SUMMARY REPORT FOR:

PELLY RIVER AQUATIC ECOSYSTEM

MONITORING PLAN, AUGUST 2012

For

Yukon

Energy Mines and Resources

Erik Pit
Assessment and Abandoned Mines

Submitted by

Laberge
ENVIRONMENTAL SERVICES

September 28TH, 2012

1.0 BACKGROUND

In early August of 2012, a request was made of Laberge Environmental Services (LES) to provide a proposal to Assessment and Abandoned Mines (AAM) to conduct the Pelly River Aquatics Water Monitoring Program at the Faro Mine Complex (FMC) for the months of August and October.

The provided lists indicate that 22 sites are to be sampled under the monitoring program for a suite of analytical and in-situ parameters. Specifically the parameters are as follows:

In-situ

- pH
- conductivity
- temperature

Analytical

- alkalinity
- chloride
- ammonia
- nitrate
- dissolved and total organic carbon
- conductivity
- pH
- sulphate
- total suspended solids
- total dissolved solids
- turbidity
- hardness
- low level total and dissolved metals (30 element suite)

LES signed a contract on August 17th, 2012 to complete the receiving water monitoring programs.

2.0 STUDY AREA

The study area encompasses reference sites, impacted sites, and receiving water sites and has generally been divided into three main areas: the Vangorda watershed, the Faro mine site and Rose and Anvil watersheds, and the Pelly River. The table below lists the sites and their descriptions. The sites are listed by area from upstream to downstream in all of the tables of this report, to aid in interpretation of the data.

TABLE 1		LIST OF SITES AND DESCRIPTIONS
Vangorda Watershed	VR	West Fork of Vangorda upstream of Haul Road.
	V17A	AEX Cr upstream of Haul Road
	VW3	West Fork of Vangorda downstream of AEX Creek
	VW1	West Fork of Vangorda downstream of landslide but u/s of VW2
	VW2	Tributary to West Vangorda Cr which drains Grum west lobe, upstream of Mine Access Road
	V20A	Dixon Cr upstream of mine workings, tributary to Vangorda Cr.
	VGMAIN	Vangorda Cr downstream of mine but upstream of West Vangorda Creek.
	V8	Vangorda Cr downstream all inputs but u/s Pelly River.
Faro Sites and Rose & Anvil Watersheds	USFR	South Fork Rose Creek upstream Haul Road
	GCULV	South Fork Rose Creek downstream Haul Road and u/s Mine Access Road
	K8	Reservoir Creek upstream Mine Access Road
	R1	Rose Creek upstream pumphouse pond and tailings system
	FC	Faro Cr upstream diversion
	W10	Upper Guardhouse Creek upstream NW Dump
	NWID	Northwest interceptor ditch upstream of diversion point
	X14	Rose Creek downstream of all mining inputs
	R4	Rose Creek upstream confluence with Anvil Creek
	R6	Anvil Creek upstream confluence with Rose Creek
	R5	Anvil Cr downstream of Rose Cr after full mixing.
	A1	Anvil Creek near confluence with Pelly River
Pelly	P1	Pelly River upstream Vangorda Cr
	P4	Pelly River downstream Anvil Creek

The only site where samples were not collected in August was R5, Anvil Creek downstream of the confluence with Rose Creek. Although a concentrated effort was made to locate a suitable landing spot, none could be found. A possible future spot was identified approximately one kilometre downstream of the confluence at Easting 587432 and Northing 692232 (NAD 27, Zone 8V). This site would require intensive brushing before a helicopter could safely land here (see Photo #20 in Appendix A). A gravel island was located in the nearby vicinity, however it was too vegetated to allow the setting down of a helicopter. Sampling further downstream would be unrepresentative of the water quality of R5 due to the input from other tributaries.

3.0 METHODS

Surface water quality sampling followed AAM's water sampling protocols, a copy of which was provided to LES. Maxxam Analytics Ltd supplied LES with the necessary sample kits prior to the field trip of August 28th to 30th, 2012. Each sample bottle was rinsed three times with the sample waters and then filled and preserved as specified by the laboratory's protocols. Samples that required filtering (dissolved organic carbon and dissolved metals), were filtered in the field prior to preservation. Samples were kept cool then shipped as soon as possible to the Maxxam laboratory in Burnaby, BC.

In-situ measurements of water temperature, conductivity and pH were taken at each site. The in-situ meters were calibrated daily. Photographs were also taken to document the current conditions at each location.

As measures of quality assurance and quality control (QA/QC), two blind duplicates were collected during the survey. In addition, one field blank, which was labelled BD-3, was submitted. Although a request had been made of the lab, no travel blank was supplied with the sample kits. The lab ran their own QA/QC and their report is included with their analytical report (see Appendix C).

Six of the sampling sites are remote and can be accessed by helicopter only. AAM provided Trans North with a separate contract to conduct the aerial portion of the program.

Following recommendations made in the May 2012 summary report, hand-brushing of a helicopter pad at the confluence of Rose and Anvil Creeks was an added component of the current contract (see Photo #19). Only minor grooming will now be required to maintain an open and safe landing area here for future thrice annual monitoring programs.

4.0 RESULTS

Water levels were considerably lower in August than in May throughout most of the study area.

4.1 Photographs

Photographs of each site can be found in Appendix A.

4.2 In-Situ Results

The in-situ data is presented in Table 2, Appendix B. The table also includes a comment section where the locations of the collection of the duplicate samples are indicated and any observations are recorded.

While flying down Anvil Creek from R5 to A1, it was noted that Anvil Creek became very turbid downstream of a major tributary draining from the north (see Photo #22). There were very heavy rains on August 28th and this could have caused slope failures upstream on this tributary. Anvil Creek was still somewhat turbid at the sampling location A1.

4.3 Analytical Data

Anions, Nutrients and Physical Data

Table 3 in Appendix B, presents the compiled anion, nutrient and physical attributes of the samples

collected in the study area.

Total and Dissolved Metals
The dissolved metals data is presented in Table 4, and the total metals data is included in Table 5, both in Appendix B.

5.0 DISCUSSION AND RECOMMENDATIONS

It is beyond our scope of work to provide any discussion or interpretation of the results for the August 2012 water quality collected under this monitoring program. This letter report includes all the specified deliverables in the provided scope of work.

However, I would like to make note of something. During the May sampling event, upper Guard House Creek downstream of the interceptor ditch was inadvertently sampled instead of NWID. The chemistry is very different. These two sites are located on the same body of water and are only 80 m apart. The proper site for NWID was sampled on August 28th, 2012. Therefore the May data reported for NWID does not represent the water quality at NWID and should be discarded.

I would also like to recommend that a site be cleared and established to allow future sampling of site R5. I feel it is important to have a monitoring site downstream of the confluence of Rose and Anvil Creeks to monitor any impacts to Anvil Creek from Rose Creek. The potential site indicated in this report is relatively close to the confluence (approximately one kilometre) but would ensure that full mixing of both creeks has occurred. Tributaries entering from both the left and right sides of Anvil Creek prohibit the establishment of a site further downstream. It has been predicted by various experts that the quality of Rose Creek will deteriorate over time as drainage gradually makes its way from the waste rock dumps, tailings, etc to the Rose Creek valley. Monitoring R5 will ensure that any impacts could potentially be documented well before reaching the Pelly River. And further to that, I would also like to take this opportunity to recommend that a biomonitoring program be implemented in the near future. The assemblage of benthic invertebrates can shed a lot of light onto the water quality conditions and general health of a stream in addition to occasional grab samples.

Respectively submitted,

Bonnie Burns
Laberge Environmental Services

APPENDIX A

PHOTOGRAPHS, AUGUST 2012

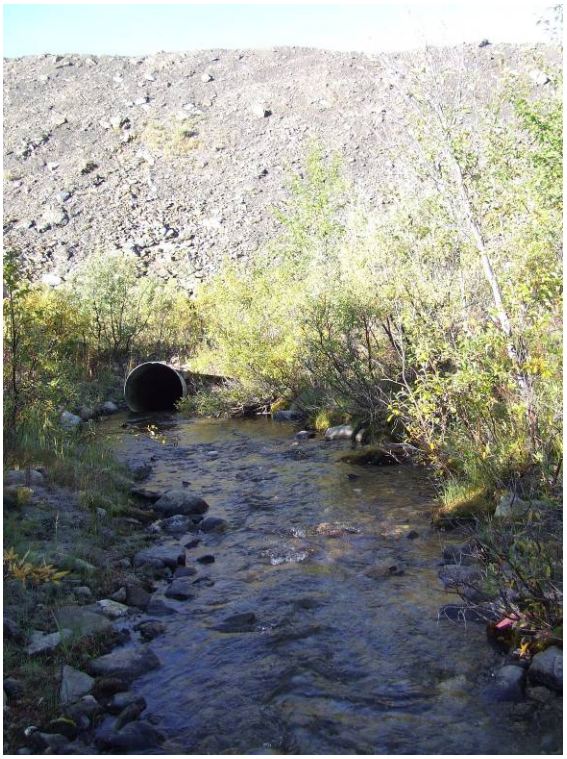

Photo #1; Looking d/s from VR.

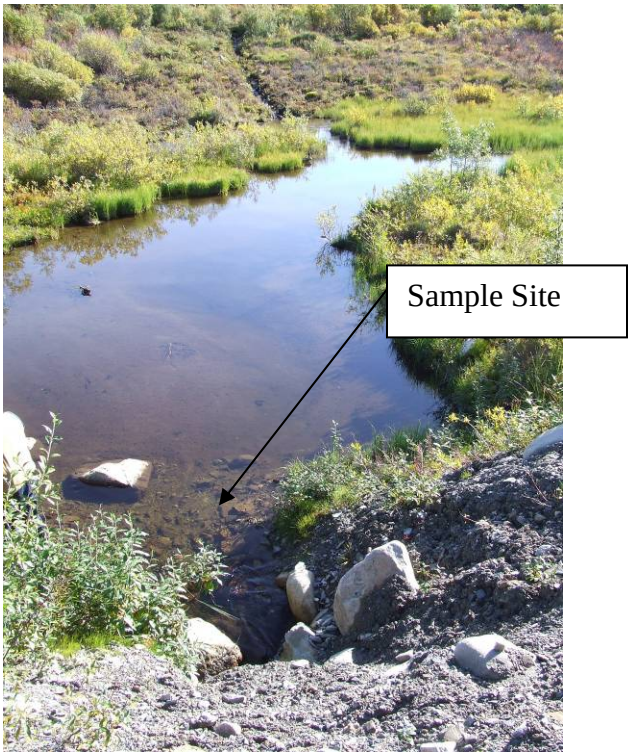

Photo #2; V17A.

Photo #3, Looking u/s from VW3.

Photo #4; Looking d/s from VW1.

Photo #5; VW2 looking u/s from site.

Photo #6; VGMAIN looking u/s.

Photo #7; V20A – an actual area of flow then went to ground.

Photo #8; V20A – no flow across trail, only pooling.

Photo #9; V8 looking upstream.

Photo #10; USFR looking upstream.

Photo #11; GCULV looking upstream.

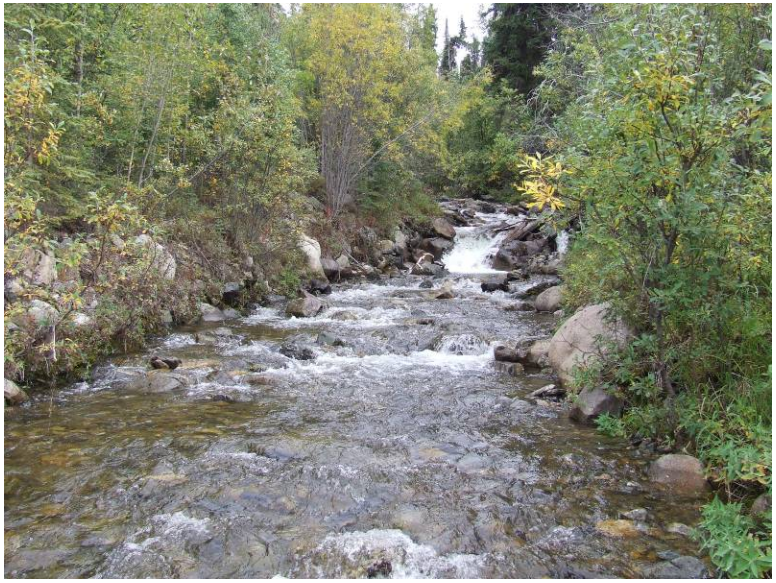

Photo #12; K8 looking upstream.

Photo #13; R1 looking downstream from sample site.

Photo #14; FC looking downstream.

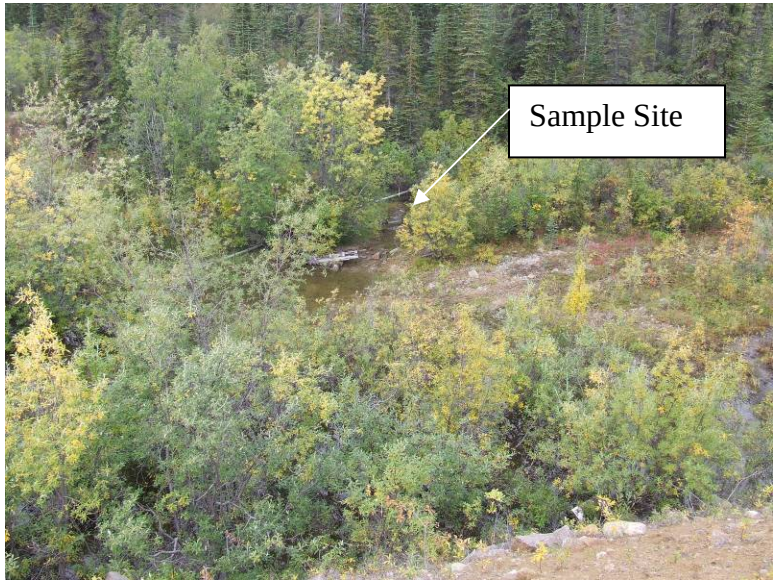

Photo #15; W-10 from berm.

Photo #16; NWID looking downstream.

Photo #17; X-14 at the gauge looking downstream.

Photo #18; R-4 looking upstream.

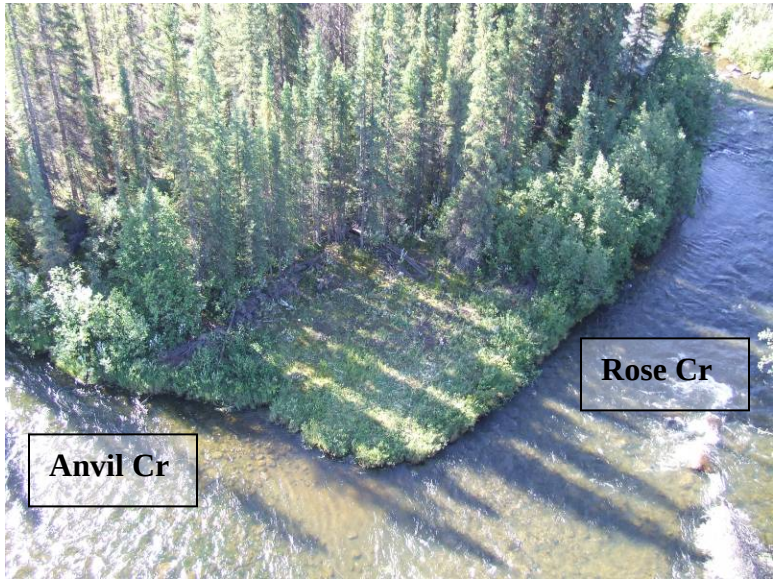

Photo #19; the cleared area for safe landing of the helicopter.

Photo #20; a potential landing spot for R5 which requires considerable brushing.

Photo #21; R-6 looking upstream.

Photo #22; Anvil Creek became very turbid part way to the Pelly River.

Photo #23; A-1 looking upstream.

Photo #24; P-1 looking downstream.

Photo #25; P-4 looking upstream.

APPENDIX B

WATER QUALITY TABLES
AUGUST 2012

TABLE 2 **INSITU DATA FOR THE PELLY RIVER AQUATIC MONITORING PROGRAM AT AND NEAR THE FMC, AUGUST 2012**

Site #	Site Description	Date Sampled 2012	Time Sampled	NAD 27 Zone 8V		Water Temp ^{o}C	pH	Conductivity uS/cm	Comments
				Easting	Northing				
VR	West Fork of Vangorda u/s of Haul Road.	August 30	9:15	590801	6906722	3.7	7.62	61	Blind duplicate collected here labelled BD-2.
V17A	AEX Cr u/s of Haul Road	August 30	10:15	591380	6906066	5.4	7.60	147	water clear.
VW3	West Fork of Vangorda d/s of AEX Creek	August 29	15:25	590508	6906424	6.4	7.85	143	Clear water.
VW1	West Fork of Vangorda d/s of landslide but u/s of VW2	August 29	16:00	587050	6904547	5.9	8.20	326	Water clear.
VW2	Tributary to West Vangorda Cr which drains Grum west lobe	August 29	16:30	587407	6903555	3.0	8.39	656	Water very clear.
V20A	Dixon Cr u/s of mine workings, trib to Vangorda Cr.	August 30	11:20	595269	6902053	5.1	7.75	425	Walked in, clear water, pooled upstream road and sampled here as no flow over road to willows now.
VGMAIN	Vangorda Cr d/s mine but u/s West Vangorda Creek.	August 29	14:35	585794	6901321	6.4	8.20	339	Clear water.
V8	Vangorda Cr d/s all inputs but u/s Pelly River.	August 29	17:00	584951	6900458	6.7	8.34	374	Fresh bear scat on trail so sampled just u/s of bridge rather than at gauge.
USFR	South Fork Rose Creek u/s Haul Road	August 30	9:45	590363	6907200	5.5	7.65	42	Clear water.
GCULV	South Fork Rose Creek d/s Haul Road and u/s Mine Access Road	August 28	18:00	589930	6907206	7.9	7.81	47	High velocity, clear water.
K8	Reservoir Creek u/s Mine Access Road	August 28	17:45	586530	6910570	6.4	8.00	69	Water is clear.
R1	Rose Creek u/s pumphouse pond and tailings system	August 30	13:00	583733	6912159	5.3	8.01	164	Clear water. Sunny and calm.
FC	Faro Cr u/s diversion	August 28	16:10	585473	6916553	6.8	7.57	22	Clear water, gauge height: 0.285m.
W10	Upper Guardhouse Creek u/s NW Dump	August 28	15:05	583400	6915392	5.5	8.18	123	Quite clear.
NWID	Northwest interceptor ditch u/s of diversion point	August 28	14:30	582508	6914540	5.4	8.37	250	Clear water.
X14	Rose Creek d/s of all mining inputs	August 28	16:50	579299	6914803	7.9	7.61	493	Water is high especially considering that water levels are low at the other streams on site, gauge height: 0.800m.
R4	Rose Creek u/s confluence with Anvil Creek	August 29	10:30	567655	6921163	4.7	8.06	363	Clear water. Duplicate (BD-1) collected here.
R6	Anvil Creek u/s confluence with Rose Creek	August 29	9:45	568197	6921432	4.1	8.27	267	Landing site was brushed out. Clear water.
R5	Anvil Cr d/s of Rose Cr after full mixing.	August 29		567432	6922324				No suitable landing location.
A1	Anvil Creek near confluence with Pelly River	August 29	11:45	545855	6924017	6.1	8.18	289	Water is turbid, started getting turbid just d/s of first trib after confluence with Rose Cr.
P1	Pelly River u/s Vangorda Cr	August 29	13:10	585384	6898429	10.9	8.28	345	Water is clear. Heard but didn't see sandhill cranes.
P4	Pelly River d/s Anvil Creek	August 29	12:30	543435	6925496	10.1	8.33	330	Water is pretty clear.

TABLE 3 **ANIONS, NUTRIENTS AND PHYSICAL PORPERTIES FOR THE PELLY RIVER AQUATIC MONITORING PROGRAM, FMC, AUGUST 2012**

		Misc. Inorganics							Anions		Nutrients				Physical Properties				
	Sampling Date	Dissolved Organic Carbon (C)	Alkalinity (Total as CaCO3)	Total Organic Carbon (C)	Alkalinity (PP as CaCO3)	Bicarbonate (HCO3)	Carbonate (CO3)	Hydroxide (OH)	Dissolved Sulphate (SO4)	Dissolved Chloride (Cl)	Ammonia (N)	Nitrate plus Nitrite (N)	Nitrate (N)	Nitrite (N)	Conductivity	pH	Total Suspended Solids	Total Dissolved Solids	Turbidity
UNITS		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	pH Units	mg/L	mg/L	NTU
VR	8/30/2012 9:15	4.03	26.1	3.95	<0.50	31.8	<0.50	<0.50	3.75	<0.50	<0.0050	<0.0020	<0.0020	<0.0020	63.4	7.65	<1.0	40	0.14
V17A	8/30/2012 10:15	4.30	39.5	4.31	<0.50	48.2	<0.50	<0.50	27.1	<0.50	0.0097	0.120	0.120	<0.0020	145	7.80	1.1	88	0.50
VW3	8/29/2012 15:25	4.61	49.3	4.40	<0.50	60.2	<0.50	<0.50	22.8	<0.50	0.019	0.0675 (2)	0.0675	<0.0020 (2)	147	7.91	<1.0	100	0.30
VW1	8/29/2012 16:00	5.67	133	6.45	0.83	160	1.00	<0.50	33.4	1.2	0.017	0.0343 (2)	0.0343	<0.0020 (2)	324	8.31	7.3	216	1.80
VW2	8/29/2012 16:30	2.46	292	2.43	9.31	333	11.2	<0.50	84.9	<0.50	0.021	<0.0020 (2)	<0.0020	<0.0020 (2)	649	8.51	2.1	424	0.16
V20A	8/30/2012 11:20	4.76	229	4.64	5.68	265	6.82	<0.50	7.08	<0.50	0.0093	0.0133	0.0133	<0.0020	417	8.48	1.7	230	0.19
VGMAIN	8/29/2012 14:35	3.65	86.0	3.70	<0.50	105	<0.50	<0.50	80.9	<0.50	0.013	0.426 (2)	0.426	<0.0020 (2)	339	8.05	2.3	228	0.43
V8	8/29/2012 17:00	5.25	118	5.45	<0.50	144	<0.50	<0.50	72.7	0.58	0.012	0.0630 (2)	0.0630	<0.0020 (2)	372	8.26	7.9	256	2.43
USFR	8/30/2012 9:45	3.22	21.4	3.22	<0.50	26.1	<0.50	<0.50	4.30	<0.50	0.015	<0.0020	<0.0020	<0.0020	51.0	7.54	<1.0	34	0.46
GCULV	8/28/2012 18:00	4.51	21.6	4.20	<0.50	26.4	<0.50	<0.50	3.35	<0.50	0.0094	<0.0020 (2)	<0.0020	<0.0020 (2)	54.0	7.56	3.7	48	0.43 (2)
K8	8/28/2012 17:45	3.80	29.6	3.58	<0.50	36.1	<0.50	<0.50	5.20	<0.50	0.0081	0.0233 (2)	0.0233	<0.0020 (2)	75.1	7.72	<1.0	48	0.24 (2)
R1	8/30/2012 13:00	3.66	75.2	3.65	<0.50	91.8	<0.50	<0.50	9.95	<0.50	0.0052	0.0223	0.0223	<0.0020	167	8.06	<1.0	100	0.44
FC	8/28/2012 16:10	4.03	13.4	4.51	<0.50	16.3	<0.50	<0.50	<0.50	<0.50	0.033	<0.0020 (2)	<0.0020	<0.0020 (2)	33.3	7.40	8.0	26	0.83 (2)
W10	8/28/2012 15:05	4.15	61.4	4.05	<0.50	74.9	<0.50	<0.50	1.76	<0.50	0.013	<0.0020 (2)	<0.0020	<0.0020 (2)	125	8.00	<1.0	88	0.41 (2)
NW1D	8/28/2012 14:30	3.51	113	3.24	<0.50	137	<0.50	<0.50	20.3	<0.50	0.0083	0.0057 (2)	0.0057	<0.0020 (2)	245	8.24	2.6	160	0.13 (2)
X14	8/28/2012 16:50	3.39	102	3.52	<0.50	125	<0.50	<0.50	134	<0.50	0.070	0.0276 (2)	0.0276	<0.0020 (2)	481	8.14	1.4	344	2.12 (2)
R4	8/29/2012 10:30	3.64	92.3	3.95	<0.50	113	<0.50	<0.50	86.7	<0.50	0.018	0.0702 (2)	0.0702	<0.0020 (2)	358	8.11	1.8	242	0.81 (2)
R6	8/29/2012 9:45	4.28	121	3.61	<0.50	148	<0.50	<0.50	18.3	<0.50	0.0079	0.0446 (2)	0.0446	<0.0020 (2)	266	8.28	1.3	154	0.39 (2)
A1	8/29/2012 12:30	4.95	98.0	5.06	<0.50	120	<0.50	<0.50	39.9	<0.50	0.016	0.0548 (2)	0.0498	0.0050 (2)	288	8.14	26.5	180	15.3 (2)
P1	8/29/2012 13:10	4.29	113	4.27	<0.50	138	<0.50	<0.50	57.8	<0.50	0.0058	0.0040 (2)	0.0040	<0.0020 (2)	338	8.27	5.9	222	1.84 (2)
P4	8/29/2012 12:30	4.43	111	4.38	<0.50	136	<0.50	<0.50	52.6	<0.50	<0.0050	0.0144 (2)	0.0144	<0.0020 (2)	325	8.25	7.3	214	5.02 (2)
BD-1	8/29/2012	3.41	92.0	3.67	<0.50	112	<0.50	<0.50	86.3	<0.50	0.021	0.0712 (2)	0.0712	<0.0020 (2)	360	8.14	2.0	242	0.70 (2)
BD-2	8/30/2012	3.26	26.3	3.82	<0.50	32.1	<0.50	<0.50	3.72	<0.50	0.0082	<0.0020	<0.0020	<0.0020	63.2	7.66	<1.0	42	0.13 (2)
BD-3		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0 (1)	18 (1)	0.0094	<0.0020	<0.0020	<0.0020	1.7	5.91	<1.0	<10	<0.10

RDL = Reportable Detection Limit
EDL = Estimated Detection Limit
(1) RDL raised due to sample matrix interference.
(2) Sample analysed past recommended hold time.

TABLE 4 — **LOW LEVEL DISSOLVED METALS, FMC, AUGUST 2012**

	UNITS	VR	V17A	VW3	VW1	VW2	V20A	VGMAIN	V8	USFR	GCULV	K8	R1	FC	W10	NW1D	X14	R4	R6	A1	P1	P4	BD-1	BD-2	BD-3
Sampling Date & Time		8/30/2012 9:15	8/30/2012 10:15	8/29/2012 15:25	8/29/2012 16:00	8/29/2012 16:30	8/30/2012 11:20	8/29/2012 14:35	8/29/2012 17:00	8/30/2012 9:45	8/28/2012 18:00	8/28/2012 17:45	8/30/2012 13:00	8/28/2012 16:10	8/28/2012 15:05	8/28/2012 14:30	8/28/2012 16:50	8/29/2012 10:30	8/29/2012 9:45	8/29/2012 12:30	8/29/2012 13:10	8/29/2012 12:30	8/29/2012	8/30/2012	**Field Blank**
Dissolved Hardness (CaCO3)	mg/L	35.1	72.6	73.6	173	379	233	170	193	22.4	24.9	34.5	84.8	13.8	63.1	128	238	179	145	143	177	166	173	28.8	<0.50
Dissolved Aluminum (Al)	ug/L	22.3	33.1	24.4	9.28	1.27	1.97	10.2	10.8	15.8	19.6	13.7	7.56	41.7	11.7	3.96	8.71	8.39	12.0	17.4	17.8	14.8	8.89	21.9	0.63
Dissolved Antimony (Sb)	ug/L	0.023	0.029	0.038	0.074	0.187	0.043	0.084	0.102	0.036	0.031	0.023	0.073	0.032	0.029	0.049	0.080	0.098	0.119	0.118	0.189	0.168	0.084	0.027	<0.020
Dissolved Arsenic (As)	ug/L	0.176	0.951	0.558	0.725	0.339	0.524	0.309	0.455	0.217	0.286	0.174	0.468	0.123	0.164	0.192	0.445	0.298	0.366	0.606	0.525	0.517	0.342	0.170	<0.020
Dissolved Barium (Ba)	ug/L	25.7	21.6	27.4	57.2	131	97.8	33.9	49.1	22.3	24.7	20.3	43.8	16.6	18.9	45.2	47.0	60.8	65.9	61.6	74.0	69.9	58.4	25.9	0.030
Dissolved Beryllium (Be)	ug/L	0.018	0.024	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010	<0.010	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.015	<0.010
Dissolved Bismuth (Bi)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Dissolved Cadmium (Cd)	ug/L	0.0080	0.0110	0.0260	0.0180	0.0840	<0.0050	0.0460	0.0390	<0.0050	<0.0050	<0.0050	0.0150	0.0160	0.0160	0.0510	0.0220	0.0230	0.0110	0.0220	0.102	0.0580	0.0310	0.0070	<0.0050
Dissolved Chromium (Cr)	ug/L	0.13	0.26	0.20	0.12	<0.10	<0.10	<0.10	0.15	0.16	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	0.16	0.12	0.21	<0.10	<0.10	0.16	<0.10	0.16
Dissolved Cobalt (Co)	ug/L	0.0140	0.0530	0.0240	0.0600	0.0100	0.0180	0.0280	0.0560	0.0210	0.0230	0.0180	0.0380	0.0260	0.0150	0.0100	6.08	1.45	0.0320	0.347	0.0270	0.136	1.45	0.0210	<0.0050
Dissolved Copper (Cu)	ug/L	0.610	0.724	0.728	0.891	0.538	0.594 (1)	0.881	1.13	0.454	0.764 (1)	0.535	0.681	0.882	1.11	1.10	2.02 (1)	0.779	0.688	1.23	0.856	0.982	0.890	0.625	0.086
Dissolved Iron (Fe)	ug/L	18.9 (2)	123	65.3	107	2.7	19.8	34.6	47.5	73.9	79.5	20.6	114	38.6	9.6	4.9	671	171	96.9	78.1	33.7	42.8	163	16.8	2.6
Dissolved Lead (Pb)	ug/L	0.0180	0.0480	0.0630	0.0380	0.0130	0.0140	0.0830	0.0590	0.0320	0.0580	0.0660	0.142	0.448	0.151	0.270 (1)	0.124	0.0790	0.0150	0.149	0.0270	0.0270	0.0810	0.0230	0.0100
Dissolved Lithium (Li)	ug/L	0.50	0.94	0.90	3.30	3.40	4.01	3.34	3.74	0.70	1.07	1.82	3.53	1.94	1.42	4.98	5.16	4.53	1.96	2.99	3.25	3.13	3.92	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	0.563	15.2	4.66	28.8	0.087	2.34	5.52	11.4	4.88	5.87	0.354	17.3	1.88	0.216	0.284	3140	879	12.0	285	5.94	99.1	964	0.839	<0.050
Dissolved Molybdenum (Mo)	ug/L	0.102	0.064	0.105	0.438	2.29	0.239	0.400	0.686	0.193	0.199	0.073	0.477	0.056	0.193	0.304	0.459	0.531	1.01	0.748	1.12	1.09	0.544	0.079	<0.050
Dissolved Nickel (Ni)	ug/L	0.177	0.496	0.397	0.668	0.783	0.299 (1)	0.738	1.12	0.236	0.285	0.276	0.438	0.413	0.344	0.456	4.85	2.29	0.473	1.36	3.60	2.46	2.34	0.174	0.129
Dissolved Selenium (Se)	ug/L	<0.040	0.053	0.123	0.216	4.39	0.792	0.218	0.707 (1)	<0.040	0.040	<0.040	0.293	<0.040	0.064	0.103	0.322	0.353	0.605	0.566	1.22	0.858	0.416	0.049	<0.040
Dissolved Silicon (Si)	ug/L	6840 (3)	5920	5760	5400	4730	5340	4670	4890	3640	4160	4990	5520	7140	7130	6970	5010	4900	4870	4930	3310	3670	4560	4720	<100
Dissolved Silver (Ag)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0130	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Strontium (Sr)	ug/L	44.7	79.9	86.7	196	337	301	167	194	44.2	44.9	65.6	101	24.5	66.7	155	232	178	109	138	184	180	184	47.1	<0.050
Dissolved Thallium (Tl)	ug/L	0.0030	0.0040	0.0030	0.0020	0.0020	<0.0020	0.0210	0.0170	<0.0020	<0.0020	0.0020	0.0020	0.0020	0.0020	0.0030	0.0260	0.0180	<0.0020	0.0060	0.0030	0.0050	0.0200	0.0020	<0.0020
Dissolved Tin (Sn)	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.26	<0.20	<0.20	0.21	<0.20	<0.20	0.23	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Titanium (Ti)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Uranium (U)	ug/L	0.300	0.937	1.01	2.03	6.10	1.34	2.40	2.67	0.354	0.396	0.695	0.949	0.145	0.162	0.638	1.48	1.12	1.48	1.36	1.66	1.49	1.04	0.302	<0.0020
Dissolved Vanadium (V)	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.22	0.26	<0.20	<0.20	0.47	0.38	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.20	<0.20	<0.20
Dissolved Zinc (Zn)	ug/L	0.52	32.2	20.7	7.28	2.68	0.45	10.1	6.66	0.33	1.09	0.84	5.70	1.94	1.09	12.6	29.4	13.9	0.44	3.24	5.07	2.35	14.8	0.69	0.22
Dissolved Zirconium (Zr)	ug/L	0.11	0.16	0.12	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.12	<0.10
Dissolved Calcium (Ca)	mg/L	11.3 (1)	19.7	20.8	44.2	94.3	61.4	43.6	47.9	7.12	7.84	11.3	25.2	4.11	20.8	41.8	69.3	52.4	40.4	41.0	45.6	43.9	50.1	8.85	0.053
Dissolved Magnesium (Mg)	mg/L	1.64	5.66	5.23	15.2	34.9	19.3	14.9	17.9	1.13	1.30	1.54	5.29	0.858	2.69	5.69	15.7	11.7	10.6	9.76	15.3	13.8	11.6	1.63	<0.050
Dissolved Potassium (K)	mg/L	0.314	0.316	0.368	0.760	0.978	0.973	0.665	0.780	0.248	0.253	0.347	0.597	0.147	0.537	1.48	1.35	1.22	1.11	1.23	0.719	0.879	1.11	0.322	<0.050
Dissolved Sodium (Na)	mg/L	1.53	1.82	1.73	3.08	2.43	2.69	2.25	2.63	1.42	1.47	1.74	1.98	1.85	2.03	2.77	4.54	3.24	1.79	2.41	1.76	2.16	3.20	1.59	<0.050
Dissolved Sulphur (S)	mg/L	<10	12	<10	15	32	<10	31	29	<10	<10	<10	<10	<10	<10	<10	55	35	<10	19	24	20	31	<10	<10

RDL = Reportable Detection Limit
EDL = Estimated Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.
(2) Duplicate RPD above control limit - (10% of analytes failure allowed).
(3) Duplicate RPD above control limit - (10% of analytes failure allowed).
Dissolved greater than total. Reanalysis yields similar results.
(4) Matrix Spike outside acceptance criteria (10% of analytes failure allowed).

TABLE 5 **LOW LEVEL TOTAL METALS, FMC, AUGUST 2012**

	UNITS	VR	V17A	VW3	VW1	VW2	V20A	VGMAIN	V8	USFR	GCULV	K8	R1	FC	W10	NW1D	X14	R4	R6	A1	P1	P4	BD-1	BD-2	BD-3
Sampling Date & Time		8/30/2012 9:15	8/30/2012 10:15	8/29/2012 15:25	8/29/2012 16:00	8/29/2012 16:30	8/30/2012 11:20	8/29/2012 14:35	8/29/2012 17:00	8/30/2012 9:45	8/28/2012 18:00	8/28/2012 17:45	8/30/2012 13:00	8/28/2012 16:10	8/28/2012 15:05	8/28/2012 14:30	8/28/2012 16:50	8/29/2012 10:30	8/29/2012 9:45	8/29/2012 12:30	8/29/2012 13:10	8/29/2012 12:30	8/29/2012	8/30/2012	**Field Blank**
Total Hardness(CaCO3)	mg/L	28.6	69.1	69.2	169	382	231	167	190	22.6	23.5	34.4	84.0	13.6	63.4	123	241	176	141	146	178	170	180	29.6	<0.50
Total Aluminum (Al)	ug/L	26.3	46.9	33.9	69.5	7.47	2.97	14.7	67.5	26.2	52.8	19.8	14.2	69.2	31.8	6.76	15.6	22.6	28.9	259	60.4	119	22.7	26.0	<0.20
Total Antimony (Sb)	ug/L	0.027	0.031	0.036	0.077	0.170	0.054	0.076	0.098	0.035	0.034	0.025	0.074	0.026	0.027	0.047	0.070	0.090	0.119	0.143	0.198	0.166	0.086	0.024	<0.020
Total Arsenic (As)	ug/L	0.204	1.03	0.642	0.817	0.304	0.524	0.373	0.549	0.222	0.347	0.200	0.524	0.103	0.137	0.178	0.453	0.316	0.499	0.886	0.548	0.664	0.359	0.188	<0.020
Total Barium (Ba)	ug/L	27.6	20.2	28.4	60.5	130	102	36.1	50.1	23.3	26.7	20.1	46.2	16.9	19.2	49.2	48.3	60.8	68.9	79.9	80.0	77.1	60.7	26.5	<0.020
Total Beryllium (Be)	ug/L	0.020	0.016	0.016	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.016	0.010	<0.010	0.019	<0.010	<0.010	<0.010	<0.010	<0.010	0.021	<0.010	0.012	<0.010	0.017	<0.010
Total Bismuth (Bi)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Total Cadmium (Cd)	ug/L	0.0100	0.0160	0.0310	0.0220	0.0890	<0.0050	0.0400	0.0450	<0.0050	0.0110	0.0060	0.0120	0.0090	0.0240	0.0550	0.0270	0.0320	0.0150	0.0680	0.148	0.0880	0.0320	0.0100	<0.0050
Total Chromium (Cr)	ug/L	<0.10	<0.10	<0.10	0.25	0.12	<0.10	<0.10	0.20	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.12	0.50	<0.10	0.29	0.14	<0.10	<0.10
Total Cobalt (Co)	ug/L	0.0170	0.0490	0.0310	0.128	0.0120	0.0170	0.0410	0.145	0.0220	0.0800	0.0190	0.0570	0.0460	0.0240	0.0140	5.88	1.58	0.0560	0.651	0.100	0.263	1.56	0.0190	<0.0050
Total Copper (Cu)	ug/L	0.684	0.910	0.705	1.03	0.574	0.338	0.953	1.37	0.530	0.482	0.498	0.589	1.86	1.10	1.30	0.550	0.847	0.736	1.99	0.995	1.47	1.26	0.729	<0.050
Total Iron (Fe)	ug/L	21.7	160	90.5	230	22.5	36.1	55.6	197	119	212	35.0	156	77.2	35.8	8.7	826	283	144	631	153	271	274	28.0	<1.0
Total Lead (Pb)	ug/L	0.0510	0.180	0.212	0.271	0.0500	0.0950	0.210	0.411	0.0570	0.117	0.119	0.305	0.700	0.259	0.151	0.259	0.227	0.0330	0.720	0.124	0.259	0.246	0.0420	0.0060
Total Lithium (Li)	ug/L	0.58	0.88	0.88	3.48	3.50	4.09	2.99	3.64	0.73	0.95	1.53	3.33	1.81	1.35	5.32	5.24	4.20	1.94	3.57	3.19	3.66	4.52	<0.50	<0.50
Total Manganese (Mn)	ug/L	0.924	14.3	5.87	34.0	0.431	5.46	8.81	20.0	9.25	33.4	0.863	19.5	2.32	0.941	0.411	3010	961	14.5	310	13.7	113	1050	1.24	<0.050
Total Molybdenum (Mo)	ug/L	0.309	0.078	0.065	0.421	2.11	0.237	0.423	0.631	0.184	0.188	<0.050	0.404	<0.050	0.185	0.290	0.440	0.471	0.993	0.605	1.05	0.981	0.535	0.092	<0.050
Total Nickel (Ni)	ug/L	0.196 (2)	0.405	0.407	0.830	0.807	0.223	0.685	1.41	0.901	0.303	0.243	0.480	0.467	0.373	0.428	4.71	2.34	0.579	2.43	3.62	2.88	2.46	0.300	<0.020
Total Selenium (Se)	ug/L	0.083	<0.040	0.075	0.279	4.74	0.684	0.282	0.435	0.047	0.082	<0.040	0.243	0.062	0.083	0.105	0.298	0.516	0.606	0.467	1.04	0.867	0.338	0.046	<0.040
Total Silicon (Si)	ug/L	5090	5910	5310	5370	4670	5260	4400	4860	3520	3900	4980	5140	7050	7180	6790	5180	4750	4670	5390	3340	4080	4880	5020	<100
Total Silver (Ag)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	<0.0050	0.0050	<0.0050	<0.0050	<0.0050
Total Strontium (Sr)	ug/L	45.5	78.5	90.7	200	341	301	166	192	42.2	44.2	64.6	104	25.0	67.7	161	231	180	112	136	191	182	188	48.1	<0.050
Total Thallium (Tl)	ug/L	0.0020	0.0030	0.0030	0.0040	0.0020	<0.0020	0.0220	0.0180	0.0020	0.0020	0.0020	0.0020	<0.0020	<0.0020	0.0040	0.0270	0.0190	<0.0020	0.0160	0.0040	0.0080	0.0220	0.0030	<0.0020
Total Tin (Sn)	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.23	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Total Titanium (Ti)	ug/L	<0.50	0.70	<0.50	1.88	<0.50	<0.50	<0.50	1.23	<0.50	2.03	0.60	0.81	1.19	0.86	<0.50	1.50	0.65	1.53	9.50	1.82	3.89	<0.50	<0.50	<0.50
Total Uranium (U)	ug/L	0.317	0.934	1.08	2.05	6.00	1.33	2.39	2.67	0.352	0.503	0.695	0.933	0.149	0.153	0.639	1.46	1.17	1.50	1.39	1.65	1.50	1.07	0.312	<0.0020
Total Vanadium (V)	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.84	<0.20	0.56	<0.20	<0.20	<0.20
Total Zinc (Zn)	ug/L	0.74	32.5	21.6	8.84	2.92	0.94	10.9	9.66	0.41	1.15	0.85	5.95	1.96	1.57	13.7	29.1	15.7	0.47	8.86	7.86	6.31	16.9	0.60	<0.10 (4)
Total Zirconium (Zr)	ug/L	0.12	0.17	0.14	0.13	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.25	0.11	0.10	<0.10	0.12	<0.10
Total Calcium (Ca)	mg/L	8.71	19.1	19.5	43.5	95.7	61.8	42.0	47.6	7.22	7.31	11.3	25.1	4.02	21.0	40.8	70.9	51.6	38.9	42.5	46.6	45.2	51.8	9.09	<0.050
Total Magnesium (Mg)	mg/L	1.66	5.17	4.96	14.7	34.8	18.7	15.1	17.4	1.10	1.27	1.51	5.18	0.864	2.67	5.25	15.6	11.5	10.5	9.73	15.0	13.9	12.2	1.69	<0.050
Total Potassium (K)	mg/L	0.339	0.315	0.371	0.783	1.03	0.989	0.667	0.788	0.260	0.257	0.376	0.611	0.156	0.536	1.44	1.31	1.23	1.08	1.30	0.742	0.922	1.18	0.332	<0.050
Total Sodium (Na)	mg/L	1.51	1.72	1.67	3.08	2.46	2.72	2.22	2.46	1.41	1.45	1.77	2.01	1.80	1.92	2.44	4.40	3.13	1.73	2.40	1.78	2.13	3.23	1.62	<0.050
Total Sulphur (S)	mg/L	<10	11	<10	17	33	<10	32	30	<10	<10	<10	<10	<10	<10	<10	56	35	<10	19	24	21	34	<10	<10

RDL = Reportable Detection Limit
EDL = Estimated Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.
(2) Duplicate RPD above control limit - (10% of analytes failure allowed).
(3) Duplicate RPD above control limit - (10% of analytes failure allowed).
Dissolved greater than tc Dissolved greater than total. Reanalysis yields similar results.
(4) Matrix Spike outside acceptance criteria (10% of analytes failure allowed).

APPENDIX C

ANALYTICAL REPORT FROM MAXXAM
AUGUST 2012

Your Project #: B12-090-DL PELLY R. ECOSYSTEM
Your C.O.C. #: 32486701, 32486702, 32486703

Attention: Bonnie Burns
LABERGE ENVIRONMENTAL SERVICES
WHITEHORSE
405 Ogilvie Street
PO Box 21072
Whitehorse, YT
CANADA Y1A 6P7

Report Date: 2012/09/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B278117
Received: 2012/08/31, 14:15

Sample Matrix: Water
Samples Received: 24

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Water	23	2012/09/04	2012/09/05	BBY6SOP-00026	SM2320B
Alkalinity - Water	1	2012/09/07	2012/09/07	BBY6SOP-00026	SM2320B
Chloride by Automated Colourimetry	23	N/A	2012/09/04	BBY6SOP-00011	SM-4500-Cl-
Chloride by Automated Colourimetry	1	N/A	2012/09/06	BBY6SOP-00011	SM-4500-Cl-
Carbon (DOC)	23	N/A	2012/09/07	BBY6SOP-00003	SM-5310C
Carbon (DOC)	1	N/A	2012/09/10	BBY6SOP-00003	SM-5310C
Conductance - water	23	N/A	2012/09/05	BBY6SOP-00026	SM-2510B
Conductance - water	1	N/A	2012/09/07	BBY6SOP-00026	SM-2510B
Hardness Total (calculated as CaCO3)	1	N/A	2012/09/06	BBY WI-00033	Calculated Parameter
Hardness Total (calculated as CaCO3)	3	N/A	2012/09/08	BBY WI-00033	Calculated Parameter
Hardness Total (calculated as CaCO3)	20	N/A	2012/09/10	BBY WI-00033	Calculated Parameter
Hardness (calculated as CaCO3)	1	N/A	2012/09/08	BBY WI-00033	Calculated Parameter
Hardness (calculated as CaCO3)	23	N/A	2012/09/10	BBY WI-00033	Calculated Parameter
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2012/09/08	BBY7SOP-00002	EPA 6020A
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	23	N/A	2012/09/10	BBY7SOP-00002	EPA 6020A
Elements by ICPMS Low Level (dissolved)	20	N/A	2012/09/07	BBY7SOP-00002	EPA 6020A
Elements by ICPMS Low Level (dissolved)	1	N/A	2012/09/08	BBY7SOP-00002	EPA 6020A
Elements by ICPMS Low Level (dissolved)	3	N/A	2012/09/09	BBY7SOP-00002	EPA 6020A
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2012/09/06	BBY7SOP-00002	EPA 6020A
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2012/09/08	BBY7SOP-00002	EPA 6020A
Na, K, Ca, Mg, S by CRC ICPMS (total)	20	N/A	2012/09/10	BBY7SOP-00002	EPA 6020A
Elements by ICPMS Low Level (total)	1	N/A	2012/09/06	BBY7SOP-00002	EPA 6020A
Elements by ICPMS Low Level (total)	20	N/A	2012/09/07	BBY7SOP-00002	EPA 6020A
Elements by ICPMS Low Level (total)	3	N/A	2012/09/08	BBY7SOP-00002	EPA 6020A
Ammonia-N	23	N/A	2012/09/04	BBY6SOP-00009	SM-4500NH3G
Ammonia-N	1	N/A	2012/09/06	BBY6SOP-00009	SM-4500NH3G
Nitrate+Nitrite (N) (low level	23	N/A	2012/09/02	BBY6SOP-00010	EPA 353.2
Nitrate+Nitrite (N) (low level	1	N/A	2012/09/06	BBY6SOP-00010	EPA 353.2
Nitrite (N) (low level)	23	N/A	2012/09/02	BBY6SOP-00010	EPA 353.2
Nitrite (N) (low level)	1	N/A	2012/09/06	BBY6SOP-00010	EPA 353.2
Nitrogen - Nitrate (as N)	23	N/A	2012/09/05		
Nitrogen - Nitrate (as N)	1	N/A	2012/09/07		
Filter and HNO3 Preserve for Metals	23	N/A	2012/08/31	BBY6WI-00001	EPA 200.2
Filter and HNO3 Preserve for Metals	1	N/A	2012/09/07	BBY6WI-00001	EPA 200.2
pH Water	23	N/A	2012/09/05	BBY6SOP-00026	SM-4500H+B
pH Water	1	N/A	2012/09/07	BBY6SOP-00026	SM-4500H+B
Sulphate by Automated Colourimetry	23	N/A	2012/09/04	BBY6SOP-00017	SM4500-SO42
Sulphate by Automated Colourimetry	1	N/A	2012/09/06	BBY6SOP-00017	SM4500-SO42
Total Dissolved Solids (Filt. Residue)	2	2012/09/04	2012/09/04	BBY6SOP-00033	SM 2540C
Total Dissolved Solids (Filt. Residue)	4	2012/09/04	2012/09/05	BBY6SOP-00033	SM 2540C
Total Dissolved Solids (Filt. Residue)	11	2012/09/05	2012/09/05	BBY6SOP-00033	SM 2540C
Total Dissolved Solids (Filt. Residue)	7	2012/09/06	2012/09/06	BBY6SOP-00033	SM 2540C

../2

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

Sample Matrix: Water
Samples Received: 24

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbon (Total Organic)	23	N/A	2012/09/07	BBY6SOP-00003	SM-5310C
Carbon (Total Organic)	1	N/A	2012/09/10	BBY6SOP-00003	SM-5310C
Total Suspended Solids-LowLevel	6	2012/09/04	2012/09/04	BBY6SOP-00034	SM-2540 D
Total Suspended Solids-LowLevel	17	2012/09/05	2012/09/05	BBY6SOP-00034	SM-2540 D
Total Suspended Solids-LowLevel	1	2012/09/06	2012/09/06	BBY6SOP-00034	SM-2540 D
Turbidity	16	N/A	2012/09/01	BBY6SOP-00027	SM - 2130B
Turbidity	7	N/A	2012/09/04	BBY6SOP-00027	SM - 2130B
Turbidity	1	N/A	2012/09/07	BBY6SOP-00027	SM - 2130B

* Results relate only to the items tested.

Encryption Key

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

Tabitha Rudkin, Burnaby Project Manager
Email: TRudkin@maxxam.ca
Phone# (604) 638-2639

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

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

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		EI9152	EI9153		EI9154	EI9155		EI9156		EI9157		
Sampling Date		2012/08/30 09:15	2012/08/30 10:15		2012/08/29 15:25	2012/08/29 16:00		2012/08/29 16:30		2012/08/30 11:20		
COC#		32486701	32486701		32486701	32486701		32486701		32486701		
	UNITS	**VR**	**V17A**	**QC Batch**	**VW3**	**VW1**	**QC Batch**	**VW2**	**QC Batch**	**V20A**	**RDL**	**QC Batch**
Calculated Parameters												
Filter and HNO3 Preservation	N/A	FIELD	FIELD	ONSITE	FIELD	FIELD	ONSITE	FIELD	ONSITE	FIELD	N/A	ONSITE
Total Hardness (CaCO3)	mg/L	28.6	69.1	6134893	69.2	169	6134893	382	6134893	231	0.50	6134893
Nitrate (N)	mg/L	<0.0020	0.120	6131331	0.0675	0.0343	6131331	<0.0020	6131331	0.0133	0.0020	6131331
Misc. Inorganics												
Dissolved Hardness (CaCO3)	mg/L	35.1	72.6	6134230	73.6	173	6134230	379	6134230	233	0.50	6134230
Dissolved Organic Carbon (C)	mg/L	4.03	4.30	6146522	4.61	5.67	6146522	2.46	6155349	4.76	0.50	6146522
Alkalinity (Total as CaCO3)	mg/L	26.1	39.5	6139387	49.3	133	6139387	292	6139387	229	0.50	6139387
Total Organic Carbon (C)	mg/L	3.95	4.31	6146616	4.40	6.45	6146616	2.43	6155357	4.64	0.50	6146616
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	6139387	<0.50	0.83	6139387	9.31	6139387	5.68	0.50	6139387
Bicarbonate (HCO3)	mg/L	31.8	48.2	6139387	60.2	160	6139387	333	6139387	265	0.50	6139387
Carbonate (CO3)	mg/L	<0.50	<0.50	6139387	<0.50	1.00	6139387	11.2	6139387	6.82	0.50	6139387
Hydroxide (OH)	mg/L	<0.50	<0.50	6139387	<0.50	<0.50	6139387	<0.50	6139387	<0.50	0.50	6139387
Anions												
Dissolved Sulphate (SO4)	mg/L	3.75	27.1	6138473	22.8	33.4	6138473	84.9	6138473	7.08	0.50	6138473
Dissolved Chloride (Cl)	mg/L	<0.50	<0.50	6138467	<0.50	1.2	6138467	<0.50	6138467	<0.50	0.50	6138467
Nutrients												
Ammonia (N)	mg/L	<0.0050	0.0097	6136535	0.019	0.017	6136535	0.021	6136535	0.0093	0.0050	6136535
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.120	6135931	0.0675(1)	0.0343(1)	6135931	<0.0020(1)	6135931	0.0133	0.0020	6135931
Nitrite (N)	mg/L	<0.0020	<0.0020	6135932	<0.0020(1)	<0.0020(1)	6135932	<0.0020(1)	6135932	<0.0020	0.0020	6135932
Physical Properties												
Conductivity	uS/cm	63.4	145	6139388	147	324	6139388	649	6139388	417	1.0	6139388
pH	pH Units	7.65	7.80	6139390	7.91	8.31	6139390	8.51	6139390	8.48		6139390
Physical Properties												
Total Suspended Solids	mg/L	<1.0	1.1	6140048	<1.0	7.3	6140048	2.1	6140048	1.7	1.0	6140048
Total Dissolved Solids	mg/L	40	88	6146123	100	216	6141915	424	6141915	230	10	6146123
Turbidity	NTU	0.14	0.50	6135300	0.30	1.80	6135300	0.16	6135300	0.19	0.10	6135300

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) - Sample analysed past recommended hold time.

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		EI9158	EI9159		EI9160		EI9161	EI9162		EI9163		
Sampling Date		2012/08/29 14:35	2012/08/29 17:00		2012/08/30 09:45		2012/08/28 18:00	2012/08/28 17:45		2012/08/30 13:00		
COC#		32486701	32486701		32486701		32486701	32486702		32486702		
	UNITS	**VGMAIN**	**V8**	**QC Batch**	**USFR**	**QC Batch**	**GCULV**	**K8**	**QC Batch**	**R1**	**RDL**	**QC Batch**
Calculated Parameters												
Filter and HNO3 Preservation	N/A	FIELD	FIELD	ONSITE	FIELD	ONSITE	FIELD	FIELD	ONSITE	FIELD	N/A	ONSITE
Total Hardness (CaCO3)	mg/L	167	190	6134893	22.6	6134893	23.5	34.4	6134893	84.0	0.50	6134893
Nitrate (N)	mg/L	0.426	0.0630	6131331	<0.0020	6131331	<0.0020	0.0233	6131331	0.0223	0.0020	6131331
Misc. Inorganics												
Dissolved Hardness (CaCO3)	mg/L	170	193	6134230	22.4	6134230	24.9	34.5	6134230	84.8	0.50	6134230
Dissolved Organic Carbon (C)	mg/L	3.65	5.25	6146522	3.22	6146522	4.51	3.80	6146522	3.66	0.50	6146522
Alkalinity (Total as CaCO3)	mg/L	86.0	118	6139387	21.4	6139387	21.6	29.6	6139387	75.2	0.50	6139387
Total Organic Carbon (C)	mg/L	3.70	5.45	6146616	3.22	6146616	4.20	3.58	6146616	3.65	0.50	6146616
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	6139387	<0.50	6139387	<0.50	<0.50	6139387	<0.50	0.50	6139387
Bicarbonate (HCO3)	mg/L	105	144	6139387	26.1	6139387	26.4	36.1	6139387	91.8	0.50	6139387
Carbonate (CO3)	mg/L	<0.50	<0.50	6139387	<0.50	6139387	<0.50	<0.50	6139387	<0.50	0.50	6139387
Hydroxide (OH)	mg/L	<0.50	<0.50	6139387	<0.50	6139387	<0.50	<0.50	6139387	<0.50	0.50	6139387
Anions												
Dissolved Sulphate (SO4)	mg/L	80.9	72.7	6138473	4.30	6138473	3.35	5.20	6138473	9.95	0.50	6138473
Dissolved Chloride (Cl)	mg/L	<0.50	0.58	6138467	<0.50	6138467	<0.50	<0.50	6138467	<0.50	0.50	6138467
Nutrients												
Ammonia (N)	mg/L	0.013	0.012	6136535	0.015	6136535	0.0094	0.0081	6136535	0.0052	0.0050	6136535
Nitrate plus Nitrite (N)	mg/L	0.426(1)	0.0630(1)	6135931	<0.0020	6135931	<0.0020(1)	0.0233(1)	6135931	0.0223	0.0020	6135931
Nitrite (N)	mg/L	<0.0020(1)	<0.0020(1)	6135932	<0.0020	6135932	<0.0020(1)	<0.0020(1)	6135932	<0.0020	0.0020	6135932
Physical Properties												
Conductivity	uS/cm	339	372	6139388	51.0	6139388	54.0	75.1	6139388	167	1.0	6139388
pH	pH Units	8.05	8.26	6139390	7.54	6139390	7.56	7.72	6139390	8.06		6139390
Physical Properties												
Total Suspended Solids	mg/L	2.3	7.9	6140048	<1.0	6140048	3.7	<1.0	6136670	<1.0	1.0	6140048
Total Dissolved Solids	mg/L	228	256	6141915	34	6146123	48	48	6139142	100	10	6146123
Turbidity	NTU	0.43	2.43	6135300	0.46	6135300	0.43(1)	0.24(1)	6135300	0.44	0.10	6135300

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) - Sample analysed past recommended hold time.

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		EI9164	EI9165	EI9166	EI9167		EI9168	EI9169	EI9170	EI9171		
Sampling Date		2012/08/28 16:10	2012/08/28 15:05	2012/08/28 14:30	2012/08/28 16:50		2012/08/29 10:30	2012/08/29 09:45	2012/08/29 12:30	2012/08/29 13:10		
COC#		32486702	32486702	32486702	32486702		32486702	32486702	32486702	32486702		
	UNITS	**FC**	**W10**	**NW1D**	**X14**	**QC Batch**	**R4**	**R6**	**A1**	**P1**	**RDL**	**QC Batch**
Calculated Parameters												
Filter and HNO3 Preservation	N/A	FIELD	FIELD	FIELD	FIELD	ONSITE	FIELD	FIELD	FIELD	FIELD	N/A	ONSITE
Total Hardness (CaCO3)	mg/L	13.6	63.4	123	241	6134893	176	141	146	178	0.50	6134893
Nitrate (N)	mg/L	<0.0020	<0.0020	0.0057	0.0276	6131331	0.0702	0.0446	0.0498	0.0040	0.0020	6131331
Misc. Inorganics												
Dissolved Hardness (CaCO3)	mg/L	13.8	63.1	128	238	6134230	179	145	143	177	0.50	6134230
Dissolved Organic Carbon (C)	mg/L	4.03	4.15	3.51	3.39	6146522	3.64	4.28	4.95	4.29	0.50	6146522
Alkalinity (Total as CaCO3)	mg/L	13.4	61.4	113	102	6139387	92.3	121	98.0	113	0.50	6139387
Total Organic Carbon (C)	mg/L	4.51	4.05	3.24	3.52	6146616	3.95	3.61	5.06	4.27	0.50	6146616
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	6139387	<0.50	<0.50	<0.50	<0.50	0.50	6139387
Bicarbonate (HCO3)	mg/L	16.3	74.9	137	125	6139387	113	148	120	138	0.50	6139387
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	6139387	<0.50	<0.50	<0.50	<0.50	0.50	6139387
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	6139387	<0.50	<0.50	<0.50	<0.50	0.50	6139387
Anions												
Dissolved Sulphate (SO4)	mg/L	<0.50	1.76	20.3	134	6138473	86.7	18.3	39.9	57.8	0.50	6138473
Dissolved Chloride (Cl)	mg/L	<0.50	<0.50	<0.50	<0.50	6138467	<0.50	<0.50	<0.50	<0.50	0.50	6138467
Nutrients												
Ammonia (N)	mg/L	0.033	0.013	0.0083	0.070	6136535	0.018	0.0079	0.016	0.0058	0.0050	6136535
Nitrate plus Nitrite (N)	mg/L	<0.0020(1)	<0.0020(1)	0.0057(1)	0.0276(1)	6135931	0.0702(1)	0.0446(1)	0.0548(1)	0.0040(1)	0.0020	6135931
Nitrite (N)	mg/L	<0.0020(1)	<0.0020(1)	<0.0020(1)	<0.0020(1)	6135932	<0.0020(1)	<0.0020(1)	0.0050(1)	<0.0020(1)	0.0020	6135932
Physical Properties												
Conductivity	uS/cm	33.3	125	245	481	6139388	358	266	288	338	1.0	6139388
pH	pH Units	7.40	8.00	8.24	8.14	6139390	8.11	8.28	8.14	8.27		6139390
Physical Properties												
Total Suspended Solids	mg/L	8.0	<1.0	2.6	1.4	6136670	1.8	1.3	26.5	5.9	1.0	6140048
Total Dissolved Solids	mg/L	26	88	160	344	6139142	242	154	180	222	10	6141915
Turbidity	NTU	0.83(1)	0.41(1)	0.13(1)	2.12(1)	6135300	0.81(1)	0.39(1)	15.3(1)	1.84(1)	0.10	6137110

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) - Sample analysed past recommended hold time.

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		EI9182	EI9183		EI9184			EI9185		
Sampling Date		2012/08/29 12:30	2012/08/29		2012/08/30					
COC#		32486703	32486703		32486703			32486703		
	UNITS	**P4**	**BD-1**	**QC Batch**	**BD-2**	**RDL**	**QC Batch**	**BD-3**	**RDL**	**QC Batch**
Calculated Parameters										
Filter and HNO3 Preservation	N/A	FIELD	FIELD	ONSITE	FIELD	N/A	ONSITE	FIELD	N/A	ONSITE
Total Hardness (CaCO3)	mg/L	170	180	6134893	29.6	0.50	6134893	<0.50	0.50	6140120
Nitrate (N)	mg/L	0.0144	0.0712	6131331	<0.0020	0.0020	6131331	<0.0020	0.0020	6140124
Misc. Inorganics										
Dissolved Hardness (CaCO3)	mg/L	166	173	6134230	28.8	0.50	6134230	<0.50	0.50	6142702
Dissolved Organic Carbon (C)	mg/L	4.43	3.41	6146522	3.26	0.50	6146522	<0.50	0.50	6146522
Alkalinity (Total as CaCO3)	mg/L	111	92.0	6139387	26.3	0.50	6139387	<0.50	0.50	6147929
Total Organic Carbon (C)	mg/L	4.38	3.67	6146616	3.82	0.50	6146616	<0.50	0.50	6146616
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	6139387	<0.50	0.50	6139387	<0.50	0.50	6147929
Bicarbonate (HCO3)	mg/L	136	112	6139387	32.1	0.50	6139387	<0.50	0.50	6147929
Carbonate (CO3)	mg/L	<0.50	<0.50	6139387	<0.50	0.50	6139387	<0.50	0.50	6147929
Hydroxide (OH)	mg/L	<0.50	<0.50	6139387	<0.50	0.50	6139387	<0.50	0.50	6147929
Anions										
Dissolved Sulphate (SO4)	mg/L	52.6	86.3	6138473	3.72	0.50	6138473	<5.0(1)	5.0	6145892
Dissolved Chloride (Cl)	mg/L	<0.50	<0.50	6138467	<0.50	0.50	6138467	18(1)	5.0	6145827
Nutrients										
Ammonia (N)	mg/L	<0.0050	0.021	6136535	0.0082	0.0050	6136535	0.0094	0.0050	6143822
Nitrate plus Nitrite (N)	mg/L	0.0144(2)	0.0712(2)	6135931	<0.0020	0.0020	6135931	<0.0020	0.0020	6146320
Nitrite (N)	mg/L	<0.0020(2)	<0.0020(2)	6135932	<0.0020	0.0020	6135932	<0.0020	0.0020	6146323
Physical Properties										
Conductivity	uS/cm	325	360	6139388	63.2	1.0	6139388	1.7	1.0	6147966
pH	pH Units	8.25	8.14	6139390	7.66		6139390	5.91		6147968
Physical Properties										
Total Suspended Solids	mg/L	7.3	2.0	6140048	<1.0	1.0	6140048	<1.0	1.0	6143899
Total Dissolved Solids	mg/L	214	242	6141915	42	10	6146123	<10	10	6146123
Turbidity	NTU	5.02(2)	0.70(2)	6137110	0.13(2)	0.10	6137110	<0.10	0.10	6148111

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) - RDL raised due to sample matrix interference.
(2) - Sample analysed past recommended hold time.

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EI9152	EI9153	EI9154	EI9155	EI9156	EI9157	EI9158	EI9159	EI9160		
Sampling Date		2012/08/30 09:15	2012/08/30 10:15	2012/08/29 15:25	2012/08/29 16:00	2012/08/29 16:30	2012/08/30 11:20	2012/08/29 14:35	2012/08/29 17:00	2012/08/30 09:45		
COC#		32486701	32486701	32486701	32486701	32486701	32486701	32486701	32486701	32486701		
	UNITS	**VR**	**V17A**	**VW3**	**VW1**	**VW2**	**V20A**	**VGMAIN**	**V8**	**USFR**	**RDL**	**QC Batch**
Dissolved Metals by ICPMS												
Dissolved Aluminum (Al)	ug/L	22.3	33.1	24.4	9.28	1.27	1.97	10.2	10.8	15.8	0.20	6140753
Dissolved Antimony (Sb)	ug/L	0.023	0.029	0.038	0.074	0.187	0.043	0.084	0.102	0.036	0.020	6140753
Dissolved Arsenic (As)	ug/L	0.176	0.951	0.558	0.725	0.339	0.524	0.309	0.455	0.217	0.020	6140753
Dissolved Barium (Ba)	ug/L	25.7	21.6	27.4	57.2	131	97.8	33.9	49.1	22.3	0.020	6140753
Dissolved Beryllium (Be)	ug/L	0.018	0.024	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	6140753
Dissolved Bismuth (Bi)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	6140753
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	50	6140753
Dissolved Cadmium (Cd)	ug/L	0.0080	0.0110	0.0260	0.0180	0.0840	<0.0050	0.0460	0.0390	<0.0050	0.0050	6140753
Dissolved Chromium (Cr)	ug/L	0.13	0.26	0.20	0.12	<0.10	<0.10	<0.10	0.15	0.16	0.10	6140753
Dissolved Cobalt (Co)	ug/L	0.0140	0.0530	0.0240	0.0600	0.0100	0.0180	0.0280	0.0560	0.0210	0.0050	6140753
Dissolved Copper (Cu)	ug/L	0.610	0.724	0.728	0.891	0.538	0.594(1)	0.881	1.13	0.454	0.050	6140753
Dissolved Iron (Fe)	ug/L	18.9(2)	123	65.3	107	2.7	19.8	34.6	47.5	73.9	1.0	6140753
Dissolved Lead (Pb)	ug/L	0.0180	0.0480	0.0630	0.0380	0.0130	0.0140	0.0830	0.0590	0.0320	0.0050	6140753
Dissolved Lithium (Li)	ug/L	0.50	0.94	0.90	3.30	3.40	4.01	3.34	3.74	0.70	0.50	6140753
Dissolved Manganese (Mn)	ug/L	0.563	15.2	4.66	28.8	0.087	2.34	5.52	11.4	4.88	0.050	6140753
Dissolved Molybdenum (Mo)	ug/L	0.102	0.064	0.105	0.438	2.29	0.239	0.400	0.686	0.193	0.050	6140753
Dissolved Nickel (Ni)	ug/L	0.177	0.496	0.397	0.668	0.783	0.299(1)	0.738	1.12	0.236	0.020	6140753
Dissolved Selenium (Se)	ug/L	<0.040	0.053	0.123	0.216	4.39	0.792	0.218	0.707(1)	<0.040	0.040	6140753
Dissolved Silicon (Si)	ug/L	6840(3)	5920	5760	5400	4730	5340	4670	4890	3640	100	6140753
Dissolved Silver (Ag)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	6140753
Dissolved Strontium (Sr)	ug/L	44.7	79.9	86.7	196	337	301	167	194	44.2	0.050	6140753
Dissolved Thallium (Tl)	ug/L	0.0030	0.0040	0.0030	0.0020	0.0020	<0.0020	0.0210	0.0170	<0.0020	0.0020	6140753
Dissolved Tin (Sn)	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	6140753
Dissolved Titanium (Ti)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	6140753
Dissolved Uranium (U)	ug/L	0.300	0.937	1.01	2.03	6.10	1.34	2.40	2.67	0.354	0.0020	6140753
Dissolved Vanadium (V)	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.22	0.20	6140753
Dissolved Zinc (Zn)	ug/L	0.52	32.2	20.7	7.28	2.68	0.45	10.1	6.66	0.33	0.10	6140753
Dissolved Zirconium (Zr)	ug/L	0.11	0.16	0.12	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	6140753
Dissolved Calcium (Ca)	mg/L	11.3(1)	19.7	20.8	44.2	94.3	61.4	43.6	47.9	7.12	0.050	6132205
Dissolved Magnesium (Mg)	mg/L	1.64	5.66	5.23	15.2	34.9	19.3	14.9	17.9	1.13	0.050	6132205
Dissolved Potassium (K)	mg/L	0.314	0.316	0.368	0.760	0.978	0.973	0.665	0.780	0.248	0.050	6132205

RDL = Reportable Detection Limit
(1) - Dissolved greater than total. Reanalysis yields similar results.
(2) - Duplicate RPD above control limit - (10% of analytes failure allowed).
(3) - Duplicate RPD above control limit - (10% of analytes failure allowed).
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EI9152	EI9153	EI9154	EI9155	EI9156	EI9157	EI9158	EI9159	EI9160		
Sampling Date		2012/08/30 09:15	2012/08/30 10:15	2012/08/29 15:25	2012/08/29 16:00	2012/08/29 16:30	2012/08/30 11:20	2012/08/29 14:35	2012/08/29 17:00	2012/08/30 09:45		
COC#		32486701	32486701	32486701	32486701	32486701	32486701	32486701	32486701	32486701		
	UNITS	**VR**	**V17A**	**VW3**	**VW1**	**VW2**	**V20A**	**VGMAIN**	**V8**	**USFR**	**RDL**	**QC Batch**
Dissolved Sodium (Na)	mg/L	1.53	1.82	1.73	3.08	2.43	2.69	2.25	2.63	1.42	0.050	6132205
Dissolved Sulphur (S)	mg/L	<10	12	<10	15	32	<10	31	29	<10	10	6132205
Total Metals by ICPMS												
Total Aluminum (Al)	ug/L	26.3	46.9	33.9	69.5	7.47	2.97	14.7	67.5	26.2	0.20	6140754
Total Antimony (Sb)	ug/L	0.027	0.031	0.036	0.077	0.170	0.054	0.076	0.098	0.035	0.020	6140754
Total Arsenic (As)	ug/L	0.204	1.03	0.642	0.817	0.304	0.524	0.373	0.549	0.222	0.020	6140754
Total Barium (Ba)	ug/L	27.6	20.2	28.4	60.5	130	102	36.1	50.1	23.3	0.020	6140754
Total Beryllium (Be)	ug/L	0.020	0.016	0.016	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	6140754
Total Bismuth (Bi)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	6140754
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	50	6140754
Total Cadmium (Cd)	ug/L	0.0100	0.0160	0.0310	0.0220	0.0890	<0.0050	0.0400	0.0450	<0.0050	0.0050	6140754
Total Chromium (Cr)	ug/L	<0.10	<0.10	<0.10	0.25	0.12	<0.10	<0.10	0.20	<0.10	0.10	6140754
Total Cobalt (Co)	ug/L	0.0170	0.0490	0.0310	0.128	0.0120	0.0170	0.0410	0.145	0.0220	0.0050	6140754
Total Copper (Cu)	ug/L	0.684	0.910	0.705	1.03	0.574	0.338	0.953	1.37	0.530	0.050	6140754
Total Iron (Fe)	ug/L	21.7	160	90.5	230	22.5	36.1	55.6	197	119	1.0	6140754
Total Lead (Pb)	ug/L	0.0510	0.180	0.212	0.271	0.0500	0.0950	0.210	0.411	0.0570	0.0050	6140754
Total Lithium (Li)	ug/L	0.58	0.88	0.88	3.48	3.50	4.09	2.99	3.64	0.73	0.50	6140754
Total Manganese (Mn)	ug/L	0.924	14.3	5.87	34.0	0.431	5.46	8.81	20.0	9.25	0.050	6140754
Total Molybdenum (Mo)	ug/L	0.309	0.078	0.065	0.421	2.11	0.237	0.423	0.631	0.184	0.050	6140754
Total Nickel (Ni)	ug/L	0.196(1)	0.405	0.407	0.830	0.807	0.223	0.685	1.41	0.901	0.020	6140754
Total Selenium (Se)	ug/L	0.083	<0.040	0.075	0.279	4.74	0.684	0.282	0.435	0.047	0.040	6140754
Total Silicon (Si)	ug/L	5090	5910	5310	5370	4670	5260	4400	4860	3520	100	6140754
Total Silver (Ag)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	6140754
Total Strontium (Sr)	ug/L	45.5	78.5	90.7	200	341	301	166	192	42.2	0.050	6140754
Total Thallium (Tl)	ug/L	0.0020	0.0030	0.0030	0.0040	0.0020	<0.0020	0.0220	0.0180	0.0020	0.0020	6140754
Total Tin (Sn)	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	6140754
Total Titanium (Ti)	ug/L	<0.50	0.70	<0.50	1.88	<0.50	<0.50	<0.50	1.23	<0.50	0.50	6140754
Total Uranium (U)	ug/L	0.317	0.934	1.08	2.05	6.00	1.33	2.39	2.67	0.352	0.0020	6140754
Total Vanadium (V)	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	6140754
Total Zinc (Zn)	ug/L	0.74	32.5	21.6	8.84	2.92	0.94	10.9	9.66	0.41	0.10	6140754
Total Zirconium (Zr)	ug/L	0.12	0.17	0.14	0.13	<0.10	<0.10	<0.10	0.11	<0.10	0.10	6140754
Total Calcium (Ca)	mg/L	8.71	19.1	19.5	43.5	95.7	61.8	42.0	47.6	7.22	0.050	6132158
Total Magnesium (Mg)	mg/L	1.66	5.17	4.96	14.7	34.8	18.7	15.1	17.4	1.10	0.050	6132158
Total Potassium (K)	mg/L	0.339	0.315	0.371	0.783	1.03	0.989	0.667	0.788	0.260	0.050	6132158
Total Sodium (Na)	mg/L	1.51	1.72	1.67	3.08	2.46	2.72	2.22	2.46	1.41	0.050	6132158

RDL = Reportable Detection Limit
(1) - Duplicate RPD above control limit - (10% of analytes failure allowed).

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EI9152	EI9153	EI9154	EI9155	EI9156	EI9157	EI9158	EI9159	EI9160		
Sampling Date		2012/08/30 09:15	2012/08/30 10:15	2012/08/29 15:25	2012/08/29 16:00	2012/08/29 16:30	2012/08/30 11:20	2012/08/29 14:35	2012/08/29 17:00	2012/08/30 09:45		
COC#		32486701	32486701	32486701	32486701	32486701	32486701	32486701	32486701	32486701		
	UNITS	**VR**	**V17A**	**VW3**	**VW1**	**VW2**	**V20A**	**VGMAIN**	**V8**	**USFR**	**RDL**	**QC Batch**
Total Sulphur (S)	mg/L	<10	11	<10	17	33	<10	32	30	<10	10	6132158

RDL = Reportable Detection Limit

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EI9161		EI9162		EI9163		EI9164		EI9165		
Sampling Date		2012/08/28 18:00		2012/08/28 17:45		2012/08/30 13:00		2012/08/28 16:10		2012/08/28 15:05		
COC#		32486701		32486702		32486702		32486702		32486702		
	UNITS	**GCULV**	**QC Batch**	**K8**	**QC Batch**	**R1**	**QC Batch**	**FC**	**QC Batch**	**W10**	**RDL**	**QC Batch**
Dissolved Metals by ICPMS												
Dissolved Aluminum (Al)	ug/L	19.6	6140753	13.7	6140753	7.56	6140753	41.7	6140753	11.7	0.20	6140753
Dissolved Antimony (Sb)	ug/L	0.031	6140753	0.023	6140753	0.073	6140753	0.032	6140753	0.029	0.020	6140753
Dissolved Arsenic (As)	ug/L	0.286	6140753	0.174	6140753	0.468	6140753	0.123	6140753	0.164	0.020	6140753
Dissolved Barium (Ba)	ug/L	24.7	6140753	20.3	6140753	43.8	6140753	16.6	6140753	18.9	0.020	6140753
Dissolved Beryllium (Be)	ug/L	0.010	6140753	<0.010	6140753	<0.010	6140753	0.015	6140753	<0.010	0.010	6140753
Dissolved Bismuth (Bi)	ug/L	<0.0050	6140753	<0.0050	6140753	<0.0050	6140753	<0.0050	6140753	<0.0050	0.0050	6140753
Dissolved Boron (B)	ug/L	<50	6140753	<50	6140753	<50	6140753	<50	6140753	<50	50	6140753
Dissolved Cadmium (Cd)	ug/L	<0.0050	6140753	<0.0050	6140753	0.0150	6140753	0.0160	6140753	0.0160	0.0050	6140753
Dissolved Chromium (Cr)	ug/L	<0.10	6140753	<0.10	6140753	<0.10	6140753	0.11	6140753	<0.10	0.10	6140753
Dissolved Cobalt (Co)	ug/L	0.0230	6140753	0.0180	6140753	0.0380	6140753	0.0260	6140753	0.0150	0.0050	6140753
Dissolved Copper (Cu)	ug/L	0.764(1)	6140753	0.535	6140753	0.681	6140753	0.882	6140753	1.11	0.050	6140753
Dissolved Iron (Fe)	ug/L	79.5	6140753	20.6	6140753	114	6140753	38.6	6140753	9.6	1.0	6140753
Dissolved Lead (Pb)	ug/L	0.0580	6140753	0.0660	6140753	0.142	6140753	0.448	6140753	0.151	0.0050	6140753
Dissolved Lithium (Li)	ug/L	1.07	6140753	1.82	6140753	3.53	6140753	1.94	6140753	1.42	0.50	6140753
Dissolved Manganese (Mn)	ug/L	5.87	6140753	0.354	6140753	17.3	6140753	1.88	6140753	0.216	0.050	6140753
Dissolved Molybdenum (Mo)	ug/L	0.199	6140753	0.073	6140753	0.477	6140753	0.056	6140753	0.193	0.050	6140753
Dissolved Nickel (Ni)	ug/L	0.285	6140753	0.276	6154719	0.438	6140753	0.413	6154719	0.344	0.020	6140753
Dissolved Selenium (Se)	ug/L	0.040	6140753	<0.040	6140753	0.293	6140753	<0.040	6140753	0.064	0.040	6140753
Dissolved Silicon (Si)	ug/L	4160	6140753	4990	6140753	5520	6140753	7140	6140753	7130	100	6140753
Dissolved Silver (Ag)	ug/L	<0.0050	6140753	<0.0050	6140753	<0.0050	6140753	<0.0050	6140753	<0.0050	0.0050	6140753
Dissolved Strontium (Sr)	ug/L	44.9	6140753	65.6	6140753	101	6140753	24.5	6140753	66.7	0.050	6140753
Dissolved Thallium (Tl)	ug/L	<0.0020	6140753	0.0020	6140753	0.0020	6140753	0.0020	6140753	0.0020	0.0020	6140753
Dissolved Tin (Sn)	ug/L	<0.20	6140753	<0.20	6140753	<0.20	6140753	0.26	6140753	<0.20	0.20	6140753
Dissolved Titanium (Ti)	ug/L	<0.50	6140753	<0.50	6140753	<0.50	6140753	<0.50	6140753	<0.50	0.50	6140753
Dissolved Uranium (U)	ug/L	0.396	6140753	0.695	6140753	0.949	6140753	0.145	6140753	0.162	0.0020	6140753
Dissolved Vanadium (V)	ug/L	0.26	6140753	<0.20	6140753	<0.20	6140753	0.47	6140753	0.38	0.20	6140753
Dissolved Zinc (Zn)	ug/L	1.09	6140753	0.84	6140753	5.70	6140753	1.94	6154719	1.09	0.10	6140753
Dissolved Zirconium (Zr)	ug/L	<0.10	6140753	<0.10	6140753	<0.10	6140753	<0.10	6140753	<0.10	0.10	6140753
Dissolved Calcium (Ca)	mg/L	7.84	6132205	11.3	6132205	25.2	6132205	4.11	6132205	20.8	0.050	6132205
Dissolved Magnesium (Mg)	mg/L	1.30	6132205	1.54	6132205	5.29	6132205	0.858	6132205	2.69	0.050	6132205
Dissolved Potassium (K)	mg/L	0.253	6132205	0.347	6132205	0.597	6132205	0.147	6132205	0.537	0.050	6132205
Dissolved Sodium (Na)	mg/L	1.47	6132205	1.74	6132205	1.98	6132205	1.85	6132205	2.03	0.050	6132205
Dissolved Sulphur (S)	mg/L	<10	6132205	<10	6132205	<10	6132205	<10	6132205	<10	10	6132205

RDL = Reportable Detection Limit
(1) - Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EI9161		EI9162		EI9163		EI9164		EI9165		
Sampling Date		2012/08/28 18:00		2012/08/28 17:45		2012/08/30 13:00		2012/08/28 16:10		2012/08/28 15:05		
COC#		32486701		32486702		32486702		32486702		32486702		
	UNITS	**GCULV**	**QC Batch**	**K8**	**QC Batch**	**R1**	**QC Batch**	**FC**	**QC Batch**	**W10**	**RDL**	**QC Batch**
Total Metals by ICPMS												
Total Aluminum (Al)	ug/L	52.8	6140754	19.8	6140754	14.2	6140754	69.2	6140754	31.8	0.20	6140754
Total Antimony (Sb)	ug/L	0.034	6140754	0.025	6140754	0.074	6140754	0.026	6140754	0.027	0.020	6140754
Total Arsenic (As)	ug/L	0.347	6140754	0.200	6140754	0.524	6140754	0.103	6140754	0.137	0.020	6140754
Total Barium (Ba)	ug/L	26.7	6140754	20.1	6140754	46.2	6140754	16.9	6140754	19.2	0.020	6140754
Total Beryllium (Be)	ug/L	0.016	6140754	0.010	6140754	<0.010	6140754	0.019	6140754	<0.010	0.010	6140754
Total Bismuth (Bi)	ug/L	<0.0050	6140754	<0.0050	6140754	<0.0050	6140754	<0.0050	6140754	<0.0050	0.0050	6140754
Total Boron (B)	ug/L	<50	6140754	<50	6140754	<50	6140754	<50	6140754	<50	50	6140754
Total Cadmium (Cd)	ug/L	0.0110	6140754	0.0060	6140754	0.0120	6140754	0.0090	6140754	0.0240	0.0050	6140754
Total Chromium (Cr)	ug/L	<0.10	6140754	<0.10	6140754	<0.10	6140754	<0.10	6140754	<0.10	0.10	6140754
Total Cobalt (Co)	ug/L	0.0800	6140754	0.0190	6140754	0.0570	6140754	0.0460	6140754	0.0240	0.0050	6140754
Total Copper (Cu)	ug/L	0.482	6140754	0.498	6140754	0.589	6140754	1.86	6140754	1.10	0.050	6140754
Total Iron (Fe)	ug/L	212	6140754	35.0	6140754	156	6140754	77.2	6140754	35.8	1.0	6140754
Total Lead (Pb)	ug/L	0.117	6140754	0.119	6140754	0.305	6140754	0.700	6140754	0.259	0.0050	6140754
Total Lithium (Li)	ug/L	0.95	6140754	1.53	6140754	3.33	6140754	1.81	6140754	1.35	0.50	6140754
Total Manganese (Mn)	ug/L	33.4	6140754	0.863	6140754	19.5	6140754	2.32	6140754	0.941	0.050	6140754
Total Molybdenum (Mo)	ug/L	0.188	6140754	<0.050	6140754	0.404	6140754	<0.050	6140754	0.185	0.050	6140754
Total Nickel (Ni)	ug/L	0.303	6140754	0.243	6140754	0.480	6140754	0.467	6140754	0.373	0.020	6140754
Total Selenium (Se)	ug/L	0.082	6140754	<0.040	6140754	0.243	6140754	0.062	6140754	0.083	0.040	6140754
Total Silicon (Si)	ug/L	3900	6140754	4980	6140754	5140	6140754	7050	6140754	7180	100	6140754
Total Silver (Ag)	ug/L	<0.0050	6140754	<0.0050	6140754	<0.0050	6140754	<0.0050	6140754	<0.0050	0.0050	6140754
Total Strontium (Sr)	ug/L	44.2	6140754	64.6	6140754	104	6140754	25.0	6140754	67.7	0.050	6140754
Total Thallium (Tl)	ug/L	0.0020	6140754	0.0020	6140754	0.0020	6140754	<0.0020	6140754	<0.0020	0.0020	6140754
Total Tin (Sn)	ug/L	<0.20	6140754	<0.20	6140754	<0.20	6140754	<0.20	6140754	<0.20	0.20	6140754
Total Titanium (Ti)	ug/L	2.03	6140754	0.60	6140754	0.81	6140754	1.19	6140754	0.86	0.50	6140754
Total Uranium (U)	ug/L	0.503	6140754	0.695	6140754	0.933	6140754	0.149	6140754	0.153	0.0020	6140754
Total Vanadium (V)	ug/L	<0.20	6140754	<0.20	6140754	<0.20	6140754	<0.20	6140754	<0.20	0.20	6140754
Total Zinc (Zn)	ug/L	1.15	6140754	0.85	6140754	5.95	6140754	1.96	6140754	1.57	0.10	6140754
Total Zirconium (Zr)	ug/L	<0.10	6140754	<0.10	6140754	<0.10	6140754	<0.10	6140754	<0.10	0.10	6140754
Total Calcium (Ca)	mg/L	7.31	6132158	11.3	6132158	25.1	6132158	4.02	6132158	21.0	0.050	6132158
Total Magnesium (Mg)	mg/L	1.27	6132158	1.51	6132158	5.18	6132158	0.864	6132158	2.67	0.050	6132158
Total Potassium (K)	mg/L	0.257	6132158	0.376	6132158	0.611	6132158	0.156	6132158	0.536	0.050	6132158
Total Sodium (Na)	mg/L	1.45	6132158	1.77	6132158	2.01	6132158	1.80	6132158	1.92	0.050	6132158
Total Sulphur (S)	mg/L	<10	6132158	<10	6132158	<10	6132158	<10	6132158	<10	10	6132158

RDL = Reportable Detection Limit

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EI9166		EI9167	EI9168	EI9169	EI9170	EI9171		
Sampling Date		2012/08/28 14:30		2012/08/28 16:50	2012/08/29 10:30	2012/08/29 09:45	2012/08/29 12:30	2012/08/29 13:10		
COC#		32486702		32486702	32486702	32486702	32486702	32486702		
	UNITS	**NW1D**	**QC Batch**	**X14**	**R4**	**R6**	**A1**	**P1**	**RDL**	**QC Batch**
Dissolved Metals by ICPMS										
Dissolved Aluminum (Al)	ug/L	3.96	6140753	8.71	8.39	12.0	17.4	17.8	0.20	6140753
Dissolved Antimony (Sb)	ug/L	0.049	6140753	0.080	0.098	0.119	0.118	0.189	0.020	6140753
Dissolved Arsenic (As)	ug/L	0.192	6140753	0.445	0.298	0.366	0.606	0.525	0.020	6140753
Dissolved Barium (Ba)	ug/L	45.2	6140753	47.0	60.8	65.9	61.6	74.0	0.020	6140753
Dissolved Beryllium (Be)	ug/L	<0.010	6140753	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	6140753
Dissolved Bismuth (Bi)	ug/L	<0.0050	6140753	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	6140753
Dissolved Boron (B)	ug/L	<50	6140753	<50	<50	<50	<50	<50	50	6140753
Dissolved Cadmium (Cd)	ug/L	0.0510	6140753	0.0220	0.0230	0.0110	0.0220	0.102	0.0050	6140753
Dissolved Chromium (Cr)	ug/L	<0.10	6140753	<0.10	0.16	0.12	0.21	<0.10	0.10	6140753
Dissolved Cobalt (Co)	ug/L	0.0100	6140753	6.08	1.45	0.0320	0.347	0.0270	0.0050	6140753
Dissolved Copper (Cu)	ug/L	1.10	6140753	2.02(1)	0.779	0.688	1.23	0.856	0.050	6140753
Dissolved Iron (Fe)	ug/L	4.9	6140753	671	171	96.9	78.1	33.7	1.0	6140753
Dissolved Lead (Pb)	ug/L	0.270(1)	6154719	0.124	0.0790	0.0150	0.149	0.0270	0.0050	6140753
Dissolved Lithium (Li)	ug/L	4.98	6140753	5.16	4.53	1.96	2.99	3.25	0.50	6140753
Dissolved Manganese (Mn)	ug/L	0.284	6140753	3140	879	12.0	285	5.94	0.050	6140753
Dissolved Molybdenum (Mo)	ug/L	0.304	6140753	0.459	0.531	1.01	0.748	1.12	0.050	6140753
Dissolved Nickel (Ni)	ug/L	0.456	6140753	4.85	2.29	0.473	1.36	3.60	0.020	6140753
Dissolved Selenium (Se)	ug/L	0.103	6140753	0.322	0.353	0.605	0.566	1.22	0.040	6140753
Dissolved Silicon (Si)	ug/L	6970	6140753	5010	4900	4870	4930	3310	100	6140753
Dissolved Silver (Ag)	ug/L	<0.0050	6140753	0.0130	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	6140753
Dissolved Strontium (Sr)	ug/L	155	6140753	232	178	109	138	184	0.050	6140753
Dissolved Thallium (Tl)	ug/L	0.0030	6140753	0.0260	0.0180	<0.0020	0.0060	0.0030	0.0020	6140753
Dissolved Tin (Sn)	ug/L	<0.20	6140753	0.21	<0.20	<0.20	0.23	<0.20	0.20	6140753
Dissolved Titanium (Ti)	ug/L	<0.50	6140753	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	6140753
Dissolved Uranium (U)	ug/L	0.638	6140753	1.48	1.12	1.48	1.36	1.66	0.0020	6140753
Dissolved Vanadium (V)	ug/L	<0.20	6140753	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	6140753
Dissolved Zinc (Zn)	ug/L	12.6	6140753	29.4	13.9	0.44	3.24	5.07	0.10	6140753
Dissolved Zirconium (Zr)	ug/L	<0.10	6140753	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	6140753
Dissolved Calcium (Ca)	mg/L	41.8	6132205	69.3	52.4	40.4	41.0	45.6	0.050	6132205
Dissolved Magnesium (Mg)	mg/L	5.69	6132205	15.7	11.7	10.6	9.76	15.3	0.050	6132205
Dissolved Potassium (K)	mg/L	1.48	6132205	1.35	1.22	1.11	1.23	0.719	0.050	6132205
Dissolved Sodium (Na)	mg/L	2.77	6132205	4.54	3.24	1.79	2.41	1.76	0.050	6132205
Dissolved Sulphur (S)	mg/L	<10	6132205	55	35	<10	19	24	10	6132205

RDL = Reportable Detection Limit
(1) - Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EI9166		EI9167	EI9168	EI9169	EI9170	EI9171		
Sampling Date		2012/08/28 14:30		2012/08/28 16:50	2012/08/29 10:30	2012/08/29 09:45	2012/08/29 12:30	2012/08/29 13:10		
COC#		32486702		32486702	32486702	32486702	32486702	32486702		
	UNITS	**NW1D**	**QC Batch**	**X14**	**R4**	**R6**	**A1**	**P1**	**RDL**	**QC Batch**
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	6.76	6140754	15.6	22.6	28.9	259	60.4	0.20	6140754
Total Antimony (Sb)	ug/L	0.047	6140754	0.070	0.090	0.119	0.143	0.198	0.020	6140754
Total Arsenic (As)	ug/L	0.178	6140754	0.453	0.316	0.499	0.886	0.548	0.020	6140754
Total Barium (Ba)	ug/L	49.2	6140754	48.3	60.8	68.9	79.9	80.0	0.020	6140754
Total Beryllium (Be)	ug/L	<0.010	6140754	<0.010	<0.010	<0.010	0.021	<0.010	0.010	6140754
Total Bismuth (Bi)	ug/L	<0.0050	6140754	<0.0050	<0.0050	<0.0050	0.0050	<0.0050	0.0050	6140754
Total Boron (B)	ug/L	<50	6140754	<50	<50	<50	<50	<50	50	6140754
Total Cadmium (Cd)	ug/L	0.0550	6140754	0.0270	0.0320	0.0150	0.0680	0.148	0.0050	6140754
Total Chromium (Cr)	ug/L	<0.10	6140754	<0.10	<0.10	0.12	0.50	<0.10	0.10	6140754
Total Cobalt (Co)	ug/L	0.0140	6140754	5.88	1.58	0.0560	0.651	0.100	0.0050	6140754
Total Copper (Cu)	ug/L	1.30	6140754	0.550	0.847	0.736	1.99	0.995	0.050	6140754
Total Iron (Fe)	ug/L	8.7	6140754	826	283	144	631	153	1.0	6140754
Total Lead (Pb)	ug/L	0.151	6140754	0.259	0.227	0.0330	0.720	0.124	0.0050	6140754
Total Lithium (Li)	ug/L	5.32	6140754	5.24	4.20	1.94	3.57	3.19	0.50	6140754
Total Manganese (Mn)	ug/L	0.411	6140754	3010	961	14.5	310	13.7	0.050	6140754
Total Molybdenum (Mo)	ug/L	0.290	6140754	0.440	0.471	0.993	0.605	1.05	0.050	6140754
Total Nickel (Ni)	ug/L	0.428	6140754	4.71	2.34	0.579	2.43	3.62	0.020	6140754
Total Selenium (Se)	ug/L	0.105	6140754	0.298	0.516	0.606	0.467	1.04	0.040	6140754
Total Silicon (Si)	ug/L	6790	6140754	5180	4750	4670	5390	3340	100	6140754
Total Silver (Ag)	ug/L	<0.0050	6140754	<0.0050	<0.0050	<0.0050	0.0050	<0.0050	0.0050	6140754
Total Strontium (Sr)	ug/L	161	6140754	231	180	112	136	191	0.050	6140754
Total Thallium (Tl)	ug/L	0.0040	6140754	0.0270	0.0190	<0.0020	0.0160	0.0040	0.0020	6140754
Total Tin (Sn)	ug/L	<0.20	6140754	<0.20	<0.20	0.23	<0.20	<0.20	0.20	6140754
Total Titanium (Ti)	ug/L	<0.50	6140754	1.50	0.65	1.53	9.50	1.82	0.50	6140754
Total Uranium (U)	ug/L	0.639	6140754	1.46	1.17	1.50	1.39	1.65	0.0020	6140754
Total Vanadium (V)	ug/L	<0.20	6140754	<0.20	<0.20	<0.20	0.84	<0.20	0.20	6140754
Total Zinc (Zn)	ug/L	13.7	6140754	29.1	15.7	0.47	8.86	7.86	0.10	6140754
Total Zirconium (Zr)	ug/L	<0.10	6140754	<0.10	<0.10	<0.10	0.25	0.11	0.10	6140754
Total Calcium (Ca)	mg/L	40.8	6132158	70.9	51.6	38.9	42.5	46.6	0.050	6132158
Total Magnesium (Mg)	mg/L	5.25	6132158	15.6	11.5	10.5	9.73	15.0	0.050	6132158
Total Potassium (K)	mg/L	1.44	6132158	1.31	1.23	1.08	1.30	0.742	0.050	6132158
Total Sodium (Na)	mg/L	2.44	6132158	4.40	3.13	1.73	2.40	1.78	0.050	6132158
Total Sulphur (S)	mg/L	<10	6132158	56	35	<10	19	24	10	6132158

RDL = Reportable Detection Limit

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EI9182	EI9183		EI9184		EI9185		
Sampling Date		2012/08/29 12:30	2012/08/29		2012/08/30				
COC#		32486703	32486703		32486703		32486703		
	UNITS	**P4**	**BD-1**	**QC Batch**	**BD-2**	**QC Batch**	**BD-3**	**RDL**	**QC Batch**
Dissolved Metals by ICPMS									
Dissolved Aluminum (Al)	ug/L	14.8	8.89	6141272	21.9	6141272	0.63	0.20	6143815
Dissolved Antimony (Sb)	ug/L	0.168	0.084	6141272	0.027	6141272	<0.020	0.020	6143815
Dissolved Arsenic (As)	ug/L	0.517	0.342	6141272	0.170	6141272	<0.020	0.020	6143815
Dissolved Barium (Ba)	ug/L	69.9	58.4	6141272	25.9	6141272	0.030	0.020	6143815
Dissolved Beryllium (Be)	ug/L	<0.010	<0.010	6141272	0.015	6141272	<0.010	0.010	6143815
Dissolved Bismuth (Bi)	ug/L	<0.0050	<0.0050	6141272	<0.0050	6141272	<0.0050	0.0050	6143815
Dissolved Boron (B)	ug/L	<50	<50	6141272	<50	6141272	<50	50	6143815
Dissolved Cadmium (Cd)	ug/L	0.0580	0.0310	6141272	0.0070	6141272	<0.0050	0.0050	6143815
Dissolved Chromium (Cr)	ug/L	<0.10	0.16	6141272	<0.10	6141272	0.16	0.10	6143815
Dissolved Cobalt (Co)	ug/L	0.136	1.45	6141272	0.0210	6141272	<0.0050	0.0050	6143815
Dissolved Copper (Cu)	ug/L	0.982	0.890	6141272	0.625	6141272	0.086	0.050	6143815
Dissolved Iron (Fe)	ug/L	42.8	163	6141272	16.8	6141272	2.6	1.0	6143815
Dissolved Lead (Pb)	ug/L	0.0270	0.0810	6141272	0.0230	6141272	0.0100	0.0050	6143815
Dissolved Lithium (Li)	ug/L	3.13	3.92	6141272	<0.50	6141272	<0.50	0.50	6143815
Dissolved Manganese (Mn)	ug/L	99.1	964	6141272	0.839	6141272	<0.050	0.050	6143815
Dissolved Molybdenum (Mo)	ug/L	1.09	0.544	6141272	0.079	6141272	<0.050	0.050	6143815
Dissolved Nickel (Ni)	ug/L	2.46	2.34	6141272	0.174	6141272	0.129	0.020	6154719
Dissolved Selenium (Se)	ug/L	0.858	0.416	6141272	0.049	6141272	<0.040	0.040	6143815
Dissolved Silicon (Si)	ug/L	3670	4560	6141272	4720	6141272	<100	100	6143815
Dissolved Silver (Ag)	ug/L	<0.0050	<0.0050	6141272	<0.0050	6141272	<0.0050	0.0050	6143815
Dissolved Strontium (Sr)	ug/L	180	184	6141272	47.1	6141272	<0.050	0.050	6143815
Dissolved Thallium (Tl)	ug/L	0.0050	0.0200	6141272	0.0020	6141272	<0.0020	0.0020	6143815
Dissolved Tin (Sn)	ug/L	<0.20	<0.20	6141272	<0.20	6141272	<0.20	0.20	6143815
Dissolved Titanium (Ti)	ug/L	<0.50	<0.50	6141272	<0.50	6141272	<0.50	0.50	6143815
Dissolved Uranium (U)	ug/L	1.49	1.04	6141272	0.302	6141272	<0.0020	0.0020	6143815
Dissolved Vanadium (V)	ug/L	0.20	<0.20	6141272	<0.20	6141272	<0.20	0.20	6143815
Dissolved Zinc (Zn)	ug/L	2.35	14.8	6141272	0.69	6141272	0.22	0.10	6143815
Dissolved Zirconium (Zr)	ug/L	<0.10	<0.10	6141272	0.12	6141272	<0.10	0.10	6143815
Dissolved Calcium (Ca)	mg/L	43.9	50.1	6132205	8.85	6134922	0.053	0.050	6140122
Dissolved Magnesium (Mg)	mg/L	13.8	11.6	6132205	1.63	6134922	<0.050	0.050	6140122
Dissolved Potassium (K)	mg/L	0.879	1.11	6132205	0.322	6134922	<0.050	0.050	6140122
Dissolved Sodium (Na)	mg/L	2.16	3.20	6132205	1.59	6134922	<0.050	0.050	6140122
Dissolved Sulphur (S)	mg/L	20	31	6132205	<10	6134922	<10	10	6140122

RDL = Reportable Detection Limit

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EI9182	EI9183		EI9184		EI9185		
Sampling Date		2012/08/29 12:30	2012/08/29		2012/08/30				
COC#		32486703	32486703		32486703		32486703		
	UNITS	**P4**	**BD-1**	**QC Batch**	**BD-2**	**QC Batch**	**BD-3**	**RDL**	**QC Batch**
Total Metals by ICPMS									
Total Aluminum (Al)	ug/L	119	22.7	6140759	26.0	6140759	<0.20	0.20	6143992
Total Antimony (Sb)	ug/L	0.166	0.086	6140759	0.024	6140759	<0.020	0.020	6143992
Total Arsenic (As)	ug/L	0.664	0.359	6140759	0.188	6140759	<0.020	0.020	6143992
Total Barium (Ba)	ug/L	77.1	60.7	6140759	26.5	6140759	<0.020	0.020	6143992
Total Beryllium (Be)	ug/L	0.012	<0.010	6140759	0.017	6140759	<0.010	0.010	6143992
Total Bismuth (Bi)	ug/L	<0.0050	<0.0050	6140759	<0.0050	6140759	<0.0050	0.0050	6143992
Total Boron (B)	ug/L	<50	<50	6140759	<50	6140759	<50	50	6143992
Total Cadmium (Cd)	ug/L	0.0880	0.0320	6140759	0.0100	6140759	<0.0050	0.0050	6143992
Total Chromium (Cr)	ug/L	0.29	0.14	6140759	<0.10	6140759	<0.10	0.10	6143992
Total Cobalt (Co)	ug/L	0.263	1.56	6140759	0.0190	6140759	<0.0050	0.0050	6143992
Total Copper (Cu)	ug/L	1.47	1.26	6140759	0.729	6140759	<0.050	0.050	6143992
Total Iron (Fe)	ug/L	271	274	6140759	28.0	6140759	<1.0	1.0	6143992
Total Lead (Pb)	ug/L	0.259	0.246	6140759	0.0420	6140759	0.0060	0.0050	6143992
Total Lithium (Li)	ug/L	3.66	4.52	6140759	<0.50	6140759	<0.50	0.50	6143992
Total Manganese (Mn)	ug/L	113	1050	6140759	1.24	6140759	<0.050	0.050	6143992
Total Molybdenum (Mo)	ug/L	0.981	0.535	6140759	0.092	6140759	<0.050	0.050	6143992
Total Nickel (Ni)	ug/L	2.88	2.46	6140759	0.300	6140759	<0.020	0.020	6143992
Total Selenium (Se)	ug/L	0.867	0.338	6140759	0.046	6140759	<0.040	0.040	6143992
Total Silicon (Si)	ug/L	4080	4880	6140759	5020	6140759	<100	100	6143992
Total Silver (Ag)	ug/L	0.0050	<0.0050	6140759	<0.0050	6140759	<0.0050	0.0050	6143992
Total Strontium (Sr)	ug/L	182	188	6140759	48.1	6140759	<0.050	0.050	6143992
Total Thallium (Tl)	ug/L	0.0080	0.0220	6140759	0.0030	6140759	<0.0020	0.0020	6143992
Total Tin (Sn)	ug/L	<0.20	<0.20	6140759	<0.20	6140759	<0.20	0.20	6143992
Total Titanium (Ti)	ug/L	3.89	<0.50	6140759	<0.50	6140759	<0.50	0.50	6143992
Total Uranium (U)	ug/L	1.50	1.07	6140759	0.312	6140759	<0.0020	0.0020	6143992
Total Vanadium (V)	ug/L	0.56	<0.20	6140759	<0.20	6140759	<0.20	0.20	6143992
Total Zinc (Zn)	ug/L	6.31	16.9	6140759	0.60	6140759	<0.10(1)	0.10	6143992
Total Zirconium (Zr)	ug/L	0.10	<0.10	6140759	0.12	6140759	<0.10	0.10	6143992
Total Calcium (Ca)	mg/L	45.2	51.8	6132158	9.09	6132158	<0.050	0.050	6140123
Total Magnesium (Mg)	mg/L	13.9	12.2	6132158	1.69	6132158	<0.050	0.050	6140123
Total Potassium (K)	mg/L	0.922	1.18	6132158	0.332	6132158	<0.050	0.050	6140123
Total Sodium (Na)	mg/L	2.13	3.23	6132158	1.62	6132158	<0.050	0.050	6140123
Total Sulphur (S)	mg/L	21	34	6132158	<10	6132158	<10	10	6140123

RDL = Reportable Detection Limit
(1) - Matrix Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

General Comments

Sample EI9152-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9153-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9154-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9155-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9156-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9157-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9158-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9159-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9160-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9161-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9162-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9163-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9164-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9165-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory

pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9166-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9167-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9168-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9169-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9170-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9171-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9182-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9183-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9184-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9185-01: The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EI9162, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample EI9164, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample EI9166, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample EI9185, Elements by ICPMS Low Level (dissolved): Test repeated.

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6135300	Turbidity	2012/09/01			104	80 - 120	<0.10	NTU	2.8	20
6135931	Nitrate plus Nitrite (N)	2012/09/02	102	80 - 120	103	80 - 120	<0.0020	mg/L	NC	25
6135932	Nitrite (N)	2012/09/02	99	80 - 120	96	80 - 120	<0.0020	mg/L	NC	25
6136535	Ammonia (N)	2012/09/04	91	80 - 120	100	80 - 120	<0.0050	mg/L	0	20
6136670	Total Suspended Solids	2012/09/04			99	80 - 120	<1.0	mg/L		
6137110	Turbidity	2012/09/04			102	80 - 120	<0.10	NTU	0.4	20
6138467	Dissolved Chloride (Cl)	2012/09/04			102	80 - 120	<0.50	mg/L	NC	20
6138473	Dissolved Sulphate (SO4)	2012/09/04			102	80 - 120	<0.50	mg/L	1.4	20
6139142	Total Dissolved Solids	2012/09/06	NC	80 - 120	110	80 - 120	<10	mg/L	0.4	20
6139387	Alkalinity (Total as CaCO3)	2012/09/05	NC	80 - 120	96	80 - 120	<0.50	mg/L	7.1	20
6139387	Alkalinity (PP as CaCO3)	2012/09/05					<0.50	mg/L	NC	20
6139387	Bicarbonate (HCO3)	2012/09/05					<0.50	mg/L	7.1	20
6139387	Carbonate (CO3)	2012/09/05					<0.50	mg/L	NC	20
6139387	Hydroxide (OH)	2012/09/05					<0.50	mg/L	NC	20
6139388	Conductivity	2012/09/05			99	80 - 120	<1.0	uS/cm	0.2	20
6140048	Total Suspended Solids	2012/09/05			105	80 - 120	<1.0	mg/L		
6140753	Dissolved Aluminum (Al)	2012/09/07	105	80 - 120	107	80 - 120	<0.20	ug/L	5.7	20
6140753	Dissolved Antimony (Sb)	2012/09/07	101	80 - 120	104	80 - 120	<0.020	ug/L	NC	20
6140753	Dissolved Arsenic (As)	2012/09/07	101	80 - 120	92	80 - 120	<0.020	ug/L	5.0	20
6140753	Dissolved Barium (Ba)	2012/09/07	NC	80 - 120	98	80 - 120	<0.020	ug/L	2.0	20
6140753	Dissolved Beryllium (Be)	2012/09/07	114	80 - 120	102	80 - 120	<0.010	ug/L	NC	20
6140753	Dissolved Bismuth (Bi)	2012/09/07	95	80 - 120	99	80 - 120	<0.0050	ug/L	NC	20
6140753	Dissolved Cadmium (Cd)	2012/09/07	103	80 - 120	104	80 - 120	<0.0050	ug/L	NC	20
6140753	Dissolved Chromium (Cr)	2012/09/07	96	80 - 120	105	80 - 120	0.13, RDL=0.10	ug/L	NC	20
6140753	Dissolved Cobalt (Co)	2012/09/07	97	80 - 120	99	80 - 120	<0.0050	ug/L	NC	20
6140753	Dissolved Copper (Cu)	2012/09/07	98	80 - 120	101	80 - 120	<0.050	ug/L	6.2	20
6140753	Dissolved Iron (Fe)	2012/09/07	101	80 - 120	109	80 - 120	<1.0	ug/L	23.6(1)	20
6140753	Dissolved Lead (Pb)	2012/09/07	100	80 - 120	102	80 - 120	<0.0050	ug/L	NC	20
6140753	Dissolved Lithium (Li)	2012/09/07	99	80 - 120	98	80 - 120	<0.50	ug/L	NC	20
6140753	Dissolved Manganese (Mn)	2012/09/07	99	80 - 120	100	80 - 120	<0.050	ug/L	7.2	20
6140753	Dissolved Molybdenum (Mo)	2012/09/07	96	80 - 120	99	80 - 120	<0.050	ug/L	NC	20
6140753	Dissolved Nickel (Ni)	2012/09/07	100	80 - 120	101	80 - 120	<0.020	ug/L	15.1	20
6140753	Dissolved Selenium (Se)	2012/09/07	113	80 - 120	97	80 - 120	<0.040	ug/L	NC	20
6140753	Dissolved Silver (Ag)	2012/09/07	101	80 - 120	109	80 - 120	<0.0050	ug/L	NC	20
6140753	Dissolved Strontium (Sr)	2012/09/07	NC	80 - 120	98	80 - 120	<0.050	ug/L	5.3	20
6140753	Dissolved Thallium (Tl)	2012/09/07	100	80 - 120	102	80 - 120	<0.0020	ug/L	NC	20
6140753	Dissolved Tin (Sn)	2012/09/07	102	80 - 120	113	80 - 120	<0.20	ug/L	NC	20
6140753	Dissolved Titanium (Ti)	2012/09/07	105	80 - 120	94	80 - 120	<0.50	ug/L	NC	20
6140753	Dissolved Uranium (U)	2012/09/07	99	80 - 120	99	80 - 120	<0.0020	ug/L	5.8	20
6140753	Dissolved Vanadium (V)	2012/09/07	102	80 - 120	98	80 - 120	<0.20	ug/L	NC	20

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6140753	Dissolved Zinc (Zn)	2012/09/07	119	80 - 120	108	80 - 120	<0.10	ug/L	0.8	20
6140753	Dissolved Boron (B)	2012/09/07					<50	ug/L	NC	20
6140753	Dissolved Silicon (Si)	2012/09/07					<100	ug/L	31.7(1)	20
6140753	Dissolved Zirconium (Zr)	2012/09/07					<0.10	ug/L	NC	20
6140754	Total Aluminum (Al)	2012/09/07	96	80 - 120	102	80 - 120	<0.20	ug/L	3.0	20
6140754	Total Antimony (Sb)	2012/09/07	101	80 - 120	101	80 - 120	<0.020	ug/L	NC	20
6140754	Total Arsenic (As)	2012/09/07	99	80 - 120	93	80 - 120	<0.020	ug/L	7.5	20
6140754	Total Barium (Ba)	2012/09/07	NC	80 - 120	95	80 - 120	<0.020	ug/L	0.2	20
6140754	Total Beryllium (Be)	2012/09/07	104	80 - 120	95	80 - 120	<0.010	ug/L	NC	20
6140754	Total Bismuth (Bi)	2012/09/07	89	80 - 120	98	80 - 120	<0.0050	ug/L	NC	20
6140754	Total Cadmium (Cd)	2012/09/07	100	80 - 120	98	80 - 120	<0.0050	ug/L	NC	20
6140754	Total Chromium (Cr)	2012/09/07	89	80 - 120	92	80 - 120	<0.10	ug/L	NC	20
6140754	Total Cobalt (Co)	2012/09/07	91	80 - 120	98	80 - 120	<0.0050	ug/L	NC	20
6140754	Total Copper (Cu)	2012/09/07	87	80 - 120	90	80 - 120	<0.050	ug/L	11.6	20
6140754	Total Iron (Fe)	2012/09/07	103	80 - 120	105	80 - 120	<1.0	ug/L	2.5	20
6140754	Total Lead (Pb)	2012/09/07	96	80 - 120	101	80 - 120	<0.0050	ug/L	4.0	20
6140754	Total Lithium (Li)	2012/09/07	98	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
6140754	Total Manganese (Mn)	2012/09/07	95	80 - 120	97	80 - 120	<0.050	ug/L	10.4	20
6140754	Total Molybdenum (Mo)	2012/09/07	90	80 - 120	93	80 - 120	<0.050	ug/L	2.3	20
6140754	Total Nickel (Ni)	2012/09/07	92	80 - 120	94	80 - 120	<0.020	ug/L	26.2(1)	20
6140754	Total Selenium (Se)	2012/09/07	100	80 - 120	94	80 - 120	<0.040	ug/L	NC	20
6140754	Total Silver (Ag)	2012/09/07	94	80 - 120	99	80 - 120	<0.0050	ug/L	NC	20
6140754	Total Strontium (Sr)	2012/09/07	NC	80 - 120	96	80 - 120	<0.050	ug/L	0.2	20
6140754	Total Thallium (Tl)	2012/09/07	96	80 - 120	102	80 - 120	<0.0020	ug/L	NC	20
6140754	Total Tin (Sn)	2012/09/07	98	80 - 120	103	80 - 120	<0.20	ug/L	NC	20
6140754	Total Titanium (Ti)	2012/09/07	101	80 - 120	92	80 - 120	<0.50	ug/L	NC	20
6140754	Total Uranium (U)	2012/09/07	93	80 - 120	98	80 - 120	<0.0020	ug/L	4.9	20
6140754	Total Vanadium (V)	2012/09/07	98	80 - 120	96	80 - 120	<0.20	ug/L	NC	20
6140754	Total Zinc (Zn)	2012/09/07	105	80 - 120	102	80 - 120	<0.10	ug/L	12.8	20
6140754	Total Boron (B)	2012/09/07					<50	ug/L	NC	20
6140754	Total Silicon (Si)	2012/09/07					<100	ug/L	1.2	20
6140754	Total Zirconium (Zr)	2012/09/07					<0.10	ug/L	NC	20
6140759	Total Aluminum (Al)	2012/09/08	105	80 - 120	104	80 - 120	<0.20	ug/L	NC	20
6140759	Total Antimony (Sb)	2012/09/08	102	80 - 120	100	80 - 120	<0.020	ug/L	NC	20
6140759	Total Arsenic (As)	2012/09/08	102	80 - 120	103	80 - 120	<0.020	ug/L	NC	20
6140759	Total Barium (Ba)	2012/09/08	99	80 - 120	101	80 - 120	<0.020	ug/L	NC	20
6140759	Total Beryllium (Be)	2012/09/08	108	80 - 120	105	80 - 120	<0.010	ug/L	NC	20
6140759	Total Bismuth (Bi)	2012/09/08	100	80 - 120	100	80 - 120	<0.0050	ug/L	NC	20
6140759	Total Cadmium (Cd)	2012/09/08	104	80 - 120	101	80 - 120	<0.0050	ug/L	NC	20
6140759	Total Chromium (Cr)	2012/09/08	100	80 - 120	102	80 - 120	<0.10	ug/L	NC	20

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6140759	Total Cobalt (Co)	2012/09/08	98	80 - 120	100	80 - 120	<0.0050	ug/L	NC	20
6140759	Total Copper (Cu)	2012/09/08	99	80 - 120	100	80 - 120	<0.050	ug/L	NC	20
6140759	Total Iron (Fe)	2012/09/08	106	80 - 120	107	80 - 120	<1.0	ug/L		
6140759	Total Lead (Pb)	2012/09/08	98	80 - 120	98	80 - 120	<0.0050	ug/L		
6140759	Total Lithium (Li)	2012/09/08	110	80 - 120	110	80 - 120	<0.50	ug/L	NC	20
6140759	Total Manganese (Mn)	2012/09/08	102	80 - 120	102	80 - 120	<0.050	ug/L	NC	20
6140759	Total Molybdenum (Mo)	2012/09/08	100	80 - 120	104	80 - 120	<0.050	ug/L	NC	20
6140759	Total Nickel (Ni)	2012/09/08	100	80 - 120	102	80 - 120	<0.020	ug/L		
6140759	Total Selenium (Se)	2012/09/08	110	80 - 120	104	80 - 120	<0.040	ug/L	NC	20
6140759	Total Silver (Ag)	2012/09/08	101	80 - 120	99	80 - 120	<0.0050	ug/L	NC	20
6140759	Total Strontium (Sr)	2012/09/08	99	80 - 120	98	80 - 120	<0.050	ug/L	NC	20
6140759	Total Thallium (Tl)	2012/09/08	100	80 - 120	101	80 - 120	<0.0020	ug/L	NC	20
6140759	Total Tin (Sn)	2012/09/08	101	80 - 120	104	80 - 120	<0.20	ug/L	NC	20
6140759	Total Titanium (Ti)	2012/09/08	109	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
6140759	Total Uranium (U)	2012/09/08	94	80 - 120	94	80 - 120	<0.0020	ug/L	NC	20
6140759	Total Vanadium (V)	2012/09/08	99	80 - 120	100	80 - 120	<0.20	ug/L	NC	20
6140759	Total Zinc (Zn)	2012/09/08	111	80 - 120	109	80 - 120	<0.10	ug/L	NC	20
6140759	Total Boron (B)	2012/09/08					<50	ug/L	NC	20
6140759	Total Silicon (Si)	2012/09/08					<100	ug/L	NC	20
6140759	Total Zirconium (Zr)	2012/09/08					<0.10	ug/L	NC	20
6141272	Dissolved Aluminum (Al)	2012/09/09	104	80 - 120	105	80 - 120	<0.20	ug/L	NC	20
6141272	Dissolved Antimony (Sb)	2012/09/09	102	80 - 120	100	80 - 120	<0.020	ug/L	NC	20
6141272	Dissolved Arsenic (As)	2012/09/09	99	80 - 120	101	80 - 120	<0.020	ug/L	NC	20
6141272	Dissolved Barium (Ba)	2012/09/09	97	80 - 120	99	80 - 120	<0.020	ug/L	NC	20
6141272	Dissolved Beryllium (Be)	2012/09/09	97	80 - 120	95	80 - 120	<0.010	ug/L	NC	20
6141272	Dissolved Bismuth (Bi)	2012/09/09	99	80 - 120	98	80 - 120	<0.0050	ug/L	NC	20
6141272	Dissolved Cadmium (Cd)	2012/09/09	100	80 - 120	100	80 - 120	<0.0050	ug/L	NC	20
6141272	Dissolved Chromium (Cr)	2012/09/09	101	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
6141272	Dissolved Cobalt (Co)	2012/09/09	99	80 - 120	100	80 - 120	<0.0050	ug/L	NC	20
6141272	Dissolved Copper (Cu)	2012/09/09	98	80 - 120	100	80 - 120	<0.050	ug/L	2.1	20
6141272	Dissolved Iron (Fe)	2012/09/09	104	80 - 120	104	80 - 120	<1.0	ug/L	NC	20
6141272	Dissolved Lead (Pb)	2012/09/09	96	80 - 120	97	80 - 120	<0.0050	ug/L	NC	20
6141272	Dissolved Lithium (Li)	2012/09/09	97	80 - 120	96	80 - 120	<0.50	ug/L	NC	20
6141272	Dissolved Manganese (Mn)	2012/09/09	101	80 - 120	102	80 - 120	<0.050	ug/L	NC	20
6141272	Dissolved Molybdenum (Mo)	2012/09/09	97	80 - 120	100	80 - 120	<0.050	ug/L	NC	20
6141272	Dissolved Nickel (Ni)	2012/09/09	102	80 - 120	104	80 - 120	<0.020	ug/L	NC	20
6141272	Dissolved Selenium (Se)	2012/09/09	101	80 - 120	102	80 - 120	<0.040	ug/L	NC	20
6141272	Dissolved Silver (Ag)	2012/09/09	100	80 - 120	100	80 - 120	<0.0050	ug/L	NC	20
6141272	Dissolved Strontium (Sr)	2012/09/09	95	80 - 120	96	80 - 120	<0.050	ug/L	NC	20
6141272	Dissolved Thallium (Tl)	2012/09/09	100	80 - 120	101	80 - 120	<0.0020	ug/L	NC	20

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6141272	Dissolved Tin (Sn)	2012/09/09	102	80 - 120	104	80 - 120	<0.20	ug/L	NC	20
6141272	Dissolved Titanium (Ti)	2012/09/09	107	80 - 120	104	80 - 120	<0.50	ug/L	NC	20
6141272	Dissolved Uranium (U)	2012/09/09	91	80 - 120	92	80 - 120	<0.0020	ug/L	NC	20
6141272	Dissolved Vanadium (V)	2012/09/09	100	80 - 120	101	80 - 120	<0.20	ug/L	NC	20
6141272	Dissolved Zinc (Zn)	2012/09/09	112	80 - 120	106	80 - 120	<0.10	ug/L	NC	20
6141272	Dissolved Boron (B)	2012/09/09					<50	ug/L	NC	20
6141272	Dissolved Silicon (Si)	2012/09/09					<100	ug/L	NC	20
6141272	Dissolved Zirconium (Zr)	2012/09/09					<0.10	ug/L	NC	20
6141915	Total Dissolved Solids	2012/09/05	NC	80 - 120	100	80 - 120	<10	mg/L	0.3	20
6143815	Dissolved Aluminum (Al)	2012/09/08	108	80 - 120	111	80 - 120	<0.20	ug/L	NC	20
6143815	Dissolved Antimony (Sb)	2012/09/08	104	80 - 120	104	80 - 120	<0.020	ug/L	NC	20
6143815	Dissolved Arsenic (As)	2012/09/08	104	80 - 120	102	80 - 120	<0.020	ug/L	NC	20
6143815	Dissolved Barium (Ba)	2012/09/08	104	80 - 120	104	80 - 120	<0.020	ug/L	NC	20
6143815	Dissolved Beryllium (Be)	2012/09/08	102	80 - 120	99	80 - 120	<0.010	ug/L	NC	20
6143815	Dissolved Bismuth (Bi)	2012/09/08	104	80 - 120	105	80 - 120	<0.0050	ug/L	NC	20
6143815	Dissolved Cadmium (Cd)	2012/09/08	105	80 - 120	105	80 - 120	<0.0050	ug/L	NC	20
6143815	Dissolved Chromium (Cr)	2012/09/08	102	80 - 120	100	80 - 120	<0.10	ug/L	NC	20
6143815	Dissolved Cobalt (Co)	2012/09/08	100	80 - 120	100	80 - 120	<0.0050	ug/L	NC	20
6143815	Dissolved Copper (Cu)	2012/09/08	101	80 - 120	100	80 - 120	<0.050	ug/L	NC	20
6143815	Dissolved Iron (Fe)	2012/09/08	110	80 - 120	113	80 - 120	<1.0	ug/L	NC	20
6143815	Dissolved Lead (Pb)	2012/09/08	101	80 - 120	103	80 - 120	<0.0050	ug/L	NC	20
6143815	Dissolved Lithium (Li)	2012/09/08	101	80 - 120	101	80 - 120	<0.50	ug/L	NC	20
6143815	Dissolved Manganese (Mn)	2012/09/08	103	80 - 120	119	80 - 120	<0.050	ug/L	NC	20
6143815	Dissolved Molybdenum (Mo)	2012/09/08	105	80 - 120	104	80 - 120	<0.050	ug/L	NC	20
6143815	Dissolved Selenium (Se)	2012/09/08	106	80 - 120	109	80 - 120	<0.040	ug/L	NC	20
6143815	Dissolved Silver (Ag)	2012/09/08	105	80 - 120	105	80 - 120	<0.0050	ug/L	NC	20
6143815	Dissolved Strontium (Sr)	2012/09/08	101	80 - 120	102	80 - 120	<0.050	ug/L	NC	20
6143815	Dissolved Thallium (Tl)	2012/09/08	104	80 - 120	108	80 - 120	<0.0020	ug/L	NC	20
6143815	Dissolved Tin (Sn)	2012/09/08	108	80 - 120	118	80 - 120	<0.20	ug/L	NC	20
6143815	Dissolved Titanium (Ti)	2012/09/08	109	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
6143815	Dissolved Uranium (U)	2012/09/08	97	80 - 120	100	80 - 120	<0.0020	ug/L	NC	20
6143815	Dissolved Vanadium (V)	2012/09/08	104	80 - 120	100	80 - 120	<0.20	ug/L	NC	20
6143815	Dissolved Zinc (Zn)	2012/09/08	124(1)	80 - 120	119	80 - 120	<0.10	ug/L	NC	20
6143815	Dissolved Boron (B)	2012/09/08					<50	ug/L	NC	20
6143815	Dissolved Silicon (Si)	2012/09/08					<100	ug/L	NC	20
6143815	Dissolved Zirconium (Zr)	2012/09/08					<0.10	ug/L	NC	20
6143822	Ammonia (N)	2012/09/06	91	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20
6143899	Total Suspended Solids	2012/09/06			103	80 - 120	<1.0	mg/L		
6143992	Total Aluminum (Al)	2012/09/06	99	80 - 120	101	80 - 120	<0.20	ug/L	NC	20
6143992	Total Antimony (Sb)	2012/09/06	103	80 - 120	99	80 - 120	<0.020	ug/L	NC	20

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6143992	Total Arsenic (As)	2012/09/06	104	80 - 120	102	80 - 120	<0.020	ug/L	NC	20
6143992	Total Barium (Ba)	2012/09/06	98	80 - 120	97	80 - 120	<0.020	ug/L	NC	20
6143992	Total Beryllium (Be)	2012/09/06	98	80 - 120	96	80 - 120	<0.010	ug/L	NC	20
6143992	Total Bismuth (Bi)	2012/09/06	98	80 - 120	95	80 - 120	<0.0050	ug/L	NC	20
6143992	Total Cadmium (Cd)	2012/09/06	104	80 - 120	99	80 - 120	<0.0050	ug/L	NC	20
6143992	Total Chromium (Cr)	2012/09/06	101	80 - 120	105	80 - 120	<0.10	ug/L	NC	20
6143992	Total Cobalt (Co)	2012/09/06	100	80 - 120	105	80 - 120	<0.0050	ug/L	NC	20
6143992	Total Copper (Cu)	2012/09/06	103	80 - 120	102	80 - 120	<0.050	ug/L	NC	20
6143992	Total Iron (Fe)	2012/09/06	99	80 - 120	95	80 - 120	<1.0	ug/L	NC	20
6143992	Total Lead (Pb)	2012/09/06	99	80 - 120	98	80 - 120	<0.0050	ug/L	NC	20
6143992	Total Lithium (Li)	2012/09/06	94	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
6143992	Total Manganese (Mn)	2012/09/06	101	80 - 120	101	80 - 120	<0.050	ug/L	NC	20
6143992	Total Molybdenum (Mo)	2012/09/06	102	80 - 120	100	80 - 120	<0.050	ug/L	NC	20
6143992	Total Nickel (Ni)	2012/09/06	101	80 - 120	104	80 - 120	<0.020	ug/L	NC	20
6143992	Total Selenium (Se)	2012/09/06	114	80 - 120	105	80 - 120	<0.040	ug/L	NC	20
6143992	Total Silver (Ag)	2012/09/06	104	80 - 120	99	80 - 120	<0.0050	ug/L	NC	20
6143992	Total Strontium (Sr)	2012/09/06	100	80 - 120	100	80 - 120	<0.050	ug/L	NC	20
6143992	Total Thallium (Tl)	2012/09/06	104	80 - 120	101	80 - 120	<0.0020	ug/L	NC	20
6143992	Total Tin (Sn)	2012/09/06	109	80 - 120	105	80 - 120	<0.20	ug/L	NC	20
6143992	Total Titanium (Ti)	2012/09/06	96	80 - 120	107	80 - 120	<0.50	ug/L	NC	20
6143992	Total Uranium (U)	2012/09/06	99	80 - 120	97	80 - 120	<0.0020	ug/L	NC	20
6143992	Total Vanadium (V)	2012/09/06	98	80 - 120	105	80 - 120	<0.20	ug/L	NC	20
6143992	Total Zinc (Zn)	2012/09/06	129(1)	80 - 120	127(1, 2)	80 - 120	<0.10	ug/L	NC	20
6143992	Total Boron (B)	2012/09/06					<50	ug/L	NC	20
6143992	Total Silicon (Si)	2012/09/06					<100	ug/L	NC	20
6143992	Total Zirconium (Zr)	2012/09/06					<0.10	ug/L	NC	20
6145827	Dissolved Chloride (Cl)	2012/09/06			100	80 - 120	<0.50	mg/L	1.2	20
6145892	Dissolved Sulphate (SO4)	2012/09/06	NC	80 - 120	103	80 - 120	<0.50	mg/L	0.8	20
6146123	Total Dissolved Solids	2012/09/06	NC	80 - 120	104	80 - 120	<10	mg/L	4.0	20
6146320	Nitrate plus Nitrite (N)	2012/09/06	104	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
6146323	Nitrite (N)	2012/09/06	84	80 - 120	100	80 - 120	<0.0020	mg/L	NC	25
6146522	Dissolved Organic Carbon (C)	2012/09/07	NC	80 - 120	104	80 - 120	<0.50	mg/L	9.4	20
6146616	Total Organic Carbon (C)	2012/09/07	108	80 - 120	108	80 - 120	<0.50	mg/L	2.8	20
6147929	Alkalinity (Total as CaCO3)	2012/09/07	107	80 - 120	97	80 - 120	<0.50	mg/L	NC	20
6147929	Alkalinity (PP as CaCO3)	2012/09/07					<0.50	mg/L	NC	20
6147929	Bicarbonate (HCO3)	2012/09/07					<0.50	mg/L	NC	20
6147929	Carbonate (CO3)	2012/09/07					<0.50	mg/L	NC	20
6147929	Hydroxide (OH)	2012/09/07					<0.50	mg/L	NC	20
6147966	Conductivity	2012/09/07			99	80 - 120	<1.0	uS/cm	NC	20
6148111	Turbidity	2012/09/07			102	80 - 120	<0.10	NTU	4.6	20

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

Sampler Initials: BB

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6154719	Dissolved Lead (Pb)	2012/09/10			98	80 - 120	<0.0050	ug/L		
6154719	Dissolved Nickel (Ni)	2012/09/10			101	80 - 120	<0.020	ug/L		
6154719	Dissolved Zinc (Zn)	2012/09/10			108	80 - 120	<0.10	ug/L		
6155349	Dissolved Organic Carbon (C)	2012/09/10	107	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
6155357	Total Organic Carbon (C)	2012/09/10	107	80 - 120	105	80 - 120	<0.50	mg/L	NC	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.

Maxxam Job #: B278117
Report Date: 2012/09/12

LABERGE ENVIRONMENTAL SERVICES
Client Project #: B12-090-DL PELLY R. ECOSYSTEM

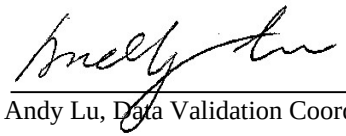
Sampler Initials: BB

(1) - Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.
(2) - Blank Spike outside acceptance criteria (10% of analytes failure allowed).

Validation Signature Page

Maxxam Job #: B278117

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Andy Lu, Data Validation Coordinator

==========

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.

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CHAIN OF CUSTODY RECORD

INVOICE INFORMATION:		REPORT INFORMATION (if differs from invoice):		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#3673 LABERGE ENVIRONMENTAL SERVICES	Company Name:		Quotation #:	B20552	MAXXAM JOB #: B278117	BOTTLE ORDER #: 324867
Contact Name:	Bonnie Burns	Contact Name:		P.O. #:			
Address:	405 Ogilvie Street PO Box 21072 Whitehorse YT Y1A 6P7	Address:		Project #:	B12-090-DL	CHAIN OF CUSTODY #: C#324867-01-01	PROJECT MANAGER: Tabcha Rudkin
Phone:	(867)668-6838 Fax:	Phone:	Fax:	Project Name:	Kelly R. Ecosystem		
Email:	bonnieburns@northwestel.net	Email:		Site #:			
				Sampled By:	B. Burns, D. Davidge		

REGULATORY CRITERIA:

SPECIAL INSTRUCTIONS:

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

ANALYSIS REQUESTED (Please be specific):

TURNAROUND TIME (TAT) REQUIRED:

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:
Rush Confirmation Number: (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water? (Y/N)	Metals Field Filtered (Y/N)	Low Level Dissolved Metals in Water	Low Level Total Metals in Water	General Chem (pH,EC, TDS, TSS, turb)	Nitrate, Nitrite (low), SO4, Cl, Alk.	TOC, NH4	DOC	# of Bottles	Comments
1	VR	E19152	Aug30	09:15	H_2O		✓	✓	✓	✓	✓	✓	✓	6	all samples
2	V17A	53	Aug30	10:15	H_2O		✓	✓	✓	✓	✓	✓	✓	6	have been
3	VW3	54	Aug29	15:25	H_2O		✓	✓	✓	✓	✓	✓	✓	6	filtered &
4	VW1	55	Aug29	16:00	H_2O		✓	✓	✓	✓	✓	✓	✓	6	preserved in
5	VW2	56	Aug29	16:30	H_2O		✓	✓	✓	✓	✓	✓	✓	6	the field
6	V20A	57	Aug30	11:20	H_2O		✓	✓	✓	✓	✓	✓	✓	6	following
7	VGMAIN	58	Aug29	14:35	H_2O		✓	✓	✓	✓	✓	✓	✓	6	appropriate
8	V8	59	Aug29	17:00	H_2O		✓	✓	✓	✓	✓	✓	✓	6	protocols.
9	USFR	60	Aug30	09:45	H_2O		✓	✓	✓	✓	✓	✓	✓	6	
10	GCULV	61	Aug28	18:00	H_2O		✓	✓	✓	✓	✓	✓	✓	6	

B278117

*RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time:	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time:	# Jars Used and Not Submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
			Laurel Gardner	10/24/08/31	14:15		☐	7, 8, 8/9, 8, 10 NA	☐ Yes ☐ No

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

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7.6.5

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CHAIN OF CUSTODY RECORD

INVOICE INFORMATION:		REPORT INFORMATION (if differs from invoice):		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#3673 LABERGE ENVIRONMENTAL SERVICES	Company Name:		Quotation #:	B20552	MAXXAM JOB #: B278117	BOTTLE ORDER #: 324667
Contact Name:	Bonnie Burns	Contact Name:		P.O. #:			
Address:	405 Ogilvie Street PO Box 21072 Whitehorse YT Y1A 6P7	Address:		Project #:	B12-090-DL	CHAIN OF CUSTODY #: C#324667-02-01	PROJECT MANAGER: Tabitha Rudkin
Phone:	(867)668-6838 Fax:	Phone:	Fax:	Project Name:			
Email:	bonnieburns@northwestel.net	Email:		Site #:			
				Sampled By:			

REGULATORY CRITERIA:

SPECIAL INSTRUCTIONS

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

ANALYSIS REQUESTED (Please be specific):

TURNAROUND TIME (TAT) REQUIRED:

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Regular (Standard) TAT: ☐
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as ROD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission) ☐
Date Required: Time Required:
Rush Confirmation Number: (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water? (Y/N)	Metals Field Filtered? (Y/N)	Low Level Dissolved Metals in Water	Low Level Total Metals in Water	General Chem (pH,EC,TDS,TSS,turb)	Nitrate, Nitrite (low), SO4, Cl, Alk.	TOC, NH4	DOC	# of Bottles	Comments
1	K8	E19162	Aug 28	17:45	H2O			✓	✓	✓	✓	✓	✓	✓	6	
2	R1	63	Aug 30	13:00	H2O			✓	✓	✓	✓	✓	✓	✓	6	
3	FC	64	Aug 28	16:10	H2O			✓	✓	✓	✓	✓	✓	✓	6	
4	W10	65	Aug 28	15:05	H2O			✓	✓	✓	✓	✓	✓	✓	6	
5	NWID	66	Aug 28	14:30	H2O			✓	✓	✓	✓	✓	✓	✓	6	
6	X14	67	Aug 28	16:50	H2O			✓	✓	✓	✓	✓	✓	✓	6	
7	R4	68	Aug 29	10:30	H2O			✓	✓	✓	✓	✓	✓	✓	6	
8	R6	69	Aug 29	09:45	H2O			✓	✓	✓	✓	✓	✓	✓	6	
9	A1	70	Aug 29	12:30	H2O			✓	✓	✓	✓	✓	✓	✓	6	
10	P1	71	Aug 29	13:10	H2O			✓	✓	✓	✓	✓	✓	✓	6	

B278117

*RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time:	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time:	# Jars Used and Not Submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
			Laurel Berthier	2012/08/31	14:15		☐	7,8,8 / 9,8,10	NA ☐ Yes ☐ No

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

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CHAIN OF CUSTODY RECORD

INVOICE INFORMATION		REPORT INFORMATION (if differs from invoice)		PROJECT INFORMATION		Laboratory Use Only	
Company Name:	#3673 LABERGE ENVIRONMENTAL SERVICES	Company Name:		Quotation #:	B20552	MAXXAM JOB #: B278117	BOTTLE ORDER #: 324867
Contact Name:	Bonnie Burns	Contact Name:		P.O. #:			
Address:	405 Ogilvie Street PO Box 21072	Address:		Project #:	B12-090-DL	CHAIN OF CUSTODY #: C#324867-03-01	PROJECT MANAGER: Tabitha Rudkin
	Whitehorse YT Y1A 6P7			Project Name:			
Phone:	(867)668-6838 Fax:	Phone:	Fax:	Site #:			
Email:	bonnieburns@northwestel.net	Email:		Sampled By:			

REGULATORY CRITERIA:

SPECIAL INSTRUCTIONS:

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

TURNAROUND TIME (TAT) REQUIRED:

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____
Rush Confirmation Number: _____ (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y/N)	Metals Field Filtered ? (Y/N)	Low Level Dissolved Metals in Water	Low Level Total Metals in Water	General Chem (pH,EC,TDS,TSS,turb)	Nitrate, Nitrite (low), SO4, Cl, Alk.	TOC, NH4	DOC	# of Bottles	Comments
1	PH	E19182	Aug29	12:30	H_2O		✓	✓	✓	✓	✓	✓	✓	6	
2	BD-1	83	Aug29		H_2O		✓	✓	✓	✓	✓	✓	✓	6	
3	BD-2	84	Aug30		H_2O		✓	✓	✓	✓	✓	✓	✓	6	
4	Field Blank (FB)		Aug30		H_2O		✓	✓	✓	✓	✓	✓	✓	6	
5															
6															
7															
8															
9															
10															

B278117

*RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time:	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time:	# Jars Used and Not Submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
			Laurel Barthier	2012/08/31	14:15		☐	7,8,8/9,8,10	NA ☐ Yes ☐ No

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

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