

# Pelly River Aquatic Ecosystem Monitoring Program

## 2010 Summary



Prepared by:



December 2010





A MEMBER OF ALEXCO RESOURCE GROUP

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January 17, 2011

**RE: Pelly River Aquatic Ecosystem Monitoring Program 2010 Summary**

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The following is a summary of the field sampling undertaken for the Pelly River Interim Aquatic Ecosystem Monitoring Plan (IAEMP) and the Pelly River Aquatic Ecosystem Monitoring Plan (AEMP) for the year of 2010.

During the 2010 calendar year the surface water quality monitoring work undertaken by Selkirk First Nation (SFN) and Access Consulting Group (ACG) evolved based on recommendations from the expert technical advisors involved in analyzing the results of the IAEMP and planning the AEMP. In the fall of 2010 the monitoring program changed from the IAEMP to the AEMP.

Access Consulting Group was involved in a number of aspects of this program, including the following:

- Development of updated workplans for the Interim Aquatic Affects Sampling Program (May 2010) and for the Long-term Aquatic Affects Monitoring Program (October 2010);
- Coordination and management of the Surface Water Quality Surveillance Program including supplying all necessary field sampling equipment and transportation from Whitehorse and Pelly Crossing to Faro;
- Meeting all the logistical requirements for field sampling (mobilization and demobilization of equipment and personnel for field sampling events, lodging, meals, helicopter transportation, notification to mine-site, sample mobilization and preparation, and external analytical laboratory communications);
- Participation in all field sampling including training of SFN members in field sampling protocols and techniques; and
- Review of all data returned from the laboratory including a quality Assurance/Quality Control review and transfer of all data into an EQWin database for all water quality database for the AAMP.

Monitoring events occurred in January, February, March, May, August and November. Until March 2010 the IAEMP called for monthly sampling events. In March the IAEMP

was renewed and a new monitoring work plan was to be submitted, with changes based on the recommendations of the technical advisors. After March 2010 the sampling frequency was dropped to 6 times per year. It was determined that results analysis would be more useful if the frequency of sampling was increased during the more variable ice-free summer months and decreased during the lower frequency winter months. This resulted in a May freshet sampling event, and June and August sampling events. In October, with the implementation of the AEMP, the frequency was dropped to 3 times annually (spring freshet, summer low flows, and winter low flows). The November sampling event represents the first sampling event under the AEMP. Based on recommendations of the technical advisors changes to the stations to be sampled occurred prior to most sampling events.

Attached are the following:

1. Workplans
2. Sample stations
3. Trip reports and analytical laboratory results
4. Laboratory results compared to the CMME guidelines (tables and graphs of parameters of particular concern at select sample stations)

**Pelly River Aquatic Ecosystem  
Monitoring Program  
2010 Summary**

**Work Plans**



**Workplan - Draft**  
**Interim Aquatic Ecosystem Monitoring Program**  
**Faro and Vangorda Mine Sites**

**May 2010**

**1. Background**

The Faro Mine is located at the headwaters of the Rose/Anvil Creeks and Vangorda Creek and within the traditional territory of the Ross River Dena Council (RRDC). These creeks eventually drain into the Pelly River, an important resource for the Selkirk First Nation (SFN) as it flows through SFN traditional territory. Both the RRDC and the SFN have expressed concern for water quality and possible effects to the aquatic ecosystem in the drainages affected by the Faro Mine complex.

In 2000, the SFN Lands and Resource Branch commenced aquatic environmental studies in their traditional territory. The first water quality investigation was undertaken in 2001 by Laberge Environmental Services (LES). Follow up water quality sampling occurred in 2002, and again in 2003. Specific fisheries investigations in the Pelly River drainages have also been undertaken by SFN. These included the collection of baseline information on Pelly River broad whitefish and their migration within the Tatlmain/Mica Creek and Pelly River drainages, in 2001 by Can-nic-a-nick Environmental and fish habitat assessments in Pelly River streams which included whitefish and salmon DNA analysis by White Mountain Environmental Consultants.

In 2004, SFN, Access Consulting Group (ACG), LES and White Mountain Environmental Consulting (WMEC) in cooperation with the Faro Mine Remediation Program Office (Type II Office) initiated Aquatic Effects Assessment programs on Anvil Creek and the Pelly River. Specific technical data on stream water quality, metals levels in sediments, soils, benthos and fisheries in waters downstream of the Faro Mine complex was collected. Benthos and fisheries utilization in Anvil Creek was characterized. The Anvil Creek sites were also assessed for metals levels within the soil horizons at stations located across the stream floodplain to document possible effects from the historic tailings release from the mine site. The assessment built upon SFN's existing database and enabled an assessment of downstream effects from the Faro mine site on waters flowing through their traditional territory (Access Consulting Group. 2007).

The Aquatic Effects Assessment program continued in 2005 and 2006 collecting additional data utilizing established stations and protocols. As in 2004, technical data was collected on stream water quality, metals levels in sediments, soils, benthos and fisheries in waters downstream of the Faro Mine complex. The data gathered during the 2004, 2005 and 2006 program was utilized as part of the Faro mine closure environmental effects studies (Access Consulting Group. 2007).

In 2006, the Faro Mine Closure Planning Office initiated a comprehensive review of monitoring programs at the Faro and Vangorda mine sites. The objective of this project, conducted by Minnow Environmental, was to design a comprehensive monitoring program for the Faro Mine complex, considering data needs for the development

assessment and regulatory processes in the short-term and for closure plan implementation and evaluation in the long-term.

Minnow also initiated work on the development of site-specific water quality objectives for Rose and Vangorda Creeks. These site-specific objectives will be used to guide closure activities and to evaluate potential effects of closure plan implementation.

Both of these projects are key components of the closure planning process. Initial work on these projects has identified an immediate need to revise and supplement the monitoring programs currently under way (Minnow Environmental. 2007). While the changes may be short-term, they are considered critical to establishing effective long-term monitoring programs and developing defensible site-specific water quality objectives.

In recognition of the need to understand seasonal variability in reference conditions including winter base flow conditions, an initial round of sampling for additional stations with analyses at improved detection limits was completed in March 2007. This program was then continued through 2007 to March 2010 using these same stations with the improved detection limits.

Water Quality (WQ) data collected during the sampling program described above was analysed and used along with WQ data collected by Dennison Environmental to develop a long-term water quality monitoring strategy (Minnow Environmental 2009). This strategy along with discussions resulting from a technical committee workshop (April 2010) combined with meeting the environmental security interests of SFN with respect to water quality in the downstream environment were used to develop this current workplan.

### **1.1 Reports Referenced:**

Minnow Environmental. 2007. "Aquatic Ecosystem Monitoring Program, Faro Mine, Yukon". DRAFT. Prepared for: Faro Mine Closure Office.

Access Consulting Group & Laberge Environmental Services. 2007. "Pelly River Aquatic Effects Assessment". Prepared for: Selkirk First Nation.

Minnow Environmental, 2009. "Aquatic Ecosystem Monitoring Program, Faro Mine, Yukon (Updated 2009) Draft.

### **2. Rationale**

As part of the monitoring review and site-specific objectives projects, Minnow has reviewed and analyzed surface water quality, sediment, benthic invertebrate and fish data from reference areas, receiving water and loading sources. The initial work has demonstrated that the data set, though extensive, is not robust in some key areas (Minnow Environmental. 2007).

Most significantly, there are insufficient data from reference stations to facilitate a strong understanding of reference conditions (Minnow Environmental. 2007). Improved characterization of reference conditions will require sampling from additional stations, increased sampling frequencies (to characterize seasonal variation) and improved method detection limits. Prior to March 2007 the method detection limits (MDLs) for several contaminants that may be relevant at the site were not sufficient to allow comparison with water quality guidelines.

Prior to March 2007 monitoring improvements were also required for receiving water stations. Improved MDLs for several parameters were required in order to understand whether there are impacts from the mine. As with reference areas, the MDLs needed to be sufficiently low to allow comparison to water quality guidelines. Some receiving water stations also required increased monitoring frequencies to allow characterization of seasonal variation. Without consistent monitoring frequencies for all key reference and receiving water stations, the results of analyses can be biased by the number of samples and the timing for sample collection. This monitoring program has begun and is recommended for continuation until March 2011 to improve the reference data set and provide a clear picture of existing conditions over time.

The 2010 program will be modified to remove sites where there is overlap with the sampling undertaken by Dennison Environmental Services.

The goal of this workplan is to outline the interim changes to the aquatic ecosystem monitoring program in order to meet the goals of the LTMP. To fully develop the LTMP several additional components and studies will be required to fill information gaps. This data collection will be implemented as part of the Interim Aquatic Ecosystem Monitoring Program (IAEMP) from 2007 – 2010. This workplan details the budget, personnel and strategy to complete this IAEMP.

### **3. Surface Water Monitoring**

Table 1 and Figure 1 summarizes the changes to sample locations and sample frequency for the interim water quality monitoring program. Recommended changes to the existing water quality monitoring proposed in 2007 and modified in 2008 and 2009 include:

- Elimination of surface water monitoring stations that are not required by licence and do not meet specified criteria.
- An increase to the number of reference stations to develop or update background benchmarks

- A decrease in sampling frequencies to bi-monthly to reduce the cost while generating enough data to permit characterization of seasonal variability and allow the optimum frequency and timing of water sample collection for the Long Term Monitoring Plan (LTMP) to be determined. See Table 1 ‘Summary of Sample Stations and Frequency at Faro during IAEMP’ to see which sites’ sample frequencies will change and a description of the stations.
- Evaluate the potential for concentrations of antimony, boron, beryllium, chromium, mercury, molybdenum, selenium, tin, thallium, uranium, or vanadium to exceed Canadian water quality guidelines (CWQG), or alternative toxicity-based benchmarks, in surface waters in the future
- Ensure laboratory method detection limits are sufficiently low to permit meaningful comparison to CWQG
- Field measurements and sampling methods for water quality will be performed as outlined in “Aquatic Ecosystem Monitoring Program, Faro, Yukon” (Minnow Environmental Inc., June 2007, Draft) to maintain operating standards. These standards are found specifically in Appendix A ‘Standard Operating Procedures, Field Measurements’ and Appendix B ‘Standard Operating Procedures, Sampling Methods’ of Minnow’s report.
- Dennison Environmental Services will continue their water quality monitoring program as per the Water Use Licence. This has resulted in redundant sampling and these redundant sites have been removed from the IAEMP to reduce overlap.

Table 1 outlines the station locations that will be sampled Selkirk First Nation with Access Consulting Group in the IAEMP. The 2007 plan called for 8 additional sites were added to be added the monitoring schedule, 21 stations retained for continuation, 28 stations eliminated and 19 stations (above) had their monitoring frequency changed to monthly. The 2010 revision calls for 9 sites for surface water monitoring during the IAEMP by Selkirk First Nation with Access Consulting Group. Results from all samples will be examined for LTMP. Sampling will follow protocol for water quality collection and flows.

Table 1 Summary of Sample Stations and Frequency at Faro during IAEMP

Water Body	Database Station ID	Station Description	License Requirement	Frequency Stipulated in Licence	To Be Sampled By	Recommended Frequency	Historical Monitoring (start, frequency)
Faro Creek Area	FC	Faro Creek above diversion channel	-	-	SFN/ACG	Bi-monthly	88 to '96, 0-15 times per year, monthly since September 2007
Rose Creek Downstream of Mine	X14	Rose Creek downstream of the diversion channel	✓	Weekly when discharging	SFN/ACG	Monthly	Since '75, 0-37 times per year, monthly since September 2007
	R4	Rose Creek upstream of Anvil Creek	✓	Winter / Summer	SFN/ACG	Bi-monthly	Since '90, 1 - 6 times per year (intermittent), monthly since September 2007
Anvil Creek	R6	Anvil Creek upstream of Rose Creek	✓	Winter / Summer	SFN/ACG	Bi-monthly	Since '90, 1 - 6 times per year (intermittent), monthly since September 2007
	A1 (Anvil Creek)	Anvil Creek upstream of Pelly River	✓		SFN/ACG	Monthly	Since '04 as R11, monthly since September 2007
Pelly River	P1	Pelly River upstream of Vangorda site			SFN/ACG	Bi-monthly	no data (new), monthly since September 2007
	P4	Pelly River d/s of Anvil Creek			SFN/ACG	Bi-monthly	no data (new), monthly since September 2007
	P5	Pelly River at Pelly Crossing			SFN/ACG	Bi-monthly	Begun September 2009, monthly to June 2010
Vangorda Creek	V8	Vangorda Creek/u/s f confluence with Pelly River			SFN/ACG	Bi-Monthly	Begun May 2010

Sampling began in May 2010.

### **3.2 Flow Monitoring**

Discussions in 2008 with the Type 2 Mines Office have indicated that there is a lack of flow measurements at some of the remote receiving locations. To refine the accuracy of the loading model for environmental assessment purposes additional flow monitoring is proposed to continue to strengthen the hydrological database. This section focused on those water quality monitoring stations where additional flow measurements will be collected and a single station where a new water level logger station will also be established. The flow measurements have been proposed for the following stations when conditions allow:

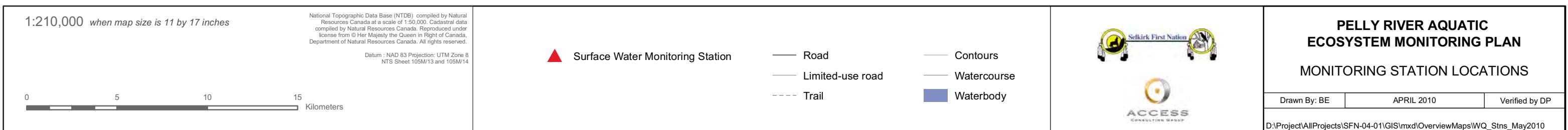
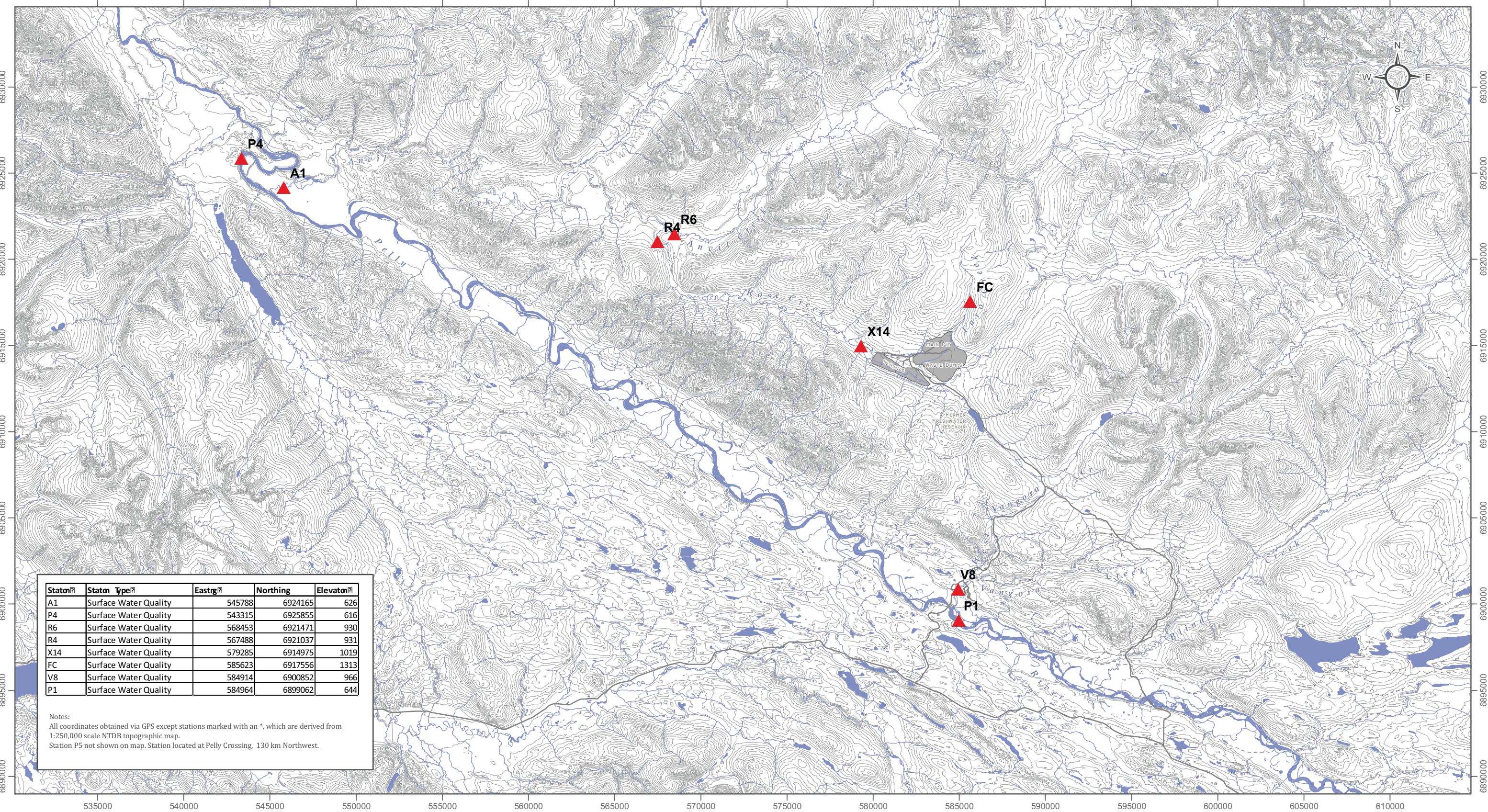
- FC (Faro Creek upstream of the diversion channel), and
- R6 (Anvil Creek upstream of Rose Creek).

A water level logger and staff gauge will be installed at station R6 (Anvil Creek upstream of Rose Creek). To date no flows have been taken at R6 due to dangerously high flow rates.

(Note: In August 2006 samples were collected for database stations R7, R2, V1 and V27. There were 3 samples at each site where metal (for fine fraction), particle size analysis and toxicity were tested.)

### **4. Reporting**

Letter reports of each sampling event will be produced and submitted prior to the next month's sampling event. Data will be compiled and added to the existing database and will be available after the completion of the sampling once the laboratory analysis has been completed and the results have been reviewed and inputted.





**COST BREAKDOWN**  
 Selkirk First Nation/Ross River Dena Council/Access Consulting Group  
 Aquatic Ecosystem Monitoring Plan (IAEMP)

CONTRACT NAME: Workplan for Interim Aquatic Ecosystem Monitoring Plan  
 CONTRACTOR: Selkirk First Nation, Pelly Crossing, Yukon. Y0B1P0  
 TIMELINE: One (1) COVERING THE PERIOD: April 1, 2010 to March 31, 2011

Task No.	Details	Labour	Days/Units	\$/Day	\$/Unit	Lump Sum	Cost
<b>1.0</b>	<b>Study Plan and Project Management</b>						
	Study plan, Meetings, Financial Tracking	ACG Senior	6	\$1,120.00			\$6,720.00
						<b>Task Total</b>	<b>\$6,720.00</b>
<b>2.0</b>	<b>Interim Aquatic Ecosystem Monitoring Plan</b>						
<b>2.1</b>	<b>Monthly Field Work</b>						
	Field Work (3 days x 6 months)	ACG Intermediate	18	\$760.00			\$13,680.00
		SFN	18	\$180.00			\$3,240.00
		RRDC	18	\$180.00			\$3,240.00
	Accommodation ( 2 nights x 6 months)	ACG Personnel	12	\$110.00			\$1,320.00
		SFN Personnel	12	\$110.00			\$1,320.00
		RRDC Personnel	12	\$110.00			\$1,320.00
	Ground Transportation	All Personnel	6	\$550.00			\$3,300.00
	Helicopter *		6	\$4,000.00			\$24,000.00
	Food	ACG Personnel	14	\$86.20			\$1,206.80
		SFN Personnel	14	\$86.20			\$1,206.80
		RRDC Personnel	14	\$86.20			\$1,206.80
<b>2.2</b>	<b>Water Quality Monitoring Program</b>						
	Lab fees (9 stations + 1 duplicates + 2 blanks (field and trip) x 6 months = 112 samples) Stations: FC, R1, R3, R4, R6, A1, P1, P4, P5, VR, and x14 *		72		\$350.00		\$25,200.00
	Sample shipping *		6	\$175.00			\$1,050.00
	Field Supplies / Equipment Rental		14	\$150.00			\$2,100.00
						<b>Task Total</b>	<b>\$83,390.40</b>
<b>3.0</b>	<b>Reporting and Assessment</b>						
	Trip report with Data + mob/demob	ACG Intermediate	9	\$760.00			\$6,840.00
	Data management and QA/QC	ACG Intermediate	8	\$720.00			\$5,760.00
						<b>Task Total</b>	<b>\$12,600.00</b>
						<b>Total</b>	<b>\$102,710.40</b>

\* includes third party disbursement charge of 5%

ACG - Access Consulting Group

SFN - Selkirk First Nation, Environmental Technician

RRDC - Ross River Dena Council, Environmental Technician



**Workplan**  
**Aquatic Ecosystem Monitoring Program**  
**Faro and Vangorda Mine Sites**

**October 2010**

**1. Background**

The Faro Mine is located at the headwaters of the Rose/Anvil Creeks and Vangorda Creek and within the traditional territory of the Ross River Dena Council (RRDC). These creeks eventually drain into the Pelly River, an important resource for the Selkirk First Nation (SFN) as it flows through SFN traditional territory. Both the RRDC and the SFN have expressed concern for water quality and possible effects to the aquatic ecosystem in the drainages affected by the Faro Mine complex.

In 2000, the SFN Lands and Resource Branch commenced aquatic environmental studies in their traditional territory. The first water quality investigation was undertaken in 2001 by Laberge Environmental Services (LES). Follow up water quality sampling occurred in 2002, and again in 2003. Specific fisheries investigations in the Pelly River drainages have also been undertaken by SFN. These included the collection of baseline information on Pelly River broad whitefish and their migration within the Tatlmain/Mica Creek and Pelly River drainages, in 2001 by Can-nic-a-nick Environmental and fish habitat assessments in Pelly River streams which included whitefish and salmon DNA analysis by White Mountain Environmental Consultants.

In 2004, SFN, Access Consulting Group (ACG), LES and White Mountain Environmental Consulting (WMEC) in cooperation with the Faro Mine Remediation Program Office (Type II Office) initiated Aquatic Effects Assessment programs on Anvil Creek and the Pelly River. Specific technical data on stream water quality, metals levels in sediments, soils, benthos and fisheries in waters downstream of the Faro Mine complex was collected. Benthos and fisheries utilization in Anvil Creek was characterized. The Anvil Creek sites were also assessed for metals levels within the soil horizons at stations located across the stream floodplain to document possible effects from the historic tailings release from the mine site. The assessment built upon SFN's existing database and enabled an assessment of downstream effects from the Faro mine site on waters flowing through their traditional territory (Access Consulting Group. 2007).

The Aquatic Effects Assessment program continued in 2005 and 2006 collecting additional data utilizing established stations and protocols. As in 2004, technical data was collected on stream water quality, metals levels in sediments, soils, benthos and fisheries in waters downstream of the Faro Mine complex. The data gathered during the 2004, 2005 and 2006 program was utilized as part of the Faro mine closure environmental effects studies (Access Consulting Group. 2007).

In 2006, the Faro Mine Closure Planning Office initiated a comprehensive review of monitoring programs at the Faro and Vangorda mine sites. The objective of this project, conducted by Minnow Environmental, was to design a comprehensive monitoring program for the Faro Mine complex, considering data needs for the development

assessment and regulatory processes in the short-term and for closure plan implementation and evaluation in the long-term.

Minnow also initiated work on the development of site-specific water quality objectives for Rose and Vangorda Creeks. These site-specific objectives will be used to guide closure activities and to evaluate potential effects of closure plan implementation.

Both of these projects are key components of the closure planning process. Initial work on these projects has identified an immediate need to revise and supplement the monitoring programs currently under way (Minnow Environmental. 2007). While the changes may be short-term, they are considered critical to establishing effective long-term monitoring programs and developing defensible site-specific water quality objectives.

In recognition of the need to understand seasonal variability in reference conditions including winter base flow conditions, an initial round of sampling for additional stations with analyses at improved detection limits was completed in March 2007. This program was then continued through 2007 to March 2010 using these same stations with the improved detection limits.

Water Quality (WQ) data collected during the sampling program described above was analysed and used along with WQ data collected by Dennison Environmental to develop a long-term water quality monitoring strategy (Minnow Environmental 2009). This strategy along with discussions resulting from a technical committee workshop (April 2010) combined with meeting the environmental security interests of SFN with respect to water quality in the downstream environment were used to develop this current workplan.

### **1.1 Reports Referenced:**

Minnow Environmental. 2007. "Aquatic Ecosystem Monitoring Program, Faro Mine, Yukon". DRAFT. Prepared for: Faro Mine Closure Office.

Access Consulting Group & Laberge Environmental Services. 2007. "Pelly River Aquatic Effects Assessment". Prepared for: Selkirk First Nation.

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### **2. Rationale**

As part of the monitoring review and site-specific objectives projects, Minnow has reviewed and analyzed surface water quality, sediment, benthic invertebrate and fish data from reference areas, receiving water and loading sources. The initial work has demonstrated that the data set, though extensive, is not robust in some key areas (Minnow Environmental. 2007).

Most significantly, there are insufficient data from reference stations to facilitate a strong understanding of reference conditions (Minnow Environmental. 2007). Improved characterization of reference conditions will require sampling from additional stations, increased sampling frequencies (to characterize seasonal variation) and improved method detection limits. Prior to March 2007 the method detection limits (MDLs) for several contaminants that may be relevant at the site were not sufficient to allow comparison with water quality guidelines.

Prior to March 2007 monitoring improvements were also required for receiving water stations. Improved MDLs for several parameters were required in order to understand whether there are impacts from the mine. As with reference areas, the MDLs needed to be sufficiently low to allow comparison to water quality guidelines. Some receiving water stations also required increased monitoring frequencies to allow characterization of seasonal variation. Without consistent monitoring frequencies for all key reference and receiving water stations, the results of analyses can be biased by the number of samples and the timing for sample collection. This monitoring program has begun and is recommended for continuation until summer 2011 to improve the reference data set and provide a clear picture of existing conditions over time.

Discussions between Indian and Northern Affairs Canada, the Selkirk First Nation, Minnow Environmental and Access Consulting Group resulted in a reduction to a 3 event sampling program and an increase in the number of sample stations in the 2010 to March 2011 Program.

The goal of this workplan is to outline the interim changes to the aquatic ecosystem monitoring program in order to meet the goals of the LTMP. To fully develop the LTMP several additional components and studies will be required to fill information gaps. This data collection will be implemented as part of the Interim Aquatic Ecosystem Monitoring Program (IAEMP) from 2007 – 2010. This workplan details the budget, personnel and strategy to complete this IAEMP.

### **3. Surface Water Monitoring**

Table 1 summarizes the changes to sample locations and sample frequency for the interim water quality monitoring program. Recommended changes to the existing water quality monitoring proposed in 2007 and modified in 2008 and 2009 include:

- Elimination of surface water monitoring stations that are not required by licence and do not meet specified criteria.
- An increase to the number of reference stations to develop or update background benchmarks

- An increase to the number of stations to capture site developments and noted concerns since the last revision of the program.
- A decrease in sampling frequencies to 3 times annually to reduce the cost while generating enough data to permit characterization of seasonal variability and allow the optimum frequency and timing of water sample collection for the Long Term Monitoring Plan (LTMP) to be determined. The 3 sample events are in low flow, freshet, and mid-flow periods to capture the varying water levels. See Table 1 'Summary of Sample Stations and Frequency at Faro during IAEMP' to see sample station frequencies and descriptions.
- Evaluate the potential for concentrations of antimony, boron, beryllium, chromium, mercury, molybdenum, selenium, tin, thallium, uranium, or vanadium to exceed Canadian water quality guidelines (CWQG), or alternative toxicity-based benchmarks, in surface waters in the future
- Ensure laboratory method detection limits are sufficiently low to permit meaningful comparison to CWQG
- Field measurements and sampling methods for water quality will be performed as outlined in "Aquatic Ecosystem Monitoring Program, Faro, Yukon" (Minnow Environmental Inc., June 2007, Draft) to maintain operating standards. These standards are found specifically in Appendix A 'Standard Operating Procedures, Field Measurements' and Appendix B 'Standard Operating Procedures, Sampling Methods' of Minnow's report.
- Dennison Environmental Services will continue their water quality monitoring program as per the Water Use Licence. This has resulted in redundant sampling and these redundant sites have been removed from the IAEMP to reduce overlap.

Table 1 outlines the station locations that will be sampled Selkirk First Nation with Access Consulting Group in the IAEMP. The 2007 plan called for 8 additional sites were added to be added the monitoring schedule, 21 stations retained for continuation, 28 stations eliminated and 19 stations (above) had their monitoring frequency changed to monthly. The 2010 revision calls for 9 sites for surface water monitoring during the IAEMP by Selkirk First Nation with Access Consulting Group. Results from all samples will be examined for LTMP. Sampling will follow protocol for water quality collection and flows.

**Table 1: Monitoring Locations and Frequencies - FN Water Quality Program 2010/11**

Station Name	Location Description	Water Quality Frequency	Parameter Suite	Flow/Level <sup>1</sup> Frequency	Purpose	Number of Samples	Notes
<b>Vangorda/Grum</b>							
V8	Lower Vangorda Creek at the footbridge	3X	S LDL	CONT	Rec	3	Dual sampling - FN and DES
V17A	Creek from Grum ore transfer pad	3X	S LDL	3X	Rec	3	Reduced Frequency, 2010
V20A	Dixon Creek u/s of all mine influence	3X	S LDL	3X	Ref	3	New 2010, replace V20. Site to be in Dixon Cr, not tributary.
VR	West Fork of Vangorda Creek u/s of Haul Road	3X	S LDL	3X	Ref	3	
VG Main	Main Fork Vangorda Creek u/s of West Fork	3X	S LDL		Rec	3	Reinstated 2010
VW1	West Fork Vangorda Creek d/s of landslide and u/s of Grum WR drainage	3X	S LDL		Rec	3	New 2009, SFN
VW2	Tributary Draining Grum West Lobe	3X	S LDL	3X	Rec	3	New 2009, SFN
VW3	West Fork Vangorda Creek d/s of AEX Creek	3X	S LDL	3X	Rec	3	New 2010
<b>Faro/Rose/Anvil</b>							
FC	Faro Creek above diversion channel	3X	S LDL	CONT	Ref	3	Reduced Frequency, 2010
R1	South Fork Rose Creek u/s of Pumphouse Pond	3X	S LDL		Ref?	3	Reduced Frequency, 2010
R4	Rose Creek u/s of Anvil Cr.	3X	S LDL	3X	Rec	3	Reduced Frequency, 2010
R5	Rose Creek d/s of Anvil Cr.	3X	S LDL	3X	Rec	3	Reduced Frequency, 2010
R6	Anvil Creek u/s of Rose Cr.	3X	S LDL	3X	Rec	3	Reduced Frequency, 2010
W10	Upper Guardhouse Ck u/s of NW Dump	3X	S LDL	3X	Ref	3	Reduced Frequency, 2010
X14	Rose Creek downstream of the diversion channel	3X	S LDL	CONT	Rec	3	Dual sampling - FN and DES
NWID	NW Interceptor u/s of diversion point	3X	S LDL	3X	Rec	3	Reduced Frequency 2010, Replacing W8.
USFR	South Fork Rose Creek u/s of Haul Road	3X	S LDL	3X	Ref	3	New for 2010
GCULV	South Fork Rose Creek u/s of Mine Access Road	3X	S LDL		Other	3	Inadvertently removed in 2009.
K8	Reservoir Creek u/s of Mine Access Road	3X	S LDL		Other	3	Inadvertently removed in 2009.
A1	Anvil Creek u/s of Pelly River	3X	S LDL	3X	Rec	3	Reduced Frequency, 2010
<b>Pelly River</b>							
P1	Pelly River u/s of Vangorda Creek	3X	S LDL	3X	Ref	3	Reduced Frequency, 2010
P4	Pelly River d/s of Anvil Creek	3X	S LDL	3X	Rec	3	Reduced Frequency, 2010
P5	Pelly River u/s of Pelly Crossing	3X	S LDL	3X	Rec	3	Reduced Frequency, 2010
<b>Total Surface Samples per Year</b>						<b>69</b>	

**Legend**

Frequency - 3X=Three times/year including 2nd 1/2 of March (low flow), 2nd 1/2 of May (freshet), and October (mid-range flow).

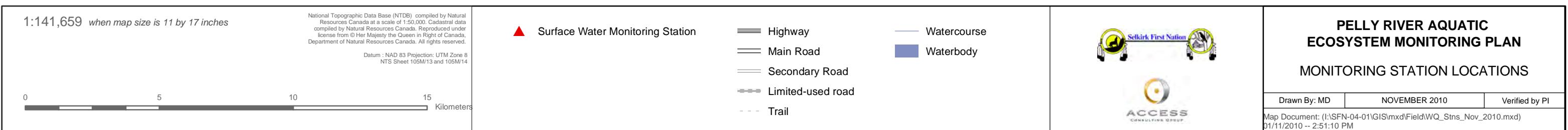
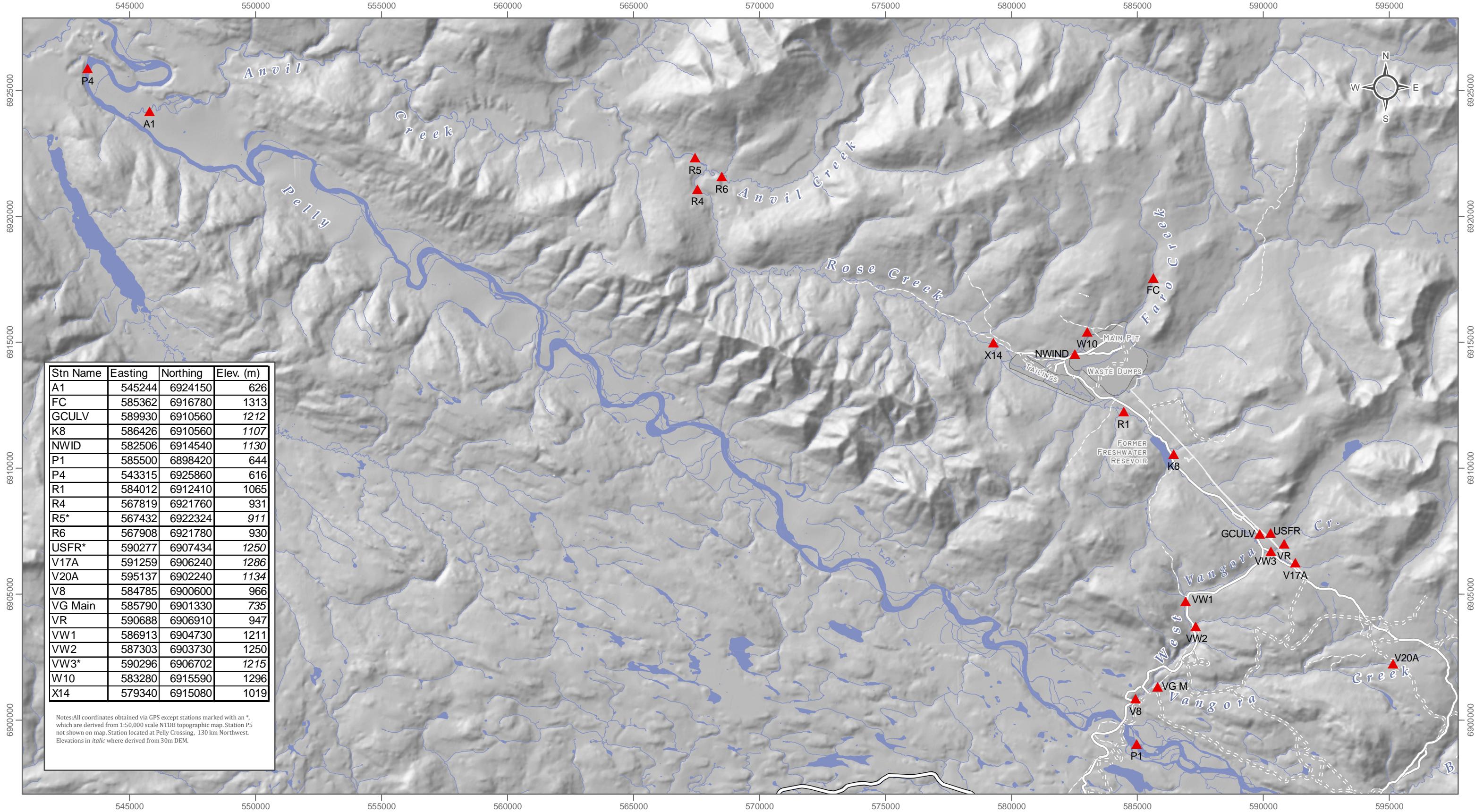
Parameter Suite - S LDL=Surface Water Low Detection Limit

Purpose - Rec=Receiving Water, Ref=Reference, Int=Internal,  
Per=Perimeter

**Notes**

<sup>1</sup> Zero flow or flows that cannot be sampled (i.e. trace, subsurface, glaciation) are to be recorded and reported for all required sampling events.

Adapted from Bill Slater July 26, 2010 (Memo)





### **3.2 Flow Monitoring**

Discussions have indicated that there is a lack of flow measurements at some of the receiving locations. To refine the accuracy of the loading model for environmental assessment purposes additional flow monitoring is proposed to continue to strengthen the hydrological database. Flows or water levels measurements will be taken whenever possible at all stations indicated in Table 1.

A water level logger and staff gauge will be installed at station R6 (Anvil Creek upstream of Rose Creek). To date no flows have been taken at R6 due to dangerously high flow rates.

### **4. Reporting**

Letter reports of each sampling event will be produced and submitted prior to the next sampling event. Data will be compiled and added to the existing database and will be available after the completion of the sampling once the laboratory analysis has been completed and the results have been reviewed and inputted. A data sharing protocol will be established to allow for on-site decision making if needed.

**COST BREAKDOWN**  
 Selkirk First Nation/Ross River Dena Council/Access Consulting Group  
 Aquatic Ecosystem Monitoring Plan (IAEMP)

CONTRACT NAME: Workplan for Interim Aquatic Ecosystem Monitoring Plan  
 CONTRACTOR: Selkirk First Nation, Pelly Crossing, Yukon. Y0B1P0  
 TIMELINE: One (1) COVERING THE PERIOD: April 1, 2010 to March 31, 2011

Task No.	Details	Labour	Days/Units	\$/Day	\$/Unit	Lump Sum	Cost
<b>1.0</b>	<b>Study Plan and Project Management</b>						
	Study plan, Meetings, Financial Tracking	ACG Senior	8	\$1,120.00			\$8,960.00
						<b>Task Total</b>	<b>\$8,960.00</b>
<b>2.0</b>	<b>Interim Aquatic Ecosystem Monitoring Plan</b>						
<b>2.1</b>	<b>Monthly Field Work</b>						
	Field Work (4 days x 3 events)	ACG Intermediate	12	\$760.00			\$9,120.00
		SFN	12	\$180.00			\$2,160.00
		RRDC	12	\$180.00			\$2,160.00
	Accommodation ( 2 nights x 3 events)	ACG Personnel	6	\$110.00			\$660.00
		SFN Personnel	6	\$110.00			\$660.00
		RRDC Personnel	6	\$110.00			\$660.00
	Ground Transportation	All Personnel	3	\$550.00			\$1,650.00
	Helicopter *		3	\$4,000.00			\$12,000.00
	Food	ACG Personnel	9	\$86.20			\$775.80
		SFN Personnel	9	\$86.20			\$775.80
		RRDC Personnel	9	\$86.20			\$775.80
<b>2.2</b>	<b>Water Quality Monitoring Program</b>						
	Lab fees (23 stations + 1 duplicates + 2 blanks (field and trip) x 3 events = 78 samples)		78		\$350.00		\$27,300.00
	Sample shipping *		3	\$175.00			\$525.00
	Field Supplies / Equipment Rental		9	\$150.00			\$1,350.00
						<b>Task Total</b>	<b>\$60,572.40</b>
<b>3.0</b>	<b>Reporting and Assessment</b>						
	Trip report with Data + mob/demob	ACG Intermediate	5	\$760.00			\$3,420.00
	Data management and QA/QC	ACG Intermediate	8	\$720.00			\$5,760.00
						<b>Task Total</b>	<b>\$9,180.00</b>
						<b>Total</b>	<b>\$78,712.40</b>

\* includes third party disbursement charge of 5%

ACG - Access Consulting Group

SFN - Selkirk First Nation, Environmental Technician

RRDC - Ross River Dena Council, Environmental Technician

**Pelly River Aquatic Ecosystem  
Monitoring Program  
2010 Summary**

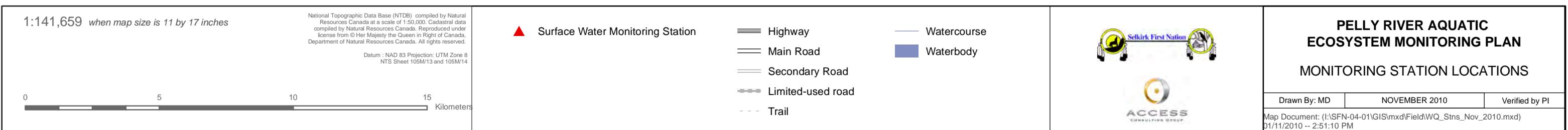
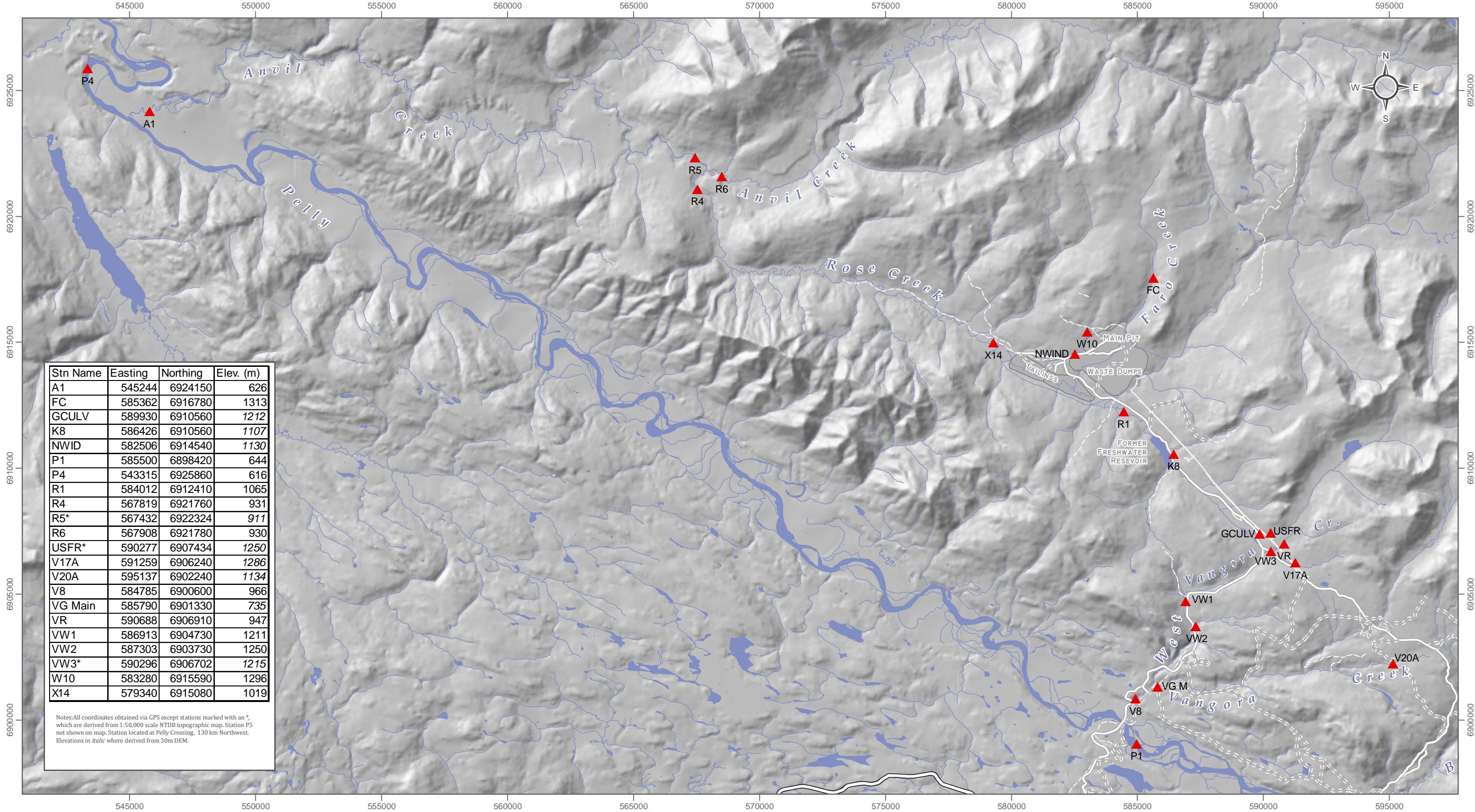
**Sampling Stations**



Stations sampled in 2010

Database Station ID	Station Description	Jan	Feb	March	May	Aug	November	AEM Sites
V8	Lower Vangorda Creek at the footbridge				X	X	X	X
V17A	Creek from Grum ore transfer pad						X	X
V20A	Dixon Creek u/s of all mine influence						X	X
VR	West Fork of Vangorda Creek u/s of Haul Road	X	X	X			X	X
V6A	AEX Creek	X	X	X				
VG Main	Main Fork Vangorda Creek u/s of West Fork							X
VW1	West Fork Vangorda Creek d/s of landslide and u/s of Grum WR drainage		X	X				X
VW2	Tributary Draining Grum West Lobe		X	X				X
VW3	West Fork Vangorda Creek d/s of AEX Creek							X
FC	Faro Creek above diversion channel	X	X	X	X	X	X	X
R1	South Fork Rose Creek u/s of Pumphouse Pond	X	X	X			X	X
R3	Rose Creek between R2 and R4	X	X	X				
R4	Rose Creek u/s of Anvil Cr.	X	X		X	X	X	X
R5	Rose Creek d/s of Anvil Cr.						X	X
R6	Anvil Creek u/s of Rose Cr.	X	X	X	X	X	X	X
W10	Upper Guardhouse Ck u/s of NW Dump							X
X14	Rose Creek downstream of the diversion channel				X	X		X
NWID	NW Interceptor u/s of diversion point						X	X
USFR	South Fork Rose Creek u/s of Haul Road						X	X
GCULV	South Fork Rose Creek u/s of Mine Access Road						X	X
K8	Reservoir Creek u/s of Mine Access Road						X	X
A1	Anvil Creek u/s of Pelly River	X	X	X	X	X	X	X
P1	Pelly River u/s of Vangorda Creek	X	X	X	X	X	X	X
P4	Pelly River d/s of Anvil Creek	X	X	X	X	X	X	X
P5	Pelly River u/s of Pelly Crossing		X		X		X	X







**Pelly River Aquatic Ecosystem  
Monitoring Program  
2010 Summary**

**Monthly Trip Reports and  
Laboratory Results**





A MEMBER OF ALEXCO RESOURCE GROUP

# 3 Calcite Business Centre, 151 Industrial Road, Whitehorse, Yukon Y1A 2V3  
PHONE (867) 668-6463 FAX (867) 667-6680  
[WWW.ACCESSCONSULTING.CA](http://WWW.ACCESSCONSULTING.CA)

## MEMORANDUM

**TO:** File

**CC:** David Petkovich  
Scott Keesey

**FROM:** Paul Inglis

**RE:** **January 2010 water sampling at Faro (Pelly River Interim Aquatic Ecosystem Monitoring Plan)**

**PROJECT #:** SFN-09-02

**DATE:** March 3, 2010

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The following is a brief trip report for the monthly water sampling event in the area of the Anvil Range Mine for the month of January 2010.

In the late morning of January 20<sup>th</sup>, 2009 Paul Inglis (ACG) travelled from Whitehorse to Pelly Crossing where he picked up Randy Profeit (SFN). These two constituted the field crew for the sampling event. They then drove to Faro arriving at 18:00.

On January 21<sup>st</sup> the field crew drove the Mine Access Road to the mine site, sampling stations VW2 (dry, not sampled), VW1, and R1 arriving at the minesite at 10:45. After checking in with the mine admin the field crew sampled sites VR and FC (within the compound). The crew then met Trans North Helicopters pilot Brian Parsons at 12:30 at the Faro Airport. Weather while sampling in the afternoon was cloudy with occasional snow and the temperature was around -6 to -10°C. The following sites were sampled by helicopter: P1, P4, A1, R6, R4, R3, and V6A. In-situ measurements were taken with an YSI multi-meter. Based on unusually low pH measurements from the YSI meter it was suspected that the pH probe was not functioning, later inspections and testing confirmed this. Eight sample bottles were collected at each station with the following parameters being screened for:

- General (including Alkalinity, conductivity and pH)
- TSS and TDS
- Total metals
- Dissolved metals (Field Filtered)
- Dissolved Organic Carbon (Field Filtered)
- Cyanide
- Anions
- Total Organic Carbon and Phosphorus

Additionally 1 field blank and 1 duplicate sample were prepared and tested. The duplicate was sampled at station A1. All 13 sets of water samples were shipped via Air North Cargo on January 22<sup>nd</sup> to Maxxam Analytics in Burnaby, B.C. for analysis.

Station	Northing	Easting
R1	62.3337	133.378
R3	62.38103	133.579
R4	62.4209	133.687
R6	62.42107	133.685
A1	62.44574	134.123
P4	62.46132	134.16
P1	62.20786	133.356
FC	62.37258	133.35
VR	62.28282	133.252
V6A	62.28019	133.258
VW1	62.26413	133.326

Notable issues:

- Flow measurements were not taken at R4 or FC due to difficulty in accessing flowing water through the thick ice.



Plate 1: In-situ measurements at station R1



Plate 2: Water sampling at station A1

If you have any questions about this report, please contact Paul Inglis of Access Consulting Group.



Your P.O. #: SFN-09-02  
 Your Project #: SFN-07-01  
 Your C.O.C. #: 08308266, 08308277

**Attention: David Petkovich**  
 ACCESS CONSULTING GROUP  
 #3 Calcite  
 151 Industrial Road  
 WHITEHORSE, YT  
 CANADA Y1A 3C8

Report Date: 2010/02/01

## CERTIFICATE OF ANALYSIS

**MAXXAM JOB #: B003745**  
 Received: 2010/01/25, 10:00

Sample Matrix: Water  
 # Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Water	13	2010/01/26	2010/01/26	BRN SOP-00264 R4.0	Based on SM2320B
Chloride by Automated Colourimetry	13	N/A	2010/01/26	BRN-SOP 00234 R3.0	Based on EPA 325.2
Cyanide WAD (weak acid dissociable)	13	N/A	2010/01/26	BRN SOP-00227 R3.0	Based on SM-4500CN I
Carbon (DOC)	13	N/A	2010/01/28	BRN SOP-00224 R4.0	Based on M 860-87T
Conductance - water	13	N/A	2010/01/26	BRN SOP-00264 R2.0	Based on SM-2510B
Fluoride - Mining Clients	13	N/A	2010/01/25	BRN SOP-00225 R1.0	Based SM - 4500 F C
Hardness Total (calculated as CaCO <sub>3</sub> )	13	N/A	2010/01/28		
Hardness (calculated as CaCO <sub>3</sub> )	13	N/A	2010/01/28		
Ion Balance	13	N/A	2010/01/28		
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2010/01/27	BRN SOP-00206 R7.0	Based on EPA 200.8
Elements by ICPMS Low Level (dissolved) (1)	13	N/A	2010/01/27	BRN SOP-00206 R7.0	Based on EPA 200.8
Elements by ICPMS Low Level (total) (1)	13	2010/01/25	2010/01/26	BRN SOP-00206 R7.0	Based on EPA 200.8
Na, K, Ca, Mg, S by CRC ICPMS (total)	13	2010/01/25	2010/01/26	BRN SOP-00206 R7.0	Based on EPA 200.8
Ammonia (N)	13	N/A	2010/01/25	BRN SOP-00232 R4.0	Based on USEPA 350.1
Nitrate + Nitrite (N)	13	N/A	2010/01/25	ING233 Rev.4.4	Based on EPA 353.2
Nitrite (N) by CFA	13	N/A	2010/01/25	BRN SOP-00233 R1.0	EPA 353.2
Nitrogen - Nitrate (as N)	13	N/A	2010/01/26		
Filter and HNO <sub>3</sub> Preserve for Metals	13	N/A	2010/01/25	BRN WI-00006 R1.0	Based on EPA 200.2
pH Water	13	N/A	2010/01/26	BRN SOP-00264 R4.0	Based on SM-4500H+B
Sulphate by Automated Colourimetry	13	N/A	2010/01/26	BRN-SOP 00243 R1.0	Based on EPA 375.4
Total Dissolved Solids (Filt. Residue)	13	N/A	2010/01/26	BRN SOP 00276 R4.0	SM 2540C
Carbon (Total Organic)	13	N/A	2010/01/28	BRN SOP-00224 R4.0	Based on SM-5310C
Total Phosphorus	13	N/A	2010/01/25	BRN SOP-00236 R4.0	SM 4500
Total Suspended Solids	13	N/A	2010/01/25	BRN SOP-00277 R5.0	Based on SM-2540 D

\* Results relate only to the items tested.

(1) SCC/CAEAL

..2

Maxxam Job #: B003745  
Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01  
Your P.O. #: SFN-09-02  
Sampler Initials: PI

-2-

#### Encryption Key

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

KIMBERLEY WEBBER, BBY Customer Service  
Email: kim.webber@maxxamanalytics.com  
Phone# (604) 444-4808 Ext:259

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

Total cover pages: 2

Maxxam Job #: B003745  
 Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

## RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		S52973	S52974	S52975	S52976	S52977	S52978	S52979		
Sampling Date		2010/01/21 09:05	2010/01/21 10:05	2010/01/21 11:05	2010/01/21 11:35	2010/01/21 12:40	2010/01/21 13:10	2010/01/21 13:25		
	Units	VW1	R1	VR	FC	P1	P4	A1	RDL	QC Batch
<b>Misc. Inorganics</b>										
Fluoride (F)	mg/L	0.21	0.15	0.07	0.11	0.12	0.12	0.11	0.01	3698395
<b>Preparation</b>										
Filter and HNO3 Preservation	N/A	FIELD	N/A	ONSITE						
<b>ANIONS</b>										
Nitrite (N)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3700734
<b>Calculated Parameters</b>										
Ion Balance	N/A	0.99	0.95	NC	NC	1.0	0.97	0.97	0.01	3699219
Nitrate (N)	mg/L	0.16	0.14	0.07	0.06	0.09	0.07	0.24	0.02	3698673
<b>Misc. Inorganics</b>										
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	3704971
Dissolved Organic Carbon (C)	mg/L	2.1	1.7	2.7	1.4	1.3	2.6	1.2	0.5	3709221
Alkalinity (Total as CaCO3)	mg/L	190	120	39	21	150	150	140	0.5	3700993
Total Organic Carbon (C)	mg/L	2.6	2.0	2.8	2.1	1.1	3.1	1.1	0.5	3709213
Alkalinity (PP as CaCO3)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3700993
Bicarbonate (HCO3)	mg/L	230	150	48	26	180	180	170	0.5	3700993
Carbonate (CO3)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3700993
Hydroxide (OH)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3700993
<b>Anions</b>										
Dissolved Sulphate (SO4)	mg/L	59	29	6.2	2.0	67	63	44	0.5	3705714
Dissolved Chloride (Cl)	mg/L	2.3	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3705716
<b>Nutrients</b>										
Ammonia (N)	mg/L	0.009	0.047	0.022	<0.005	0.007	0.012	0.009	0.005	3700723
Nitrate plus Nitrite (N)	mg/L	0.16	0.14	0.07	0.06	0.09	0.07	0.24	0.02	3700733
Total Phosphorus (P)	mg/L	<0.005	0.015	0.016	<0.005	<0.005	<0.005	<0.005	0.005	3697978
<b>Physical Properties</b>										
Conductivity	uS/cm	460	294	92	45	425	396	357	1	3700992
pH	pH Units	8.1	7.9	7.6	7.4	8.0	8.0	8.1		3700987
<b>Physical Properties</b>										
Total Suspended Solids	mg/L	8	4	14	<1	<1	2	1	1	3699395
Total Dissolved Solids	mg/L	280	170	52	42	320	340	230	10	3699932

N/A = Not Applicable

NC = Non-calculable

RDL = Reportable Detection Limit

Maxxam Job #: B003745  
 Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

## RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		S52980	S52981	S52982	S52983	S52984	S52992		
Sampling Date		2010/01/21 13:50	2010/01/21 14:18	2010/01/21 14:40	2010/01/21 14:55	2010/01/21	2010/01/21		
	Units	R6	R4	R3	V6A	DUPLICATE	FIELD BLANK	RDL	QC Batch
<b>Misc. Inorganics</b>									
Fluoride (F)	mg/L	0.09	0.12	0.13	0.09	0.11	<0.01	0.01	3698395
<b>Preparation</b>									
Filter and HNO3 Preservation	N/A	FIELD	FIELD	FIELD	FIELD	FIELD	FIELD	N/A	ONSITE
<b>ANIONS</b>									
Nitrite (N)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3700734
<b>Calculated Parameters</b>									
Ion Balance	N/A	0.94	0.95	0.94	1.0	0.96	NC	0.01	3699219
Nitrate (N)	mg/L	0.22	0.24	0.23	0.38	0.24	<0.02	0.02	3698673
<b>Misc. Inorganics</b>									
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	3704971
Dissolved Organic Carbon (C)	mg/L	0.9	1.4	1.5	1.4	1.5	<0.5	0.5	3709221
Alkalinity (Total as CaCO3)	mg/L	150	150	150	110	150	1.1	0.5	3700993
Total Organic Carbon (C)	mg/L	0.8	1.3	1.4	1.8	1.4	<0.5	0.5	3709213
Alkalinity (PP as CaCO3)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3700993
Bicarbonate (HCO3)	mg/L	180	180	180	130	180	1.3	0.5	3700993
Carbonate (CO3)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3700993
Hydroxide (OH)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3700993
<b>Anions</b>									
Dissolved Sulphate (SO4)	mg/L	22	98	110	56	100	<0.5	0.5	3705714
Dissolved Chloride (Cl)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3705716
<b>Nutrients</b>									
Ammonia (N)	mg/L	0.007	0.012	0.028	<0.005	0.010	0.008	0.005	3700723
Nitrate plus Nitrite (N)	mg/L	0.22	0.24	0.23	0.38	0.24	<0.02	0.02	3700733
Total Phosphorus (P)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3697978
<b>Physical Properties</b>									
Conductivity	uS/cm	320	465	496	328	468	3	1	3700992
pH	pH Units	8.1	7.9	8.0	8.0	7.9	6.0		3700987
<b>Physical Properties</b>									
Total Suspended Solids	mg/L	1	<1	<1	2	<1	<1	1	3699395
Total Dissolved Solids	mg/L	200	330	320	270	330	<10	10	3699932

N/A = Not Applicable

NC = Non-calculable

RDL = Reportable Detection Limit

**LOW LEVEL DISSOLVED METALS - WATER (WATER)**

Maxxam ID		S52973	S52974	S52975	S52976	S52977	S52978	S52979		
Sampling Date		2010/01/21 09:05	2010/01/21 10:05	2010/01/21 11:05	2010/01/21 11:35	2010/01/21 12:40	2010/01/21 13:10	2010/01/21 13:25		
	Units	VW1	R1	VR	FC	P1	P4	A1	RDL	QC Batch
<b>Misc. Inorganics</b>										
Dissolved Hardness (CaCO <sub>3</sub> )	mg/L	245	140	37.8	16.3	217	201	174	0.5	3698049

RDL = Reportable Detection Limit

Maxxam Job #: B003745  
 Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### LOW LEVEL DISSOLVED METALS - WATER (WATER)

Maxxam ID		S52973	S52974	S52975	S52976	S52977	S52978	S52979		
Sampling Date		2010/01/21 09:05	2010/01/21 10:05	2010/01/21 11:05	2010/01/21 11:35	2010/01/21 12:40	2010/01/21 13:10	2010/01/21 13:25		
Units		VW1	R1	VR	FC	P1	P4	A1	RDL	QC Batch
<b>Dissolved Metals by ICPMS</b>										
Dissolved Aluminum (Al)	ug/L	3.7	5.1	16.2	20.6	3.0	2.6	5.6	0.2	3706114
Dissolved Antimony (Sb)	ug/L	0.06	0.07	0.08	0.02	0.17	0.18	1.39	0.02	3706114
Dissolved Arsenic (As)	ug/L	0.44	0.31	0.18	0.07	0.26	0.26	0.61	0.02	3706114
Dissolved Barium (Ba)	ug/L	76.6	65.7	34.3	17.2	83.8	65.5	77.4	0.02	3706114
Dissolved Beryllium (Be)	ug/L	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.01	3706114
Dissolved Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3706114
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	50	3706114
Dissolved Cadmium (Cd)	ug/L	0.007	0.022	0.028	0.007	0.156	0.034	<0.005	0.005	3706114
Dissolved Chromium (Cr)	ug/L	<0.1	0.2	0.6	<0.1	<0.1	<0.1	0.2	0.1	3706114
Dissolved Cobalt (Co)	ug/L	0.080	0.080	0.025	0.014	0.017	0.031	0.029	0.005	3706114
Dissolved Copper (Cu)	ug/L	0.45	1.04	1.22	0.32	0.48	0.23	0.55	0.05	3706114
Dissolved Iron (Fe)	ug/L	28	168	16	14	13	7	20	1	3706114
Dissolved Lead (Pb)	ug/L	0.043	0.084	0.123	0.062	0.012	0.014	0.198(1)	0.005	3706114
Dissolved Lithium (Li)	ug/L	3.9	2.4	<0.5	2.2	3.9	3.4	3.7	0.5	3706114
Dissolved Manganese (Mn)	ug/L	72.6	82.4	2.12	0.59	10.9	9.27	5.03	0.05	3706114
Dissolved Molybdenum (Mo)	ug/L	0.62	0.31	0.21	0.08	1.04	0.97	1.11	0.05	3706114
Dissolved Nickel (Ni)	ug/L	0.55	0.41	0.29	0.20	3.22	0.78	0.43	0.02	3706114
Dissolved Selenium (Se)	ug/L	0.34	0.18	0.07	<0.04	1.28	0.89	0.73	0.04	3706114
Dissolved Silicon (Si)	ug/L	5780	4650	5010	6720	3470	3030	5230	100	3706114
Dissolved Silver (Ag)	ug/L	<0.005	<0.005	<0.005	0.015	0.010	0.007	<0.005	0.005	3706114
Dissolved Strontium (Sr)	ug/L	279	215	58.2	28.9	222	202	165	0.05	3706114
Dissolved Thallium (Tl)	ug/L	0.002	0.003	<0.002	0.003	0.003	0.004	0.003	0.002	3706114
Dissolved Tin (Sn)	ug/L	0.01	0.02	0.03	<0.01	<0.01	<0.01	<0.01	0.01	3706114
Dissolved Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3706114
Dissolved Uranium (U)	ug/L	3.43	2.60	0.367	0.055	2.09	1.72	2.33	0.002	3706114
Dissolved Vanadium (V)	ug/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	3706114
Dissolved Zinc (Zn)	ug/L	2.8	6.7	12.4	1.7(1)	18.8	3.9	2.5(1)	0.1	3706114
Dissolved Zirconium (Zr)	ug/L	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	3706114
Dissolved Calcium (Ca)	mg/L	64.4	44.1	11.5	4.88	56.5	53.4	51.9	0.05	3708496
Dissolved Magnesium (Mg)	mg/L	20.5	7.20	2.18	0.99	18.4	16.4	10.8	0.05	3708496
Dissolved Potassium (K)	mg/L	0.99	1.31	0.54	0.17	0.83	0.85	1.48	0.05	3708496
Dissolved Sodium (Na)	mg/L	4.15	2.79	1.73	2.01	2.33	1.90	3.22	0.05	3708496
Dissolved Sulphur (S)	mg/L	23	10	<3	<3	27	23	17	3	3708496

RDL = Reportable Detection Limit

(1) - Dissolved greater than total. Reanalysis yields similar results

Maxxam Job #: B003745  
Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
Sampler Initials: PI

**LOW LEVEL DISSOLVED METALS - WATER (WATER)**

Maxxam ID		S52980	S52981	S52982	S52983	S52984	S52992		
Sampling Date		2010/01/21 13:50	2010/01/21 14:18	2010/01/21 14:40	2010/01/21 14:55	2010/01/21	2010/01/21		
	Units	R6	R4	R3	V6A	DUPLICATE	FIELD BLANK	RDL	QC Batch
<b>Misc. Inorganics</b>									
Dissolved Hardness (CaCO <sub>3</sub> )	mg/L	158	228	243	166	231	<0.5	0.5	3698049

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RDL = Reportable Detection Limit

Maxxam Job #: B003745  
 Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### LOW LEVEL DISSOLVED METALS - WATER (WATER)

Maxxam ID		S52980	S52981	S52982	S52983	S52984	S52992		
Sampling Date		2010/01/21 13:50	2010/01/21 14:18	2010/01/21 14:40	2010/01/21 14:55	2010/01/21	2010/01/21		
	Units	R6	R4	R3	V6A	DUPLICATE	FIELD BLANK	RDL	QC Batch
<b>Dissolved Metals by ICPMS</b>									
Dissolved Aluminum (Al)	ug/L	2.1	1.7	1.2	6.0	1.7	1.2	0.2	3706114
Dissolved Antimony (Sb)	ug/L	0.12	0.11	0.07	0.10	0.12	<0.02	0.02	3706114
Dissolved Arsenic (As)	ug/L	0.31	0.19	0.18	0.68	0.21	<0.02	0.02	3706114
Dissolved Barium (Ba)	ug/L	86.8	78.2	65.8	45.0	77.9	0.36(1)	0.02	3706114
Dissolved Beryllium (Be)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	3706114
Dissolved Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3706114
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	50	3706114
Dissolved Cadmium (Cd)	ug/L	<0.005	<0.005	0.009	0.040	0.006	<0.005	0.005	3706114
Dissolved Chromium (Cr)	ug/L	<0.1	0.1	0.1	0.2	0.2	<0.1	0.1	3706114
Dissolved Cobalt (Co)	ug/L	0.014	0.025	0.044	0.024	0.032	<0.005	0.005	3706114
Dissolved Copper (Cu)	ug/L	0.25	1.74(1)	0.40	0.43	0.49	0.35(1)	0.05	3706114
Dissolved Iron (Fe)	ug/L	26	12	11	16	12	<1	1	3706114
Dissolved Lead (Pb)	ug/L	0.016	0.200(1)	0.012	0.075	0.017	0.041(1)	0.005	3706114
Dissolved Lithium (Li)	ug/L	2.6	4.0	4.7	1.4	4.0	<0.5	0.5	3706114
Dissolved Manganese (Mn)	ug/L	7.91	25.8	28.0	2.56	26.3	0.22	0.05	3706114
Dissolved Molybdenum (Mo)	ug/L	1.30	0.60	0.39	0.31(1)	0.56	<0.05	0.05	3706114
Dissolved Nickel (Ni)	ug/L	0.20	0.62	1.04	0.34	0.68	<0.02	0.02	3706114
Dissolved Selenium (Se)	ug/L	0.83	0.76	0.52	0.15	0.75	<0.04	0.04	3706114
Dissolved Silicon (Si)	ug/L	5060	5540	5160	5350	5550	<100	100	3706114
Dissolved Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3706114
Dissolved Strontium (Sr)	ug/L	138	220	232	202	220	0.05	0.05	3706114
Dissolved Thallium (Tl)	ug/L	<0.002	0.003	0.004	0.004	0.003	<0.002	0.002	3706114
Dissolved Tin (Sn)	ug/L	0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.01	3706114
Dissolved Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3706114
Dissolved Uranium (U)	ug/L	2.31	2.30	2.32	3.97	2.28	<0.002	0.002	3706114
Dissolved Vanadium (V)	ug/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	3706114
Dissolved Zinc (Zn)	ug/L	0.8	6.0(1)	5.2	24.9	3.9	1.3(1)	0.1	3706114
Dissolved Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3706114
Dissolved Calcium (Ca)	mg/L	46.5	68.3	72.6	48.7	69.4	<0.05	0.05	3708496
Dissolved Magnesium (Mg)	mg/L	10.3	13.9	15.0	10.8	14.1	<0.05	0.05	3708496
Dissolved Potassium (K)	mg/L	1.27	1.51	1.50	0.53	1.53	<0.05	0.05	3708496
Dissolved Sodium (Na)	mg/L	2.05	4.28	4.72	2.01	4.37	<0.05	0.05	3708496
Dissolved Sulphur (S)	mg/L	9	33	40	23	35	<3	3	3708496

RDL = Reportable Detection Limit

(1) - Dissolved greater than total. Reanalysis yields similar results

**LOW LEVEL TOTAL METALS - WATER (WATER)**

Maxxam ID		S52973	S52974	S52975	S52976	S52977	S52978	S52979		
Sampling Date		2010/01/21 09:05	2010/01/21 10:05	2010/01/21 11:05	2010/01/21 11:35	2010/01/21 12:40	2010/01/21 13:10	2010/01/21 13:25		
	Units	VW1	R1	VR	FC	P1	P4	A1	RDL	QC Batch
<b>Calculated Parameters</b>										
Total Hardness (CaCO <sub>3</sub> )	mg/L	253	145	41.5	17.7	216	221	181	0.5	3698671

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RDL = Reportable Detection Limit

Maxxam Job #: B003745  
 Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### LOW LEVEL TOTAL METALS - WATER (WATER)

Maxxam ID		S52973	S52974	S52975	S52976	S52977	S52978	S52979		
Sampling Date		2010/01/21 09:05	2010/01/21 10:05	2010/01/21 11:05	2010/01/21 11:35	2010/01/21 12:40	2010/01/21 13:10	2010/01/21 13:25		
Units		VW1	R1	VR	FC	P1	P4	A1	RDL	QC Batch
<b>Total Metals by ICPMS</b>										
Total Aluminum (Al)	ug/L	27.4	28.4	116	24.8	5.6	4.4	13.4	0.2	3699996
Total Antimony (Sb)	ug/L	0.06	0.12	0.16	<0.02	0.16	0.19	0.14	0.02	3699996
Total Arsenic (As)	ug/L	0.59	0.97	0.49	0.06	0.28	0.28	0.66	0.02	3699996
Total Barium (Ba)	ug/L	79.0	68.4	38.5	18.0	80.6	66.2	76.2	0.02	3699996
Total Beryllium (Be)	ug/L	<0.01	0.01	0.04	<0.01	<0.01	<0.01	<0.01	0.01	3699996
Total Bismuth (Bi)	ug/L	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	0.005	3699996
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	50	3699996
Total Cadmium (Cd)	ug/L	0.015	0.045	0.080	0.008	0.153	0.053	0.008	0.005	3699996
Total Chromium (Cr)	ug/L	0.1	0.3	0.6	0.1	<0.1	<0.1	0.2	0.1	3699996
Total Cobalt (Co)	ug/L	0.122	0.118	0.097	0.016	0.019	0.028	0.029	0.005	3699996
Total Copper (Cu)	ug/L	0.55	1.18	1.78	0.28	0.45	0.33	0.50	0.05	3699996
Total Iron (Fe)	ug/L	128	1370	176	20	29	18	41	1	3699996
Total Lead (Pb)	ug/L	0.229	0.850	2.04	0.076	0.016	0.044	0.086	0.005	3699996
Total Lithium (Li)	ug/L	4.0	2.5	<0.5	2.3	4.0	3.4	3.7	0.5	3699996
Total Manganese (Mn)	ug/L	85.3	108	26.7	0.62	10.9	9.08	10.2	0.05	3699996
Total Molybdenum (Mo)	ug/L	0.55	0.29	0.16	0.08	1.05	0.97	1.04	0.05	3699996
Total Nickel (Ni)	ug/L	0.65	0.56	0.45	0.20	3.18	0.77	0.49	0.02	3699996
Total Selenium (Se)	ug/L	0.33	0.19	0.07	<0.04	1.41	0.97	0.77	0.04	3699996
Total Silicon (Si)	ug/L	5700	5220	5180	7650	3770	3300	5560	100	3699996
Total Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3699996
Total Strontium (Sr)	ug/L	292	227	64.3	30.6	228	213	172	0.05	3699996
Total Thallium (Tl)	ug/L	0.002	0.003	0.005	<0.002	0.002	0.003	<0.002	0.002	3699996
Total Tin (Sn)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	3699996
Total Titanium (Ti)	ug/L	<0.5	0.8	2.0	0.5	<0.5	<0.5	<0.5	0.5	3699996
Total Uranium (U)	ug/L	3.59	2.67	0.789	0.072	2.12	1.83	2.38	0.002	3699996
Total Vanadium (V)	ug/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	3699996
Total Zinc (Zn)	ug/L	3.5	11.8	15.3	1.2	17.8	4.3	2.1	0.1	3699996
Total Zirconium (Zr)	ug/L	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	3699996
Total Calcium (Ca)	mg/L	66.2	45.4	12.6	5.28	56.0	58.3	53.6	0.05	3705589
Total Magnesium (Mg)	mg/L	21.4	7.65	2.42	1.10	18.5	18.2	11.4	0.05	3705589
Total Potassium (K)	mg/L	1.00	1.32	0.52	0.18	0.80	0.90	1.49	0.05	3705589
Total Sodium (Na)	mg/L	4.33	2.98	1.83	2.20	2.37	2.14	3.34	0.05	3705589
Total Sulphur (S)	mg/L	25	10	<3	<3	27	26	19	3	3705589

RDL = Reportable Detection Limit

Maxxam Job #: B003745  
Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
Sampler Initials: PI

**LOW LEVEL TOTAL METALS - WATER (WATER)**

Maxxam ID		S52980	S52981	S52982	S52983	S52984	S52992		
Sampling Date		2010/01/21 13:50	2010/01/21 14:18	2010/01/21 14:40	2010/01/21 14:55	2010/01/21	2010/01/21		
	Units	R6	R4	R3	V6A	DUPLICATE	FIELD BLANK	RDL	QC Batch
<b>Calculated Parameters</b>									
Total Hardness (CaCO <sub>3</sub> )	mg/L	168	239	252	165	235	<0.5	0.5	3698671

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RDL = Reportable Detection Limit

Maxxam Job #: B003745  
 Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### LOW LEVEL TOTAL METALS - WATER (WATER)

Maxxam ID		S52980	S52981	S52982	S52983	S52984	S52992		
Sampling Date		2010/01/21 13:50	2010/01/21 14:18	2010/01/21 14:40	2010/01/21 14:55	2010/01/21	2010/01/21		
	Units	R6	R4	R3	V6A	DUPLICATE	FIELD BLANK	RDL	QC Batch
<b>Total Metals by ICPMS</b>									
Total Aluminum (Al)	ug/L	6.3	3.3	2.2	16.2	2.9	0.9	0.2	3699996
Total Antimony (Sb)	ug/L	0.12	0.13	0.08	0.09	0.12	<0.02	0.02	3699996
Total Arsenic (As)	ug/L	0.48	0.23	0.16	0.78	0.24	<0.02	0.02	3699996
Total Barium (Ba)	ug/L	84.5	84.3	68.2	43.5	79.0	0.07	0.02	3699996
Total Beryllium (Be)	ug/L	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.01	3699996
Total Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3699996
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	50	3699996
Total Cadmium (Cd)	ug/L	0.012	0.007	0.008	0.049	0.005	<0.005	0.005	3699996
Total Chromium (Cr)	ug/L	0.1	0.2	0.1	<0.1	0.2	<0.1	0.1	3699996
Total Cobalt (Co)	ug/L	0.033	0.044	0.041	0.037	0.033	<0.005	0.005	3699996
Total Copper (Cu)	ug/L	0.32	0.44	0.42	0.38	0.44	<0.05	0.05	3699996
Total Iron (Fe)	ug/L	118	38	34	59	37	<1	1	3699996
Total Lead (Pb)	ug/L	0.016	0.073	0.044	0.443	0.069	0.022	0.005	3699996
Total Lithium (Li)	ug/L	2.5	4.2	4.9	1.3	4.0	<0.5	0.5	3699996
Total Manganese (Mn)	ug/L	14.9	33.1	58.3	6.34	33.3	<0.05	0.05	3699996
Total Molybdenum (Mo)	ug/L	1.16	0.60	0.33	0.15	0.51	<0.05	0.05	3699996
Total Nickel (Ni)	ug/L	0.26	0.68	1.07	0.38	0.67	0.04	0.02	3699996
Total Selenium (Se)	ug/L	0.76	0.74	0.55	0.16	0.73	<0.04	0.04	3699996
Total Silicon (Si)	ug/L	4800	5640	5760	5500	5510	<100	100	3699996
Total Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3699996
Total Strontium (Sr)	ug/L	141	242	245	202	229	0.05	0.05	3699996
Total Thallium (Tl)	ug/L	<0.002	0.003	<0.002	0.004	0.003	<0.002	0.002	3699996
Total Tin (Sn)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	3699996
Total Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3699996
Total Uranium (U)	ug/L	2.33	2.54	2.41	3.87	2.37	0.007	0.002	3699996
Total Vanadium (V)	ug/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	3699996
Total Zinc (Zn)	ug/L	0.6	4.2	6.1	25.8	4.1	0.3	0.1	3699996
Total Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3699996
Total Calcium (Ca)	mg/L	49.1	71.7	75.2	48.6	70.4	<0.05	0.05	3705589
Total Magnesium (Mg)	mg/L	11.0	14.7	15.7	10.7	14.3	<0.05	0.05	3705589
Total Potassium (K)	mg/L	1.31	1.52	1.53	0.51	1.52	<0.05	0.05	3705589
Total Sodium (Na)	mg/L	2.16	4.50	4.97	1.94	4.40	<0.05	0.05	3705589
Total Sulphur (S)	mg/L	8	38	42	23	36	<3	3	3705589

RDL = Reportable Detection Limit

Package 1	1.0°C
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Each temperature is the average of up to three cooler temperatures taken at receipt

**General Comments**

- Sample S52975-: Ion Balance: NC = Not Calculable due to low ion sum [< 3 meq/L].
- Sample S52976-: Ion Balance: NC = Not Calculable due to low ion sum [< 3 meq/L].
- Sample S52992-: Ion Balance: NC = Not Calculable due to low ion sum [< 3 meq/L].

Maxxam Job #: B003745  
 Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3697978	Total Phosphorus (P)	2010/01/25	104	80 - 120	95	80 - 120	<0.005	mg/L	NC	20
3698395	Fluoride (F)	2010/01/25	105	80 - 120	100	80 - 120	<0.01	mg/L	0.8	20
3699395	Total Suspended Solids	2010/01/25			101	80 - 120	<1	mg/L		
3699932	Total Dissolved Solids	2010/01/26	92	80 - 120	102	80 - 120	<10	mg/L	2.8	20
3699996	Total Arsenic (As)	2010/01/26	99	80 - 120	93	80 - 120	<0.02	ug/L	7.5	20
3699996	Total Beryllium (Be)	2010/01/26	105	80 - 120	102	80 - 120	<0.01	ug/L	NC	20
3699996	Total Cadmium (Cd)	2010/01/26	101	80 - 120	98	80 - 120	<0.005	ug/L	NC	20
3699996	Total Chromium (Cr)	2010/01/26	98	80 - 120	97	80 - 120	<0.1	ug/L	NC	20
3699996	Total Cobalt (Co)	2010/01/26	93	80 - 120	96	80 - 120	<0.005	ug/L	4.5	20
3699996	Total Copper (Cu)	2010/01/26	91	80 - 120	102	80 - 120	<0.05	ug/L	2.5	20
3699996	Total Lead (Pb)	2010/01/26	99	80 - 120	107	80 - 120	<0.005	ug/L	2.0	20
3699996	Total Lithium (Li)	2010/01/26	101	80 - 120	103	80 - 120	<0.5	ug/L	4.7	20
3699996	Total Nickel (Ni)	2010/01/26	93	80 - 120	97	80 - 120	<0.02	ug/L	2.7	20
3699996	Total Selenium (Se)	2010/01/26	102	80 - 120	93	80 - 120	<0.04	ug/L	15.6	20
3699996	Total Uranium (U)	2010/01/26	104	80 - 120	107	80 - 120	<0.002	ug/L	1.4	20
3699996	Total Vanadium (V)	2010/01/26	99	80 - 120	94	80 - 120	<0.2	ug/L	NC	20
3699996	Total Zinc (Zn)	2010/01/26	102	80 - 120	107	80 - 120	<0.1	ug/L	1.9	20
3699996	Total Aluminum (Al)	2010/01/26					<0.2	ug/L	0.8	20
3699996	Total Antimony (Sb)	2010/01/26					<0.02	ug/L	NC	20
3699996	Total Barium (Ba)	2010/01/26					<0.02	ug/L	0.6	20
3699996	Total Bismuth (Bi)	2010/01/26					<0.005	ug/L	NC	20
3699996	Total Boron (B)	2010/01/26					<50	ug/L	NC	20
3699996	Total Iron (Fe)	2010/01/26					<1	ug/L	7.6	20
3699996	Total Manganese (Mn)	2010/01/26					<0.05	ug/L	0.9	20
3699996	Total Molybdenum (Mo)	2010/01/26					<0.05	ug/L	1	20
3699996	Total Silicon (Si)	2010/01/26					<100	ug/L	13.8	20
3699996	Total Silver (Ag)	2010/01/26					<0.005	ug/L	NC	20
3699996	Total Strontium (Sr)	2010/01/26					<0.05	ug/L	0	20
3699996	Total Thallium (Tl)	2010/01/26					<0.002	ug/L	NC	20
3699996	Total Tin (Sn)	2010/01/26					<0.01	ug/L	NC	20
3699996	Total Titanium (Ti)	2010/01/26					<0.5	ug/L	NC	20
3699996	Total Zirconium (Zr)	2010/01/26					<0.1	ug/L	NC	20
3700723	Ammonia (N)	2010/01/25	100	80 - 120	91	80 - 120	<0.005	mg/L	NC	20
3700733	Nitrate plus Nitrite (N)	2010/01/25	99	80 - 120	105	80 - 120	<0.02	mg/L	NC	25
3700734	Nitrite (N)	2010/01/25	102	80 - 120	105	80 - 120	<0.005	mg/L	1.3	20
3700992	Conductivity	2010/01/26			102	80 - 120	<1	uS/cm	NC	20
3700993	Alkalinity (Total as CaCO <sub>3</sub> )	2010/01/26	NC	80 - 120	99	80 - 120	<0.5	mg/L	NC	20
3700993	Alkalinity (PP as CaCO <sub>3</sub> )	2010/01/26					<0.5	mg/L	NC	20
3700993	Bicarbonate (HCO <sub>3</sub> )	2010/01/26					<0.5	mg/L	NC	20

Maxxam Job #: B003745  
 Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3700993	Carbonate (CO3)	2010/01/26					<0.5	mg/L	NC	20
3700993	Hydroxide (OH)	2010/01/26					<0.5	mg/L	NC	20
3704971	Weak Acid Dissoc. Cyanide (CN)	2010/01/26	101	80 - 120	99	80 - 120	<0.0005	mg/L	NC	20
3705589	Total Calcium (Ca)	2010/01/26					<0.05	mg/L	0.8	20
3705589	Total Magnesium (Mg)	2010/01/26					<0.05	mg/L	0.5	20
3705589	Total Potassium (K)	2010/01/26					<0.05	mg/L	0.02	20
3705589	Total Sodium (Na)	2010/01/26					<0.05	mg/L	1.2	20
3705589	Total Sulphur (S)	2010/01/26					<3	mg/L	5.0	20
3705714	Dissolved Sulphate (SO4)	2010/01/26	NC	80 - 120	96	80 - 120	<0.5	mg/L	0.5	20
3705716	Dissolved Chloride (Cl)	2010/01/26	114	80 - 120	103	80 - 120	<0.5	mg/L	4.7	20
3706114	Dissolved Arsenic (As)	2010/01/27	101	80 - 120	95	80 - 120	<0.02	ug/L	0.07	20
3706114	Dissolved Beryllium (Be)	2010/01/27	109	80 - 120	105	80 - 120	<0.01	ug/L	NC	20
3706114	Dissolved Cadmium (Cd)	2010/01/27	103	80 - 120	97	80 - 120	<0.005	ug/L	NC	20
3706114	Dissolved Chromium (Cr)	2010/01/27	101	80 - 120	99	80 - 120	<0.1	ug/L	NC	20
3706114	Dissolved Cobalt (Co)	2010/01/27	95	80 - 120	97	80 - 120	<0.005	ug/L	11.3	20
3706114	Dissolved Copper (Cu)	2010/01/27	95	80 - 120	103	80 - 120	<0.05	ug/L	5.8	20
3706114	Dissolved Lead (Pb)	2010/01/27	97	80 - 120	105	80 - 120	<0.005	ug/L	2.7	20
3706114	Dissolved Lithium (Li)	2010/01/27	104	80 - 120	103	80 - 120	<0.5	ug/L	2.1	20
3706114	Dissolved Nickel (Ni)	2010/01/27	94	80 - 120	97	80 - 120	<0.02	ug/L	0.3	20
3706114	Dissolved Selenium (Se)	2010/01/27	98	80 - 120	94	80 - 120	<0.04	ug/L	10.8	20
3706114	Dissolved Uranium (U)	2010/01/27	102	80 - 120	102	80 - 120	0.002, RDL=0.002	ug/L	0.3	20
3706114	Dissolved Vanadium (V)	2010/01/27	103	80 - 120	96	80 - 120	<0.2	ug/L	NC	20
3706114	Dissolved Zinc (Zn)	2010/01/27	94	80 - 120	100	80 - 120	<0.1	ug/L	0.2	20
3706114	Dissolved Aluminum (Al)	2010/01/27					<0.2	ug/L	7.9	20
3706114	Dissolved Antimony (Sb)	2010/01/27					<0.02	ug/L	NC	20
3706114	Dissolved Barium (Ba)	2010/01/27					<0.02	ug/L	1.5	20
3706114	Dissolved Bismuth (Bi)	2010/01/27					<0.005	ug/L	NC	20
3706114	Dissolved Boron (B)	2010/01/27					<50	ug/L	NC	20
3706114	Dissolved Iron (Fe)	2010/01/27					<1	ug/L	11.3	20
3706114	Dissolved Manganese (Mn)	2010/01/27					<0.05	ug/L	2.2	20
3706114	Dissolved Molybdenum (Mo)	2010/01/27					<0.05	ug/L	1.1	20
3706114	Dissolved Silicon (Si)	2010/01/27					<100	ug/L	11.8	20
3706114	Dissolved Silver (Ag)	2010/01/27					<0.005	ug/L	NC	20
3706114	Dissolved Strontium (Sr)	2010/01/27					<0.05	ug/L	0.4	20
3706114	Dissolved Thallium (Tl)	2010/01/27					<0.002	ug/L	NC	20
3706114	Dissolved Tin (Sn)	2010/01/27					<0.01	ug/L	NC	20
3706114	Dissolved Titanium (Ti)	2010/01/27					<0.5	ug/L	NC	20
3706114	Dissolved Zirconium (Zr)	2010/01/27					<0.1	ug/L	NC	20
3708496	Dissolved Calcium (Ca)	2010/01/27					<0.05	mg/L	1.8	20

Maxxam Job #: B003745  
 Report Date: 2010/02/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3708496	Dissolved Magnesium (Mg)	2010/01/27					<0.05	mg/L	2.7	20
3708496	Dissolved Potassium (K)	2010/01/27					<0.05	mg/L	0.7	20
3708496	Dissolved Sodium (Na)	2010/01/27					<0.05	mg/L	2.9	20
3708496	Dissolved Sulphur (S)	2010/01/27					<3	mg/L	2.6	20
3709213	Total Organic Carbon (C)	2010/01/28	100	80 - 120	100	80 - 120	<0.5	mg/L	2.3	20
3709221	Dissolved Organic Carbon (C)	2010/01/28	NC	80 - 120	99	80 - 120	<0.5	mg/L	0.4	20

N/A = Not Applicable

RDL = Reportable Detection Limit

RPD = Relative Percent Difference

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.



8577 Commerce Court  
Burnaby, BC V5A 4N5  
[www.maxxamanalytics.com](http://www.maxxamanalytics.com)

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Toll-Free: 1-800-440-4808

08308266

### CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

B003745

(A)

PAGE 1 OF 2

COMPANY NAME: Access Consulting Group		CLIENT PROJECT NO.: SFN-07-01		LAB USE ONLY MAXXAM JOB #		LAB USE ONLY COC #		
COMPANY ADDRESS: #3 Calcite Business Center 151 Industrial Rd Whitehorse, YT Y1A 2V3		TEL: (867) 668-6463 E-MAIL: paul@accessconsulting.ca david@accessconsulting.ca FAX: (867) 668-6680		ANALYSIS REQUEST		LAB USE ONLY		
SAMPLER NAME (PRINT): Paul Inglis	PROJECT MANAGER: David Petkovich	LABORATORY CONTACT: Kim Webber						
FIELD SAMPLE ID		MATRIX		SAMPLING				
		GROUNDWATER	SOIL	DATE	TIME	* CONTAINERS	General (Alk, EC, pH)	TSS (TDS)
				DD/MM/YY			Total Metals (Low Level)	
		X		21-Jan-10	9:05	8	X X X X X X X X	X X X X X X X X
		X		21-Jan-10	10:05	8	X X X X X X X X	X X X X X X X X
		X		21-Jan-10	11:05	8	X X X X X X X X	X X X X X X X X
		X		21-Jan-10	11:35	8	X X X X X X X X	X X X X X X X X
		X		21-Jan-10	12:40	8	X X X X X X X X	X X X X X X X X
		X		21-Jan-10	13:10	8	X X X X X X X X	X X X X X X X X
		X		21-Jan-10	13:25	8	X X X X X X X X	X X X X X X X X
		X		21-Jan-10	13:50	8	X X X X X X X X	X X X X X X X X
		X		21-Jan-10	14:18	8	X X X X X X X X	X X X X X X X X
X		21-Jan-10	14:40	8	X X X X X X X X	X X X X X X X X		
X		21-Jan-10	14:55	8	X X X X X X X X	X X X X X X X X		
Duplicate				8	X X X X X X X X	X X X X X X X X		
13 Field Blank TAT (Turnaround Time) LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL		PO NUMBER OR QUOTE NUMBER: SFN-09-02		SPECIAL DETECTION LIMITS / CONTAMINANT TYPE: AS per previous SFN-07-01/ SFN-09-02 sampling		LAB USE ONLY CCME CSR AB TIER 1 OTHER		
* Some exceptions apply - please contact laboratory		ACCOUNTING CONTACT: Colette MacMillon		SPECIAL REPORTING OR BILLING INSTRUCTIONS:		ARRIVAL TEMPERATURE °C: DUE DATE: LOG IN CHECK: 111		
STANDARD 5 BUSINESS DAYS		RELINQUISHED BY SAMPLER: Paul Inglis		DATE: DD/MM/YY	TIME: 22/01/2010 16:00	RECEIVED BY:		
RUSH	3 BUSINESS DAYS							
RUSH	2 BUSINESS DAYS							
URGENT	1 BUSINESS DAY							
OTHER BUSINESS DAYS		RELINQUISHED BY:		DATE: DD/MM/YY	TIME:	RECEIVED BY:		
		RELINQUISHED BY:		DATE: DD/MM/YY	TIME: 25/6/2010 10:00	RECEIVED BY LABORATORY: CWB		
CUSTODY RECORD								



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Burnaby, BC V5A 4N5      Fax: (604) 444-4511  
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**CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST**

PAGE 2 OF 2

08308277

MAXXAM JOB #	ANALYSIS REQUEST	COC #
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COMPANY NAME: Access Consulting Group		CLIENT PROJECT NO.: SFN-07-01		PUB USE ONLY				
COMPANY ADDRESS: #3 Calcite Business Center 151 Industrial Rd Whitehorse, YT Y1A 2V3		TEL.: (867) 668-6463  E-MAIL: paul@accessconsulting.ca david@accessconsulting.ca  FAX: (867) 668-6680						
SAMPLER NAME (PRINT): Paul Inglis	PROJECT MANAGER: David Petkovich	LABORATORY CONTACT: Kim Webber						
FIELD SAMPLE ID		MATRIX		SAMPLING				
		GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	DATE	TIME
					DD/MM/YY			General (Alk, EC, pH)
1 Field Blank		X			21-Jan-10		8	X X X TSS (TDS)
2								X Total Metals (Low Level)
3								X Dissolved Metals (Low Level)
4								X DOC
5								X Anions -(Cl, F, NH3, NO2, NO3, SO4)
6								X Cyanide
7								X Phosphorus, TOC
8								
9								
10								
11								

TAT (Turnaround Time)		PO NUMBER OR QUOTE NUMBER:	SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:	CCME CSR AB TIER 1 OTHER	ARRIVAL TEMPERATURE °C:	DUE DATE:	LOG IN CHECK:
LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL		SFN-09-02	AS per previous SFN-07-01/ SFN-09-02 sampling				
* Some exceptions apply - please contact laboratory		ACCOUNTING CONTACT: <b>Colette MacMillon</b>	SPECIAL REPORTING OR BILLING INSTRUCTIONS:	# JARS USED:			
STANDARD 5 BUSINESS DAYS		RELINQUISHED BY SAMPLER: <b>Paul Inglis</b>	DATE: DD/MM/YY 22/01/2010	TIME: 16:00	RECEIVED BY:		
RUSH	3 BUSINESS DAYS	RELINQUISHED BY: <b>Paul Inglis</b>	DATE: DD/MM/YY	TIME:	RECEIVED BY:		
RUSH	2 BUSINESS DAYS	RELINQUISHED BY: <b>Paul Inglis</b>	DATE: DD/MM/YY	TIME:	RECEIVED BY:		
URGENT	1 BUSINESS DAY	RELINQUISHED BY: <b>Paul Inglis</b>	DATE: DD/MM/YY	TIME:	RECEIVED BY LABORATORY:		
OTHER BUSINESS DAYS							
<b>CUSTODY</b>							

**CUSTODY  
RECORD**



A MEMBER OF ALEXCO RESOURCE GROUP

# 3 Calcite Business Centre, 151 Industrial Road, Whitehorse, Yukon Y1A 2V3  
PHONE (867) 668-6463 FAX (867) 667-6680  
[WWW.ACCESSCONSULTING.CA](http://WWW.ACCESSCONSULTING.CA)

## MEMORANDUM

**TO:** File

**CC:** David Petkovich  
Scott Keesey  
Kurt Neunherz

**FROM:** Paul Inglis

**RE:** **February 2010 water sampling at Faro (Pelly River Interim Aquatic Ecosystem Monitoring Plan)**

**PROJECT #:** SFN-09-02

**DATE:** March 4, 2010

---

The following is a brief trip report for the monthly water sampling event in the area of the Anvil Range Mine for the month of February 2010.

In the late morning of February 20<sup>th</sup>, 2009 Paul Inglis and Kurt Neunherz (ACG) departed from Whitehorse to travel to Pelly Crossing where they picked up Randy Profeit (SFN). These three constituted the field crew for the sampling event. They then drove to Faro arriving at 18:00 and proceeded to sample stations VW1 and VW2.

On February 24<sup>th</sup> the field crew drove the Mine Access Road to the mine site, sampling station R1 arriving at the minesite at 8:45am. After checking in with the mine security the field crew were given the 2010 site safety orientation. The crew then sampled sites VR and FC (within the compound). Weather while sampling in the morning was cloudy with light to heavy snow and poor visibility. The temperature was around -10°C. The crew called Delmar of Capital Helicopters and decided that the weather conditions were too poor to sample the stations that require a helicopter. The weather forecast for Faro for Thursday was also poor and so the decision was made to postpone sampling until Friday February 26<sup>th</sup>. The field crew then returned to Pelly and sampled site P5 (The

Pelly River near Pelly Crossing), dropped off Randy Profeit, and Paul Inglis and Kurt Neunherz returned to Whitehorse.

On Friday February 26<sup>th</sup> Paul Inglis and Kurt Neunherz departed Whitehorse for Faro travelling by Helicopter to Faro with pilot Darren of Capital Helicopters. The weather conditions while sampling were partially cloudy and the temperature was around -5°C. The following sites were sampled by helicopter: P4, A1, R6, R4, R3, V6A, and P1. In-situ measurements were taken with an YSI multi-meter. Eight sample bottles were collected at each station with the following parameters being screened for:

- General (including Alkalinity, conductivity and pH)
- TSS and TDS
- Total metals
- Dissolved metals (Field Filtered)
- Dissolved Organic Carbon (Field Filtered)
- Cyanide
- Anions
- Total Organic Carbon and Phosphorus

Additionally 1 field blank and 2 duplicate samples were prepared and tested. The duplicates were sampled at stations FC and V6A. 8 sets of water samples (VW1, VW2, R1, VR, FC, P5, Field Blank, and Duplicate 1) were shipped via Air North Cargo on February 25<sup>th</sup> and another 8 sets (P4, A1, R4, R6, R3, V6A, P1, and Duplicate 2) were shipped on February 27<sup>th</sup> to Maxxam Analytics in Burnaby, B.C. for analysis.

Station	Northing	Easting	Station	Northing	Easting
R1	62.3337	133.378	P4	62.46132	134.16
R3	62.38103	133.579	P1	62.20786	133.356
R4	62.4209	133.687	FC	62.37258	133.35
R6	62.42107	133.685	VR	62.28282	133.252
A1	62.44574	134.123	V6A	62.28019	133.258
P5	63.9421	135.293	VW1	62.26413	133.326
P4	62.46132	134.16	VW2	62.25506	133.319

Notable issues:

- Flow measurements were taken at FC and R4 using the salt dilution method but operator (Paul) error resulted in the measurements from FC being erased.

- An overflight of the Rose Creek Diversion and Faro Creek showed 3 areas of open water on Faro Creek downstream of the Faro Creek Diversion and upstream of the confluence of the Faro and Rose Creeks.



Plate 1: Water sampling at station R3



Plate 2: Open Water on Faro Creek upstream of the Haul Road

If you have any questions about this report, please contact Paul Inglis of Access Consulting Group.



Your P.O. #: SFN-09-02  
 Your Project #: SFN-07-01  
 Your C.O.C. #: 08310095

**Attention: David Petkovich**  
 ACCESS CONSULTING GROUP  
 #3 Calcite  
 151 Industrial Road  
 WHITEHORSE, YT  
 CANADA Y1A 3C8

Report Date: 2010/03/05

## CERTIFICATE OF ANALYSIS

**MAXXAM JOB #: B011023**  
 Received: 2010/02/26, 13:15

Sample Matrix: Water  
 # Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Water	8	2010/02/27	2010/02/27	BRN SOP-00264 R4.0	Based on SM2320B
Chloride by Automated Colourimetry	8	N/A	2010/03/01	BRN-SOP 00234 R3.0	Based on EPA 325.2
Cyanide WAD (weak acid dissociable)	8	N/A	2010/03/05	BRN SOP-00227 R3.0	Based on SM-4500CN I
Carbon (DOC)	8	N/A	2010/03/03	BRN SOP-00224 R4.0	Based on M 860-87T
Conductance - water	8	N/A	2010/02/27	BRN SOP-00264 R2.0	Based on SM-2510B
Fluoride - Mining Clients	8	N/A	2010/03/02	BRN SOP-00225 R1.0	Based SM - 4500 F C
Hardness Total (calculated as CaCO <sub>3</sub> )	8	N/A	2010/03/04		
Hardness (calculated as CaCO <sub>3</sub> )	8	N/A	2010/03/05		
Ion Balance	8	N/A	2010/03/04		
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	8	N/A	2010/03/04	BRN SOP-00206 R7.0	Based on EPA 200.8
Elements by ICPMS Low Level (dissolved) ①	8	N/A	2010/03/04	BRN SOP-00206 R7.0	Based on EPA 200.8
Elements by ICPMS Low Level (total) ①	8	2010/03/03	2010/03/03	BRN SOP-00206 R7.0	Based on EPA 200.8
Na, K, Ca, Mg, S by CRC ICPMS (total)	8	2010/03/03	2010/03/03	BRN SOP-00206 R7.0	Based on EPA 200.8
Ammonia (N)	8	N/A	2010/02/27	BRN SOP-00232 R4.0	Based on USEPA 350.1
Nitrate + Nitrite (N)	7	N/A	2010/03/01	ING233 Rev.4.4	Based on EPA 353.2
Nitrate + Nitrite (N)	1	N/A	2010/03/04	ING233 Rev.4.4	Based on EPA 353.2
Nitrite (N) by CFA	8	N/A	2010/03/01	BRN SOP-00233 R1.0	EPA 353.2
Nitrogen - Nitrate (as N)	7	N/A	2010/03/03		
Nitrogen - Nitrate (as N)	1	N/A	2010/03/04		
Filter and HNO <sub>3</sub> Preserve for Metals	8	N/A	2010/03/01	BRN WI-00006 R1.0	Based on EPA 200.2
pH Water	8	N/A	2010/02/27	BRN SOP-00264 R4.0	Based on SM-4500H+B
Sulphate by Automated Colourimetry	8	N/A	2010/03/01	BRN-SOP 00243 R1.0	Based on EPA 375.4
Total Dissolved Solids (Filt. Residue)	8	N/A	2010/03/03	BRN SOP 00276 R4.0	SM 2540C
Carbon (Total Organic)	8	N/A	2010/03/03	BRN SOP-00224 R4.0	Based on SM-5310C
Total Phosphorus	8	N/A	2010/03/01	BRN SOP-00236 R4.0	SM 4500
Total Suspended Solids	8	N/A	2010/03/02	BRN SOP-00277 R5.0	Based on SM-2540 D

\* Results relate only to the items tested.

(1) SCC/CAEAL

..2

Maxxam Job #: B011023  
Report Date: 2010/03/05

ACCESS CONSULTING GROUP

Client Project #: SFN-07-01

Your P.O. #: SFN-09-02

Sampler Initials: PI

-2-

#### Encryption Key

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

KIMBERLEY WEBBER, BBY Customer Service  
Email: kim.webber@maxxamanalytics.com  
Phone# (604) 444-4808 Ext:259

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

Total cover pages: 2

Maxxam Job #: B011023  
 Report Date: 2010/03/05

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		S98126	S98127	S98128	S98129		
Sampling Date		2010/02/23 17:15	2010/02/24 08:05	2010/02/24 09:45	2010/02/24 10:25		
	Units	VW1	R1	VR	FC	RDL	QC Batch
<b>Misc. Inorganics</b>							
Fluoride (F)	mg/L	0.22	0.16	0.08	0.12	0.01	3781503
<b>Preparation</b>							
Filter and HNO3 Preservation	N/A	FIELD	FIELD	FIELD	FIELD	N/A	ONSITE
<b>ANIONS</b>							
Nitrite (N)	mg/L	<0.005	0.006	<0.005	<0.005	0.005	3779850
<b>Calculated Parameters</b>							
Ion Balance	N/A	1.0	1.1	NC	NC	0.01	3775264
Nitrate (N)	mg/L	0.16	0.15	0.09	0.05	0.02	3776480
<b>Misc. Inorganics</b>							
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.0005	<0.0005	0.0006	<0.0005	0.0005	3792900
Dissolved Organic Carbon (C)	mg/L	2.1	2.1	3.1	1.1	0.5	3785361
Alkalinity (Total as CaCO3)	mg/L	210	120	41	21	0.5	3776951
Total Organic Carbon (C)	mg/L	2.0	4.1	3.7	1.2	0.5	3785292
Alkalinity (PP as CaCO3)	mg/L	<0.5	<0.5	<0.5	<0.5	0.5	3776951
Bicarbonate (HCO3)	mg/L	250	150	50	26	0.5	3776951
Carbonate (CO3)	mg/L	<0.5	<0.5	<0.5	<0.5	0.5	3776951
Hydroxide (OH)	mg/L	<0.5	<0.5	<0.5	<0.5	0.5	3776951
<b>Anions</b>							
Dissolved Sulphate (SO4)	mg/L	62	30	6.1	1.4	0.5	3781163
Dissolved Chloride (Cl)	mg/L	2.1	1.0	0.9	<0.5	0.5	3781097
<b>Nutrients</b>							
Ammonia (N)	mg/L	0.012	0.115	0.124	0.006	0.005	3776978
Nitrate plus Nitrite (N)	mg/L	0.16	0.15	0.09	0.05	0.02	3779845
Total Phosphorus (P)	mg/L	<0.005	<0.005	<0.005	<0.005	0.005	3777651
<b>Physical Properties</b>							
Conductivity	uS/cm	505	288	103	47	1	3776950
pH	pH Units	8.0	7.9	7.4	7.3		3776945
<b>Physical Properties</b>							
Total Suspended Solids	mg/L	7	110	200	<1	1	3779650
Total Dissolved Solids	mg/L	320	180	78	42	10	3779652

N/A = Not Applicable

NC = Non-calculable

RDL = Reportable Detection Limit

Maxxam Job #: B011023  
 Report Date: 2010/03/05

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

## RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		S98130		S98131		S98132	S98133		
Sampling Date		2010/02/24 12:40		2010/02/24 14:10		2010/02/24	2010/02/24		
	Units	VW2	QC Batch	P5	QC Batch	DUPLICATE	BLANK	RDL	QC Batch
<b>Misc. Inorganics</b>									
Fluoride (F)	mg/L	0.21	3781503	0.13	3781503	0.12	<0.01	0.01	3781503
<b>Preparation</b>									
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	FIELD	N/A	ONSITE
<b>ANIONS</b>									
Nitrite (N)	mg/L	<0.005	3779850	<0.005	3779850	<0.005	<0.005	0.005	3779850
<b>Calculated Parameters</b>									
Ion Balance	N/A	0.98	3775264	1.1	3775264	NC	NC	0.01	3775264
Nitrate (N)	mg/L	0.32	3776480	0.12	3776480	0.06	<0.02	0.02	3776480
<b>Misc. Inorganics</b>									
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.0005	3792900	<0.0005	3792900	<0.0005	<0.0005	0.0005	3792900
Dissolved Organic Carbon (C)	mg/L	1.6	3785361	1.7	3785361	0.5	<0.5	0.5	3785361
Alkalinity (Total as CaCO3)	mg/L	320	3776951	140	3776951	23	2.0	0.5	3776951
Total Organic Carbon (C)	mg/L	1.9	3785292	1.2	3785292	0.6	<0.5	0.5	3785292
Alkalinity (PP as CaCO3)	mg/L	<0.5	3776951	<0.5	3776951	<0.5	<0.5	0.5	3776951
Bicarbonate (HCO3)	mg/L	390	3776951	180	3776951	28	2.4	0.5	3776951
Carbonate (CO3)	mg/L	<0.5	3776951	<0.5	3776951	<0.5	<0.5	0.5	3776951
Hydroxide (OH)	mg/L	<0.5	3776951	<0.5	3776951	<0.5	<0.5	0.5	3776951
<b>Anions</b>									
Dissolved Sulphate (SO4)	mg/L	120	3781163	59	3781163	1.5	<0.5	0.5	3781163
Dissolved Chloride (Cl)	mg/L	<0.5	3781097	<0.5	3781097	<0.5	<0.5	0.5	3781097
<b>Nutrients</b>									
Ammonia (N)	mg/L	0.010	3776978	0.011	3776978	0.009	0.010	0.005	3776978
Nitrate plus Nitrite (N)	mg/L	0.32	3779845	0.12	3788199	0.06	<0.02	0.02	3779845
Total Phosphorus (P)	mg/L	<0.005	3777651	<0.005	3777651	<0.005	<0.005	0.005	3777651
<b>Physical Properties</b>									
Conductivity	uS/cm	760	3776950	404	3776950	48	2	1	3776950
pH	pH Units	8.1	3776945	7.9	3776945	7.3	6.3		3776945
<b>Physical Properties</b>									
Total Suspended Solids	mg/L	1	3779650	2	3779650	1	<1	1	3779650
Total Dissolved Solids	mg/L	530	3779652	280	3783453	44	<10	10	3783453

N/A = Not Applicable

NC = Non-calculable

RDL = Reportable Detection Limit

Maxxam Job #: B011023  
Report Date: 2010/03/05

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
Sampler Initials: PI

**LOW LEVEL DISSOLVED METALS - WATER (WATER)**

Maxxam ID		S98126	S98127	S98128	S98129	S98130	S98131	S98132	S98133		
Sampling Date		2010/02/23 17:15	2010/02/24 08:05	2010/02/24 09:45	2010/02/24 10:25	2010/02/24 12:40	2010/02/24 14:10	2010/02/24	2010/02/24		
	Units	VW1	R1	VR	FC	VW2	P5	DUPLICATE	BLANK	RDL	QC Batch
<b>Misc. Inorganics</b>											
Dissolved Hardness (CaCO <sub>3</sub> )	mg/L	274	154	43.9	18.4	431	211	17.9	<0.5	0.5	3773705

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RDL = Reportable Detection Limit

Maxxam Job #: B011023  
 Report Date: 2010/03/05

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### LOW LEVEL DISSOLVED METALS - WATER (WATER)

Maxxam ID		S98126	S98127	S98128	S98129	S98130	S98131	S98132	S98133		
Sampling Date		2010/02/23 17:15	2010/02/24 08:05	2010/02/24 09:45	2010/02/24 10:25	2010/02/24 12:40	2010/02/24 14:10	2010/02/24	2010/02/24		
Units		VW1	R1	VR	FC	VW2	P5	DUPLICATE	BLANK	RDL	QC Batch
<b>Dissolved Metals by ICPMS</b>											
Dissolved Aluminum (Al)	ug/L	2.4	4.4	13.9	10.9	1.4	4.4	8.4	3.9(1)	0.2	3784637
Dissolved Antimony (Sb)	ug/L	0.06	0.08	0.11	0.02	0.33	0.14	0.02	<0.02	0.02	3784637
Dissolved Arsenic (As)	ug/L	0.41	0.44	0.20	0.06	0.31	0.32	0.05	<0.02	0.02	3784637
Dissolved Barium (Ba)	ug/L	79.6	69.8	37.1	17.9	114	84.6	17.5	0.71(1)	0.02	3784637
Dissolved Beryllium (Be)	ug/L	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	3784637
Dissolved Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3784637
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	50	3784637
Dissolved Cadmium (Cd)	ug/L	0.010	0.018	0.023	0.008	0.162	0.113	0.007	<0.005	0.005	3784637
Dissolved Chromium (Cr)	ug/L	<0.1	<0.1	0.2	<0.1	0.1	<0.1	<0.1	<0.1	0.1	3784637
Dissolved Cobalt (Co)	ug/L	0.082	0.213	0.027	0.008	0.007	0.012	0.013	<0.005	0.005	3784637
Dissolved Copper (Cu)	ug/L	0.42	1.01	3.06	0.36	0.32	0.51	0.26	0.37(1)	0.05	3784637
Dissolved Iron (Fe)	ug/L	30	380	18	9	1	13	6	3	1	3784637
Dissolved Lead (Pb)	ug/L	0.033	0.816	0.350	0.296	0.046	0.035	0.243	0.123(1)	0.005	3784637
Dissolved Lithium (Li)	ug/L	3.6	2.5	<0.5	2.3	4.0	4.3	2.2	<0.5	0.5	3784637
Dissolved Manganese (Mn)	ug/L	79.1	366	1.90	0.46	<0.05	7.22	0.27	0.37(1)	0.05	3784637
Dissolved Molybdenum (Mo)	ug/L	0.67	0.27	0.16	0.09	3.78	1.12	0.10	<0.05	0.05	3784637
Dissolved Nickel (Ni)	ug/L	0.47	0.57	0.36	0.18	1.51	3.25	0.17	0.04	0.02	3784637
Dissolved Selenium (Se)	ug/L	0.40	0.22	0.07	<0.04	4.28	1.25	<0.04	<0.04	0.04	3784637
Dissolved Silicon (Si)	ug/L	5090	4870	4990	7330	4410	3810	7180	<100	100	3784637
Dissolved Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3784637
Dissolved Strontium (Sr)	ug/L	306	237	65.8	31.8	372	243	31.3	0.17	0.05	3784637
Dissolved Thallium (Tl)	ug/L	<0.002	0.002	<0.002	<0.002	0.002	0.004	<0.002	<0.002	0.002	3784637
Dissolved Tin (Sn)	ug/L	<0.01	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	3784637
Dissolved Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3784637
Dissolved Uranium (U)	ug/L	3.84	3.07	0.493	0.060	8.93	1.65	0.059	0.003	0.002	3784637
Dissolved Vanadium (V)	ug/L	<0.2	<0.2	<0.2	<0.2	1.1	<0.2	<0.2	<0.2	0.2	3784637
Dissolved Zinc (Zn)	ug/L	2.9	5.0	11.0	1.7	8.4	13.6	1.4	1.6(1)	0.1	3784637
Dissolved Zirconium (Zr)	ug/L	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3784637
Dissolved Calcium (Ca)	mg/L	71.4	48.1	13.3	5.47	108	56.2	5.32	0.12	0.05	3789632
Dissolved Magnesium (Mg)	mg/L	23.3	8.29	2.62	1.16	39.3	17.3	1.12	<0.05	0.05	3789632
Dissolved Potassium (K)	mg/L	1.08	1.49	0.78	0.20	1.12	1.01	0.19	<0.05	0.05	3789632
Dissolved Sodium (Na)	mg/L	4.78	3.34	2.35	2.33	2.62	3.05	2.31	0.14	0.05	3789632
Dissolved Sulphur (S)	mg/L	26	11	<3	<3	44	26	<3	<3	3	3789632

RDL = Reportable Detection Limit

(1) - Dissolved greater than total. Reanalysis yields similar results

Maxxam Job #: B011023  
Report Date: 2010/03/05

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
Sampler Initials: PI

**LOW LEVEL TOTAL METALS - WATER (WATER)**

Maxxam ID		S98126	S98127	S98128	S98129	S98130	S98131	S98132	S98133		
Sampling Date		2010/02/23 17:15	2010/02/24 08:05	2010/02/24 09:45	2010/02/24 10:25	2010/02/24 12:40	2010/02/24 14:10	2010/02/24	2010/02/24		
	Units	VW1	R1	VR	FC	VW2	P5	DUPLICATE	BLANK	RDL	QC Batch
<b>Calculated Parameters</b>											
Total Hardness (CaCO <sub>3</sub> )	mg/L	261	152	44.8	17.6	436	205	18.5	1.2	0.5	3773710

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RDL = Reportable Detection Limit

Maxxam Job #: B011023  
 Report Date: 2010/03/05

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### LOW LEVEL TOTAL METALS - WATER (WATER)

Maxxam ID		S98126	S98127	S98128	S98129	S98130	S98131	S98132	S98133		
Sampling Date		2010/02/23 17:15	2010/02/24 08:05	2010/02/24 09:45	2010/02/24 10:25	2010/02/24 12:40	2010/02/24 14:10	2010/02/24	2010/02/24		
Units		VW1	R1	VR	FC	VW2	P5	DUPLICATE	BLANK	RDL	QC Batch
<b>Total Metals by ICPMS</b>											
Total Aluminum (Al)	ug/L	35.9	274	1180	34.8	6.2	17.2	29.1	1.2	0.2	3784571
Total Antimony (Sb)	ug/L	0.05	0.09	0.21	<0.02	0.31	0.13	0.07	<0.02	0.02	3784571
Total Arsenic (As)	ug/L	0.51	2.94	2.25	0.09	0.35	0.36	0.09	<0.02	0.02	3784571
Total Barium (Ba)	ug/L	78.9	101	91.8	18.1	113	83.0	18.1	0.06	0.02	3784571
Total Beryllium (Be)	ug/L	<0.01	0.05	0.39	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	3784571
Total Bismuth (Bi)	ug/L	<0.005	0.012	0.014	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3784571
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	50	3784571
Total Cadmium (Cd)	ug/L	0.016	0.081	0.348	0.008	0.155	0.124	0.006	<0.005	0.005	3784571
Total Chromium (Cr)	ug/L	<0.1	0.8	0.7	<0.1	0.2	0.2	<0.1	<0.1	0.1	3784571
Total Cobalt (Co)	ug/L	0.110	0.668	0.869	0.028	0.015	0.029	0.020	<0.005	0.005	3784571
Total Copper (Cu)	ug/L	0.56	2.90	7.06	0.31	0.52	0.63	0.31	0.10	0.05	3784571
Total Iron (Fe)	ug/L	115	5170	1310	44	12	64	38	1	1	3784571
Total Lead (Pb)	ug/L	0.222	3.02	12.5	0.251	0.214	0.146	2.11	0.073	0.005	3784571
Total Lithium (Li)	ug/L	3.7	2.7	1.4	2.3	3.9	4.1	2.4	<0.5	0.5	3784571
Total Manganese (Mn)	ug/L	82.0	396	212	2.57	0.48	10.2	1.76	0.08	0.05	3784571
Total Molybdenum (Mo)	ug/L	0.62	0.26	0.08	0.09	3.75	1.10	0.08	<0.05	0.05	3784571
Total Nickel (Ni)	ug/L	0.58	2.26	1.60	0.19	1.59	3.34	0.19	0.02	0.02	3784571
Total Selenium (Se)	ug/L	0.40	0.24	0.09	<0.04	4.39	1.29	<0.04	<0.04	0.04	3784571
Total Silicon (Si)	ug/L	5060	5410	5120	7010	4290	3520	7400	<100	100	3784571
Total Silver (Ag)	ug/L	<0.005	0.008	0.026	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3784571
Total Strontium (Sr)	ug/L	296	237	68.5	30.4	357	234	31.4	1.22	0.05	3784571
Total Thallium (Tl)	ug/L	<0.002	0.009	0.033	<0.002	<0.002	0.004	<0.002	<0.002	0.002	3784571
Total Tin (Sn)	ug/L	<0.01	0.06	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	3784571
Total Titanium (Ti)	ug/L	0.6	11.2	14.7	0.7	<0.5	<0.5	<0.5	<0.5	0.5	3784571
Total Uranium (U)	ug/L	3.70	3.14	5.59	0.083	8.73	1.64	0.101	<0.002	0.002	3784571
Total Vanadium (V)	ug/L	<0.2	0.9	1.3	<0.2	1.1	<0.2	<0.2	<0.2	0.2	3784571
Total Zinc (Zn)	ug/L	3.3	17.9	30.9	1.6	9.1	14.3	1.5	1.1	0.1	3784571
Total Zirconium (Zr)	ug/L	<0.1	0.3	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3784571
Total Calcium (Ca)	mg/L	68.1	47.8	13.8	5.22	109	53.7	5.43	0.29	0.05	3786024
Total Magnesium (Mg)	mg/L	22.1	7.87	2.52	1.11	39.9	17.3	1.19	0.13	0.05	3786024
Total Potassium (K)	mg/L	1.05	1.46	0.79	0.19	1.15	0.97	0.19	<0.05	0.05	3786024
Total Sodium (Na)	mg/L	4.48	3.12	2.18	2.22	2.68	3.01	2.18	<0.05	0.05	3786024
Total Sulphur (S)	mg/L	26	11	<3	<3	48	25	<3	<3	3	3786024

RDL = Reportable Detection Limit

Package 1      2.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

**General Comments**

- Sample S98128-: Ion Balance: NC = Not Calculable due to low ion sum [< 3 meq/L].
- Sample S98129-: Ion Balance: NC = Not Calculable due to low ion sum [< 3 meq/L].
- Sample S98132-: Ion Balance: NC = Not Calculable due to low ion sum [< 3 meq/L].
- Sample S98133-: Ion Balance: NC = Not Calculable due to low ion sum [< 3 meq/L].

Maxxam Job #: B011023  
 Report Date: 2010/03/05

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3776950	Conductivity	2010/02/27			101	80 - 120	<1	uS/cm	NC	20
3776951	Alkalinity (Total as CaCO3)	2010/02/27	NC	80 - 120	102	80 - 120	<0.5	mg/L	NC	20
3776951	Alkalinity (PP as CaCO3)	2010/02/27					<0.5	mg/L	NC	20
3776951	Bicarbonate (HCO3)	2010/02/27					<0.5	mg/L	NC	20
3776951	Carbonate (CO3)	2010/02/27					<0.5	mg/L	NC	20
3776951	Hydroxide (OH)	2010/02/27					<0.5	mg/L	NC	20
3776978	Ammonia (N)	2010/02/27	NC	80 - 120	94	80 - 120	<0.005	mg/L	NC	20
3777651	Total Phosphorus (P)	2010/03/01	102	80 - 120	94	80 - 120	<0.005	mg/L	NC	20
3779650	Total Suspended Solids	2010/03/02			103	80 - 120	<1	mg/L		
3779652	Total Dissolved Solids	2010/03/03	106	80 - 120	94	80 - 120	<10	mg/L	3.8	20
3779845	Nitrate plus Nitrite (N)	2010/03/01	99	80 - 120	103	80 - 120	<0.02	mg/L	NC	25
3779850	Nitrite (N)	2010/03/01	99	80 - 120	105	80 - 120	<0.005	mg/L	NC	20
3781097	Dissolved Chloride (Cl)	2010/03/01	112	80 - 120	101	80 - 120	<0.5	mg/L	NC	20
3781163	Dissolved Sulphate (SO4)	2010/03/01	101	80 - 120	99	80 - 120	<0.5	mg/L	0.9	20
3781503	Fluoride (F)	2010/03/02	98	80 - 120	94	80 - 120	<0.01	mg/L	0.8	20
3783453	Total Dissolved Solids	2010/03/03	116	80 - 120	92	80 - 120	<10	mg/L	NC	20
3784571	Total Arsenic (As)	2010/03/03	97	80 - 120	94	80 - 120	<0.02	ug/L	1.1	20
3784571	Total Beryllium (Be)	2010/03/03	100	80 - 120	92	80 - 120	<0.01	ug/L	NC	20
3784571	Total Cadmium (Cd)	2010/03/03	101	80 - 120	95	80 - 120	<0.005	ug/L	NC	20
3784571	Total Chromium (Cr)	2010/03/03	96	80 - 120	96	80 - 120	<0.1	ug/L	NC	20
3784571	Total Cobalt (Co)	2010/03/03	94	80 - 120	95	80 - 120	<0.005	ug/L	NC	20
3784571	Total Copper (Cu)	2010/03/03	98	80 - 120	98	80 - 120	<0.05	ug/L	2.2	20
3784571	Total Lead (Pb)	2010/03/03	102	80 - 120	100	80 - 120	<0.005	ug/L	NC	20
3784571	Total Lithium (Li)	2010/03/03	102	80 - 120	99	80 - 120	<0.5	ug/L	NC	20
3784571	Total Nickel (Ni)	2010/03/03	97	80 - 120	95	80 - 120	<0.02	ug/L	NC	20
3784571	Total Selenium (Se)	2010/03/03	104	80 - 120	99	80 - 120	<0.04	ug/L	NC	20
3784571	Total Uranium (U)	2010/03/03	100	80 - 120	102	80 - 120	<0.002	ug/L	NC	20
3784571	Total Vanadium (V)	2010/03/03	96	80 - 120	94	80 - 120	<0.2	ug/L	NC	20
3784571	Total Zinc (Zn)	2010/03/03	120	80 - 120	98	80 - 120	<0.1	ug/L	NC	20
3784571	Total Aluminum (Al)	2010/03/03					<0.2	ug/L	0.4	20
3784571	Total Antimony (Sb)	2010/03/03					<0.02	ug/L	NC	20
3784571	Total Barium (Ba)	2010/03/03					<0.02	ug/L	0.3	20
3784571	Total Bismuth (Bi)	2010/03/03					<0.005	ug/L	NC	20
3784571	Total Boron (B)	2010/03/03					<50	ug/L	NC	20
3784571	Total Iron (Fe)	2010/03/03					<1	ug/L		
3784571	Total Manganese (Mn)	2010/03/03					<0.05	ug/L	2.5	20
3784571	Total Molybdenum (Mo)	2010/03/03					<0.05	ug/L	NC	20
3784571	Total Silicon (Si)	2010/03/03					<100	ug/L		
3784571	Total Silver (Ag)	2010/03/03					<0.005	ug/L	NC	20

Maxxam Job #: B011023  
 Report Date: 2010/03/05

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3784571	Total Strontium (Sr)	2010/03/03					<0.05	ug/L	1.4	20
3784571	Total Thallium (Tl)	2010/03/03					<0.002	ug/L	NC	20
3784571	Total Tin (Sn)	2010/03/03					<0.01	ug/L	NC	20
3784571	Total Titanium (Ti)	2010/03/03					<0.5	ug/L		
3784571	Total Zirconium (Zr)	2010/03/03					<0.1	ug/L		
3784637	Dissolved Arsenic (As)	2010/03/04	94	80 - 120	91	80 - 120	<0.02	ug/L	2.0	20
3784637	Dissolved Beryllium (Be)	2010/03/04	97	80 - 120	93	80 - 120	<0.01	ug/L	NC	20
3784637	Dissolved Cadmium (Cd)	2010/03/04	97	80 - 120	96	80 - 120	<0.005	ug/L	NC	20
3784637	Dissolved Chromium (Cr)	2010/03/04	94	80 - 120	95	80 - 120	<0.1	ug/L	NC	20
3784637	Dissolved Cobalt (Co)	2010/03/04	90	80 - 120	95	80 - 120	<0.005	ug/L	9.2	20
3784637	Dissolved Copper (Cu)	2010/03/04	88	80 - 120	98	80 - 120	<0.05	ug/L	3.7	20
3784637	Dissolved Lead (Pb)	2010/03/04	94	80 - 120	102	80 - 120	<0.005	ug/L	8.9	20
3784637	Dissolved Lithium (Li)	2010/03/04	99	80 - 120	97	80 - 120	<0.5	ug/L	4.5	20
3784637	Dissolved Nickel (Ni)	2010/03/04	91	80 - 120	96	80 - 120	<0.02	ug/L	4.3	20
3784637	Dissolved Selenium (Se)	2010/03/04	101	80 - 120	99	80 - 120	<0.04	ug/L	3.9	20
3784637	Dissolved Uranium (U)	2010/03/04	96	80 - 120	104	80 - 120	<0.002	ug/L	0.2	20
3784637	Dissolved Vanadium (V)	2010/03/04	96	80 - 120	94	80 - 120	<0.2	ug/L	NC	20
3784637	Dissolved Zinc (Zn)	2010/03/04	94	80 - 120	99	80 - 120	<0.1	ug/L	7.1	20
3784637	Dissolved Aluminum (Al)	2010/03/04					<0.2	ug/L	4.4	20
3784637	Dissolved Antimony (Sb)	2010/03/04					<0.02	ug/L	NC	20
3784637	Dissolved Barium (Ba)	2010/03/04					<0.02	ug/L	1.7	20
3784637	Dissolved Bismuth (Bi)	2010/03/04					<0.005	ug/L	NC	20
3784637	Dissolved Boron (B)	2010/03/04					<50	ug/L	NC	20
3784637	Dissolved Iron (Fe)	2010/03/04					<1	ug/L	1.2	20
3784637	Dissolved Manganese (Mn)	2010/03/04					<0.05	ug/L	0.8	20
3784637	Dissolved Molybdenum (Mo)	2010/03/04					<0.05	ug/L	1.9	20
3784637	Dissolved Silicon (Si)	2010/03/04					<100	ug/L	0.7	20
3784637	Dissolved Silver (Ag)	2010/03/04					<0.005	ug/L	NC	20
3784637	Dissolved Strontium (Sr)	2010/03/04					<0.05	ug/L	0.9	20
3784637	Dissolved Thallium (Tl)	2010/03/04					<0.002	ug/L	NC	20
3784637	Dissolved Tin (Sn)	2010/03/04					<0.01	ug/L	NC	20
3784637	Dissolved Titanium (Ti)	2010/03/04					<0.5	ug/L	NC	20
3784637	Dissolved Zirconium (Zr)	2010/03/04					<0.1	ug/L	NC	20
3785292	Total Organic Carbon (C)	2010/03/03	95	80 - 120	100	80 - 120	<0.5	mg/L	NC	20
3785361	Dissolved Organic Carbon (C)	2010/03/03	91	80 - 120	94	80 - 120	<0.5	mg/L	NC	20
3786024	Total Calcium (Ca)	2010/03/03					<0.05	mg/L		
3786024	Total Magnesium (Mg)	2010/03/03					<0.05	mg/L	1.7	20
3786024	Total Potassium (K)	2010/03/03					<0.05	mg/L		
3786024	Total Sodium (Na)	2010/03/03					<0.05	mg/L		

Maxxam Job #: B011023  
 Report Date: 2010/03/05

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	
3786024	Total Sulphur (S)	2010/03/03					<3	mg/L			
3788199	Nitrate plus Nitrite (N)	2010/03/04	97	80 - 120	100	80 - 120	<0.02	mg/L	NC	25	
3789632	Dissolved Calcium (Ca)	2010/03/04					<0.05	mg/L	1.5	20	
3789632	Dissolved Magnesium (Mg)	2010/03/04					<0.05	mg/L	0.8	20	
3789632	Dissolved Potassium (K)	2010/03/04					<0.05	mg/L	2.1	20	
3789632	Dissolved Sodium (Na)	2010/03/04					<0.05	mg/L	1	20	
3789632	Dissolved Sulphur (S)	2010/03/04					<3	mg/L	1.0	20	
3792900	Weak Acid Dissoc. Cyanide (CN)	2010/03/05	100	80 - 120	101	80 - 120	<0.0005	mg/L	NC	20	

N/A = Not Applicable

RPD = Relative Percent Difference

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.



8577 Commerce Court  
Burnaby, BC V5A 4N5  
[www.maxxamanalytics.com](http://www.maxxamanalytics.com)  
Phone: (604) 444-4808  
Fax: (604) 444-4511  
Toll-Free: 1-800-440-4808

### CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

PAGE 1 OF 1

08310095

MAXXAM JOB #  
B011023

### ANALYSIS REQUEST

COC #

COMPANY NAME: Access Consulting Group	CLIENT PROJECT NO.: SFN-07-01
COMPANY ADDRESS: #3 Calcite Business Center 151 Industrial Rd Whitehorse, YT Y1A 2V3	TEL.: (867) 668-6463 E-MAIL: <a href="mailto:paul@accessconsulting.ca">paul@accessconsulting.ca</a> <a href="mailto:david@accessconsulting.ca">david@accessconsulting.ca</a> FAX: (867) 668-6680
SAMPLER NAME (PRINT): Paul Inglis	PROJECT MANAGER: David Petkovich
LABORATORY CONTACT: Kim Webber	

	FIELD SAMPLE ID		MATRIX	SAMPLING			# CONTAINERS	General (Alk, EC, pH)	TSS (TDS)	Total Metals (Low Level)	Dissolved Metals (Low Level)	DOC	Anions -(Cl, F, NH3, NO2, NO3, SO4)	Cyanide	Phosphorus, TOC
				GROUNDWATER	surface water	drinking water									
							DD/MM/YY								
1	VW1			X			23-Feb-10	17:15	8	X	X	X	X	X	
2	R1			X			24-Feb-10	8:05	8	X	X	X	X	X	x
3	VR			X			24-Feb-10	9:45	8	X	X	X	X	X	x
4	FC			X			24-Feb-10	10:25	8	X	X	X	X	X	x
5	VW2			X			23-Feb-10	12:40	8	X	X	X	X	X	x
6	P5			X			24-Feb-10	14:10	8	X	X	X	X	X	x
7	Duplicate			X			24-Feb-10		8	X	X	X	X	X	x
8	Blank			X			24-Feb-10		8	X	X	X	X	X	x
9				X											
10				X											
11				X											
12				X											

TAT (Turnaround Time) <b>LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL</b>	PO NUMBER OR QUOTE NUMBER: <b>SFN-09-02</b>	SPECIAL DETECTION LIMITS / CONTAMINANT TYPE: <b>AS per previous SFN-07-01/ SFN-09-02 sampling</b>	CCME CSR AB TIER 1 OTHER	RECEIVED BY: <b>2/2/12</b>	LAB USE ONLY
* Some exceptions apply - please contact laboratory	ACCOUNTING CONTACT: <b>Colette MacMillon</b>	SPECIAL REPORTING OR BILLING INSTRUCTIONS:	# JARS USED:	ARRIVAL TEMPERATURE °C: <b>2/2/12</b>	DUE DATE:
STANDARD 5 BUSINESS DAYS	RELINQUISHED BY SAMPLER: <b>Paul Inglis</b>	DATE: DD/MM/YY <b>25/02/2010</b>	TIME: <b>8:30</b>	RECEIVED BY:	LOG IN CHECK:
RUSH 3 BUSINESS DAYS	RELINQUISHED BY:	DATE: DD/MM/YY	TIME:	RECEIVED BY:	
RUSH 2 BUSINESS DAYS	RELINQUISHED BY:	DATE: DD/MM/YY	TIME:	RECEIVED BY:	
URGENT 1 BUSINESS DAY	RELINQUISHED BY:	DATE: DD/MM/YY <b>26/2/12</b>	TIME: <b>13:15</b>	RECEIVED BY LABORATORY: <b>b</b>	
OTHER BUSINESS DAYS					

**CUSTODY  
RECORD**



Your P.O. #: SFN-09-02  
 Your Project #: SFN-07-01  
 Your C.O.C. #: 08310134

**Attention: David Petkovich**  
 ACCESS CONSULTING GROUP  
 #3 Calcite  
 151 Industrial Road  
 WHITEHORSE, YT  
 CANADA Y1A 3C8

Report Date: 2010/03/08

## CERTIFICATE OF ANALYSIS

**MAXXAM JOB #: B011427**  
 Received: 2010/03/01, 14:00

Sample Matrix: Water  
 # Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Water	8	2010/03/03	2010/03/03	BRN SOP-00264 R4.0	Based on SM2320B
Chloride by Automated Colourimetry	8	N/A	2010/03/03	BRN-SOP 00234 R3.0	Based on EPA 325.2
Cyanide WAD (weak acid dissociable)	8	N/A	2010/03/05	BRN SOP-00227 R3.0	Based on SM-4500CN I
Carbon (DOC)	8	N/A	2010/03/03	BRN SOP-00224 R4.0	Based on M 860-87T
Conductance - water	8	N/A	2010/03/03	BRN SOP-00264 R2.0	Based on SM-2510B
Fluoride - Mining Clients	8	N/A	2010/03/02	BRN SOP-00225 R1.0	Based SM - 4500 F C
Hardness Total (calculated as CaCO <sub>3</sub> )	8	N/A	2010/03/08		
Hardness (calculated as CaCO <sub>3</sub> )	8	N/A	2010/03/08		
Ion Balance	8	N/A	2010/03/08		
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	8	N/A	2010/03/06	BRN SOP-00206 R7.0	Based on EPA 200.8
Elements by ICPMS Low Level (dissolved) (1)	8	N/A	2010/03/06	BRN SOP-00206 R7.0	Based on EPA 200.8
Elements by ICPMS Low Level (total) (1)	8	2010/03/04	2010/03/06	BRN SOP-00206 R7.0	Based on EPA 200.8
Na, K, Ca, Mg, S by CRC ICPMS (total)	8	2010/03/04	2010/03/06	BRN SOP-00206 R7.0	Based on EPA 200.8
Ammonia (N)	8	N/A	2010/03/03	BRN SOP-00232 R4.0	Based on USEPA 350.1
Nitrate + Nitrite (N)	8	N/A	2010/03/04	ING233 Rev.4.4	Based on EPA 353.2
Nitrite (N) by CFA	8	N/A	2010/03/04	BRN SOP-00233 R1.0	EPA 353.2
Nitrogen - Nitrate (as N)	8	N/A	2010/03/04		
Filter and HNO <sub>3</sub> Preserve for Metals	8	N/A	2010/03/02	BRN WI-00006 R1.0	Based on EPA 200.2
pH Water	8	N/A	2010/03/03	BRN SOP-00264 R4.0	Based on SM-4500H+B
Sulphate by Automated Colourimetry	8	N/A	2010/03/04	BRN-SOP 00243 R1.0	Based on EPA 375.4
Total Dissolved Solids (Filt. Residue)	8	N/A	2010/03/03	BRN SOP 00276 R4.0	SM 2540C
Carbon (Total Organic)	8	N/A	2010/03/03	BRN SOP-00224 R4.0	Based on SM-5310C
Total Phosphorus	8	N/A	2010/03/02	BRN SOP-00236 R4.0	SM 4500
Total Suspended Solids	8	N/A	2010/03/03	BRN SOP-00277 R5.0	Based on SM-2540 D

\* Results relate only to the items tested.

(1) SCC/CAEAL

..2

Maxxam Job #: B011427  
Report Date: 2010/03/08

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01  
Your P.O. #: SFN-09-02  
Sampler Initials: PI

-2-

#### Encryption Key

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

KIMBERLEY WEBBER, BBY Customer Service  
Email: kim.webber@maxxamanalytics.com  
Phone# (604) 444-4808 Ext:259

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

Total cover pages: 2

Maxxam Job #: B011427  
 Report Date: 2010/03/08

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		T00650	T00651	T00652	T00653	T00654	T00655	T00656	T00657		
Sampling Date		2010/02/26 09:50	2010/02/26 10:10	2010/02/26 11:10	2010/02/26 10:50	2010/02/26 11:30	2010/02/26 12:00	2010/02/26 12:25	2010/02/26		
	Units	P4	A1	R4	R6	R3	V6A	P1	DUPLICATE	RDL	QC Batch
<b>Misc. Inorganics</b>											
Fluoride (F)	mg/L	0.12	0.11	0.12	0.08	0.13	0.10	0.12	0.10	0.01	3781503
<b>Preparation</b>											
Filter and HNO3 Preservation	N/A	FIELD	FIELD	N/A	ONSITE						
<b>ANIONS</b>											
Nitrite (N)	mg/L	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	0.005	3788202
<b>Calculated Parameters</b>											
Ion Balance	N/A	0.93	0.94	0.98	0.95	0.98	0.98	0.96	0.95	0.01	3781387
Nitrate (N)	mg/L	0.10	0.24	0.25	0.22	0.23	0.33	0.08	0.35	0.02	3781388
<b>Misc. Inorganics</b>											
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0005	0.0005	3792900
Dissolved Organic Carbon (C)	mg/L	0.8	1.3	1.5	0.9	1.5	1.8	1.4	1.9	0.5	3785361
Alkalinity (Total as CaCO3)	mg/L	160	150	160	150	170	120	160	130	0.5	3786679
Total Organic Carbon (C)	mg/L	1.4	1.2	1.6	1.3	1.4	1.5	1.6	1.9	0.5	3785292
Alkalinity (PP as CaCO3)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3786679
Bicarbonate (HCO3)	mg/L	200	180	200	190	200	150	190	150	0.5	3786679
Carbonate (CO3)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3786679
Hydroxide (OH)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3786679
<b>Anions</b>											
Dissolved Sulphate (SO4)	mg/L	80	56	140	23	170	64	79	62	0.5	3787028
Dissolved Chloride (Cl)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3787027
<b>Nutrients</b>											
Ammonia (N)	mg/L	<0.005	<0.005	<0.005	<0.005	0.025	<0.005	<0.005	<0.005	0.005	3787024
Nitrate plus Nitrite (N)	mg/L	0.10	0.24	0.25	0.22	0.24	0.33	0.08	0.35	0.02	3788199
Total Phosphorus (P)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3780674
<b>Physical Properties</b>											
Conductivity	uS/cm	435	375	536	327	606	348	430	356	1	3786677
pH	pH Units	8.1	8.1	8.0	8.1	8.0	8.0	8.1	8.1		3786560
<b>Physical Properties</b>											
Total Suspended Solids	mg/L	<1	<1	<1	<1	<1	2	<1	3	1	3782118
Total Dissolved Solids	mg/L	330	220	380	200	390	210	260	220	10	3783453

N/A = Not Applicable

RDL = Reportable Detection Limit

### LOW LEVEL DISSOLVED METALS - WATER (WATER)

Maxxam ID		T00650	T00651	T00652	T00653	T00654	T00655	T00656	T00657		
Sampling Date		2010/02/26 09:50	2010/02/26 10:10	2010/02/26 11:10	2010/02/26 10:50	2010/02/26 11:30	2010/02/26 12:00	2010/02/26 12:25	2010/02/26		
Misc. Inorganics	Units	P4	A1	R4	R6	R3	V6A	P1	DUPLICATE	RDL	QC Batch
Dissolved Hardness (CaCO <sub>3</sub> )	mg/L	222	186	283	166	323	180	225	177	0.5	3781057

---

RDL = Reportable Detection Limit

Maxxam Job #: B011427  
 Report Date: 2010/03/08

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### LOW LEVEL DISSOLVED METALS - WATER (WATER)

Maxxam ID		T00650	T00651	T00652	T00653	T00654	T00655	T00656	T00657		
Sampling Date		2010/02/26 09:50	2010/02/26 10:10	2010/02/26 11:10	2010/02/26 10:50	2010/02/26 11:30	2010/02/26 12:00	2010/02/26 12:25	2010/02/26		
Units		P4	A1	R4	R6	R3	V6A	P1	DUPLICATE	RDL	QC Batch
<b>Dissolved Metals by ICPMS</b>											
Dissolved Aluminum (Al)	ug/L	2.0	1.6	1.3	1.7	1.1	4.9	1.4	4.9	0.2	3789409
Dissolved Antimony (Sb)	ug/L	0.16	0.13	0.11	0.12	0.06	0.08	0.22	0.07	0.02	3789409
Dissolved Arsenic (As)	ug/L	0.28	0.64	0.24	0.33	0.14	0.75	0.25	0.72	0.02	3789409
Dissolved Barium (Ba)	ug/L	71.6	79.5	85.7	89.6	68.6	46.7	87.4	45.8	0.02	3789409
Dissolved Beryllium (Be)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Dissolved Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	50	3789409
Dissolved Cadmium (Cd)	ug/L	0.036	0.006	0.006	0.008	0.013	0.044	0.072	0.047	0.005	3789409
Dissolved Chromium (Cr)	ug/L	<0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.1	3789409
Dissolved Cobalt (Co)	ug/L	0.008	0.019	0.031	0.013	0.138	0.019	0.015	0.011	0.005	3789409
Dissolved Copper (Cu)	ug/L	0.34	0.42	0.41	0.29	0.29	0.33	0.28	0.28	0.05	3789409
Dissolved Iron (Fe)	ug/L	2	5	10	14	8	10	10	10	1	3789409
Dissolved Lead (Pb)	ug/L	0.066(1)	0.060(1)	0.017	0.025	0.005	0.073	0.006	0.069	0.005	3789409
Dissolved Lithium (Li)	ug/L	3.3	3.7	4.5	2.6	5.8	1.5	3.2	1.5	0.5	3789409
Dissolved Manganese (Mn)	ug/L	0.11	1.45	27.1	6.13	202	1.17	6.90	0.93	0.05	3789409
Dissolved Molybdenum (Mo)	ug/L	0.96	1.11	0.56	1.38	0.33	0.19	1.12	0.18	0.05	3789409
Dissolved Nickel (Ni)	ug/L	0.43	0.37	0.72	0.23	1.80	0.35	0.68	0.27	0.02	3789409
Dissolved Selenium (Se)	ug/L	1.56	0.81	0.70	0.85	0.58	0.21	2.50	0.20	0.04	3789409
Dissolved Silicon (Si)	ug/L	3130	5240	4750	5050	5490	5110	3210	5050	100	3789409
Dissolved Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3789409
Dissolved Strontium (Sr)	ug/L	235	181	270	149	306	235	230	232	0.05	3789409
Dissolved Thallium (Tl)	ug/L	<0.002	<0.002	<0.002	<0.002	0.002	0.003	0.003	0.003	0.002	3789409
Dissolved Tin (Sn)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	3789409
Dissolved Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3789409
Dissolved Uranium (U)	ug/L	2.28	2.55	2.71	2.49	2.78	5.32	1.74	5.24	0.002	3789409
Dissolved Vanadium (V)	ug/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	3789409
Dissolved Zinc (Zn)	ug/L	2.6(1)	1.7	3.5	0.9	6.2	22.3	3.8	21.3	0.1	3789409
Dissolved Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3789409
Dissolved Calcium (Ca)	mg/L	58.7	55.9	85.1	48.9	96.5	53.4	61.4	52.4	0.05	3794291
Dissolved Magnesium (Mg)	mg/L	18.2	11.4	17.1	10.6	19.9	11.4	17.3	11.2	0.05	3794291
Dissolved Potassium (K)	mg/L	0.76	1.53	1.76	1.30	1.80	0.54	0.89	0.54	0.05	3794291
Dissolved Sodium (Na)	mg/L	2.10	3.34	5.31	2.11	6.51	1.98	2.00	1.91	0.05	3794291
Dissolved Sulphur (S)	mg/L	26	18	49	7	61	23	27	21	3	3794291

RDL = Reportable Detection Limit

(1) - Dissolved greater than total. Reanalysis yields similar results

### LOW LEVEL TOTAL METALS - WATER (WATER)

Maxxam ID		T00650	T00651	T00652	T00653	T00654	T00655	T00656	T00657		
Sampling Date		2010/02/26 09:50	2010/02/26 10:10	2010/02/26 11:10	2010/02/26 10:50	2010/02/26 11:30	2010/02/26 12:00	2010/02/26 12:25	2010/02/26		
	Units	P4	A1	R4	R6	R3	V6A	P1	DUPLICATE	RDL	QC Batch
<b>Calculated Parameters</b>											
Total Hardness (CaCO <sub>3</sub> )	mg/L	218	177	262	160	310	172	208	165	0.5	3781386

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RDL = Reportable Detection Limit

Maxxam Job #: B011427  
 Report Date: 2010/03/08

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### LOW LEVEL TOTAL METALS - WATER (WATER)

Maxxam ID		T00650	T00651	T00652	T00653	T00654	T00655	T00656	T00657		
Sampling Date		2010/02/26 09:50	2010/02/26 10:10	2010/02/26 11:10	2010/02/26 10:50	2010/02/26 11:30	2010/02/26 12:00	2010/02/26 12:25	2010/02/26		
Units		P4	A1	R4	R6	R3	V6A	P1	DUPLICATE	RDL	QC Batch
<b>Total Metals by ICPMS</b>											
Total Aluminum (Al)	ug/L	2.9	7.8	2.9	4.8	1.2	13.8	2.2	16.1	0.2	3787525
Total Antimony (Sb)	ug/L	0.17	0.14	0.11	0.12	0.06	0.10	0.21	0.12	0.02	3787525
Total Arsenic (As)	ug/L	0.28	0.67	0.25	0.48	0.19	0.88	0.26	0.80	0.02	3787525
Total Barium (Ba)	ug/L	71.6	78.2	84.6	89.9	71.5	46.9	82.5	44.9	0.02	3787525
Total Beryllium (Be)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Total Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	50
Total Cadmium (Cd)	ug/L	0.042	0.011	0.010	0.008	0.017	0.050	0.071	0.060	0.005	3787525
Total Chromium (Cr)	ug/L	<0.1	0.1	0.2	0.1	0.1	<0.1	<0.1	0.1	0.1	3787525
Total Cobalt (Co)	ug/L	0.010	0.026	0.041	0.026	0.162	0.035	0.014	0.037	0.005	3787525
Total Copper (Cu)	ug/L	0.31	0.42	0.44	0.26	0.30	0.41	0.26	0.47	0.05	3787525
Total Iron (Fe)	ug/L	6	35	28	112	33	36	11	42	1	3787525
Total Lead (Pb)	ug/L	0.028	0.034	0.117	0.042	0.019	0.348	0.011	0.416	0.005	3787525
Total Lithium (Li)	ug/L	3.4	3.7	4.4	2.6	5.9	1.5	3.1	1.5	0.5	3787525
Total Manganese (Mn)	ug/L	0.34	6.25	32.1	10.6	204	3.59	5.96	8.08	0.05	3787525
Total Molybdenum (Mo)	ug/L	0.92	1.10	0.55	1.35	0.34	0.20	1.07	0.28	0.05	3787525
Total Nickel (Ni)	ug/L	0.41	0.39	0.73	0.24	1.71	0.35	0.69	0.35	0.02	3787525
Total Selenium (Se)	ug/L	1.64	1.13	0.83	0.91	0.64	0.21	2.64	0.21	0.04	3787525
Total Silicon (Si)	ug/L	3150	6680	5280	4910	5560	4920	3050	4830	100	3787525
Total Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3787525
Total Strontium (Sr)	ug/L	229	171	253	142	296	227	219	217	0.05	3787525
Total Thallium (Tl)	ug/L	<0.002	<0.002	0.002	<0.002	0.002	0.003	0.002	0.003	0.002	3787525
Total Tin (Sn)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Total Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5
Total Uranium (U)	ug/L	2.26	2.49	2.65	2.41	2.79	5.18	1.65	5.00	0.002	3787525
Total Vanadium (V)	ug/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Total Zinc (Zn)	ug/L	2.1	1.5	3.3	0.7	5.6	23.7	2.9	24.6	0.1	3787525
Total Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Total Calcium (Ca)	mg/L	57.4	52.7	78.5	46.9	92.3	50.9	57.0	48.8	0.05	3794158
Total Magnesium (Mg)	mg/L	18.0	11.0	16.0	10.3	19.3	11.0	16.1	10.5	0.05	3794158
Total Potassium (K)	mg/L	0.72	1.41	1.61	1.24	1.72	0.51	0.82	0.51	0.05	3794158
Total Sodium (Na)	mg/L	2.06	3.24	5.03	2.02	6.30	1.92	1.86	1.85	0.05	3794158
Total Sulphur (S)	mg/L	28	21	48	8	59	22	26	22	3	3794158

RDL = Reportable Detection Limit

Package 1 7.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

**General Comments**

Maxxam Job #: B011427  
 Report Date: 2010/03/08

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3780674	Total Phosphorus (P)	2010/03/02	93	80 - 120	94	80 - 120	<0.005	mg/L	NC	20
3781503	Fluoride (F)	2010/03/02	98	80 - 120	94	80 - 120	<0.01	mg/L	0.8	20
3782118	Total Suspended Solids	2010/03/03			97	80 - 120	<1	mg/L		
3783453	Total Dissolved Solids	2010/03/03	116	80 - 120	92	80 - 120	<10	mg/L	NC	20
3785292	Total Organic Carbon (C)	2010/03/03	95	80 - 120	100	80 - 120	<0.5	mg/L	NC	20
3785361	Dissolved Organic Carbon (C)	2010/03/03	91	80 - 120	94	80 - 120	<0.5	mg/L	0.5	20
3786677	Conductivity	2010/03/03			101	80 - 120	<1	uS/cm	0.6	20
3786679	Alkalinity (Total as CaCO <sub>3</sub> )	2010/03/03	NC	80 - 120	102	80 - 120	<0.5	mg/L	0.9	20
3786679	Alkalinity (PP as CaCO <sub>3</sub> )	2010/03/03					<0.5	mg/L	NC	20
3786679	Bicarbonate (HCO <sub>3</sub> )	2010/03/03					<0.5	mg/L	0.9	20
3786679	Carbonate (CO <sub>3</sub> )	2010/03/03					<0.5	mg/L	NC	20
3786679	Hydroxide (OH)	2010/03/03					<0.5	mg/L	NC	20
3787024	Ammonia (N)	2010/03/03			89	80 - 120	<0.005	mg/L	NC	20
3787027	Dissolved Chloride (Cl)	2010/03/03	NC	80 - 120	100	80 - 120	<0.5	mg/L	NC	20
3787028	Dissolved Sulphate (SO <sub>4</sub> )	2010/03/04	NC	80 - 120	97	80 - 120	<0.5	mg/L	0.7	20
3787525	Total Arsenic (As)	2010/03/06	108	80 - 120	96	80 - 120	<0.02	ug/L	1.9	20
3787525	Total Beryllium (Be)	2010/03/06	105	80 - 120	101	80 - 120	<0.01	ug/L	NC	20
3787525	Total Cadmium (Cd)	2010/03/06	104	80 - 120	100	80 - 120	<0.005	ug/L	17.2	20
3787525	Total Chromium (Cr)	2010/03/06	102	80 - 120	100	80 - 120	<0.1	ug/L	NC	20
3787525	Total Cobalt (Co)	2010/03/06	99	80 - 120	98	80 - 120	<0.005	ug/L	NC	20
3787525	Total Copper (Cu)	2010/03/06	95	80 - 120	104	80 - 120	<0.05	ug/L	1.3	20
3787525	Total Lead (Pb)	2010/03/06	99	80 - 120	108	80 - 120	<0.005	ug/L	6.6	20
3787525	Total Lithium (Li)	2010/03/06	107	80 - 120	106	80 - 120	<0.5	ug/L	0.4	20
3787525	Total Nickel (Ni)	2010/03/06	97	80 - 120	100	80 - 120	<0.02	ug/L	1.8	20
3787525	Total Selenium (Se)	2010/03/06	111	80 - 120	102	80 - 120	<0.04	ug/L	1.2	20
3787525	Total Uranium (U)	2010/03/06	110	80 - 120	107	80 - 120	<0.002	ug/L	0.4	20
3787525	Total Vanadium (V)	2010/03/06	104	80 - 120	95	80 - 120	<0.2	ug/L	NC	20
3787525	Total Zinc (Zn)	2010/03/06	102	80 - 120	104	80 - 120	<0.1	ug/L	13.7	20
3787525	Total Aluminum (Al)	2010/03/06					<0.2	ug/L	3.9	20
3787525	Total Antimony (Sb)	2010/03/06					<0.02	ug/L	2.0	20
3787525	Total Barium (Ba)	2010/03/06					<0.02	ug/L	0.03	20
3787525	Total Bismuth (Bi)	2010/03/06					<0.005	ug/L	NC	20
3787525	Total Boron (B)	2010/03/06					<50	ug/L	NC	20
3787525	Total Iron (Fe)	2010/03/06					<1	ug/L	3.4	20
3787525	Total Manganese (Mn)	2010/03/06					<0.05	ug/L	2.6	20
3787525	Total Molybdenum (Mo)	2010/03/06					<0.05	ug/L	5.3	20
3787525	Total Silicon (Si)	2010/03/06					<100	ug/L	1.3	20
3787525	Total Silver (Ag)	2010/03/06					<0.005	ug/L	NC	20
3787525	Total Strontium (Sr)	2010/03/06					<0.05	ug/L	0.3	20

Maxxam Job #: B011427  
 Report Date: 2010/03/08

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: PI

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3787525	Total Thallium (Tl)	2010/03/06					<0.002	ug/L	NC	20
3787525	Total Tin (Sn)	2010/03/06					<0.01	ug/L	NC	20
3787525	Total Titanium (Ti)	2010/03/06					<0.5	ug/L	NC	20
3787525	Total Zirconium (Zr)	2010/03/06					<0.1	ug/L	NC	20
3788199	Nitrate plus Nitrite (N)	2010/03/04	97	80 - 120	100	80 - 120	<0.02	mg/L	NC	25
3788202	Nitrite (N)	2010/03/04	100	80 - 120	104	80 - 120	<0.005	mg/L	NC	20
3789409	Dissolved Arsenic (As)	2010/03/06	106	80 - 120	96	80 - 120	<0.02	ug/L	NC	20
3789409	Dissolved Beryllium (Be)	2010/03/06	101	80 - 120	96	80 - 120	<0.01	ug/L	NC	20
3789409	Dissolved Cadmium (Cd)	2010/03/06	104	80 - 120	95	80 - 120	<0.005	ug/L	NC	20
3789409	Dissolved Chromium (Cr)	2010/03/06	103	80 - 120	101	80 - 120	<0.1	ug/L	NC	20
3789409	Dissolved Cobalt (Co)	2010/03/06	98	80 - 120	100	80 - 120	<0.005	ug/L	6.3	20
3789409	Dissolved Copper (Cu)	2010/03/06	97	80 - 120	104	80 - 120	<0.05	ug/L	16.4	20
3789409	Dissolved Lead (Pb)	2010/03/06	96	80 - 120	105	80 - 120	<0.005	ug/L	NC	20
3789409	Dissolved Lithium (Li)	2010/03/06	105	80 - 120	104	80 - 120	<0.5	ug/L	NC	20
3789409	Dissolved Nickel (Ni)	2010/03/06	98	80 - 120	101	80 - 120	<0.02	ug/L	18.7	20
3789409	Dissolved Selenium (Se)	2010/03/06	108	80 - 120	97	80 - 120	<0.04	ug/L	NC	20
3789409	Dissolved Uranium (U)	2010/03/06	105	80 - 120	105	80 - 120	<0.002	ug/L	2.4	20
3789409	Dissolved Vanadium (V)	2010/03/06	102	80 - 120	96	80 - 120	<0.2	ug/L	NC	20
3789409	Dissolved Zinc (Zn)	2010/03/06	105	80 - 120	103	80 - 120	<0.1	ug/L	12.8	20
3789409	Dissolved Aluminum (Al)	2010/03/06					<0.2	ug/L	0.8	20
3789409	Dissolved Antimony (Sb)	2010/03/06					<0.02	ug/L	NC	20
3789409	Dissolved Barium (Ba)	2010/03/06					<0.02	ug/L	1.4	20
3789409	Dissolved Bismuth (Bi)	2010/03/06					<0.005	ug/L	NC	20
3789409	Dissolved Boron (B)	2010/03/06					<50	ug/L	NC	20
3789409	Dissolved Iron (Fe)	2010/03/06					<1	ug/L	0.4	20
3789409	Dissolved Manganese (Mn)	2010/03/06					<0.05	ug/L	6.2	20
3789409	Dissolved Molybdenum (Mo)	2010/03/06					<0.05	ug/L	1.2	20
3789409	Dissolved Silicon (Si)	2010/03/06					<100	ug/L	3.4	20
3789409	Dissolved Silver (Ag)	2010/03/06					<0.005	ug/L	NC	20
3789409	Dissolved Strontium (Sr)	2010/03/06					<0.05	ug/L	0.3	20
3789409	Dissolved Thallium (Tl)	2010/03/06					<0.002	ug/L	NC	20
3789409	Dissolved Tin (Sn)	2010/03/06					<0.01	ug/L	NC	20
3789409	Dissolved Titanium (Ti)	2010/03/06					<0.5	ug/L	NC	20
3789409	Dissolved Zirconium (Zr)	2010/03/06					<0.1	ug/L	NC	20
3792900	Weak Acid Dissoc. Cyanide (CN)	2010/03/05	100	80 - 120	101	80 - 120	<0.0005	mg/L	NC	20
3794158	Total Calcium (Ca)	2010/03/06					<0.05	mg/L	0.4	20
3794158	Total Magnesium (Mg)	2010/03/06					<0.05	mg/L	1.4	20
3794158	Total Potassium (K)	2010/03/06					<0.05	mg/L	0.7	20
3794158	Total Sodium (Na)	2010/03/06					<0.05	mg/L	2.3	20

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	
3794158	Total Sulphur (S)	2010/03/06					<3	mg/L	2.1	20	
3794291	Dissolved Calcium (Ca)	2010/03/06					<0.05	mg/L	0.1	20	
3794291	Dissolved Magnesium (Mg)	2010/03/06					<0.05	mg/L	2.1	20	
3794291	Dissolved Potassium (K)	2010/03/06					<0.05	mg/L	0.4	20	
3794291	Dissolved Sodium (Na)	2010/03/06					<0.05	mg/L	1.9	20	
3794291	Dissolved Sulphur (S)	2010/03/06					<3	mg/L	0.4	20	

N/A = Not Applicable

RPD = Relative Percent Difference

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.



8577 Commerce Court  
Burnaby, BC V5A 4N5  
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## **CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST**

PAGE 1 OF 1

COMPANY NAME: Access Consulting Group		CLIENT PROJECT NO.: SFN-07-01		LAB USE ONLY																									
COMPANY ADDRESS: #3 Calcite Business Center 151 Industrial Rd Whitehorse, YT Y1A 2V3		TEL.: (867) 668-6463  E-MAIL: <a href="mailto:paul@accessconsulting.ca">paul@accessconsulting.ca</a> <a href="mailto:david@accessconsulting.ca">david@accessconsulting.ca</a> FAX: (867) 668-6680																											
SAMPLER NAME (PRINT): Paul Inglis		PROJECT MANAGER: David Petkovich		LABORATORY CONTACT: Kim Webber																									
FIELD SAMPLE ID				MAXXAM LAB #  (LAB USE ONLY)		MATRIX		SAMPLING				# CONTAINERS		General (Alk, EC, pH)		TSS (TDS)		Total Metals (Low Level)		Dissolved Metals (Low Level)		DOC		Anions -Cl, F, NH3, NO2, NO3, SO4)		Cyanide		Phosphorus, TOC	
						GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	DATE	TIME	DD/MM/YY			X	X	X	X	X	X	X	X	X	X	X	X	X	X
1	P4			X				26-Feb-10	9:50	8	X	X	X	X	X	X	X	X	X	X	x								
2	A1			X				26-Feb-10	10:10	8	X	X	X	X	X	X	X	X	X	X	x								
3	R4			X				26-Feb-10	11:10	8	X	X	X	X	X	X	X	X	X	X	x								
4	R6			X				26-Feb-10	10:50	8	X	X	X	X	X	X	X	X	X	X	x								
5	R3			X				26-Feb-10	11:30	8	X	X	X	X	X	X	X	X	X	X	x								
6	V6A			X				26-Feb-10	12:00	8	X	X	X	X	X	X	X	X	X	X	x								
7	P1			X				26-Feb-10	12:25	8	X	X	X	X	X	X	X	X	X	X	x								
8	Duplicate			X				26-Feb-10		8	X	X	X	X	X	X	X	X	X	X	x								
9				X																									
10				X																									
11				X																									
12				X																									
TAT (Turnaround Time)  LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL	PO NUMBER OR QUOTE NUMBER: SFN-09-02	SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:  AS per previous SFN-07-01/SFN-09-02 sampling												CCME CSR AB TIER 1 OTHER	ARRIVAL TEMPERATURE °C: 71.7	LAB USE ONLY  DUE DATE:	LOG IN CHECK:												
* Some exceptions apply - please contact laboratory	ACCOUNTING CONTACT: Colette MacMillon	SPECIAL REPORTING OR BILLING INSTRUCTIONS:												# JARS USED: 717.7															
STANDARD 5 BUSINESS DAYS	RELINQUISHED BY SAMPLER: Paul Inglis	DATE: DD/MM/YY	26/02/2010	TIME:	8:30	RECEIVED BY:																							
RUSH 3 BUSINESS DAYS	RELINQUISHED BY:	DATE: DD/MM/YY		TIME:		RECEIVED BY:																							
RUSH 2 BUSINESS DAYS	RELINQUISHED BY:	DATE: DD/MM/YY		TIME:		RECEIVED BY:																							
URGENT 1 BUSINESS DAY	RELINQUISHED BY:	DATE: DD/MM/YY		TIME:		RECEIVED BY:																							
OTHER BUSINESS DAYS	RELINQUISHED BY:	DATE: DD/MM/YY		TIME:		RECEIVED BY LABORATORY:																							
CUSTODY RECORD	RELINQUISHED BY:	DATE: DD/MM/YY	1/3/10	TIME:	14:08																								



A MEMBER OF ALEXCO RESOURCE GROUP

# 3 Calcite Business Centre, 151 Industrial Road, Whitehorse, Yukon Y1A 2V3  
PHONE (867) 668-6463 FAX (867) 667-6680  
[WWW.ACCESSCONSULTING.CA](http://WWW.ACCESSCONSULTING.CA)

## MEMORANDUM

**TO:** File

**CC:** David Petkovich  
Scott Keesey

**FROM:** Durand Cornett

**RE:** **March 2010 water sampling at Faro (Pelly River Interim Aquatic Ecosystem Monitoring Plan)**

**PROJECT #:** SFN-09-02

**DATE:** April 1, 2010

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The following is a brief trip report for the monthly water sampling event in the area of the Anvil Range Mine for the month of March 2010.

In the late morning of March 29<sup>th</sup>, 2009 Durand Cornett (ACG) travelled from Whitehorse to Pelly Crossing where he picked up Randy Profeit (SFN). These two constituted the field crew for the sampling event. They then drove to Faro arriving at 17:00.

On March 30<sup>th</sup> the field crew drove the Mine Access Road to the mine site, arriving at the Admin building at 8:45. Durand had to re-take Denison's safety orientation as it is now their policy to take the course on an annual basis. After checking in and getting orientated the field crew sampled sites FC and VR (within the compound). On the way back to Faro the field crew sampled sites R1, VW1 and VW2. The crew then met Trans North Helicopters pilot Ben Drury at 12:15 at the Faro Airport. Weather while sampling in the afternoon was sunny with light clouds and the temperature was around 3 to 6°C. The following sites were sampled by helicopter: P1, P4, A1, R6, R3, and V6A. There was no sample collected at R4 as the crew could not find a safe area to access water and thick ice prevented sampling elsewhere. In-situ measurements were taken with an YSI multi-meter. Eight sample bottles were collected at each station with the following parameters being screened for:

- General (including Alkalinity, conductivity and pH)
- TSS and TDS
- Total metals
- Dissolved metals (Field Filtered)
- Dissolved Organic Carbon (Field Filtered)
- Cyanide
- Anions
- Total Organic Carbon and Phosphorus

Additionally 1 duplicate sample was prepared and tested. The duplicate was sampled at station R3. All 12 sets of water samples were shipped via Air North Cargo on March 31<sup>st</sup> to Maxxam Analytics in Burnaby, B.C. for analysis.

Station	Northing	Easting
R1	62.3337	133.378
R3	62.38103	133.579
R6	62.42107	133.685
A1	62.44574	134.123
P1	62.20786	133.356
P4	62.46132	134.16
V6A	62.28019	133.258
FC	62.37258	133.35
VR	62.28282	133.252
VW1	62.26413	133.326
VW2	62.25505	133.318

Notable issues:

- Flow measurements were not taken at R4 or FC due to difficulty in accessing flowing water through the thick ice.



Plate 1: Water sampling at Station P1



Plate 2: Overflow ice at V6A

If you have any questions about this report, please contact Paul Inglis of Access Consulting Group.



Your P.O. #: SFN-09-02  
 Your Project #: SFN-07-01  
 Your C.O.C. #: 08311935

**Attention: David Petkovich**  
 ACCESS CONSULTING GROUP  
 #3 Calcite  
 151 Industrial Road  
 WHITEHORSE, YT  
 CANADA Y1A 3C8

Report Date: 2010/04/09

## CERTIFICATE OF ANALYSIS

**MAXXAM JOB #: B019097**  
 Received: 2010/04/01, 08:30

Sample Matrix: Water  
 # Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Water	1	2010/04/03	2010/04/03	BRN SOP-00264 R4.0	Based on SM2320B
Alkalinity - Water	1	2010/04/03	2010/04/05	BRN SOP-00264 R4.0	Based on SM2320B
Alkalinity - Water	10	2010/04/03	2010/04/06	BRN SOP-00264 R4.0	Based on SM2320B
Chloride by Automated Colourimetry	11	N/A	2010/04/05	BRN-SOP 00234 R3.0	Based on EPA 325.2
Chloride by Automated Colourimetry	1	N/A	2010/04/06	BRN-SOP 00234 R3.0	Based on EPA 325.2
Cyanide WAD (weak acid dissociable)	12	N/A	2010/04/08	BRN SOP-00227 R3.0	Based on SM-4500CN I
Carbon (DOC)	7	N/A	2010/04/06	BRN SOP-00224 R4.0	Based on M 860-87T
Carbon (DOC)	3	N/A	2010/04/07	BRN SOP-00224 R4.0	Based on M 860-87T
Carbon (DOC)	2	N/A	2010/04/08	BRN SOP-00224 R4.0	Based on M 860-87T
Conductance - water	12	N/A	2010/04/03	BRN SOP-00264 R2.0	Based on SM-2510B
Fluoride - Mining Clients	12	N/A	2010/04/05	BRN SOP-00225 R1.0	Based SM - 4500 F C
Hardness Total (calculated as CaCO <sub>3</sub> )	12	N/A	2010/04/08		
Hardness (calculated as CaCO <sub>3</sub> )	6	N/A	2010/04/07		
Hardness (calculated as CaCO <sub>3</sub> )	6	N/A	2010/04/08		
Ion Balance	5	N/A	2010/04/07		
Ion Balance	7	N/A	2010/04/08		
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	6	N/A	2010/04/07	BRN SOP-00206	Based on EPA 200.8
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	6	N/A	2010/04/08	BRN SOP-00206	Based on EPA 200.8
Elements by ICPMS Low Level (dissolved) ①	12	N/A	2010/04/07	BRN SOP-00206	Based on EPA 200.8
Na, K, Ca, Mg, S by CRC ICPMS (total)	12	N/A	2010/04/08	BRN SOP-00206	Based on EPA 200.8
Elements by ICPMS Low Level (total) ①	8	N/A	2010/04/07	BRN SOP-00206	Based on EPA 200.8
Elements by ICPMS Low Level (total) ①	4	N/A	2010/04/08	BRN SOP-00206	Based on EPA 200.8
Ammonia (N)	12	N/A	2010/04/06	BRN SOP-00232 R4.0	Based on USEPA 350.1
Nitrate + Nitrite (N)	12	N/A	2010/04/06	ING233 Rev.4.4	Based on EPA 353.2
Nitrite (N) by CFA	12	N/A	2010/04/06	BRN SOP-00233 R1.0	EPA 353.2
Nitrogen - Nitrate (as N)	12	N/A	2010/04/07		
Filter and HNO <sub>3</sub> Preserve for Metals	12	N/A	2010/04/03	BRN WI-00006 R1.0	Based on EPA 200.2
pH Water	1	N/A	2010/04/05	BRN SOP-00264 R4.0	Based on SM-4500H+B
pH Water	11	N/A	2010/04/06	BRN SOP-00264 R4.0	Based on SM-4500H+B
Sulphate by Automated Colourimetry	11	N/A	2010/04/05	BRN-SOP 00243 R1.0	Based on EPA 375.4
Sulphate by Automated Colourimetry	1	N/A	2010/04/07	BRN-SOP 00243 R1.0	Based on EPA 375.4
Total Dissolved Solids (Filt. Residue)	12	N/A	2010/04/06	BRN SOP 00276 R4.0	SM 2540C
Carbon (Total Organic)	8	N/A	2010/04/06	BRN SOP-00224 R4.0	Based on SM-5310C
Carbon (Total Organic)	3	N/A	2010/04/07	BRN SOP-00224 R4.0	Based on SM-5310C
Carbon (Total Organic)	1	N/A	2010/04/08	BRN SOP-00224 R4.0	Based on SM-5310C
Total Phosphorus	12	N/A	2010/04/06	BRN SOP-00236 R4.0	SM 4500
Total Suspended Solids	11	N/A	2010/04/05	BRN SOP-00277 R5.0	Based on SM-2540 D
Total Suspended Solids	1	N/A	2010/04/06	BRN SOP-00277 R5.0	Based on SM-2540 D

\* Results relate only to the items tested.

Encryption Key

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

KIMBERLEY WEBBER, BBY Customer Service  
Email: kim.webber@maxxamanalytics.com  
Phone# (604) 444-4808 Ext:259

=====  
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

## RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		T43961	T43962	T43963		T43964		
Sampling Date		2010/03/30 09:20	2010/03/30 09:45	2010/03/30 10:45		2010/03/30 11:15		
	Units	FC	VR	R1	QC Batch	VW1	RDL	QC Batch
<b>Misc. Inorganics</b>								
Fluoride (F)	mg/L	0.11	0.06	0.14	3859472	0.29	0.01	3859472
<b>ANIONS</b>								
Nitrite (N)	mg/L	<0.005	<0.005	<0.005	3864514	<0.005	0.005	3864514
<b>Calculated Parameters</b>								
Ion Balance	N/A	NC	NC	1.0	3858932	1.1	0.01	3858932
Nitrate (N)	mg/L	0.08	0.08	0.18	3858906	0.19	0.02	3858906
<b>Misc. Inorganics</b>								
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.0005	<0.0005	<0.0005	3866628	<0.0005	0.0005	3866628
Dissolved Organic Carbon (C)	mg/L	2.4	2.5	1.5	3864932	3.5	0.5	3864932
Alkalinity (Total as CaCO <sub>3</sub> )	mg/L	25	40	140	3863064	290	0.5	3863064
Total Organic Carbon (C)	mg/L	1.5	1.4	5.5	3864933	2.6	0.5	3864933
Alkalinity (PP as CaCO <sub>3</sub> )	mg/L	<0.5	<0.5	<0.5	3863064	<0.5	0.5	3863064
Bicarbonate (HCO <sub>3</sub> )	mg/L	30	49	170	3863064	350	0.5	3863064
Carbonate (CO <sub>3</sub> )	mg/L	<0.5	<0.5	<0.5	3863064	<0.5	0.5	3863064
Hydroxide (OH)	mg/L	<0.5	<0.5	<0.5	3863064	<0.5	0.5	3863064
<b>Anions</b>								
Dissolved Sulphate (SO <sub>4</sub> )	mg/L	2.0	7.1	33	3863072	110	0.5	3868112
Dissolved Chloride (Cl)	mg/L	<0.5	<0.5	<0.5	3863065	3.3	0.5	3864951
<b>Nutrients</b>								
Ammonia (N)	mg/L	0.013	<0.005	0.129	3864953	0.051	0.005	3864953
Nitrate plus Nitrite (N)	mg/L	0.08	0.08	0.18	3864476	0.19	0.02	3864476
Total Phosphorus (P)	mg/L	<0.005	<0.005	<0.005	3860632	<0.005	0.005	3860632
<b>Physical Properties</b>								
Conductivity	uS/cm	52	97	329	3859039	710	1	3859039
pH	pH Units	7.6	7.8	8.1	3863060	8.2		3863060
<b>Physical Properties</b>								
Total Suspended Solids	mg/L	11	46	3	3859293	52	1	3859293
Total Dissolved Solids	mg/L	26	48	190	3859294	440	10	3859294

N/A = Not Applicable

NC = Non-calculable

RDL = Reportable Detection Limit

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		T43965		T43966		T43967		T43968		
Sampling Date		2010/03/30 11:45		2010/03/30 12:30		2010/03/30 13:00		2010/03/30 13:20		
	Units	VW2	QC Batch	P1	QC Batch	P4	QC Batch	A1	RDL	QC Batch
<b>Misc. Inorganics</b>										
Fluoride (F)	mg/L	0.20	3859472	0.11	3859472	0.29	3859472	0.10	0.01	3859472
<b>ANIONS</b>										
Nitrite (N)	mg/L	<0.005	3864514	<0.005	3864514	<0.005	3864514	<0.005	0.005	3864514
<b>Calculated Parameters</b>										
Ion Balance	N/A	1.1	3858932	1.0	3858932	0.99	3858932	0.94	0.01	3858932
Nitrate (N)	mg/L	0.21	3858906	0.08	3858906	0.03	3858906	0.25	0.02	3858906
<b>Misc. Inorganics</b>										
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.0005	3866628	<0.0005	3866628	<0.0005	3866628	<0.0005	0.0005	3866628
Dissolved Organic Carbon (C)	mg/L	2.4	3864932	2.5	3864932	<0.5	3864932	1.2	0.5	3867858
Alkalinity (Total as CaCO <sub>3</sub> )	mg/L	320	3863064	160	3859040	190	3863064	150	0.5	3863064
Total Organic Carbon (C)	mg/L	1.9	3864933	2.1	3864933	<0.5	3864933	1.2	0.5	3864933
Alkalinity (PP as CaCO <sub>3</sub> )	mg/L	<0.5	3863064	<0.5	3859040	<0.5	3863064	<0.5	0.5	3863064
Bicarbonate (HCO <sub>3</sub> )	mg/L	390	3863064	190	3859040	230	3863064	180	0.5	3863064
Carbonate (CO <sub>3</sub> )	mg/L	<0.5	3863064	<0.5	3859040	<0.5	3863064	<0.5	0.5	3863064
Hydroxide (OH)	mg/L	<0.5	3863064	<0.5	3859040	<0.5	3863064	<0.5	0.5	3863064
<b>Anions</b>										
Dissolved Sulphate (SO <sub>4</sub> )	mg/L	120	3863072	78	3863072	30	3863072	81	0.5	3863072
Dissolved Chloride (Cl)	mg/L	<0.5	3863065	<0.5	3863065	<0.5	3863065	<0.5	0.5	3863065
<b>Nutrients</b>										
Ammonia (N)	mg/L	<0.005	3864953	<0.005	3864953	<0.005	3864953	<0.005	0.005	3864953
Nitrate plus Nitrite (N)	mg/L	0.21	3864476	0.08	3864476	0.03	3864476	0.25	0.02	3864476
Total Phosphorus (P)	mg/L	<0.005	3860632	<0.005	3860632	<0.005	3860632	<0.005	0.005	3860632
<b>Physical Properties</b>										
Conductivity	uS/cm	771	3859039	421	3859039	414	3859039	421	1	3859039
pH	pH Units	8.2	3863060	8.2	3859038	8.2	3863060	8.2		3863060
<b>Physical Properties</b>										
Total Suspended Solids	mg/L	8	3859293	<1	3859293	50	3859293	1	1	3859293
Total Dissolved Solids	mg/L	460	3859294	250	3859294	210	3859294	240	10	3859294

N/A = Not Applicable

RDL = Reportable Detection Limit

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

## RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		T43969		T43970	T43971			T43972		
Sampling Date		2010/03/30 14:00		2010/03/30 14:20	2010/03/30 14:00			2010/03/30		
	Units	R6	QC Batch	R3	V6A	RDL	QC Batch	DUPLICATE	RDL	QC Batch
<b>Misc. Inorganics</b>										
Fluoride (F)	mg/L	0.07	3859472	0.14	0.09	0.01	3859472	0.13	0.01	3859472
<b>ANIONS</b>										
Nitrite (N)	mg/L	<0.005	3864514	<0.005	<0.005	0.005	3864514	<0.005	0.005	3864514
<b>Calculated Parameters</b>										
Ion Balance	N/A	0.95	3858932	1.7	0.96	0.01	3858932	1.1	0.01	3858932
Nitrate (N)	mg/L	0.21	3858906	0.26	0.37	0.02	3858906	0.25	0.02	3858906
<b>Misc. Inorganics</b>										
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.0005	3866628	<0.0005	<0.0005	0.0005	3866628	0.0017	0.0005	3866628
Dissolved Organic Carbon (C)	mg/L	1.2	3872928	1.0	2.6	0.5	3867858	1.9	0.5	3872928
Alkalinity (Total as CaCO <sub>3</sub> )	mg/L	150	3863064	180	140	0.5	3863064	180	0.5	3863064
Total Organic Carbon (C)	mg/L	<0.5	3869079	1.0	2.6	0.5	3869079	0.9	0.5	3873088
Alkalinity (PP as CaCO <sub>3</sub> )	mg/L	<0.5	3863064	<0.5	<0.5	0.5	3863064	<0.5	0.5	3863064
Bicarbonate (HCO <sub>3</sub> )	mg/L	180	3863064	220	170	0.5	3863064	220	0.5	3863064
Carbonate (CO <sub>3</sub> )	mg/L	<0.5	3863064	<0.5	<0.5	0.5	3863064	<0.5	0.5	3863064
Hydroxide (OH)	mg/L	<0.5	3863064	<0.5	<0.5	0.5	3863064	<0.5	0.5	3863064
<b>Anions</b>										
Dissolved Sulphate (SO <sub>4</sub> )	mg/L	24	3863072	100	70	0.5	3863072	270	5	3863072
Dissolved Chloride (Cl)	mg/L	<0.5	3863065	<0.5	<0.5	0.5	3863065	<0.5	0.5	3863065
<b>Nutrients</b>										
Ammonia (N)	mg/L	<0.005	3864953	0.120	<0.005	0.005	3864953	0.117	0.005	3864953
Nitrate plus Nitrite (N)	mg/L	0.21	3864476	0.26	0.37	0.02	3864476	0.25	0.02	3864476
Total Phosphorus (P)	mg/L	<0.005	3860632	<0.005	<0.005	0.005	3860632	<0.005	0.005	3860632
<b>Physical Properties</b>										
Conductivity	uS/cm	326	3859039	889	400	1	3859039	884	1	3859039
pH	pH Units	8.2	3863060	8.0	8.1		3863060	8.0		3863060
<b>Physical Properties</b>										
Total Suspended Solids	mg/L	<1	3859293	<1	25	1	3859293	<1	1	3862217
Total Dissolved Solids	mg/L	170	3859294	610	240	10	3859294	590	10	3859294

N/A = Not Applicable

RDL = Reportable Detection Limit

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### LOW LEVEL DISSOLVED METALS IN WATER (WATER)

Maxxam ID		T43961	T43962	T43963	T43964	T43965	T43966		
Sampling Date		2010/03/30 09:20	2010/03/30 09:45	2010/03/30 10:45	2010/03/30 11:15	2010/03/30 11:45	2010/03/30 12:30		
	Units	FC	VR	R1	VW1	VW2	P1	RDL	QC Batch
<b>Preparation</b>									
Filter and HNO3 Preservation	N/A	FIELD	FIELD	FIELD	FIELD	FIELD	FIELD	N/A	ONSITE
<b>Misc. Inorganics</b>									
Dissolved Hardness (CaCO <sub>3</sub> )	mg/L	18.8	45.2	166	410	456	233	0.5	3858904

N/A = Not Applicable

RDL = Reportable Detection Limit

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### LOW LEVEL DISSOLVED METALS IN WATER (WATER)

Maxxam ID		T43961	T43962	T43963	T43964	T43965	T43966		
Sampling Date		2010/03/30 09:20	2010/03/30 09:45	2010/03/30 10:45	2010/03/30 11:15	2010/03/30 11:45	2010/03/30 12:30		
	Units	FC	VR	R1	VW1	VW2	P1	RDL	QC Batch
<b>Dissolved Metals by ICPMS</b>									
Dissolved Aluminum (Al)	ug/L	18.3	17.9	2.6	6.2	5.7	23.7(1)	0.2	3864519
Dissolved Antimony (Sb)	ug/L	0.02	0.04	0.05	0.07	0.33	0.19(1)	0.02	3864519
Dissolved Arsenic (As)	ug/L	0.09	0.28	0.37	0.61	0.40	0.32	0.02	3864519
Dissolved Barium (Ba)	ug/L	19.1	37.7	78.5	98.1	107	82.3	0.02	3864519
Dissolved Beryllium (Be)	ug/L	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.01	3864519
Dissolved Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	0.005	3864519
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	50	3864519
Dissolved Cadmium (Cd)	ug/L	0.011	0.022	0.008	0.025	0.179	0.202	0.005	3864519
Dissolved Chromium (Cr)	ug/L	<0.1	0.1	<0.1	<0.1	0.2	0.3	0.1	3864519
Dissolved Cobalt (Co)	ug/L	0.014	0.022	0.102	0.100	0.015	0.028(1)	0.005	3864519
Dissolved Copper (Cu)	ug/L	0.50	0.87	0.34	0.98	0.66(1)	1.11(1)	0.05	3864519
Dissolved Iron (Fe)	ug/L	15	23	125	22	10	25	1	3864519
Dissolved Lead (Pb)	ug/L	0.090	0.095	0.035	0.047	0.165(1)	0.162(1)	0.005	3864519
Dissolved Lithium (Li)	ug/L	2.5	<0.5	2.7	6.2	4.0	4.0	0.5	3864519
Dissolved Manganese (Mn)	ug/L	0.68	1.78	122	90.3	0.60(1)	19.7	0.05	3864519
Dissolved Molybdenum (Mo)	ug/L	0.12	0.16	0.31	1.23	4.31	1.16	0.05	3864519
Dissolved Nickel (Ni)	ug/L	0.20	0.23	0.45	0.90	1.65	2.93	0.02	3864519
Dissolved Selenium (Se)	ug/L	<0.04	0.08	0.22	0.70	4.62	1.43	0.04	3864519
Dissolved Silicon (Si)	ug/L	8430	5810	5980	7750	4980	3530	100	3864519
Dissolved Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3864519
Dissolved Strontium (Sr)	ug/L	32.6	67.3	257	458	371	244	0.05	3864519
Dissolved Thallium (Tl)	ug/L	<0.002	0.002	0.003	0.003	0.002	0.003	0.002	3864519
Dissolved Tin (Sn)	ug/L	<0.01	0.01	<0.01	<0.01	0.01	0.03	0.01	3864519
Dissolved Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3864519
Dissolved Uranium (U)	ug/L	0.062	0.520	3.28	5.78	9.34	2.33	0.002	3864519
Dissolved Vanadium (V)	ug/L	<0.2	<0.2	<0.2	<0.2	1.4	<0.2	0.2	3864519
Dissolved Zinc (Zn)	ug/L	2.5	4.0	1.9	3.6	11.1	18.4(1)	0.1	3864519
Dissolved Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.1	3864519
Dissolved Calcium (Ca)	mg/L	5.53	13.8	52.5	102	114	59.6	0.05	3858918
Dissolved Magnesium (Mg)	mg/L	1.20	2.60	8.43	37.8	41.5	20.5	0.05	3858918
Dissolved Potassium (K)	mg/L	0.23	0.62	1.58	1.84	1.27	1.03	0.05	3858918
Dissolved Sodium (Na)	mg/L	2.37	1.86	3.34	7.55	2.97	3.23	0.05	3858918
Dissolved Sulphur (S)	mg/L	<10	<10	12	46	49	29	10	3858918

RDL = Reportable Detection Limit

(1) - Dissolved greater than total. Reanalysis yields similar results

Maxxam Job #: B019097  
Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
Sampler Initials: DC

**LOW LEVEL DISSOLVED METALS IN WATER (WATER)**

Maxxam ID		T43967	T43968	T43969	T43970	T43971	T43972		
Sampling Date		2010/03/30 13:00	2010/03/30 13:20	2010/03/30 14:00	2010/03/30 14:20	2010/03/30 14:00	2010/03/30		
	Units	P4	A1	R6	R3	V6A	DUPLICATE	RDL	QC Batch
<b>Preparation</b>									
Filter and HNO3 Preservation	N/A	FIELD	FIELD	FIELD	FIELD	FIELD	FIELD	N/A	ONSITE
<b>Misc. Inorganics</b>									
Dissolved Hardness (CaCO3)	mg/L	205	208	162	449	197	462	0.5	3858904

---

N/A = Not Applicable

RDL = Reportable Detection Limit

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### LOW LEVEL DISSOLVED METALS IN WATER (WATER)

Maxxam ID		T43967	T43968	T43969	T43970	T43971	T43972		
Sampling Date		2010/03/30 13:00	2010/03/30 13:20	2010/03/30 14:00	2010/03/30 14:20	2010/03/30 14:00	2010/03/30		
	Units	P4	A1	R6	R3	V6A	DUPLICATE	RDL	QC Batch
<b>Dissolved Metals by ICPMS</b>									
Dissolved Aluminum (Al)	ug/L	5.3	3.8	2.3	2.2(1)	4.3	1.2	0.2	3864913
Dissolved Antimony (Sb)	ug/L	0.10	0.12	0.11	0.08	0.07	0.07	0.02	3864913
Dissolved Arsenic (As)	ug/L	1.19	0.65	0.32	0.18	0.77	0.17	0.02	3864913
Dissolved Barium (Ba)	ug/L	87.1	84.2	86.2	66.1	53.5	66.5	0.02	3864913
Dissolved Beryllium (Be)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	3864913
Dissolved Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3864913
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	50	3864913
Dissolved Cadmium (Cd)	ug/L	0.110(1)	0.033(1)	0.036	0.100(1)	0.063	0.049	0.005	3864913
Dissolved Chromium (Cr)	ug/L	0.1	0.1	<0.1	0.1	<0.1	<0.1	0.1	3864913
Dissolved Cobalt (Co)	ug/L	0.037	0.016	0.019	2.43	0.032	2.50	0.005	3864913
Dissolved Copper (Cu)	ug/L	0.68(1)	0.59	0.73(1)	0.62(1)	0.67	0.39	0.05	3864913
Dissolved Iron (Fe)	ug/L	15	27	18	15	10	12	1	3864913
Dissolved Lead (Pb)	ug/L	0.082	0.027	0.069(1)	0.029	0.075	0.022	0.005	3864913
Dissolved Lithium (Li)	ug/L	4.6	4.2	2.9	9.3	1.9	9.4	0.5	3864913
Dissolved Manganese (Mn)	ug/L	13.3	1.79	4.12	2100	6.00	2140	0.05	3864913
Dissolved Molybdenum (Mo)	ug/L	2.01	1.16	1.38	0.51	0.21	0.50	0.05	3864913
Dissolved Nickel (Ni)	ug/L	0.63	0.45	0.19	6.80	0.36	6.98	0.02	3864913
Dissolved Selenium (Se)	ug/L	0.31	0.81	0.87	0.43	0.23	0.42	0.04	3864913
Dissolved Silicon (Si)	ug/L	4970	5290	4980	5800	5510	5700	100	3864913
Dissolved Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3864913
Dissolved Strontium (Sr)	ug/L	237	192	143	404	259	406	0.05	3864913
Dissolved Thallium (Tl)	ug/L	0.003	0.002	<0.002	0.013	0.004	0.014	0.002	3864913
Dissolved Tin (Sn)	ug/L	0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	3864913
Dissolved Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	3864913
Dissolved Uranium (U)	ug/L	1.48	2.80	2.56	3.55	6.01	3.60	0.002	3864913
Dissolved Vanadium (V)	ug/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	3864913
Dissolved Zinc (Zn)	ug/L	4.4(1)	1.8	2.2(1)	50.0	30.9	50.6	0.1	3864913
Dissolved Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3864913
Dissolved Calcium (Ca)	mg/L	54.7	60.5	46.7	130	56.9	133	0.05	3858918
Dissolved Magnesium (Mg)	mg/L	16.7	14.0	11.1	30.5	13.3	31.6	0.05	3858918
Dissolved Potassium (K)	mg/L	1.98	1.60	1.33	2.41	1.00	2.47	0.05	3858918
Dissolved Sodium (Na)	mg/L	5.80	4.32	2.36	10.6	2.28	11.0	0.05	3858918
Dissolved Sulphur (S)	mg/L	10	25	<10	106	23	108	10	3858918

RDL = Reportable Detection Limit

(1) - Dissolved greater than total. Reanalysis yields similar results

Maxxam Job #: B019097  
Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
Sampler Initials: DC

**LOW LEVEL TOTAL METALS IN WATER (WATER)**

Maxxam ID		T43961	T43962	T43963	T43964		T43965	T43966		
Sampling Date		2010/03/30 09:20	2010/03/30 09:45	2010/03/30 10:45	2010/03/30 11:15		2010/03/30 11:45	2010/03/30 12:30		
	Units	FC	VR	R1	VW1	QC Batch	VW2	P1	RDL	QC Batch
<b>Calculated Parameters</b>										
Total Hardness (CaCO <sub>3</sub> )	mg/L	18.8	44.4	155	391	3858917	428	230	0.5	3858917

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RDL = Reportable Detection Limit

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### LOW LEVEL TOTAL METALS IN WATER (WATER)

Maxxam ID		T43961	T43962	T43963	T43964		T43965	T43966		
Sampling Date		2010/03/30 09:20	2010/03/30 09:45	2010/03/30 10:45	2010/03/30 11:15		2010/03/30 11:45	2010/03/30 12:30		
	Units	FC	VR	R1	VW1	QC Batch	VW2	P1	RDL	QC Batch
<b>Total Metals by ICPMS</b>										
Total Aluminum (Al)	ug/L	90.4	357	9.0	111	3864821	5.2	4.2	0.2	3865387
Total Antimony (Sb)	ug/L	0.02	0.04	0.05	0.09	3864821	0.31	0.14	0.02	3865387
Total Arsenic (As)	ug/L	0.25	0.95	0.54	1.19	3864821	0.34	0.27	0.02	3865387
Total Barium (Ba)	ug/L	22.2	49.8	82.0	106	3864821	105	84.1	0.02	3865387
Total Beryllium (Be)	ug/L	0.03	0.12	<0.01	0.01	3864821	<0.01	<0.01	0.01	3865387
Total Bismuth (Bi)	ug/L	0.006	0.016	<0.005	<0.005	3864821	<0.005	<0.005	0.005	3865387
Total Boron (B)	ug/L	<50	<50	<50	<50	3864821	<50	<50	50	3865387
Total Cadmium (Cd)	ug/L	0.025	0.108	0.018	0.048	3864821	0.171	0.107	0.005	3865387
Total Chromium (Cr)	ug/L	0.2	0.3	<0.1	0.2	3864821	0.1	<0.1	0.1	3865387
Total Cobalt (Co)	ug/L	0.099	0.274	0.108	0.359	3864821	0.015	0.017	0.005	3865387
Total Copper (Cu)	ug/L	0.64	1.74	0.83	1.55	3864821	0.49	0.47	0.05	3865387
Total Iron (Fe)	ug/L	469	438	500	341	3864821	11	26	1	3865387
Total Lead (Pb)	ug/L	1.73	2.60	0.443	1.34	3864821	0.072	0.043	0.005	3865387
Total Lithium (Li)	ug/L	2.8	0.9	2.7	6.4	3864821	4.0	4.3	0.5	3865387
Total Manganese (Mn)	ug/L	11.1	46.9	121	116	3864821	0.45	18.5	0.05	3865387
Total Molybdenum (Mo)	ug/L	0.10	0.14	0.32	1.12	3864821	4.25	1.21	0.05	3865387
Total Nickel (Ni)	ug/L	0.28	0.67	0.48	1.50	3864821	1.73	2.67	0.02	3865387
Total Selenium (Se)	ug/L	<0.04	0.09	0.23	0.75	3864821	4.26	1.34	0.04	3865387
Total Silicon (Si)	ug/L	7390	5320	5090	6900	3864821	5010	3550	100	3865387
Total Silver (Ag)	ug/L	<0.005	0.024	<0.005	<0.005	3864821	<0.005	<0.005	0.005	3865387
Total Strontium (Sr)	ug/L	33.0	69.3	255	424	3864821	341	239	0.05	3865387
Total Thallium (Tl)	ug/L	0.003	0.012	0.003	0.005	3864821	<0.002	0.003	0.002	3865387
Total Tin (Sn)	ug/L	<0.01	<0.01	<0.01	<0.01	3864821	<0.01	<0.01	0.01	3865387
Total Titanium (Ti)	ug/L	3.6	8.8	<0.5	2.7	3864821	<0.5	<0.5	0.5	3865387
Total Uranium (U)	ug/L	0.175	1.64	3.21	5.57	3864821	9.20	2.40	0.002	3865387
Total Vanadium (V)	ug/L	0.3	0.4	<0.2	0.3	3864821	1.4	<0.2	0.2	3865387
Total Zinc (Zn)	ug/L	7.1	10.8	6.1	8.0	3864821	10.1	14.4	0.1	3865387
Total Zirconium (Zr)	ug/L	<0.1	0.2	<0.1	0.2	3864821	<0.1	<0.1	0.1	3865387
Total Calcium (Ca)	mg/L	5.53	13.6	49.1	96.1	3858919	106	58.3	0.05	3858919
Total Magnesium (Mg)	mg/L	1.21	2.55	7.88	36.7	3858919	39.7	20.4	0.05	3858919
Total Potassium (K)	mg/L	0.22	0.57	1.48	1.68	3858919	1.10	0.86	0.05	3858919
Total Sodium (Na)	mg/L	2.33	1.78	3.14	7.16	3858919	2.70	2.71	0.05	3858919
Total Sulphur (S)	mg/L	<10	<10	11	44	3858919	44	27	10	3858919

RDL = Reportable Detection Limit

Maxxam Job #: B019097  
Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
Sampler Initials: DC

**LOW LEVEL TOTAL METALS IN WATER (WATER)**

Maxxam ID		T43967	T43968	T43969	T43970	T43971	T43972		
Sampling Date		2010/03/30 13:00	2010/03/30 13:20	2010/03/30 14:00	2010/03/30 14:20	2010/03/30 14:00	2010/03/30		
	Units	P4	A1	R6	R3	V6A	DUPLICATE	RDL	QC Batch
<b>Calculated Parameters</b>									
Total Hardness (CaCO <sub>3</sub> )	mg/L	208	206	165	475	202	436	0.5	3858917

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RDL = Reportable Detection Limit

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### LOW LEVEL TOTAL METALS IN WATER (WATER)

Maxxam ID		T43967	T43968	T43969	T43970	T43971	T43972		
Sampling Date		2010/03/30 13:00	2010/03/30 13:20	2010/03/30 14:00	2010/03/30 14:20	2010/03/30 14:00	2010/03/30		
Units		P4	A1	R6	R3	V6A	DUPLICATE	RDL	QC Batch
<b>Total Metals by ICPMS</b>									
Total Aluminum (Al)	ug/L	9.2	31.5	4.2	1.7	115	1.5	0.2	3865387
Total Antimony (Sb)	ug/L	0.09	0.14	0.11	0.07	0.09	0.07	0.02	3865387
Total Arsenic (As)	ug/L	1.29	0.67	0.46	0.21	1.65	0.19	0.02	3865387
Total Barium (Ba)	ug/L	91.5	86.1	89.8	67.1	58.6	65.8	0.02	3865387
Total Beryllium (Be)	ug/L	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	0.01	3865387
Total Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	0.005	3865387
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	50	3865387
Total Cadmium (Cd)	ug/L	0.053	0.020	0.014	0.046	0.101	0.047	0.005	3865387
Total Chromium (Cr)	ug/L	<0.1	0.1	<0.1	<0.1	0.2	<0.1	0.1	3865387
Total Cobalt (Co)	ug/L	0.033	0.050	0.021	2.51	0.288	2.35	0.005	3865387
Total Copper (Cu)	ug/L	0.58	0.71	0.34	0.36	1.15	0.34	0.05	3865387
Total Iron (Fe)	ug/L	23	57	124	78	228	71	1	3865387
Total Lead (Pb)	ug/L	0.068	0.198	0.025	0.036	3.85	0.111	0.005	3865387
Total Lithium (Li)	ug/L	4.6	4.1	2.7	9.2	2.0	9.1	0.5	3865387
Total Manganese (Mn)	ug/L	12.1	14.5	8.46	2210	22.5	2030	0.05	3865387
Total Molybdenum (Mo)	ug/L	2.12	1.11	1.42	0.50	0.18	0.48	0.05	3865387
Total Nickel (Ni)	ug/L	0.64	0.53	0.19	7.04	0.73	6.28	0.02	3865387
Total Selenium (Se)	ug/L	0.31	0.78	0.89	0.43	0.23	0.43	0.04	3865387
Total Silicon (Si)	ug/L	5140	5160	5160	5980	5780	5870	100	3865387
Total Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	0.005	3865387
Total Strontium (Sr)	ug/L	244	195	146	407	262	399	0.05	3865387
Total Thallium (Tl)	ug/L	0.003	<0.002	<0.002	0.012	0.007	0.013	0.002	3865387
Total Tin (Sn)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	3865387
Total Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	2.8	<0.5	0.5	3865387
Total Uranium (U)	ug/L	1.54	2.79	2.61	3.57	6.11	3.60	0.002	3865387
Total Vanadium (V)	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	0.2	3865387
Total Zinc (Zn)	ug/L	2.1	3.6	0.6	50.3	43.9	46.2	0.1	3865387
Total Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	3865387
Total Calcium (Ca)	mg/L	56.0	60.6	48.0	138	59.1	127	0.05	3858919
Total Magnesium (Mg)	mg/L	16.5	13.2	11.0	31.5	13.2	29.2	0.05	3858919
Total Potassium (K)	mg/L	1.94	1.61	1.30	2.57	1.10	2.38	0.05	3858919
Total Sodium (Na)	mg/L	5.62	4.22	2.22	10.8	2.30	10.2	0.05	3858919
Total Sulphur (S)	mg/L	11	25	<10	118	23	108	10	3858919

RDL = Reportable Detection Limit

Package 1	1.3°C
Package 2	2.3°C

Each temperature is the average of up to three cooler temperatures taken at receipt

**General Comments**

Sample T43962-: Ion Balance: NC = Not Calculable due to low ion sum [< 3 meq/L].

Sample T43961-: Ion Balance: NC = Not Calculable due to low ion sum [< 3 meq/L].

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3859039	Conductivity	2010/04/03			101	80 - 120	<1	uS/cm	0.5	20
3859040	Alkalinity (Total as CaCO <sub>3</sub> )	2010/04/05	NC	80 - 120	96	80 - 120	0.8, RDL=0.5	mg/L	1.5	20
3859040	Alkalinity (PP as CaCO <sub>3</sub> )	2010/04/05					<0.5	mg/L	NC	20
3859040	Bicarbonate (HCO <sub>3</sub> )	2010/04/05					0.9, RDL=0.5	mg/L	1.5	20
3859040	Carbonate (CO <sub>3</sub> )	2010/04/05					<0.5	mg/L	NC	20
3859040	Hydroxide (OH)	2010/04/05					<0.5	mg/L	NC	20
3859293	Total Suspended Solids	2010/04/05			100	80 - 120	<1	mg/L		
3859294	Total Dissolved Solids	2010/04/06	116	80 - 120	98	80 - 120	<10	mg/L	1.7 <sup>(1)</sup>	20
3859472	Fluoride (F)	2010/04/05	90	80 - 120	102	80 - 120	<0.01	mg/L	1.6	20
3860632	Total Phosphorus (P)	2010/04/06	98	80 - 120	94	80 - 120	<0.005	mg/L	0.1	20
3862217	Total Suspended Solids	2010/04/06			99	80 - 120	<1	mg/L		
3863064	Alkalinity (Total as CaCO <sub>3</sub> )	2010/04/06	NC	80 - 120	100	80 - 120	0.7, RDL=0.5	mg/L	3.6	20
3863064	Alkalinity (PP as CaCO <sub>3</sub> )	2010/04/06					<0.5	mg/L	NC	20
3863064	Bicarbonate (HCO <sub>3</sub> )	2010/04/06					0.9, RDL=0.5	mg/L	3.6	20
3863064	Carbonate (CO <sub>3</sub> )	2010/04/06					<0.5	mg/L	NC	20
3863064	Hydroxide (OH)	2010/04/06					<0.5	mg/L	NC	20
3863065	Dissolved Chloride (Cl)	2010/04/05	NC	80 - 120	103	80 - 120	<0.5	mg/L	NC	20
3863072	Dissolved Sulphate (SO <sub>4</sub> )	2010/04/05	NC	80 - 120	102	80 - 120	<0.5	mg/L	0.09	20
3864476	Nitrate plus Nitrite (N)	2010/04/06	95	80 - 120	105	80 - 120	<0.02	mg/L	0.3	25
3864514	Nitrite (N)	2010/04/06	100	80 - 120	107	80 - 120	<0.005	mg/L	NC	20
3864519	Dissolved Arsenic (As)	2010/04/07	103	80 - 120	97	80 - 120	<0.02	ug/L	2.7	20
3864519	Dissolved Beryllium (Be)	2010/04/07	110	80 - 120	103	80 - 120	<0.01	ug/L	NC	20
3864519	Dissolved Cadmium (Cd)	2010/04/07	110	80 - 120	102	80 - 120	<0.005	ug/L	NC	20
3864519	Dissolved Chromium (Cr)	2010/04/07	99	80 - 120	102	80 - 120	<0.1	ug/L	NC	20
3864519	Dissolved Cobalt (Co)	2010/04/07	101	80 - 120	101	80 - 120	<0.005	ug/L	5.8	20
3864519	Dissolved Copper (Cu)	2010/04/07	100	80 - 120	103	80 - 120	<0.05	ug/L	1	20
3864519	Dissolved Lead (Pb)	2010/04/07	104	80 - 120	109	80 - 120	<0.005	ug/L	0.3	20
3864519	Dissolved Lithium (Li)	2010/04/07	105	80 - 120	105	80 - 120	<0.5	ug/L	NC	20
3864519	Dissolved Nickel (Ni)	2010/04/07	99	80 - 120	101	80 - 120	<0.02	ug/L	18.4	20
3864519	Dissolved Selenium (Se)	2010/04/07	108	80 - 120	100	80 - 120	<0.04	ug/L	NC	20
3864519	Dissolved Uranium (U)	2010/04/07	105	80 - 120	108	80 - 120	<0.002	ug/L	0.7	20
3864519	Dissolved Vanadium (V)	2010/04/07	100	80 - 120	97	80 - 120	<0.2	ug/L	NC	20
3864519	Dissolved Zinc (Zn)	2010/04/07	113	80 - 120	98	80 - 120	<0.1	ug/L	4.6	20
3864519	Dissolved Aluminum (Al)	2010/04/07					<0.2	ug/L	0.8	20
3864519	Dissolved Antimony (Sb)	2010/04/07					<0.02	ug/L	NC	20
3864519	Dissolved Barium (Ba)	2010/04/07					<0.02	ug/L	0.7	20
3864519	Dissolved Bismuth (Bi)	2010/04/07					<0.005	ug/L	NC	20
3864519	Dissolved Boron (B)	2010/04/07					<50	ug/L	NC	20
3864519	Dissolved Iron (Fe)	2010/04/07					<1	ug/L	1.2	20

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3864519	Dissolved Manganese (Mn)	2010/04/07					<0.05	ug/L	1.4	20
3864519	Dissolved Molybdenum (Mo)	2010/04/07					<0.05	ug/L	1.4	20
3864519	Dissolved Silicon (Si)	2010/04/07					<100	ug/L	2.4	20
3864519	Dissolved Silver (Ag)	2010/04/07					<0.005	ug/L	NC	20
3864519	Dissolved Strontium (Sr)	2010/04/07					<0.05	ug/L	0.2	20
3864519	Dissolved Thallium (Tl)	2010/04/07					<0.002	ug/L	NC	20
3864519	Dissolved Tin (Sn)	2010/04/07					<0.01	ug/L	NC	20
3864519	Dissolved Titanium (Ti)	2010/04/07					<0.5	ug/L	NC	20
3864519	Dissolved Zirconium (Zr)	2010/04/07					<0.1	ug/L	NC	20
3864821	Total Arsenic (As)	2010/04/08	109	80 - 120	102	80 - 120	<0.02	ug/L	15.3	20
3864821	Total Beryllium (Be)	2010/04/08	117	80 - 120	104	80 - 120	<0.01	ug/L	NC	20
3864821	Total Cadmium (Cd)	2010/04/08	112	80 - 120	102	80 - 120	<0.005	ug/L	NC	20
3864821	Total Chromium (Cr)	2010/04/08	108	80 - 120	107	80 - 120	<0.1	ug/L	NC	20
3864821	Total Cobalt (Co)	2010/04/08	109	80 - 120	106	80 - 120	<0.005	ug/L	6.2	20
3864821	Total Copper (Cu)	2010/04/08	113	80 - 120	109	80 - 120	<0.05	ug/L	1.1	20
3864821	Total Lead (Pb)	2010/04/08	111	80 - 120	108	80 - 120	<0.005	ug/L	3.1	20
3864821	Total Lithium (Li)	2010/04/08	116	80 - 120	105	80 - 120	<0.5	ug/L	0.9	20
3864821	Total Nickel (Ni)	2010/04/08	111	80 - 120	105	80 - 120	<0.02	ug/L	3.4	20
3864821	Total Selenium (Se)	2010/04/08	114	80 - 120	104	80 - 120	<0.04	ug/L	NC	20
3864821	Total Uranium (U)	2010/04/08	112	80 - 120	106	80 - 120	<0.002	ug/L	6.0	20
3864821	Total Vanadium (V)	2010/04/08	108	80 - 120	100	80 - 120	<0.2	ug/L	NC	20
3864821	Total Zinc (Zn)	2010/04/08	NC	80 - 120	110	80 - 120	<0.1	ug/L	17.8	20
3864821	Total Aluminum (Al)	2010/04/08					<0.2	ug/L	6.7	20
3864821	Total Antimony (Sb)	2010/04/08					<0.02	ug/L	NC	20
3864821	Total Barium (Ba)	2010/04/08					<0.02	ug/L	2.2	20
3864821	Total Bismuth (Bi)	2010/04/08					<0.005	ug/L	NC	20
3864821	Total Boron (B)	2010/04/08					<50	ug/L	NC	20
3864821	Total Iron (Fe)	2010/04/08					<1	ug/L	8.2	20
3864821	Total Manganese (Mn)	2010/04/08					<0.05	ug/L	3.0	20
3864821	Total Molybdenum (Mo)	2010/04/08					<0.05	ug/L	NC	20
3864821	Total Silicon (Si)	2010/04/08					<100	ug/L	2.6	20
3864821	Total Silver (Ag)	2010/04/08					<0.005	ug/L	NC	20
3864821	Total Strontium (Sr)	2010/04/08					<0.05	ug/L	2.4	20
3864821	Total Thallium (Tl)	2010/04/08					<0.002	ug/L	NC	20
3864821	Total Tin (Sn)	2010/04/08					<0.01	ug/L	NC	20
3864821	Total Titanium (Ti)	2010/04/08					<0.5	ug/L	7.1	20
3864821	Total Zirconium (Zr)	2010/04/08					<0.1	ug/L	NC	20
3864913	Dissolved Arsenic (As)	2010/04/07	103	80 - 120	101	80 - 120	<0.02	ug/L	2.3	20
3864913	Dissolved Beryllium (Be)	2010/04/07	111	80 - 120	104	80 - 120	<0.01	ug/L	NC	20

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3864913	Dissolved Cadmium (Cd)	2010/04/07	99	80 - 120	94	80 - 120	<0.005	ug/L	11.6	20
3864913	Dissolved Chromium (Cr)	2010/04/07	111	80 - 120	112	80 - 120	<0.1	ug/L	NC	20
3864913	Dissolved Cobalt (Co)	2010/04/07	110	80 - 120	111	80 - 120	<0.005	ug/L	5.7	20
3864913	Dissolved Copper (Cu)	2010/04/07	111	80 - 120	117	80 - 120	<0.05	ug/L	4.1	20
3864913	Dissolved Lead (Pb)	2010/04/07	103	80 - 120	104	80 - 120	<0.005	ug/L	2.9	20
3864913	Dissolved Lithium (Li)	2010/04/07	107	80 - 120	104	80 - 120	<0.5	ug/L	3.4	20
3864913	Dissolved Nickel (Ni)	2010/04/07	110	80 - 120	112	80 - 120	<0.02	ug/L	1.0	20
3864913	Dissolved Selenium (Se)	2010/04/07	107	80 - 120	103	80 - 120	<0.04	ug/L	6.8	20
3864913	Dissolved Uranium (U)	2010/04/07	111	80 - 120	107	80 - 120	<0.002	ug/L	0.5	20
3864913	Dissolved Vanadium (V)	2010/04/07	110	80 - 120	106	80 - 120	<0.2	ug/L	NC	20
3864913	Dissolved Zinc (Zn)	2010/04/07	110	80 - 120	116	80 - 120	<0.1	ug/L	6.3	20
3864913	Dissolved Aluminum (Al)	2010/04/07					<0.2	ug/L	5.0	20
3864913	Dissolved Antimony (Sb)	2010/04/07					<0.02	ug/L	NC	20
3864913	Dissolved Barium (Ba)	2010/04/07					<0.02	ug/L	0.8	20
3864913	Dissolved Bismuth (Bi)	2010/04/07					<0.005	ug/L	NC	20
3864913	Dissolved Boron (B)	2010/04/07					<50	ug/L	NC	20
3864913	Dissolved Iron (Fe)	2010/04/07					<1	ug/L	0.3	20
3864913	Dissolved Manganese (Mn)	2010/04/07					<0.05	ug/L	2.1	20
3864913	Dissolved Molybdenum (Mo)	2010/04/07					<0.05	ug/L	0.2	20
3864913	Dissolved Silicon (Si)	2010/04/07					<100	ug/L	0.7	20
3864913	Dissolved Silver (Ag)	2010/04/07					<0.005	ug/L	NC	20
3864913	Dissolved Strontium (Sr)	2010/04/07					<0.05	ug/L	0.2	20
3864913	Dissolved Thallium (Tl)	2010/04/07					<0.002	ug/L	NC	20
3864913	Dissolved Tin (Sn)	2010/04/07					<0.01	ug/L	NC	20
3864913	Dissolved Titanium (Ti)	2010/04/07					<0.5	ug/L	NC	20
3864913	Dissolved Zirconium (Zr)	2010/04/07					<0.1	ug/L	NC	20
3864932	Dissolved Organic Carbon (C)	2010/04/06	NC	80 - 120	93	80 - 120	<0.5	mg/L	NC	20
3864933	Total Organic Carbon (C)	2010/04/06	97	80 - 120	93	80 - 120	<0.5	mg/L	NC	20
3864951	Dissolved Chloride (Cl)	2010/04/06	101	80 - 120	96	80 - 120	<0.5	mg/L	2.8	20
3864953	Ammonia (N)	2010/04/06	94	80 - 120	87	80 - 120	<0.005	mg/L	NC	20
3865387	Total Arsenic (As)	2010/04/07	110	80 - 120	96	80 - 120	<0.02	ug/L	9.5	20
3865387	Total Beryllium (Be)	2010/04/07	109	80 - 120	97	80 - 120	<0.01	ug/L	NC	20
3865387	Total Cadmium (Cd)	2010/04/07	111	80 - 120	101	80 - 120	<0.005	ug/L	7.1	20
3865387	Total Chromium (Cr)	2010/04/07	117	80 - 120	106	80 - 120	<0.1	ug/L	NC	20
3865387	Total Cobalt (Co)	2010/04/07	115	80 - 120	105	80 - 120	<0.005	ug/L	NC	20
3865387	Total Copper (Cu)	2010/04/07	112	80 - 120	108	80 - 120	<0.05	ug/L	8.5	20
3865387	Total Lead (Pb)	2010/04/07	114	80 - 120	106	80 - 120	<0.005	ug/L	1.8	20
3865387	Total Lithium (Li)	2010/04/07	119	80 - 120	105	80 - 120	<0.5	ug/L	7.1	20
3865387	Total Nickel (Ni)	2010/04/07	113	80 - 120	104	80 - 120	<0.02	ug/L	5.4	20

Maxxam Job #: B019097  
 Report Date: 2010/04/09

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3865387	Total Selenium (Se)	2010/04/07	118	80 - 120	101	80 - 120	<0.04	ug/L	0.6	20
3865387	Total Uranium (U)	2010/04/07	NC	80 - 120	110	80 - 120	<0.002	ug/L	6.2	20
3865387	Total Vanadium (V)	2010/04/07	117	80 - 120	101	80 - 120	<0.2	ug/L	3.9	20
3865387	Total Zinc (Zn)	2010/04/07	NC	80 - 120	102	80 - 120	<0.1	ug/L	3.7	20
3865387	Total Aluminum (Al)	2010/04/07					<0.2	ug/L	7.2	20
3865387	Total Antimony (Sb)	2010/04/07					<0.02	ug/L	7.4	20
3865387	Total Barium (Ba)	2010/04/07					<0.02	ug/L	7.5	20
3865387	Total Bismuth (Bi)	2010/04/07					<0.005	ug/L	NC	20
3865387	Total Boron (B)	2010/04/07					<50	ug/L	NC	20
3865387	Total Iron (Fe)	2010/04/07					<1	ug/L	0.2	20
3865387	Total Manganese (Mn)	2010/04/07					<0.05	ug/L	1.9	20
3865387	Total Molybdenum (Mo)	2010/04/07					<0.05	ug/L	5.3	20
3865387	Total Silicon (Si)	2010/04/07					<100	ug/L	1.5	20
3865387	Total Silver (Ag)	2010/04/07					<0.005	ug/L	NC	20
3865387	Total Strontium (Sr)	2010/04/07					<0.05	ug/L	5.1	20
3865387	Total Thallium (Tl)	2010/04/07					<0.002	ug/L	NC	20
3865387	Total Tin (Sn)	2010/04/07					<0.01	ug/L	NC	20
3865387	Total Titanium (Ti)	2010/04/07					<0.5	ug/L	NC	20
3865387	Total Zirconium (Zr)	2010/04/07					<0.1	ug/L	NC	20
3866628	Weak Acid Dissoc. Cyanide (CN)	2010/04/08	99	80 - 120	101	80 - 120	<0.0005	mg/L	NC	20
3867858	Dissolved Organic Carbon (C)	2010/04/07	NC	80 - 120	101	80 - 120	<0.5	mg/L	1.5	20
3868112	Dissolved Sulphate (SO4)	2010/04/07	NC	80 - 120	93	80 - 120	<0.5	mg/L	2.4	20
3869079	Total Organic Carbon (C)	2010/04/07	85	80 - 120	101	80 - 120	<0.5	mg/L		
3872928	Dissolved Organic Carbon (C)	2010/04/07	NC	80 - 120	104	80 - 120	<0.5	mg/L	NC	20
3873088	Total Organic Carbon (C)	2010/04/08	106	80 - 120	93	80 - 120	<0.5	mg/L	3.8	20

N/A = Not Applicable

RDL = Reportable Detection Limit

RPD = Relative Percent Difference

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

(1) - Fine particulates <1μ passing through filter.



8577 Commerce Court  
Burnaby, BC V5A 4N5  
[www.maxxamanalytics.com](http://www.maxxamanalytics.com)  
Phone: (604) 444-4808  
Fax.: (604) 444-4511  
Toll-Free: 1-800-440-4808

### CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

PAGE 1 OF 1

COMPANY NAME: Access Consulting Group	CLIENT PROJECT NO.: SFN-07-01
COMPANY ADDRESS: #3 Calcite Business Center 151 Industrial Rd Whitehorse, YT Y1A 2V3	TEL.: (867) 668-6463  E-MAIL: <a href="mailto:paul@accessconsulting.ca">paul@accessconsulting.ca</a> <a href="mailto:david@accessconsulting.ca">david@accessconsulting.ca</a> FAX: (867) 668-6680
SAMPLER NAME (PRINT): Durand Cornett	PROJECT MANAGER: David Petkovich
	LABORATORY CONTACT: Kim Webber

FIELD SAMPLE ID		MATRIX	SAMPLING		# CONTAINERS	General (Alk, EC, pH)	TSS (TDS)	Total Metals (Low Level)	Dissolved Metals (Low Level)	DOC	Anions -Cl, F, NH3, NO2, NO3, SO4)	Cyanide	Phosphorus, TOC
			DATE	TIME									
1 FC		GROUNDWATER	DD/MM/YY		8	X	X	X	X	X	X	X	X
2 VR		SURFACE WATER	30/03/10	9:20	8	X	X	X	X	X	X	X	X
3 R1		DRINKING WATER	30/03/10	9:45	8	X	X	X	X	X	X	X	X
4 VW1		SOIL	30/03/10	10:45	8	X	X	X	X	X	X	X	X
5 VW2		OTHER	30/03/10	11:15	8	X	X	X	X	X	X	X	X
6 P1			30/03/10	11:45	8	X	X	X	X	X	X	X	X
7 P4			30/03/10	12:30	8	X	X	X	X	X	X	X	X
8 A1			30/03/10	13:00	8	X	X	X	X	X	X	X	X
9 R6			30/03/10	13:20	8	X	X	X	X	X	X	X	X
10 R3			30/03/10	14:00	8	X	X	X	X	X	X	X	X
11 V6A			30/03/10	14:20	8	X	X	X	X	X	X	X	X
12 DUPLICATE			30/03/10	-	8	X	X	X	X	X	X	X	X
TAT (Turnaround Time) LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL		PO NUMBER OR QUOTE NUMBER:	SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:			CCME	ARRIVAL		DUE DATE:	LOG IN CHECK:			
		SFN-09-02	AS per previous SFN-07-01/ SFN-09-02 sampling			CSR	TEMPERATURE °C:						
* Some exceptions apply - please contact laboratory		ACCOUNTING CONTACT:	SPECIAL REPORTING OR BILLING INSTRUCTIONS:			AB TIER 1	1,2,1						
STANDARD 5 BUSINESS DAYS		Colette MacMillon				OTHER	3,2,2						
RUSH 3 BUSINESS DAYS	RELINQUISHED BY SAMPLER:	Durand Cornett	DATE: DD/MM/YY	31/03/2010	TIME: 10:00	RECEIVED BY:							
RUSH 2 BUSINESS DAYS	RELINQUISHED BY:		DATE: DD/MM/YY		TIME:	RECEIVED BY:							
URGENT 1 BUSINESS DAY	RELINQUISHED BY:		DATE: DD/MM/YY		TIME:	RECEIVED BY:							
OTHER BUSINESS DAYS	RELINQUISHED BY:		DATE: DD/MM/YY		TIME:	RECEIVED BY LABORATORY:							

CUSTODY  
RECORD





A MEMBER OF ALEXCO RESOURCE GROUP

# 3 Calcite Business Centre, 151 Industrial Road, Whitehorse, Yukon Y1A 2V3  
PHONE (867) 668-6463 FAX (867) 667-6680  
[WWW.ACCESSCONSULTING.CA](http://WWW.ACCESSCONSULTING.CA)

## MEMORANDUM

**TO:** File

**CC:** David Petkovich  
Scott Keesey

**FROM:** Durand Cornett

**RE:** **May 2010 water sampling at Faro (Pelly River Interim Aquatic Ecosystem Monitoring Plan)**

**PROJECT #:** SFN-09-02

**DATE:** June 3, 2010

---

The following is a brief trip report for the monthly water sampling event in the area of the Anvil Range Mine for the month of May 2010.

In the late morning of May 18<sup>th</sup>, 2009 Durand Cornett and Catherine Henry (ACG) travelled from Whitehorse to Pelly Crossing where they picked up Michael Harper (SFN). These three constituted the field crew for the sampling event. They then drove to Faro arriving at 17:00.

On May 19<sup>th</sup> the field crew drove to the Faro Airport where they were scheduled to meet Ben Tanner of Trans North Helicopters. Ben arrived at 9:15 and after he fueled up the crew departed. Sites P1, P4, A1 R4 and R6 were accessed by helicopter. They landed back at the Airport at 11:15. The field crew then drove to sample site V8 (Vangorda downstream from the Faro town site). The crew then drove to the minesite arriving at the Admin building at 12:00. Catherine and Michael had to take Denison's safety orientation as it was their first times at the Faro Mine. After checking in and getting orientated the field crew sampled sites FC (inside the compound) and X14 (outside the compound). They then drove back to Pelly where the sampled station P5 and dropped off Michael Harper. Catherine and Durand then returned to Whitehorse, arriving at 19:30. Samples were prepped that evening.

In-situ measurements were taken with an YSI multi-meter. Six sample bottles were collected at each station with the following parameters being screened for:

- General (including Alkalinity, Conductivity and pH)
- TSS and TDS
- Total metals
- Cyanide
- Anions
- Phosphorus

Additionally 2 duplicate samples were prepared and tested. Duplicate 1 was sampled at station V8 and tested for Total Metals. Duplicate 2 was taken at X14 and tested for Cyanide. All 9 sets of water samples were shipped via Air North Cargo on May 20<sup>th</sup> to Maxxam Analytics in Burnaby, B.C. for analysis.

Station	Northing	Easting
P1	62.20786	133.356
P4	62.46132	134.16
A1	62.44574	134.123
R6	62.42107	133.685
R4	62.4209	133.687
V8	62.221428	133.3669
FC	62.37258	133.35
X14	62.35722	133.46722
P5	63.9421	135.293

#### Weather Conditions:

- May 19<sup>th</sup> at 9:00. 6 degrees C. Mostly Cloudy, gusty winds.

#### Notable issues:

- Sample was collected at V8, but unsure if it is the former V8 site. UTM Coordinates taken with the sample are: Zone 8. Easting 0584914 Northing 6900085.

Photographs:



Plate 1: Water sampling at Station A1

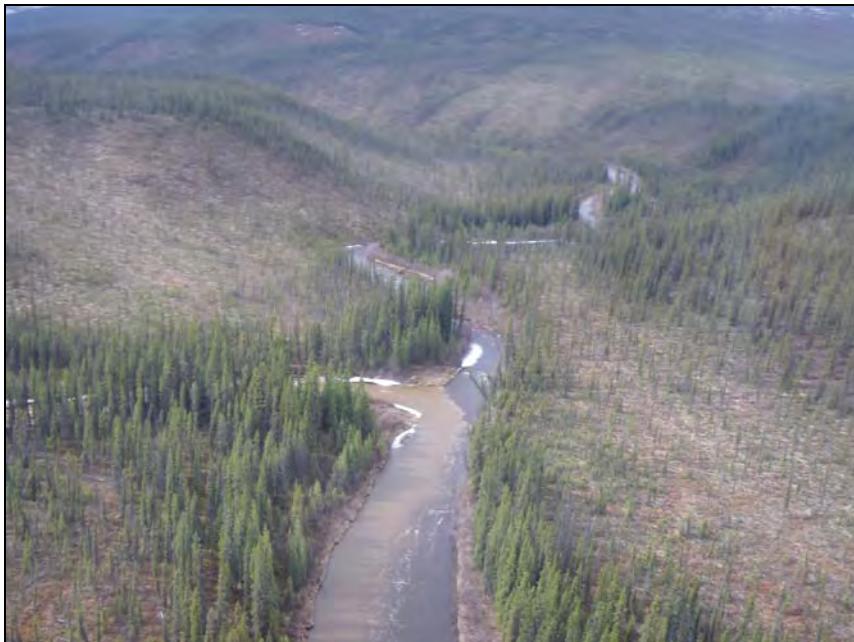


Plate 2: Anvil and Rose Creeks Meet

If you have any questions about this report, please contact Durand Cornett of Access Consulting Group.



Your P.O. #: SFN-09-02  
 Your Project #: SFN-07-01  
 Your C.O.C. #: 08313263

**Attention: David Petkovich**  
 ACCESS CONSULTING GROUP  
 #3 Calcite  
 151 Industrial Road  
 WHITEHORSE, YT  
 CANADA Y1A 3C8

Report Date: 2010/06/01

## CERTIFICATE OF ANALYSIS

**MAXXAM JOB #: B035821**  
 Received: 2010/05/21, 14:00

Sample Matrix: Water  
 # Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Water	4	2010/05/29	2010/05/30	BRN SOP-00264 R4.0	Based on SM2320B
Alkalinity - Water	5	2010/05/29	2010/05/31	BRN SOP-00264 R4.0	Based on SM2320B
Chloride by Automated Colourimetry	8	N/A	2010/05/22	BRN-SOP 00234 R3.0	Based on EPA 325.2
Chloride by Automated Colourimetry	1	N/A	2010/05/25	BRN-SOP 00234 R3.0	Based on EPA 325.2
Cyanide (Total)	10	N/A	2010/05/27	BRN-SOP 00226 R2.0	Based on EPA 9012AR1
Conductance - water	4	N/A	2010/05/30	BRN SOP-00264 R2.0	Based on SM-2510B
Conductance - water	5	N/A	2010/05/31	BRN SOP-00264 R2.0	Based on SM-2510B
Fluoride - Mining Clients	9	N/A	2010/05/28	BRN SOP-00225 R1.0	Based SM - 4500 F C
Hardness Total (calculated as CaCO3)	10	N/A	2010/06/01		
Na, K, Ca, Mg, S by CRC ICPMS (total)	10	N/A	2010/06/01	BRN SOP-00206	Based on EPA 200.8
Elements by ICPMS Low Level (total)	10	N/A	2010/06/01	BRN SOP-00206	Based on EPA 200.8
Ammonia-N	9	N/A	2010/05/27		
Nitrate + Nitrite (N)	9	N/A	2010/05/25		Based on USEPA 353.2
Nitrite (N) by CFA	7	N/A	2010/05/25	BRN SOP-00233 R1.0	EPA 353.2
Nitrite (N) by CFA	2	N/A	2010/05/26	BRN SOP-00233 R1.0	EPA 353.2
Nitrogen - Nitrate (as N)	7	N/A	2010/05/26	BYY6SOP-00010	Based on EPA 353.2
Nitrogen - Nitrate (as N)	2	N/A	2010/05/27	BYY6SOP-00010	Based on EPA 353.2
pH Water	2	N/A	2010/05/29	BRN SOP-00264 R4.0	Based on SM-4500H+B
pH Water	2	N/A	2010/05/30	BRN SOP-00264 R4.0	Based on SM-4500H+B
pH Water	5	N/A	2010/05/31	BRN SOP-00264 R4.0	Based on SM-4500H+B
Sulphate by Automated Colourimetry	8	N/A	2010/05/22	BRN-SOP 00243 R1.0	Based on EPA 375.4
Sulphate by Automated Colourimetry	1	N/A	2010/05/25	BRN-SOP 00243 R1.0	Based on EPA 375.4
Total Dissolved Solids (Filt. Residue)	9	N/A	2010/05/27	BRN SOP 00276 R4.0	SM 2540C
Total Phosphorus	9	N/A	2010/05/26	BRN SOP-00236 R4.0	SM 4500
Total Suspended Solids	9	N/A	2010/05/25	BRN SOP-00277 R5.0	Based on SM - 2540 D

\* Results relate only to the items tested.

### Encryption Key

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

KIMBERLEY WEBBER, BBY Customer Service  
 Email: kim.webber@maxxamanalytics.com  
 Phone# (604) 638-3254

Maxxam Job #: B035821  
Report Date: 2010/06/01

ACCESS CONSULTING GROUP

Client Project #: SFN-07-01

Your P.O. #: SFN-09-02

Sampler Initials: DC

-2-

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B035821  
 Report Date: 2010/06/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

## RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		U28876		U28877	U28878	U28879		U28880		
Sampling Date		2010/05/19 09:30		2010/05/19 10:10	2010/05/19 10:20	2010/05/19 10:45		2010/05/19 10:55		
	Units	P1	RDL	P4	A1	R6	QC Batch	R4	RDL	QC Batch
<b>Misc. Inorganics</b>										
Fluoride (F)	mg/L	0.13	0.05	0.11	0.08	0.07	3990624	0.09	0.01	3990624
<b>ANIONS</b>										
Nitrite (N)	mg/L	<0.005	0.005	<0.005	<0.005	<0.005	3981142	<0.005	0.005	3981142
<b>Calculated Parameters</b>										
Nitrate (N)	mg/L	<0.02	0.02	0.11	0.06	0.05	3974032	0.06	0.02	3974032
<b>Misc. Inorganics</b>										
Cyanide + Thiocyanate	mg/L	<0.0005	0.0005	0.0005	0.0009	0.0005	3987421	0.0014	0.0005	3987421
Alkalinity (Total as CaCO <sub>3</sub> )	mg/L	87	0.5	86	75	79	3991653	68	0.5	3991653
Alkalinity (PP as CaCO <sub>3</sub> )	mg/L	<0.5	0.5	<0.5	<0.5	<0.5	3991653	<0.5	0.5	3991653
Bicarbonate (HCO <sub>3</sub> )	mg/L	110	0.5	100	92	96	3991653	83	0.5	3991653
Carbonate (CO <sub>3</sub> )	mg/L	<0.5	0.5	<0.5	<0.5	<0.5	3991653	<0.5	0.5	3991653
Hydroxide (OH)	mg/L	<0.5	0.5	<0.5	<0.5	<0.5	3991653	<0.5	0.5	3991653
<b>Anions</b>										
Dissolved Sulphate (SO <sub>4</sub> )	mg/L	48	0.5	54	45	14	3977923	71	0.5	3982440
Dissolved Chloride (Cl)	mg/L	<0.5	0.5	0.7	<0.5	0.5	3977922	<0.5	0.5	3982415
<b>Nutrients</b>										
Ammonia (N)	mg/L	<0.005	0.005	0.028	0.009	0.023	3985540	0.016	0.005	3985540
Nitrate plus Nitrite (N)	mg/L	<0.02	0.02	0.11	0.06	0.05	3981042	0.06	0.02	3981042
Total Phosphorus (P)	mg/L	0.054	0.005	0.057	0.111	0.085	3981863	0.025	0.005	3981863
<b>Physical Properties</b>										
Conductivity	uS/cm	252	1	253	233	189	3991654	273	1	3991654
pH	pH Units	8.1		8.0	7.9	8.0	3991655	8.0		3991655
<b>Physical Properties</b>										
Total Suspended Solids	mg/L	35	4	23	93	62	3978820	19	4	3978820
Total Dissolved Solids	mg/L	170	10	160	160	120	3982429	190	10	3982429

RDL = Reportable Detection Limit

Maxxam Job #: B035821  
 Report Date: 2010/06/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

## RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		U28881	U28882		U28883	U28884	U28886		
Sampling Date		2010/05/19 11:30	2010/05/19 12:30		2010/05/19 13:00	2010/05/19 16:10	2010/05/19		
	Units	V8	FC	QC Batch	X14	P5	DUP2	RDL	QC Batch
<b>Misc. Inorganics</b>									
Fluoride (F)	mg/L	0.11	0.05	3990624	0.09	0.11		0.01	3990624
<b>ANIONS</b>									
Nitrite (N)	mg/L	<0.005	<0.005	3981142	0.007	<0.005		0.005	3985190
<b>Calculated Parameters</b>									
Nitrate (N)	mg/L	0.15	<0.02	3974032	0.04	<0.02		0.02	3974032
<b>Misc. Inorganics</b>									
Cyanide + Thiocyanate	mg/L	<0.0005	0.0005	3987421	0.0022	<0.0005	0.0022	0.0005	3987421
Alkalinity (Total as CaCO <sub>3</sub> )	mg/L	94	9.1	3991653	64	96		0.5	3991653
Alkalinity (PP as CaCO <sub>3</sub> )	mg/L	<0.5	<0.5	3991653	<0.5	<0.5		0.5	3991653
Bicarbonate (HCO <sub>3</sub> )	mg/L	110	11	3991653	78	120		0.5	3991653
Carbonate (CO <sub>3</sub> )	mg/L	<0.5	<0.5	3991653	<0.5	<0.5		0.5	3991653
Hydroxide (OH)	mg/L	<0.5	<0.5	3991653	<0.5	<0.5		0.5	3991653
<b>Anions</b>									
Dissolved Sulphate (SO <sub>4</sub> )	mg/L	62	<0.5	3977923	80	45		0.5	3977923
Dissolved Chloride (Cl)	mg/L	0.8	<0.5	3977922	0.6	0.6		0.5	3977922
<b>Nutrients</b>									
Ammonia (N)	mg/L	<0.005	<0.005	3985540	0.038	0.006		0.005	3985540
Nitrate plus Nitrite (N)	mg/L	0.15	<0.02	3981042	0.05	<0.02		0.02	3981042
Total Phosphorus (P)	mg/L	0.090	0.008	3981863	0.020	0.032		0.005	3981863
<b>Physical Properties</b>									
Conductivity	uS/cm	293	22	3991654	277	263		1	3991654
pH	pH Units	8.0	7.1	3991655	7.9	8.1			3991655
<b>Physical Properties</b>									
Total Suspended Solids	mg/L	87	6	3978820	15	20		4	3978820
Total Dissolved Solids	mg/L	180	16	3982429	190	170		10	3982429

RDL = Reportable Detection Limit

Maxxam Job #: B035821  
 Report Date: 2010/06/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### LOW LEVEL TOTAL METALS IN WATER (WATER)

Maxxam ID		U28876	U28877	U28878	U28879	U28880	U28881	U28882	U28883	U28884	U28885		
Sampling Date		2010/05/19 09:30	2010/05/19 10:10	2010/05/19 10:20	2010/05/19 10:45	2010/05/19 10:55	2010/05/19 11:30	2010/05/19 12:30	2010/05/19 13:00	2010/05/19 16:10	2010/05/19		
	Units	P1	P4	A1	R6	R4	V8	FC	X14	P5	DUP1	RDL	QC Batch
<b>Calculated Parameters</b>													
Total Hardness (CaCO <sub>3</sub> )	mg/L	130	129	118	97.4	127	157	8.7	127	128	151	0.5	3973998

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RDL = Reportable Detection Limit

Maxxam Job #: B035821  
 Report Date: 2010/06/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### LOW LEVEL TOTAL METALS IN WATER (WATER)

Maxxam ID		U28876	U28877	U28878	U28879	U28880	U28881	U28882	U28883	U28884	U28885		
Sampling Date		2010/05/19 09:30	2010/05/19 10:10	2010/05/19 10:20	2010/05/19 10:45	2010/05/19 10:55	2010/05/19 11:30	2010/05/19 12:30	2010/05/19 13:00	2010/05/19 16:10	2010/05/19		
	Units	P1	P4	A1	R6	R4	V8	FC	X14	P5	DUP1	RDL	QC Batch
<b>Total Metals by ICPMS</b>													
Total Aluminum (Al)	ug/L	258	271	1030	771	241	902	198	215	259	810	0.2	3994878
Total Antimony (Sb)	ug/L	0.23	0.18	0.23	0.21	0.15	0.13	<0.02	0.09	0.17	0.13	0.02	3994878
Total Arsenic (As)	ug/L	0.99	1.01	2.16	2.04	1.12	1.58	0.21	1.08	0.86	1.53	0.02	3994878
Total Barium (Ba)	ug/L	84.8	68.8	101	74.1	61.4	65.7	14.7	38.5	74.2	63.9	0.02	3994878
Total Beryllium (Be)	ug/L	0.03	0.03	0.08	0.08	0.03	0.06	0.06	0.02	0.03	0.07	0.01	3994878
Total Bismuth (Bi)	ug/L	<0.005	0.007	0.018	0.014	0.009	0.016	0.005	0.008	<0.005	0.014	0.005	3994878
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	50	3994878
Total Cadmium (Cd)	ug/L	0.298	0.168	0.173	0.152	0.097	0.140	0.045	0.063	0.170	0.141	0.005	3994878
Total Chromium (Cr)	ug/L	0.3	0.6	2.5	1.7	0.6	1.9	0.2	0.4	0.3	1.6	0.1	3994878
Total Cobalt (Co)	ug/L	0.455	0.387	1.64	0.985	1.97	1.30	0.105	1.50	0.307	1.21	0.005	3994878
Total Copper (Cu)	ug/L	2.92	2.72	5.58	4.42	2.98	4.10	1.53	2.03	2.60	3.95	0.05	3994878
Total Iron (Fe)	ug/L	792	621	2080	2200	1010	1600	249	991	631	1450	1	3994878
Total Lead (Pb)	ug/L	0.713	0.757	4.02	1.55	4.89	5.53	1.05	4.81	0.522	5.39	0.005	3994878
Total Lithium (Li)	ug/L	2.8	3.2	4.5	2.7	3.7	4.1	1.2	3.7	3.0	4.0	0.5	3994878
Total Manganese (Mn)	ug/L	53.7	89.3	524	149	1290	93.4	11.6	891	42.7	87.9	0.05	3994878
Total Molybdenum (Mo)	ug/L	0.92	0.82	0.43	0.62	0.49	0.42	<0.05	0.93	0.88	0.36	0.05	3994878
Total Nickel (Ni)	ug/L	6.62	4.74	6.53	3.15	4.29	4.74	0.58	3.29	4.76	4.34	0.02	3994878
Total Selenium (Se)	ug/L	0.84	0.65	0.35	0.42	0.24	0.45	<0.04	0.14	0.66	0.47	0.04	3994878
Total Silicon (Si)	ug/L	3110	3450	4950	4470	3870	4830	4050	3560	3340	4710	100	3994878
Total Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	3994878
Total Strontium (Sr)	ug/L	142	131	110	80.4	129	147	17.3	127	161	145	0.05	3994878
Total Thallium (Tl)	ug/L	0.009	0.011	0.036	0.018	0.032	0.035	0.008	0.031	0.009	0.033	0.002	3994878
Total Tin (Sn)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	3994878
Total Titanium (Ti)	ug/L	5.1	8.9	46.2	28.1	7.6	28.8	4.2	6.2	4.0	24.1	0.5	3994878
Total Uranium (U)	ug/L	1.25	1.26	1.33	1.40	0.936	2.90	0.325	0.867	1.01	2.91	0.002	3994878
Total Vanadium (V)	ug/L	1.0	0.9	3.4	3.8	0.5	1.9	<0.2	0.2	0.7	1.6	0.2	3994878
Total Zinc (Zn)	ug/L	25.8	14.2	32.4	11.4	46.7	28.4	7.6	39.8	14.5	27.6	0.1	3994878
Total Zirconium (Zr)	ug/L	0.2	0.2	0.4	0.4	0.2	0.4	0.7	0.2	0.2	0.4	0.1	3994878
Total Calcium (Ca)	mg/L	33.3	34.6	34.1	26.7	37.5	37.9	2.62	37.4	33.6	36.6	0.05	3975089
Total Magnesium (Mg)	mg/L	11.3	10.2	7.90	7.49	8.15	15.0	0.53	8.24	10.7	14.5	0.05	3975089
Total Potassium (K)	mg/L	0.83	1.08	1.47	1.16	1.15	1.02	0.56	1.16	1.24	0.99	0.05	3975089
Total Sodium (Na)	mg/L	1.42	1.79	2.10	1.21	2.41	2.06	0.97	2.65	2.25	2.00	0.05	3975089
Total Sulphur (S)	mg/L	16	17	15	<10	22	20	<10	25	15	19	10	3975089

RDL = Reportable Detection Limit

Maxxam Job #: B035821  
Report Date: 2010/06/01

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
Sampler Initials: DC

Package 1	6.3°C
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Each temperature is the average of up to three cooler temperatures taken at receipt

**General Comments**

Maxxam Job #: B035821  
 Report Date: 2010/06/01

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3977922	Dissolved Chloride (Cl)	2010/05/22	NC	80 - 120	104	80 - 120	<0.5	mg/L	NC	20
3977923	Dissolved Sulphate (SO4)	2010/05/22	NC	80 - 120	100	80 - 120	<0.5	mg/L	9.2	20
3978820	Total Suspended Solids	2010/05/25	104	80 - 120	101	80 - 120	<4	mg/L	NC	25
3981042	Nitrate plus Nitrite (N)	2010/05/25	NC	80 - 120	102	80 - 120	<0.02	mg/L	NC	25
3981142	Nitrite (N)	2010/05/25	99	80 - 120	104	80 - 120	<0.005	mg/L	NC	20
3981863	Total Phosphorus (P)	2010/05/26	101	80 - 120	88	80 - 120	<0.005	mg/L	1.5	20
3982415	Dissolved Chloride (Cl)	2010/05/25	113	80 - 120	103	80 - 120	<0.5	mg/L	0.5	20
3982429	Total Dissolved Solids	2010/05/27	110	80 - 120	96	80 - 120	<10	mg/L	2.4	20
3982440	Dissolved Sulphate (SO4)	2010/05/25			109	80 - 120	<0.5	mg/L	5.0	20
3985190	Nitrite (N)	2010/05/26	95	80 - 120	103	80 - 120	<0.005	mg/L	NC	20
3985540	Ammonia (N)	2010/05/27	NC	80 - 120	98	80 - 120	<0.005	mg/L	NC	20
3987421	Cyanide + Thiocyanate	2010/05/27	103	80 - 120	96	80 - 120	<0.0005	mg/L	NC	20
3990624	Fluoride (F)	2010/05/28	93	80 - 120	100	80 - 120	<0.01	mg/L	2.3	20
3991653	Alkalinity (Total as CaCO3)	2010/05/30	107	80 - 120	100	80 - 120	<0.5	mg/L	0.9	20
3991653	Alkalinity (PP as CaCO3)	2010/05/30					<0.5	mg/L	NC	20
3991653	Bicarbonate (HCO3)	2010/05/30					<0.5	mg/L	0.9	20
3991653	Carbonate (CO3)	2010/05/30					<0.5	mg/L	NC	20
3991653	Hydroxide (OH)	2010/05/30					<0.5	mg/L	NC	20
3991654	Conductivity	2010/05/30			100	80 - 120	<1	uS/cm	0.7	20
3994878	Total Arsenic (As)	2010/06/01	97	80 - 120	104	80 - 120	<0.02	ug/L	2.7	20
3994878	Total Beryllium (Be)	2010/06/01	101	80 - 120	107	80 - 120	<0.01	ug/L	NC	20
3994878	Total Cadmium (Cd)	2010/06/01	100	80 - 120	104	80 - 120	<0.005	ug/L	2.3	20
3994878	Total Chromium (Cr)	2010/06/01	98	80 - 120	104	80 - 120	<0.1	ug/L	NC	20
3994878	Total Cobalt (Co)	2010/06/01	96	80 - 120	107	80 - 120	<0.005	ug/L	1.5	20
3994878	Total Copper (Cu)	2010/06/01	96	80 - 120	108	80 - 120	<0.05	ug/L	2.4	20
3994878	Total Lead (Pb)	2010/06/01	96	80 - 120	107	80 - 120	<0.005	ug/L	1.5	20
3994878	Total Lithium (Li)	2010/06/01	97	80 - 120	104	80 - 120	<0.5	ug/L	11.6	20
3994878	Total Nickel (Ni)	2010/06/01	NC	80 - 120	107	80 - 120	<0.02	ug/L	9.8	20
3994878	Total Selenium (Se)	2010/06/01	103	80 - 120	108	80 - 120	<0.04	ug/L	0.9	20
3994878	Total Uranium (U)	2010/06/01	103	80 - 120	110	80 - 120	<0.002	ug/L	3.3	20
3994878	Total Vanadium (V)	2010/06/01	99	80 - 120	103	80 - 120	<0.2	ug/L	4.8	20
3994878	Total Zinc (Zn)	2010/06/01	NC	80 - 120	106	80 - 120	<0.1	ug/L	7.3	20
3994878	Total Aluminum (Al)	2010/06/01					<0.2	ug/L	5.2	20
3994878	Total Antimony (Sb)	2010/06/01					<0.02	ug/L	3.6	20
3994878	Total Barium (Ba)	2010/06/01					<0.02	ug/L	2.6	20
3994878	Total Bismuth (Bi)	2010/06/01					<0.005	ug/L	NC	20
3994878	Total Boron (B)	2010/06/01					<50	ug/L	NC	20
3994878	Total Iron (Fe)	2010/06/01					<1	ug/L	4.8	20
3994878	Total Manganese (Mn)	2010/06/01					<0.05	ug/L	3.5	20

Maxxam Job #: B035821  
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ACCESS CONSULTING GROUP  
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### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
3994878	Total Molybdenum (Mo)	2010/06/01					<0.05	ug/L	5.1	20
3994878	Total Silicon (Si)	2010/06/01					<100	ug/L	2.9	20
3994878	Total Silver (Ag)	2010/06/01					<0.005	ug/L	NC	20
3994878	Total Strontium (Sr)	2010/06/01					<0.05	ug/L	1.8	20
3994878	Total Thallium (Tl)	2010/06/01					<0.002	ug/L	NC	20
3994878	Total Tin (Sn)	2010/06/01					<0.01	ug/L	NC	20
3994878	Total Titanium (Ti)	2010/06/01					<0.5	ug/L	2.8	20
3994878	Total Zirconium (Zr)	2010/06/01					<0.1	ug/L	NC	20

N/A = Not Applicable

RPD = Relative Percent Difference

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.



8577 Commerce Court  
Burnaby, BC V5A 4N5  
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### CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

PAGE 1 OF 1

08313263

MAXXAM JOB #  
B135821

ANALYSIS REQUEST

COC #

COMPANY NAME: Access Consulting Group		CLIENT PROJECT NO.: SFN-07-01																																			
COMPANY ADDRESS: #3 Calcite Business Center 151 Industrial Rd Whitehorse, YT Y1A 2V3		TEL.: (867) 668-6463 david@accessconsulting.ca	E-MAIL: paul@accessconsulting.ca marie@accessconsulting.ca	FAX: (867) 668-6680																																	
SAMPLER NAME (PRINT): Durand Cornett, Catherine Henry	PROJECT MANAGER: David Petkovich	LABORATORY CONTACT: Kim Webber																																			
FIELD SAMPLE ID		MATRIX				SAMPLING								General (Alk, EC, pH)				TSS (TDS)				Total Metals (Low Level)				Anions -(Cl, F, NH3, NO2, NO3, SO4)				Cyanide				Phosphorus			
		GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	DATE	TIME	* CONTAINERS	DD/MM/YY																												
1 P1	X			19/5/2010	9:30	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
2 P4	X			19/5/2010	10:10	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
3 A1	X			19/5/2010	10:20	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
4 R6	X			19/5/2010	10:45	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
5 R4	X			19/5/2010	10:55	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
6 V8	X			19/5/2010	11:30	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
7 FC	X			19/5/2010	12:30	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
8 X14	X			19/5/2010	13:00	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
9 P5	X			19/5/2010	16:10	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
10 DUP1	X			19/5/2010	/	1			x																												
11 DUP2	X			19/5/2010	/	1				x																											
12																																					
TAT (Turnaround Time) LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL		PO NUMBER OR QUOTE NUMBER: SFN-09-02		SPECIAL DETECTION LIMITS / CONTAMINANT TYPE: AS per previous SFN-07-01/ SFN-09-02 sampling								CCME CSR AB TIER 1 OTHER		ARRIVAL TEMPERATURE °C: 6,6,T. C N/A:		DUE DATE:		LOG IN CHECK:																			
* Some exceptions apply - please contact laboratory		ACCOUNTING CONTACT: Colette MacMillon		SPECIAL REPORTING OR BILLING INSTRUCTIONS:								# JARS USED:																									
STANDARD 5 BUSINESS DAYS	RUSH 3 BUSINESS DAYS	RUSH 2 BUSINESS DAYS	URGENT 1 BUSINESS DAY	RELINQUISHED BY SAMPLER: Durand Cornett		DATE: DD/MM/YY	20/05/2010	TIME:	10:00	RECEIVED BY:																											
OTHER BUSINESS DAYS		RELINQUISHED BY:		DATE: DD/MM/YY	TIME:	RECEIVED BY:																															
CUSTODY RECORD		RELINQUISHED BY:		DATE: DD/MM/YY	TIME: 21/05/110	RECEIVED BY LABORATORY: Gn Ty																															



A MEMBER OF ALEXCO RESOURCE GROUP

# 3 Calcite Business Centre, 151 Industrial Road, Whitehorse, Yukon Y1A 2V3  
PHONE (867) 668-6463 FAX (867) 667-6680  
[WWW.ACCESSCONSULTING.CA](http://WWW.ACCESSCONSULTING.CA)

## MEMORANDUM

**TO:** File

**CC:** David Petkovich  
Scott Keesey

**FROM:** Durand Cornett

**RE:** **August 2010 water sampling at Faro (Pelly River Interim Aquatic Ecosystem Monitoring Plan)**

**PROJECT #:** SFN-09-02

**DATE:** August 9, 2010

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The following is a brief trip report for the monthly water sampling event in the area of the Anvil Range Mine for the month of August 2010.

On August 2<sup>nd</sup>, 2010 Durand Cornett and Melissa Bacon (Access) travelled from Whitehorse to Faro. Selkirk First Nation was conducting the Youth Mentoring Program (YMP) in association with Access Consulting and were to join for the sampling event this month. Access staff met Ellie Marcotte along with four SFN Youth and a film crew in Faro on the evening of August 2<sup>nd</sup>.

On August 3<sup>rd</sup> the field crew and YMP drove to the Faro Airport where they were scheduled to meet Brian Parsons of Trans North Helicopters. Brian arrived at 9:00 and gave a safety orientation. The field crew flew to sites P4 and A1 with the first group of the YMP. They went back to the airport and members of the YMP switched. Sites R4 and R6 were then visited. After one more switch the remaining YMP members, the crew visited site P1 and did a flyby of the minesite as the film crew acquired some shots of the area. They returned to the Faro Airport at 12:20 and then drove to the minesite. The YMP took Denison's safety orientation before entering the property. Sites X14 and FC were visited. The YMP then departed and Access sampled the last site, V8 on the way out of Faro.

---

In-situ measurements were taken with an YSI multi-meter. Six sample bottles were collected at each station with the following parameters being screened for:

- General (including Alkalinity, Conductivity and pH)
- TSS and TDS
- Total metals
- Cyanide
- Anions
- Phosphorus

Additionally 2 duplicate samples were prepared and tested. Duplicate 1 was sampled at station X14 and tested for Total Metals. Duplicate 2 was taken at V8 and tested for Anions. Field blanks were also taken at X14 (Total Metals) and V8 (Anions). A Trip Blank was carried to all stations and returned to Maxxam. All 8 sets of water samples, duplicates and blanks were shipped via Air North Cargo on August 5<sup>th</sup> to Maxxam Analytics in Burnaby, B.C. for analysis.

Station	Northing	Easting
P1	62.20786	133.356
P4	62.46132	134.16
A1	62.44574	134.123
R6	62.42107	133.685
R4	62.4209	133.687
V8	62.221428	133.3669
FC	62.37258	133.35
X14	62.35722	133.46722

#### Weather Conditions:

- August 3<sup>rd</sup> at 11:40. 22 Degrees C. Sunny and clear.
- August 3<sup>rd</sup> at 17:00. 24 Degrees C. Partially cloudy. No precipitation.
- 

#### Notable issues:

- Sample was collected at V8, but unsure if it is the former V8 site. UTM Coordinates taken with the sample are: Zone 8. Easting 0584914 Northing 6900085.
- Generally very low water level on the Pelly River.

Photographs:



Plate 1: Station P4 (downstream)



Plate 2: SFN Youth and Crew at site FC

If you have any questions about this report, please contact Durand Cornett of Access Consulting Group.

Your P.O. #: SFN-09-02  
 Your Project #: SFN-07-01  
 Your C.O.C. #: 08320212, 08320215

**Attention: David Petkovich**  
 ACCESS CONSULTING GROUP  
 #3 Calcite  
 151 Industrial Road  
 WHITEHORSE, YT  
 CANADA Y1A 3C8

Report Date: 2010/08/20

## CERTIFICATE OF ANALYSIS

**MAXXAM JOB #: B067935**  
 Received: 2010/08/06, 14:25

Sample Matrix: Water  
 # Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Water	8	2010/08/09	2010/08/09	BRN SOP-00264 R4.0	Based on SM2320B
Chloride by Automated Colourimetry	10	N/A	2010/08/10	BRN-SOP 00234 R3.0	Based on EPA 325.2
Cyanide (Total)	8	N/A	2010/08/12	BRN SOP-00226 R2.0	Based on EPA 9012AR1
Cyanide WAD (weak acid dissociable)	8	N/A	2010/08/11	BRN SOP-00227 R3.0	Based on SM-4500CN I
Conductance - water	8	N/A	2010/08/09	BRN SOP-00264 R2.0	Based on SM-2510B
Fluoride - Mining Clients	10	N/A	2010/08/10	BRN SOP-00225 R1.0	Based SM - 4500 F C
Hardness Total (calculated as CaCO3)	11	N/A	2010/08/13		
Na, K, Ca, Mg, S by CRC ICPMS (total)	11	N/A	2010/08/13	BRN SOP-00206	Based on EPA 200.8
Elements by ICPMS Low Level (total)	11	N/A	2010/08/12	BRN SOP-00206	Based on EPA 200.8
Ammonia-N	9	N/A	2010/08/09	BBY6SOP-00044	Based on EPA 350.1
Ammonia-N	1	N/A	2010/08/11	BBY6SOP-00044	Based on EPA 350.1
Nitrate + Nitrite (N)	9	N/A	2010/08/12		Based on USEPA 353.2
Nitrate + Nitrite (N)	1	N/A	2010/08/18		Based on USEPA 353.2
Nitrite (N) by CFA	10	N/A	2010/08/12	BRN SOP-00233 R1.0	EPA 353.2
Nitrogen - Nitrate (as N)	10	N/A	2010/08/13	BBY6SOP-00010	Based on EPA 353.2
pH Water	8	N/A	2010/08/09	BRN SOP-00264 R4.0	Based on SM-4500H+B
Sulphate by Automated Colourimetry	10	N/A	2010/08/10	BRN-SOP 00243 R1.0	Based on EPA 375.4
Total Dissolved Solids (Filt. Residue)	8	N/A	2010/08/12	BRN SOP 00276 R4.0	SM 2540C
Total Phosphorus	8	N/A	2010/08/10	BRN SOP-00236 R4.0	SM 4500
Total Suspended Solids-LowLevel	8	N/A	2010/08/10	BRN SOP-00277 R5.0	Based on SM-2540 D

\* Results relate only to the items tested.

Encryption Key

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

KIMBERLEY WEBBER, BBY Customer Service  
 Email: kim.webber@maxxamanalytics.com  
 Phone# (604) 638-3254

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Job #: B067935  
 Report Date: 2010/08/20

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

## RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		W03953	W03954	W03955	W03956	W03957	W03958		
Sampling Date		2010/08/03	2010/08/03	2010/08/03	2010/08/03	2010/08/03	2010/08/03		
	Units	P1	P4	A1	R6	R4	V8	RDL	QC Batch
<b>Misc. Inorganics</b>									
Fluoride (F)	mg/L	0.13	0.21	0.11	0.08	0.12	0.15	0.01	4166692
<b>ANIONS</b>									
Nitrite (N)	mg/L	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	0.005	4178348
<b>Calculated Parameters</b>									
Nitrate (N)	mg/L	<0.02	<0.02	<0.02	0.02	0.04	0.14	0.02	4162804
<b>Misc. Inorganics</b>									
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	4172123
Cyanide + Thiocyanate	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	4175419
Alkalinity (Total as CaCO <sub>3</sub> )	mg/L	140	160	130	160	120	160	0.5	4165495
Alkalinity (PP as CaCO <sub>3</sub> )	mg/L	<0.5	<0.5	<0.5	0.9	<0.5	2.4	0.5	4165495
Bicarbonate (HCO <sub>3</sub> )	mg/L	180	200	160	190	140	190	0.5	4165495
Carbonate (CO <sub>3</sub> )	mg/L	<0.5	<0.5	<0.5	1.1	<0.5	2.8	0.5	4165495
Hydroxide (OH)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	4165495
<b>Anions</b>									
Dissolved Sulphate (SO <sub>4</sub> )	mg/L	61	47	40	21	64	100	0.5	4168629
Dissolved Chloride (Cl)	mg/L	1.3	0.7	<0.5	<0.5	0.5	0.7	0.5	4168618
<b>Nutrients</b>									
Ammonia (N)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	4164042
Nitrate plus Nitrite (N)	mg/L	<0.02(1)	<0.02(1)	<0.02(1)	0.02(1)	0.04(1)	0.14(1)	0.02	4176539
Total Phosphorus (P)	mg/L	0.021	<0.005	<0.005	<0.005	<0.005	0.005	0.005	4165557
<b>Physical Properties</b>									
Conductivity	uS/cm	372	369	305	298	335	467	1	4165494
pH	pH Units	8.17	8.24	8.25	8.30	8.16	8.35		4165491
<b>Physical Properties</b>									
Total Suspended Solids	mg/L	3	<1	1	<1	<1	2	1	4164801
Total Dissolved Solids	mg/L	210	210	170	170	210	300	10	4167369

RDL = Reportable Detection Limit

(1) - Sample analysed past recommended hold time

## RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		W03959	W03960		W03963		W03964		
Sampling Date		2010/08/03	2010/08/03		2010/08/03		2010/08/03		
	Units	FC	X14	QC Batch	FIELD BLANK 2	QC Batch	DUP 2	RDL	QC Batch
<b>Misc. Inorganics</b>									
Fluoride (F)	mg/L	0.09	0.13	4166692	<0.01	4166692	0.14	0.01	4166692
<b>ANIONS</b>									
Nitrite (N)	mg/L	<0.005(1)	<0.005(1)	4178348	<0.005(1)	4178348	<0.005(1)	0.005	4178348
<b>Calculated Parameters</b>									
Nitrate (N)	mg/L	<0.02	<0.02	4162804	0.36	4162804	0.14	0.02	4162804
<b>Misc. Inorganics</b>									
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.0005	<0.0005	4172123				0.0005	
Cyanide + Thiocyanate	mg/L	<0.0005	<0.0005	4175419				0.0005	
Alkalinity (Total as CaCO <sub>3</sub> )	mg/L	25	110	4165495				0.5	
Alkalinity (PP as CaCO <sub>3</sub> )	mg/L	<0.5	<0.5	4165495				0.5	
Bicarbonate (HCO <sub>3</sub> )	mg/L	30	140	4165495				0.5	
Carbonate (CO <sub>3</sub> )	mg/L	<0.5	<0.5	4165495				0.5	
Hydroxide (OH)	mg/L	<0.5	<0.5	4165495				0.5	
<b>Anions</b>									
Dissolved Sulphate (SO <sub>4</sub> )	mg/L	1.5	57	4168629	<0.5	4168629	100	0.5	4168629
Dissolved Chloride (Cl)	mg/L	<0.5	0.6	4168618	<0.5	4168618	0.8	0.5	4168618
<b>Nutrients</b>									
Ammonia (N)	mg/L	<0.005	0.012	4164042	<0.005	4172007	0.023	0.005	4164042
Nitrate plus Nitrite (N)	mg/L	<0.02(1)	<0.02(1)	4176539	0.36(1)	4191165	0.14(1)	0.02	4176539
Total Phosphorus (P)	mg/L	<0.005	<0.005	4165557				0.005	
<b>Physical Properties</b>									
Conductivity	uS/cm	43	315	4165494				1	
pH	pH Units	7.47	8.06	4165491					
<b>Physical Properties</b>									
Total Suspended Solids	mg/L	<1	<1	4164801				1	
Total Dissolved Solids	mg/L	30	190	4167369				10	

RDL = Reportable Detection Limit

(1) - Sample analysed past recommended hold time

Maxxam Job #: B067935  
 Report Date: 2010/08/20

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### LOW LEVEL TOTAL METALS IN WATER (WATER)

Maxxam ID		W03953	W03954	W03955	W03956	W03957	W03958	W03959		
Sampling Date		2010/08/03	2010/08/03	2010/08/03	2010/08/03	2010/08/03	2010/08/03	2010/08/03		
Calculated Parameters	Units	P1	P4	A1	R6	R4	V8	FC	RDL	QC Batch
<b>Total Hardness (CaCO<sub>3</sub>)</b>										
Total Hardness (CaCO <sub>3</sub> )	mg/L	181	184	148	153	162	239	16.8	0.5	4162801
<b>Total Metals by ICPMS</b>										
Total Aluminum (Al)	ug/L	38.3	34.4	19.0	16.6	7.1	21.5	41.0	0.2	4175323
Total Antimony (Sb)	ug/L	0.21	0.18	0.14	0.13	0.11	0.14	0.03	0.02	4175323
Total Arsenic (As)	ug/L	0.49	0.66	0.53	0.48	0.30	0.52	0.11	0.02	4175323
Total Barium (Ba)	ug/L	78.2	84.0	52.6	69.5	47.8	53.2	20.7	0.02	4175323
Total Beryllium (Be)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Total Bismuth (Bi)	ug/L	0.013	0.022	0.114	<0.005	0.008	<0.005	<0.005	<0.005	0.005
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	50
Total Cadmium (Cd)	ug/L	0.118	0.105	0.033	0.017	0.015	0.047	0.010	0.005	4175323
Total Chromium (Cr)	ug/L	0.3	0.3	0.4	0.5	0.4	0.1	0.1	0.1	4175323
Total Cobalt (Co)	ug/L	0.072	0.069	0.078	0.038	0.137	0.069	0.026	0.005	4175323
Total Copper (Cu)	ug/L	0.82	0.98	0.78	0.54	0.62	0.84	0.53	0.05	4175323
Total Iron (Fe)	ug/L	72	91	69	169	135	54	40	1	4175323
Total Lead (Pb)	ug/L	0.094	0.123	0.167	0.053	0.112	0.151	0.504	0.005	4175323
Total Lithium (Li)	ug/L	4.0	4.5	3.6	2.1	4.1	4.9	2.6	0.5	4175323
Total Manganese (Mn)	ug/L	22.2	28.8	36.5	12.9	150	7.85	1.59	0.05	4175323
Total Molybdenum (Mo)	ug/L	1.31	1.60	0.96	1.20	0.62	0.87	0.07	0.05	4175323
Total Nickel (Ni)	ug/L	2.68	1.96	0.87	0.40	1.18	1.11	0.32	0.02	4175323
Total Selenium (Se)	ug/L	0.85	0.61	0.50	0.67	0.43	0.57	<0.04	0.04	4175323
Total Silicon (Si)	ug/L	2990	3530	4100	4070	3960	4710	6960	100	4175323
Total Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Total Strontium (Sr)	ug/L	208	221	148	128	175	242	32.3	0.05	4175323
Total Thallium (Tl)	ug/L	0.006	0.008	0.010	<0.002	0.025	0.016	<0.002	0.002	4175323
Total Tin (Sn)	ug/L	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	4175323
Total Titanium (Ti)	ug/L	0.7	0.8	0.9	<0.5	<0.5	0.6	<0.5	0.5	4175323
Total Uranium (U)	ug/L	1.69	1.81	1.61	1.86	1.34	3.90	0.115	0.002	4175323
Total Vanadium (V)	ug/L	0.2	0.2	<0.2	<0.2	<0.2	<0.2	0.2	0.2	4175323
Total Zinc (Zn)	ug/L	5.2	5.5	2.7	0.3	9.4	7.0	1.4	0.1	4175323
Total Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	4175323
Total Calcium (Ca)	mg/L	46.9	48.5	43.2	42.9	47.5	58.2	5.00	0.05	4162803
Total Magnesium (Mg)	mg/L	15.5	15.3	9.72	11.3	10.6	22.8	1.05	0.05	4162803
Total Potassium (K)	mg/L	0.78	1.24	1.35	1.11	1.20	0.96	0.16	0.05	4162803
Total Sodium (Na)	mg/L	1.79	3.25	2.71	1.84	3.30	3.23	2.10	0.05	4162803
Total Sulphur (S)	mg/L	23	18	15	<10	24	37	<10	10	4162803

RDL = Reportable Detection Limit

Maxxam Job #: B067935  
Report Date: 2010/08/20

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
Sampler Initials: DC

**LOW LEVEL TOTAL METALS IN WATER (WATER)**

Maxxam ID		W03960		W03961		W03962		W03977			
Sampling Date		2010/08/03		2010/08/03		2010/08/03		2010/08/03			
	Units	X14	QC Batch	FIELD BLANK 1	QC Batch	DUP 1	QC Batch	TRIP BLANK	RDL	QC Batch	
<b>Calculated Parameters</b>											
Total Hardness (CaCO <sub>3</sub> )	mg/L	150	4162801	<0.5	4162801	151	4162801	<0.5	0.5	4162801	

---

RDL = Reportable Detection Limit

Maxxam Job #: B067935  
 Report Date: 2010/08/20

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### LOW LEVEL TOTAL METALS IN WATER (WATER)

Maxxam ID		W03960		W03961		W03962		W03977		
Sampling Date		2010/08/03		2010/08/03		2010/08/03		2010/08/03		
	Units	X14	QC Batch	FIELD BLANK 1	QC Batch	DUP 1	QC Batch	TRIP BLANK	RDL	QC Batch
<b>Total Metals by ICPMS</b>										
Total Aluminum (Al)	ug/L	7.0	4175323	1.8	4187278	11.7	4175323	0.8	0.2	4175323
Total Antimony (Sb)	ug/L	0.08	4175323	<0.02	4175323	0.08	4175323	<0.02	0.02	4175323
Total Arsenic (As)	ug/L	0.49	4175323	<0.02	4175323	0.48	4175323	<0.02	0.02	4175323
Total Barium (Ba)	ug/L	49.0	4175323	<0.02	4175323	48.8	4175323	<0.02	0.02	4175323
Total Beryllium (Be)	ug/L	<0.01	4175323	<0.01	4175323	<0.01	4175323	<0.01	0.01	4175323
Total Bismuth (Bi)	ug/L	<0.005	4175323	<0.005	4175323	<0.005	4175323	<0.005	0.005	4175323
Total Boron (B)	ug/L	<50	4175323	<50	4175323	<50	4175323	<50	50	4175323
Total Cadmium (Cd)	ug/L	0.024	4175323	<0.005	4175323	0.027	4175323	<0.005	0.005	4175323
Total Chromium (Cr)	ug/L	<0.1	4175323	<0.1	4175323	<0.1	4175323	<0.1	0.1	4175323
Total Cobalt (Co)	ug/L	0.409	4175323	<0.005	4175323	0.403	4175323	<0.005	0.005	4175323
Total Copper (Cu)	ug/L	0.47	4175323	<0.05	4175323	0.54	4175323	<0.05	0.05	4175323
Total Iron (Fe)	ug/L	353	4175323	<1	4175323	369	4175323	<1	1	4175323
Total Lead (Pb)	ug/L	0.168	4175323	<0.005	4175323	0.317	4175323	<0.005	0.005	4187278
Total Lithium (Li)	ug/L	4.3	4175323	<0.5	4175323	4.3	4175323	<0.5	0.5	4175323
Total Manganese (Mn)	ug/L	617	4175323	<0.05	4175323	620	4175323	<0.05	0.05	4175323
Total Molybdenum (Mo)	ug/L	0.56	4175323	<0.05	4175323	0.56	4175323	<0.05	0.05	4175323
Total Nickel (Ni)	ug/L	1.39	4175323	<0.02	4175323	1.37	4175323	<0.02	0.02	4175323
Total Selenium (Se)	ug/L	0.20	4175323	<0.04	4175323	0.19	4175323	<0.04	0.04	4175323
Total Silicon (Si)	ug/L	4400	4175323	<100	4175323	4330	4175323	<100	100	4175323
Total Silver (Ag)	ug/L	<0.005	4175323	<0.005	4175323	<0.005	4175323	<0.005	0.005	4175323
Total Strontium (Sr)	ug/L	172	4175323	<0.05	4175323	173	4175323	<0.05	0.05	4175323
Total Thallium (Tl)	ug/L	0.005	4175323	<0.002	4175323	0.006	4175323	<0.002	0.002	4175323
Total Tin (Sn)	ug/L	<0.01	4175323	<0.01	4175323	<0.01	4175323	<0.01	0.01	4175323
Total Titanium (Ti)	ug/L	<0.5	4175323	<0.5	4175323	1.1	4175323	<0.5	0.5	4175323
Total Uranium (U)	ug/L	1.49	4175323	<0.002	4175323	1.50	4175323	<0.002	0.002	4175323
Total Vanadium (V)	ug/L	<0.2	4175323	<0.2	4175323	<0.2	4175323	<0.2	0.2	4175323
Total Zinc (Zn)	ug/L	17.6	4175323	<0.1	4175323	17.9	4175323	<0.1	0.1	4175323
Total Zirconium (Zr)	ug/L	<0.1	4175323	<0.1	4175323	<0.1	4175323	<0.1	0.1	4175323
Total Calcium (Ca)	mg/L	43.7	4162803	<0.05	4162803	43.9	4162803	<0.05	0.05	4162803
Total Magnesium (Mg)	mg/L	9.85	4162803	<0.05	4162803	10.0	4162803	<0.05	0.05	4162803
Total Potassium (K)	mg/L	1.00	4162803	<0.05	4162803	1.00	4162803	<0.05	0.05	4162803
Total Sodium (Na)	mg/L	3.42	4162803	<0.05	4162803	3.49	4162803	<0.05	0.05	4162803
Total Sulphur (S)	mg/L	21	4162803	<10	4162803	22	4162803	<10	10	4162803

RDL = Reportable Detection Limit

Package 1 11.7°C

Each temperature is the average of up to three cooler temperatures taken at receipt

Sample W03961, Elements by ICPMS Low Level (total): Test repeated.

Sample W03977, Elements by ICPMS Low Level (total): Test repeated.

Maxxam Job #: B067935  
 Report Date: 2010/08/20

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
4164042	Ammonia (N)	2010/08/09	NC	80 - 120	109	80 - 120	<0.005	mg/L	0.5	20
4164801	Total Suspended Solids	2010/08/10			101	80 - 120	<1	mg/L		
4165494	Conductivity	2010/08/09			100	80 - 120	<1	uS/cm	0	20
4165495	Alkalinity (Total as CaCO <sub>3</sub> )	2010/08/09	111	80 - 120	100	80 - 120	0.5, RDL=0.5	mg/L		
4165495	Alkalinity (PP as CaCO <sub>3</sub> )	2010/08/09					<0.5	mg/L		
4165495	Bicarbonate (HCO <sub>3</sub> )	2010/08/09					0.6, RDL=0.5	mg/L		
4165495	Carbonate (CO <sub>3</sub> )	2010/08/09					<0.5	mg/L		
4165495	Hydroxide (OH)	2010/08/09					<0.5	mg/L		
4165557	Total Phosphorus (P)	2010/08/10	104	80 - 120	97	80 - 120	<0.005	mg/L	NC	20
4166692	Fluoride (F)	2010/08/10	105	80 - 120	97	80 - 120	<0.01	mg/L	2.4	20
4167369	Total Dissolved Solids	2010/08/12	114	80 - 120	92	80 - 120	<10	mg/L	3.9	20
4168618	Dissolved Chloride (Cl)	2010/08/10	NC	80 - 120	94	80 - 120	<0.5	mg/L	NC	20
4168629	Dissolved Sulphate (SO <sub>4</sub> )	2010/08/10	NC	80 - 120	98	80 - 120	<0.5	mg/L	0.1	20
4172007	Ammonia (N)	2010/08/11	86	80 - 120	100	80 - 120	<0.005	mg/L	NC	20
4172123	Weak Acid Dissoc. Cyanide (CN)	2010/08/11	102	80 - 120	103	80 - 120	<0.0005	mg/L	NC	20
4175323	Total Arsenic (As)	2010/08/12	103	80 - 120	99	80 - 120	0.03, RDL=0.02	ug/L	0.02	20
4175323	Total Beryllium (Be)	2010/08/12	113	80 - 120	115	80 - 120	<0.01	ug/L	NC	20
4175323	Total Cadmium (Cd)	2010/08/12	100	80 - 120	102	80 - 120	<0.005	ug/L	4.8	20
4175323	Total Chromium (Cr)	2010/08/12	104	80 - 120	100	80 - 120	<0.1	ug/L	NC	20
4175323	Total Cobalt (Co)	2010/08/12	102	80 - 120	99	80 - 120	<0.005	ug/L	13.0	20
4175323	Total Copper (Cu)	2010/08/12	101	80 - 120	104	80 - 120	<0.05	ug/L	2.0	20
4175323	Total Lead (Pb)	2010/08/12	103	80 - 120	107	80 - 120	<0.005	ug/L	21.4 <sub>(1, 2)</sub>	20
4175323	Total Lithium (Li)	2010/08/12	103	80 - 120	111	80 - 120	<0.5	ug/L	3.2	20
4175323	Total Nickel (Ni)	2010/08/12	99	80 - 120	100	80 - 120	<0.02	ug/L	1.3	20
4175323	Total Selenium (Se)	2010/08/12	105	80 - 120	104	80 - 120	<0.04	ug/L	3.1	20
4175323	Total Uranium (U)	2010/08/12	105	80 - 120	102	80 - 120	<0.002	ug/L	1.5	20
4175323	Total Vanadium (V)	2010/08/12	103	80 - 120	95	80 - 120	<0.2	ug/L	NC	20
4175323	Total Zinc (Zn)	2010/08/12	NC	80 - 120	108	80 - 120	<0.1	ug/L	2.0	20
4175323	Total Aluminum (Al)	2010/08/12					<0.2	ug/L	4.8	20
4175323	Total Antimony (Sb)	2010/08/12					<0.02	ug/L	0.8	20
4175323	Total Barium (Ba)	2010/08/12					<0.02	ug/L	1.0	20
4175323	Total Bismuth (Bi)	2010/08/12					<0.005	ug/L	NC	20
4175323	Total Boron (B)	2010/08/12					<50	ug/L	NC	20
4175323	Total Iron (Fe)	2010/08/12					<1	ug/L	2.5	20
4175323	Total Manganese (Mn)	2010/08/12					<0.05	ug/L	1.0	20
4175323	Total Molybdenum (Mo)	2010/08/12					<0.05	ug/L	1.4	20
4175323	Total Silicon (Si)	2010/08/12					<100	ug/L	2.4	20
4175323	Total Silver (Ag)	2010/08/12					<0.005	ug/L	NC	20
4175323	Total Strontium (Sr)	2010/08/12					<0.05	ug/L	0.4	20

Maxxam Job #: B067935  
 Report Date: 2010/08/20

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-09-02  
 Sampler Initials: DC

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
4175323	Total Thallium (Tl)	2010/08/12					<0.002	ug/L	NC	20
4175323	Total Tin (Sn)	2010/08/12					<0.01	ug/L	NC	20
4175323	Total Titanium (Ti)	2010/08/12					<0.5	ug/L	NC	20
4175323	Total Zirconium (Zr)	2010/08/12					<0.1	ug/L	NC	20
4175419	Cyanide + Thiocyanate	2010/08/12	102	80 - 120	97	80 - 120	<0.0005	mg/L	NC	20
4176539	Nitrate plus Nitrite (N)	2010/08/12	100	80 - 120	103	80 - 120	<0.02	mg/L	NC <sup>(3)</sup>	25
4178348	Nitrite (N)	2010/08/12	102	80 - 120	109	80 - 120	<0.005	mg/L	NC <sup>(3)</sup>	20
4187278	Total Lead (Pb)	2010/08/18	NC	80 - 120	108	80 - 120	<0.005	ug/L	0.8	20
4187278	Total Aluminum (Al)	2010/08/18					<0.2	ug/L	2.9	20
4191165	Nitrate plus Nitrite (N)	2010/08/18	107	80 - 120	102	80 - 120	<0.02	mg/L	NC <sup>(3)</sup>	25

N/A = Not Applicable

RDL = Reportable Detection Limit

RPD = Relative Percent Difference

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

(1) - Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) - Duplicate RPD for Pb exceeds acceptance criteria. 10% of analytes failure in multielement scan is allowed.

(3) - Sample analysed past recommended hold time



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Burnaby, BC V5A 4N5  
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Phone: (604) 444-4808  
Fax: (604) 444-4511  
Toll-Free: 1-800-440-4808

## **CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST**

PAGE 1 OF 2

ANALYSIS REQUEST						
LAB USE ONLY MAXXAM JOB # <i>5067939</i>		LAB USE ONLY			LAB USE ONLY COC #	
# CONTAINERS	General (Alk, EC, pH)	TSS (TDS)	Total Metals (Low Level)	Anions -(Cl, F, NH3, NO2, NO3, SO4)	Cyanide	Phosphorus
	6	X X X X X X				
6	X X X X X X					
6	X X X X X X					
6	X X X X X X					
6	X X X X X X					
6	X X X X X X					
6	X X X X X X					
6	X X X X X X					
1		X				
1		X				
1			X			
1			X			
<input type="checkbox"/> CCME <input type="checkbox"/> CSR <input type="checkbox"/> AB TIER 1 <input type="checkbox"/> OTHER		LAB USE ONLY				
		ARRIVAL TEMPERATURE °C:		DUE DATE:		LOG IN CHECK:
		<i>14,10,11</i>				
		# JARS USED:				
RECEIVED BY:						
RECEIVED BY:						
RECEIVED BY LABORATORY: <i>Claire Raymond / Claire Raymond</i>						

COMPANY NAME: Access Consulting Group	CLIENT PROJECT NO.: SFN-07-01	
COMPANY ADDRESS: #3 Calcite Business Center 151 Industrial Rd Whitehorse, YT Y1A 2V3	TEL.: (867) 668-6463 <a href="mailto:david@accessconsulting.ca">david@accessconsulting.ca</a> E-MAIL: <a href="mailto:paul@accessconsulting.ca">paul@accessconsulting.ca</a> <a href="mailto:marie@accessconsulting.ca">marie@accessconsulting.ca</a> FAX: (867) 668-6680	
SAMPLER NAME (PRINT): Durand Cornett, SFN Youth Program	PROJECT MANAGER: David Petkovich	LABORATORY CONTACT: Kim Webber

FIELD SAMPLE ID	LAB SAMPLE ID	MATRIX	SAMPLING			# CONTAINERS					
			GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	DATE	TIME		
								DD/MM/YY			
1 P1	101	X						3-Aug-10		6	X X X X X X
2 P4	102	X						3-Aug-10		6	X X X X X X
3 A1	95	X						3-Aug-10		6	X X X X X X
4 R6	103	X						3-Aug-10		6	X X X X X X
5 R4	104	X						3-Aug-10		6	X X X X X X
6 V8	105	X						3-Aug-10		6	X X X X X X
7 FC	106	X						3-Aug-10		6	X X X X X X
8 X14	96	X						3-Aug-10		6	X X X X X X
9 Field Blank 1	1	X						3-Aug-10	/ 1		x
10 Dup1	2	x						3-Aug-10	/ 1		x
11 Field Blank 2	3	x						3-Aug-10	/ 1		x
12 Dup2								3-Aug-10	/ 1		x

TAT (Turnaround Time) <b>LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL</b>		PO NUMBER OR QUOTE NUMBER: <b>SFN-09-02</b>	SPECIAL DETECTION LIMITS / CONTAMINANT TYPE: <b>AS per previous SFN-07-01/ SFN-09-02 sampling</b>	CCME CSR AB TIER 1 OTHER	<b>LAB USE ONLY</b>		
* Some exceptions apply - please contact laboratory		ACCOUNTING CONTACT: <b>Colette MacMillon</b>	SPECIAL REPORTING OR BILLING INSTRUCTIONS:		# JARS USED: <b>14/10,11</b>	ARRIVAL TEMPERATURE °C.	DUE DATE:
<b>STANDARD 5 BUSINESS DAYS</b>	<b>RUSH 3 BUSINESS DAYS</b>	RELINQUISHED BY SAMPLER: <b>Durand Cornett</b>	DATE: DD/MM/YY <b>05/08/2010</b>	TIME: <b>19:00</b>	RECEIVED BY:		
<b>RUSH 2 BUSINESS DAYS</b>	<b>URGENT 1 BUSINESS DAY</b>	RELINQUISHED BY: <b></b>	DATE: DD/MM/YY	TIME: <b></b>	RECEIVED BY:		
<b>OTHER BUSINESS DAYS</b>		RELINQUISHED BY: <b></b>	DATE: DD/MM/YY <b>09/08/10</b>	TIME: <b>Page 14 of 25</b>	RECEIVED BY LABORATORY: <b>Clair Raymond/Claire Raymond</b>		
<b>CUSTODY RECORD</b>							

**CUSTODY  
RECORD**



## MEMORANDUM

**TO:** File

**CC:** David Petkovich

**FROM:** Stuart Van Bibber

**RE:** November 2010 water sampling at Faro (Aquatic Ecosystem Monitoring Program, Faro Mine, Yukon)

**PROJECT #:** SFN-10-01

**DATE:** November 2, 2010

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This letter report describes the field and in-office work conducted for the Aquatic Ecosystem Monitoring Program, Faro Mine, by Access Consulting Group (ACG) in November, 2010. Participants in this field trip included Paul Inglis and Stuart Van Bibber of ACG. Although attempts were made to involve a Selkirk First Nation (SFN) beneficiary, ACG personnel were unable to meet up with and include anyone from Pelly Crossing. The field trip to Faro proceeded without the assistance of a SFN person this month.

The following sections highlight the specific work conducted during the site visit.

### 1. Monthly Water Quality and Hydrology Surveillance Program

Between November 2 and 4, 2010, water quality samples, flows and in-situ data were collected from the following Water Quality Sample Stations (WQ stations): A1, FC, GCULV, K8, NWID, P1, P4, P5, R1, R4, R5, R6, USFR, V17A, V20A, V8, VGMAIN, VR, VW1, VW2, VW3, W10, and X14. All of the above stations were noted to have varying degrees of ice cover and/or glacial ice above flowing water. Many of the stations had open flowing water through which to collect samples and conduct stream flow measurements. Samples were collected from R4, R5, R6, A1, P4, and P1 by helicopter with an R44 Raven from Horizon Helicopters of Whitehorse.

All samples collected were filtered and preserved, if required, at the end of the day of collection and kept in the refrigerator or in coolers with ice packs. They were sent to Maxxam Analytics Inc. (Maxxam) and analyzed for the following parameters:

- Routine parameters (conductivity, pH, total suspended solids, colour, hardness, total and dissolved solids);
- Total suspended solids;
- Anions (ammonia, nitrogen, phosphate);
- Total Organics (alkalinity, hydroxide, carbonate, dissolved and total organic carbon);
- Cyanide (weak acid digestible); and
- Total and dissolved metals (suite of 33 metals, including all parameters found in the CCME and MMER guidelines).

A full suite of QA/QC water samples (TSS/TDS, General, Anions, TOC, Cyanide, and Total and Dissolved Metals) were collected as follows:

- Field duplicates – collected at station R4
- Field blanks – Field blanks processed at R6 from Distilled Water (DI water) from Maxxam Labs
- Trip blanks – A full suite of DI water provided by Maxxam and was carried to all sites throughout the entire trip and never opened.

## **2. In-situ Data**

Study activities this month also consisted of collecting in-situ field measurements (pH, electrical conductivity, water temperature, turbidity, and oxidation reduction potential). The sites visited within the study area are presented in table format on the next page, which includes all associated measurements:

AQUATIC ECOSYSTEM MONITORING PROGRAM, FARO MINE, YUKON

Station	Date	Time (24 hr)	pH	EC ( $\mu\text{S}/\text{cm}$ )	WT ( $^{\circ}\text{C}$ )	ORP (mV)	NTU	Flows ( $\text{m}^3/\text{sec}$ )
P5	2-Nov-10	13:00	7.73	221.1	1.3	308.4	4.6	* <sup>2</sup>
V8	2-Nov-10	17:15	8.13	303.3	-0.1	281.3	2.60	CONT
V20A	3-Nov-10	09:15	7.43	312.3	-0.1	301.3	4.4	* <sup>1</sup>
V17A	3-Nov-10	10:15	7.49	99.8	-0.1	286.2	1.9	0.012
VR	3-Nov-10	11:20	7.30	44.6	-0.1	280.1	0.42	0.018
USFR	3-Nov-10	11:50	7.39	30.2	-0.1	283.3	0.68	0.327
FC	3-Nov-10	12:40	7.50	22.3	0.0	273.1	0.85	CONT
W10	3-Nov-10	13:10	Stream reach dry to stream bed, no samples collected.					
NWID	3-Nov-10	13:30	7.92	193.8	0.0	286.7	0.20	0.007
X14	3-Nov-10	14:10	7.83	235.4	0.2	286.7	1.12	CONT
R1	3-Nov-10	14:43	7.86	121.1	-0.1	285.1	0.93	* <sup>1</sup>
K8	3-Nov-10	15:06	7.91	59.7	0.1	284.7	0.22	0.129
GCULV	3-Nov-10	15:35	7.66	40.9	0.0	285.7	0.66	0.191
VW3	3-Nov-10	16:00	7.71	90.4	0.0	293.0	1.66	0.060
VW1	3-Nov-10	16:30	7.96	205.9	0.1	290.5	0.83	n/r
VW2	3-Nov-10	16:50	8.18	384.7	0.1	294.3	0.26	0.026
R5	4-Nov-10	11:31	7.76	203.9	0.1	299.3	0.45	* <sup>2</sup>
R6	4-Nov-10	11:55	7.99	168.7	-0.1	298.1	1.34	2.495
R4	4-Nov-10	12:30	7.76	207.8	-0.1	309.0	0.49	2.012
A1	4-Nov-10	13:50	8.11	176.0	0.1	310.4	2.10	4.251
P4	4-Nov-10	14:00	8.14	214.6	-0.1	311.8	2.20	* <sup>2</sup>
P1	4-Nov-10	14:26	8.27	219.5	0.0	311.3	1.92	* <sup>2</sup>
VGMAIN	4-Nov-10	15:11	8.30	293.4	0.4	310.8	31.00	0.253

Notes:  $\mu\text{S}/\text{cm}$  = microsiemens / centimeter

ppm = parts per million

EC = Electrical Conductivity

n/r = not read due to instrument malfunction

<sup>1</sup> No observable flow within which to accurately collect flows

<sup>2</sup> Flows too high to safely meter flows

WT = Water Temperature

n/a = not applicable

n/r - not required (as per Table 1: Monitoring Locations and Freq.)

CONT - continuously monitored by Denisen

### **3. Stream Discharge**

Field activities this month also consisted of collecting stream discharge values through the use of the salt slug injection method. This method involved first determining the background conductivity of the stream using a handheld conductivity meter. Once this is established, a known weight of salt is dissolved in a bucket of stream water and then poured into the creek, at a distance upstream of at least 20-25 times the width of the stream. Electrical conductivity is continuously metered downstream of the injection point until the conductivity returns to background values after a peak has been observed. The stream discharge can be then calculated based on conductivity values.

It should be noted on the aforementioned table that flows were not metered for a number of reasons; either Denisen was continuously monitoring certain sites (CONT), flows did not have to be metered as per Table 1: Monitoring Locations and Frequencies of the "Aquatic Ecosystem Monitoring Program" document released by Minnow Environmental Inc. (n/r), flows were too high and safety was a concern (\*<sup>2</sup>), or there were no observable flows within which to collect flow measurements (\*<sup>1</sup>).

### **4. Weather Conditions**

November 2 – conditions late in the day were overcast, approximately -7°C, and no precipitation.

November 3 – day started off as cool, overcast, strong easterly winds, and a temperature of -8°C.

By midday a large system was noted to be moving into the area, bringing with it a considerable amount of snow and very warm weather, with a maximum temperature of +1°C by 2:00pm. By 3:00pm, winds picked up, and by 3:30pm, considerable amounts of snow was falling, with temperatures ranging from -1°C to -4°C, depending on elevation.

November 4 – generally overcast, cloud ceiling of approximately 3000 ft., strong south westerly winds, and temperatures ranging from +2°C to +4°C. Slight rain was encountered at the beginning of the day, but by the end of the day, the skies cleared and cloud cover was minimal to moderate.

### **5. Photographs**

Photos were taken throughout the day to document WQ Station conditions. Four representative photos are included. Please refer to the following link on the Access Consulting Group server for a compilation of all photos collected (W:\ACG\_ACTIVE\SFN-2010\ENVIRONMENTAL MONITORING\Baseline Monitoring\2010\10-11\Photos). Notable photos are provided to the reader in the following two pages.



W10 – dry creek bed



R1 – Conductivity logging for salt slug flow measurements



P1 – Horizon Helicopters R44 Raven



VG Main - trailhead

Your P.O. #: SFN-10-01  
 Your Project #: SFN-07-01  
 Your C.O.C. #: 08325031, 08325032

**Attention: David Petkovich**  
 ACCESS CONSULTING GROUP  
 #3 Calcite  
 151 Industrial Road  
 WHITEHORSE, YT  
 CANADA Y1A 3C8

**Report Date: 2010/11/18**

## CERTIFICATE OF ANALYSIS

**MAXXAM JOB #: B0A8919**  
 Received: 2010/11/08, 08:15

Sample Matrix: Water  
 # Samples Received: 25

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Water	25	2010/11/09	2010/11/09	BBY6SOP-00026	Based on SM2320B
Chloride by Automated Colourimetry	25	N/A	2010/11/09	BRN-SOP 00234 R3.0	Based on EPA 325.2
Cyanide WAD (weak acid dissociable)	25	N/A	2010/11/16	BRN SOP-00227 R3.0	Based on SM-4500CN I
Colour (True)	25	N/A	2010/11/09	BRN SOP-00247 R1.0	Based on SM-2120B
Conductance - water	25	N/A	2010/11/09	BRN SOP-00264 R2.0	Based on SM-2510B
Fluoride - Mining Clients	25	N/A	2010/11/10	BRN SOP-00225 R1.0	Based SM - 4500 F C
Hardness Total (calculated as CaCO3)	25	N/A	2010/11/16		
Hardness (calculated as CaCO3)	24	N/A	2010/11/16		
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	24	N/A	2010/11/16	BRN SOP-00206	Based on EPA 200.8
Elements by ICPMS Low Level (dissolved)	4	N/A	2010/11/15	BRN SOP-00206	Based on EPA 200.8
Elements by ICPMS Low Level (dissolved)	20	N/A	2010/11/16	BRN SOP-00206	Based on EPA 200.8
Na, K, Ca, Mg, S by CRC ICPMS (total)	25	N/A	2010/11/16	BRN SOP-00206	Based on EPA 200.8
Elements by ICPMS Low Level (total)	1	N/A	2010/11/15	BRN SOP-00206	Based on EPA 200.8
Elements by ICPMS Low Level (total)	24	N/A	2010/11/16	BRN SOP-00206	Based on EPA 200.8
Ammonia-N	24	N/A	2010/11/09	BBY6SOP-00044	Based on EPA 350.1
Ammonia-N	1	N/A	2010/11/10	BBY6SOP-00044	Based on EPA 350.1
Nitrate + Nitrite (N)	25	N/A	2010/11/09		Based on USEPA 353.2
Nitrite (N) by CFA	25	N/A	2010/11/09	BRN SOP-00233 R1.0	EPA 353.2
Nitrogen - Nitrate (as N)	25	N/A	2010/11/10	BBY6SOP-00010	Based on EPA 353.2
Filter and HNO3 Preserve for Metals	24	N/A	2010/11/08	BRN WI-00006 R1.0	Based on EPA 200.2
pH Water	25	N/A	2010/11/09	BRN SOP-00264 R4.0	Based on SM-4500H+B
Sulphate by Automated Colourimetry	25	N/A	2010/11/09	BRN-SOP 00243 R1.0	Based on EPA 375.4
Total Dissolved Solids (Filt. Residue)	2	N/A	2010/11/09	BRN SOP 00276 R4.0	SM 2540C
Total Dissolved Solids (Filt. Residue)	23	N/A	2010/11/10	BRN SOP 00276 R4.0	SM 2540C
Carbon (Total Organic)	24	N/A	2010/11/15	BRN SOP-00224 R4.0	Based on SM-5310C
Carbon (Total Organic)	1	N/A	2010/11/16	BRN SOP-00224 R4.0	Based on SM-5310C
Total Phosphorus	25	N/A	2010/11/10	BRN SOP-00236 R4.0	SM 4500
Total Suspended Solids	2	N/A	2010/11/09	BRN SOP-00277 R5.0	Based on SM - 2540 D
Total Suspended Solids	23	N/A	2010/11/10	BRN SOP-00277 R5.0	Based on SM - 2540 D

\* Results relate only to the items tested.

..2



Success Through Science®

Maxxam Job #: B0A8919  
Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01  
Your P.O. #: SFN-10-01

-2-

#### Encryption Key

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

KIMBERLEY WEBBER, BBY Customer Service  
Email: kwebber@maxxam.ca  
Phone# (604) 638-3254

=====  
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B0A8919  
 Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01  
 Your P.O. #: SFN-10-01

### RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		Y28421	Y28422		Y28423	Y28424	Y28425	Y28426	Y28427	Y28429		
Sampling Date		2010/11/02	2010/11/02		2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03		
	Units	P5	V8	QC Batch	V20A	V17A	VR	USFR	FC	NWID	RDL	QC Batch
<b>Misc. Inorganics</b>												
Fluoride (F)	mg/L	0.12	0.15	4416212	0.16	0.07	0.07	0.07	0.10	0.18	0.01	4416212
<b>ANIONS</b>												
Nitrite (N)	mg/L	<0.005(1)	<0.005(1)	4412287	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	4412287
<b>Calculated Parameters</b>												
Filter and HNO3 Preservation	N/A	FIELD	FIELD	ONSITE	FIELD	FIELD	FIELD	FIELD	FIELD	FIELD	N/A	ONSITE
Nitrate (N)	mg/L	0.04	0.30	4408768	0.08	0.29	0.02	0.04	<0.02	0.04	0.02	4408768
<b>Misc. Inorganics</b>												
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.0008	0.0008	4431268	0.0009	0.0008	0.0009	0.0010	0.0010	0.0008	0.0005	4431268
Alkalinity (Total as CaCO3)	mg/L	150	170	4411172	280	49	35	29	18	150	0.5	4411172
Total Organic Carbon (C)	mg/L	1.5	2.9	4428103	2.4	2.1	1.7	<0.5	1.6	1.9	0.5	4428103
Alkalinity (PP as CaCO3)	mg/L	<0.5	<0.5	4411172	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	4411172
Bicarbonate (HCO3)	mg/L	180	210	4411172	350	60	42	36	21	180	0.5	4411172
Carbonate (CO3)	mg/L	<0.5	<0.5	4411172	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	4411172
Hydroxide (OH)	mg/L	<0.5	<0.5	4411172	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	4411172
<b>Anions</b>												
Dissolved Sulphate (SO4)	mg/L	50	120	4414796	14	38	6.1	7.2	1.7	38	0.5	4414796
Dissolved Chloride (Cl)	mg/L	<0.5	<0.5	4414789	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	4414789
<b>MISCELLANEOUS</b>												
True Colour	Col. Unit	5	<5	4411765	5	5	5	<5	<5	<5	5	4411765
<b>Nutrients</b>												
Ammonia (N)	mg/L	0.030	0.015	4411931	0.019	0.036	0.014	0.015	0.013	0.013	0.005	4411931
Nitrate plus Nitrite (N)	mg/L	0.04(1)	0.30(1)	4412156	0.08	0.29(1)	0.02(1)	0.04(1)	<0.02(1)	0.04(1)	0.02	4412156
Total Phosphorus (P)	mg/L	0.007	0.006	4413378	0.014	0.007	0.007	0.006	0.006	0.007	0.005	4413378
<b>Physical Properties</b>												
Conductivity	uS/cm	383	561	4411171	546	193	84	74	42	362	1	4411171
pH	pH Units	8.14	8.26	4411166	8.13	7.68	7.69	7.61	7.41	8.23		4411166
<b>Physical Properties</b>												
Total Suspended Solids	mg/L	<4	<4	4410402	25	<4	<4	<4	<4	<4	4	4414735
Total Dissolved Solids	mg/L	210	340	4410491	300	120	58	58	36	210	10	4414776

N/A = Not Applicable

RDL = Reportable Detection Limit

(1) - Samples arrived to laboratory past recommended hold time.

Maxxam Job #: B0A8919  
 Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-10-01

### RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		Y28430	Y28431	Y28432	Y28456	Y28457	Y28458	Y28459	Y28460		
Sampling Date		2010/11/03	2010/11/03	2010/11/03	2010/11/04	2010/11/04	2010/11/04	2010/11/04	2010/11/04		
	Units	R1	K8	GCULV	R4	R5	R6	A1	P4	RDL	QC Batch
<b>Misc. Inorganics</b>											
Fluoride (F)	mg/L	0.12	0.10	0.08	0.11	0.11	0.08	0.10	0.14	0.01	4416212
<b>ANIONS</b>											
Nitrite (N)	mg/L	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	<0.005(1)	0.005	4412287
<b>Calculated Parameters</b>											
Filter and HNO3 Preservation	N/A	FIELD	N/A	ONSITE							
Nitrate (N)	mg/L	0.07	0.05	0.04	0.15	0.15	0.16	0.15	0.05	0.02	4408768
<b>Misc. Inorganics</b>											
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.0009	0.0009	0.0008	0.0008	0.0008	0.0007	0.0009	0.0008	0.0005	4431268
Alkalinity (Total as CaCO3)	mg/L	94	53	30	120	130	140	120	140	0.5	4411172
Total Organic Carbon (C)	mg/L	2.2	1.6	2.0	3.6	2.1	2.0	1.2	1.7	0.5	4428103
Alkalinity (PP as CaCO3)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.5	4411172
Bicarbonate (HCO3)	mg/L	110	64	37	150	160	170	150	170	0.5	4411172
Carbonate (CO3)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.5	4411172
Hydroxide (OH)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	4411172
<b>Anions</b>											
Dissolved Sulphate (SO4)	mg/L	21	11	7.0	72	66	22	41	59	0.5	4414796
Dissolved Chloride (Cl)	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	4414789
<b>MISCELLANEOUS</b>											
True Colour	Col. Unit	5	<5	5	<5	<5	<5	<5	<5	5	4411765
<b>Nutrients</b>											
Ammonia (N)	mg/L	0.041	0.041	0.011	0.023	0.022	0.012	0.015	0.016	0.005	4411931
Nitrate plus Nitrite (N)	mg/L	0.07(1)	0.05(1)	0.04(1)	0.15(1)	0.15(1)	0.16(1)	0.15(1)	0.05(1)	0.02	4412156
Total Phosphorus (P)	mg/L	0.005	<0.005	0.005	<0.005	0.006	0.006	0.011	0.008	0.005	4413378
<b>Physical Properties</b>											
Conductivity	uS/cm	226	131	84	385	379	314	328	400	1	4411171
pH	pH Units	8.07	7.89	7.69	8.15	8.17	8.22	8.26	8.31		4411166
<b>Physical Properties</b>											
Total Suspended Solids	mg/L	<4	<4	<4	<4	<4	<4	8	<4	4	4414735
Total Dissolved Solids	mg/L	130	74	54	230	240	170	180	240	10	4414776

N/A = Not Applicable

RDL = Reportable Detection Limit

(1) - Samples arrived to laboratory past recommended hold time.

### RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		Y28461	Y28462	Y28463	Y28710		Y28711		
Sampling Date		2010/11/04	2010/11/04						
	Units	P1	VG MAIN	TRIP BLANK	VM1	QC Batch	VM2	RDL	QC Batch
<b>Misc. Inorganics</b>									
Fluoride (F)	mg/L	0.15	0.13	<0.01	0.15	4416212	0.19	0.01	4416212
<b>ANIONS</b>									
Nitrite (N)	mg/L	<0.005(1)	<0.005(1)	<0.005	<0.005	4412287	<0.005	0.005	4412287
<b>Calculated Parameters</b>									
Filter and HNO3 Preservation	N/A	FIELD	FIELD		FIELD	ONSITE	FIELD	N/A	ONSITE
Nitrate (N)	mg/L	0.03	0.42	<0.02	0.09	4408768	0.16	0.02	4408768
<b>Misc. Inorganics</b>									
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.0009	0.0008	0.0014	0.0010	4431268	0.0006	0.0005	4431268
Alkalinity (Total as CaCO3)	mg/L	140	150	0.9	150	4411172	300	0.5	4411172
Total Organic Carbon (C)	mg/L	2.2	2.1	1.0	3.6	4428103	1.9	0.5	4430847
Alkalinity (PP as CaCO3)	mg/L	<0.5	<0.5	<0.5	<0.5	4411172	5.2	0.5	4411172
Bicarbonate (HCO3)	mg/L	170	180	1.1	190	4411172	350	0.5	4411172
Carbonate (CO3)	mg/L	<0.5	<0.5	<0.5	<0.5	4411172	6.2	0.5	4411172
Hydroxide (OH)	mg/L	<0.5	<0.5	<0.5	<0.5	4411172	<0.5	0.5	4411172
<b>Anions</b>									
Dissolved Sulphate (SO4)	mg/L	69	130	<0.5	52	4414796	110	0.5	4414796
Dissolved Chloride (Cl)	mg/L	<0.5	<0.5	<0.5	0.7	4414789	<0.5	0.5	4414789
<b>MISCELLANEOUS</b>									
True Colour	Col. Unit	<5	<5	<5	<5	4411765	<5	5	4411765
<b>Nutrients</b>									
Ammonia (N)	mg/L	0.024	0.024	<0.005	0.086	4411931	<0.005	0.005	4411931
Nitrate plus Nitrite (N)	mg/L	0.03(1)	0.42(1)	<0.02	0.09	4412156	0.16	0.02	4412156
Total Phosphorus (P)	mg/L	0.007	<0.005	<0.005	<0.005	4413378	<0.005	0.005	4413378
<b>Physical Properties</b>									
Conductivity	uS/cm	407	535	2	384	4411171	711	1	4411171
pH	pH Units	8.21	8.28	5.85	8.26	4411166	8.38		4411166
<b>Physical Properties</b>									
Total Suspended Solids	mg/L	<4	<4	<4	<4	4414735	<4	4	4414735
Total Dissolved Solids	mg/L	240	350	<10	220	4414776	420	10	4414776

N/A = Not Applicable

RDL = Reportable Detection Limit

(1) - Samples arrived to laboratory past recommended hold time.

**RESULTS OF CHEMICAL ANALYSES OF WATER**

Maxxam ID		Y28712	Y28713		Y28714		Y28715		
	Units	VM3	DUPPLICATE	QC Batch	FIELD BLANK	QC Batch	X14	RDL	QC Batch
<b>Misc. Inorganics</b>									
Fluoride (F)	mg/L	0.09	0.08	4416212	<0.01	4416212	0.11	0.01	4416212
<b>ANIONS</b>									
Nitrite (N)	mg/L	<0.005	<0.005	4412287	<0.005	4412287	<0.005	0.005	4412287
<b>Calculated Parameters</b>									
Filter and HNO3 Preservation	N/A	FIELD	FIELD	ONSITE	FIELD	ONSITE	FIELD	N/A	ONSITE
Nitrate (N)	mg/L	0.16	0.16	4408768	<0.02	4408768	0.12	0.02	4408768
<b>Misc. Inorganics</b>									
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.0008	0.0008	4431268	0.0007	4431268	0.0009	0.0005	4431268
Alkalinity (Total as CaCO3)	mg/L	65	140	4411172	0.9	4411172	130	0.5	4411172
Total Organic Carbon (C)	mg/L	3.4	2.4	4428103	1.1	4428103	2.3	0.5	4428103
Alkalinity (PP as CaCO3)	mg/L	<0.5	<0.5	4411172	<0.5	4411172	<0.5	0.5	4411172
Bicarbonate (HCO3)	mg/L	79	170	4411172	1.1	4411172	160	0.5	4411172
Carbonate (CO3)	mg/L	<0.5	<0.5	4411172	<0.5	4411172	<0.5	0.5	4411172
Hydroxide (OH)	mg/L	<0.5	<0.5	4411172	<0.5	4411172	<0.5	0.5	4411172
<b>Anions</b>									
Dissolved Sulphate (SO4)	mg/L	28	23	4414796	<0.5	4414796	95	0.5	4414796
Dissolved Chloride (Cl)	mg/L	<0.5	<0.5	4414789	<0.5	4414789	<0.5	0.5	4414789
<b>MISCELLANEOUS</b>									
True Colour	Col. Unit	<5	<5	4411765	<5	4411765	5	5	4411765
<b>Nutrients</b>									
Ammonia (N)	mg/L	<0.005	0.024	4411931	<0.005	4415924	0.022	0.005	4411931
Nitrate plus Nitrite (N)	mg/L	0.16	0.16	4412156	<0.02	4412156	0.12	0.02	4412156
Total Phosphorus (P)	mg/L	<0.005	<0.005	4413378	<0.005	4413378	<0.005	0.005	4413378
<b>Physical Properties</b>									
Conductivity	uS/cm	191	314	4411171	6	4411171	433	1	4411171
pH	pH Units	7.98	8.25	4411166	5.82	4411166	8.15		4411166
<b>Physical Properties</b>									
Total Suspended Solids	mg/L	<4	<4	4414735	<4	4414735	<4	4	4414735
Total Dissolved Solids	mg/L	100	170	4414776	<10	4414776	260	10	4414776

N/A = Not Applicable

RDL = Reportable Detection Limit

### LOW LEVEL DISSOLVED METALS IN WATER (WATER)

Maxxam ID		Y28421	Y28422	Y28423	Y28424	Y28425	Y28426	Y28427	Y28429	Y28430		
Sampling Date		2010/11/02	2010/11/02	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03		
Units		P5	V8	V20A	V17A	VR	USFR	FC	NWID	R1	RDL	QC Batch
<b>Misc. Inorganics</b>												
Dissolved Hardness (CaCO <sub>3</sub> )	mg/L	184	283	297	80.5	33.7	29.4	15.4	173	102	0.5	4406405
<b>Dissolved Metals by ICPMS</b>												
Dissolved Aluminum (Al)	ug/L	14.2	4.8	2.3	18.3	13.2	6.1	20.0	3.5	2.8	0.2	4421486
Dissolved Antimony (Sb)	ug/L	0.12	0.13	0.12	0.04	<0.02	0.03	<0.02	0.04	0.03	0.02	4421486
Dissolved Arsenic (As)	ug/L	0.54	0.41	0.40	0.69	0.17	0.20	0.08	0.19	0.28	0.02	4421486
Dissolved Barium (Ba)	ug/L	83.0	58.0	167	26.0	29.8	29.6	17.2	53.6	49.3	0.02	4421486
Dissolved Beryllium (Be)	ug/L	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.01	4421486
Dissolved Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	4421486
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	50	4421486
Dissolved Cadmium (Cd)	ug/L	0.104	0.045	0.007	0.023	0.005	<0.005	0.010	0.060(1)	<0.005	0.005	4421486
Dissolved Chromium (Cr)	ug/L	0.1	0.2	<0.1	0.2	<0.1	<0.1	0.2	<0.1	<0.1	0.1	4421486
Dissolved Cobalt (Co)	ug/L	0.145	0.032	0.021	0.116	0.010	0.011	0.018	0.014	0.052	0.005	4421486
Dissolved Copper (Cu)	ug/L	0.78	0.56	0.20	0.57	0.39	0.26	0.45	0.62	0.33	0.05	4421486
Dissolved Iron (Fe)	ug/L	85	9	73	135	9	35	14	3	118	1	4421486
Dissolved Lead (Pb)	ug/L	0.066	0.020	0.038	0.270	0.013	0.008	0.030	0.069	0.009	0.005	4421486
Dissolved Lithium (Li)	ug/L	3.3	4.6	6.5	0.7	<0.5	1.0	2.2	6.6	1.9	0.5	4421486
Dissolved Manganese (Mn)	ug/L	201	2.94	26.2	48.1	0.34	0.64	0.48	0.05	58.4	0.05	4421486
Dissolved Molybdenum (Mo)	ug/L	1.21	0.97	0.65(1)	0.10	0.14	0.31	0.08	0.29	0.22	0.05	4421486
Dissolved Nickel (Ni)	ug/L	3.08	1.20	0.24	0.41	0.14	0.15	0.39(1)	0.48	0.32	0.02	4421486
Dissolved Selenium (Se)	ug/L	0.57	0.78	2.45	<0.04	<0.04	<0.04	<0.04	0.25	0.13	0.04	4421486
Dissolved Silicon (Si)	ug/L	3670	4470	5660	5480	4490	3950	6800	6420	4490	100	4421486
Dissolved Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	4421486
Dissolved Strontium (Sr)	ug/L	245	279	366	100	57.0	58.9	29.9	234	170	0.05	4421486
Dissolved Thallium (Tl)	ug/L	0.004	0.005	<0.002	0.004	<0.002	<0.002	<0.002	0.003	<0.002	0.002	4421486
Dissolved Tin (Sn)	ug/L	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	4421486
Dissolved Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	4421486
Dissolved Uranium (U)	ug/L	1.31	6.02	3.97	1.24	0.411	0.405	0.071	1.36	1.63	0.002	4421486
Dissolved Vanadium (V)	ug/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	4421486
Dissolved Zinc (Zn)	ug/L	8.2(1)	7.0	3.3	21.0	0.8	1.0(1)	1.7	11.2	1.0(1)	0.1	4421486
Dissolved Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	4421486
Dissolved Calcium (Ca)	mg/L	48.6	66.0	76.6	22.3	10.1	9.12	4.53	56.7	31.4	0.05	4409682
Dissolved Magnesium (Mg)	mg/L	15.1	28.7	25.7	6.04	2.08	1.62	0.99	7.58	5.82	0.05	4409682
Dissolved Potassium (K)	mg/L	1.65	0.98	1.21	0.32	0.34	0.31	0.14	1.60	0.88	0.05	4409682
Dissolved Sodium (Na)	mg/L	3.83	3.69	3.82	2.10	1.61	1.84	2.00	3.28	2.31	0.05	4409682

RDL = Reportable Detection Limit

(1) - Dissolved greater than total. Reanalysis yields similar results



Maxxam Job #: B0A8919  
Report Date: 2010/11/18

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Client Project #: SFN-07-01  
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### LOW LEVEL DISSOLVED METALS IN WATER (WATER)

Maxxam ID		Y28421	Y28422	Y28423	Y28424	Y28425	Y28426	Y28427	Y28429	Y28430		
Sampling Date		2010/11/02	2010/11/02	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03		
	Units	P5	V8	V20A	V17A	VR	USFR	FC	NWID	R1	RDL	QC Batch
Dissolved Sulphur (S)	mg/L	19	46	<10	14	<10	<10	<10	14	<10	10	4409682

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RDL = Reportable Detection Limit

Maxxam Job #: B0A8919  
 Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-10-01

### LOW LEVEL DISSOLVED METALS IN WATER (WATER)

Maxxam ID		Y28431		Y28432	Y28456	Y28457		Y28458		Y28459	Y28460		
Sampling Date		2010/11/03		2010/11/03	2010/11/04	2010/11/04		2010/11/04		2010/11/04	2010/11/04		
Units	K8	QC Batch	GCULV	R4	R5	QC Batch	R6	QC Batch	A1	P4	RDL	QC Batch	
<b>Misc. Inorganics</b>													
Dissolved Hardness (CaCO <sub>3</sub> )	mg/L	56.3	4406405	30.5	186	179	4406405	155	4406405	155	195	0.5	4406405
<b>Dissolved Metals by ICPMS</b>													
Dissolved Aluminum (Al)	ug/L	5.4	4421486	5.4	1.4	1.4	4421486	2.2	4421486	4.3	4.8	0.2	4421486
Dissolved Antimony (Sb)	ug/L	0.03	4421486	0.02	0.09	0.09	4421486	0.12	4421486	0.11	0.17	0.02	4421486
Dissolved Arsenic (As)	ug/L	0.18	4421486	0.22	0.21	0.22	4421486	0.33	4421486	0.55	0.58	0.02	4421486
Dissolved Barium (Ba)	ug/L	28.3	4421486	31.2	63.2	64.5	4421486	78.4	4421486	65.9	80.1	0.02	4421486
Dissolved Beryllium (Be)	ug/L	<0.01	4421486	<0.01	<0.01	<0.01	4421486	<0.01	4421486	<0.01	<0.01	0.01	4421486
Dissolved Bismuth (Bi)	ug/L	<0.005	4421486	<0.005	<0.005	<0.005	4421486	<0.005	4421486	<0.005	<0.005	0.005	4421486
Dissolved Boron (B)	ug/L	<50	4421486	<50	<50	<50	4421486	<50	4421486	<50	<50	50	4421486
Dissolved Cadmium (Cd)	ug/L	<0.005	4421486	<0.005	0.014	0.012	4421486	0.009	4421486	0.008	0.042	0.005	4421486
Dissolved Chromium (Cr)	ug/L	<0.1	4421486	<0.1	0.1	<0.1	4421486	<0.1	4421486	0.1	<0.1	0.1	4421486
Dissolved Cobalt (Co)	ug/L	0.012	4421486	0.010	0.071	0.069	4421486	0.015	4421486	0.021	0.044	0.005	4421486
Dissolved Copper (Cu)	ug/L	0.28	4437347	0.22	0.44	0.42	4421486	0.36	4421486	0.41	0.50	0.05	4421486
Dissolved Iron (Fe)	ug/L	3	4437347	30	31	31	4421486	34	4421486	14	19	1	4421486
Dissolved Lead (Pb)	ug/L	0.024	4421486	0.012	0.028	0.021	4421486	0.015	4421486	0.017	0.021	0.005	4421486
Dissolved Lithium (Li)	ug/L	2.0	4421486	1.1	3.8	3.5	4421486	2.3	4421486	3.3	3.8	0.5	4421486
Dissolved Manganese (Mn)	ug/L	0.14	4421486	0.55	188	161	4421486	6.28	4421486	2.56	16.7	0.05	4421486
Dissolved Molybdenum (Mo)	ug/L	0.12	4421486	0.23	0.62	0.66	4421486	1.18	4421486	0.96	1.40	0.05	4421486
Dissolved Nickel (Ni)	ug/L	0.19	4437347	0.18(1)	1.04	0.84	4421486	0.27	4421486	0.47	2.18	0.02	4421486
Dissolved Selenium (Se)	ug/L	0.06	4421486	<0.04	0.50	0.50	4421486	0.76	4421486	0.59	0.90	0.04	4421486
Dissolved Silicon (Si)	ug/L	4620	4421486	3830	4810	4620	4421486	4670	4421486	4650	3410	100	4421486
Dissolved Silver (Ag)	ug/L	<0.005	4421486	<0.005	<0.005	<0.005	4421486	<0.005	4421486	<0.005	<0.005	0.005	4421486
Dissolved Strontium (Sr)	ug/L	124	4421486	62.4	199	194	4421486	137	4421486	159	220	0.05	4421486
Dissolved Thallium (Tl)	ug/L	<0.002	4421486	<0.002	0.008	0.006	4421486	<0.002	4421486	0.003	<0.002	0.002	4421486
Dissolved Tin (Sn)	ug/L	<0.01	4421486	<0.01	<0.01	<0.01	4421486	<0.01	4421486	<0.01	<0.01	0.01	4421486
Dissolved Titanium (Ti)	ug/L	<0.5	4421486	<0.5	<0.5	<0.5	4421486	<0.5	4421486	<0.5	<0.5	0.5	4421486
Dissolved Uranium (U)	ug/L	2.13	4421486	0.397	1.97	1.98	4421486	2.24	4421486	2.14	2.36	0.002	4421486
Dissolved Vanadium (V)	ug/L	<0.2	4421486	<0.2	<0.2	<0.2	4421486	<0.2	4421486	<0.2	0.2	0.2	4421486
Dissolved Zinc (Zn)	ug/L	1.4(1)	4437347	0.7	11.1	9.8	4421486	1.4(1)	4437347	1.3	2.9	0.1	4421486
Dissolved Zirconium (Zr)	ug/L	<0.1	4421486	<0.1	<0.1	<0.1	4421486	<0.1	4421486	<0.1	<0.1	0.1	4421486
Dissolved Calcium (Ca)	mg/L	18.2	4409682	9.34	55.1	52.3	4409682	44.0	4409682	45.1	51.3	0.05	4409682
Dissolved Magnesium (Mg)	mg/L	2.61	4409682	1.74	11.8	11.8	4409682	11.0	4409682	10.2	16.3	0.05	4409682
Dissolved Potassium (K)	mg/L	0.47	4409682	0.33	1.25	1.24	4409682	1.13	4409682	1.32	0.95	0.05	4409682
Dissolved Sodium (Na)	mg/L	2.05	4409682	1.91	3.52	3.35	4409682	1.96	4409682	2.87	2.62	0.05	4409682

RDL = Reportable Detection Limit

(1) - Dissolved greater than total. Reanalysis yields similar results



Maxxam Job #: B0A8919  
Report Date: 2010/11/18

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### LOW LEVEL DISSOLVED METALS IN WATER (WATER)

Maxxam ID		Y28431		Y28432	Y28456	Y28457		Y28458		Y28459	Y28460		
Sampling Date		2010/11/03		2010/11/03	2010/11/04	2010/11/04		2010/11/04		2010/11/04	2010/11/04		
	Units	K8	QC Batch	GCULV	R4	R5	QC Batch	R6	QC Batch	A1	P4	RDL	QC Batch
Dissolved Sulphur (S)	mg/L	<10	4409682	<10	25	23	4409682	<10	4409682	16	23	10	4409682

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RDL = Reportable Detection Limit



Maxxam Job #: B0A8919  
Report Date: 2010/11/18

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### LOW LEVEL DISSOLVED METALS IN WATER (WATER)

Maxxam ID		Y28461	Y28462	Y28710	Y28711		Y28712	Y28713	Y28714	Y28715		
Sampling Date		2010/11/04	2010/11/04									
	Units	P1	VG MAIN	VM1	VM2	QC Batch	VM3	DUPPLICATE	FIELD BLANK	X14	RDL	QC Batch
<b>Misc. Inorganics</b>												
Dissolved Hardness (CaCO <sub>3</sub> )	mg/L	204	268	187	423	4406405	93.9	175	<0.5	226	0.5	4406405

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RDL = Reportable Detection Limit

### LOW LEVEL DISSOLVED METALS IN WATER (WATER)

Maxxam ID		Y28461	Y28462	Y28710	Y28711		Y28712	Y28713	Y28714	Y28715		
Sampling Date		2010/11/04	2010/11/04									
	Units	P1	VG MAIN	VM1	VM2	QC Batch	VM3	DUPPLICATE	FIELD BLANK	X14	RDL	QC Batch
<b>Dissolved Metals by ICPMS</b>												
Dissolved Aluminum (Al)	ug/L	5.7	3.8	4.0	2.1	4421486	10.5	3.1	0.3	2.3	0.2	4423025
Dissolved Antimony (Sb)	ug/L	0.17	0.13	0.05	0.31	4421486	0.03	0.12	<0.02	0.05	0.02	4423025
Dissolved Arsenic (As)	ug/L	0.39	0.42	0.49	0.41	4421486	0.49	0.32	<0.02	0.19	0.02	4423025
Dissolved Barium (Ba)	ug/L	77.7	53.0	64.5	103	4421486	34.0	77.0	<0.02	57.2	0.02	4423025
Dissolved Beryllium (Be)	ug/L	<0.01	<0.01	<0.01	<0.01	4421486	<0.01	<0.01	<0.01	<0.01	0.01	4423025
Dissolved Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	4421486	<0.005	<0.005	<0.005	<0.005	0.005	4423025
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	4421486	<50	<50	<50	<50	50	4423025
Dissolved Cadmium (Cd)	ug/L	0.084	0.042	0.007	0.115	4421486	0.024	0.009	<0.005	0.029	0.005	4423025
Dissolved Chromium (Cr)	ug/L	<0.1	<0.1	<0.1	0.1	4421486	<0.1	<0.1	<0.1	<0.1	0.1	4423025
Dissolved Cobalt (Co)	ug/L	0.019	0.073	0.052	0.017	4421486	0.028(1)	0.018	<0.005	0.824	0.005	4423025
Dissolved Copper (Cu)	ug/L	0.58	0.56	0.38	0.47	4421486	0.36	0.27	<0.05	0.28	0.05	4423025
Dissolved Iron (Fe)	ug/L	19	15	50	4	4421486	51	44	<1	94	1	4423025
Dissolved Lead (Pb)	ug/L	0.012	0.075	0.009	0.008	4421486	0.085	0.008	<0.005	0.032	0.005	4423025
Dissolved Lithium (Li)	ug/L	3.7	3.9	3.2	3.8	4421486	0.9	2.4	<0.5	5.3	0.5	4423025
Dissolved Manganese (Mn)	ug/L	7.23	4.50	48.1	0.07	4421486	10.3	6.45	<0.05	1200	0.05	4423025
Dissolved Molybdenum (Mo)	ug/L	1.35	0.74	0.47	3.52	4421486	0.12	1.15	<0.05	0.51	0.05	4423025
Dissolved Nickel (Ni)	ug/L	2.94	1.37	0.41	1.33	4421486	0.27	0.25	<0.02	2.27	0.02	4423025
Dissolved Selenium (Se)	ug/L	1.11	0.47	0.15	3.70	4421486	0.06	0.80	<0.04	0.27	0.04	4423025
Dissolved Silicon (Si)	ug/L	3040	4260	4910	4820	4421486	5640	5440	<100	5760	100	4423025
Dissolved Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	4421486	<0.005	<0.005	<0.005	<0.005	0.005	4423025
Dissolved Strontium (Sr)	ug/L	231	258	231	344	4421486	122	138	<0.05	228	0.05	4423025
Dissolved Thallium (Tl)	ug/L	0.002	0.006	<0.002	<0.002	4421486	0.003	<0.002	<0.002	0.004	0.002	4423025
Dissolved Tin (Sn)	ug/L	<0.01	<0.01	<0.01	<0.01	4421486	<0.01	<0.01	<0.01	<0.01	0.01	4423025
Dissolved Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	4421486	<0.5	<0.5	<0.5	<0.5	0.5	4423025
Dissolved Uranium (U)	ug/L	2.38	6.41	2.68	8.14	4421486	1.89	2.22	0.003	2.25	0.002	4423025
Dissolved Vanadium (V)	ug/L	<0.2	<0.2	<0.2	1.1	4421486	<0.2	<0.2	<0.2	<0.2	0.2	4423025
Dissolved Zinc (Zn)	ug/L	6.9	12.0	1.8	5.3	4421486	11.9	1.2	1.1(2)	30.6	0.1	4423025
Dissolved Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	<0.1	4421486	<0.1	<0.1	<0.1	<0.1	0.1	4423025
Dissolved Calcium (Ca)	mg/L	51.6	63.0	48.6	109	4409682	28.0	50.8	<0.05	67.5	0.05	4409682
Dissolved Magnesium (Mg)	mg/L	18.4	26.9	15.9	36.6	4409682	5.82	11.6	<0.05	13.9	0.05	4409682
Dissolved Potassium (K)	mg/L	0.76	0.89	0.71	1.01	4409682	0.40	1.26	<0.05	1.36	0.05	4409682
Dissolved Sodium (Na)	mg/L	2.23	3.46	3.30	2.58	4409682	1.98	2.02	<0.05	4.49	0.05	4409682

RDL = Reportable Detection Limit

(1) - Duplicate RPD for Co exceeds acceptance criteria. 10% of analytes failure in multielement scan is allowed.

(2) - Dissolved greater than total. Reanalysis yields similar results



Maxxam Job #: B0A8919  
Report Date: 2010/11/18

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ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01  
Your P.O. #: SFN-10-01

### LOW LEVEL DISSOLVED METALS IN WATER (WATER)

Maxxam ID		Y28461	Y28462	Y28710	Y28711		Y28712	Y28713	Y28714	Y28715		
Sampling Date		2010/11/04	2010/11/04									
	Units	P1	VG MAIN	VM1	VM2	QC Batch	VM3	DUPLICATE	FIELD BLANK	X14	RDL	QC Batch
Dissolved Sulphur (S)	mg/L	25	48	17	40	4409682	11	<10	<10	37	10	4409682

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RDL = Reportable Detection Limit

Maxxam Job #: B0A8919  
 Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-10-01

### LOW LEVEL TOTAL METALS IN WATER (WATER)

Maxxam ID		Y28421	Y28422	Y28423	Y28424	Y28425	Y28426	Y28427	Y28429	Y28430	Y28431			
Sampling Date		2010/11/02	2010/11/02	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03			
Units		P5	V8	V20A	V17A	VR	USFR	FC	NWID	R1	K8	RDL	QC Batch	
<b>Calculated Parameters</b>														
Total Hardness (CaCO <sub>3</sub> )	mg/L	190	304	307	84.6	34.8	30.8	15.7	166	103	56.6	0.5	4410325	
<b>Total Metals by ICPMS</b>														
Total Aluminum (Al)	ug/L	22.7	13.7	64.9	25.4	18.6	13.4	22.5	5.2	6.2	5.0	0.2	4417425	
Total Antimony (Sb)	ug/L	0.13	0.14	0.13	0.05	0.02	0.03	<0.02	0.04	0.03	<0.02	0.02	4417425	
Total Arsenic (As)	ug/L	0.59	0.47	0.65	0.89	0.18	0.25	0.08	0.18	0.30	0.19	0.02	4417425	
Total Barium (Ba)	ug/L	83.0	59.1	180	26.9	30.1	30.6	17.2	51.7	52.9	28.1	0.02	4417425	
Total Beryllium (Be)	ug/L	<0.01	<0.01	<0.01	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	4417425
Total Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	4417425
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	50	4417425
Total Cadmium (Cd)	ug/L	0.109	0.043	0.026	0.033	0.008	<0.005	0.011	0.046	<0.005	0.006	0.005	4417425	
Total Chromium (Cr)	ug/L	0.1	0.1	0.3	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	4417425
Total Cobalt (Co)	ug/L	0.139	0.056	0.061	0.123	0.017	0.028	0.016	0.010	0.051	0.014	0.005	4417425	
Total Copper (Cu)	ug/L	0.86	0.65	1.08	1.00	0.45	0.31	0.41	0.62	0.36	0.28	0.05	4417425	
Total Iron (Fe)	ug/L	92	42	387	258	18	87	21	5	203	6	1	4417425	
Total Lead (Pb)	ug/L	0.114	0.115	0.865	0.891	0.083	0.032	0.105	0.137	0.036	0.052	0.005	4417425	
Total Lithium (Li)	ug/L	3.4	4.6	6.8	0.7	<0.5	1.1	2.3	6.3	2.1	2.0	0.5	4417425	
Total Manganese (Mn)	ug/L	203	6.13	34.4	49.6	1.35	11.0	0.83	0.18	61.2	0.23	0.05	4417425	
Total Mercury (Hg)	ug/L	0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	4417425
Total Molybdenum (Mo)	ug/L	1.19	1.02	0.52	0.08	0.14	0.30	0.07	0.25	0.25	0.13	0.05	4417425	
Total Nickel (Ni)	ug/L	3.10	1.36	0.40	0.43	0.16	0.16	0.24	0.44	0.33	0.21	0.02	4417425	
Total Selenium (Se)	ug/L	0.76	0.85	2.43	<0.04	<0.04	<0.04	<0.04	0.24	0.14	0.07	0.04	4417425	
Total Silicon (Si)	ug/L	3960	4940	6110	6040	4890	4260	7150	6340	4740	4930	100	4417425	
Total Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	4417425	
Total Strontium (Sr)	ug/L	242	286	374	100	56.9	59.8	29.3	225	181	122	0.05	4417425	
Total Tellurium (Te)	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	4417425
Total Thallium (Tl)	ug/L	0.003	0.005	<0.002	0.004	0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	0.002	4417425
Total Thorium (Th)	ug/L	<0.005	<0.005	0.007	0.019	0.011	0.006	0.009	<0.005	<0.005	<0.005	<0.005	0.005	4417425
Total Tin (Sn)	ug/L	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	4417425
Total Titanium (Ti)	ug/L	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	4417425
Total Uranium (U)	ug/L	1.33	6.15	4.05	1.29	0.457	0.464	0.080	1.26	1.74	2.14	0.002	4417425	
Total Vanadium (V)	ug/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	4417425
Total Zinc (Zn)	ug/L	4.5	7.4	7.0	21.9	1.2	0.3	2.2	10.3	0.7	0.6	0.1	4417425	
Total Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	4417425
Total Calcium (Ca)	mg/L	49.7	70.4	80.6	23.7	10.5	9.61	4.56	54.6	31.6	18.4	0.05	4410979	
Total Magnesium (Mg)	mg/L	15.9	31.2	25.8	6.17	2.12	1.64	1.06	7.16	5.95	2.58	0.05	4410979	

RDL = Reportable Detection Limit

Maxxam Job #: B0A8919  
Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01  
Your P.O. #: SFN-10-01

**LOW LEVEL TOTAL METALS IN WATER (WATER)**

Maxxam ID		Y28421	Y28422	Y28423	Y28424	Y28425	Y28426	Y28427	Y28429	Y28430	Y28431		
Sampling Date		2010/11/02	2010/11/02	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03	2010/11/03		
	Units	P5	V8	V20A	V17A	VR	USFR	FC	NWID	R1	K8	RDL	QC Batch
Total Potassium (K)	mg/L	1.68	1.03	1.23	0.32	0.34	0.32	0.14	1.46	0.89	0.45	0.05	4410979
Total Sodium (Na)	mg/L	3.93	3.92	3.75	2.11	1.73	1.86	2.25	3.02	2.37	2.01	0.05	4410979
Total Sulphur (S)	mg/L	22	51	<10	15	<10	<10	<10	14	<10	<10	10	4410979

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RDL = Reportable Detection Limit

Maxxam Job #: B0A8919  
 Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-10-01

### LOW LEVEL TOTAL METALS IN WATER (WATER)

Maxxam ID		Y28432	Y28456	Y28457	Y28458	Y28459	Y28460	Y28461	Y28462	Y28463		
Sampling Date		2010/11/03	2010/11/04	2010/11/04	2010/11/04	2010/11/04	2010/11/04	2010/11/04	2010/11/04	2010/11/04		
Units	GCULV	R4	R5	R6	A1	P4	P1	VG MAIN	TRIP BLANK	RDL	QC Batch	
<b>Calculated Parameters</b>												
Total Hardness (CaCO <sub>3</sub> )	mg/L	31.8	178	187	159	157	203	209	282	<0.5	0.5	4410325
<b>Total Metals by ICPMS</b>												
Total Aluminum (Al)	ug/L	10.5	3.6	4.6	5.4	65.5	24.3	17.0	3.9	<0.2	0.2	4417425
Total Antimony (Sb)	ug/L	0.03	0.09	0.09	0.13	0.12	0.17	0.19	0.12	<0.02	0.02	4417425
Total Arsenic (As)	ug/L	0.24	0.23	0.27	0.36	0.74	0.71	0.45	0.41	<0.02	0.02	4417425
Total Barium (Ba)	ug/L	31.3	62.9	65.6	79.8	70.3	83.6	80.3	54.1	<0.02	0.02	4417425
Total Beryllium (Be)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Total Bismuth (Bi)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	4417425
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	50	4417425
Total Cadmium (Cd)	ug/L	<0.005	0.023	0.021	0.007	0.023	0.080	0.114	0.052	<0.005	0.005	4417425
Total Chromium (Cr)	ug/L	<0.1	0.1	0.1	<0.1	0.3	0.1	<0.1	0.4	<0.1	0.1	4417425
Total Cobalt (Co)	ug/L	0.021	0.077	0.079	0.023	0.144	0.086	0.042	0.083	<0.005	0.005	4417425
Total Copper (Cu)	ug/L	0.30	0.46	0.49	0.39	0.80	0.72	0.70	0.63	<0.05	0.05	4417425
Total Iron (Fe)	ug/L	70	82	86	83	152	92	69	29	<1	1	4417425
Total Lead (Pb)	ug/L	0.030	0.164	0.131	0.025	0.472	0.165	0.066	0.077	<0.005	0.005	4417425
Total Lithium (Li)	ug/L	1.2	3.7	3.7	2.3	3.4	3.8	3.8	3.9	<0.5	0.5	4417425
Total Manganese (Mn)	ug/L	7.59	198	178	8.21	46.8	24.5	11.0	6.05	<0.05	0.05	4417425
Total Mercury (Hg)	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	4417425
Total Molybdenum (Mo)	ug/L	0.33	0.56	0.65	1.20	0.94	1.34	1.32	0.74	<0.05	0.05	4417425
Total Nickel (Ni)	ug/L	0.14	1.02	1.02	0.32	0.91	2.39	3.17	1.63	<0.02	0.02	4417425
Total Selenium (Se)	ug/L	<0.04	0.49	0.60	0.80	0.61	0.96	1.18	0.50	<0.04	0.04	4417425
Total Silicon (Si)	ug/L	4360	4630	5000	5030	4920	3770	3200	4720	<100	100	4417425
Total Silver (Ag)	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	4417425
Total Strontium (Sr)	ug/L	62.9	200	198	135	157	221	232	259	0.07	0.05	4417425
Total Tellurium (Te)	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	4417425
Total Thallium (Tl)	ug/L	<0.002	0.006	0.006	<0.002	0.004	0.003	<0.002	0.007	<0.002	0.002	4417425
Total Thorium (Th)	ug/L	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	0.005	4417425
Total Tin (Sn)	ug/L	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.01	4417425
Total Titanium (Ti)	ug/L	<0.5	<0.5	<0.5	<0.5	3.2	<0.5	<0.5	<0.5	<0.5	0.5	4417425
Total Uranium (U)	ug/L	0.546	1.92	2.00	2.23	2.15	2.40	2.44	6.56	<0.002	0.002	4417425
Total Vanadium (V)	ug/L	<0.2	<0.2	<0.2	<0.2	0.3	0.2	<0.2	<0.2	<0.2	0.2	4417425
Total Zinc (Zn)	ug/L	1.0	12.3	10.7	0.4	4.8	4.3	8.7	13.0	<0.1	0.1	4417425
Total Zirconium (Zr)	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	4417425
Total Calcium (Ca)	mg/L	9.93	51.9	54.8	45.2	45.5	52.8	52.8	66.4	<0.05	0.05	4410979

RDL = Reportable Detection Limit

Maxxam Job #: B0A8919  
Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01  
Your P.O. #: SFN-10-01

**LOW LEVEL TOTAL METALS IN WATER (WATER)**

Maxxam ID		Y28432	Y28456	Y28457	Y28458	Y28459	Y28460	Y28461	Y28462	Y28463		
Sampling Date		2010/11/03	2010/11/04	2010/11/04	2010/11/04	2010/11/04	2010/11/04	2010/11/04	2010/11/04			
	Units	GCULV	R4	R5	R6	A1	P4	P1	VG MAIN	TRIP BLANK	RDL	QC Batch
Total Magnesium (Mg)	mg/L	1.71	11.8	12.1	11.3	10.6	17.3	18.7	28.2	<0.05	0.05	4410979
Total Potassium (K)	mg/L	0.32	1.23	1.27	1.14	1.37	0.98	0.77	0.91	<0.05	0.05	4410979
Total Sodium (Na)	mg/L	1.87	3.49	3.48	1.96	2.96	2.73	2.26	3.66	<0.05	0.05	4410979
Total Sulphur (S)	mg/L	<10	28	26	<10	17	24	27	52	<10	10	4410979

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RDL = Reportable Detection Limit

### LOW LEVEL TOTAL METALS IN WATER (WATER)

Maxxam ID		Y28710		Y28711	Y28712	Y28713	Y28714	Y28715		
	Units	VM1	QC Batch	VM2	VM3	DUPPLICATE	FIELD BLANK	X14	RDL	QC Batch
<b>Calculated Parameters</b>										
Total Hardness (CaCO <sub>3</sub> )	mg/L	189		4410325	391	88.5	150	<0.5	203	0.5
<b>Total Metals by ICPMS</b>										
Total Aluminum (Al)	ug/L	8.6		4417425	3.9	20.5	4.4	1.2	4.6	0.2
Total Antimony (Sb)	ug/L	0.04		4417425	0.28	0.03	0.10	<0.02	0.05	0.02
Total Arsenic (As)	ug/L	0.56		4417425	0.39	0.78	0.41	<0.02	0.32	0.02
Total Barium (Ba)	ug/L	64.0		4417425	99.7	31.5	77.1	<0.02	59.4	0.02
Total Beryllium (Be)	ug/L	<0.01		4417425	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Total Bismuth (Bi)	ug/L	<0.005		4417425	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Total Boron (B)	ug/L	<50		4417425	<50	<50	<50	<50	<50	50
Total Cadmium (Cd)	ug/L	0.007		4417425	0.115	0.031	0.009	<0.005	0.042	0.005
Total Chromium (Cr)	ug/L	<0.1		4417425	0.2	<0.1	<0.1	<0.1	<0.1	0.1
Total Cobalt (Co)	ug/L	0.068		4417425	0.018	0.061	0.024	<0.005	0.900	0.005
Total Copper (Cu)	ug/L	0.42		4417425	0.45	0.45	0.34	<0.05	0.35	0.05
Total Iron (Fe)	ug/L	106		4417425	6	113	80	<1	306	1
Total Lead (Pb)	ug/L	0.058		4417425	0.020	0.384	0.023	<0.005	0.179	0.005
Total Lithium (Li)	ug/L	3.2		4417425	3.7	0.8	2.3	<0.5	5.1	0.5
Total Manganese (Mn)	ug/L	52.9		4417425	0.19	13.2	7.97	<0.05	1200	0.05
Total Mercury (Hg)	ug/L	<0.01		4417425	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Total Molybdenum (Mo)	ug/L	0.45		4417425	3.50	0.22	1.16	<0.05	0.56	0.05
Total Nickel (Ni)	ug/L	0.50		4417425	1.29	0.28	0.27	<0.02	2.48	0.02
Total Selenium (Se)	ug/L	0.17		4417425	3.39	0.12	0.76	<0.04	0.26	0.04
Total Silicon (Si)	ug/L	5080		4417425	4350	5330	4570	<100	5150	100
Total Silver (Ag)	ug/L	<0.005		4417425	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Total Strontium (Sr)	ug/L	225		4417425	327	110	133	<0.05	224	0.05
Total Tellurium (Te)	ug/L	<0.02		4417425	<0.02	<0.02	<0.02	<0.02	<0.02	0.02
Total Thallium (Tl)	ug/L	<0.002		4417425	<0.002	0.003	<0.002	<0.002	0.004	0.002
Total Thorium (Th)	ug/L	<0.005		4417425	<0.005	0.009	<0.005	<0.005	<0.005	0.005
Total Tin (Sn)	ug/L	<0.01		4417425	<0.01	0.01	<0.01	<0.01	<0.01	0.01
Total Titanium (Ti)	ug/L	<0.5		4417425	<0.5	<0.5	<0.5	<0.5	<0.5	0.5
Total Uranium (U)	ug/L	2.61		4417425	7.74	1.78	2.14	0.002	2.24	0.002
Total Vanadium (V)	ug/L	<0.2		4417425	1.1	<0.2	<0.2	<0.2	<0.2	0.2
Total Zinc (Zn)	ug/L	2.0		4417425	6.6	14.9	1.7	<0.1	34.7	0.1
Total Zirconium (Zr)	ug/L	<0.1		4417425	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Total Calcium (Ca)	mg/L	48.9		4410979	96.3	26.1	42.1	<0.05	59.1	0.05
Total Magnesium (Mg)	mg/L	16.3		4410979	36.6	5.65	11.0	<0.05	13.4	0.05

RDL = Reportable Detection Limit

Maxxam Job #: B0A8919  
Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
Client Project #: SFN-07-01  
Your P.O. #: SFN-10-01

**LOW LEVEL TOTAL METALS IN WATER (WATER)**

Maxxam ID		Y28710		Y28711	Y28712	Y28713	Y28714	Y28715		
	Units	VM1	QC Batch	VM2	VM3	DUPLICATE	FIELD BLANK	X14	RDL	QC Batch
Total Potassium (K)	mg/L	0.73	4410979	1.01	0.36	1.12	<0.05	1.24	0.05	4410979
Total Sodium (Na)	mg/L	3.38	4410979	2.55	1.89	1.91	<0.05	4.43	0.05	4410979
Total Sulphur (S)	mg/L	17	4410979	40	<10	<10	<10	34	10	4410979

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RDL = Reportable Detection Limit

Package 1	5.3°C
Package 2	5.0°C
Package 3	5.3°C
Package 4	0.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

#### RESULTS OF CHEMICAL ANALYSES OF WATER Comments

- Sample Y28421-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28422-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28423-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28424-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28425-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28426-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28427-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28429-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28430-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28431-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28432-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28456-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28457-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28458-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28459-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28460-01 Colour (True): Sample received past method-specified hold time.
- Sample Y28461-01 Colour (True): Sample received past method-specified hold time.



Maxxam Job #: B0A8919  
Report Date: 2010/11/18

Success Through Science®

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Client Project #: SFN-07-01  
Your P.O. #: SFN-10-01

Sample Y28462-01 Colour (True): Sample received past method-specified hold time.

Sample Y28431, Elements by ICPMS Low Level (dissolved): Test repeated.

Sample Y28458, Elements by ICPMS Low Level (dissolved): Test repeated.

Maxxam Job #: B0A8919  
 Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-10-01

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
4410402	Total Suspended Solids	2010/11/09	105	80 - 120	100	80 - 120	<4	mg/L	NC	25
4410491	Total Dissolved Solids	2010/11/09	106	80 - 120	98	80 - 120	<10	mg/L	2.3	20
4411171	Conductivity	2010/11/09			102	80 - 120	<1	uS/cm	0	20
4411172	Alkalinity (Total as CaCO <sub>3</sub> )	2010/11/09	NC	80 - 120	98	80 - 120	<0.5	mg/L	0.2	20
4411172	Alkalinity (PP as CaCO <sub>3</sub> )	2010/11/09					<0.5	mg/L	NC	20
4411172	Bicarbonate (HCO <sub>3</sub> )	2010/11/09					<0.5	mg/L	0.2	20
4411172	Carbonate (CO <sub>3</sub> )	2010/11/09					<0.5	mg/L	NC	20
4411172	Hydroxide (OH)	2010/11/09					<0.5	mg/L	NC	20
4411765	True Colour	2010/11/09					<5	Col. Unit	NC	N/A
4411931	Ammonia (N)	2010/11/09	NC	80 - 120	97	80 - 120	<0.005	mg/L	4.2	20
4412156	Nitrate plus Nitrite (N)	2010/11/09	100	80 - 120	98	80 - 120	<0.02	mg/L	NC	25
4412287	Nitrite (N)	2010/11/09	109	80 - 120	99	80 - 120	<0.005	mg/L	NC	20
4413378	Total Phosphorus (P)	2010/11/10	101	80 - 120	95	80 - 120	<0.005	mg/L	NC	20
4414735	Total Suspended Solids	2010/11/10	100	80 - 120	101	80 - 120	<4	mg/L	NC	25
4414776	Total Dissolved Solids	2010/11/10	106	80 - 120	92	80 - 120	<10	mg/L	2.8	20
4414789	Dissolved Chloride (Cl)	2010/11/09	98	80 - 120	107	80 - 120	<0.5	mg/L	NC	20
4414796	Dissolved Sulphate (SO <sub>4</sub> )	2010/11/09	NC	80 - 120	105	80 - 120	<0.5	mg/L	0.4	20
4415924	Ammonia (N)	2010/11/10	NC	80 - 120	99	80 - 120	<0.005	mg/L	0.4	20
4416212	Fluoride (F)	2010/11/10	103	80 - 120	95	80 - 120	<0.01	mg/L	1.4	20
4417425	Total Arsenic (As)	2010/11/15	104	80 - 120	101	80 - 120	<0.02	ug/L	1.5	20
4417425	Total Beryllium (Be)	2010/11/15	109	80 - 120	101	80 - 120	<0.01	ug/L	NC	20
4417425	Total Cadmium (Cd)	2010/11/15	107	80 - 120	103	80 - 120	<0.005	ug/L	17.7	20
4417425	Total Chromium (Cr)	2010/11/15	105	80 - 120	105	80 - 120	<0.1	ug/L	NC	20
4417425	Total Cobalt (Co)	2010/11/15	102	80 - 120	103	80 - 120	<0.005	ug/L	4.0	20
4417425	Total Copper (Cu)	2010/11/15	103	80 - 120	106	80 - 120	<0.05	ug/L	2.7	20
4417425	Total Lead (Pb)	2010/11/15	103	80 - 120	104	80 - 120	<0.005	ug/L	3.2	20
4417425	Total Lithium (Li)	2010/11/15	106	80 - 120	104	80 - 120	<0.5	ug/L	6.0	20
4417425	Total Nickel (Ni)	2010/11/15	101	80 - 120	105	80 - 120	<0.02	ug/L	0.5	20
4417425	Total Selenium (Se)	2010/11/15	106	80 - 120	97	80 - 120	<0.04	ug/L	15.9	20
4417425	Total Uranium (U)	2010/11/15	108	80 - 120	107	80 - 120	<0.002	ug/L	0.7	20
4417425	Total Vanadium (V)	2010/11/15	107	80 - 120	103	80 - 120	<0.2	ug/L	NC	20
4417425	Total Zinc (Zn)	2010/11/15	103	80 - 120	103	80 - 120	<0.1	ug/L	3.6	20
4417425	Total Aluminum (Al)	2010/11/15					<0.2	ug/L	2.4	20
4417425	Total Antimony (Sb)	2010/11/15					<0.02	ug/L	2.4	20
4417425	Total Barium (Ba)	2010/11/15					<0.02	ug/L	0.8	20
4417425	Total Bismuth (Bi)	2010/11/15					<0.005	ug/L	NC	20
4417425	Total Boron (B)	2010/11/15					<50	ug/L	NC	20
4417425	Total Iron (Fe)	2010/11/15					<1	ug/L	0.7	20
4417425	Total Manganese (Mn)	2010/11/15					<0.05	ug/L	1.9	20

Maxxam Job #: B0A8919  
 Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-10-01

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
4417425	Total Mercury (Hg)	2010/11/15					<0.01	ug/L	NC	20
4417425	Total Molybdenum (Mo)	2010/11/15					<0.05	ug/L	3.2	20
4417425	Total Silicon (Si)	2010/11/15					<100	ug/L	0.8	20
4417425	Total Silver (Ag)	2010/11/15					<0.005	ug/L	NC	20
4417425	Total Strontium (Sr)	2010/11/15					<0.05	ug/L	3.1	20
4417425	Total Tellurium (Te)	2010/11/15					<0.02	ug/L		
4417425	Total Thallium (Tl)	2010/11/15					<0.002	ug/L	NC	20
4417425	Total Thorium (Th)	2010/11/15					<0.005	ug/L		
4417425	Total Tin (Sn)	2010/11/15					<0.01	ug/L	NC	20
4417425	Total Titanium (Ti)	2010/11/15					<0.5	ug/L	NC	20
4417425	Total Zirconium (Zr)	2010/11/15					<0.1	ug/L	NC	20
4417698	Total Arsenic (As)	2010/11/16	109	80 - 120	102	80 - 120	<0.02	ug/L	0.8	20
4417698	Total Beryllium (Be)	2010/11/16	101	80 - 120	96	80 - 120	<0.01	ug/L	NC	20
4417698	Total Cadmium (Cd)	2010/11/16	110	80 - 120	99	80 - 120	<0.005	ug/L	6.7	20
4417698	Total Chromium (Cr)	2010/11/16	114	80 - 120	103	80 - 120	<0.1	ug/L	NC	20
4417698	Total Cobalt (Co)	2010/11/16	108	80 - 120	105	80 - 120	<0.005	ug/L	NC	20
4417698	Total Copper (Cu)	2010/11/16	110	80 - 120	108	80 - 120	<0.05	ug/L	2.0	20
4417698	Total Lead (Pb)	2010/11/16	99	80 - 120	100	80 - 120	<0.005	ug/L	NC	20
4417698	Total Lithium (Li)	2010/11/16	98	80 - 120	99	80 - 120	<0.5	ug/L	1.9	20
4417698	Total Nickel (Ni)	2010/11/16	110	80 - 120	105	80 - 120	<0.02	ug/L	4.9	20
4417698	Total Selenium (Se)	2010/11/16	102	80 - 120	99	80 - 120	<0.04	ug/L	1.6	20
4417698	Total Uranium (U)	2010/11/16	NC	80 - 120	102	80 - 120	<0.002	ug/L	1.3	20
4417698	Total Vanadium (V)	2010/11/16	115	80 - 120	103	80 - 120	<0.2	ug/L	4.6	20
4417698	Total Zinc (Zn)	2010/11/16	NC	80 - 120	111	80 - 120	<0.1	ug/L	17.4	20
4417698	Total Aluminum (Al)	2010/11/16					<0.2	ug/L	3.9	20
4417698	Total Antimony (Sb)	2010/11/16					<0.02	ug/L	1.4	20
4417698	Total Barium (Ba)	2010/11/16					<0.02	ug/L	0.4	20
4417698	Total Bismuth (Bi)	2010/11/16					<0.005	ug/L	NC	20
4417698	Total Boron (B)	2010/11/16					<50	ug/L	NC	20
4417698	Total Iron (Fe)	2010/11/16					<1	ug/L	1.9	20
4417698	Total Manganese (Mn)	2010/11/16					<0.05	ug/L	NC	20
4417698	Total Mercury (Hg)	2010/11/16					<0.01	ug/L	NC	20
4417698	Total Molybdenum (Mo)	2010/11/16					<0.05	ug/L	2.0	20
4417698	Total Silicon (Si)	2010/11/16					<100	ug/L	1.2	20
4417698	Total Silver (Ag)	2010/11/16					<0.005	ug/L	NC	20
4417698	Total Strontium (Sr)	2010/11/16					<0.05	ug/L	0.9	20
4417698	Total Tellurium (Te)	2010/11/16					<0.02	ug/L		
4417698	Total Thallium (Tl)	2010/11/16					<0.002	ug/L	NC	20
4417698	Total Thorium (Th)	2010/11/16					<0.005	ug/L		

Maxxam Job #: B0A8919  
 Report Date: 2010/11/18

ACCESS CONSULTING GROUP  
 Client Project #: SFN-07-01

Your P.O. #: SFN-10-01

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
4417698	Total Tin (Sn)	2010/11/16					<0.01	ug/L	NC	20
4417698	Total Titanium (Ti)	2010/11/16					<0.5	ug/L	NC	20
4417698	Total Zirconium (Zr)	2010/11/16					<0.1	ug/L	NC	20
4421486	Dissolved Arsenic (As)	2010/11/16	101	80 - 120	100	80 - 120	<0.02	ug/L	0.3	20
4421486	Dissolved Beryllium (Be)	2010/11/16	106	80 - 120	103	80 - 120	<0.01	ug/L	NC	20
4421486	Dissolved Cadmium (Cd)	2010/11/16	104	80 - 120	101	80 - 120	<0.005	ug/L	11.8	20
4421486	Dissolved Chromium (Cr)	2010/11/16	105	80 - 120	105	80 - 120	<0.1	ug/L	NC	20
4421486	Dissolved Cobalt (Co)	2010/11/16	102	80 - 120	105	80 - 120	<0.005	ug/L	10	20
4421486	Dissolved Copper (Cu)	2010/11/16	99	80 - 120	107	80 - 120	<0.05	ug/L	4.0	20
4421486	Dissolved Lead (Pb)	2010/11/16	101	80 - 120	106	80 - 120	<0.005	ug/L	2.5	20
4421486	Dissolved Lithium (Li)	2010/11/16	103	80 - 120	105	80 - 120	<0.5	ug/L	1.1	20
4421486	Dissolved Nickel (Ni)	2010/11/16	98	80 - 120	104	80 - 120	<0.02	ug/L	0.7	20
4421486	Dissolved Selenium (Se)	2010/11/16	105	80 - 120	104	80 - 120	<0.04	ug/L	1.2	20
4421486	Dissolved Uranium (U)	2010/11/16	108	80 - 120	109	80 - 120	<0.002	ug/L	1.6	20
4421486	Dissolved Vanadium (V)	2010/11/16	101	80 - 120	103	80 - 120	<0.2	ug/L	NC	20
4421486	Dissolved Zinc (Zn)	2010/11/16	NC	80 - 120	101	80 - 120	<0.1	ug/L	3.9	20
4421486	Dissolved Aluminum (Al)	2010/11/16					0.2, RDL=0.2	ug/L	4.6	20
4421486	Dissolved Antimony (Sb)	2010/11/16					<0.02	ug/L	1.6	20
4421486	Dissolved Barium (Ba)	2010/11/16					<0.02	ug/L	0.04	20
4421486	Dissolved Bismuth (Bi)	2010/11/16					<0.005	ug/L	NC	20
4421486	Dissolved Boron (B)	2010/11/16					<50	ug/L	NC	20
4421486	Dissolved Iron (Fe)	2010/11/16					<1	ug/L	1.3	20
4421486	Dissolved Manganese (Mn)	2010/11/16					<0.05	ug/L	0.5	20
4421486	Dissolved Molybdenum (Mo)	2010/11/16					<0.05	ug/L	3.4	20
4421486	Dissolved Silicon (Si)	2010/11/16					<100	ug/L	0.1	20
4421486	Dissolved Silver (Ag)	2010/11/16					<0.005	ug/L	NC	20
4421486	Dissolved Strontium (Sr)	2010/11/16					<0.05	ug/L	0.7	20
4421486	Dissolved Thallium (Tl)	2010/11/16					<0.002	ug/L	NC	20
4421486	Dissolved Tin (Sn)	2010/11/16					<0.01	ug/L	NC	20
4421486	Dissolved Titanium (Ti)	2010/11/16					<0.5	ug/L	NC	20
4421486	Dissolved Zirconium (Zr)	2010/11/16					<0.1	ug/L	NC	20
4423025	Dissolved Arsenic (As)	2010/11/15	100	80 - 120	101	80 - 120	<0.02	ug/L	2.7	20
4423025	Dissolved Beryllium (Be)	2010/11/15	106	80 - 120	105	80 - 120	<0.01	ug/L	NC	20
4423025	Dissolved Cadmium (Cd)	2010/11/15	106	80 - 120	105	80 - 120	<0.005	ug/L	NC	20
4423025	Dissolved Chromium (Cr)	2010/11/15	102	80 - 120	103	80 - 120	<0.1	ug/L	NC	20
4423025	Dissolved Cobalt (Co)	2010/11/15	99	80 - 120	102	80 - 120	<0.005	ug/L	26.6 <sup>(1)</sup>	20
4423025	Dissolved Copper (Cu)	2010/11/15	97	80 - 120	103	80 - 120	<0.05	ug/L	3.9	20
4423025	Dissolved Lead (Pb)	2010/11/15	101	80 - 120	106	80 - 120	<0.005	ug/L	10.2	20
4423025	Dissolved Lithium (Li)	2010/11/15	105	80 - 120	107	80 - 120	<0.5	ug/L	NC	20

### QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
4423025	Dissolved Nickel (Ni)	2010/11/15	99	80 - 120	100	80 - 120	<0.02	ug/L	2.8	20
4423025	Dissolved Selenium (Se)	2010/11/15	102	80 - 120	106	80 - 120	<0.04	ug/L	NC	20
4423025	Dissolved Uranium (U)	2010/11/15	105	80 - 120	109	80 - 120	<0.002	ug/L	1.2	20
4423025	Dissolved Vanadium (V)	2010/11/15	100	80 - 120	104	80 - 120	<0.2	ug/L	NC	20
4423025	Dissolved Zinc (Zn)	2010/11/15	NC	80 - 120	113	80 - 120	<0.1	ug/L	0.3	20
4423025	Dissolved Aluminum (Al)	2010/11/15					<0.2	ug/L	9.1	20
4423025	Dissolved Antimony (Sb)	2010/11/15					<0.02	ug/L	NC	20
4423025	Dissolved Barium (Ba)	2010/11/15					<0.02	ug/L	1.0	20
4423025	Dissolved Bismuth (Bi)	2010/11/15					<0.005	ug/L	NC	20
4423025	Dissolved Boron (B)	2010/11/15					<50	ug/L	NC	20
4423025	Dissolved Iron (Fe)	2010/11/15					<1	ug/L	2.1	20
4423025	Dissolved Manganese (Mn)	2010/11/15					<0.05	ug/L	1	20
4423025	Dissolved Molybdenum (Mo)	2010/11/15					<0.05	ug/L	NC	20
4423025	Dissolved Silicon (Si)	2010/11/15					<100	ug/L	1.3	20
4423025	Dissolved Silver (Ag)	2010/11/15					<0.005	ug/L	NC	20
4423025	Dissolved Strontium (Sr)	2010/11/15					<0.05	ug/L	0.5	20
4423025	Dissolved Thallium (Tl)	2010/11/15					<0.002	ug/L	NC	20
4423025	Dissolved Tin (Sn)	2010/11/15					<0.01	ug/L	NC	20
4423025	Dissolved Titanium (Ti)	2010/11/15					<0.5	ug/L	NC	20
4423025	Dissolved Zirconium (Zr)	2010/11/15					<0.1	ug/L	NC	20
4428103	Total Organic Carbon (C)	2010/11/15	NC	80 - 120	108	80 - 120	<0.5	mg/L	9.2	20
4430847	Total Organic Carbon (C)	2010/11/16	104	80 - 120	99	80 - 120	<0.5	mg/L	3.7	20
4431268	Weak Acid Dissoc. Cyanide (CN)	2010/11/16	100	80 - 120	107	80 - 120	<0.0005	mg/L	NC	20
4437347	Dissolved Copper (Cu)	2010/11/18			102	80 - 120	<0.05	ug/L		
4437347	Dissolved Nickel (Ni)	2010/11/18			100	80 - 120	<0.02	ug/L		
4437347	Dissolved Zinc (Zn)	2010/11/18			99	80 - 120	<0.1	ug/L		
4437347	Dissolved Iron (Fe)	2010/11/18					<1	ug/L		

N/A = Not Applicable

RDL = Reportable Detection Limit

RPD = Relative Percent Difference

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

(1) - Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



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#### **CHAIN-OF-CUSTODY**

**ANALYSIS REQUEST**

08325031

PAGE 1 OF 2

LAB USE ONLY MAXXAM JOB #  <i>BOA 3919</i>	<b>ANALYSIS REQUEST</b>	LAB USE ONLY COC #
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TAT (Turnaround Time) <b>LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL</b>		PO NUMBER OR QUOTE NUMBER:	SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:	CCME CSR AB TIER 1 OTHER	LAB USE ONLY		
		SFN-10-01	As discussed- please add Mercury, Tellurium, and Thorium to the total metals, and hardness, Colour, and TOC.		ARRIVAL TEMPERATURE °C:	DUE DATE:	LOG IN CHECK:
		ACCOUNTING CONTACT: Colette MacMillon	SPECIAL REPORTING OR BILLING INSTRUCTIONS:		# JARS USED:	565	654
		RELINQUISHED BY SAMPLER: Stuart Van Bibber	DATE: DD/MM/YY      05/11/2010		TIME: 19:00	RECEIVED BY:	466
		RELINQUISHED BY:	DATE: DD/MM/YY	TIME: 10/11/08	RECEIVED BY:		
		RELINQUISHED BY:	DATE: Page 26 of 27 DD/MM/YY	TIME: 06/15	RECEIVED BY LABORATORY:	C. Rosen	
<b>STANDARD 5 BUSINESS DAYS</b>							
RUSH	<b>3 BUSINESS DAYS</b>						
RUSH	<b>2 BUSINESS DAYS</b>						
URGENT	<b>1 BUSINESS DAY</b>						
OTHER BUSINESS DAYS							
<b>CUSTODY RECORD</b>							



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CHAIN

**RECORD AND ANALYSIS REQUEST**

PAGE 2 OF 2



**Pelly River Aquatic Ecosystem  
Monitoring Program  
2010 Summary**

**Laboratory Results Compared to  
CCME Guidelines**



Station Name		V8	V8	V8	V8	V8	
Description		Lower Vangorda Ck at the footbridge					
Smpl Date		19/05/2010	19/05/2010	03/08/2010	03/08/2010	02/11/2010	
Sample Class		QD	M	QD	M	M	
eq Smpl #		V8_40317_QD	V8_40317_M	V8_40393_QD	V8_40393_M	V8_40484_M	CCME-Aquatic
Ag-T	µg/L	<0.005	<0.005		<0.005	<0.005	0.1
Al-T	µg/L	810	902		21.5	13.7	*
As-T	µg/L	1.53	1.58		0.52	0.47	5
Cd-T	µg/L	0.141	0.14		0.047	0.043	*
Cr-T	µg/L	1.6	1.9		0.1	0.1	1
Cu-T	µg/L	3.95	4.1		0.84	0.65	*
Fe-T	µg/L	1450	1600		54	42	300
Hg-T	µg/L					0.01	0.026
Mo-T	µg/L	0.36	0.42		0.87	1.02	73
Ni-T	µg/L	4.34	4.74		1.11	1.36	*
Pb-T	µg/L	5.39	5.53		0.151	0.115	*
Se-T	µg/L	0.47	0.45		0.57	0.85	1
Tl-T	µg/L	0.033	0.035		0.016	0.005	0.8
Zn-T	µg/L	27.6	28.4		7	7.4	30
CN-WAD	mg/L				<0.0005	0.0008	0.005
Total Ammonia	mg/L		<0.005	0.023	<0.005	0.015	0.239
Nitrite	mg/L		<0.005	<0.005	<0.005	<0.005	0.06
Nitrate	mg/L		0.15	0.14	0.14	0.3	2.9
pH-F	pH units		7.99		8.39	8.13	6.5-9
Temp-F	C		4.8		12.9	-0.1	
Hardness - Total	mg/L	151	157		239	304	
Dissolved Sulphate	mg/L		62	100	100	120	
TSS	mg/L		87		2	<4	

Station Name		P5	P5	P5	
Description		Pelly River u/s of Pelly Crossing	Pelly River u/s of Pelly Crossing	Pelly River u/s of Pelly Crossing	
Smpl Date		24/02/2010	19/05/2010	02/11/2010	
Sample Class		M	M	M	
eq Smpl #		P5_40233_M	P5_40317_M	P5_40484_M	CCME-Aquatic
Ag-T	µg/L	<0.005	<0.005	<0.005	0.1
Al-T	µg/L	17.2	259	22.7	*
As-T	µg/L	0.36	0.86	0.59	5
Cd-T	µg/L	0.124	0.17	0.109	*
Cr-T	µg/L	0.2	0.3	0.1	1
Cu-T	µg/L	0.63	2.6	0.86	*
Fe-T	µg/L	64	631	92	300
Hg-T	µg/L			0.01	0.026
Mo-T	µg/L	1.1	0.88	1.19	73
Ni-T	µg/L	3.34	4.76	3.1	*
Pb-T	µg/L	0.146	0.522	0.114	*
Se-T	µg/L	1.29	0.66	0.76	1
Tl-T	µg/L	0.004	0.009	0.003	0.8
Zn-T	µg/L	14.3	14.5	4.5	30
CN-WAD	mg/L	<0.0005		0.0008	0.005
Total Ammonia	mg/L	0.011	0.006	0.03	0.239
Nitrite	mg/L	<0.005	<0.005	<0.005	0.06
Nitrate	mg/L	0.12	<0.02	0.04	2.9
pH-F	pH units	7.72	7.93	7.73	6.5-9
Temp-F	°C	0	10.6	1.3	
Hardness - Total	mg/L	205	128	190	
Dissolved Sulphate	mg/L	59	45	50	
TSS	mg/L	2	20	<4	

Station Name		VW1	VW1	VW1	VW1	
Description		West fork Vangorda Ck d/s of slide u/s Grum WR dra	West fork Vangorda Ck d/s of slide u/s Grum WR dra	West fork Vangorda Ck d/s of slide u/s Grum WR dra	West fork Vangorda Ck d/s of slide u/s Grum WR dra	
Smpl Date		21/01/2010	23/02/2010	30/03/2010	03/11/2010	
Sample Class		M	M	M	M	
eq Smpl #		VW1_40199_M	VW1_40232_M	VW1_40267_M	VW1_40485_M	CCME-Aquatic
Ag-T	µg/L	<0.005	<0.005	<0.005	<0.005	0.1
Al-T	µg/L	27.4	35.9	111	8.6	*
As-T	µg/L	0.59	0.51	1.19	0.56	5
Cd-T	µg/L	0.015	0.016	0.048	0.007	*
Cr-T	µg/L	0.1	<0.1	0.2	<0.1	1
Cu-T	µg/L	0.55	0.56	1.55	0.42	*
Fe-T	µg/L	128	115	341	106	300
Hg-T	µg/L			<0.01		0.026
Mo-T	µg/L	0.55	0.62	1.12	0.45	73
Ni-T	µg/L	0.65	0.58	1.5	0.5	*
Pb-T	µg/L	0.229	0.222	1.34	0.058	*
Se-T	µg/L	0.33	0.4	0.75	0.17	1
Tl-T	µg/L	0.002	<0.002	0.005	<0.002	0.8
Zn-T	µg/L	3.5	3.3	8	2	30
CN-WAD	mg/L	<0.0005	<0.0005	<0.0005	0.001	0.005
Total Ammonia	mg/L	0.009	0.012	0.051	0.086	0.239
Nitrite	mg/L	<0.005	<0.005	<0.005	<0.005	0.06
Nitrate	mg/L	0.16	0.16	0.19	0.09	2.9
pH-F	pH units	4.23	8.06		7.96	6.5-9
Temp-F	C	-0.1	0		0.1	
Hardness - Total	mg/L	253	261	391	189	
Dissolved Sulphate	mg/L	59	62	110	52	
TSS	mg/L	8	7	52	<4	

Station Name		VW2	VW2	VW2	
		West Vangorda Ck, trib draining Grum west lobe	West Vangorda Ck, trib draining Grum west lobe	West Vangorda Ck, trib draining Grum west lobe	
Description		24/02/2010	30/03/2010	03/11/2010	
Smpl Date					
Sample Class		M	M	M	
eq Smpl #		VW2_40233_M	VW2_40267_M	VW2_40485_M	CCME-Aquatic
Ag-T	µg/L	<0.005	<0.005	<0.005	0.1
Al-T	µg/L	6.2	5.2	3.9	*
As-T	µg/L	0.35	0.34	0.39	5
Cd-T	µg/L	0.155	0.171	0.115	*
Cr-T	µg/L	0.2	0.1	0.2	1
Cu-T	µg/L	0.52	0.49	0.45	*
Fe-T	µg/L	12	11	6	300
Hg-T	µg/L			<0.01	0.026
Mo-T	µg/L	3.75	4.25	3.5	73
Ni-T	µg/L	1.59	1.73	1.29	*
Pb-T	µg/L	0.214	0.072	0.02	*
Se-T	µg/L	4.39	4.26	3.39	1
Tl-T	µg/L	<0.002	<0.002	<0.002	0.8
Zn-T	µg/L	9.1	10.1	6.6	30
CN-WAD	mg/L	<0.0005	<0.0005	0.0006	0.005
Total Ammonia	mg/L	0.01	<0.005	<0.005	0.239
Nitrite	mg/L	<0.005	<0.005	<0.005	0.06
Nitrate	mg/L	0.32	0.21	0.16	2.9
pH-F	pH units	8.23	8.22	8.18	6.5-9
Temp-F	C	0	0	0.1	
Hardness - Total	mg/L	436	428	391	
Dissolved Sulphate	mg/L	120	120	110	
TSS	mg/L	1	8	<4	

Station Name		FC							
Description		Faro Creek above diversion channel							
Smpl Date		21/01/2010	24/02/2010	24/02/2010	30/03/2010	19/05/2010	03/08/2010	03/11/2010	
Sample Class		M	QD	M	M	M	M	M	
eq Smpl #		FC_40199_M	FC_40233_QD	FC_40233_M	FC_40267_M	FC_40317_M	FC_40393_M	FC_40485_M	CCME-Aquatic
Ag-T	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.1
Al-T	µg/L	24.8	29.1	34.8	90.4	198	41	22.5	*
As-T	µg/L	0.06	0.09	0.09	0.25	0.21	0.11	0.08	5
Cd-T	µg/L	0.008	0.006	0.008	0.025	0.045	0.01	0.011	*
Cr-T	µg/L	0.1	<0.1	<0.1	0.2	0.2	0.1	0.1	1
Cu-T	µg/L	0.28	0.31	0.31	0.64	1.53	0.53	0.41	*
Fe-T	µg/L	20	38	44	469	249	40	21	300
Hg-T	µg/L							<0.01	0.026
Mo-T	µg/L	0.08	0.08	0.09	0.1	<0.05	0.07	0.07	73
Ni-T	µg/L	0.2	0.19	0.19	0.28	0.58	0.32	0.24	*
Pb-T	µg/L	0.076	2.11	0.251	1.73	1.05	0.504	0.105	*
Se-T	µg/L	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	1
Tl-T	µg/L	<0.002	<0.002	<0.002	0.003	0.008	<0.002	<0.002	0.8
Zn-T	µg/L	1.2	1.5	1.6	7.1	7.6	1.4	2.2	30
CN-WAD	mg/L	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	0.001	0.005
Total Ammonia	mg/L	<0.005	0.009	0.006	0.013	<0.005	<0.005	0.013	0.239
Nitrite	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.06
Nitrate	mg/L	0.06	0.06	0.05	0.08	<0.02	<0.02	<0.02	2.9
pH-F	pH units	4.39		8.08	8.18	7.47	7.39	7.50	6.5-9
Temp-F	C	-0.1		0	0	0.9	10.9	0.0	
Hardness - Total	mg/L	17.7	18.5	17.6	18.8	8.7	16.8	15.7	
Dissolved Sulphate	mg/L	2	1.5	1.4	2	<0.5	1.5	1.7	
TSS	mg/L	<1	1	<1	11	6	<1	<4	

Station Name		R1	R1	R1	R1	
		South fork Rose Ck u/s of Pumphouse Pond				
Description		21/01/2010	24/02/2010	30/03/2010	03/11/2010	
Smpl Date						
Sample Class		M	M	M	M	
eq Smpl #		R1_40199_M	R1_40233_M	R1_40267_M	R1_40485_M	CCME-Aquatic
Ag-T	µg/L	<0.005	0.008	<0.005	<0.005	0.1
Al-T	µg/L	28.4	274	9	6.2	*
As-T	µg/L	0.97	2.94	0.54	0.3	5
Cd-T	µg/L	0.045	0.081	0.018	<0.005	*
Cr-T	µg/L	0.3	0.8	<0.1	<0.1	1
Cu-T	µg/L	1.18	2.9	0.83	0.36	*
Fe-T	µg/L	1370	5170	500	203	300
Hg-T	µg/L			<0.01	0.026	
Mo-T	µg/L	0.29	0.26	0.32	0.25	73
Ni-T	µg/L	0.56	2.26	0.48	0.33	*
Pb-T	µg/L	0.85	3.02	0.443	0.036	*
Se-T	µg/L	0.19	0.24	0.23	0.14	1
Tl-T	µg/L	0.003	0.009	0.003	<0.002	0.8
Zn-T	µg/L	11.8	17.9	6.1	0.7	30
CN-WAD	mg/L	<0.0005	<0.0005	<0.0005	0.0009	0.005
Total Ammonia	mg/L	0.047	0.115	0.129	0.041	0.239
Nitrite	mg/L	<0.005	0.006	<0.005	<0.005	0.06
Nitrate	mg/L	0.14	0.15	0.18	0.07	2.9
pH-F	pH units	4.53	8.45	7.86	7.86	6.5-9
Temp-F	C	-0.1	0.1	0	-0.1	
Hardness - Total	mg/L	145	152	155	103	
Dissolved Sulphate	mg/L	29	30	33	21	
TSS	mg/L	4	110	3	<4	

Station Name		X14	X14	X14	X14	
Description		Rose Ck d/s of the diversion channel				
Smpl Date		19/05/2010	03/08/2010	03/08/2010	03/11/2010	
Sample Class		M	QD	M	M	
eq Smpl #		X14_40317_M	X14_40393_QD	X14_40393_M	X14_40485_M	CCME-Aquatic
Ag-T	µg/L	<0.005	<0.005	<0.005	<0.005	0.1
Al-T	µg/L	215	11.7	7	4.6	*
As-T	µg/L	1.08	0.48	0.49	0.32	5
Cd-T	µg/L	0.063	0.027	0.024	0.042	*
Cr-T	µg/L	0.4	<0.1	<0.1	<0.1	1
Cu-T	µg/L	2.03	0.54	0.47	0.35	*
Fe-T	µg/L	991	369	353	306	300
Hg-T	µg/L			<0.01		0.026
Mo-T	µg/L	0.93	0.56	0.56	0.56	73
Ni-T	µg/L	3.29	1.37	1.39	2.48	*
Pb-T	µg/L	4.81	0.317	0.168	0.179	*
Se-T	µg/L	0.14	0.19	0.2	0.26	1
Tl-T	µg/L	0.031	0.006	0.005	0.004	0.8
Zn-T	µg/L	39.8	17.9	17.6	34.7	30
CN-WAD	mg/L			<0.0005	0.0009	0.005
Total Ammonia	mg/L	0.038		0.012	0.022	0.239
Nitrite	mg/L	0.007		<0.005	<0.005	0.06
Nitrate	mg/L	0.04		<0.02	0.12	2.9
pH-F	pH units	7.38		7.99	7.83	6.5-9
Temp-F	°C	4.1		13.3	0.2	
Hardness - Total	mg/L	127	151	150	203	
Dissolved Sulphate	mg/L	80		57	95	
TSS	mg/L	15		<1	<4	

Station Name		R4	R4	R4	R4	R4	R4	
Description		Rose Ck u/s of Anvil Ck						
Smpl Date		21/01/2010	26/02/2010	19/05/2010	03/08/2010	04/11/2010	04/11/2010	
Sample Class		M	M	M	M	QD	M	
eq Smpl #		R4_40199_M	R4_40235_M	R4_40317_M	R4_40393_M	R4_40486_QD	R4_40486_M	CCME-Aquatic
Ag-T	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.1
Al-T	µg/L	3.3	2.9	241	7.1	4.4	3.6	*
As-T	µg/L	0.23	0.25	1.12	0.3	0.41	0.23	5
Cd-T	µg/L	0.007	0.01	0.097	0.015	0.009	0.023	*
Cr-T	µg/L	0.2	0.2	0.6	0.4	<0.1	0.1	1
Cu-T	µg/L	0.44	0.44	2.98	0.62	0.34	0.46	*
Fe-T	µg/L	38	28	1010	135	80	82	300
Hg-T	µg/L					<0.01	<0.01	0.026
Mo-T	µg/L	0.6	0.55	0.49	0.62	1.16	0.56	73
Ni-T	µg/L	0.68	0.73	4.29	1.18	0.27	1.02	*
Pb-T	µg/L	0.073	0.117	4.89	0.112	0.023	0.164	*
Se-T	µg/L	0.74	0.83	0.24	0.43	0.76	0.49	1
Tl-T	µg/L	0.003	0.002	0.032	0.025	<0.002	0.006	0.8
Zn-T	µg/L	4.2	3.3	46.7	9.4	1.7	12.3	30
CN-WAD	mg/L	<0.0005	<0.0005		<0.0005	0.0008	0.0008	0.005
Total Ammonia	mg/L	0.012	<0.005	0.016	<0.005	0.024	0.023	0.239
Nitrite	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.06
Nitrate	mg/L	0.24	0.25	0.06	0.04	0.16	0.15	2.9
pH-F	pH units	2.7	7.73	7.74	8.24		7.76	6.5-9
Temp-F	C	-0.1	0	4.5	10.2		-0.1	
Hardness - Total	mg/L	239	262	127	162	150	178	
Dissolved Sulphate	mg/L	98	140	71	64	23	72	
TSS	mg/L	<1	<1	19	<1	<4	<4	

Station Name		R6	R6	R6	R6	R6	R6	
Description		Anvil Ck u/s of Rose Ck						
Smpl Date		21/01/2010	26/02/2010	30/03/2010	19/05/2010	03/08/2010	04/11/2010	
Sample Class		M	M	M	M	M	M	
eq Smpl #		R6_40199_M	R6_40235_M	R6_40267_M	R6_40317_M	R6_40393_M	R6_40486_M	CCME-Aquatic
Ag-T	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.1
Al-T	µg/L	6.3	4.8	4.2	771	16.6	5.4	*
As-T	µg/L	0.48	0.48	0.46	2.04	0.48	0.36	5
Cd-T	µg/L	0.012	0.008	0.014	0.152	0.017	0.007	*
Cr-T	µg/L	0.1	0.1	<0.1	1.7	0.5	<0.1	1
Cu-T	µg/L	0.32	0.26	0.34	4.42	0.54	0.39	*
Fe-T	µg/L	118	112	124	2200	169	83	300
Hg-T	µg/L						<0.01	0.026
Mo-T	µg/L	1.16	1.35	1.42	0.62	1.2	1.2	73
Ni-T	µg/L	0.26	0.24	0.19	3.15	0.4	0.32	*
Pb-T	µg/L	0.016	0.042	0.025	1.55	0.053	0.025	*
Se-T	µg/L	0.76	0.91	0.89	0.42	0.67	0.8	1
Tl-T	µg/L	<0.002	<0.002	<0.002	0.018	<0.002	<0.002	0.8
Zn-T	µg/L	0.6	0.7	0.6	11.4	0.3	0.4	30
CN-WAD	mg/L	<0.0005	<0.0005	<0.0005		<0.0005	0.0007	0.005
Total Ammonia	mg/L	0.007	<0.005	<0.005	0.023	<0.005	0.012	0.239
Nitrite	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.06
Nitrate	mg/L	0.22	0.22	0.21	0.05	0.02	0.16	2.9
pH-F	pH units	2.89	8.13	8.34	7.93	8.46	7.99	6.5-9
Temp-F	C	-0.1	0	0	4.4	9	-0.1	
Hardness - Total	mg/L	168	160	165	97.4	153	159	
Dissolved Sulphate	mg/L	22	23	24	14	21	22	
TSS	mg/L	1	<1	<1	62	<1	<4	

Station Name		A1 (Anvil Creek)						
Description		Anvil Ck u/s of Pelly River						
Smpl Date		21/01/2010	26/02/2010	30/03/2010	19/05/2010	03/08/2010	04/11/2010	
Sample Class		M	M	M	M	M	M	
eq Smpl #		A1_40199_M	A1_40235_M	A1_40267_M	A1_40317_M	A1_40393_M	A1_40486_M	CCME-Aquatic
Ag-T	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.1
Al-T	µg/L	13.4	7.8	31.5	1030	19	65.5	*
As-T	µg/L	0.66	0.67	0.67	2.16	0.53	0.74	5
Cd-T	µg/L	0.008	0.011	0.02	0.173	0.033	0.023	*
Cr-T	µg/L	0.2	0.1	0.1	2.5	0.4	0.3	1
Cu-T	µg/L	0.5	0.42	0.71	5.58	0.78	0.8	*
Fe-T	µg/L	41	35	57	2080	69	152	300
Hg-T	µg/L						<0.01	0.026
Mo-T	µg/L	1.04	1.1	1.11	0.43	0.96	0.94	73
Ni-T	µg/L	0.49	0.39	0.53	6.53	0.87	0.91	*
Pb-T	µg/L	0.086	0.034	0.198	4.02	0.167	0.472	*
Se-T	µg/L	0.77	1.13	0.78	0.35	0.5	0.61	1
Tl-T	µg/L	<0.002	<0.002	<0.002	0.036	0.01	0.004	0.8
Zn-T	µg/L	2.1	1.5	3.6	32.4	2.7	4.8	30
CN-WAD	mg/L	<0.0005	<0.0005	<0.0005		<0.0005	0.0009	0.005
Total Ammonia	mg/L	0.009	<0.005	<0.005	0.009	<0.005	0.015	0.239
Nitrite	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.06
Nitrate	mg/L	0.24	0.24	0.25	0.06	<0.02	0.15	2.9
pH-F	pH units	2.86	8.21	8.36	7.81	8.29	8.11	6.5-9
Temp-F	C	-0.1	0	0	5.7	12.6	0.1	
Hardness - Total	mg/L	181	177	206	118	148	157	
Dissolved Sulphate	mg/L	44	56	81	45	40	41	
TSS	mg/L	1	<1	1	93	1	8	

Station Name		P1	P1	P1	P1	P1	P1	
Description		Pelly River u/s of Vangorda Ck						
Smpl Date		21/01/2010	26/02/2010	30/03/2010	19/05/2010	03/08/2010	04/11/2010	
Sample Class		M	M	M	M	M	M	
eq Smpl #		P1_40199_M	P1_40235_M	P1_40267_M	P1_40317_M	P1_40393_M	P1_40486_M	CCME-Aquatic
Ag-T	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.1
Al-T	µg/L	5.6	2.2	4.2	258	38.3	17	*
As-T	µg/L	0.28	0.26	0.27	0.99	0.49	0.45	5
Cd-T	µg/L	0.153	0.071	0.107	0.298	0.118	0.114	*
Cr-T	µg/L	<0.1	<0.1	<0.1	0.3	0.3	<0.1	1
Cu-T	µg/L	0.45	0.26	0.47	2.92	0.82	0.7	*
Fe-T	µg/L	29	11	26	792	72	69	300
Hg-T	µg/L						<0.01	0.026
Mo-T	µg/L	1.05	1.07	1.21	0.92	1.31	1.32	73
Ni-T	µg/L	3.18	0.69	2.67	6.62	2.68	3.17	*
Pb-T	µg/L	0.016	0.011	0.043	0.713	0.094	0.066	*
Se-T	µg/L	1.41	2.64	1.34	0.84	0.85	1.18	1
Tl-T	µg/L	0.002	0.002	0.003	0.009	0.006	<0.002	0.8
Zn-T	µg/L	17.8	2.9	14.4	25.8	5.2	8.7	30
CN-WAD	mg/L	<0.0005	<0.0005	<0.0005		<0.0005	0.0009	0.005
Total Ammonia	mg/L	0.007	<0.005	<0.005	<0.005	<0.005	0.024	0.239
Nitrite	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.06
Nitrate	mg/L	0.09	0.08	0.08	<0.02	<0.02	0.03	2.9
pH-F	pH units	3.91	7.99	7.89	8.02	8.12	8.27	6.5-9
Temp-F	C	-0.1	2.8	0.1	11.1	16.6	0.0	
Hardness - Total	mg/L	216	208	230	130	181	209	
Dissolved Sulphate	mg/L	67	79	78	48	61	69	
TSS	mg/L	<1	<1	<1	35	3	<4	

Station Name		P4	P4	P4	P4	P4	P4	
Description		Pelly River d/s of Anvil Ck						
Smpl Date		21/01/2010	26/02/2010	30/03/2010	19/05/2010	03/08/2010	04/11/2010	
Sample Class		M	M	M	M	M	M	
eq Smpl #		P4_40199_M	P4_40235_M	P4_40267_M	P4_40317_M	P4_40393_M	P4_40486_M	CCME-Aquatic
Ag-T	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.1
Al-T	µg/L	4.4	2.9	9.2	271	34.4	24.3	*
As-T	µg/L	0.28	0.28	1.29	1.01	0.66	0.71	5
Cd-T	µg/L	0.053	0.042	0.053	0.168	0.105	0.08	*
Cr-T	µg/L	<0.1	<0.1	<0.1	0.6	0.3	0.1	1
Cu-T	µg/L	0.33	0.31	0.58	2.72	0.98	0.72	*
Fe-T	µg/L	18	6	23	621	91	92	300
Hg-T	µg/L						<0.01	0.026
Mo-T	µg/L	0.97	0.92	2.12	0.82	1.6	1.34	73
Ni-T	µg/L	0.77	0.41	0.64	4.74	1.96	2.39	*
Pb-T	µg/L	0.044	0.028	0.068	0.757	0.123	0.165	*
Se-T	µg/L	0.97	1.64	0.31	0.65	0.61	0.96	1
Tl-T	µg/L	0.003	<0.002	0.003	0.011	0.008	0.003	0.8
Zn-T	µg/L	4.3	2.1	2.1	14.2	5.5	4.3	30
CN-WAD	mg/L	<0.0005	<0.0005	<0.0005		<0.0005	0.0008	0.005
Total Ammonia	mg/L	0.012	<0.005	<0.005	0.028	<0.005	0.016	0.239
Nitrite	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.06
Nitrate	mg/L	0.07	0.1	0.03	0.11	<0.02	0.05	2.9
pH-F	pH units	3.4	8.1	8.03	8.07	8.23	8.14	6.5-9
Temp-F	C	1.4	0.6	0.6	10.5	15.1	-0.1	
Hardness - Total	mg/L	221	218	208	129	184	203	
Dissolved Sulphate	mg/L	63	80	30	54	47	59	
TSS	mg/L	2	<1	50	23	<1	<4	

Station Name		VR	VR	VR	VR	
		West fork of Vangorda Ck u/s of haul road				
Description		21/01/2010	24/02/2010	30/03/2010	03/11/2010	
Smpl Date						
Sample Class		M	M	M	M	
eq Smpl #		VR_40199_M	VR_40233_M	VR_40267_M	VR_40485_M	CCME-Aquatic
Ag-T	µg/L	<0.005	0.026	0.024	<0.005	0.1
Al-T	µg/L	116	1180	357	18.6	*
As-T	µg/L	0.49	2.25	0.95	0.18	5
Cd-T	µg/L	0.08	0.348	0.108	0.008	*
Cr-T	µg/L	0.6	0.7	0.3	<0.1	1
Cu-T	µg/L	1.78	7.06	1.74	0.45	*
Fe-T	µg/L	176	1310	438	18	300
Hg-T	µg/L			<0.01	0.026	
Mo-T	µg/L	0.16	0.08	0.14	0.14	73
Ni-T	µg/L	0.45	1.6	0.67	0.16	*
Pb-T	µg/L	2.04	12.5	2.6	0.083	*
Se-T	µg/L	0.07	0.09	0.09	<0.04	1
Tl-T	µg/L	0.005	0.033	0.012	0.002	0.8
Zn-T	µg/L	15.3	30.9	10.8	1.2	30
CN-WAD	mg/L	<0.0005	0.0006	<0.0005	0.0009	0.005
Total Ammonia	mg/L	0.022	0.124	<0.005	0.014	0.239
Nitrite	mg/L	<0.005	<0.005	<0.005	<0.005	0.06
Nitrate	mg/L	0.07	0.09	0.08	0.02	2.9
pH-F	pH units	5.49	8.4	7.84	7.30	6.5-9
Temp-F	C	-0.1	0	0	-0.1	
Hardness - Total	mg/L	41.5	44.8	44.4	34.8	
Dissolved Sulphate	mg/L	6.2	6.1	7.1	6.1	
TSS	mg/L	14	200	46	<4	

Station Name		VW3	
		West fork Vangorda Ck d/s AEX Ck	
Description			
Smpl Date		03/11/2010	
Sample Class		M	
eq Smpl #		VW3_40485_M	CCME-Aquatic
Ag-T	µg/L	<0.005	0.1
Al-T	µg/L	20.5	*
As-T	µg/L	0.78	5
Cd-T	µg/L	0.031	*
Cr-T	µg/L	<0.1	1
Cu-T	µg/L	0.45	*
Fe-T	µg/L	113	300
Hg-T	µg/L	<0.01	0.026
Mo-T	µg/L	0.22	73
Ni-T	µg/L	0.28	*
Pb-T	µg/L	0.384	*
Se-T	µg/L	0.12	1
Tl-T	µg/L	0.003	0.8
Zn-T	µg/L	14.9	30
CN-WAD	mg/L	0.0008	0.005
Total Ammonia	mg/L	<0.005	0.239
Nitrite	mg/L	<0.005	0.06
Nitrate	mg/L	0.16	2.9
pH-F	pH units	7.71	6.5-9
Temp-F	C	0.0	
Hardness - Total	mg/L	88.5	
Dissolved Sulphate	mg/L	28	
TSS	mg/L	<4	

Station Name		VG MAIN	
		Main fork Vangorda Ck u/s of west fork	
Description			
Smpl Date		04/11/2010	
Sample Class		M	
eq Smpl #		VGMAIN_40486_M	CCME-Aquatic
Ag-T	µg/L	<0.005	0.1
Al-T	µg/L	3.9	*
As-T	µg/L	0.41	5
Cd-T	µg/L	0.052	*
Cr-T	µg/L	0.4	1
Cu-T	µg/L	0.63	*
Fe-T	µg/L	29	300
Hg-T	µg/L	<0.01	0.026
Mo-T	µg/L	0.74	73
Ni-T	µg/L	1.63	*
Pb-T	µg/L	0.077	*
Se-T	µg/L	0.5	1
Tl-T	µg/L	0.007	0.8
Zn-T	µg/L	13	30
CN-WAD	mg/L	0.0008	0.005
Total Ammonia	mg/L	0.024	0.239
Nitrite	mg/L	<0.005	0.06
Nitrate	mg/L	0.42	2.9
pH-F	pH units	8.30	6.5-9
Temp-F	C	0.4	
Hardness - Total	mg/L	282	
Dissolved Sulphate	mg/L	130	
TSS	mg/L	<4	

Station Name		R5	
Description		Rose Ck d/s of Anvil Ck	
Smpl Date		04/11/2010	
Sample Class		M	
eq Smpl #		R5_40486_M	CCME-Aquatic
Ag-T	µg/L	<0.005	0.1
Al-T	µg/L	4.6	*
As-T	µg/L	0.27	5
Cd-T	µg/L	0.021	*
Cr-T	µg/L	0.1	1
Cu-T	µg/L	0.49	*
Fe-T	µg/L	86	300
Hg-T	µg/L	<0.01	0.026
Mo-T	µg/L	0.65	73
Ni-T	µg/L	1.02	*
Pb-T	µg/L	0.131	*
Se-T	µg/L	0.6	1
Tl-T	µg/L	0.006	0.8
Zn-T	µg/L	10.7	30
CN-WAD	mg/L	0.0008	0.005
Total Ammonia	mg/L	0.022	0.239
Nitrite	mg/L	<0.005	0.06
Nitrate	mg/L	0.15	2.9
pH-F	pH units	7.76	6.5-9
Temp-F	C	0.1	
Hardness - Total	mg/L	187	
Dissolved Sulphate	mg/L	66	
TSS	mg/L	<4	

Station Name		<b>GCULV</b>	
Description		South fork Rose Ck u/s of mine access road	
Smpl Date		<b>03/11/2010</b>	
Sample Class		<b>M</b>	
eq Smpl #		<b>GCULV_40485_M</b>	CCME-Aquatic
Ag-T	µg/L	<0.005	0.1
Al-T	µg/L	10.5	*
As-T	µg/L	0.24	5
Cd-T	µg/L	<0.005	*
Cr-T	µg/L	<0.1	1
Cu-T	µg/L	0.3	*
Fe-T	µg/L	70	300
Hg-T	µg/L	<0.01	0.026
Mo-T	µg/L	0.33	73
Ni-T	µg/L	0.14	*
Pb-T	µg/L	0.03	*
Se-T	µg/L	<0.04	1
Tl-T	µg/L	<0.002	0.8
Zn-T	µg/L	1	30
CN-WAD	mg/L	0.0008	0.005
Total Ammonia	mg/L	0.011	0.239
Nitrite	mg/L	<0.005	0.06
Nitrate	mg/L	0.04	2.9
pH-F	pH units	7.66	6.5-9
Temp-F	C	0.0	
Hardness - Total	mg/L	31.8	
Dissolved Sulphate	mg/L	7	
TSS	mg/L	<4	

Station Name		K8	
Description		Reservoir Ck u/s of mine access road	
Smpl Date		03/11/2010	
Sample Class		M	
eq Smpl #		K8_40485_M	CCME-Aquatic
Ag-T	µg/L	<0.005	0.1
Al-T	µg/L	5	*
As-T	µg/L	0.19	5
Cd-T	µg/L	0.006	*
Cr-T	µg/L	<0.1	1
Cu-T	µg/L	0.28	*
Fe-T	µg/L	6	300
Hg-T	µg/L	<0.01	0.026
Mo-T	µg/L	0.13	73
Ni-T	µg/L	0.21	*
Pb-T	µg/L	0.052	*
Se-T	µg/L	0.07	1
Tl-T	µg/L	<0.002	0.8
Zn-T	µg/L	0.6	30
CN-WAD	mg/L	0.0009	0.005
Total Ammonia	mg/L	0.041	0.239
Nitrite	mg/L	<0.005	0.06
Nitrate	mg/L	0.05	2.9
pH-F	pH units	7.91	6.5-9
Temp-F	C	0.1	
Hardness - Total	mg/L	56.6	
Dissolved Sulphate	mg/L	11	
TSS	mg/L	<4	

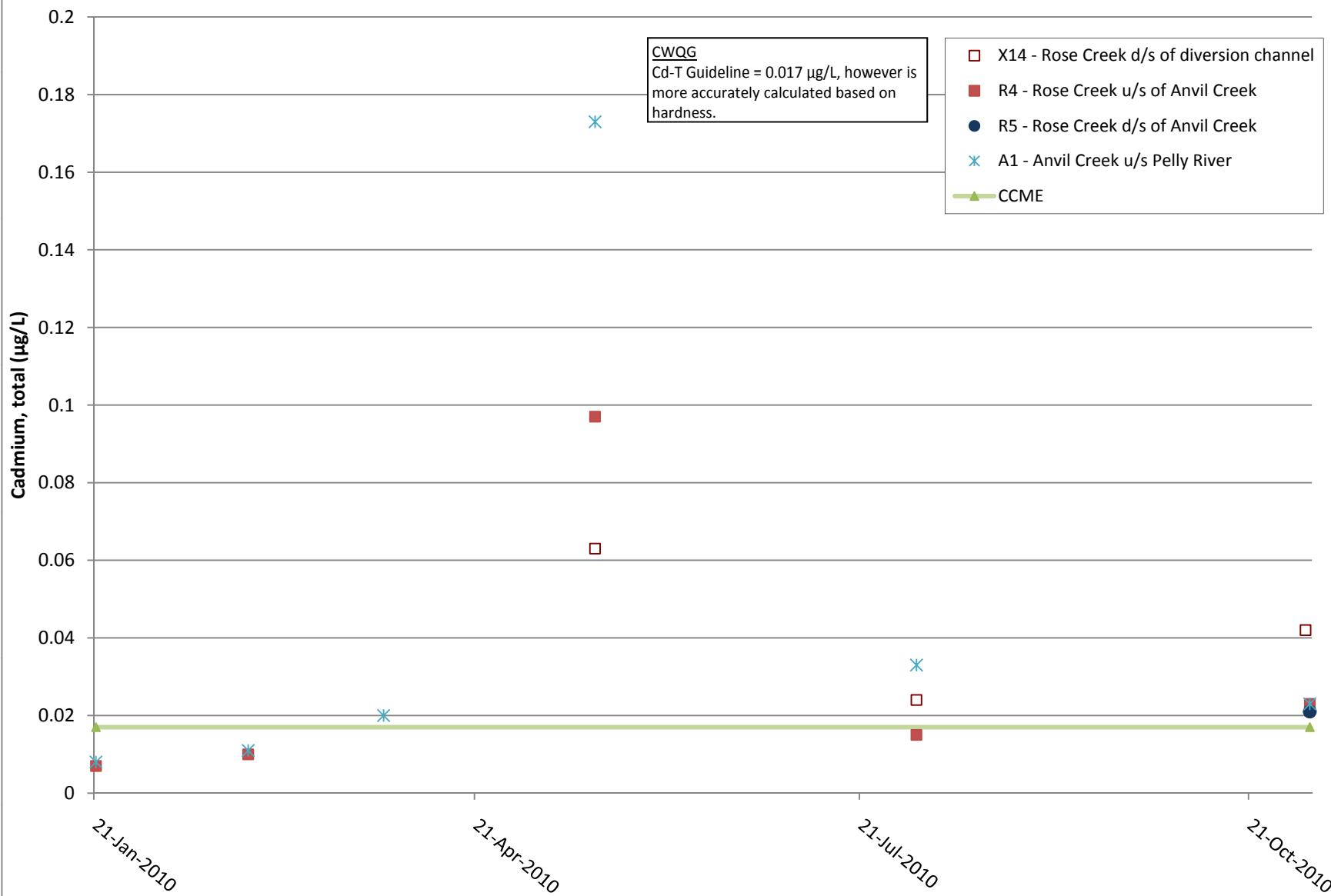
Station Name		NWID	
Description		<b>NW interceptor u/s of diversion point</b>	
Smpl Date		<b>03/11/2010</b>	
Sample Class		<b>M</b>	
eq Smpl #		<b>NWID_40485_M</b>	CCME-Aquatic
Ag-T	µg/L	<0.005	0.1
Al-T	µg/L	5.2	*
As-T	µg/L	0.18	5
Cd-T	µg/L	0.046	*
Cr-T	µg/L	<0.1	1
Cu-T	µg/L	0.62	*
Fe-T	µg/L	5	300
Hg-T	µg/L	<0.01	0.026
Mo-T	µg/L	0.25	73
Ni-T	µg/L	0.44	*
Pb-T	µg/L	0.137	*
Se-T	µg/L	0.24	1
Tl-T	µg/L	0.003	0.8
Zn-T	µg/L	10.3	30
CN-WAD	mg/L	0.0008	0.005
Total Ammonia	mg/L	0.013	0.239
Nitrite	mg/L	<0.005	0.06
Nitrate	mg/L	0.04	2.9
pH-F	pH units	7.92	6.5-9
Temp-F	C	0.0	
Hardness - Total	mg/L	166	
Dissolved Sulphate	mg/L	38	
TSS	mg/L	<4	

Station Name		USFR	
		<b>South fork Rose Ck</b>	
Description		<b>u/s of haul road</b>	
Smpl Date		<b>03/11/2010</b>	
Sample Class		<b>M</b>	
eq Smpl #		<b>USFR_40485_M</b>	CCME-Aquatic
Ag-T	µg/L	<0.005	0.1
Al-T	µg/L	13.4	*
As-T	µg/L	0.25	5
Cd-T	µg/L	<0.005	*
Cr-T	µg/L	<0.1	1
Cu-T	µg/L	0.31	*
Fe-T	µg/L	87	300
Hg-T	µg/L	<0.01	0.026
Mo-T	µg/L	0.3	73
Ni-T	µg/L	0.16	*
Pb-T	µg/L	0.032	*
Se-T	µg/L	<0.04	1
Tl-T	µg/L	<0.002	0.8
Zn-T	µg/L	0.3	30
CN-WAD	mg/L	0.001	0.005
Total Ammonia	mg/L	0.015	0.239
Nitrite	mg/L	<0.005	0.06
Nitrate	mg/L	0.04	2.9
pH-F	pH units	7.39	6.5-9
Temp-F	C	-0.1	
Hardness - Total	mg/L	30.8	
Dissolved Sulphate	mg/L	7.2	
TSS	mg/L	<4	

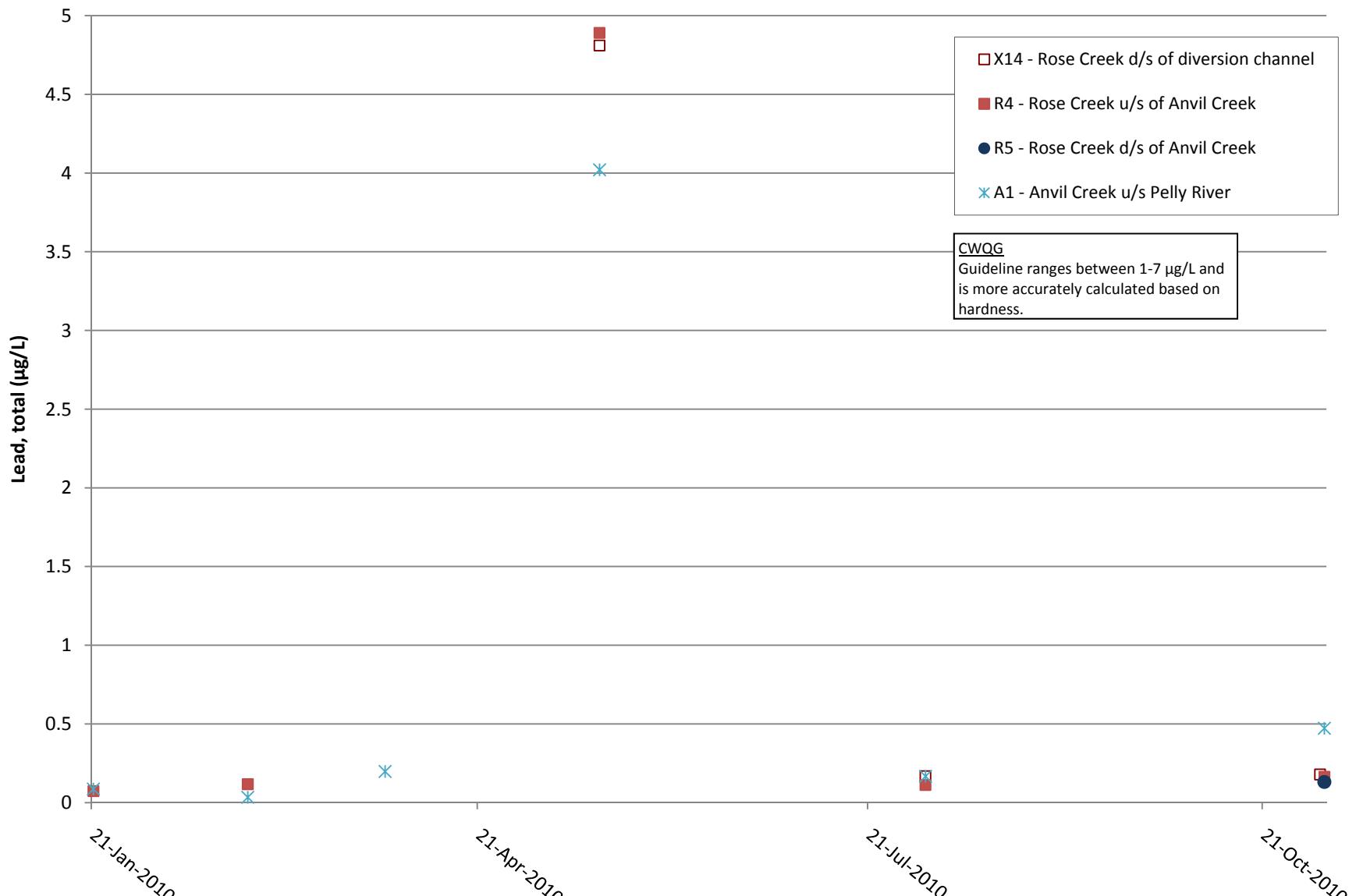
Station Name		V17A	
Description		Creek from Grum ore transfer pad	
Smpl Date		03/11/2010	
Sample Class		M	
eq Smpl #		V17A_40485_M	CCME-Aquatic
Ag-T	µg/L	<0.005	0.1
Al-T	µg/L	25.4	*
As-T	µg/L	0.89	5
Cd-T	µg/L	0.033	*
Cr-T	µg/L	<0.1	1
Cu-T	µg/L	1	*
Fe-T	µg/L	258	300
Hg-T	µg/L	<0.01	0.026
Mo-T	µg/L	0.08	73
Ni-T	µg/L	0.43	*
Pb-T	µg/L	0.891	*
Se-T	µg/L	<0.04	1
Tl-T	µg/L	0.004	0.8
Zn-T	µg/L	21.9	30
CN-WAD	mg/L	0.0008	0.005
Total Ammonia	mg/L	0.036	0.239
Nitrite	mg/L	<0.005	0.06
Nitrate	mg/L	0.29	2.9
pH-F	pH units	7.49	6.5-9
Temp-F	°C	-0.1	
Hardness - Total	mg/L	84.6	
Dissolved Sulphate	mg/L	38	
TSS	mg/L	<4	

Station Name		V20A	
Description		Dixon Ck u/s of mine influence	
Smpl Date		03/11/2010	
Sample Class		M	
eq Smpl #		V20A_40485_M	CCME-Aquatic
Ag-T	µg/L	<0.005	0.1
Al-T	µg/L	64.9	*
As-T	µg/L	0.65	5
Cd-T	µg/L	0.026	*
Cr-T	µg/L	0.3	1
Cu-T	µg/L	1.08	*
Fe-T	µg/L	387	300
Hg-T	µg/L	0.01	0.026
Mo-T	µg/L	0.52	73
Ni-T	µg/L	0.4	*
Pb-T	µg/L	0.865	*
Se-T	µg/L	2.43	1
Tl-T	µg/L	<0.002	0.8
Zn-T	µg/L	7	30
CN-WAD	mg/L	0.0009	0.005
Total Ammonia	mg/L	0.019	0.239
Nitrite	mg/L	<0.005	0.06
Nitrate	mg/L	0.08	2.9
pH-F	pH units	7.43	6.5-9
Temp-F	C	-0.1	
Hardness - Total	mg/L	307	
Dissolved Sulphate	mg/L	14	
TSS	mg/L	25	

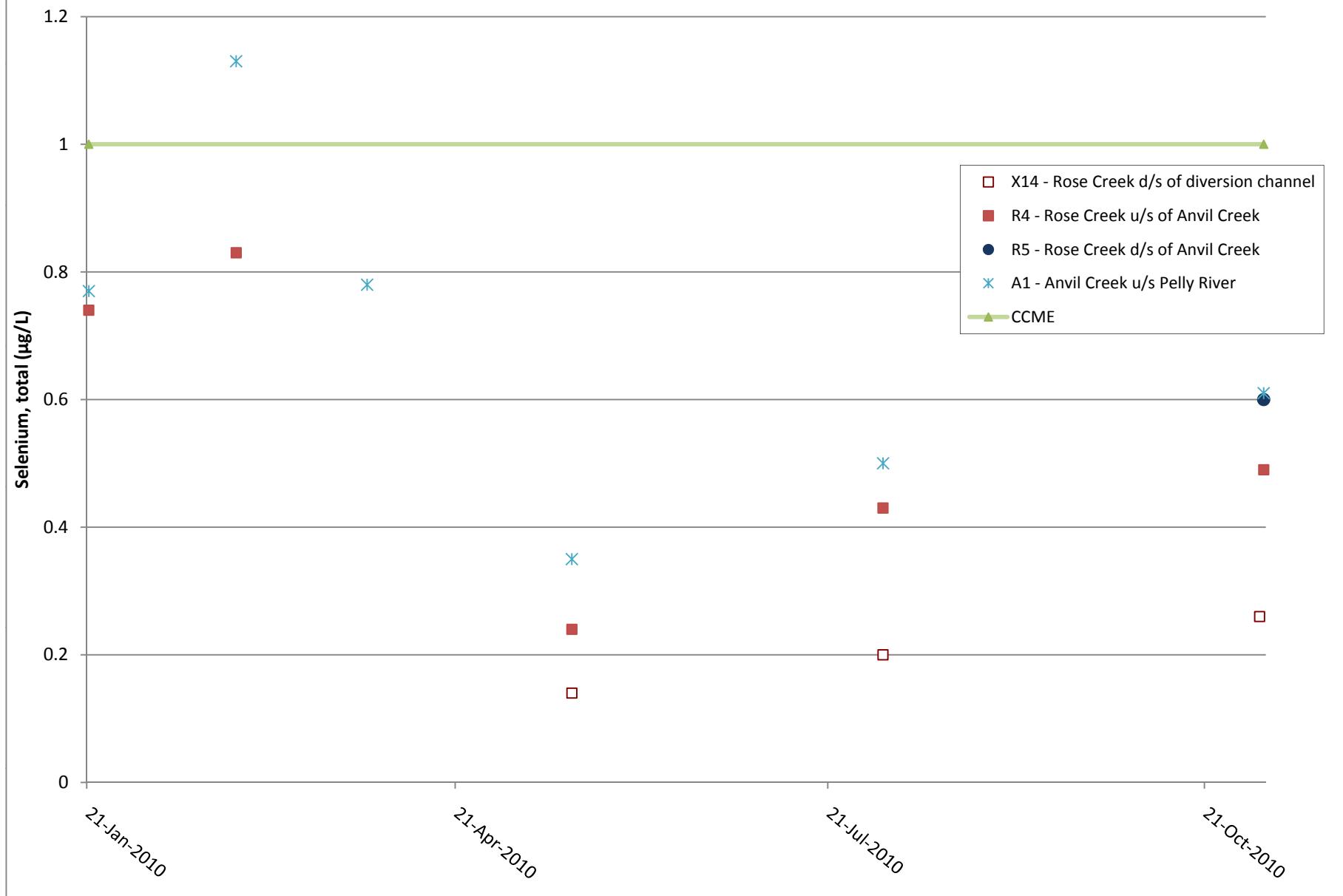
## Rose and Anvil Creeks Water Quality, Total Cadmium



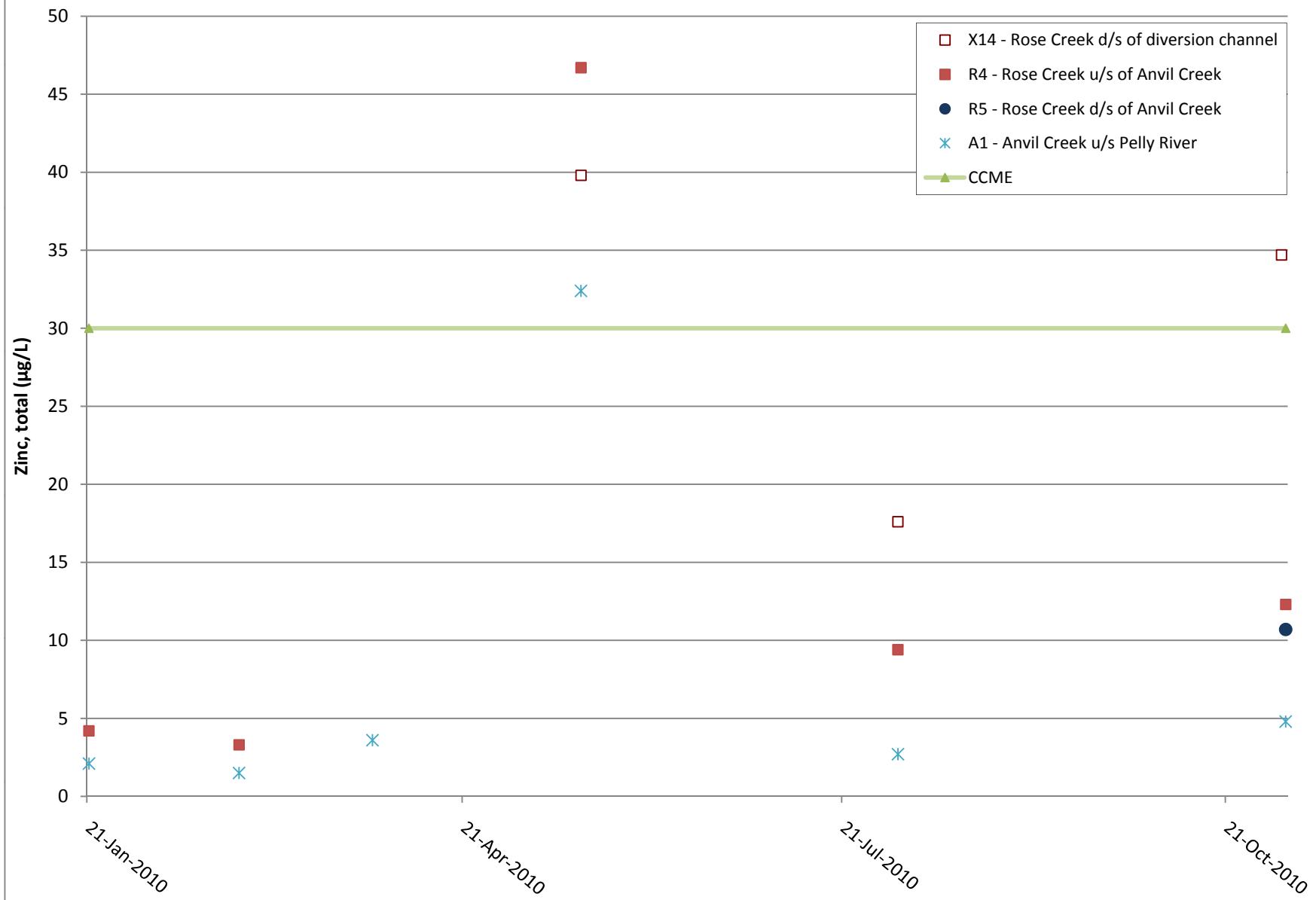
## Rose and Anvil Creeks Water Quality, Total Lead



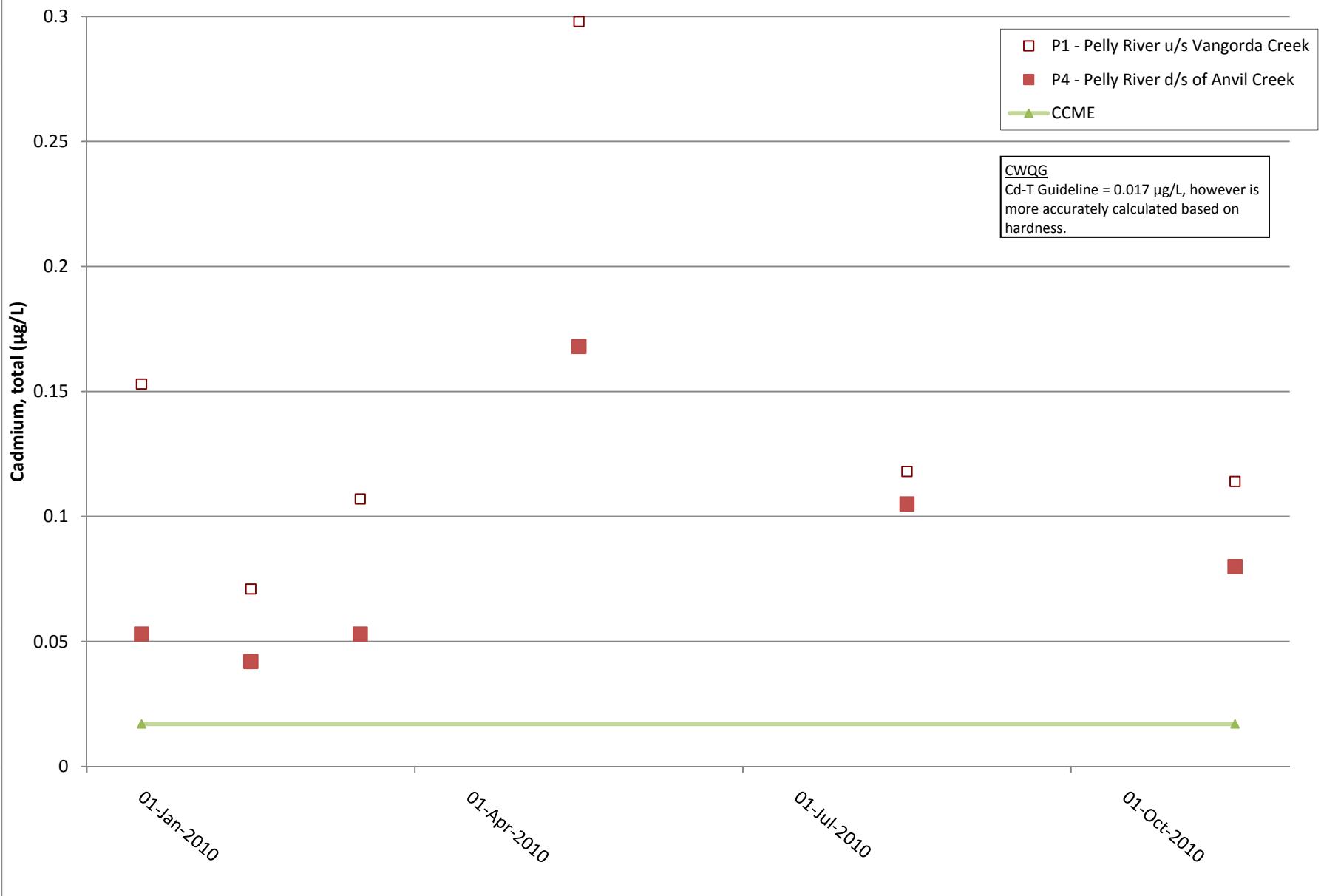
### Rose and Anvil Creeks Water Quality, Total Selenium



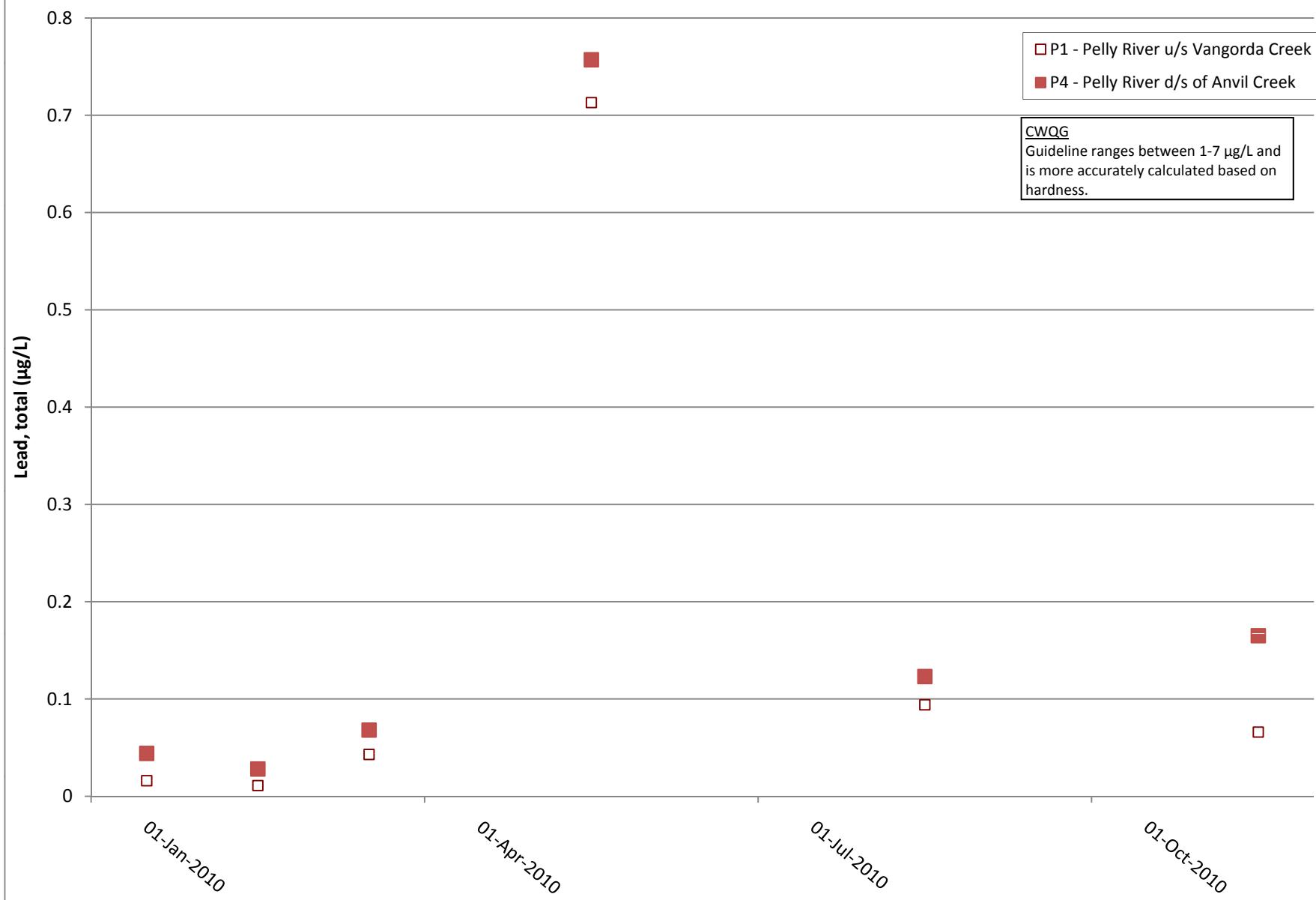
## Rose and Anvil Creeks Water Quality, Total Zinc

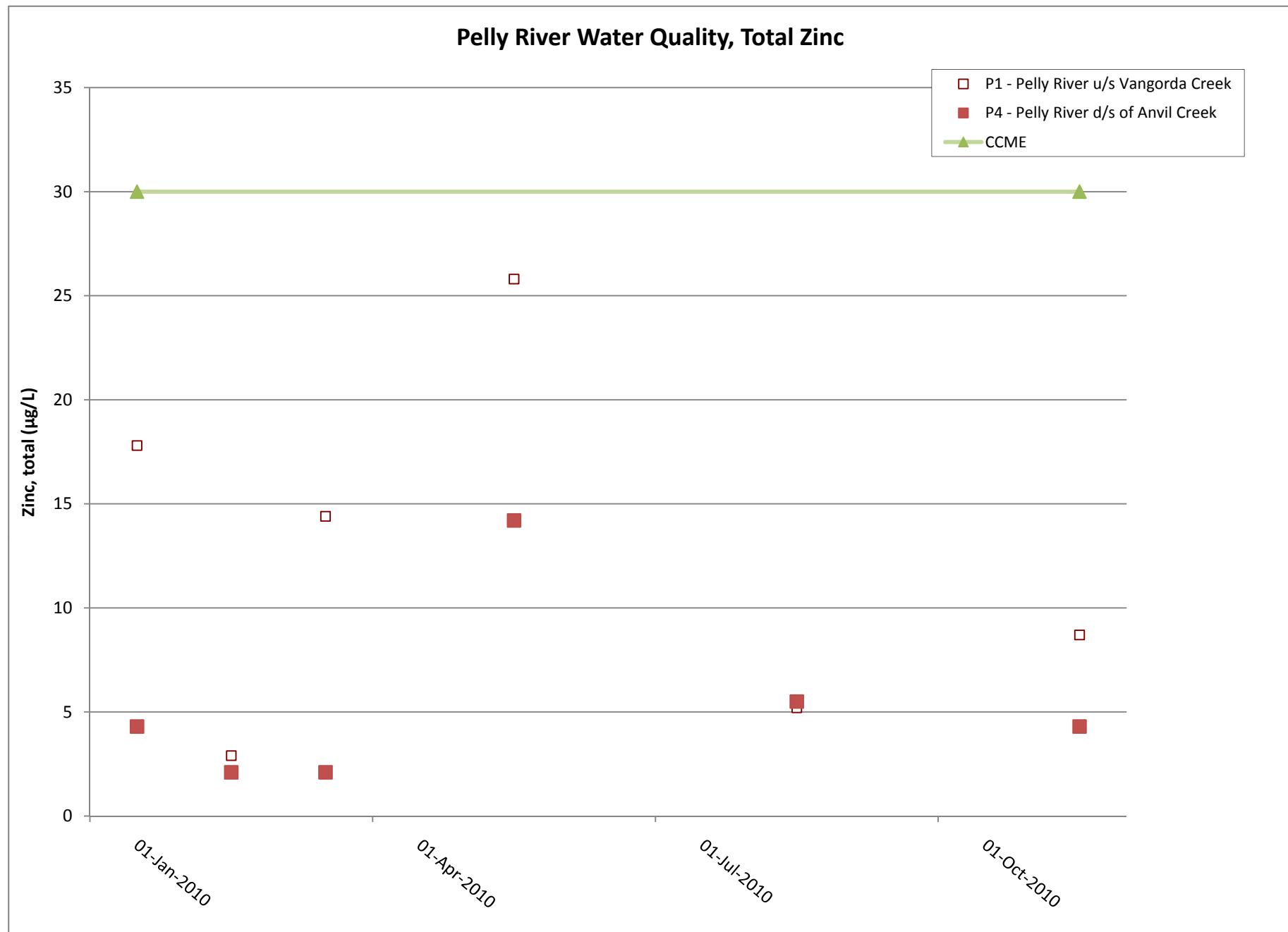


## Pelly River Water Quality, Total Cadmium



## Pelly River Water Quality, Total Lead







**Pelly River Aquatic Ecosystem  
Monitoring Program  
2010 Summary**

**Laboratory Results Statistical Analysis**



		Cd-T	Pb-T	Zn-T
		µg/L	µg/L	µg/L
CCME-Aquatic		*	*	30
Station Name	Smpl Date			
P1 - Pelly River u/s Vangorda Creek	21/01/2010	0.153	0.016	17.8
P1	26/02/2010	0.071	0.011	2.9
P1	30/03/2010	0.107	0.043	14.4
P1	19/05/2010	0.298	0.713	25.8
P1	03/08/2010	0.118	0.094	5.2
P1	04/11/2010	0.114	0.066	8.7
Average		0.143	0.157	12.5
Count		6	6	6
Minimum		0.071	0.011	2.9
Maximum		0.298	0.713	25.8
Geometric Mean		0.129	0.057	9.8
Sum		0.861	0.943	74.8
Count <DL		0	0	0
Standard Deviation		0.08	0.274	8.6
1st Quartile		0.109	0.023	6.1
Median		0.116	0.054	11.6
3rd Quartile		0.144	0.087	16.9
Count Over Standard		6	0	0
% Over Standard		100	0	0

\* indicates standard based on hardness

Red bold highlight indicates exceedance

		Cd-T	Pb-T	Zn-T
		µg/L	µg/L	µg/L
CCME-Aquatic		*	*	30
Station Name	Smpl Date			
P4 - Pelly River d/s of Anvil Creek	21/01/2010	0.053	0.044	4.3
P4	26/02/2010	0.042	0.028	2.1
P4	30/03/2010	0.053	0.068	2.1
P4	19/05/2010	<b>0.168</b>	0.757	14.2
P4	03/08/2010	<b>0.105</b>	0.123	5.5
P4	04/11/2010	<b>0.08</b>	0.165	4.3
Average		0.084	0.198	5.4
Count		6	6	6
Minimum		0.042	0.028	2.1
Maximum		0.168	0.757	14.2
Geometric Mean		0.074	0.104	4.3
Sum		0.501	1.185	32.5
Count <DL		0	0	0
Standard Deviation		0.047	0.279	4.5
1st Quartile		0.053	0.05	2.6
Median		0.067	0.096	4.3
3rd Quartile		0.099	0.154	5.2
Count Over Standard		3	0	0
% Over Standard		50	0	0

\* indicates standard based on hardness

Red bold highlight indicates exceedance

		Cd-T	Pb-T	Se-T	Zn-T
Station Name	Smpl Date	µg/L	µg/L	µg/L	µg/L
CCME-Aquatic		*	*	1	30
X14	19/05/2010	0.063	4.81	0.14	39.8
X14	03/08/2010	0.024	0.168	0.2	17.6
X14	03/11/2010	0.042	0.179	0.26	34.7
R4	21/01/2010	0.007	0.073	0.74	4.2
R4	26/02/2010	0.01	0.117	0.83	3.3
R4	19/05/2010	0.097	4.89	0.24	46.7
R4	03/08/2010	0.015	0.112	0.43	9.4
R4	04/11/2010	0.023	0.164	0.49	12.3
R5	04/11/2010	0.021	0.131	0.6	10.7
A1 (Anvil Creek)	21/01/2010	0.008	0.086	0.77	2.1
A1 (Anvil Creek)	26/02/2010	0.011	0.034	1.13	1.5
A1 (Anvil Creek)	30/03/2010	0.02	0.198	0.78	3.6
A1 (Anvil Creek)	19/05/2010	0.173	4.02	0.35	32.4
A1 (Anvil Creek)	03/08/2010	0.033	0.167	0.5	2.7
A1 (Anvil Creek)	04/11/2010	0.023	0.472	0.61	4.8
Average		0.038	1.041	0.54	15.1
Count		15	15	15	15
Minimum		0.007	0.034	0.14	1.5
Maximum		0.173	4.89	1.13	46.7
Geometric Mean		0.025	0.268	0.46	8.5
Sum		0.57	15.621	8.07	225.8
Count <DL		0	0	0	0
Standard Deviation		0.044	1.84	0.28	15.5
1st Quartile		0.013	0.115	0.3	3.5
Median		0.023	0.167	0.5	9.4
3rd Quartile		0.038	0.335	0.76	25
Count Over Standard		3	3	1	4
% Over Standard		20	20	6.7	26.7

\* indicates standard based on hardness      Red bold highlight indicates exceedance

	Smpl Date	X14 - Rose Creek d/s of diversion channel	R4 - Rose Creek u/s of Anvil Creek	R5 - Rose Creek d/s of Anvil Creek	A1 - Anvil Creek u/s Pelly River	CCME
Cd-T	21/01/2010		0.007		0.008	0.017
	26/02/2010		0.01		0.011	
	30/03/2010				0.02	
	19/05/2010	<b>0.063</b>	<b>0.097</b>		<b>0.173</b>	
	8/3/2010 10:30	0.024	0.015		0.033	
	11/3/2010 14:10	0.042				
	11/4/2010 13:50		0.023	0.021	0.023	0.017
Average		0.043	0.03	0.021	0.045	
Count		3	5	1	6	
Minimum		0.024	0.007	0.021	0.008	
Maximum		0.063	0.097	0.021	0.173	
Geometric Mean		0.04	0.019	0.021	0.025	
Sum		0.129	0.152	0.021	0.268	
Count <DL		0	0	0	0	
Standard Deviation		0.02	0.038	0	0.064	
1st Quartile		0.033	0.01	0.021	0.013	
Median		0.042	0.015	0.021	0.021	
3rd Quartile		0.053	0.023	0.021	0.03	
Count Over Standard		1	1	0	1	
% Over Standard		33.3	20	0	16.7	

\* indicates standard based on hardness

Red bold highlight indicates exceedance

	Smpl Date	X14 - Rose Creek d/s of diversion channel	R4 - Rose Creek u/s of Anvil Creek	R5 - Rose Creek d/s of Anvil Creek	A1 - Anvil Creek u/s Pelly River
Pb-T	21/01/2010		0.073		0.086
	26/02/2010		0.117		0.034
	30/03/2010				0.198
	19/05/2010	<b>4.81</b>	<b>4.89</b>		<b>4.02</b>
	8/3/2010 10:30	0.168	0.112		0.167
	11/3/2010 14:10	0.179			
	11/4/2010 13:50		0.164	0.131	0.472
Average		1.719	1.071	0.131	0.829
Count		3	5	1	6
Minimum		0.168	0.073	0.131	0.034
Maximum		4.81	4.89	0.131	4.02
Geometric Mean		0.525	0.238	0.131	0.238
Sum		5.157	5.356	0.131	4.977
Count <DL		0	0	0	0
Standard Deviation		2.677	2.135	0	1.57
1st Quartile		0.173	0.112	0.131	0.106
Median		0.179	0.117	0.131	0.182
3rd Quartile		2.494	0.164	0.131	0.403
Count Over Standard		1	1	0	1
% Over Standard		33.3	20	0	16.7

\* indicates standard based on hardness

Red bold highlight indicates exceedance

	Smpl Date	X14 - Rose Creek d/s of diversion channel	R4 - Rose Creek u/s of Anvil Creek	R5 - Rose Creek d/s of Anvil Creek	A1 - Anvil Creek u/s Pelly River	CCME
Se-T	21/01/2010		0.74		0.77	1
	26/02/2010		0.83		<b>1.13</b>	
	30/03/2010				0.78	
	19/05/2010	0.14	0.24		0.35	
	8/3/2010 10:30	0.2	0.43		0.5	
	11/3/2010 14:10	0.26				
	11/4/2010 13:50		0.49	0.6	0.61	1
Average		0.2	0.55	0.6	0.69	
Count		3	5	1	6	
Minimum		0.14	0.24	0.6	0.35	
Maximum		0.26	0.83	0.6	1.13	
Geometric Mean		0.19	0.5	0.6	0.65	
Sum		0.6	2.73	0.6	4.14	
Count <DL		0	0	0	0	
Standard Deviation		0.06	0.24	0	0.27	
1st Quartile		0.17	0.43	0.6	0.53	
Median		0.2	0.49	0.6	0.69	
3rd Quartile		0.23	0.74	0.6	0.78	
Count Over Standard		0	0	0	1	
% Over Standard		0	0	0	16.7	

\* indicates standard based on hardness

Red bold highlight indicates exceedance

	Smpl Date	X14 - Rose Creek d/s of diversion channel	R4 - Rose Creek u/s of Anvil Creek	R5 - Rose Creek d/s of Anvil Creek	A1 - Anvil Creek u/s Pelly River	CCME
Zn-T	21/01/2010		4.2		2.1	30
	26/02/2010		3.3		1.5	
	30/03/2010				3.6	
	19/05/2010	<b>39.8</b>	<b>46.7</b>		<b>32.4</b>	
	8/3/2010 10:30	17.6	9.4		2.7	
	11/3/2010 14:10	<b>34.7</b>				
	11/4/2010 13:50		12.3	10.7	4.8	30
Average		30.7	15.2	10.7	7.9	
Count		3	5	1	6	
Minimum		17.6	3.3	10.7	1.5	
Maximum		39.8	46.7	10.7	32.4	
Geometric Mean		29	9.4	10.7	4.1	
Sum		92.1	75.9	10.7	47.1	
Count <DL		0	0	0	0	
Standard Deviation		11.6	18	0	12.1	
1st Quartile		26.2	4.2	10.7	2.2	
Median		34.7	9.4	10.7	3.2	
3rd Quartile		37.2	12.3	10.7	4.5	
Count Over Standard		2	1	0	1	
% Over Standard		66.7	20	0	16.7	

\* indicates standard based on hardness

Red bold highlight indicates exceedance