company:

Project ID: NND-03-05
Name: G300 Flow Redirection
Location: ELSA
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 273254
Control Number: E 01272
Date Received: Dec 03, 2003
Date Reported: Dec 11, 2003
Report Number: 491677

	NWL Number	273254-4	273254-5		
	Sample Date				
	Sample Description	G3-SW12 28-Nov-03	G3-SW13 28-Nov-03		
	Matrix	Water - General	Water - General		
Analyte		**Units**	**Results**	**Results**	**Results**	**Detection Limit**
Metals Dissolved (Trace)						
Aluminum	Dissolved	mg/L	<0.01	0.02		0.01
Antimony	Dissolved	mg/L	0.08	0.03		0.02
Arsenic	Dissolved	mg/L	<0.02	<0.02		0.02
Barium	Dissolved	mg/L	0.0056	0.0309		0.0005
Beryllium	Dissolved	mg/L	<0.0006	<0.0006		0.0005
Bismuth	Dissolved	mg/L	<0.02	<0.02		0.02
Cadmium	Dissolved	mg/L	0.305	0.138		0.0005
Calcium	Dissolved	mg/L	260	218		0.01
Chromium	Dissolved	mg/L	0.032	0.011		0.001
Cobalt	Dissolved	mg/L	0.135	0.045		0.001
Copper	Dissolved	mg/L	<0.001	<0.001		0.001
Iron	Dissolved	mg/L	15.8	<0.002		0.002
Lead	Dissolved	mg/L	<0.005	<0.005		0.005
Lithium	Dissolved	mg/L	0.035	0.022		0.005
Magnesium	Dissolved	mg/L	53.8	44.0		0.01
Manganese	Dissolved	mg/L	208	117		0.0005
Molybdenum	Dissolved	mg/L	<0.01	<0.01		0.01
Nickel	Dissolved	mg/L	0.505	0.257		0.001
Phosphorus	Dissolved	mg/L	<0.06	<0.06		0.05
Potassium	Dissolved	mg/L	<0.3	0.4		0.3
Selenium	Dissolved	mg/L	0.10	<0.02		0.02
Silicon	Dissolved	mg/L	5.4	4.2		0.05
Silver	Dissolved	mg/L	<0.002	<0.002		0.002
Sodium	Dissolved	mg/L	2.36	1.75		0.05
Strontium	Dissolved	mg/L	0.298	0.297		0.005
Sulphur	Dissolved	mg/L	480	354		0.2
Sulphate (SO4)	Dissolved	mg/L	1440	1060		0.6
Thorium	Dissolved	mg/L	<0.005	<0.005		0.005
Tin	Dissolved	mg/L	0.034	0.035		0.005
Titanium	Dissolved	mg/L	<0.001	<0.001		0.001
Uranium	Dissolved	mg/L	<0.06	<0.06		0.06
Vanadium	Dissolved	mg/L	<0.001	<0.001		0.001
Zinc	Dissolved	mg/L	153	84.7		0.001
Zirconium	Dissolved	mg/L	<0.005	<0.005		0.005
Routine Water						

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204D Strickland Street
Whitehorse, YT, Canada
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Attn: Nichole Speiss
Sampled By:
Company:

Project ID: NND-03-05
Name: G300 Flow Redirection
Location: ELSA
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 273254
Control Number: E 01272
Date Received: Dec 03, 2003
Date Reported: Dec 11, 2003
Report Number: 491677

	NWL Number	273254-4	273254-5		
	Sample Date				
	Sample Description	G3-SW12 28-Nov-03	G3-SW13 28-Nov-03		
	Matrix	Water - General	Water - General		
Analyte		**Units**	**Results**	**Results**	**Results**	**Detection Limit**
Routine Water - Continued						
pH	Water	pH	6.9	6.3		0.1
Chloride	Dissolved	mg/L	<0.5	<0.5		0.05
Fluoride		mg/L	0.23	<0.05		0.05
Hydroxide	Water	mg/L	<5	<5		5
Carbonate	Water	mg/L	<6	<6		5
Bicarbonate	Water	mg/L	40	13		5
T-Alkalinity	as CaCO3	mg/L	33	10		5

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Sampled By:
Company:

Project ID: NND-03-05
Name: G300 Flow Redirection
Location: ELSA
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 273254
Control Number: E 01272
Date Received: Dec 03, 2003
Date Reported: Dec 11, 2003
Report Number: 491677

	NWL Number	273254-4	273254-5	273254-6	
	Sample Date				
	Sample Description	G3-SW12 28-Nov-03	G3-SW13 28-Nov-03	G#-SW14 28-Nov-03	
	Matrix	Water - General	Water - General	Water - General	
Analyte	**Units**	**Results**	**Results**	**Results**	**Detection Limit**
Metals Total (Trace)					
Aluminum Total	mg/L	0.18	1.48	0.84	0.01
Antimony Total	mg/L	0.06	0.04	0.03	0.02
Arsenic Total	mg/L	0.07	<0.02	<0.02	0.02
Barium Total	mg/L	0.0057	0.0753	0.0456	0.0005
Beryllium Total	mg/L	<0.0006	<0.0006	<0.0006	0.0005
Bismuth Total	mg/L	<0.02	<0.02	<0.02	0.02
Cadmium Total	mg/L	0.228	0.139	0.102	0.0005
Calcium Total	mg/L	208	242	283	0.01
Chromium Total	mg/L	0.016	0.013	0.012	0.001
Cobalt Total	mg/L	0.094	0.046	0.026	0.001
Copper Total	mg/L	<0.001	0.010	0.003	0.001
Iron Total	mg/L	18.8	3.99	2.03	0.002
Lead Total	mg/L	0.177	0.013	0.009	0.005
Lithium Total	mg/L	0.021	0.020	0.019	0.005
Magnesium Total	mg/L	42.4	48.8	55.3	0.01
Manganese Total	mg/L	147	111	89.6	0.0005
Molybdenum Total	mg/L	<0.01	<0.01	0.01	0.01
Nickel Total	mg/L	0.352	0.254	0.217	0.001
Phosphorus Total	mg/L	<0.06	0.17	0.16	0.05
Potassium Total	mg/L	<0.3	0.4	0.4	0.3
Selenium Total	mg/L	0.07	0.07	<0.02	0.02
Silicon Total	mg/L	4.4	5.2	5.3	0.05
Silver Total	mg/L	<0.002	<0.002	<0.002	0.002
Sodium Total	mg/L	1.69	1.67	1.77	0.05
Strontium Total	mg/L	0.219	0.291	0.342	0.005
Sulphur Total	mg/L	373	386	422	0.2
Thorium Total	mg/L	<0.006	<0.006	<0.006	0.005
Tin Total	mg/L	0.028	0.032	0.039	0.005
Titanium Total	mg/L	<0.001	0.048	0.028	0.001
Uranium Total	mg/L	<0.07	<0.07	<0.07	0.06
Vanadium Total	mg/L	<0.001	<0.001	<0.001	0.001
Zinc Total	mg/L	111	81.0	66.8	0.001
Zirconium Total	mg/L	<0.006	<0.006	<0.006	0.005

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Location: ELSA
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 273254
Control Number: E 01272
Date Received: Dec 03, 2003
Date Reported: Dec 11, 2003
Report Number: 491677

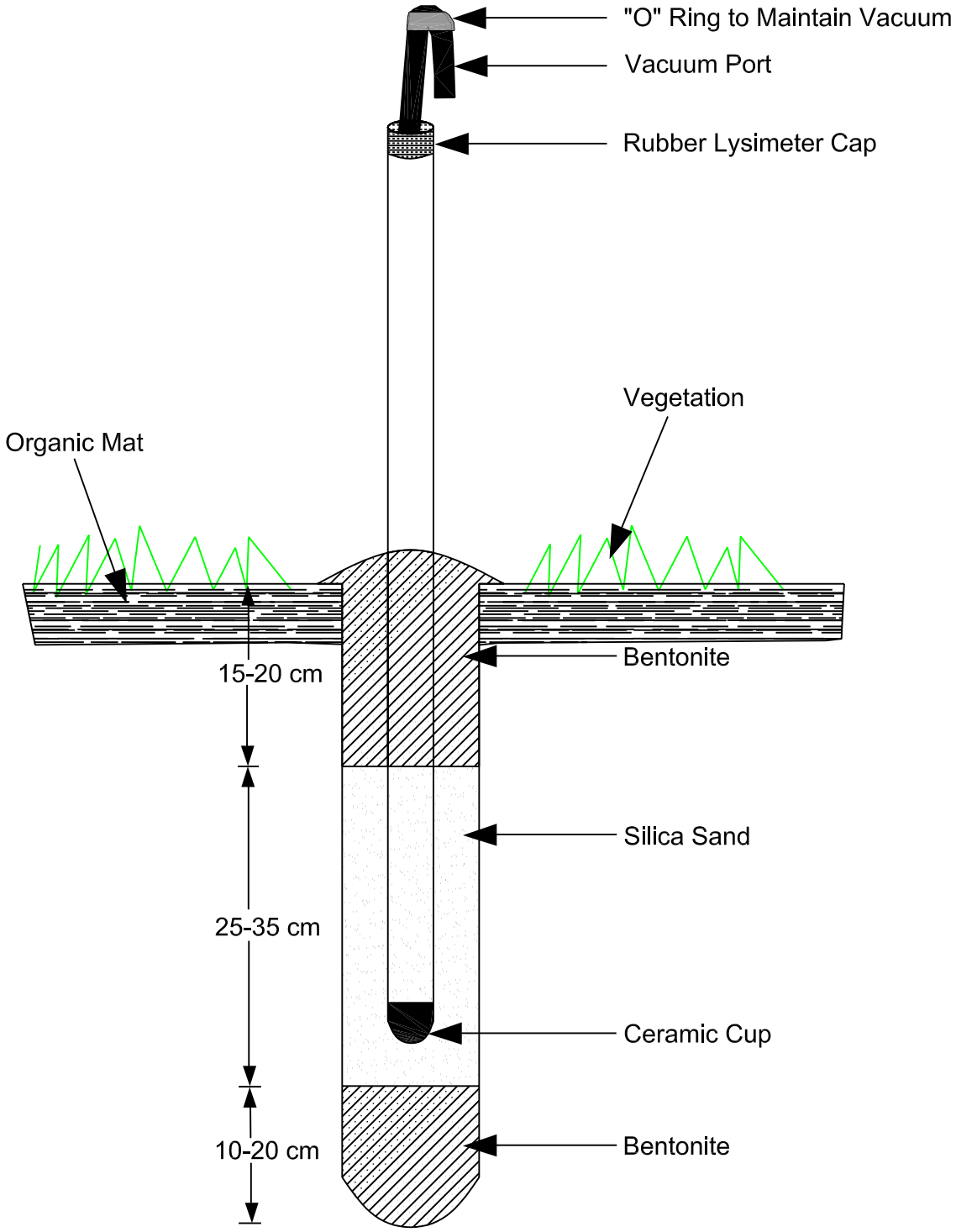
	NWL Number	273254-7	273254-8		
	Sample Date				
	Sample Description	G3-SW15 28-Nov-03	ACG-WQ10 28-Nov-03		
	Matrix	Water - General	Water - General		
Analyte		**Units**	**Results**	**Results**	**Results**	**Detection Limit**
Metals Total (Trace)						
Aluminum	Total	mg/L	0.07	0.04		0.01
Antimony	Total	mg/L	<0.02	0.06		0.02
Arsenic	Total	mg/L	<0.02	<0.02		0.02
Barium	Total	mg/L	0.0420	0.0389		0.0005
Beryllium	Total	mg/L	<0.0006	<0.0006		0.0005
Bismuth	Total	mg/L	<0.02	<0.02		0.02
Cadmium	Total	mg/L	0.0518	0.0478		0.0005
Calcium	Total	mg/L	269	289		0.01
Chromium	Total	mg/L	0.009	0.009		0.001
Cobalt	Total	mg/L	0.010	0.010		0.001
Copper	Total	mg/L	0.004	<0.001		0.001
Iron	Total	mg/L	0.098	0.081		0.002
Lead	Total	mg/L	<0.006	<0.006		0.005
Lithium	Total	mg/L	0.018	0.019		0.005
Magnesium	Total	mg/L	48.1	51.9		0.01
Manganese	Total	mg/L	78.9	71.7		0.0005
Molybdenum	Total	mg/L	0.01	<0.01		0.01
Nickel	Total	mg/L	0.130	0.122		0.001
Phosphorus	Total	mg/L	<0.06	<0.06		0.05
Potassium	Total	mg/L	<0.3	0.7		0.3
Selenium	Total	mg/L	0.03	<0.02		0.02
Silicon	Total	mg/L	4.7	4.7		0.05
Silver	Total	mg/L	<0.002	<0.002		0.002
Sodium	Total	mg/L	1.74	1.73		0.05
Strontium	Total	mg/L	0.393	0.379		0.005
Sulphur	Total	mg/L	360	383		0.2
Thorium	Total	mg/L	<0.006	<0.006		0.005
Tin	Total	mg/L	0.028	0.048		0.005
Titanium	Total	mg/L	<0.001	<0.001		0.001
Uranium	Total	mg/L	<0.07	<0.07		0.06
Vanadium	Total	mg/L	<0.001	<0.001		0.001
Zinc	Total	mg/L	52.7	47.9		0.001
Zirconium	Total	mg/L	<0.006	<0.006		0.005

Examination of Natural Attenuation of Metals in Aqueous Solution by Soils in Northern Environments

Data Report

APPENDIX D

DRAWING OF A TYPICAL LYSIMETER INSTALLATION



ACCESS CONSULTING GROUP

Examination of Natural Attenuation of Metals in Aqueous Solution by Soils in Northern Environments
Data Report

Typical Lysimeter Installation

DRAWN BY: NS	CHECKED BY: RM
DATE: 03/26/04	

Our File: D:\Project\MERG-03-01\dwg\Lysimeter.dwg

Appendix D