

April 3, 2009

Mr. Bill Renfro Railroad Commission of Texas Oil and Gas Division Site Remediation Section P.O. Box 12967 Austin, TX 78711-2967

#### Subject: Final Letter Report – Summary of the January 2009 Site-wide Groundwater and Surface Water Monitoring Event Dugout Creek Area, Howard and Mitchell Counties Cleanup Code #CU-04-54102, Requisition No. 455-4-0284

#### Dear Mr. Renfro:

INTERA personnel mobilized to the Dugout Creek area including the O'Ryan and Pharaoh Seeps on January 26, 2009, to conduct a site-wide groundwater and surface water monitoring event as described in the Work Plan developed for these field activities by INTERA in November 2008.

Water levels in monitor wells along Dugout Creek and in monitor wells around Pharaoh Seep were measured on January 26, 2009, and water levels in monitor wells around O'Ryan Seep were measured on January 27, 2009. Groundwater elevations were lower in the wells by one to four feet as compared to those measured during the previous site-wide monitoring event in January 2008 with the exception of MW-O-15 where a drop of 10 feet was noted. Flow directions based on data measured in January 2009 are similar to those in January 2008. Potentiometric surface maps for the O'Ryan Seep area and the Pharaoh Seep area have been updated with January 2009 data and are provided as Figure 1 and Figure 2. Groundwater elevation data are summarized in Table 1.

A total of 37 groundwater monitor wells are present in the Dugout Creek, O'Ryan Seep and Pharaoh Seep study area. At the time of the site-wide monitoring event, MW-D-09, MW-O-02, MW-O-04 and MW-P-07 were dry and were not sampled. As noted in previous reports, MW-O-7 has been washed out and a hand auger was used to dig a hole adjacent to the former well from which a groundwater sample was collected. A surface water sample was not collected from Dugout Creek as it was dry. O'Ryan Seep was flowing; but a pool of surface water suitable for sampling was not present; therefore, a water sample was collected from a shallow hole excavated near the base of the seep. Pharaoh Seep was not flowing; but, at the recommendation of Tim Prude, RRC Midland District office site remediation coordinator, a shallow hole was also excavated at this seep location and a water sample was collected from the excavation.

Six wells in the seep areas were sampled using a bladder pump and analyzed for BTEX constituents (MW-07-1, MW-O-21, the shallow boring adjacent to MW-O-7, MW-P-1, MW-P-9, and FINA-01). Benzene was detected in two of the wells (FINA-01 and MW-P-1) at concentrations of 7.52  $\mu$ g/L and 48.7  $\mu$ g/L, respectively. These concentrations continue to exceed the Protective Concentration Level (PCL) of 5  $\mu$ g/L and are similar to benzene levels previously measured at these locations. No other BTEX constituents were

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present in these wells, and the other four wells analyzed showed no evidence of BTEX impacts (Table 2). BTEX data for the Pharaoh Seep area, which includes the wells with benzene detections, are posted on Figure 3. Analytical data packages and the associated Data Review Checklists are provided in Attachment A.

Thirty-three monitor wells were sampled using a bladder pump or a bailer and analyzed for chloride in the January 2009 site-wide groundwater monitoring event. Results show that chloride concentrations remain elevated and exceed the State of Texas secondary drinking water standard of 300 mg/L in twenty-eight wells (Table 2). In general, chloride distribution and pattern of occurrence remain essentially unchanged for data obtained in January 2009 as compared to data obtained in March 2006, August 2007 and January 2008.

In the O'Ryan Seep study area, chloride concentrations remained highest in upgradient well MW-O-21 (16,600 mg/L), which is located near inactive injection well Citation #71, and in the sample collected adjacent to downgradient well MW-O-7 (18,300 mg/L). Ten wells showed an increase; one well remained the same; and four wells showed a decrease in chloride concentrations around O'Ryan Seep between January 2008 and January 2009. The largest increase occurred in MW-O-13, which increased by a factor of about 2.6 from 245 mg/L to 635 mg/L. Increases in two wells, MW-O-12 and MW-O-13, resulted in chloride concentrations above the secondary drinking water standard where they had been below the standard in the previous sampling event. Decreases occurred in MW-O-5, MW-O-11, MW-O-21, and MW-07-1 with the largest decrease noted in MW-O-11, which decreased by a factor of about 5.5. Chloride data for the O'Ryan Seep study area are summarized in Table 2 and posted and contoured on Figure 4.

In the Pharaoh Seep study area, chloride concentrations remain highest in FINA-01 (33,900 mg/L), which is located near Saga Well #2, and in downgradient well MW-P-1 (19,600 mg/L), which is located east of Pit #1. Five wells (FINA-01, MW-P-1, MW-P-2, MW-P-3 and MW-P-8) showed an increase while two wells (MW-P-9 and MW-P-10) showed a decrease in chloride concentrations in the Pharaoh Seep study area between January 2008 and January 2009. The largest increase occurred in MW-P-8, which increased by a factor of about 1.6 from 420 mg/L to 678 mg/L. The largest decrease (by a factor of about 5.6) occurred in MW-P-10, which is located southeast of Saga #6. The chloride concentration in this well at 89.3 mg/L is now below the secondary drinking water standard of 300 mg/L. Chloride data for the Pharaoh Seep study area are summarized in Table 2 and posted and contoured on Figure 5.

Along Dugout Creek, chloride concentrations are highest at the confluence of the Pharaoh Seep drainage and Dugout Creek (36,800 mg/L in MW-07-3) and in MW-D-3, which is located between the O'Ryan Seep and Pharaoh Seep confluences with Dugout Creek and has a chloride concentration of 10,600 mg/L. Five wells (MW-D-3, MW-D-4, MW-D-6, MW-D-10 and MW-07-3) showed an increase while six wells (MW-D-1, MW-D-2, MW-D-5, MW-D-7, MW-D-8 and MW-07-2) showed a decrease in chloride concentrations along Dugout Creek between January 2008 and January 2009. The largest increase occurred in MW-D-6, which increased by a factor of about 1.9 from 1,550 mg/L to 2,980 mg/L. The largest decrease by a factor of about 1.7 occurred in MW-07-2 from 7,480 mg/L to 4,350 mg/L. Chloride data for the Dugout Creek study area is summarized in Table 2 and posted on Figure 6.

The high chloride concentration in MW-07-3 of 36,800 mg/L, which is located in the Pharaoh Seep drainage just above the confluence with Dugout Creek, indicates that Pharaoh Seep continues to contribute chloride to Dugout Creek. The chloride concentration in MW-07-2, which is located in the O'Ryan Seep drainage just above the confluence with Dugout Creek, is not as high as that in MW-07-3 but is still elevated at 4,350 mg/L and indicates that the O'Ryan Seep is also contributing chloride to Dugout Creek.

Surface water samples collected from the seeps were also sent to the laboratory for chloride analysis. Chloride concentration in the O'Ryan Seep water sample was detected at 1,220 mg/L. Chloride



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concentration in the Pharaoh Seep water sample was detected at 16,300 mg/L. These results are similar to those from January 2008 at 1,090 mg/L and 13,000 mg/L, respectively. These results are also consistent with the concentrations seen at the drainage confluences with Dugout Creek where Pharaoh Seep drainage concentrations are much higher than those in the O'Ryan Seep drainage.

The working hypothesis that has been proposed for the transport of chloride and other dissolved constituents continues to be supported by the data. Ongoing injection of produced water to facilitate oil production activities in Howard and Mitchell Counties is likely contributing to the elevated chloride concentrations in the study area. Injection into a productive reservoir can cause build-up of reservoir pressure allowing the migration of saline water into the freshwater aquifer by way of conduits like improperly plugged well bores which have been drilled from the surface into or below the productive reservoir. Alluvial deposits located along the channels in Dugout Creek and O'Ryan and Pharaoh Seeps serve to retain and concentrate chloride loads via evaporation and precipitation while subsequent dissolution during rain events facilitates continued movement downstream. Much of the seepage along the Ogallala/Dockum Contact flows through the drainage alluvium to Dugout Creek without surfacing at any point. The chloride content of the groundwater, particularly upgradient of the Pharaoh Seep, will remain elevated as it flows through the alluvium beneath the surface. This may explain the high chloride content in the alluvial water at the confluence of Dugout Creek and the Pharaoh Seep drainage.

Conclusions:

- Benzene was detected above the PCL of 5 µg/L in two wells, FINA-01 and MW-P-1. Both of these are located upgradient of the Pharaoh Seep, and the results are consistent with previous monitoring events.
- Chloride concentrations remain elevated above the secondary drinking water standard of 300 mg/L in 28 of 33 wells sampled.
- Chloride concentrations in the O'Ryan Seep study area are highest in MW-O-21, which is located near Citation #71, and in the augured hole adjacent to the downgradient well MW-O-7.
- Chloride concentrations in the Pharaoh Seep study area are highest in FINA-01, which is located near Saga Well #2, and in well MW-P-1, which is located downgradient of FINA-01 and east of Pit #1.
- Chloride concentrations in Dugout Creek are highest in MW-07-3, which is located in the Pharaoh Seep drainage just above the confluence with Dugout Creek and in MW-D-3, which is located between the O'Ryan Seep and Pharaoh Seep confluences with Dugout Creek.
- The high chloride concentration in MW-07-3 indicates that Pharaoh Seep continues to contribute chloride to Dugout Creek.
- The chloride concentration in MW-07-2, which is located in the O'Ryan Seep drainage just above the confluence with Dugout Creek, is not as high as that in MW-07-3 but is still elevated and indicates that the O'Ryan Seep is also contributing chloride to Dugout Creek.
- Chloride concentrations remain elevated in samples collected from both the Pharaoh Seep and the O'Ryan Seep.

Recommendations:

- Consider re-plugging Saga Well #2 as this well continues as the most likely source of the high chloride concentration in FINA-01 as well as the most likely source for the benzene detected in FINA-01.
- Consider excavation of soil in Pit #1, which has been identified as a possible source for the benzene detected in MW-P-1. Benzene concentration in this well continues to increase. Gathering lines in the vicinity of this well should also be investigated to determine if a leak in gathering lines may be a source for the continued presence of benzene in MW-P-1.



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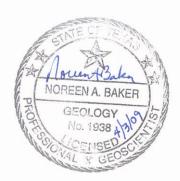
- Consider integrity testing and plugging, if warranted, of injection well Citation #71, as this well appears to be the most likely source of the high chloride concentration in MW-O-21.
- Continue semi-annual site-wide groundwater and surface water sampling to monitor chloride and benzene concentrations (where applicable).

Please email me at <u>nabaker@intera.com</u> or call me at 425-2023 if you have any questions about this information.

Sincerely,

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Noreen A. Baker, P.G. Project Manager



# **TABLES**

Locus	Monitor Well	Date Installed	UTM Northing	UTM Easting	Total Depth	<b>TOC Elevations</b>	Depth to Water*	Depth to Water	Water Level Elevation	Water Level Elevation
			(NAD83 meters)	(NAD83 meters)	(ft below TOC)	(ft msl)	(ft below TOC)	(ft below TOC)	(ft msl)	(ft msl)
							1/8/2008	1/26&27/2009	1/8/2008	1/26&27/2009
Dugout	MW-D-01	10-Mar-06	3575371	290077	19.7	NS	11.19	13.64	NA	NA
Creek**	MW-D-02	10-Mar-06	3574157	291164	22.7	NS	9.97	10.76	NA	NA
	MW-D-03	9-Mar-06	3574791	290802	18.9	NS	9.98	11.88	NA	NA
	MW-D-04	10-Mar-06	3573143	292323	17.7	NS	11.72	13.33	NA	NA
	MW-D-05	13-Mar-06	3572265	292857	24.8	NS	20.65	21.76	NA	NA
	MW-D-06	11-Mar-06	3570065	294106	17.6	NS	9.93	9.82	NA	NA
	MW-D-07	12-Mar-06	3567828	295057	27.7	NS	24.46	26.44	NA	NA
	MW-D-08	12-Mar-06	3567819	296071	37.5	NS	29.1	30.87	NA	NA
	MW-D-09	12-Mar-06	3567339	296796	19.9	NS	DRY	DRY	NA	NA
	MW-D-10	9-Mar-06	3575642	289778	19.6	NS	9.46	12.12	NA	NA
	MW-07-02	16-Aug-07	3575230	289926	20.0	NS	9.1	9.31	NA	NA
	MW-07-03	15-Aug-07	3574102	291181	20.0	NS	10.4	11.63	NA	NA
O'Ryan	MW-O-01	9-Feb-01	3573901	287806	29.7	2422.98	19.64	20.83	2403	2402
	MW-O-02	10-Feb-01	3574158	287981	17.7	2412.50	DRY	DRY	NA	NA
	MW-O-03	11-Feb-01	3573734	287420	55.7	2449.26	43.42	44.51	2406	2405
	MW-O-04	9-Feb-01	3574321	287970	57.8	2391.44	DRY	DRY	NA	NA
	MW-O-05	9-Feb-01	3573624	287756	61.7	2448.14	40.25	42.52	2408	2406
	MW-O-06	10-Feb-01	3573976	288039	23.3	2415.80	14.96	15.51	2401	2400
	MW-O-07	10-Feb-01	3574269	288657	16.8	2330.18	Well destroyed	Well destroyed	NA	NA
	MW-O-08	11-Feb-01	3573950	287403	60.1	2453.59	48.91	50.4	2405	2403
	MW-O-09	11-Feb-01	3573880	287390	58.3	2455.60	50.79	52.0	2405	2404
	MW-O-11	11-Feb-01	3574253	287510	35.7	2442.99	25.98	28.51	2417	2414
	MW-O-12	13-Jun-02	3573834	288087	22.7	2418.15	15.34	16.48	2403	2402
	MW-O-13	13-Jun-02	3573760	287968	34.7	2428.42	23.98	25.93	2404	2402
	MW-O-15	8-Jul-03	3574143	288403	17.0	2346.90	4.41	15.08	2342	2332
	MW-O-21	8-Mar-06	3574436	287480	37.8	2444.06	26.93	29.17	2417	2415
	MW-O-22	8-Mar-06	3574367	287443	36.5	2443.51	26.72	28.72	2417	2415
	MW-O-23	9-Mar-06	3574227	287348	37.9	2446.66	30.26	32.36	2416	2414
	MW-07-01	17-Aug-07	3574499	287482	34.4	NS	24.55	26.91	NA	NA
Pharaoh	MW-P-01	7-Feb-01	3573048	288378	29.7	2395.10	9.78	12.67	2385	2382
	MW-P-02	8-Feb-01	3573154	288064	28.5	2418.33	14.32	17.25	2404	2401
	MW-P-03	12-Feb-01	3573260	288074	24.6	2419.30	14.55	18.25	2405	2401
	MW-P-07	8-Feb-01	3572970	288251	52.5	2402.70	DRY	DRY	NA	NA
	MW-P-08	11-Feb-01	3573325	288249	27.7	2421.41	18.33	21.76	2403	2400
	MW-P-09	10-Feb-01	3573170	288169	20.1	2413.93	10.78	13.92	2403	2400
	MW-P-10	14-Jun-02	3573226	288094	26.5	2417.52	13.29	16.73	2404	2401
	FINA-01	Unknown	3573093	288299	19.5	2402.31	7.18	9.42	2395	2393

\*\*Elevations for Dugout Creek not surveyed, xy locations determined using handheld GPS UTM: Universal Transverse Mercator NAD: North American Datum TOC: top of casing ft msl: feet above mean sea level NS: Not Surveyed

Well ID	Date Sampled	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Chloride (mg/L)	Barium (mg/L)	Chromium (mg/L)
	<sup>GW</sup> GW <sub>Ing</sub> PCL	5	1000	700	10000	300	2.0	0.1
Pharaoh Seep	)							•
FINA-01	Feb 2001	118	<0.5	0.771	<1.5	52400	0.38	<0.03
FINA-01	June 2002	51.0	<0.500	1.40	2.97	50000	0.27	<0.010
FINA-01	March 2006	39	<2U	<2U	<3U	30100	0.113	NA
FINA-01	January 2008	12.8	<4U	<4U	<4U	33300	NA	NA
FINA-01	January 2009	7.52	<2U	<2U	<3U	33900	NA	NA
MW-P-1 MW-P-1	Feb 2001 June 2002	8.30 8.13	<0.5 <0.500	<0.5 <0.500	<1.5 <0.500	30000 28000	0.45	0.060
MW-P-1	March 2002	15	<0.500 <2U	<0.300 7	<0.300 <3U	9100	NA	NA
MW-P-1	January 2008	13.6	<4U	~4U	<00 <4U	16900	NA	NA
MW-P-1	January 2009	48.7	<2U	<2U	<3U	19600	NA	NA
MW-P-2	Feb 2001	<0.5	<0.5	<0.5	<1.5	220	0.19	<0.03
MW-P-2	June 2002	<0.500	<0.500	<0.500	<1.50	160	0.30	0.015
MW-P-2	March 2006	dry	dry	dry	dry	dry	dry	dry
MW-P-2	January 2008	NA	NA	NA	NA	93.7	NA	NA
MW-P-2 MW-P-3	January 2009 Feb 2001	NA <0.5	NA <0.5	NA <0.5	NA <1.5	123 84	NA 0.22	NA <0.03
MW-P-3	June 2002	<0.5 1.58	<0.500	2.87	1.79	46	0.22	<0.03
MW-P-3	March 2002	<0.8U	<0.500 <2U	61	<3U	147	NA	NA
MW-P-3	January 2008	NA	NA	NA	NA	142	NA	NA
MW-P-3	January 2009	NA	NA	NA	NA	217	NA	NA
MW-P-7	Feb 2001	dry	dry	dry	dry	dry	dry	dry
MW-P-7 MW-P-7	June 2002 March 2006	dry	dry	dry	dry	dry	dry	dry
MW-P-7 MW-P-7	January 2008	dry dry	dry dry	dry dry	dry dry	dry dry	dry dry	dry dry
MW-P-7	January 2009	dry	dry	dry	dry	dry	dry	dry
MW-P-8	Feb 2001	<0.5	<0.5	<0.5	<1.5	67	0.23	<0.03
MW-P-8	June 2002	<0.500	<0.500	0.980	<1.50	63	0.052	<0.010
MW-P-8	March 2006	<0.8U	<2U	57	<3U	428	NA	NA
MW-P-8	January 2008	NA	NA	NA	NA	420	NA	NA
MW-P-8	January 2009	NA	NA	NA	NA	678	NA	NA
MW-P-9 MW-P-9	Feb 2001 June 2002	207 130	66.4 43.8	4.04 4.19	<1.5 2.94	28000 47000	1.0 0.45	<0.03 <0.010
MW-P-9	March 2002	<0.8U	43.8 <2U	<2U	<3U	730	0.43	×0.010
MW-P-9	January 2008	<2U	<4U	<4U	<4U	542	NA	NA
MW-P-9	January 2009	<0.8U	<2U	<2U	<3U	434	NA	NA
MW-P-10	June 2002	<0.500	<0.500	<0.500	<1.50	38	0.067	<0.010
MW-P-10	March 2006	<0.8U	<2U	22	<3U	37.1	NA	NA
MW-P-10	January 2008	NA	NA	NA	NA	497	NA	NA
MW-P-10	January 2009	NA	NA	NA	NA	89.3	NA	NA
Seep Seep	March 2006 January 2008	<0.8U NA	<2U NA	<2U NA	<3U NA	13800 13000	0.1 NA	NA NA
Seep	January 2008 January 2009	NA	NA	NA	NA	16300	NA	NA
Stream	Feb 2001	NA	NA	NA	NA	13700	0.15	<0.03
Channel							0.10	10.000
O'Ryan Seep	E 1 0001		0.5	0.5	0.5	00500	1.0	1 44
Sump-01 MW-O-1	Feb 2001 Feb 2001	<0.5 <b>3040</b>	<0.5 1160	<0.5 285	<0.5 201	20500 17500	1.2 0.59	<b>1.1</b> <0.03
MW-O-1	June 2002	0.610	<0.5	285 <0.5	<1.5	3300	0.59	<0.03
MW-0-1	July 2002	<0.8	<2.0	<2.0	<3.0	1460	0.181	NA
MW-O-1	March 2006	<0.8U	<2U	<2U	<3U	1370	0.189	NA
MW-O-1	January 2008	NA	NA	NA	NA	1040	NA	NA
MW-O-1	January 2009	NA	NA	NA	NA	1300	NA	NA
MW-O-2	Feb 2001	dry	dry	dry	dry	dry	dry	dry
MW-O-2	June 2002	dry	dry	dry	dry	dry	dry	dry
MW-O-2 MW-O-2	July 2003 March 2006	dry dry	dry dry	dry dry	dry dry	dry dry	dry	dry
MW-0-2 MW-0-2	January 2008	dry dry	dry dry	dry dry	dry dry	dry dry	dry dry	dry dry
MW-0-2	January 2009	dry	dry	dry	dry	dry	dry	dry
MW-O-3	Feb 2001	<0.5	<0.5	<0.5	<0.5	810	2.3	0.16
MW-O-3	June 2002	<0.5	<0.5	<0.5	<1.5	680	0.19	0.013
MW-O-3	July 2003	<0.8	<2.0	<2.0	<3.0	361	0.0611	NA
MW-O-3	March 2006	<0.8U	<2U	<2U	<3U	770	0.154	NA
MW-O-3	January 2008	NA	NA	NA	NA	1450	NA	NA
MW-O-3	January 2009	NA	NA	NA	NA	1450	NA	NA

#### Table 2. Summary of Constituents of Concern in Groundwater/Surface Water

Table 2.	Summary of	Constituents	of Concern in	n Groundwater/Surface	Water
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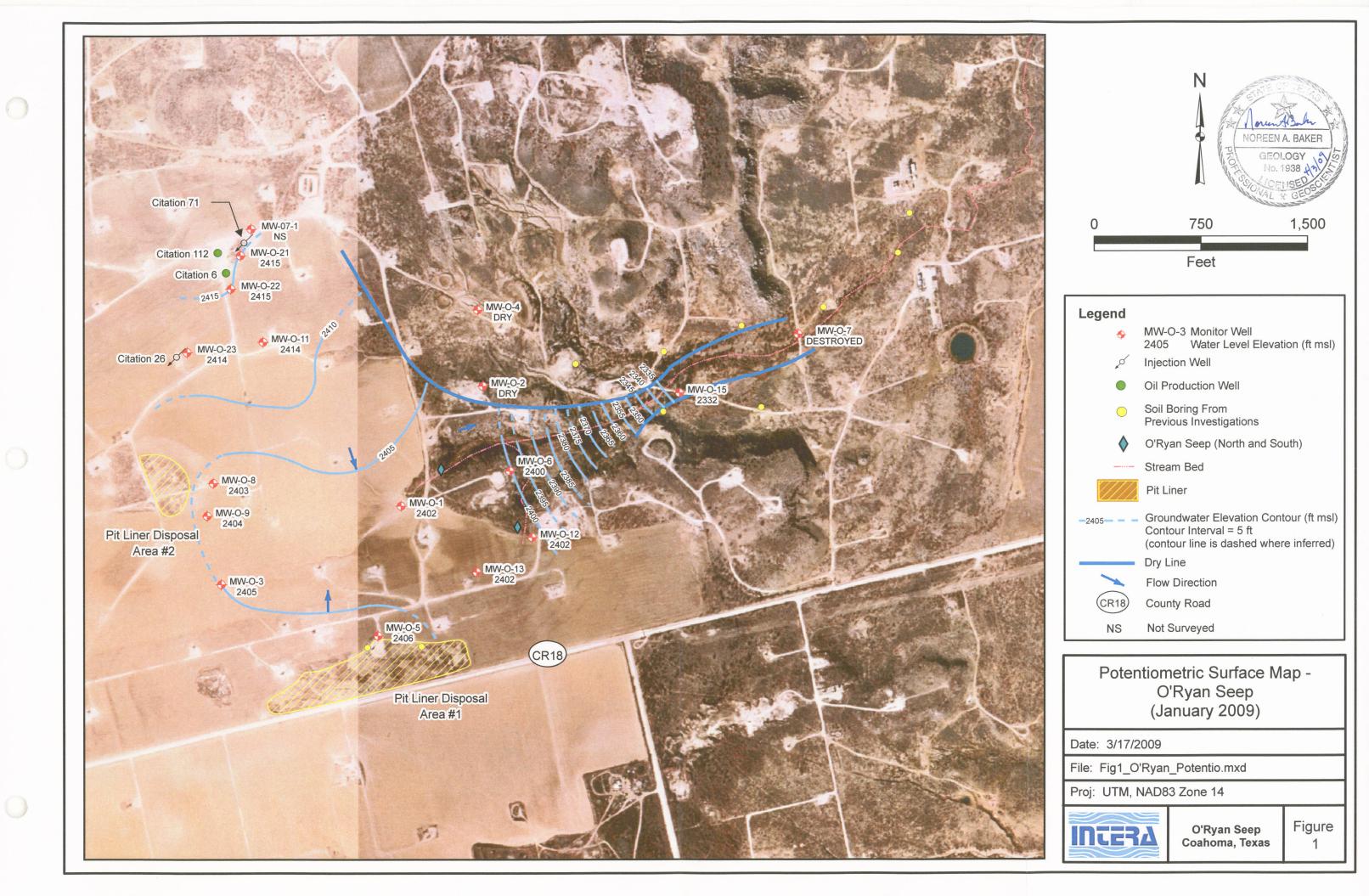
MW-O-4         Feb           MW-O-4         June           MW-O-4         July           MW-O-4         Janua           MW-O-5         Feb           MW-O-5         Janua           MW-O-6         Janua           MW-O-6         June           MW-O-6         June           MW-O-6         June           MW-O-6         June           MW-O-6         June           MW-O-7         Janua           MW-O-6         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-0-7         Janua           MW-0-8         Janua           MW-0-8         Janua           MW-0-9         Feb           MW-0-9         June           MW-0-9         Janua           MW-0-9         Janua           MW-0-9         Janua	I	(ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Chloride (mg/L)	Barium (mg/L)	Chromium (mg/L)
MW-O-4         June           MW-O-4         July           MW-O-4         Janua           MW-O-4         Janua           MW-O-5         Feb           MW-O-5         June           MW-O-5         June           MW-O-5         June           MW-O-5         June           MW-O-5         June           MW-O-5         Janua           MW-O-5         Janua           MW-O-6         June           MW-O-6         June           MW-O-6         June           MW-O-6         June           MW-O-6         June           MW-O-7         June           MW-O-6         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Feb           MW-0-9         Feb           MW-0-9         Janua           MW-0-9         Janua           MW-0-9         Janua		5	1000	700	10000	300	2.0	0.1
MW-O-4         July           MW-O-4         Marci           MW-O-4         Janua           MW-O-4         Janua           MW-O-5         Jung           MW-O-5         Jung           MW-O-5         Jung           MW-O-5         Jung           MW-O-5         Janua           MW-O-5         Jung           MW-O-6         Jung           MW-O-6         Jung           MW-O-6         Jung           MW-O-6         Jung           MW-O-6         Jung           MW-O-7         Jung           MW-O-7         Jung           MW-O-7         Jung           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Janua           MW-0-7         Janua           MW-0-8         Janua           MW-0-8         Janua           MW-0-8         Janua           MW-0-9         Feb           MW-0-9         Jung           MW-0-9         Jung           MW-0-9         Jung           MW-0-9         Janua	Feb 2001	dry	dry	dry	dry	dry	dry	dry
MW-O-4         Marci           MW-O-4         Janua           MW-O-4         Janua           MW-O-5         Feb           MW-O-5         Jung           MW-O-5         Jung           MW-O-5         Jung           MW-O-5         Janua           MW-O-5         Janua           MW-O-5         Janua           MW-O-6         Janua           MW-O-6         Janua           MW-O-6         Janua           MW-O-6         Janua           MW-O-6         Janua           MW-O-6         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-0-8         Janua           MW-0-8         Janua           MW-0-8         Janua           MW-0-9         Jung           MW-0-9         Jung           MW-0-9         Jung           MW-0-9         Jung           MW-0-9         Jung           MW-0-9         Jung	June 2002	dry	dry	dry	dry	dry	dry	dry
MW-O-4         Janua           MW-O-5         Janua           MW-O-5         June           MW-O-5         June           MW-O-5         June           MW-O-5         June           MW-O-5         June           MW-O-5         Janua           MW-O-6         Janua           MW-O-6         June           MW-O-6         June           MW-O-6         June           MW-O-6         Janua           MW-O-6         Janua           MW-O-7         Marci           MW-O-7         June           MW-O-7         June           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-0-8         June           MW-0-8         Janua           MW-0-8         Janua           MW-0-8         Janua           MW-0-8         Janua           MW-0-9         June           MW-0-8         Janua           MW-0-9         June           MW-0-11         June           MW-0-9         June	July 2003	dry	dry	dry	dry	dry	dry	dry
MW-O-4         Janua           MW-O-5         Feb           MW-O-5         June           MW-O-5         July           MW-O-5         Janua           MW-O-5         Janua           MW-O-6         Janua           MW-O-7         Feb           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-11         Janua	March 2006	dry	dry	dry	dry	dry	dry	dry
MW-O-5         Feb           MW-O-5         June           MW-O-5         July           MW-O-5         Janua           MW-O-5         Janua           MW-O-6         Janua           MW-O-6         June           MW-O-6         June           MW-O-6         Janua           MW-O-6         June           MW-O-6         June           MW-O-6         Janua           MW-O-6         Janua           MW-O-6         Janua           MW-O-7         June           MW-O-7         June           MW-O-7         June           MW-O-7         June           MW-O-7         June           MW-O-7         Janua           MW-O-8         June           MW-O-8         June           MW-O-8         Janua           MW-O-9         Feb           MW-O-9         Feb           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         June	anuary 2008	dry	dry	dry	dry	dry	dry	dry
MW-O-5         June           MW-O-5         July           MW-O-5         Janua           MW-O-5         Janua           MW-O-6         Janua           MW-O-6         July           MW-O-6         July           MW-O-6         Juna           MW-O-6         Juna           MW-O-6         July           MW-O-6         Juna           MW-O-7         Janua           MW-O-7         Juna           MW-O-7         Juna           MW-O-7         Jung           MW-O-7         Jung           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Feb           MW-O-9         June           MW-O-9         Juna           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         Jung           MW-O-12         Janua           MW-O-13         July	anuary 2009	dry	dry	dry	dry	dry	dry	dry
MW-O-5         July           MW-O-5         Marci           MW-O-5         Janua           MW-O-6         Janua           MW-O-6         Juny           MW-O-6         Juny           MW-O-6         Juny           MW-O-6         Juny           MW-O-6         Juny           MW-O-6         Juny           MW-O-6         Janua           MW-O-7         Juny           MW-O-7         Juny           MW-O-7         Juny           MW-O-7         Juny           MW-O-7         Janua           MW-O-8         Juny           MW-0-8         Juny           MW-0-8         Juny           MW-0-8         Juny           MW-0-8         Janua           MW-0-9         Feb           MW-0-8         Janua           MW-0-9         Juny           MW-0-9         Juny           MW-0-9         Juny           MW-0-9         Juny           MW-0-9         Juny           MW-0-11         Juny           MW-0-12         Juny           MW-0-13         Juny <td< td=""><td>Feb 2001</td><td>&lt;0.5</td><td>&lt;0.5</td><td>&lt;0.5</td><td>&lt;0.5</td><td>2100</td><td>10</td><td>0.11</td></td<>	Feb 2001	<0.5	<0.5	<0.5	<0.5	2100	10	0.11
MW-O-5         Marci           MW-O-5         Janua           MW-O-6         Janua           MW-O-6         June           MW-O-6         June           MW-O-6         June           MW-O-6         June           MW-O-6         June           MW-O-6         June           MW-O-6         Janua           MW-O-7         June           MW-O-7         June           MW-O-7         June           MW-O-7         June           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-0-9         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-0-9         June           MW-0-11         June           MW-0-12         Janua           MW-0-11         June           MW-0-12         June	June 2002	<0.5	<0.5	<0.5	<1.5	1700	3.7	0.020
MW-O-5         Janua           MW-O-5         Janua           MW-O-6         Feb           MW-O-6         July           MW-O-6         July           MW-O-6         Janua           MW-O-6         Janua           MW-O-6         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         July           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         July           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         June           MW-O-8         Janua           MW-O-9         June           MW-O-9         Juna           MW-O-9         Juna           MW-O-9         Juna           MW-O-9         Juna           MW-O-11         June           MW-O-12         Janua           MW-O-11         June           MW-O-12         Janua	July 2003	<0.8	<2.0	<2.0	<3.0	1620	0.0723	NA
MW-O-5         Janua           MW-O-6         Feb           MW-O-6         July           MW-O-6         July           MW-O-6         Janua           MW-O-6         Janua           MW-O-7         Feb           MW-O-7         July           MW-O-7         July           MW-O-7         July           MW-O-7         July           MW-O-7         July           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         July           MW-O-8         July           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         July           MW-O-8         Janua           MW-O-9         July           MW-O-9         July           MW-O-9         July           MW-O-11         Jung           MW-O-12         Jung           MW-O-11         Jung           MW-O-12         Jung           MW-O-12         Jung	March 2006	<0.8U	<2U	<2U	<3U	1900	0.0406	NA
MW-O-6         Feb           MW-O-6         June           MW-O-6         July           MW-O-6         Janua           MW-O-6         Janua           MW-O-7         Feb           MW-O-7         July           MW-O-7         July           MW-O-7         July           MW-O-7         July           MW-O-7         July           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         June           MW-O-8         June           MW-O-8         July           MW-O-8         June           MW-O-9         July           MW-O-9         July           MW-O-9         July           MW-O-9         July           MW-O-9         July           MW-O-9         July           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-12         June           MW-O-13         June           MW-O-12         Janua           <	anuary 2008	NA	NA	NA	NA	2800	NA	NA
MW-O-6         June           MW-O-6         July           MW-O-6         Marci           MW-O-6         Janua           MW-O-6         Janua           MW-O-7         June           MW-O-7         July           MW-O-7         July           MW-O-7         July           MW-O-7         Juna           MW-O-7         Juna           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         July           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Janua           MW-O-9         June           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         June           MW-O-12         Janua           MW-O-13         Janua           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-12         Janua           MW-O-11         June           MW-O-12         Janua <t< td=""><td>anuary 2009</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>2740</td><td>NA</td><td>NA</td></t<>	anuary 2009	NA	NA	NA	NA	2740	NA	NA
MW-O-6         July           MW-O-6         Marci           MW-O-6         Janua           MW-O-7         Janua           MW-O-7         Juny           MW-O-7         Juny           MW-O-7         Juny           MW-O-7         Juny           MW-O-7         Juny           MW-O-7         Juny           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Juny           MW-O-8         Juny           MW-O-8         Juny           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Feb           MW-O-9         Juny           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         Jung           MW-O-11         Jung           MW-O-11         Jung           MW-O-12         Jung           MW-O-12         Jung           MW-O-12         Janua           MW-O-12         Janua      M	Feb 2001	<0.5	<0.5	<0.5	<0.5	1900	0.1	< 0.03
MW-O-6         Marci           MW-O-6         Janua           MW-O-7         Janua           MW-O-7         June           MW-O-7         June           MW-O-7         June           MW-O-7         June           MW-O-7         June           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         Janua           MW-O-9         Feb           MW-O-9         June           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         June           MW-O-12         Janua           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-12         June           MW-O-12         Janua           MW-O-12         Janua	June 2002	<0.5	<0.5	<0.5	<1.5	6300	0.12	<0.010
MW-O-6         Janua           MW-O-6         Janua           MW-O-7         Jenua           MW-O-7         June           MW-O-7         Jung           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-9         Feb           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         June           MW-O-12         Janua           MW-O-11         June           MW-O-12         June           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-13         June	July 2003	<0.8	<2.0	<2.0	<3.0	6740	0.153	NA
MW-O-6         Janua           MW-O-7         Feb           MW-O-7         June           MW-O-7         June           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Feb           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         June           MW-O-12         Janua           MW-O-11         June           MW-O-12         June           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-13         June           MW-O-13         June <tr< td=""><td>March 2006</td><td>&lt;0.8U</td><td>&lt;2U</td><td>&lt;2U</td><td>&lt;3U</td><td>3100</td><td>0.0651</td><td>NA</td></tr<>	March 2006	<0.8U	<2U	<2U	<3U	3100	0.0651	NA
MW-O-6         Janua           MW-O-7         Feb           MW-O-7         June           MW-O-7         June           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Feb           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         June           MW-O-12         Janua           MW-O-11         June           MW-O-12         June           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-13         June           MW-O-13         June <tr< td=""><td>anuary 2008</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>2320</td><td>NA</td><td>NA</td></tr<>	anuary 2008	NA	NA	NA	NA	2320	NA	NA
MW-O-7         Feb           MW-O-7         June           MW-O-7         July           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         July           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         June           MW-O-9         July           MW-O-9         July           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-13         July           MW-O-13         July           MW-O-13         July	anuary 2009	NA	NA	NA	NA	3110	NA	NA
MW-O-7         June           MW-O-7         July           MW-O-7         Janua           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         June           MW-O-11         June           MW-O-11         Janua           MW-O-11         Janua           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         June           MW-O-13         June <tr< td=""><td>Feb 2001</td><td>&lt;0.5</td><td>&lt;0.5</td><td>&lt;0.5</td><td>&lt;0.5</td><td>5510</td><td>0.52</td><td>0.079</td></tr<>	Feb 2001	<0.5	<0.5	<0.5	<0.5	5510	0.52	0.079
MW-O-7         July           MW-O-7         Marci           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         July           MW-O-8         July           MW-O-8         Juna           MW-O-8         Juna           MW-O-8         Juna           MW-O-8         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         July           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-19         Janua           MW-O-19         Janua           MW-O-11         Juna           MW-O-11         Juna           MW-O-11         Juna           MW-O-11         Juna           MW-O-11         Juna           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         Juna           MW-O-13         Janua	June 2002	<0.5	<0.5	<0.5	<1.5	25000	0.090	<0.010
MW-O-7         Marci           MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         June           MW-O-8         June           MW-O-8         June           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-11         Feb           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-12         June           MW-O-12         June           MW-O-12         June           MW-O-12         June           MW-O-13         June           MW-O-13         June           MW-O-13         June      M	July 2003	<0.8	<2.0	<2.0	<3.0	26500	0.12	NA
MW-O-7         Janua           MW-O-7         Janua           MW-O-8         Feb           MW-O-8         June           MW-O-8         July           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Feb           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-19         Janua           MW-O-19         Janua           MW-O-11         July           MW-O-11         July           MW-O-11         Janua           MW-O-11         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         Janua           MW-O-13         June           MW-O-13         Janua           MW-O-13         Janua	March 2006	1.66J	<2U	<2U	<3U	22300	0.0669	NA
MW-O-7         Janua           MW-O-8         Feb           MW-O-8         June           MW-O-8         July           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Feb           MW-O-9         Janua           MW-O-19         Janua           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         Janua           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         Janua <td>anuary 2008</td> <td>&lt;2U</td> <td>&lt;4U</td> <td>&lt;4U</td> <td>&lt;4U</td> <td>13100</td> <td>NA</td> <td>NA</td>	anuary 2008	<2U	<4U	<4U	<4U	13100	NA	NA
MW-O-8         Feb           MW-O-8         June           MW-O-8         June           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Feb           MW-O-9         Janua           MW-O-10         Janua           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         Janua           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         June           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua     <	anuary 2009	<0.8U	<2U	<2U	<3U	18300	NA	NA
MW-O-8         June           MW-O-8         July           MW-O-8         Janua           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Janua           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         Feb           MW-O-11         June           MW-O-11         Juny           MW-O-11         Juny           MW-O-12         Junua           MW-O-12         Junua           MW-O-12         Junua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         June           MW-O-13         Juny           MW-O-13         Juny           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Juny           MW-O-13         Janua <td>Feb 2001</td> <td>&lt;0.5</td> <td>&lt;0.5</td> <td>&lt;0.5</td> <td>&lt;0.5</td> <td>2900</td> <td>0.15</td> <td>&lt;0.03</td>	Feb 2001	<0.5	<0.5	<0.5	<0.5	2900	0.15	<0.03
MW-O-8         July           MW-O-8         Marci           MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Janua           MW-O-9         Feb           MW-O-9         July           MW-O-9         July           MW-O-9         July           MW-O-9         Juna           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-12         Junua           MW-O-12         Junua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         July           MW-O-13         July           MW-O-13         July           MW-O-13         July           MW-O-13         July           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua <td>June 2002</td> <td>&lt;0.5</td> <td>&lt;0.5</td> <td>&lt;0.5</td> <td>&lt;1.5</td> <td>2900</td> <td>0.13</td> <td>&lt;0.03</td>	June 2002	<0.5	<0.5	<0.5	<1.5	2900	0.13	<0.03
MW-O-8         Marci           MW-O-8         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         June           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         Feb           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         Janua           MW-O-12         June           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         Janua           MW-O-15         Janua <td>July 2002</td> <td>&lt;0.5</td> <td>&lt;0.5</td> <td>&lt;0.5</td> <td>&lt;3.0</td> <td>2560</td> <td>0.13</td> <td>&lt;0.010 NA</td>	July 2002	<0.5	<0.5	<0.5	<3.0	2560	0.13	<0.010 NA
MW-O-8         Janua           MW-O-8         Janua           MW-O-9         Feb           MW-O-9         June           MW-O-9         July           MW-O-9         July           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         Feb           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         Juna           MW-O-15         Janua           MW-O-15         Janua <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>NA</td>								NA
MW-O-8         Janua           MW-O-9         Feb           MW-O-9         July           MW-O-9         July           MW-O-9         Janua           MW-O-9         Janua           MW-O-10         Janua           MW-O-11         Feb           MW-O-11         Jung           MW-O-12         Jung           MW-O-12         Jung           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         Jung           MW-O-13         Jung           MW-O-13         Jung           MW-O-13         Jung           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         July           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua	March 2006	<0.8U	<2U NA	<2U	<3U NA	2140	0.12	NA
MW-O-9         Feb           MW-O-9         June           MW-O-9         July           MW-O-9         Janua           MW-O-9         Janua           MW-O-10         Janua           MW-O-11         Feb           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         Janua           MW-O-11         Janua           MW-O-12         June           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-15         July           MW-O-15         June           MW-O-15         Janua           MW-O-15         Janua     <	anuary 2008	NA		NA		2510	NA	
MW-O-9         June           MW-O-9         July           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-10         Feb           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         Janua           MW-O-11         Janua           MW-O-11         Janua           MW-O-12         June           MW-O-12         July           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua <td>anuary 2009</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>2630</td> <td>NA</td> <td>NA</td>	anuary 2009	NA	NA	NA	NA	2630	NA	NA
MW-O-9         July           MW-O-9         Marci           MW-O-9         Janua           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         Feb           MW-O-11         July           MW-O-11         July           MW-O-11         July           MW-O-11         Janua           MW-O-11         Janua           MW-O-11         Janua           MW-O-12         June           MW-O-12         July           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         Janua           MW-O-13         July           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         July           MW-O-15         July           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janu	Feb 2001	<0.5	<0.5	<0.5	<0.5	450	0.29	< 0.03
MW-O-9         Marci           MW-O-9         Janua           MW-O-9         Janua           MW-O-11         Feb           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         June           MW-O-11         Janua           MW-O-12         June           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         July           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua<	June 2002	<0.5	<0.5	<0.5	<1.5	530	0.091	<0.010
MW-O-9         Janua           MW-O-9         Janua           MW-O-11         Feb           MW-O-11         June           MW-O-11         June           MW-O-11         July           MW-O-11         July           MW-O-11         Janua           MW-O-11         Janua           MW-O-12         June           MW-O-12         July           MW-O-12         June           MW-O-12         June           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         July           MW-O-15         July           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua           MW-O-15         Janua </td <td>July 2003</td> <td>&lt;0.8</td> <td>&lt;2.0</td> <td>&lt;2.0</td> <td>&lt;3.0</td> <td>337</td> <td>0.0327</td> <td>NA</td>	July 2003	<0.8	<2.0	<2.0	<3.0	337	0.0327	NA
MW-O-9         Janua           MW-O-11         Feb           MW-O-11         June           MW-O-11         July           MW-O-11         June           MW-O-11         Janua           MW-O-11         Janua           MW-O-11         Janua           MW-O-11         Janua           MW-O-12         June           MW-O-12         July           MW-O-12         July           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         June           MW-O-13         June           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         July           MW-O-15         July           MW-O-15         Janua           MW-O-15         Ja	March 2006	<0.8U	<2U	<2U	<3U	309	0.0414	NA
MW-O-11         Feb           MW-O-11         June           MW-O-11         July           MW-O-11         July           MW-O-11         Janua           MW-O-11         Janua           MW-O-11         Janua           MW-O-12         June           MW-O-12         July           MW-O-12         July           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         July           MW-O-13         June           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         July           MW-O-15         Janua           MW-O-15	anuary 2008	NA	NA	NA	NA	330	NA	NA
MW-O-11         June           MW-O-11         July           MW-O-11         Janua           MW-O-11         Janua           MW-O-11         Janua           MW-O-11         Janua           MW-O-11         Janua           MW-O-12         June           MW-O-12         July           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         June           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         July           MW-O-15         July           MW-O-15         Janua           MW-O-15	anuary 2009	NA	NA	NA	NA	431	NA	NA
MW-O-11         July           MW-O-11         Marci           MW-O-11         Janua           MW-O-11         Janua           MW-O-12         June           MW-O-12         July           MW-O-12         July           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         Janua           MW-O-15         July           MW-O-15         July           MW-O-15         Janua           MW-O-21         M	Feb 2001	<0.5	<0.5	<0.5	<0.5	130	0.12	<0.03
MW-O-11         Marci           MW-O-11         Janua           MW-O-11         Janua           MW-O-12         June           MW-O-12         July           MW-O-12         July           MW-O-12         Janua           MW-0-12         Janua           MW-0-12         Janua           MW-0-13         June           MW-0-13         June           MW-0-13         June           MW-0-13         July           MW-0-13         Janua           MW-0-13         Janua           MW-0-13         Janua           MW-0-15         July           MW-0-15         July           MW-0-15         Janua           MW-0-21         Marci	June 2002	<0.5	<0.5	<0.5	<1.5	190	0.039	<0.010
MW-O-11         Janua           MW-O-11         Janua           MW-O-12         June           MW-O-12         July           MW-O-12         July           MW-O-12         Marci           MW-O-12         Janua           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         July           MW-O-13         July           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         July           MW-O-15         Janua           MW-O-21         Marci	July 2003	<0.8	<2.0	<2.0	<3.0	1540	0.0547	NA
MW-0-11         Janua           MW-0-12         June           MW-0-12         July           MW-0-12         July           MW-0-12         Janua           MW-0-12         Janua           MW-0-12         Janua           MW-0-13         June           MW-0-13         July           MW-0-13         Janua           MW-0-13         Janua           MW-0-13         Janua           MW-0-13         Janua           MW-0-13         Janua           MW-0-15         July           MW-0-15         July           MW-0-15         Janua           MW-0-21         Marci	March 2006	<0.8U	<2U	<2U	<3U	606	0.0322	NA
MW-0-12         June           MW-0-12         July           MW-0-12         Marci           MW-0-12         Janua           MW-0-12         Janua           MW-0-13         June           MW-0-13         July           MW-0-13         July           MW-0-13         Janua           MW-0-13         Janua           MW-0-13         Janua           MW-0-13         Janua           MW-0-15         Janua	anuary 2008	NA	NA	NA	NA	3130	NA	NA
MW-0-12         July           MW-0-12         Marcl           MW-0-12         Janua           MW-0-13         June           MW-0-13         July           MW-0-13         July           MW-0-13         July           MW-0-13         July           MW-0-13         July           MW-0-13         Janua           MW-0-13         Janua           MW-0-15         July           MW-0-15         July           MW-0-15         Janua           MW-0-21         Marcl	anuary 2009	NA	NA	NA	NA	574	NA	NA
MW-O-12         Marci           MW-O-12         Janua           MW-O-12         Janua           MW-O-13         June           MW-O-13         July           MW-O-13         July           MW-O-13         July           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-0-15         July           MW-0-15         July           MW-0-15         July           MW-0-15         July           MW-0-15         July           MW-0-15         Janua	June 2002	<0.5	<0.5	0.750	<1.5	2300	0.28	0.020
MW-0-12         Janua           MW-0-12         Janua           MW-0-13         June           MW-0-13         July           MW-0-13         July           MW-0-13         July           MW-0-13         Janua           MW-0-13         Janua           MW-0-15         Janua           MW-0-15         July           MW-0-15         July           MW-0-15         Janua           MW-0-21         Marci	July 2003	<0.8	<2.0	<2.0	<3.0	2860	0.0780	NA
MW-O-12         Janua           MW-O-13         June           MW-O-13         July           MW-O-13         July           MW-O-13         Janua           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         July           MW-0-15         July           MW-0-15         Janua           MW-0-21         Marci	March 2006	<0.8U	13.2	<2U	<3U	692	0.0614	NA
MW-O-13         June           MW-O-13         July           MW-O-13         Marci           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         July           MW-0-15         July           MW-0-15         Janua	anuary 2008	NA	NA	NA	NA	229	NA	NA
MW-O-13         July           MW-O-13         Marci           MW-O-13         Janua           MW-O-13         Janua           MW-O-15         July           MW-O-15         Janua	anuary 2009	NA	NA	NA	NA	349	NA	NA
MW-O-13MarciMW-O-13JanuaMW-O-13JanuaMW-O-15JulyMW-O-15MarciMW-O-15JanuaMW-O-15JanuaMW-O-15JanuaMW-O-21Marci	June 2002	<0.5	<0.5	<0.5	<1.5	2600	0.12	0.012
MW-O-13MarciMW-O-13JanuaMW-O-13JanuaMW-O-15JulyMW-O-15MarciMW-O-15JanuaMW-O-15JanuaMW-O-15JanuaMW-O-21Marci	July 2003	<0.8	<2.0	<2.0	<3.0	2530	0.0618	NA
MW-O-13JanuaMW-O-13JanuaMW-O-15JulyMW-O-15MarciMW-O-15JanuaMW-O-15JanuaMW-O-21Marci	March 2006	<0.8U	36.7	<2U	<3U	689	0.0252	NA
MW-O-13JanuaMW-O-15JulyMW-O-15MarciMW-O-15JanuaMW-O-15JanuaMW-O-21Marci	anuary 2008	NA	NA	NA	NA	245	NA	NA
MW-O-15JulyMW-O-15MarclMW-O-15JanuaMW-O-15JanuaMW-O-21Marcl	anuary 2009	NA	NA	NA	NA	635	NA	NA
MW-O-15 Marcl MW-O-15 Janua MW-O-15 Janua MW-O-21 Marcl	July 2003	<0.8	<2.0	<2.0	<3.0	8590	0.0900	NA
MW-O-15 Janua MW-O-15 Janua MW-O-21 Marc	March 2006	<0.8U	<2U	<2U	<3U	6640	0.0342	NA
MW-O-15 Janua MW-O-21 Marc	anuary 2008	NA	NA	NA	NA	4600	NA	NA
MW-O-21 Marc	anuary 2009	NA	NA	NA	NA	5550	NA	NA
	March 2006	<0.8U	<2U	<2U	<3U	16200	0.175	NA
WWW-U-21 1 10000	anuary 2008	<0.80 <2U	<20 <4U	<20 <4U	<30 <4U	17200	NA	NA
	anuary 2008 anuary 2009						NA	
		<0.8U	<2U	<2U	<3U	16600		NA
	March 2006	<0.8U	<2U	<2U	<3U	352	0.0377	NA
	anuary 2008	NA	NA	NA	NA	336	NA	NA
	anuary 2009	NA	NA	NA	NA	440	NA	NA
	March 2006	<0.8U	<2U	<2U	<3U	83.1	0.0354	NA
MW-O-23 Janua MW-O-23 Janua	anuary 2008	NA NA	NA NA	NA NA	NA NA	43.6 91.1	NA NA	NA NA

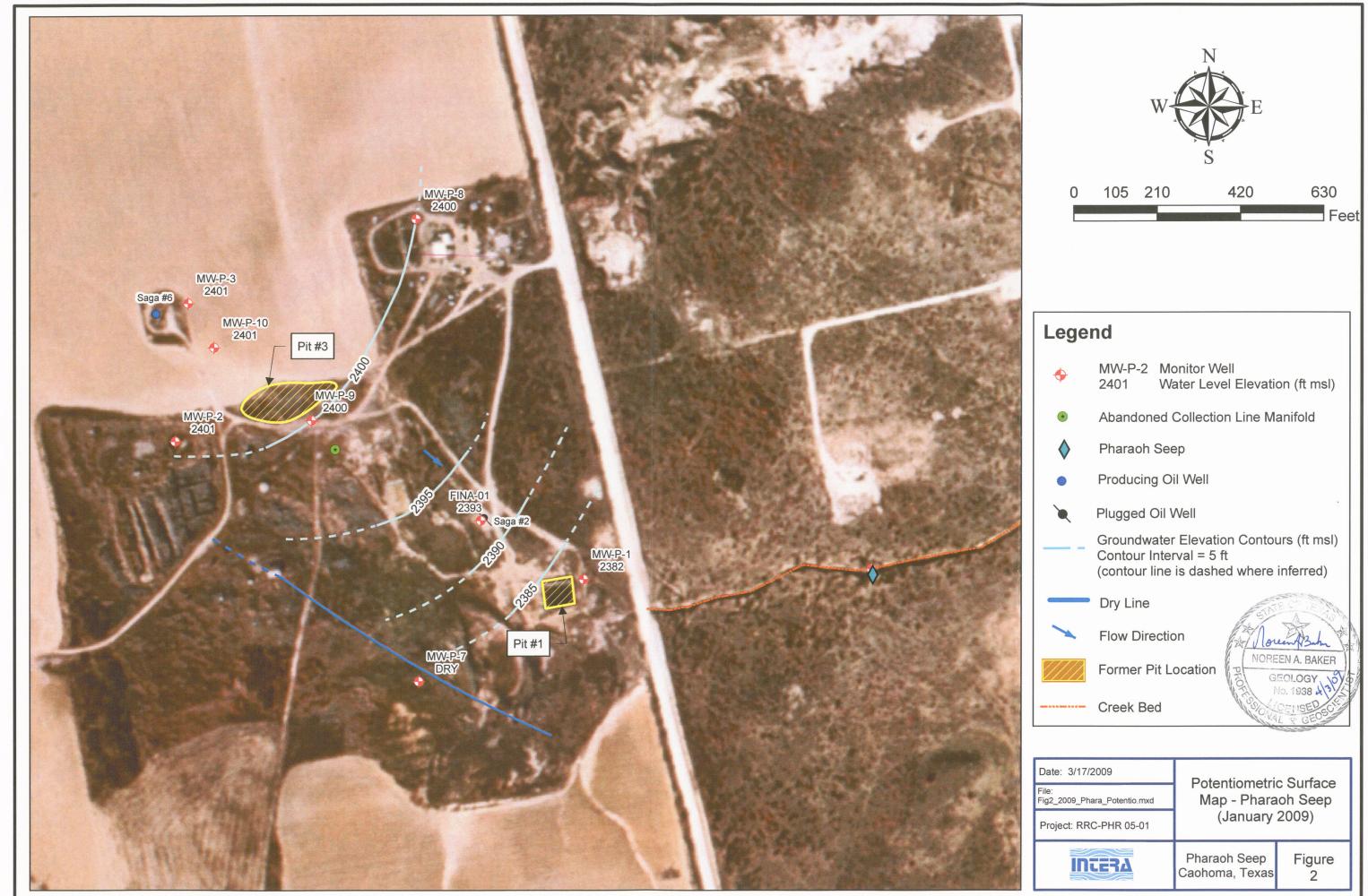
Table 2. Summary of	f Constituents of Concern in	Groundwater/Surface Water
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Well ID	Date Sampled	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Chloride (mg/L)	Barium (mg/L)	Chromium (mg/L)
		5	1000	700	10000	300	2.0	0.1
MW-07-1	August 2007	NA	NA	NA	NA	8840	NA	NA
MW-07-1	January 2008	<2U	<4U	<4U	<4U	7980	NA	NA
MW-07-1	January 2009	<0.8U	<2U	<2U	<3U	6620	NA	NA
North Seep	Feb 2001	NA	NA	NA	NA	1900	0.12	< 0.03
Seep	March 2006	<0.8U	<2U	<2U	<3U	1210	0.0623	NA
Seep	January 2008	NA	NA	NA	NA	1090	NA	NA
Seep	January 2009	NA	NA	NA	NA	1220	NA	NA
Dugout Creek								
MW-D-1	March 2006	<0.8	<2	<2	<3	10200	0.181	NA
MW-D-1	January 2008	NA	NA	NA	NA	11600	NA	NA
MW-D-1	January 2009	NA	NA	NA	NA	10300	NA	NA
MW-D-2	March 2006	<0.8	10.5	<2	<3	2370	0.180	NA
MW-D-2	January 2008	NA	NA	NA	NA	3480	NA	NA
MW-D-2	January 2009	NA	NA	NA	NA	2970	NA	NA
MW-D-3	March 2006	<0.8	<2	<2	<3	11000	0.0611	NA
MW-D-3	January 2008	NA	NA	NA	NA	8949*	NA	NA
MW-D-3	January 2009	NA	NA	NA	NA	10600	NA	NA
MW-D-4	March 2006	NS	NS	NS	NS	NS	NS	NA
MW-D-4	January 2008	NA	NA	NA	NA	5710	NA	NA
MW-D-4	January 2009	NA	NA	NA	NA	5720	NA	NA
MW-D-5	March 2006	dry	dry	dry	dry	dry	dry	NA
MW-D-5	January 2008	NÁ	NÁ	NÁ	NÁ	11400	NÁ	NA
MW-D-5	January 2009	NA	NA	NA	NA	10400	NA	NA
MW-D-6	March 2006	<0.8	<2	<2	<3	1270	0.0723	NA
MW-D-6	January 2008	NA	NA	NA	NA	1550	NA	NA
MW-D-6	January 2009	NA	NA	NA	NA	2980	NA	NA
MW-D-7	March 2006	dry	dry	dry	dry	dry	dry	NA
MW-D-7	January 2008	NÁ	NÁ	NÁ	NÁ	10400	NÁ	NA
MW-D-7	January 2009	NA	NA	NA	NA	10300	NA	NA
MW-D-8	March 2006	<0.8	<2	<2	<3	349	0.153	NA
MW-D-8	January 2008	NA	NA	NA	NA	482	NA	NA
MW-D-8	January 2009	NA	NA	NA	NA	440	NA	NA
MW-D-9	March 2006	NS	NS	NS	NS	NS	NS	NA
MW-D-9	January 2008	dry	dry	dry	dry	dry	dry	dry
MW-D-9	January 2009	dry	dry	dry	dry	dry	dry	dry
MW-D-10	March 2006	<0.8	<2	<2	<3	80.7	0.124	NÁ
MW-D-10	January 2008	NA	NA	NA	NA	68.9	NA	NA
MW-D-10	January 2009	NA	NA	NA	NA	121.0	NA	NA
MW-07-2	August 2007	dry	dry	dry	dry	dry	dry	dry
MW-07-2	January 2008	NA	NA	NA	NA	7480	NA	NA
MW-07-2	January 2009	NA	NA	NA	NA	4350	NA	NA
MW-07-3	August 2007	NA	NA	NA	NA	38800	NA	NA
MW-07-3	January 2008	NA	NA	NA	NA	33500	NA	NA
MW-07-3	January 2009	NA	NA	NA	NA	36800	NA	NA

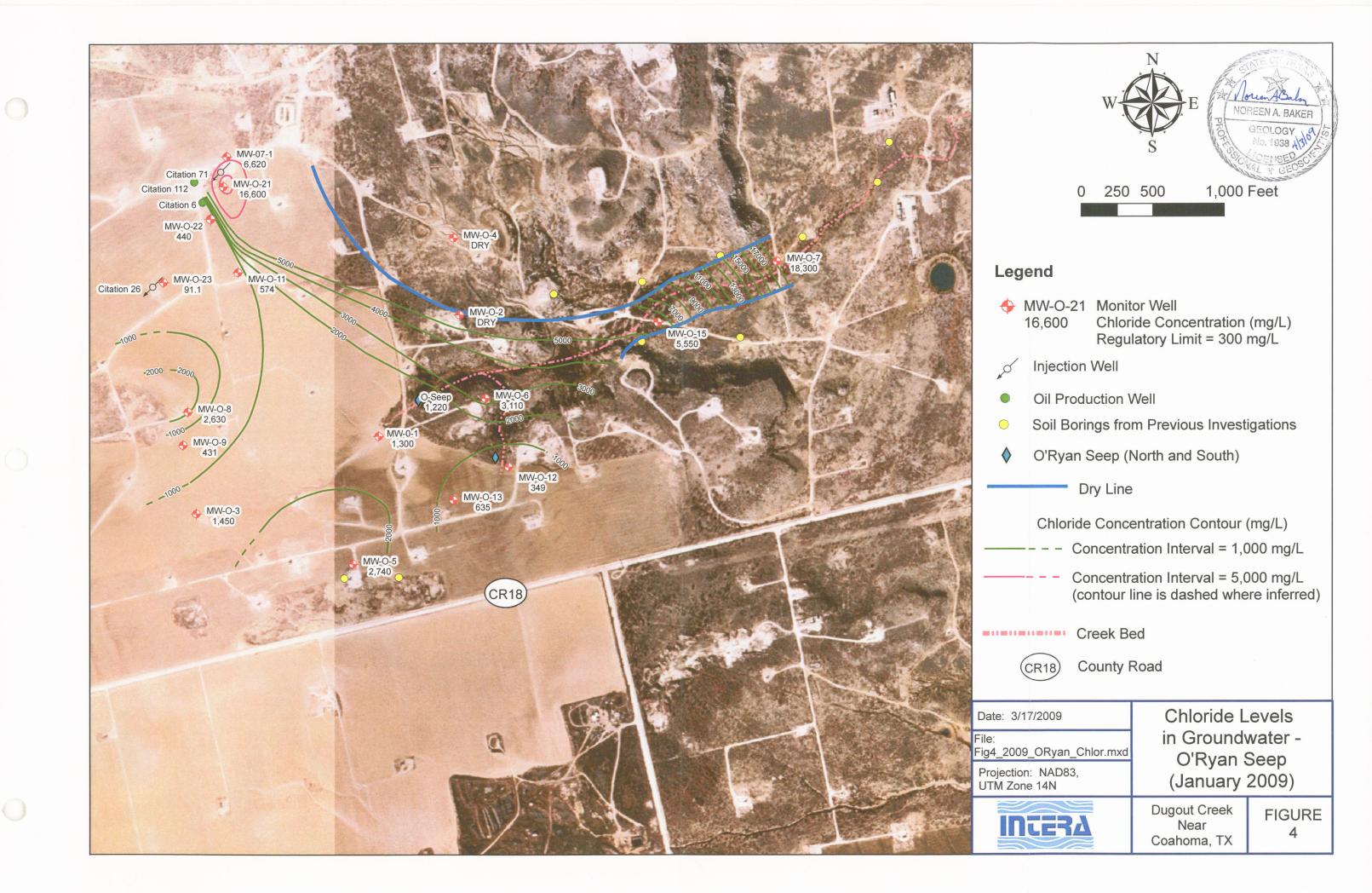
<sup>GW</sup>GW<sub>Ing</sub> PCL: Tier 1 Protective Concentration Levels for ingestion of groundwater (TCEQ, 2008) \*data from field titration using Hach test kit NA: not analyzed NS: not sampled, insufficient water in well

# **FIGURES**

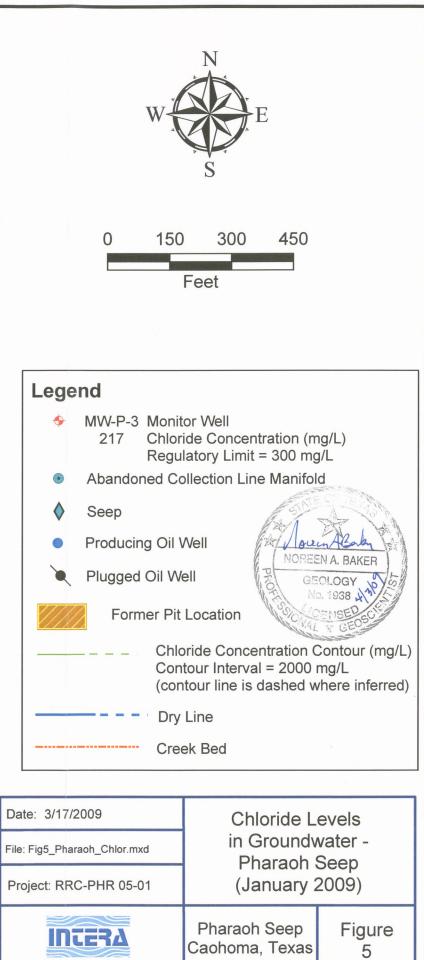














# ATTACHMENT A Laboratory Data Packages

### Data Review Checklist

Clie	ent/Project: RRC/ Dugovt	Reviewer: L. Pril	0		Review Date: 3/16/09
Lab	rk Order No.: 0901157	Analytical Method: Anims - 300			Matrix: Water
#	Review Item o	r Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
San	ple Preservation and Integr	rity			
1	Did samples arrive at the la preserved (e.g., 4°C, correc sample)?		~		
2	Were holding times met?		$\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{$		
Dat	a Completeness				
3	Are results reported for all t no additional analytes?	arget analytes, with	1		
4	Was the requested analytica	l method followed?	$\checkmark$		
5	Do reported detection limits agree with the project speci		~		
6	Are results reported for all s analysis?	samples submitted for	$\checkmark$		
Cali	bration and QC Sample Fre	equency			
7	Were initial and continuing analyses performed? And r		~		
8	For each analytical batch, as a method blank?	re results provided for	$\checkmark$		
9	For each analytical batch, an an LCS/LCSD pair?	re results provided for	$\checkmark$		
10	For each analytical/preparat provided for an MS/MSD pairs p results for MS/MSD pairs p field samples analyzed?	air? Alternately, are	~		
. 11	Are field duplicate results p specified (QAPP) frequency		$\checkmark$		

.

.

Clie	ent/Project: RRC/ Pugevt	Reviewer: L Priq	,		Review Date: 3/14/09
A CONTRACT	oratory: DHL rk Order No.: 0901157	Analytical Method: Anions - 300			Matrix: Wates
#	Review Item of	r Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
12	Organic Analyses Only: For and QC), are surrogate spike				NA
QC	Results				
13	Do method blank results show <b>no</b> detectable concentrations of target analytes (i.e., results = ND)?				
14	Are LCS/LCSD recoveries a limits?	and RPDs within	$\checkmark$		
15	Are MS/MSD recoveries an	d RPDs within limits?	$\checkmark$		
16	Are surrogate recoveries wit analyses only)?	thin limits (organic			NA
Oth	er Data Quality-Related Issu	ies			
17	The laboratory did not issue not true (a CAR was issued) sample results.	-	$\checkmark$		
18	The analyst did not describe anomalies. If this is not true impact to sample results.				
19	No other potential data quali identified. If this is not true	•	$\checkmark$		

### **Data Review Checklist (continued)**

<sup>a</sup> The laboratory will not be required to report all calibration results. Data validation efforts for this project will assume that the laboratory performed the method-specified calibration analyses.

CAR = Corrective Action Report

LCS/LCSD = Laboratory Control Sample/Duplicate Laboratory Control Sample

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Further Comments:

### Data Review Checklist

Clie	ent/Project: RRC / Dug evt	Reviewer: L. Price	e .		Review Date: 3/16/09
Laboratory: DHL Work Order No.: 09011 57		Analytical Method: TDS-2540 C			Matrix: Water
#	Review Item o	r Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
San	ople Preservation and Integ	rity			
1	Did samples arrive at the la preserved (e.g., 4°C, correct sample)?		~		
2	Were holding times met?		$\checkmark$		
Dat	a Completeness				
3	Are results reported for all no additional analytes?	target analytes, with	$\checkmark$		
4	Was the requested analytica	al method followed?	V		
5	Do reported detection limit agree with the project speci		V		
6	Are results reported for all analysis?	samples submitted for	$\checkmark$		
Cali	ibration and QC Sample Fr	equency			
7	Were initial and continuing analyses performed? And r		~		Reporting ICV/CCV is not required. checklist indicates icv/ccv is o.K. A effect on data quality.
8	For each analytical batch, a a method blank?	re results provided for	$\checkmark$		
9	For each analytical batch, a an LCS/LCSD pair?	re results provided for	V		Only LCS provided. Lab dup provide and in control. No effect on def- quality.
10	For each analytical/preparate provided for an MS/MSD p results for MS/MSD pairs p field samples analyzed?	air? Alternately, are		~	MS/MSD not run for TDS. LES dup ok. No effect on data guali
11	Are field duplicate results p specified (QAPP) frequency		$\checkmark$		· ·

Clie	ent/Project: LRC/ Dugovt Reviewer: L. Pric	e		Review Date: 3/14/09
Lab	Laboratory: DHLAnalytical Method:Work Order No.: 901157TDS - 2540 C			Matrix: Water
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?			NA
QC	Results			
13	Do method blank results show <b>no</b> detectable concentrations of target analytes (i.e., results = ND)?			
14	Are LCS/LCSD recoveries and RPDs within limits?	V		LCSD not provided.
15	Are MS/MSD recoveries and RPDs within limits?		$\checkmark$	No MS/MSD provided.
16	Are surrogate recoveries within limits (organic analyses only)?			NA
Oth	er Data Quality-Related Issues			
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.			
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	$\checkmark$		
19	No other potential data quality issues were identified. If this is not true, describe issues.	$\checkmark$		

### **Data Review Checklist (continued)**

<sup>a</sup> The laboratory will not be required to report all calibration results. Data validation efforts for this project will assume that the laboratory performed the method-specified calibration analyses.

CAR = Corrective Action Report

LCS/LCSD = Laboratory Control Sample/Duplicate Laboratory Control Sample

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Further Comments:



February 05, 2009

Barbara Rigney INTERA Inc. 1812 Centre Creek Dr. #300 Austin, Texas 78754

TEL: (512) 425-2097 FAX: (512) 425-2099

Order No.: 0901157

RE: Dugout Creek

Dear Barbara Rigney:

DHL Analytical received 8 sample(s) on 1/29/2009 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-08A-TX



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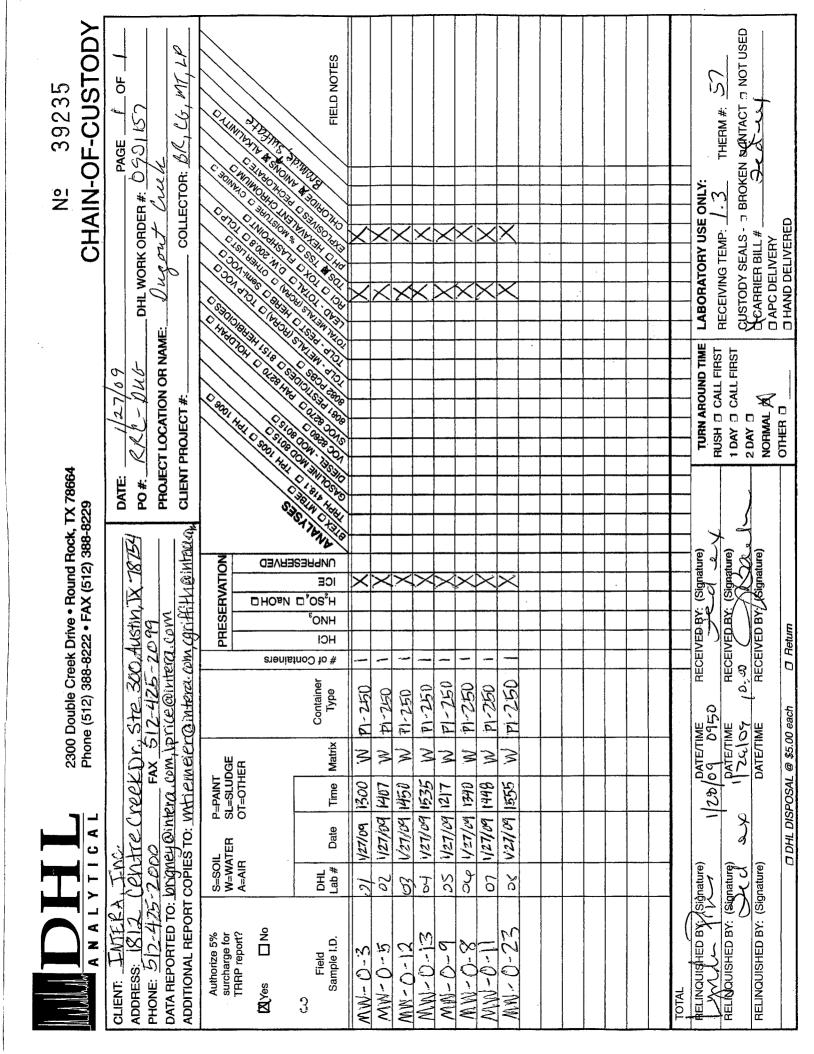
This report for INTERA Inc.: Dugout Creek (DHL Work Order 0901157) contains the following information:

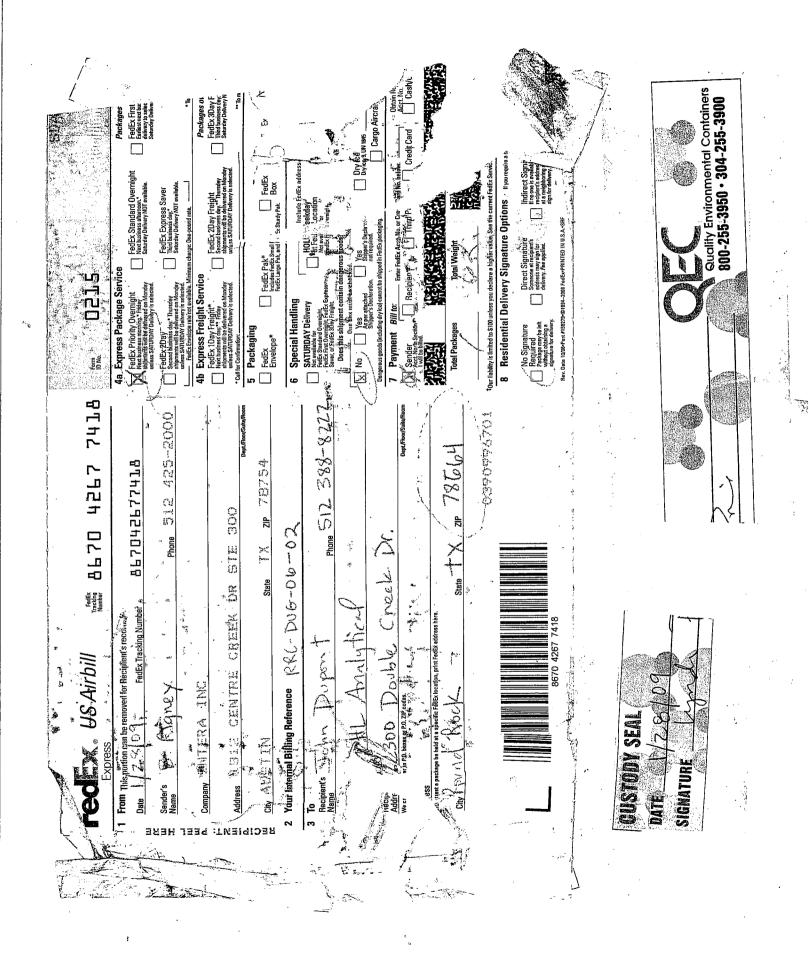
	ITEM	Page
•	Cover Page	1
•	Table of Contents	2
•	Original chain of custody, FedEx slip (if used), log-in checklist	3-5
•	Laboratory Data Package Signature Page	6
•	Laboratory Review Checklist	7-8
•	Case Narrative	9
•	Work Order Summary	10
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•	Sample Results	15-22
•	QC Summary Report	23-27
•	MQL Summary Report	28
e	Total Number of Pages	28

February 5, 2009

Approved: John DuPont

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## DHL Analytical

	Sample	Recei	ipt Chec	klist	
Client Name INTERA Inc.				Date Rec	eived: 1/29/2009
Work Order Number 0901157				Received	by JB
Checklist completed by:	L 1/20 Date	515-	7	Reviewed	by JD 0//29/09
	Carrier name:	FedEx	<u>1day</u>		
		-		_	
Shipping container/cooler in good condition?		Yes		No 🗌	Not Present
Custody seals intact on shippping container/co	ooler?	_		No 🗌	Not Present
Custody seals intact on sample bottles?				No 🗌	Not Present 🔽
Chain of custody present?		Yes		No 🗌	
Chain of custody signed when relinquished an	d received?	Yes		No 🗌	
Chain of custody agrees with sample labels?		Yes		No 🗌	
Samples in proper container/bottle?		Yes 🛽		No 🗌	
Sample containers intact?		Yes 🛛		No 🗌	
Sufficient sample volume for indicated test?		Yes 🛚		No 🗔	
All samples received within holding time?		Yes 🛛		No 🗌	
Container/Temp Blank temperature in complia	nce?	Yes 🛓	2	Νο	1.3 °C
Water - VOA vials have zero headspace?		Yes 🗌		No 🗌	No VOA vials submitted
Water - pH acceptable upon receipt?		Yes 🗌		No 🗌	Not Applicable 🗹
	Adjusted?		Chec	ked by	
Any No response must be detailed in the comm	nents section below.				
Client contacted	Date contacted:			Pe	rson contacted
Contacted by:	Regarding:				
Comments:					
Corrective Action					

۰.

### Laboratory Data Package Signature Page

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC 5.13
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
- R10 Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

**Release Statement:** I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By me signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Scott Schroeder – Project Manager John DuPont – General / QA Manager

nature

02/05/09

DH	LA	nalytical, Inc.						
Lal	oora	tory Review Checklist: Reportable Data						
Proje	ect Na	me: Dugout Creek Date: 2	/5/09					
Revi	ewer	Name: Carlos Castro Laborato	ry Work Order: 0901157					
			ch: See Analytical Dates Report					
$\frac{1}{\#^1}$	A <sup>2</sup>		en. see Anarytical Dates Report	Vec	No	DIA 3	NID4	ER# <sup>5</sup>
#'	<u>A</u> -			Yes		INA	NR⁴	EK#
		Chain-of-Custody (C-O-C)	. 1.11.	N.				D1 01
R1	OI			X		37		R1-01
		2) Were all departures from standard conditions described in an exce		11000000000		X		
R2	OI	Sample and Quality Control (QC) Identification						
		1) Are all field sample ID numbers cross-referenced to the laboratory		X	<u> </u>		<u> </u>	
		2) Are all laboratory ID numbers cross-referenced to the correspondi	ng QC data?	Х	8 890745790			
R3	OI	Test Reports		NV N			i	
		1) Were all samples prepared and analyzed within holding times?	11 11 1 1 1 1 0	X				
	1	2) Other than those results $<$ MQL, were all other raw values bracket	ed by calibration standards?	X X		<b> </b>		
	1	3) Were calculations checked by a peer or supervisor?	· · · · · · · · · · · · · · · · · · ·	$\frac{X}{X}$	<u> </u>	<u> </u>		
		<ul><li>4) Were all analyte identifications checked by a peer or supervisor?</li><li>5) Were sample quantitation limits reported for all analytes not detection of the sample quantitation limits reported for all analytes and detection.</li></ul>	ted?	X				
		<ul><li>6) Were all results for soil and sediment samples reported on a dry w</li></ul>		<u>л</u>		X	-	
		7) Were % moisture (or solids) reported for all soil and sediment samples				X		
		8) If required for the project, TICs reported?	ipies:			X		
R4	0	Surrogate Recovery Data						
	<u> </u>	1) Were surrogates added prior to extraction?	······			X		
		<ul><li>2) Were surrogate percent recoveries in all samples within the labora</li></ul>	tory OC limits?			X		
R5	OI	Test Reports/Summary Forms for Blank Samples						
		1) Were appropriate type(s) of blanks analyzed?		X		7.000.000		
		2) Were blanks analyzed at the appropriate frequency?	· · · · · · · · · · · · · · · · · · ·	X				
		3) Where method blanks taken through the entire analytical process,	including preparation and if	X				
		applicable, cleanup procedures?	morading propulation and, it	1				
		4) Were blank concentrations < MQL?		x	<u> </u>			
R6	OI	Laboratory Control Samples (LCS):						
		1) Were all COCs included in the LCS?		X				
		2) Was each LCS taken through the entire analytical procedure, inclu	ding prep and cleanup steps?	Х				
		3) Were LCSs analyzed at the required frequency?		Х				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory Q	C limits?	X	[			
		5) Does the detectability data document the laboratory's capability to	detect the COCs at the MDL used	Х				
		to calculate the SQLs?						
		6) Was the LCSD RPD within QC limits (if applicable)?		X				
<b>R7</b>	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data			2/2			
		1) Were the project/method specified analytes included in the MS and	d MSD?	Х				
		2) Were MS/MSD analyzed at the appropriate frequency?		Х				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC	limits?	Х				
		4) Were MS/MSD RPDs within laboratory QC limits?		Х				
<u>R8</u>	OI	Analytical Duplicate Data		X				
		1) Were appropriate analytical duplicates analyzed for each matrix?						
		2) Were analytical duplicates analyzed at the appropriate frequency?		X				
	07	3) Were RPDs or relative standard deviations within the laboratory Q	C limits?	Х	Technicke	See See		
<u>v</u>	OI	Method Quantitation Limits (MQLs):	1	v				
		1) Are the MQLs for each method analyte included in the laboratory	, , , , , , , , , , , , , , , , , , ,	X				
•		2) Do the MQLs correspond to the concentration of the lowest non-zer		X				
110		3) Are unadjusted MQLs included in the laboratory data package?		X				
R10		Other Problems/Anomalies	LDC and ED2			v		
		1) Are all known problems/anomalies/special conditions noted in this		v		X		· .
		2) Were all necessary corrective actions performed for the reported d		X v				
	1	3) Was applicable and available technology used to lower the SQL m affects on the sample results?	minize the matrix interference	Х				
		lattorio on the sample results:						

Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable). 1

2

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

. 1.

NA = Not applicable.3

DH	LA	nalytical, Inc.	· · · · · · · · · · · · · · · · · · ·					
		tory Review Checklist (continued): Supportin					<b>.</b>	
Proje	ct Na	me: Dugout Creek Da	ate: 2/5/09					
Revie	ewer l	Jame: Carlos Castro La	boratory Work Order: 0901157					
#I	A <sup>2</sup>	Description		Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	Initial Calibration (ICAL)		200				
		1) Were response factors and/or relative response factors for each	ch analyte within OC limits?	X				
	1	2) Were percent RSDs or correlation coefficient criteria met?		X				
		3) Was the number of standards recommended in the method us	sed for all analytes?	X	1			
	1	4) Were all points generated between the lowest and highest sta		X	<u> </u>			
		5) Are ICAL data available for all instruments used?		X				
		6) Has the initial calibration curve been verified using an approp	priate second source standard?	Х				
S2	OI	Initial and Continuing calibration Verification (ICCV and C			2.1	1997 (j. 1		
·		blank (CCB):	· · · · · · · · · · · · · · · · · · ·				1000	
		1) Was the CCV analyzed at the method-required frequency?		Х				
		2) Were percent differences for each analyte within the method-	-required QC limits?	Х				
		3) Was the ICAL curve verified for each analyte?		X				
		4) Was the absolute value of the analyte concentration in the inc	organic CCB < MDL?	X				
S3	0	Mass Spectral Tuning:						
		1) Was the appropriate compound for the method used for tunin				X		
		2) Were ion abundance data within the method-required QC lim	nits?			X		a contractor and a second second second
<u>S4</u>	0	Internal Standards (IS):						
L	ļ	1) Were IS area counts and retention times within the method-re		and the second		X	VIIIIII	11.11.11.11.11.11.11.11.11.11.11.11.11.
S5	OI	Raw Data (NELAC section 1 appendix A glossary, and section				(\$200 <u>;</u> 0)		
		1) Were the raw data (for example, chromatograms, spectral dat		X	<u> </u>			
		2) Were data associated with manual integrations flagged on the	e raw data?	X				
<u>S6</u>	0	Dual Column Confirmation	1000			N		
		1) Did dual column confirmation results meet the method-requir	red QC?			X	Engensen	
S7	0	Tentatively Identified Compounds (TICs):	1:			v		
00	r	1) If TICs were requested, were the mass spectra and TIC data s	subject to appropriate checks?			X	Specific States	
<u>S8</u>	1	Interference Check Sample (ICS) Results:				x		
<b>S</b> 9	T	1) Were percent recoveries within method QC limits? Serial Dilutions, Post Digestion Spikes, and Method of Stand	land Additions					
59		1) Were percent differences, recoveries, and the linearity w method?				Х		
S10	OI	Method Detection Limit (MDL) Studies						
510		1) Was a MDL study performed for each reported analyte?	X					
		2) Is the MDL either adjusted or supported by the analysis of DC	CSs?	X				
S11	OI	Proficiency Test Reports:						
<u></u>		1) Was the lab's performance acceptable on the applicable profic	ciency tests or evaluation studies?	Х			99999-9429-9999 	
S12	OI	Standards Documentation						
<u>~</u>		1) Are all standards used in the analyses NIST-traceable or obta	Х					
S13	OI	Compound/Analyte Identification Procedures						
	1	1) Are the procedures for compound/analyte identification docu	mented?	Х				
S14	OI	Demonstration of Analyst Competency (DOC)						
		1) Was DOC conducted consistent with NELAC Chapter 5C?		Х				
		2) Is documentation of the analyst's competency up-to-date and	on file?	Х				
S15	OI	Verification/Validation Documentation for Methods (NELA)	C Chap 5)					
		1) Are all the methods used to generate the data document	nted, verified, and validated, where	Х				
		applicable?						
S16	OI	Laboratory Standard Operating Procedures (SOPs):						
5.0		1) Are laboratory SOPs current and on file for each method perf	formed?	X				
		ay the factorizery bot boundary and on the for each method per						

Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by 1 the letter "S" should be retained and made available upon request for the appropriate retention period. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

<sup>2</sup> 3 NA = Not applicable.

<sup>4</sup> NR = Not Reviewed.

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked). 5

#### **DHL Analytical**

**Date:** 05-Feb-09

CLIENT:INTERA Inc.Project:Dugout CreekLab Order:0901157

### **CASE NARRATIVE**

Samples were analyzed using the methods outlined in the following references:

Method E300 - Anions Analysis Method M2540C (18th Edition) - TDS Analysis

Exception Report R1-01

Samples were received and log-in performed on 1/29/09. A total of 8 samples were received. The samples arrived in good condition and were properly packaged.

## **DHL Analytical**

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CLIENT:INTERA Inc.Project:Dugout CreekLabOrder:0901157

#### Date: 05-Feb-09

## Work Order Sample Summary

\_\_\_\_

Lab Smp ID	Client Sample ID	TagNumber	<b>Date Collected</b>	DateRecved
0901157-01	MW-O-3		01/27/0901:00PM	1/29/2009
0901157-02	MW-O-5		01/27/0902:07PM	1/29/2009
0901157-03	MW-O-12		01/27/0902:50PM	1/29/2009
0901157-04	MW-O-13		01/27/0903:35PM	1/29/2009
0901157-05	MW-O-9		01/27/0912:17PM	1/29/2009
0901157-06	MW-O-8		01/27/0901:40PM	1/29/2009
0901157-07	MW-O-11		01/27/0902:48PM	1/29/2009
0901157-08	MW-O-23		01/27/0903:55PM	1/29/2009

Page 1 of 1

LabOrder: Client: Project:	0901157 INTERA Inc. Dugout Creek				Р	PREP DATES REPORT	RT .
Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0901157-01A	MW-0-3	M4 00:10 60/22/10	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-3	01/27/09 01:00 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-3	MG 00:10 90/22/10	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-3	01/27/09 01:00 PM	Aqueous	M2540C	TDS Preparation	02/02/09 09:20 AM	33255
09011 57-02A	MW-0-5	01/27/09 02:07 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-5	01/27/09 02:07 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-5	01/27/09 02:07 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-5	01/27/09 02:07 PM	Aqueous	M2540C	TDS Preparation	02/02/09 09:20 AM	33255
09011 <i>5</i> 7-03A	MW-0-12	01/27/09 02:50 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-12	01/27/09 02:50 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-12	01/27/09 02:50 PM	Aqueous	M2540C	TDS Preparation	02/02/09 09:20 AM	33255
0901157-04A	MW-0-13	01/27/09 03:35 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-13	01/27/09 03:35 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-13	01/27/09 03:35 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-13	01/27/09 03:35 PM	Aqueous	M2540C	<b>TDS</b> Preparation	02/02/09 09:20 AM	33255
09011 <i>57-</i> 05A	6-0-MM	01/27/09 12:17 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	6-0-MM	01/27/09 12:17 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	6-0-MM	01/27/09 12:17 PM	Aqueous	M2540C	TDS Preparation	02/02/09 09:20 AM	33255
0901157-06A	8-0-8	01/27/09 01:40 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-O-8	01/27/09 01:40 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW0-8	01/27/09 01:40 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-8	01/27/09 01:40 PM	Aqueous	M2540C	TDS Preparation	02/02/09 09:20 AM	33255
09011 <i>57-</i> 07A	MW-0-11	01/27/09 02:48 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-11	01/27/09 02:48 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-11	01/27/09 02:48 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-11	01/27/09 02:48 PM	Aqueous	M2540C	TDS Preparation	02/03/09 03:00 PM	33297
09011 <i>57-</i> 08A	MW-0-23	01/27/09 03:55 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217
	MW-0-23	01/27/09 03:55 PM	Aqueous	E300	Anion Preparation	01/29/09 10:00 AM	33217

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05-Feb-09

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LabOrder:	0901157						
Client:	INTERA Inc.				PREI	<b>PREP DATES REPORT</b>	E
Project:	reek						
Sample ID	hample ID Client Sample ID Collection		Matrix	Date Matrix Test Number Test Name	Test Name	Prep Date	Batch ID
09011 57-08A MW-O-23	MW-0-23	01/27/09 03:55 PM	Aqueous	M2540C	TDS Preparation	02/03/09 03:00 PM	33297

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DHL Analytical

05-Feb-09

LabOrder: Client: Project:	0901157 INTERA Inc. Dugout Creek				ANA	ALYTIC.	ANALYTICAL DATES REPORT	PORT
Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0901157-01A	MW-0-3	Aqueous	E300	Anions by IC method - Water	33217	100	01/29/09 03:14 PM	IC2_090129A
	MW-0-3	Aqueous	E300	Anions by IC method - Water	33217	Ι	01/29/09 04:27 PM	IC2_090129A
	MW-0-3	Aqueous	E300	Anions by IC method - Water	33217	10	01/29/09 12:22 PM	IC2_090129A
	MW-0-3	Aqueous	M2540C	Total Dissolved Solids	33255	. <b></b> 1	02/02/09 10:00 AM	WC_090202A
09011 <i>57-</i> 02A	MW-0-5	Aqueous	E300	Anions by IC method - Water	33217	10	01/29/09 12:37 PM	IC2_090129A
	MW-0-5	Aqueous	E300	Anions by IC method - Water	33217	100	M4 62:50 00/22/10	IC2_090129A
	MW-0-5	Aqueous	E300	Anions by IC method - Water	33217	1	01/29/09 04:42 PM	IC2_090129A
	MW-0-5	Aqueous	M2540C	Total Dissolved Solids	33255	Ţ	02/02/09 10:00 AM	WC_090202A
09011 <i>57-</i> 03A	MW-0-12	Aqueous	E300	Anions by IC method - Water	33217	10	01/29/09 12:52 PM	IC2_090129A
	MW-0-12	Aqueous	E300	Anions by IC method - Water	33217	1	01/29/09 05:13 PM	IC2_090129A
	MW-0-12	Aqueous	M2540C	Total Dissolved Solids	33255	-	02/02/09 10:00 AM	WC_090202A
0901157-04A	MW-0-13	Aqueous	E300	Anions by IC method - Water	33217	Ţ	01/29/09 05:28 PM	IC2_090129A
	MW-0-13	Aqueous	E300	Anions by IC method - Water	33217	10	01/29/09 01:06 PM	IC2_090129A
	MW-0-13	Aqueous	E300	Anions by IC method - Water	33217	100	01/29/09 03:43 PM	IC2_090129A
	MW-0-13	Aqueous	M2540C	Total Dissolved Solids	33255	1	02/02/09 10:00 AM	WC_090202A
09011 <i>5</i> 7-05A	0-0-WM	Aqueous	E300	Anions by IC method - Water	33217	1	01/29/09 05:43 PM	IC2_090129A
	6-0-MM	Aqueous	E300	Anions by IC method - Water	33217	10	01/29/09 01:21 PM	IC2_090129A
	0-0-MM	Aqueous	M2540C	Total Dissolved Solids	33255	1	02/02/09 10:00 AM	WC_090202A
0901157-06A	MW-0-8	Aqueous	E300	Anions by IC method - Water	33217	10	01/29/09 02:30 PM	IC2_090129A
	MW-0-8	Aqueous	E300	Anions by IC method - Water	33217	100	01/29/09 03:58 PM	IC2_090129A
	MW-0-8	Aqueous	E300	Anions by IC method - Water	33217	1	01/29/09 06:27 PM	IC2_090129A
	8-0-8	Aqueous	M2540C	Total Dissolved Solids	33255	1	02/02/09 10:00 AM	WC_090202A
09011 57-07A	MW-0-11	Aqueous	E300	Anions by IC method - Water	33217	10	01/29/09 02:45 PM	IC2_090129A
	MW-0-11	Aqueous	E300	Anions by IC method - Water	33217	100	01/29/09 04:13 PM	IC2_090129A
	11-0-WM	Aqueous	E300	Anions by IC method - Water	33217	1	01/29/09 06:41 PM	IC2_090129A
	MW-0-11	Aqueous	M2540C	Total Dissolved Solids	33297	-	02/03/09 04:30 PM	WC_090203B
09011 <i>5</i> 7-08A	MW-0-23	Aqueous	E300	Anions by IC method - Water	33217	10	01/29/09 02:59 PM	IC2_090129A
	MW-0-23	Aqueous	E300	Anions by IC method - Water	33217	I	01/29/09 06:56 PM	IC2_090129A

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DHL Analytical

05-Fe b-09

LabOrder:	0901157							
Client:	INTERA Inc.				ANA	LYTIC	ANALYTICAL DATES REPORT	<b>PORT</b>
Project:	Dugout Creek							
Sample ID	Sample ID Client Sample ID	Matrix	Test Number Test Name	Test Name	Batch ID	Dilution	Dilution Analysis Date	Run ID
0901157-08A MW-O-23	MW-0-23	Aqueous	M2540C	Total Dissolved Solids	33297	ţ	02/03/09 04:30 PM	WC_090203B

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**Date:** 05-Feb-09

CLIENT:	INTERA Inc.				Client	Sample ID	: MW-0	D-3
Project:	Dugout Creek					LabID	: 090115	57-01
Project No:					Colle	ection Date	: 01/27/	/0901:00PM
LabOrder:	0901157					Matrix	: AQUE	EOUS
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
ANIONS BY IC	METHOD-WATER	· .	E300			·		Analyst: JBC
Bromide		2.66	0.300	1.00		mg/L	1	01/29/09 04:27 PM
Chloride		1450	30.0	100		mg/L	100	01/29/09 03:14 PM
Sulfate		255	10.0	30.0		mg/L	10	01/29/09 12:22 PM
TOTALDISSOL	VEDSOLIDS		M2540	C				Analyst: AAD
Total Dissolved Filterable)	d Solids (Residue,	3160	10.0	10.0		mg/L	1	02/02/09 10:00 AM

Qualifiers: ND - Not Detected at the SDL

- J Analyte detected between SDL and RL
- B Analyte detected in the associated Method Blank

DF- Dilution Factor

- N Parameter not NELAC certified
- See Final Page of Report for MQLs and MDLs
- S Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

- RL Reporting Limit (MQL adjusted for moisture and sample size)
- SDL Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

Page 1 of 8

DHL Ana	lytical				Date:	05-Fe	b-09			
CLIENT:	INTERA Inc.				Client Sample	<b>D</b> : MW-0	)-5			
Project:	Dugout Creek				LabID: 0901157-02					
Project No:		Collection Date: 01/27/0902:07PM								
LabOrder:	0901157				Mat	rix: AQUE	EOUS			
Analyses		Result	SDL	RL	Qual Units	DF	DateAnalyzed			
ANIONS BY IC	METHOD-WATER		E300	)	<del>.</del> .		Analyst: JBC			
Bromide		2.56	0.300	1.00	mg/L	1	01/29/09 04:42 PM			
Chloride		2740	30.0	100	mg/L	100	01/29/09 03:29 PM			
Sulfate		558	10.0	30.0	mg/L	10	01/29/09 12:37 PM			
TOTALDISSOL	VEDSOLIDS		M2540	C			Analyst: AAD			
Total Dissolved Filterable)	d Solids (Residue,	5730	10.0	10.0	mg/L	1	02/02/09 10:00 AM			

Qualifiers: ND - Not Detected at the SDL

- J Analyte detected between SDL and RL
- B Analyte detected in the associated Method Blank

DF- Dilution Factor

- N Parameter not NELAC certified
- See Final Page of Report for MQLs and MDLs
- S Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit E - TPH pattern not Gas or Diesel Range Pattern

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DHL Ana	lytical				D	ate:	05-Fe	2b-09		
CLIENT:	INTERA Inc.				Client	Sample ID:	MW-0	D-12		
Project:	Dugout Creek					LabID:	09011	0901157-03		
Project No:		Collection Date: 01/27/0902:50						/0902:50PM		
LabOrder:	0901157					Matrix:		EOUS		
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed		
ANIONS BY IC	METHOD-WATER		E300					Analyst: JBC		
Bromide		0.721	0.300	1.00	J	mg/L	1	01/29/09 05:13 PM		
Chloride		349	3.00	10.0		mg/L	10	01/29/09 12:52 PM		
Sulfate		153	10.0	30.0		mg/L	10	01/29/09 12:52 PM		
TOTALDISSOL	VEDSOLIDS		M2540	с				Analyst: AAD		
Total Dissolved Filterable)	d Solids (Residue,	1190	10.0	10.0		mg/L	1	02/02/09 10:00 AM		

Qualifiers: ND - Not Detected at the SDL

- J Analyte detected between SDL and RL
- B Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size) SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

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DHL Ana	lytical				D	ate:	05-Fe	<i>b-09</i>		
CLIENT:	INTERA Inc.				Client	Sample ID	: MW-0	D-13		
Project:	Dugout Creek					LabID	09011	57-04		
Project No:			Collection Date: 01					)1/27/0903:35PM		
LabOrder: 0901157						Matrix	AQUE	EOUS		
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed		
ANIONS BY IC	METHOD-WATER		E300					Analyst: JBC		
Bromide		1.39	0.300	1.00		mg/L	1	01/29/09 05:28 PM		
Chloride		635	30.0	100		mg/L	100	01/29/09 03:43 PM		
Sulfate		136	10.0	30.0		mg/L	10	01/29/09 01:06 PM		
TOTALDISSO	VEDSOLIDS		M2540C	:				Analyst: AAD		
Total Dissolved	d Solids (Residue,	1580	10.0	10.0		mg/L	1	02/02/09 10:00 AM		

Filterable)

Qualifiers: ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size) SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

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Date: 05-Feb-09

CLIENT:	INTERA Inc.				Client	Sample ID	: MW-0	0-9
Project:	Dugout Creek					LabID	: 09011	57-05
Project No:					Colle	ction Date	: 01/27	/0912:17PM
LabOrder:	0901157					Matrix	: AQUI	EOUS
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
ANIONS BY IC	METHOD-WATER		E300	)		. •	-	Analyst: JBC
Bromide		3.00	0.300	1.00		mg/L	1	01/29/09 05:43 PM
Chloride		431	3.00	10.0		mg/L	10	01/29/09 01:21 PM
Sulfate		883	10.0	30.0		mg/L	10	01/29/09 01:21 PM
TOTALDISSOL	OTALDISSOLVEDSOLIDS		M2540	oc				Analyst: AAD
Total Dissolved	Total Dissolved Solids (Residue,		10.0	10.0		mg/L	1	02/02/09 10:00 AM

Filterable)

Qualifiers: ND - Not Detected at the SDL

- J Analyte detected between SDL and RL
- B Analyte detected in the associated Method Blank
- DF- Dilution Factor
- N Parameter not NELAC certified
- See Final Page of Report for MQLs and MDLs
- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative
- RL Reporting Limit (MQL adjusted for moisture and sample size)
- SDL Sample Detection Limit
- E TPH pattern not Gas or Diesel Range Pattern

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DHL	Analytical	

**Date:** 05-Feb-09

CLIENT:	INTERA Inc.				Client	Sample ID	: MW-0	)-8		
Project:	Dugout Creek					LabID	: 09011:	57-06		
Project No:					Colle	ction Date	: 01/27/	/0901:40PM		
LabOrder:	0901157		Matrix: AQUEOUS							
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed		
ANIONS BY IC	METHOD-WATER	t tut i i	E300	)				Analyst: JBC		
Bromide		4.76	0.300	1.00		mg/L	1	01/29/09 06:27 PM		
Chloride		2630	30.0	100		mg/L	100	01/29/09 03:58 PM		
Sulfate		432	10.0	30.0		mg/L	10	01/29/09 02:30 PM		
TOTALDISSOL	DTALDISSOLVEDSOLIDS		M2540	C				Analyst: AAD		
Total Dissolved Solids (Residue, Filterable)		5440	10.0	10.0		mg/L	1	02/02/09 10:00 AM		

Qualifiers: ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit E - TPH pattern not Gas or Diesel Range Pattern

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DHL Ana	lytical				Da	te:	05-Fe	<i>b-09</i>
CLIENT:	INTERA Inc.				Client S	Sample ID:	MW-C	D-11
Project:	Dugout Creek					LabID:	09011	57-07
Project No:					Collec	ction Date:	01/27/	0902:48PM
LabOrder: 0901157						Matrix	AQUE	COUS
Analyses	-	Result	SDL	RL	Qual	Units	DF	DateAnalyzed
ANIONS BY IC	METHOD-WATER	<u> </u>	E300	)				Analyst: JBC
Bromide		2.30	0.300	1.00		mg/L	1	01/29/09 06:41 PM
Chloride		574	30.0	100		mg/L	100	01/29/09 04:13 PM
Sulfate		340	10.0	30.0		mg/L	10	01/29/09 02:45 PM
TOTALDISSOL	TOTALDISSOLVEDSOLIDS		M2540	C				Analyst: AAD
Total Dissolved Filterable)	Total Dissolved Solids (Residue,		10.0	10.0		mg/L	1	02/03/09 04:30 PM

Qualifiers: ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

 $\ensuremath{\mathsf{B}}$  - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified See Final Page of Report for MQLs and MDLs S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size) SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

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DHL Ana	lytical				D	ate:	05-Fe	Ь-09
CLIENT:	INTERA Inc.				Client	Sample II	): MW-0	)-23
Project:	Dugout Creek					LabII	<b>):</b> 09011:	57-08
Project No:					Colle	ection Date	e: 01/27/	0903:55PM
LabOrder:	0901157	eek       LabID: 0901157-08         Collection Date:       01/27/0903:55PM         Matrix:       AQUEOUS         Result       SDL       RL       Qual       Units       DF       DateAnalyzed         TER       E300       Analyst:       JBC       Analyst:       JBC         0.698       0.300       1.00       J       mg/L       1       01/29/09 06:56 PM         91.1       3.00       10.0       mg/L       10       01/29/09 02:59 PM         265       10.0       30.0       mg/L       10       01/29/09 02:59 PM         M2540C       Analyst: AAD	EOUS					
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
ANIONS BY IC	METHOD-WATER	÷	E300	-				Analyst: JBC
Bromide		0.698	0.300	1.00	J	mg/L	1	01/29/09 06:56 PM
Chloride		91.1	3.00	10.0		mg/L	10	01/29/09 02:59 PM
Sulfate		265	10.0	30.0		mg/L	10	01/29/09 02:59 PM
TOTALDISSOL	VEDSOLIDS		M2540C	;				Analyst: AAD
Total Dissolved	d Solids (Residue,	939	10.0	10.0		mg/L	1	02/03/09 04:30 PM

Filterable)

Qualifiers: ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit E - TPH pattern not Gas or Diesel Range Pattern

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#### CLIENT: INTERA Inc. Work Order: 0901157

#### ANALYTICAL QC SUMMARY REPORT

Project: I

Dugout Creek

#### RunID: IC2\_090129A

SampleID	LCS-33217	Batch D:	33217		TestNo:	E300			Units:	mg/l		
SampType:	LCS	RunID:	IC2_09012	29A	Analysis	5 Date: <b>1/29/2</b>	2009 10:14	4:36 AM	PrepDate	e: <b>1/29</b> /	2009	
Anaiyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimi	t HighLimit	%RPD	RPDLimit	Qual
Bromide			19.3	1.00	20.00	0	96.7	90	110			
Chloride			9.72	1.00	10.00	0	97.2	90	110			
Sulfate			29.0	3.00	30.00	0	96.5	90	110			
SampleID	LCSD-33217	Batch D:	33217		TestNo:	E300			Units:	mg/L		
SampType:	LCSD	RunID:	IC2_09012	29A	Analysis	Date: 1/29/2	2009 10:29	9:16 A <b>M</b>	PrepDate	e: 1/29/	2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	t HighLimit	%RPD I	RPDLimit	Qual
Bromide			19.5	1.00	20.00	0	97.3	90	110	0.628	20	
Chloride			9.70	1.00	10.00	0	97.0	90	110	0.226	20	
Sulfate			29.3	3.00	30.00	0	97.6	90	110	1.08	20	
SampleID	MB-33217	Batch D:	33217		TestNo:	E300			Units:	mg/L		
SampType:	MBLK	RunID:	IC2_09012	9A	Analysis	Date: 1/29/2	2009 10:43	3:57 AM	PrepDate	e: 1/29/	2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide			ND	1.00								
Chloride			ND	1.00								
Sulfate			ND	3.00								
SampleID	0901157-05A MS	Batch D:	33217		TestNo:	E300		*	Units:	mg/L		
SampType:	MS	RunID:	IC2_09012	9A	Analysis	Date: 1/29/2	2009 1:44:	43 PM	PrepDate	: 1/29/	2009	
Analyte	· ·		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD I	RPDLimit	Qual
Chloride			358	10.0	100.0	258.3	99.9	90	110			
Sulfate			828	30.0	300.0	529.7	99.3	90	110			
SampleID	0901157-05A MSD	Batch D:	33217		TestNo:	E300			Units:	mg/L		
SampType:	MSD	RunID:	IC2_09012	9A	Analysis	Date: 1/29/2	2009 1:59:	23 PM	PrepDate	: 1/29/	2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD F	RPDLimit	Qual
Chloride			357	10.0	100.0	258.3	98.8	90	110	0.313	20	
Sulfate			828	30.0	300.0	529.7	99.3	90	110	0.0164	20	
SampleID	0901157-05A MS	Batch D:	33217		TestNo:	E300			Units:	mg/L		
SampType:	MS	RunID:	IC2_09012	9A	Analysis	Date: 1/29/2	2009 5:57:	49 PM	PrepDate	: 1/29/	2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD F	RPDLimit	Qual
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD F	RPDLimit	- -

#### Qualifiers: B

Analyte detected in the associated Method Blank

- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: INTERA Inc. Work Order: 0901157 **Project:** Dugout Creek

## ANALYTICAL QC SUMMARY REPORT

IC2\_090129A RunID:

SampleID SampType:	0901157-05A MS MS	Batch D: RunID:	33217 IC2_09	0129A	TestNo: Analysis	E30 Date: 1/2	)0 9/2009 5:57:	49 PM	Units: PrepDate	mg/L :: 1/29/		
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide			21.2	1.00	20.00	1.800	96.8	90	<sup>110</sup>		·	
SampleID	0901157-05A MSD	Batch D:	33217		TestNo:	E30	ю		Units:	mg/L	-	
SampType:	MSD	RunID:	IC2_09	0129A	Analysis	Date: 1/29	9/2009 6:12:	29 PM	PrepDate	: 1/29/	2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide			21.3	1.00	20.00	1.800	97.3	90	110	0.516	20	

Qualifiers: B

Analyte detected in the associated Method Blank

- Analyte detected between MDL and RL J Not Detected at the Method Detection Limit
- ND
- RL Reporting Limit
- Analyte detected between SDL and RL J

DF Dilution Factor

MDL Method Detection Limit

R RPD outside accepted control limits Spike Recovery outside control limits Page 2 of 5

- S
- Parameter not NELAC certified Ν

#### CLIENT: INTERA Inc. Work Order: 0901157 Project: Dugout Creek

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#### ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_090129A

SampleID	ICV-090129	Batch D:	R41595		TestNo:	E300			Units:	mg/L	
SampType:	ICV	RunID:	IC2_09012	9A	Analysis	Date: 1/29/2	2009 9:50:	14 AM	PrepDate	: 1/29/2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimi	t HighLimit	%RPD RPDLimit	Qual
Bromide	an a		49.7	1.00	50.00	. 0	99.4	90	110		
Chloride			25.0	1.00	25.00	0	100	90	110		
Sulfate			74.7	3.00	75.00	0	99.6	90	110		
SampleID	CCV1-090129	Batch D:	R41595		TestNo:	E300			Units:	mg/L	
SampType:	ccv	RunID:	IC2_09012	9A	Analysis	Date: 1/29/2	2009 2:14:	04 PM	Prep Date:	1/29/2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimi	t HighLimit	%RPD RPDLimit	Qual
Bromide			19.4	1.00	20.00	0	97.0	90	110		
Chloride			9.71	1.00	10.00	0	97.1	90	110		
Sulfate			29.2	3.00	30.00	0	97.4	90	110		
SampleID	CCV2-090129	Batch D:	R41595		TestNo:	E300			Units:	mg/L	
SampType:	ccv	RuniD:	IC2_09012	9A	Analysis	Date: 1/29/2	:009 4:57:	19 PM	Prep Date:	1/29/2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimi	t HighLimit	%RPD RPDLimit	Qual
Bromide			19.5	1.00	20.00	0	97.5	90	110		
Chloride			11.0	1.00	10.00	0	110	90	110		
Sulfate			29.7	3.00	30.00	0	99.1	90	110		
SampleID	CCV3-090129	Batch D:	R41595		TestNo:	E300			Units:	mg/L	
SampType:	ccv	RunID:	IC2_09012	9A	Analysis	Date: 1/29/2	009 7:11:	11 PM	Prep Date:	1/29/2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	t HighLimit	%RPD RPDLimit	Qual
Bromide			19.4	1.00	20.00	0	96.8	90	110		

Qualifiers: B

- Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits

Page 3 of 5

N Parameter not NELAC certified

CLIENT: Work Orde Project:	INTERA In er: 0901157 Dugout Cr				AN	ALYT	ICAL Q RunID	-	J <b>MMA</b> ] VC_09020	RY REPO 02A	ORT
SampleID SampType:	MB-33255 MBLK	Batch D: RunID:	33255 WC_090	202A	TestNo: Analysis		540C 2009 10:00:00	0 AM	Units: PrepDate:	mg/L 2/2/2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimi	t HighLimit	%RPD RPDLimi	it Qual
Total Dissolve	ed Solids (Residue, I	Filtera	ND	10.0		· · · ·	• • • • • • •				
SampleID L	_CS-33255	Batch D:	33255		TestNo:	M25	40C		Units:	mg/L	
SampType: L	LCS	RunID:	WC_090	202A	Analysis	s Date: 2/2/2	2009 10:00:00	0 AM	PrepDate:	2/2/2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC I	LowLimi	t HighLimit 9	%RPD RPDLimi	t Qual
Total Dissolve	ed Solids (Residue, I	Filtera	774	10.0	745.6	0	104	90	113		
SampleID C SampType: C	0901157-06A-DUP DUP	Batch D: RunID:	33255 WC_090	202A	TestNo: Analysis		40C 2009 10:00:00	D AM	Units: PrepDate:	mg/L 2/2/2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC L	_owLimi	t HighLimit %	%RPD RPDLimi	t Qual
Total Dissolve	ed Solids (Residue, I	Filtera	5400	10.0	0	5445				0.923 5	

Qualifiers: B

- Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits

Page 4 of 5

- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Work Ord Project:	INTERA ler: 0901157 Dugout				AN	ALYT	ICAL Q RunID		UMMA VC_090		PORT
SampleID SampType:	MB-33297 MBLK	Batch D: RunID:	33297 WC_09	0203B	TestNo: Analysis		540C /2009 4:30:00	РМ	Units: PrepDate	mg/L e: 2/3/2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC 1	_owLimi	t HighLimit	%RPD RPDL	imit Qual
Total Dissol	ved Solids (Residu	e, Filtera	ND	10.0			· · · · · · · · · · · · · · · · · · ·		·	t ogen til ogen	. ' 'a
SampleID	LCS-33297	Batch D:	33297		TestNo:	M2	540C		Units:	mg/L	
SampType:	LCS	RunID:	WC_09	0203B	Analysis	Date: 2/3/	2009 4:30:00	PM	PrepDate	e: 2/3/2009	
Analyte			Result	RL.	SPKvalue	Ref Val	%REC L	_owLimi	t HighLimit	%RPD RPDL	imit Qual
Total Dissol	ved Solids (Residu	e, Filtera	753	10.0	745.6	0	101	90	113		
SampleID	0901170-06A-DU	P Batch D:	33297		TestNo:	M2	540C		Units:	mg/L	
SampType:	DUP	RunID:	WC_09	0203B	Analysis	Date: 2/3/	2009 4:30:00	РМ	PrepDate	e: 2/3/2009	
Analyte			Result	RL	SPKvalue	Ref Val	%REC L	owLimi	t HighLimit	%RPD RPDL	imit Qual
Total Dissol	ved Solids (Residu	e, Filtera	14800	10.0	0	14810				0.169	5

Qualifiers: B

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

J Analyte detected between SDL and RL

DF Dilution Factor

MDL Method Detection Limit R RPD outside accepted contr

R RPD outside accepted control limitsS Spike Recovery outside control limits

Page 5 of 5

N Parameter not NELAC certified

CLIENT: INTERA Inc.

Work Order: 0901157

Project: Dugout Creek

TestNo: E300	MDL	MQL
Analyte	mg/L	mg/L
Bromide	0.300	1.00
Chloride	0.300	1.00
Sulfate	1.00	3.00
TestNo: M2540C	MDL	MQL
Analyte	mg/L	mg/L
Total Dissolved Solids (Residue, Filt	10.0	10.0

Date: 05-Feb-09

## MQL SUMMARY REPORT

Qualifiers: MQL -Method Quantitation Limit as defined by TRRP MDL -Method Detection Limit as defined by TRRP

Page 1 of 1

#### **Data Review Checklist**

3 No

Clie	ent/Project: RRC/Dugout	Reviewer: LiPric	e		Review Date: 3/1%/09	
Lab	oratory: DHL rk Order No.: 0901170	Analytical Method: Anims - 300			Matrix: Water	
#	Review Item of	·Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
San	ple Preservation and Integr	ity				
1	Did samples arrive at the lal preserved (e.g., 4°C, correct sample)?		$\checkmark$			
2	Were holding times met?		~			
Dat	a Completeness					
3	Are results reported for all t no additional analytes?	arget analytes, with				
4	Was the requested analytica	l method followed?	$\checkmark$		6	
5	Do reported detection limits agree with the project specif				SDL was elevated due to for MW-0-15, MW-0-7, 1 MW-P-01, MW-51 for Br. detected in all diluted s effect on data quality.	sample dilution nw-0-21, mw-07- Analate uras
6	Are results reported for all s analysis?	amples submitted for	~		detected in all diluted s effect on data quality.	amples, No
Cali	bration and QC Sample Fre	quency	<b></b>	•		-
7	Were initial and continuing analyses performed? And re		$\checkmark$			
8	For each analytical batch, ar a method blank?	e results provided for	~			
9	For each analytical batch, ar an LCS/LCSD pair?	e results provided for				
10	For each analytical/preparati provided for an MS/MSD pa results for MS/MSD pairs pa field samples analyzed?	ir? Alternately, are	~			
11	Are field duplicate results pr specified (QAPP) frequency	1 0	$\checkmark$		Duplicato Pairs are: MW-0-1/MW-0-31 MW-P-01/MW-51	

#### **Data Review Checklist (continued)**

Clie	ent/Project: RRC/ Drgout Creek	Reviewer: L Pri	Če		Review Date: 3/16/0	
Lab	rk Order No.: 0901170	Analytical Method: Anions - 30			Matrix: Mater	
#	Review Item or	Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
12	Organic Analyses Only: For and QC), are surrogate spike	<b>2</b>			NA	
QC	Results			•	<b>-</b>	
13	Do method blank results sho concentrations of target anal ND)?					
14	Are LCS/LCSD recoveries a limits?	nd RPDs within	$\checkmark$			
15	Are MS/MSD recoveries and	1 RPDs within limits?		$\checkmark$	ms/msD on mw-0-7 for above control limits. IC	Br had % Rec VICCU + LCS/LCS
16	Are surrogate recoveries wit analyses only)?	hin limits (organic			abone control limits. ic in control. Samples not a basis of ms/ms/ alone. data quality.	valified on the No effect on
Othe	er Data Quality-Related Issu	es				
17	The laboratory did not issue not true (a CAR was issued), sample results.	•	$\checkmark$			
18	The analyst did not describe anomalies. If this is not true impact to sample results.		$\checkmark$			
19	No other potential data quali identified. If this is not true,	-	レ			

<sup>a</sup> The laboratory will not be required to report all calibration results. Data validation efforts for this project will assume that the laboratory performed the method-specified calibration analyses.

CAR = Corrective Action Report

LCS/LCSD = Laboratory Control Sample/Duplicate Laboratory Control Sample

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Further Comments:

### **Data Review Checklist**

Clie	nt/Project: RRC/ Dugovt Creek	Reviewer: L, Pri	ce		Review Date: 3/16/69
Lab	oratory: DHL k Order No.: 0901176	Analytical Method: VOCs 802	-1		Matrix: Water
#	Review Item or	·Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
Sam	ple Preservation and Integr	ity			
1	Did samples arrive at the lab preserved (e.g., 4°C, correct sample)?		$\sim$		
2	Were holding times met?		V		
Data	Completeness				
3	Are results reported for all tan no additional analytes?	arget analytes, with	~		
4	Was the requested analytical	l method followed?	~		
5	Do reported detection limits agree with the project specif		~		
6	Are results reported for all s analysis?	amples submitted for	~		
Cali	bration and QC Sample Fre	quency			
7	Were initial and continuing analyses performed? And re		~		
8	For each analytical batch, ar a method blank?	e results provided for	~		
9	For each analytical batch, ar an LCS/LCSD pair?	e results provided for		$\checkmark$	Only LCS provided. Icv/cc ms/msp are in control. No on data quality.
10	For each analytical/preparati provided for an MS/MSD pa results for MS/MSD pairs pr field samples analyzed?	ir? Alternately, are	$\checkmark$		U J
11	Are field duplicate results pr specified (QAPP) frequency		$\checkmark$		Duplicate pairs: mw-0-1/mw-0-31 mw-P-01/mw-51

#### **Data Review Checklist (continued)**

Clie	nt/Project: RRC/ Dugout	Reviewer: L. Pric	-P		Review Date: 3/16/09
Lab	oratory: DHL rk Order No.: 0901170	Analytical Method: VOC 5 80	21		Matrix: Water
#	Review Item or	Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
12	Organic Analyses Only: For and QC), are surrogate spike	* `	~		
QC	Results				
13	Do method blank results sho concentrations of target anal ND)?		$\checkmark$		
14	Are LCS/LCSD recoveries a limits?	and RPDs within	$\checkmark$		No LCSD provided No effect on data guality
15	Are MS/MSD recoveries and RPDs within limits?		$\checkmark$		
16	Are surrogate recoveries wit analyses only)?	hin limits (organic	$\checkmark$		
Other Data Quality-Related Issues					
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.		~		
18	The analyst did not describe anomalies. If this is not true impact to sample results.		~		
19	No other potential data quali identified. If this is not true,	-	~		

<sup>a</sup> The laboratory will not be required to report all calibration results. Data validation efforts for this project will assume that the laboratory performed the method-specified calibration analyses.

CAR = Corrective Action Report

LCS/LCSD = Laboratory Control Sample/Duplicate Laboratory Control Sample

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Further Comments:

#### **Data Review Checklist**

Clie	ent/Project: RRC/ Dugart	Reviewer: L, Pr	ie –		Review Date: 3/16/09
Lat	oratory: PHL rk Order No.: 0901170	Analytical Method: TDS-2540 <			Matrix: Water
#	Review Item o	r Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
San	ple Preservation and Integr	ity			
1	Did samples arrive at the lat preserved (e.g., 4°C, correct sample)?		~		
2	Were holding times met?			~	mw-0-7 was prepared out of hold time.
Dat	a Completeness				
3	Are results reported for all t no additional analytes?	arget analytes, with	~		
4	Was the requested analytica	l method followed?	V		
5	Do reported detection limits agree with the project specif		~		
6	Are results reported for all s analysis?	amples submitted for	~		
Cali	bration and QC Sample Fre	quency			
7	Were initial and continuing analyses performed? And re				Reporting ICV/CCU not required. Lab checklist indicates ICV/CCU OK. No effect on dark quality.
8	For each analytical batch, ar a method blank?	e results provided for	.✓		
9	For each analytical batch, ar an LCS/LCSD pair?	e results provided for	$\checkmark$		Only LCS provided. Lab dup provided and incontrol. No effect on data quality.
10	For each analytical/preparati provided for an MS/MSD paresults for MS/MSD pairs paresults for MS/MSD pairs pare field samples analyzed?	ir? Alternately, are		$\checkmark$	ms/msD is not run for TDS. Les + lab dup ok. No effect on data quality.
11	Are field duplicate results pr specified (QAPP) frequency	1 0	$\checkmark$		Duplicate pairs: mw-D-1/mw-0-31 mw-P-01/mw-51

.

#### **Data Review Checklist (continued)**

Clie	ent/Project: RRC/ Dugavt	Reviewer: L. Pric	È.e		Review Date: 3/16/39
Lab	oratory: DHL rk Order No.: 6901170	Analytical Method: TDS - 2.54	40 C		Matrix: Wates
#	Review Item or	·Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
12	Organic Analyses Only: For and QC), are surrogate spike	<b>*</b> `			NA
QC	Results				
13	Do method blank results sho concentrations of target ana ND)?		$\checkmark$		
14	Are LCS/LCSD recoveries a limits?	and RPDs within	$\checkmark$		No LCSD provided
15	Are MS/MSD recoveries and RPDs within limits?			$\checkmark$	No ms/msD povided
16	Are surrogate recoveries wit analyses only)?	hin limits (organic			NA
Other Data Quality-Related Issues					
17	The laboratory did not issue not true (a CAR was issued) sample results.		$\checkmark$		
18	The analyst did not describe anomalies. If this is not true impact to sample results.		$\checkmark$		
19	No other potential data quali identified. If this is not true,	-			

<sup>a</sup> The laboratory will not be required to report all calibration results. Data validation efforts for this project will assume that the laboratory performed the method-specified calibration analyses.

CAR = Corrective Action Report

LCS/LCSD = Laboratory Control Sample/Duplicate Laboratory Control Sample

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Further Comments: TDS was detected in the Equip Rurise however, none of the results in batch 33333 were 75 times the detected amount. No gualification necessary.



February 17, 2009

Barbara Rigney INTERA Inc. 1812 Centre Creek Dr. #300 Austin, Texas 78754

TEL: (512) 425-2097 FAX: (512) 425-2099

Order No.: 0901170

RE: Dugout Creek

Dear Barbara Rigney:

DHL Analytical received 18 sample(s) on 1/30/2009 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-08B-TX



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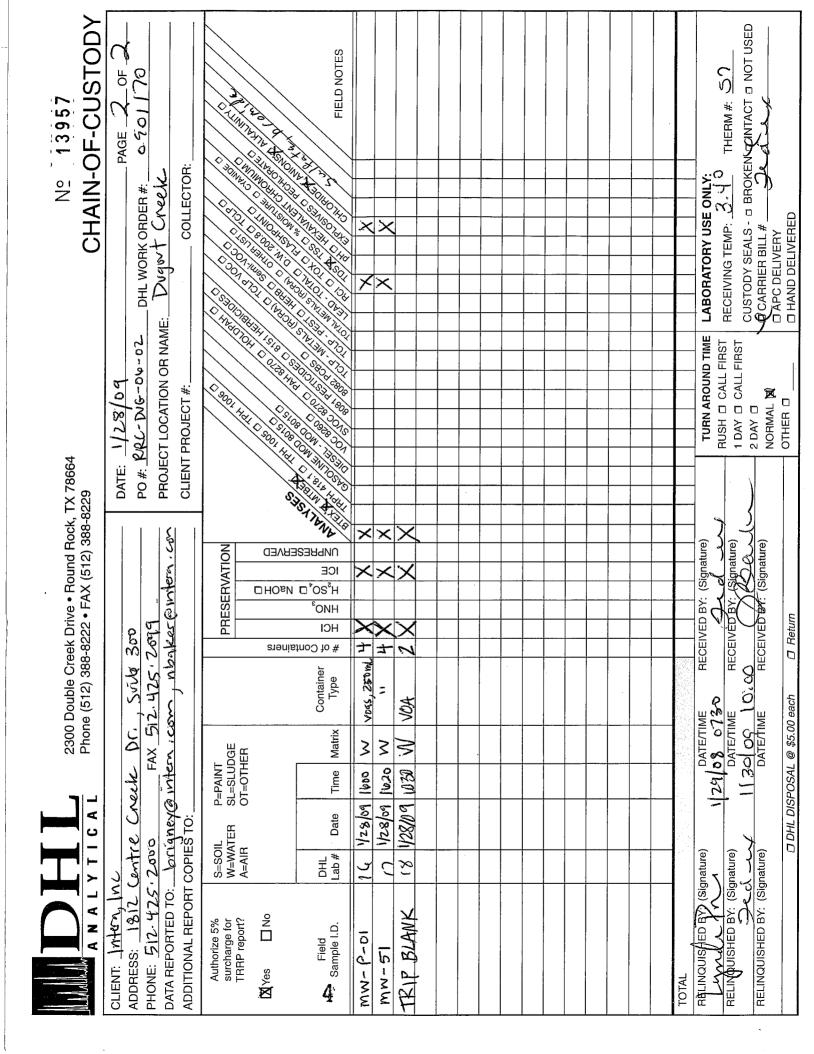
This report for INTERA Inc.: Dugout Creek (DHL Work Order 0901170) contains the following information:

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•	Cover Page	1
•	Table of Contents	2
٠	Original chain of custody, FedEx slip (if used), log-in checklist	3-6
•	Laboratory Data Package Signature Page	7
•	Laboratory Review Checklist	8-9
	Case Narrative	10
•	Work Order Summary	11
•	Preparation Dates Report	12-14
•	Analytical Dates Report	15-17
9	Sample Results	18-35
•	QC Summary Report	36-54
٠	MQL Summary Report	55
•	Total Number of Pages	55

February 17, 2009

Approved: 0 John DuPont

A N A L				2300 [ Phone	2300 Double Creek Drive • Round Rock, TX 78664 Phone (512) 388-8222 • FAX (512) 388-8229	3ek D - 8222	rive • ∣ 2 • FA	Rouni K (51:	1 Roc 2) 388	ound Rock, TX 76 (512) 388-8229	3664			•.		ö	°N HAIN	•-OF	39236 <b>CUS</b> 1	N≗ 39236 CHAIN-OF-CUSTODY	Z
K AL	INC				( ) )					DATE	LE:	12-34	89					PAGE		OF D	_م
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כםי	8	brighting Intern. PIES TO:	Inter	<b>N</b>	, nbakere inter	612	inter-	11 (201)	5	E IJ	OJECT	PROJECT LOCATION CLIENT PROJECT #:	PROJECT LOCATION OR NAME: CLIENT PROJECT #:	K NAME		-	COLLECTOR	TOR:			
Authorize 5% surcharge for	S=SOIL W=WATER	1	P=PAINT SL=SLUDGE	ЭE			PRESERVATION	TAT	Z			$\square$	0.900	400		63	6800	C JOIN			
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Field Sample I.D.	DHL Lab#	Date	Time	Matrix	Container Type	HCI # of Cont	<sup>\$</sup> ONH	ICE H <sup>5</sup> 20 <sup>°</sup> II	NNPRES			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	02/00/ 02/00/ 02/00/ 02/00/	CIA ARTA			C C C C C C C C C C C C C C C C C C C		$\backslash$	FIELD NOTES	
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2-L0-MW	20	-	1520			-		$\mathbf{X}$	_								X				
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MW-P-2	20		1635			-		$\times$									X				
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MW-0-15	2		52.81														×			00	T
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	gnature)		129	109 0730			HECEIVED BY: (Signature)	(Signa	(eng)	×		TURN D	TURN AROUND TIME RUSH 🗇 CALL FIRST		LABORATORY USE ONLY: BECEIVING TEMP・ジッ <sup>ムの</sup>	ATORY NG TEN			THFRM #	S)	
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NHN NW N Cash/Check iges up to 150 lbs defEx First Overnight filest next business morning fevery to select locations.\* America Delivery NOT everidable. To most location: ickages over 150 lbs Othe Rocip. Crèdit Card Auth. FedEx 3Day Fréight Third business day \*\* Saturdev DelivervMDT avei check Diract or Indirect 519 Dry Ice Drytee, 9, UN 1845 Cargo Aircraft Only **Quality Environmental Containers** FedEx Tube 800-255-3950 · 304-255 3800 odEx address in Section 3. + Enter FedEx Arct. No. or Credit Card No. helow. 0  $\Box$ Indirect Signature Indone is evelable at the complete state <sup>edEx Service Guil</sup> f you require a s FedEx 2Day Freight Second business day \*\* Thursday shipmiants will be delivered on Monday unless SATURDAY Delivery is selected. FedEx Standard Overnight Next business aftergoon.\* Saturday Delivery MOT available. FedEx Pak\*\*\* available. FedEx Express Saver Third business days Saturday Delivery NDT evailabl e Options a. See the currer mum charge: One-pound r E E Direct Signatur Someone at recipient address mey sign for delivery. Fee applies ods (including dry ice) cannot be shipped in FedEx 3--Residential Delivery Signatu o \$100 unless you declare a higher v  $\square$ Yes Yes Yes Yes VICE Recipient 4b Express Freight Service 4a Express Package Servi FedEx Priority Overnight Wordbarnswith words wordbarswith words A secolind uusiness day." Thursday Migments will be defivered on Monday 1965s SATURDAY Defivered on Monday FedEx Envelope rars and the delivered on Monday Delivery is selected One hox hust he'c Special Handling-SATURDAY Delivery Bill to: FedEx 1Day Freight\* Next business day.\*\* Findey Not available for FedEx Standard Overnight, FedEx First Overnight, FedExE Sever, or FedEx 3Day Freight. Does this shipment FedEx 2Day 5 Packaging FedEx Envelope\* vment 1 Our liability is limite No Sian No No N Sand \* Call for Cor Ć 9  $\Box$ 7429 8.82 W 2222 425-200 W. Color 0390926701 19/0/81 867042477429 762754 3.0 ¢. نة: بليد لات Phones 512 <u>ි</u> () ZIP ZIP 12/ 8670 à Your Internal Billing Reference  $RRCDME1 - M_{G^-}O2$ Phône 11 A 13 徽 Double Creek . موروع State | State FedEx Tracking Number FedEx Tracking Number DHL ANDIUTION CFEEK from This partion can be removed for Recipitent's records. print FedEx address 8670 4267 74 DUPON Ex US Airbill Address 1012 CENTRE B. Bigney COMPANY INTERA INC ODY SEAL JOHN I 220 220 o P.O. boxes or P.I SIGNATURE Chy ALISTIN Express sst a package be held N Recipient's Name DATE Recipient's Address رد Company ader's ame P 2 m 2.420

	Sample Receipt Chec	klist	
Client Name INTERA Inc.		Date Received:	1/30/2009
Work Order Number 0901170		Received by <b>JB</b>	
Checklist completed by: Signature	Date	Reviewed by	) 01/30/09  Date
Shipping container/cooler in good condition?	Yes 🔽	No 🗌 Not Prese	nt 🗌
Custody seals intact on shippping container/cooler?	Yes 🗹	No 🗌 Not Prese	nt 🔲
Custody seals intact on sample bottles?	Yes	No 🗌 Not Prese	nt 🔽
Chain of custody present?	Yes 🗹	No 🗌	
Chain of custody signed when relinquished and receive	ed? Yes 🗹	No 🗌	
Chain of custody agrees with sample labels?	Yes 🗹	No 🗌	
Samples in proper container/bottle?	Yes 🗹	No 🗔	
Sample containers intact?	Yes 🗹	No 🗔	
Sufficient sample volume for indicated test?	Yes 🗹	No 🗌	
All samples received within holding time?	Yes 🗹	No 🗌	
Container/Temp Blank temperature in compliance?	Yes 🗹	No 🗌 🛛 3.4 °C	
Water - VOA vials have zero headspace?	Yes 🗹	No 🗌 No VOA vials	s submitted
Water - pH acceptable upon receipt?	Yes 🗌	No 🗌 🛛 Not Applicab	ie 🗹
Adjust	ed? Cheo	cked by	
Any No response must be detailed in the comments ser	ction below. 	Person contacted	
Contacted by: Regard	ding:		
Comments: added on	TDS- outsi	ire of he	old time.
Corrective Action Kossed Dam	ple is pe	is clients	Alg. cot.

Page 1 of 1

## Laboratory Data Package Signature Page

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC 5.13
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
- R10 Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

**Release Statement:** I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Scott Schroeder – Project Manager John DuPont – General / QA Manager

Ignature

02/17/09 Date

DH	LA	nalytical, Inc.						
Lal	oora	tory Review Checklist: Reportable Data						
Proje	ect Na	ame: Dugout Creek Date	e: 2/17/2009					
Revi	ewer	Name: Evelyn Ferrero Labo	oratory Work Order: 0901170					
			Batch: See Analytical Dates Report					
$\frac{110p}{\#^1}$			Baten. See Analytical Dates Report	Vec	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
#	A			103				
<b>D</b> 1		Chain-of-Custody (C-O-C)	nla accontability yman raccint?	$\mathbf{v}$				R1-01
R1	OI	1) Did samples meet the laboratory's standard conditions of sam 2) Were all departures from standard conditions described in an		X		x		R1-01
						^	\$112.000 P	
R2	OI	Sample and Quality Control (QC) Identification		N.				
		1) Are all field sample ID numbers cross-referenced to the laboration of the laborat		X	<u> </u>			
<u></u>		2) Are all laboratory ID numbers cross-referenced to the corresp	onding QU data?	X				
R3	OI	Test Reports	ი		x			R3-01
		<ol> <li>Were all samples prepared and analyzed within holding times</li> <li>Other than those results &lt; MQL, were all other raw values bra</li> </ol>		x		· ·		R3-01
			icketed by canoration standards?	X				
		<ul><li>3) Were calculations checked by a peer or supervisor?</li><li>4) Were all analyte identifications checked by a peer or supervisor</li></ul>	~~?	X	<u> </u>			
		5) Were sample quantitation limits reported for all analytes not d		X				
		6) Were all results for soil and sediment samples reported on a d		<u> </u>		x		
		7) Were % moisture (or solids) reported for all soil and sediment				X		
		8) If required for the project, TICs reported?		-		X		
R4	0	Surrogate Recovery Data						
<u>N4</u>		1) Were surrogates added prior to extraction?		X				
		<ul><li>2) Were surrogate percent recoveries in all samples within the lai</li></ul>	boratory OC limits?	X				
R5	OI	Test Reports/Summary Forms for Blank Samples	bolatory QC mints:					
KJ		1) Were appropriate type(s) of blanks analyzed?	· · · · · · · · · · · · · · · · · · ·	X				
		<ul><li>2) Were blanks analyzed at the appropriate frequency?</li></ul>		X				
		3) Where method blanks taken through the entire analytical proc	ess including preparation and if	X	1			
		applicable, cleanup procedures?	oss, moraanig proparation ana, n					
		4) Were blank concentrations < MQL?		X				
R6	OI	Laboratory Control Samples (LCS):						
	- <u>-</u>	1) Were all COCs included in the LCS?		X				
		2) Was each LCS taken through the entire analytical procedure, i	including prep and cleanup steps?	X	1			
		3) Were LCSs analyzed at the required frequency?		X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laborato	ry QC limits?	X				
		5) Does the detectability data document the laboratory's capabili		X				
		to calculate the SQLs?						
		6) Was the LCSD RPD within QC limits (if applicable)?		X				
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data						97. O
		1) Were the project/method specified analytes included in the MS	S and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?		Х				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory	QC limits?		Х			R7-03
		4) Were MS/MSD RPDs within laboratory QC limits?		X				
R8	OI	Analytical Duplicate Data						
		1) Were appropriate analytical duplicates analyzed for each matr		X				
		2) Were analytical duplicates analyzed at the appropriate frequen		X				
		3) Were RPDs or relative standard deviations within the laborato	ry QC limits?	X				
R9	OI	Method Quantitation Limits (MQLs):	1	37				
		1) Are the MQLs for each method analyte included in the laborat		X				
		2) Do the MQLs correspond to the concentration of the lowest no		X				
<u></u>	C.	3) Are unadjusted MQLs included in the laboratory data package	?/	Х			29.000 B	
R10	OI	Other Problems/Anomalies						
		1) Are all known problems/anomalies/special conditions noted in		X				
		2) Were all necessary corrective actions performed for the report		X				
	1	3) Was applicable and available technology used to lower the SQ affects on the sample results?	L minimize the matrix interference	х				

Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. O =organic analyses; I = inorganic analyses (and general chemistry, when applicable). 1

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3 NA = Not applicable.

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

DH	LA	nalytical, Inc.						
Lab	ora	tory Review Checklist (continued): Suppor						
Proje	ct Na	me: Dugout Creek	Date: 2/17/2009					
Revie	ewer l	Name: Evelyn Ferrero	Laboratory Work Order: 0901170					
# <sup>1</sup>	A <sup>2</sup>	Description	• • • • • • • • • • • • • • • • • • •	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1		Initial Calibration (ICAL)						
		1) Were response factors and/or relative response factors for	each analyte within OC limite?	X				
		2) Were percent RSDs or correlation coefficient criteria met		X				
	1	3) Was the number of standards recommended in the method		X		1		
		4) Were all points generated between the lowest and highest		X				+
		<ul><li>5) Are ICAL data available for all instruments used?</li></ul>		X	+			
[		6) Has the initial calibration curve been verified using an ap	propriate second source standard?	X				
S2	OI	Initial and Continuing calibration Verification (ICCV an						
		blank (CCB):	,					
		1) Was the CCV analyzed at the method-required frequency	?	X			100002000	
		2) Were percent differences for each analyte within the meth		X	1			
		3) Was the ICAL curve verified for each analyte?		X				
		4) Was the absolute value of the analyte concentration in the	inorganic CCB < MDL?	Х				
S3	0	Mass Spectral Tuning:						
		1) Was the appropriate compound for the method used for tu				X		
		2) Were ion abundance data within the method-required QC	limits?			X		
S4	0	Internal Standards (IS):						
		1) Were IS area counts and retention times within the metho				X		
<u>S5</u>	OI	Raw Data (NELAC section 1 appendix A glossary, and se						
	i	1) Were the raw data (for example, chromatograms, spectral		X	ļ			
L		2) Were data associated with manual integrations flagged on	the raw data?	X				
<u>S6</u>	0	Dual Column Confirmation	1.1.0.00					11.00
		1) Did dual column confirmation results meet the method-re-	quired QC?	X				
<u>\$7</u>	0	Tentatively Identified Compounds (TICs):				37	194-34 C	
	ļ	1) If TICs were requested, were the mass spectra and TIC da	ta subject to appropriate checks?			X		
<u>S8</u>	<u> </u>	Interference Check Sample (ICS) Results:						
50	I.	1) Were percent recoveries within method QC limits?	and a distance			X		
<u>59</u>	1	Serial Dilutions, Post Digestion Spikes, and Method of St 1) Were percent differences, recoveries, and the linearity method?				х		
S10	OI	Method Detection Limit (MDL) Studies						
510		1) Was a MDL study performed for each reported analyte?		X		l		
		2) Is the MDL either adjusted or supported by the analysis of	fDCSs?	X				
S11	OI	Proficiency Test Reports:						
		1) Was the lab's performance acceptable on the applicable pr	oficiency tests or evaluation studies?	X				
S12	OI	Standards Documentation						
		1) Are all standards used in the analyses NIST-traceable or o	btained from other appropriate sources?	X				
S13	OI	Compound/Analyte Identification Procedures						
		1) Are the procedures for compound/analyte identification do	ocumented?	X				
S14	OI	Demonstration of Analyst Competency (DOC)						
		1) Was DOC conducted consistent with NELAC Chapter 5C	?	X				
		2) Is documentation of the analyst's competency up-to-date a	and on file?	Х			ĺ	
S15	OI	Verification/Validation Documentation for Methods (NE						
		1) Are all the methods used to generate the data docu applicable?	mented, verified, and validated, where	X				
	0-						5741-34782-588	
S16	OI	Laboratory Standard Operating Procedures (SOPs):	C 10	1.000				
		1) Are laboratory SOPs current and on file for each method p	performed?	x				

- NA = Not applicable. NR = Not Reviewed.

Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. O =organic analyses; I = inorganic analyses (and general chemistry, when applicable). 

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked). 

CLIENT:INTERA Inc.Project:Dugout CreekLab Order:0901170

#### CASE NARRATIVE

The samples were analyzed using the methods outlined in the following references:

Method E300 - Anions by IC method - Water Method M2540C - Total Dissolved Solids Method SW8021B - Volatile Organics by GC

Exception Report R1-01

A total of 18 samples were received and logged-in on 1/30/2009. The samples arrived in good condition and were properly packaged. On 2/11/2009 BTEX/MTBE analysis, Anions analysis and Total Dissolved Solids analysis were added on to Sample (MW-O-7) as per the instructions of Barbara Rigney. The Total Dissolved Solids analysis was added one week outside of the Hold Time for the sample.

Exception Report R3-01

For Total Dissolved Solids Analysis, Sample (MW-O-7) was prepared out of the hold time. The analysis proceeded at the request of the client. The results have been flagged "C" to denote this.

**Exception Report R7-03** 

For Anions Analysis, the recoveries of the Matrix Spike and Matrix Spike Duplicate (0901170-12 MS/MSD) were above the control limit for Bromide. These were flagged accordingly in the enclosed QC Summary Report. The LCS-33450 was within control limits for this compound. The reference sample selected for the MS/MSD was from this work order. No further corrective actions were taken.

INTERA Inc.

Dugout Creek

0901170

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**CLIENT:** 

Lab Order:

**Project:** 

Date: 17-Feb-09

Lab Smp ID C	lient Sample ID	Tag Number	Date Collected	Date Recved
0901170-01 M	IW-O-22		01/28/09 11:30 AM	1/30/2009
0901170-02 M	IW-O-1		01/28/09 12:20 PM	1/30/2009
0901170-03 M	IW-O-31		01/28/09 12:45 PM	1/30/2009
0901170-04 M	IW-O-6		01/28/09 01:40 PM	1/30/2009
0901170-05 M	IW-D-10		01/28/09 02:25 PM	1/30/2009
0901170-06 M	IW-07-2		01/28/09 03:20 PM	1/30/2009
0901170-07 M	IW-P-8		01/28/09 04:00 PM	1/30/2009
0901170-08 M	IW-P-2	· · · · · · · · · · · · · · · · · · ·	01/28/09 04:35 PM	1/30/2009
0901170-09 M	IW-P-10		01/28/09 05:00 PM	1/30/2009
0901170-10 M	[W-P-3		01/28/09 05:20 PM	1/30/2009
0901170-11 M	IW-O-15		01/28/09 06:25 PM	1/30/2009
0901170-12 M	[W-O-7		01/28/09 06:45 PM	1/30/2009
0901170-13 M	IW-O-21		01/28/09 12:10 PM	1/30/2009
0901170-14 E	R-1		01/28/09 01:00 PM	1/30/2009
0901170-15 M	IW-07-1		01/28/09 02:10 PM	1/30/2009
0901170-16 M	IW-P-01		01/28/09 04:00 PM	1/30/2009
0901170-17 M	IW-51		01/28/09 04:20 PM	1/30/2009
0901170-18 Ti	rip Blank		01/28/09 10:30 AM	1/30/2009

DHL Analytical	ılytical					17-Feb-09	
Lab Order: Client: Project:	0901170 INTERA Inc. Dugout Creek			1 1 1		PREP DATES REPORT	RT
Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0901170-01A	MW-0-22	01/28/09 11:30 AM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-0-22	01/28/09 11:30 AM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-0-22	01/28/09 11:30 AM	Aqueous	M2540C	TDS Preparation	02/03/09 03:00 PM	33297
0901170-02A	1-0-MM	01/28/09 12:20 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	I-0-MM	01/28/09 12:20 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-0-1	01/28/09 12:20 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	1-0-WM	01/28/09 12:20 PM	Aqueous	M2540C	TDS Preparation	02/03/09 03:00 PM	33297
0901170-03A	MW-0-31	01/28/09 12:45 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-0-31	01/28/09 12:45 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-0-31	01/28/09 12:45 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-0-31	01/28/09 12:45 PM	Aqueous	M2540C	TDS Preparation	02/03/09 03:00 PM	33297
0901170-04A	9-0-MM	01/28/09 01:40 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	9-0-MW	01/28/09 01:40 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	9-0-MW	01/28/09 01:40 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	9-0-MM	01/28/09 01:40 PM	Aqueous	M2540C	TDS Preparation	02/03/09 03:00 PM	33297
0901170-05A	01-CI-MM	01/28/09 02:25 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-D-10	01/28/09 02:25 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-D-10	01/28/09 02:25 PM	Aqueous	M2540C	TDS Preparation	02/03/09 03:00 PM	33297
0901170-06A	MW-07-2	01/28/09 03:20 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-07-2	01/28/09 03:20 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-07-2	01/28/09 03:20 PM	Aqueous	M2540C	TDS Preparation	02/03/09 03:00 PM	33297
0901170-07A	MW-P-8	01/28/09 04:00 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-P-8	01/28/09 04:00 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-P-8	01/28/09 04:00 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-P-8	01/28/09 04:00 PM	Aqueous	M2540C	TDS Preparation	02/03/09 03:00 PM	33297
0901170-08A	MW-P-2	01/28/09 04:35 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-P-2	01/28/09 04:35 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-P-2	01/28/09 04:35 PM	Aqueous	M2540C	TDS Preparation	02/03/09 03:00 PM	33297
Page 1 of 3	of 3						

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17-Feb-09

Lab Order:	0901170						
Client: Project:	INTERA Inc. Dugout Creek				PREP D.	PREP DATES REPORT	XT
Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0901170-09A	MW-P-10	01/28/09 05:00 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-P-10	01/28/09 05:00 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-P-10	01/28/09 05:00 PM	Aqueous	M2540C	TDS Preparation	02/04/09 03:00 PM	33333
0901170-10A	MW-P-3	01/28/09 05:20 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-P-3	01/28/09 05:20 PM	Aqueous	E300	Anion Preparation	02/02/09 08:30 AM	33262
	MW-P-3	01/28/09 05:20 PM	Aqueous	M2540C	TDS Preparation	02/04/09 03:00 PM	33333
0901170-11A	MW-0-15	01/28/09 06:25 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-0-15	01/28/09 06:25 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-0-15	01/28/09 06:25 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-0-15	01/28/09 06:25 PM	Aqueous	M2540C	TDS Preparation	02/04/09 03:00 PM	33333
0901170-12A	MW-0-7	01/28/09 06:45 PM	Aqueous	SW5030B	Purge and Trap Water GC	02/11/09 04:26 PM	33424
0901170-12B	у. <b>С. М. /b>	01/28/09 06:45 PM	Aqueous	E300	Anion Preparation	02/12/09 11:30 AM	33450
	MW-0-7	01/28/09 06:45 PM	Aqueous	E300	Anion Preparation	02/12/09 11:30 AM	33450
	MW-0-7	01/28/09 06:45 PM	Aqueous	E300	Anion Preparation	02/12/09 11:30 AM	33450
	MW-0-7	01/28/09 06:45 PM	Aqueous	M2540C	TDS Preparation	02/13/09 04:00 PM	33478
0901170-13A	MW-0-21	01/28/09 12:10 PM	Aqueous	SW5030B	Purge and Trap Water GC	02/02/09 09:02 AM	33252
0901170-13B	MW-0-21	01/28/09 12:10 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-0-21	01/28/09 12:10 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-0-21	01/28/09 12:10 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-0-21	01/28/09 12:10 PM	Aqueous	M2540C	TDS Preparation	02/04/09 03:00 PM	33333
0901170-14A	ER-1	01/28/09 01:00 <sup>PM</sup>	Aqueous	SW5030B	Purge and Trap Water GC	02/02/09 09:02 AM	33252
0901170-14B	ER-1	01/28/09 01:00 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	ER-1	01/28/09 01:00 PM	Aqueous	M2540C	TDS Preparation	02/04/09 03:00 PM	33333
0901170-15A	MW-07-1	01/28/09 02:10 PM	Aqueous	SW5030B	Purge and Trap Water GC	02/02/09 09:02 AM	33252
0901170-15B	MW-07-1	01/28/09 02:10 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-07-1	01/28/09 02:10 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-07-1	01/28/09 02:10 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-07-1	01/28/09 02:10 PM	Aqueous	M2540C	TDS Preparation	02/04/09 03:00 PM	33333
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17-Feb-09

Lab Order: Client: Project:	0901170 INTERA Inc. Dugout Creek				PREP D	PREP DATES REPORT	T
Sample ID	Client Sample ID	<b>Collection Date</b>	Matrix	Test Number	Test Name	Prep Date	Batch ID
0901170-16A	MW-P-01	01/28/09 04:00 PM	Aqueous	SW5030B	Purge and Trap Water GC	02/02/09 09:02 AM	33252
0901170-16B	MW-P-01	01/28/09 04:00 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-P-01	01/28/09 04:00 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	I0-A-WM	01/28/09 04:00 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-P-01	01/28/09 04:00 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-P-01	01/28/09 04:00 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-P-01	01/28/09 04:00 PM	Aqueous	M2540C	TDS Preparation	02/04/09 03:00 PM	33333
0901170-17A	MW-51	01/28/09 04:20 PM	Aqueous	SW5030B	Purge and Trap Water GC	02/02/09 09:02 AM	33252
0901170-17B	MW-51	01/28/09 04:20 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-51	01/28/09 04:20 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-51	01/28/09 04:20 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33278
	MW-51	01/28/09 04:20 PM	Aqueous	M2540C	TDS Preparation	02/04/09 03:00 PM	33333
0901170-18A	Trip Blank	01/28/09 10:30 AM	Trip Blank	SW5030B	Purge and Trap Water GC	02/02/09 09:02 AM	33252

17-Feb-09

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Lab Urder: Client:	UPUIL/U INTER A Inc				AN.	AT VTIC	ANAL VTICAL DATES BEDODT	TaOar
Cuent: Project:	Dugout Creek				7NTH		AL DALES	TLONI
Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0901170-01A	MW-0-22	Aqueous	E300	Anions by IC method - Water	33262	1	02/02/09 04:47 PM	IC2_090202A
	MW-0-22	Aqueous	E300	Anions by IC method - Water	33262	10	02/02/09 11:35 AM	IC2_090202A
	MW-0-22	Aqueous	M2540C	Total Dissolved Solids	33297	1	02/03/09 04:30 PM	WC_090203B
0901170-02A	MW-0-1	Aqueous	E300	Anions by IC method - Water	33262	10	02/02/09 11:50 AM	IC2_090202A
	MW-O-1	Aqueous	E300	Anions by IC method - Water	33262	100	02/02/09 12:49 PM	IC2_090202A
	MW-0-1	Aqueous	E300	Anions by IC method - Water	33262	1	02/02/09 05:31 PM	IC2_090202A
	I-0-MM	Aqueous	M2540C	Total Dissolved Solids	33297	1	02/03/09 04:30 PM	WC_090203B
0901170-03A	MW-O-31	Aqueous	E300	Anions by IC method - Water	33262	100	02/02/09 01:19 PM	IC2_090202A
	MW-0-31	Aqueous	E300	Anions by IC method - Water	33262	10	02/02/09 01:33 PM	IC2_090202A
	MW-0-31	Aqueous	E300	Anions by IC method - Water	33262	1	02/02/09 05:46 PM	IC2_090202A
	MW-0-31	Aqueous	M2540C	Total Dissolved Solids	33297	I	02/03/09 04:30 PM	WC_090203B
0901170-04A	9-0-MM	Aqueous	E300	Anions by IC method - Water	33262	10	02/02/09 01:48 PM	IC2_090202A
	9-0-MM	Aqueous	E300	Anions by IC method - Water	33262	100	02/02/09 02:03 PM	IC2_090202A
	9-0-MM	Aqueous	E300	Anions by IC method - Water	33262	1	02/02/09 06:01 PM	IC2_090202A
	9-0-MM	Aqueous	M2540C	Total Dissolved Solids	33297	I	02/03/09 04:30 PM	WC_090203B
0901170-05A	MW-D-10	Aqueous	E300	Anions by IC method - Water	33262	1	02/02/09 06:15 PM	IC2_090202A
	MW-D-10	Aqueous	E300	Anions by IC method - Water	33262	10	02/02/09 02:17 PM	IC2_090202A
	MW-D-10	Aqueous	M2540C	Total Dissolved Solids	33297	1	02/03/09 04:30 PM	WC_090203B
0901170-06A	MW-07-2	Aqueous	E300	Anions by IC method - Water	33262	100	02/02/09 02:32 PM	IC2_090202A
	MW-07-2	Aqueous	E300	Anions by IC method - Water	33262	1	02/02/09 06:59 PM	IC2_090202A
	MW-07-2	Aqueous	M2540C	Total Dissolved Solids	33297	1	02/03/09 04:30 PM	WC_090203B
0901170-07A	MW-P-8	Aqueous	E300	Anions by IC method - Water	33262	10	02/02/09 03:01 PM	IC2_090202A
	MW-P-8	Aqueous	E300	Anions by IC method - Water	33262	100	02/02/09 03:49 PM	IC2_090202A
	MW-P-8	Aqueous	E300	Anions by IC method - Water	33262	1	02/02/09 07:14 PM	IC2_090202A
	MW-P-8	Aqueous	M2540C	Total Dissolved Solids	33297	1	02/03/09 04:30 PM	WC_090203B
0901170-08A	MW-P-2	Aqueous	E300	Anions by IC method - Water	33262	10	02/02/09 03:16 PM	IC2_090202A
	MW-P-2	Aqueous	E300	Anions by IC method - Water	33262	I	02/02/09 07:29 PM	IC2_090202A
	MW-P-2	Aqueous	M2540C	Total Dissolved Solids	33297	1	02/03/09 04:30 PM	WC_090203B
Dara 1 of 2	C J ~							

17-Feb-09

Lab Order: Client: Project: Sample ID	0901170 INTER A 155				AN	AT VTIC	ANALYTICAL DATES REPORT	REPORT
	Dugout Creek				41 <b>42</b> 4			
	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
	MW-P-10	Aqueous	E300	Anions by IC method - Water	33262	10	02/02/09 04:04 PM	IC2_090202A
	MW-P-10	Aqueous	E300	Anions by IC method - Water	33262	1	02/02/09 07:43 PM	IC2_090202A
	MW-P-10	Aqueous	M2540C	Total Dissolved Solids	33333	1	02/04/09 03:50 PM	WC_090204A
0901170-10A	MW-P-3	Aqueous	E300	Anions by IC method - Water	33262	10	02/02/09 04:18 PM	IC2_090202A
	MW-P-3	Aqueous	E300	Anions by IC method - Water	33262	1	02/02/09 07:58 PM	IC2_090202A
·	MW-P-3	Aqueous	M2540C	Total Dissolved Solids	33333	1	02/04/09 03:50 PM	WC_090204A
0901170-11A	MW-0-15	Aqueous	E300 ·	Anions by IC method - Water	33278	100	02/03/09 10:34 AM	IC2_090203A
	MW0-15	Aqueous	E300	Anions by IC method - Water	33278	1000	02/04/09 10:34 AM	IC2_090204A
	MW-0-15	Aqueous	E300	Anions by IC method - Water	33278	10	02/03/09 10:49 AM	IC2_090203A
	MW-O-15	Aqueous	M2540C	Total Dissolved Solids	33333	Н	02/04/09 03:50 PM	WC_090204A
0901170-12A	MW-O-7	Aqueous	SW8021B	Volatile Organics by GC	33424	1	02/11/09 08:33 PM	GC8_090211A
0901170-12B	ИМ-О-7	Aqueous	E300	Anions by IC method - Water	33450	10	02/12/09 03:41 PM	IC_090212B
	MW-0-7	Aqueous	E300	Anions by IC method - Water	33450	1000	02/12/09 02:02 PM	IC_090212B
	MW-0-7	Aqueous	E300	Anions by IC method - Water	33450	100	02/12/09 02:54 PM	IC_090212B
	MW-0-7	Aqueous	M2540C	Total Dissolved Solids	33478	1	02/13/09 04:00 AM	WC_090213A
0901170-13A	MW-O-21	Aqueous	SW8021B	Volatile Organics by GC	33252	1	02/02/09 01:53 PM	GC8_090202A
0901170-13B	MW-0-21	Aqueous	E300	Anions by IC method - Water	33278	10	02/03/09 11:03 AM	IC2_090203A
	MW-0-21	Aqueous	E300	Anions by IC method - Water	33278	100	02/03/09 11:18 AM	IC2_090203A
	MW-0-21	Aqueous	E300	Anions by IC method - Water	33278	1000	02/03/09 11:33 AM	IC2_090203A
	MW-0-21	Aqueous	M2540C	Total Dissolved Solids	33333	1	02/04/09 03:50 PM	WC_090204A
0901170-14A	ER-1	Aqueous	SW8021B	Volatile Organics by GC	33252	1	02/02/09 02:13 PM	GC8_090202A
0901170-14B	ER-1	Aqueous	E300	Anions by IC method - Water	33278	1	02/03/09 02:24 PM	IC2_090203A
	ER-1	Aqueous	M2540C	Total Dissolved Solids	33333	1	02/04/09 03:50 PM	WC_090204A
0901170-15A	MW-07-1	Aqueous	SW8021B	Volatile Organics by GC	33252	1	02/02/09 02:32 PM	GC8_090202A
0901170-15B	MW-07-1	Aqueous	E300	Anions by IC method - Water	33278	100	02/03/09 01:41 PM	IC2_090203A
	MW-07-1	Aqueous	E300	Anions by IC method - Water	33278	1000	02/03/09 02:39 PM	IC2_090203A
	MW-07-1	Aqueous	E300	Anions by IC method - Water	33278	10	02/04/09 10:48 AM	IC2_090204A
	MW-07-1	Aqueous	M2540C	Total Dissolved Solids	33333	1	02/04/09 03:50 PM	WC_090204A

17-Feb-09

Lab Order: Client: Project:	0901170 INTERA Inc. Dugout Creek				AN	ALYTIC	ANALYTICAL DATES REPORT	REPORT
Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0901170-16A	MW-P-01	Aqueous	SW8021B	Volatile Organics by GC	33252	1	02/02/09 02:51 PM	GC8_090202A
0901170-16B	MW-P-01	Aqueous	E300	Anions by IC method - Water	33278	1000	02/05/09 10:50 AM	IC2_090205A
	MW-P-01	Aqueous	E300	Anions by IC method - Water	33278	100	02/05/09 02:37 PM	IC2_090205A
	MW-P-01	Aqueous	E300	Anions by IC method - Water	33278	10	02/04/09 11:03 AM	IC2_090204A
	10-P-01	Aqueous	E300	Anions by IC method - Water	33278	100	02/03/09 01:55 PM	IC2_090203A
	MW-P-01	Aqueous	E300	Anions by IC method - Water	33278	1000	02/05/09 02:51 PM	IC2_090205A
	MW-P-01	Aqueous	M2540C	Total Dissolved Solids	33333	1	02/04/09 03:50 PM	WC_090204A
0901170-17A	MW-51	Aqueous	SW8021B	Volatile Organics by GC	33252	1	02/02/09 03:11 PM	GC8_090202A
0901170-17B	MW-51	Aqueous	E300	Anions by IC method - Water	33278	100	02/03/09 02:10 PM	IC2_090203A
	MW-51	Aqueous	E300	Anions by IC method - Water	33278	1000	02/03/09 02:53 PM	IC2_090203A
	MW-51	Aqueous	E300	Anions by IC method - Water	33278	10	02/04/09 11:18 AM	IC2_090204A
	MW-51	Aqueous	M2540C	Total Dissolved Solids	33333	1	02/04/09 03:50 PM	WC_090204A
0901170-18A	Trip Blank	Trip Blank	SW8021B	Volatile Organics by GC	33252	1	02/02/09 06:41 PM	GC8_090202A

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DHL Anal	lytical		D	ate:	17-Feb-09					
CLIENT:	INTERA Inc.			Client Sample ID: MW-O-22						
Project:	Dugout Creek		Lab ID: 0901170-01							
Project No:					Colle	ction Date	: 01/28/	/09 11:30 AM		
Lab Order:	0901170					Matrix	: AQUE	EOUS		
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed		
ANIONS BY IC	METHOD - WATER		E300	)				Analyst: JBC		
Bromide		1.96	0.300	1.00		mg/L	1	02/02/09 04:47 PM		
Chloride		440	3.00	10.0		mg/L	10	02/02/09 11:35 AM		

Sulfate	316	10.0	30.0	mg/L	10	02/02/09 11:35 AM
TOTAL DISSOLVED SOLIDS		M2540	с			Analyst: AAD
Total Dissolved Solids (Residue,	1670	10.0	10.0	mg/L	1	02/03/09 04:30 PM

Filterable)

Qualifiers: ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

B - Analyte detected between SDL and RE
 B - Analyte detected in the associated Method Blank
 DF- Dilution Factor
 N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Analytical						ate:	17 <b>-</b> Fe	17-Feb-09				
CLIENT:	INTERA Inc.		Client Sample ID: MW-O-1									
Project:	Dugout Creek			Lab ID: 0901170-02								
Project No:				Collection Date: 01/28/09 12:20 PM								
Lab Order:	0901170		Matrix: AQUEOUS									
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed				
ANIONS BY IC	METHOD - WATER	E300						Analyst: JBC				
Bromide		2.91	0.300	1.00		mg/L	1	02/02/09 05:31 PM				
Chloride		1300	30.0	100		mg/Ľ	100	02/02/09 12:49 PM				
Sulfate		217	10.0	30.0		mg/L	10	02/02/09 11:50 AM				
TOTAL DISSOL	VED SOLIDS		oc			Analyst: AAD						

10.0

10.0

3180

Total Dissolved Solids (Residue, Filterable)

ND - Not Detected at the SDL

Qualifiers:

ND - Not Delected at the SDL

J - Analyte detected between SDL and RL B - Analyte detected in the associated Method Blank DF- Dilution Factor N - Parameter not NELAC certified See Final Page of Report for MQLs and MDLs S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

mg/L

1

RL - Reporting Limit (MQL adjusted for moisture and sample size) SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

02/03/09 04:30 PM

DHL Analytical						ate:	17-Fe	17-Feb-09		
CLIENT:	INTERA Inc.				Client	Sample ID	: MW-0	D-31		
Project:	Dugout Creek			Lab ID: 0901170-03						
Project No:				Collection Date: 01/28/09 12:45 PM						
Lab Order:	0901170		Matrix: AQUEOUS							
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed		
ANIONS BY IC	METHOD - WATER		E300	)				Analyst: JBC		
Bromide		2.94	0.300	1.00		mg/L	1	02/02/09 05:46 PM		
Chloride		1320	30.0	100		mg/L	100	02/02/09 01:19 PM		
Sulfate		230	10.0	30.0		mg/L	10	02/02/09 01:33 PM		
TOTAL DISSOLVED SOLIDS M2540C				C				Analyst: AAD		

10.0

mg/L

1

10.0

3260

#### TOTAL DISSOLVED SOLIDS Total Dissolved Solids (Residue,

Filterable)

Qualifiers:

ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

02/03/09 04:30 PM

DHL Analytical					Da	ate:	17-Fe	17-Feb-09		
CLIENT:	INTERA Inc.				Client	Sample ID	: MW-0	D-6		
Project:	Dugout Creek					Lab ID	<b>:</b> 09011	70-04		
Project No:					Colle	ction Date	e: 01/28/	′09 01:40 PM		
Lab Order:	0901170					Matrix	: AQUE	EOUS		
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed		
ANIONS BY IC	METHOD - WATER		E300	)				Analyst: JBC		
Bromide		3.76	0.300	1.00		mg/L	1	02/02/09 06:01 PM		
Chloride		3110	30.0	100		mg/L	100	02/02/09 02:03 PM		
Sulfate		703	10.0	30.0		mg/L	10	02/02/09 01:48 PM		

M2540C 10.0

10.0

mg/L

1

TOTAL DISSOLVED SOLIDS	
Total Dissolved Solids (Residue,	
Filterable)	

Qualifiers:

ND - Not Detected at the SDL

J - Analyte detected between SDL and RL B - Analyte detected in the associated Method Blank DF-Dilution Factor N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

RL - Reporting Limit (MQL adjusted for moisture and sample size) SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

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Analyst: AAD

02/03/09 04:30 PM

C - Sample Result or QC discussed in Case Narrative

6990

CLIENT: INTERA Inc. Project: Dugout Creek

#### Project No:

Lab Order: 0901170

#### Client Sample ID: MW-D-10 Lab ID: 0901170-05 Collection Date: 01/28/09 02:25 PM Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Bromide	0.648	0.300	1.00	J	mg/L	1	02/02/09 06:15 PM
Chloride	121	3.00	10.0		mg/L	10	02/02/09 02:17 PM
Sulfate	49.4	10.0	30.0		mg/L	10	02/02/09 02:17 PM
TOTAL DISSOLVED SOLIDS		M2540	с				Analyst: AAD
Total Dissolved Solids (Residue, Filterable)	709	10.0	10.0		mg/L	1	02/03/09 04:30 PM

Qualifiers:

ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size) SDL - Sample Detection Limit

DHL Analytical						ate:	17-Feb-09			
CLIENT:	INTERA Inc.				Client	Sample ID	): MW-(	)7-2		
Project:	Dugout Creek		Lab ID: 0901170-06							
Project No:			Collection Date: 01/28/09 03:20 PM							
Lab Order:	0901170		Matrix: AQUEOUS							
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed		
ANIONS BY IC	METHOD - WATER	E300						Analyst: JBC		
Bromide		13.2	0.300	1.00		mg/L	1	02/02/09 06:59 PM		
Chloride		4350	30.0	100		mg/L	100	02/02/09 02:32 PM		
Sulfate		4620	100	300		mg/L	100	02/02/09 02:32 PM		
TOTAL DISSO	LVED SOLIDS		M2540	oc				Analyst: AAD		
Total Dissolved	l Solids (Residue,	14800	14800 10.0 10.0 mg/L 1 02/03/09 04:30 F							

Total Diss Filterable)

Qualifiers: ND - Not Detected at the SDL

J - Analyte detected between SDL and RL B - Analyte detected in the associated Method Blank DF- Dilution Factor N - Parameter not NELAC certified See Final Page of Report for MQLs and MDLs

- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

CLIENT: INTERA Inc. Project: Dugout Creek

#### **Project No:**

Lab Order: 0901170

#### Client Sample ID: MW-P-8 Lab ID: 0901170-07 Collection Date: 01/28/09 04:00 PM Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		E300	)			Analyst: JBC
Bromide	1.14	0.300	1.00	mg/L	1	02/02/09 07:14 PM
Chloride	678	30.0	100	mg/L	100	02/02/09 03:49 PM
Sulfate	205	10.0	30.0	mg/L	10	02/02/09 03:01 PM
TOTAL DISSOLVED SOLIDS		M2540	C			Analyst: AAD
Total Dissolved Solids (Residue, Filterable)	1890	10.0	10.0	mg/L	1	02/03/09 04:30 PM

Qualifiers: N

ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

- B Analyte detected in the associated Method Blank
- DF-Dilution Factor
- N Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative
- RL Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

CLIENT: INTERA Inc. Project: Dugout Creek

#### **Project No:**

Lab Order: 0901170

# Client Sample ID: MW-P-2 Lab ID: 0901170-08 Collection Date: 01/28/09 04:35 PM Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Bromide	0.785	0.300	1.00	J	mg/L	1	02/02/09 07:29 PM
Chloride	123	3.00	10.0		mg/L	10	02/02/09 03:16 PM
Sulfate	151	10.0	30.0		mg/L	10	02/02/09 03:16 PM
TOTAL DISSOLVED SOLIDS		M2540	С				Analyst: AAD
Total Dissolved Solids (Residue, Filterable)	861	10.0	10.0		mg/L	1	02/03/09 04:30 PM

Qualifiers: ND - Not

ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF-Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

CLIENT: INTERA Inc. Project: Dugout Creek

#### **Project No:**

Lab Order: 0901170

# Client Sample ID: MW-P-10 Lab ID: 0901170-09 Collection Date: 01/28/09 05:00 PM Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		E300	)				Analyst: JBC
Bromide	0.707	0.300	1.00	J	mg/L	1	02/02/09 07:43 PM
Chloride	89.3	3.00	10.0		mg/L	10	02/02/09 04:04 PM
Sulfate	146	10.0	30.0		mg/L	10	02/02/09 04:04 PM
TOTAL DISSOLVED SOLIDS		M2540	C				Analyst: AAD
Total Dissolved Solids (Residue, Filterable)	828	10.0	10.0		mg/L	1	02/04/09 03:50 PM

Qualifiers: N

S: ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Anal		D	ate:	17-Feb-09							
CLIENT:	INTERA Inc.				Client	Sample II	): MW-I	<b>P-3</b>			
Project:	Dugout Creek		Lab ID: 0901170-10								
Project No:			Collection Date: 01/28/09 05:20 PM								
Lab Order:	0901170		Matrix: AQUEOUS								
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed			
ANIONS BY IC	METHOD - WATER		E300	)				Analyst: JBC			
Bromide		1.05	0.300	1.00		mg/L	1	02/02/09 07:58 PM			
Chloride		217	3.00	10.0		mg/L	10	02/02/09 04:18 PM			
Sulfate		163	10.0	30.0		mg/L	10	02/02/09 04:18 PM			
TOTAL DISSO	LVED SOLIDS		M2540	C				Analyst: AAD			
Total Dissolved	Solids (Residue,	1080	1080 10.0 10.0 mg/L 1 02/04/09 03:50 PM								

Filterable)

Qualifiers: ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

 ${\bf B}$  - Analyte detected in the associated Method Blank

DF-Dilution Factor

N - Parameter not NELAC certified See Final Page of Report for MQLs and MDLs C - Sample Result or QC discussed in Case Narrative

S - Spike Recovery outside control limits

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Analytical						ate:	17 <b>-</b> Fel	5-09	
CLIENT:	INTERA Inc.			· · · · · ·	Client	Sample ID	: MW-C	)-15	
Project:	Dugout Creek					Lab ID	•: 09011′	70-11	
Project No:			<b>Collection Date: </b> 01/28/09 06:25 PM						
Lab Order:	0901170	Matrix: AQUEOUS							
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed	
ANIONS BY IC	METHOD - WATER		E300	)				Analyst: JBC	
Bromide		20.3	3.00	10.0		mg/L	10	02/03/09 10:49 AM	
Chloride		5550	300	0 1000 mg/L 1000 02/04/09 10:34 AM					
Sulfate		1360	100	300 mg/L 100 02/03/09 10:34 AM					
TOTAL DISSO	VED SOLIDS	M2540C Analyst: AAD							

10.0

10.0

12800

TOTAL DISSOLVED SOLIDS Total Dissolved Solids (Residue, Filterable)

Qualifiers:

ND - Not Detected at the SDL

J - Analyte detected between SDL and RL B - Analyte detected in the associated Method Blank DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size) SDL - Sample Detection Limit

mg/L

1

02/04/09 03:50 PM

E - TPH pattern not Gas or Diesel Range Pattern

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DHL Ana	lytical				Da	ate:	17-Fe	17-Feb-09			
CLIENT:	INTERA Inc.			: MW-0	MW-O-7						
Project:	Dugout Creek		Lab ID: 0901170-12								
Project No:			<b>Collection Date:</b> 01/28/09 06:45 PM								
Lab Order:	0901170					Matrix	: AQUI	EOUS			
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed			
VOLATILE ORGANICS BY GC			SW80	21B				Analyst: <b>JAW</b>			
Methyl tert-buty	/l ether	ND	0.00200	0.00200 0.00600 mg/L 1 02/11/09 08:33 PM							

0.00200

mg/L

1

ND	0.00200	0.00600		mg/L	1	
ND	0.00200	0.00600		mg/L	1	
ND	0.00300	0.00900		mg/Ł	1	
94.4	0	87-113		%REC	1	
	E30	00				,
39.6	3.00	10.0		mg/L	10	
18300	300	1000		mg/L	1000	
1930	100	300		mg/L	100	
	M254	40C				,
32800	10.0	10.0	С	mg/L	1	
	ND 94.4 39.6 18300 1930	ND 0.00200 ND 0.00300 94.4 0 E30 39.6 3.00 18300 300 1930 100 M254	ND         0.00200         0.00600           ND         0.00300         0.00900           94.4         0         87-113           E300           39.6         3.00         10.0           18300         300         1000           1930         100         300           M2540C	ND         0.00200         0.00600           ND         0.00300         0.00900           94.4         0         87-113           E300           39.6         3.00         10.0           18300         300         1000           1930         100         300           M2540C	ND         0.00200         0.00600         mg/L           ND         0.00300         0.00900         mg/L           94.4         0         87-113         %REC           E300           39.6         3.00         10.0         mg/L           18300         300         1000         mg/L           1930         100         300         mg/L	ND         0.00200         0.00600         mg/L         1           ND         0.00300         0.00900         mg/L         1           94.4         0         87-113         %REC         1           E300           39.6         3.00         10.0         mg/L         10           18300         300         1000         mg/L         1000           1930         100         300         mg/L         100           M2540C

ND

0.000800

Filterable)

Benzene

Qualifiers: ND - No

ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF-Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative
- RL Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

02/11/09 08:33 PM

02/11/09 08:33 PM 02/11/09 08:33 PM 02/11/09 08:33 PM 02/11/09 08:33 PM

Analyst: JBC 02/12/09 03:41 PM 02/12/09 02:02 PM 02/12/09 02:54 PM

Analyst: AAD 02/13/09 04:00 AM

**Date:** 17-Feb-09

CLIENT: INTERA Inc. Project: Dugout Creek

#### **Project No:**

#### Lab Order: 0901170

#### Client Sample ID: MW-O-21 Lab ID: 0901170-13 Collection Date: 01/28/09 12:10 PM Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW80	)21B			Analyst: JAW
Methyl tert-butyl ether	ND	0.00200	0.00600	mg/L	1	02/02/09 01:53 PM
Benzene	ND	0.000800	0.00200	mg/L	1	02/02/09 01:53 PM
Toluene	ND	0.00200	0.00600	mg/L	1	02/02/09 01:53 PM
Ethylbenzene	ND	0.00200	0.00600	mg/L	1	02/02/09 01:53 PM
Xylenes, Total	ND	0.00300	0.00900	mg/L	1	02/02/09 01:53 PM
Surr: a,a,a-Trifluorotoluene	90.7	0	87-113	%REC	1	02/02/09 01:53 PM
ANIONS BY IC METHOD - WATER		E3	00			Analyst: JBC
Bromide	11.2	3.00	10.0	mg/L	10	02/03/09 11:03 AM
Chloride	16600	300	1000	mg/L	1000	02/03/09 11:33 AM
Sulfate	1850	100	300	mg/L	100	02/03/09 11:18 AM
TOTAL DISSOLVED SOLIDS		M254	40C			Analyst: AAD
Total Dissolved Solids (Residue, Filterable)	34800	10.0	10.0	mg/L	1	02/04/09 03:50 PM

Qualifiers: ND

ND - Not Detected at the SDL

 ${\rm J}$  - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF-Dilution Factor

N - Parameter not NELAC certified See Final Page of Report for MQLs and MDLs S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Analytical						ate:	17-Fe	17-Feb-09		
CLIENT:	INTERA Inc.				Client	Sample II	): ER-1			
Project:	Dugout Creek				Lab ID: 0901170-14					
Project No:					Collection Date: 01/28/09 01:00 PM					
Lab Order:	0901170				Matrix: AQUEOUS					
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed		
VOLATILE OR	GANICS BY GC		SW80	)21B				Analyst: <b>JAW</b>		
Methyl tert-buty	/l ether	ND	0.00200	0.00600		mg/L	1	02/02/09 02:13 PM		
Benzene		ND	0.000800	0.00200		mg/L	1	02/02/09 02:13 PM		
Toluene		ND	0.00200	0.00600		mg/L	1	02/02/09 02:13 PM		
Ethylbenzene		ND	0.00200	0.00600	600 mg/L 1 02/02/09 02:13 PM			02/02/09 02:13 PM		
Vulanca Total		ND	0.00300	0 00000						

Xylenes, Total	ND	0.00300	0.00900	mg/L	1	02/02/09 02:13 PM	
Surr: a,a,a-Trifluorotoluene	94.4	0	87-113	%REC	1	02/02/09 02:13 PM	
ANIONS BY IC METHOD - WATER		E3	00			Analyst: JBC	
Bromide	ND	0.300	1.00	mg/L	1	02/03/09 02:24 PM	
Chloride	ND	0.300	1.00	mg/L	1	02/03/09 02:24 PM	
Sulfate	ND	1.00	3.00	mg/L	1	02/03/09 02:24 PM	
TOTAL DISSOLVED SOLIDS		M254	40C			Analyst: AAD	
Total Dissolved Solids (Residue,	50.0	10.0	10.0	mg/L	1	02/04/09 03:50 PM	

Filterable)

Qualifiers: ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

 $\ensuremath{\mathsf{B}}$  - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative
- RL Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Ana	lytical				D	ate:	17-Fel	17-Feb-09		
CLIENT:	INTERA Inc.	Client Sample ID: MW-07-1								
Project:	Dugout Creek					Lab ID	<b>):</b> 09011′	70-15		
Project No:					Collection Date: 01/28/09 02:10 PM					
Lab Order:	0901170			Matrix: AQUEOUS						
Analyses		Result	SDL	RL	L Qual Units DF Date Analyze					
VOLATILE ORGANICS BY GC		SW8021B						Analyst: JAW		
Methyl tert-buty	/l ether	ND	0.00200	0.00600		mg/L	1	02/02/09 02:32 PM		
Benzene		ND	0.000800	0.00200		mg/L	1	02/02/09 02:32 PM		
Toluene		ND	0.00200	0.00600		mg/L	1	02/02/09 02:32 PM		
Ethylbenzene		ND	0.00200	0.00600		mg/L	1	02/02/09 02:32 PM		
Xylenes, Total		ND	0.00300	0.00900		mg/L	1	02/02/09 02:32 PM		
Surr: a,a,a-T	rifluorotoluene	93.5	0	87-113		%REC	1	02/02/09 02:32 PM		
ANIONS BY IC	METHOD - WATER		E30	00				Analyst: <b>JBC</b>		
Bromide		34.1	3.00	10.0		mg/L	10	02/04/09 10:48 AM		
Chloride		6620	300	1000		mg/L	1000	02/03/09 02:39 PM		
Sulfate		872	100	300		mg/L	100	02/03/09 01:41 PM		
TOTAL DISSO		M254	40C				Analyst: AAD			

10.0

mg/L

1

10.0

15700

Qualifiers: ND - No	ot Detected at the SDL
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Total Dissolved Solids (Residue,

Filterable)

J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAC certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size) SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

02/04/09 03:50 PM

DHL Analytical					D	ate:	17 <b>-</b> Fel	5-09	
CLIENT:	INTERA Inc.				Client	Sample ID	: MW-P	2-01	
Project:	Dugout Creek					Lab ID	<b>: 090</b> 11 <sup>4</sup>	70-16	
Project No:	-				Collection Date: 01/28/09 04:00 PM				
÷	0901170					Matrix	: AQUE	AQUEOUS	
Analyses		Result	SDL	RL	Qual Units DF		DF	Date Analyzed	
VOLATILE ORGA	NICS BY GC		SW80	)21B				Analyst: <b>JAW</b>	
Methyl tert-butyl etl	her	ND	0.00200	0.00600		mg/L	1	02/02/09 02:51 PM	
Benzene		0.0487	0.000800	0.00200		mg/L	1	02/02/09 02:51 PM	
Toluene		ND	0.00200	0.00600		mg/L	1	02/02/09 02:51 PM	
Ethylbenzene		ND	0.00200	0.00600		mg/L	1	02/02/09 02:51 PM	
Xylenes, Total		ND	0.00300	0.00900		mg/L	1	02/02/09 02:51 PM	
Surr: a,a,a-Trifiu	orotoluene	94.0	0	87-113		%REC	1	02/02/09 02:51 PM	
ANIONS BY IC ME	ETHOD - WATER		E30	00				Analyst: <b>JBC</b>	
Bromide	,	73.4	3.00	10.0		mg/L	10	02/04/09 11:03 AM	
Chloride		19600	300	1000		mg/L	1000	02/05/09 10:50 AM	
Sulfate		1460	100	300		mg/L	100	02/03/09 01:55 PM	
TOTAL DISSOLVE	ED SOLIDS		M254	40C				Analyst: AAD	
Total Dissolved Sol	lids (Residue,	38300	10.0	10.0		mg/L	1	02/04/09 03:50 PM	

Filterable)

Qualifiers: ND - Not Detected at the SDL

J - Analyte detected between SDL and RL

 ${\rm B}$  - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

 ${\bf S}$  - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

 $\operatorname{RL}$  - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

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DHL Anal	ytical			Da	ate:	17-Fe	17-Feb-09			
CLIENT:	INTERA Inc.		Client Sample ID: MW-51							
Project:	Dugout Creek		Lab ID: 0901170-17							
Project No:					Colle	ction Date	e: 01/28	/09 04:20 PM		
Lab Order:	0901170					Matrix	: AQUI	EOUS		
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed		
VOLATILE OR	GANICS BY GC	ND	SW80	)21B				Analyst: JAW		

Methyl tert-butyl ether	ND	0.00200	0.00600	mg/L	1	02/02/09 03:11 PM
Benzene	0.0456	0.000800	0.00200	mg/L	1	02/02/09 03:11 PM
Toluene	ND	0.00200	0.00600	mg/L	1	02/02/09 03:11 PM
Ethylbenzene	ND	0.00200	0.00600	mg/L	1	02/02/09 03:11 PM
Xylenes, Total	ND	0.00300	0.00900	mg/L	1	02/02/09 03:11 PM
Surr: a,a,a-Trifluorotoluene	94.3	0	87-113	%REC	1	02/02/09 03:11 PM
ANIONS BY IC METHOD - WATER		E30	00			Analyst: JBC
Bromide	84.6	3.00	10.0	mg/L	10	02/04/09 11:18 AM
Chloride	21200	300	1000	mg/L	1000	02/03/09 02:53 PM
Sulfate	1470	100	300	mg/L	100	02/03/09 02:10 PM
TOTAL DISSOLVED SOLIDS		M254	10C			Analyst: AAD
Total Dissolved Solids (Residue, Filterable)	36300	10.0	10.0	mg/L	1	02/04/09 03:50 PM

Qualifiers: ND - Not Detected at the SDL J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank
 DF- Dilution Factor
 N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Ana	lytical			D	ate:	17-Fe	17-Feb-09			
CLIENT:	INTERA Inc. Client Sample ID: 7							Trip Blank		
Project:	Dugout Creek			Lab ID: 0901170-18						
Project No:				Collection Date: 01/28/09 10:30 AM						
Lab Order:	0901170		Matrix: TRIP BLANK							
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed		
VOLATILE OR	GANICS BY GC		SW80	)21B				Analyst: <b>JAW</b>		
Methyl tert-buty	d ether	ND	0.00200	00 0.00600 mg/L 1 02/02/09 06:41 PM						
Benzene		ND	0.000800	0.00200 mg/L 1 02/02/09 06:41 PM						

0.00600

0.00600

0.00900

87-113

mg/L

mg/L

mg/L

%REC

1

1

1

1

02/02/09 06:41 PM

02/02/09 06:41 PM

02/02/09 06:41 PM

02/02/09 06:41 PM

0.00200

0.00200

0.00300

0

ND

ND

ND

94.4

Qualifiers:	ND - Not Det

Toluene

Ethylbenzene

Xylenes, Total

Surr: a,a,a-Trifluorotoluene

ND - Not Detected at the SDL

J - Analyte detected between SDL and RL B - Analyte detected in the associated Method Blank DF- Dilution Factor N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size) SDL - Sample Detection Limit

#### **CLIENT:** INTERA Inc.

#### 0901170 Work Order:

**Project:** 

F

Dugout Creek

#### ANALYTICAL QC SUMMARY REPORT

RunID:

GC8\_090202A

Sample ID: LCS-33252	Batch ID:	33252		Test	No: SW	/8021B		Units:	mg/l	
SampType: LCS	Run ID:	GC8_	090202A	Analy	/sis Date: <b>2/2</b> /	/2009 12:10:	40 PM	Prep Date	: 2/2/2	2009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	nit HighLimit	%RPD	RPDLimit Qual
Methyl tert-butyl ether		0.0533	0.00600	0.0500	0	107	78	122		
Benzene		0.0518	0.00200	0.0500	0	104	81	125		
Toluene		0.0510	0.00600	0.0500	0	102	84	123		
Ethylbenzene		0.0506	0.00600	0.0500	0	101	83	119		
Xylenes, Total		0.150	0.00900	0.150	0	100	81	117		
Surr: a,a,a-Trifluorotoluene		189		200.0		94.3	87	113		
Sample ID: MB-33252	Batch ID:	33252		TestN	lo: SW	8021B		Units:	mg/l	-
SampType: <b>MBLK</b>	Run ID:	GC8_(	090202A	Analy	/sis Date: <b>2/2/</b>	2009 12:30:	16 PM	Prep Date	2/2/2	2009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD	RPDLimit Qual
Methyl tert-butyl ether		ND	0.00600							
Benzene		ND	0.00200							
Toluene		ND	0.00600							
Ethylbenzene		ND	0.00600							
Xylenes, Total		ND	0.00900							
Surr: a,a,a-Trifluorotoluene		193		200.0		96.4	87	113		
Sample ID: 0901170-13AMS	Batch ID:	33252		TestN	lo: SW	8021B		Units:	mg/l	-
SampType: <b>MS</b>	Run ID:	GC8_(	90202A	Analy	vsis Date: <b>2/2/</b>	2009 7:20:1	4 PM	Prep Date:	2/2/2	2009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD	RPDLimit Qual
Methyl tert-butyl ether		0.0598	0.00600	0.0500	0	120	78	122		
Benzene		0.0534	0.00200	0.0500	0	107	81	125		
Toluene		0.0527	0.00600	0.0500	0	105	84	123		
Ethylbenzene		0.0516	0.00600	0.0500	0	103	83	119		
Xylenes, Total		0.154	0.00900	0.150	0	103	81	117		
Surr: a,a,a-Trifluorotoluene		188		200.0		94.1	87	113		
Sample ID: 0901170-13AMSD	Batch ID:	33252		TestN	lo: SW	8021B		Units:	mg/L	•
SampType: MSD	Run ID:	GC8_0	90202A	Analy	sis Date: 2/2/	2009 7:39:4	5 PM	Prep Date:	2/2/2	2009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD	RPDLimit Qual
Methyl tert-butyl ether		0.0604	0.00600	0.0500	0	121	78	122	0.969	20
Benzene		0.0520	0.00200	0.0500	0	104	81	125	2.84	20
Toluene		0.0514	0.00600	0.0500	0	103	84	123	2.50	20
Ethylbenzene		0.0505	0.00600	0.0500	0	101	83	119	2.11	20
Xylenes, Total		0.151	0.00900	0.150	0	100	81	117	2.18	20
Surr: a,a,a-Trifluorotoluene		185		200.0		92.3	87	113	0	0
Qualifiers: B Analyte de	tected in the	associated	Method Blank	DF	Dilution Facto	or				
J Analyte de	tected betwee	n MDL an	d RL	MDL	Method Detec	ction Limit			]	Page 1 of 19
ND Not Detect	ted at the Met	hod Detect	tion Limit	R	RPD outside a	accepted cont	rol limits			-
RL Reporting	Limit			S	Spike Recove	ry outside cor	ntrol limits	3		
J Analyte de	tected betwee	n SDL and	i RL	N	Parameter not	t NELAC cert	ified			

#### **CLIENT:** INTERA Inc. Work Order:

0901170

Dugout Creek **Project:** 

#### ANALYTICAL QC SUMMARY REPORT

RunID: GC8\_090202A

Sample ID: 0901154-05AMS	Batch ID:	33252		TestNo:		8021B		Units:	mg/l	
SampType: <b>MS</b>	Run ID:	GC8_0	90202A	Analysis	5 Date: 2/2/	2009 9:57:54	4 PM	Prep Date:	2/2/2	2009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	t HighLimit	%RPD	RPDLimit Qual
Methyl tert-butyl ether		0.0537	0.00600	0.0500	0	107	78	122		
Benzene		0.0527	0.00200	0.0500	0	105	81	125		
Toluene		0.0521	0.00600	0.0500	0	104	84	123		
Ethylbenzene		0.0515	0.00600	0.0500	0	103	83	119		
Xylenes, Total		0.153	0.00900	0.150	0	102	81	117		
Surr: a,a,a-Trifluorotoluene		189		200.0		94.6	87	113		
Sample ID: 0901154-05AMSD	Batch ID:	33252		TestNo:	SW	8021B		Units:	mg/L	-
Sample ID: 0901154-05AMSD SampType: MSD	Batch ID: Run ID:		90202A			8021B 2009 10:17:4	14 PM	Units: Prep Date:	-	
	Run ID:		90202A RL					Prep Date:	2/2/2	
SampType: <b>MSD</b>	Run ID:	GC8_0		Analysis	Date: 2/2/	2009 10:17:4		Prep Date:	2/2/2	:009
SampType: <b>MSD</b> Analyte	Run ID:	GC8_09 Result	RL	Analysis SPK value	Date: <b>2/2/</b> Ref Val	2009 10:17:4 %REC	LowLimit	Prep Date: HighLimit	2/2/2 %RPD	RPDLimit Qual
SampType: <b>MSD</b> Analyte Methyl tert-butyl ether	Run ID:	GC8_09 Result 0.0535	RL 0.00600	Analysis SPK value 0.0500	Date: 2/2/ Ref Val 0	2009 10:17:4 %REC 107	LowLimit	Prep Date: HighLimit	2/2/2 %RPD 0.340	2009 RPDLimit Qual
SampType: MSD Analyte Methyl tert-butyl ether Benzene	Run ID:	GC8_09 Result 0.0535 0.0523	RL 0.00600 0.00200	Analysis SPK value 0.0500 0.0500	Date: 2/2/ Ref Val 0 0	2009 10:17:4 %REC 107 105	LowLimit 78 81	Prep Date: HighLimit 122 125	2/2/2 %RPD 0.340 0.653	RPDLimit Qual 20 20
SampType: <b>MSD</b> Analyte Methyl tert-butyl ether Benzene Toluene	Run ID:	GC8_0 Result 0.0535 0.0523 0.0518	RL 0.00600 0.00200 0.00600	Analysis SPK value 0.0500 0.0500 0.0500	Date: 2/2/2 Ref Val 0 0 0	2009 10:17:4 %REC 107 105 104	LowLimit 78 81 84	Prep Date: HighLimit 122 125 123	2/2/2 %RPD 0.340 0.653 0.535	2009 RPDLimit Qual 20 20 20

Qualifiers:

- Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- Reporting Limit RL

В

- Analyte detected between SDL and RL J
- DF **Dilution Factor**
- MDL Method Detection Limit R RPD outside accepted control limits
- S Spike Recovery outside control limits
- Ν Parameter not NELAC certified

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### CLIENT:INTERA Inc.Work Order:0901170

#### Project: Dugout Creek

#### ANALYTICAL QC SUMMARY REPORT

RunID: GC8\_090202A

Sample ID: ICV-090202	Batch ID:	R41670		TestNo	: <b>SW</b>	8021B		Units:	mg/	L
SampType: ICV	Run ID:	GC8_09	0202A	Analys	is Date: <b>2/2/</b>	2009 11:51	:07 AM	Prep Date	e:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD	RPDLimit Qua
Methyl tert-butyl ether		0.101	0.00600	0.100	0	101	80	120		
Benzene		0.102	0.00200	0.100	0	102	85	115		
Toluene		0.0998	0.00600	0.100	0	99.8	85	115		
Ethylbenzene		0.0988	0.00600	0.100	0	98.8	85	115		
Xylenes, Total		0.294	0.00900	0.300	0	97.9	85	115		
Surr: a,a,a-Trifluorotoluene		192		200.0		96.2	87	113		
Sample ID: CCV1-090202	Batch ID:	R41670		TestNo	: SW	8021B		Units:	mg/	
SampType: CCV	Run ID:	GC8_09	0202A	Analys	is Date: <b>2/2/</b>	2009 3:49:3	8 PM	Prep Date	9:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD	RPDLimit Qua
Methyl tert-butyl ether		0.0520	0.00600	0.0500	0	104	80	120		
Benzene		0.0531	0.00200	0.0500	0	106	85	115		
Toluene		0.0523	0.00600	0.0500	0	105	85	115		
Ethylbenzene		0.0519	0.00600	0.0500	0	104	85	115		
Xylenes, Total		0.154	0.00900	0.150	0	103	85	115		
Surr: a,a,a-Trifluorotoluene		191		200.0		95.7	87	113		· · · · · · · · · · · · · · · · · · ·
Sample ID: CCV2-090202	Batch ID:	R41670		TestNo	: SW	3021B		Units:	mg/l	-
SampType: CCV	Run ID:	GC8_09	0202A	Analys	is Date: <b>2/2/</b> 2	2009 9:18:4	4 PM	Prep Date	<b>:</b> :	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD	RPDLimit Qua
Methyl tert-butyl ether		0.0493	0.00600	0.0500	0	98.6	80	120		
Benzene		0.0513	0.00200	0.0500	0	103	85	115		
Toluene		0.0506	0.00600	0.0500	0	101	85	115		
Ethylbenzene		0.0502	0.00600	0.0500	0	100	85	115		
Xylenes, Total		0.149	0.00900	0.150	0	99.4	85	115		
Surr: a,a,a-Trifluorotoluene		192		200.0		95.8	87	113		
Sample ID: CCV3-090202	Batch ID:	R41670		TestNo	: <b>SW</b> 8	3021B		Units:	mg/l	-
SampType: <b>CCV</b>	Run ID:	GC8_090	0202A	Analys	is Date: <b>2/2/</b> 2	2009 10:58:	11 PM	Prep Date	:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD	RPDLimit Qua
Methyl tert-butyl ether		0.0520	0.00600	0.0500	0	104	80	120		
Benzene		0.0514	0.00200	0.0500	0	103	85	115		
Toluene		0.0509	0.00600	0.0500	0	102	85	115		
Ethylbenzene		0.0505	0.00600	0.0500	0	101	85	115		
Xylenes, Total		0.150	0.00900	0.150	0	99.9	85	115		
· · · · · · · · · · · · · · · · · · ·										

Qualifiers:

- B Analyte detected in the associated Method BlankJ Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

DF Dilution Factor

MDL Method Detection Limit R RPD outside accepted control limits Page 3 of 19

S Spike Recovery outside control limits

N Parameter not NELAC certified

CLIENT:	INTERA Inc.	ANALYT
Work Order:	0901170	ANALII
Project:	Dugout Creek	

#### TICAL QC SUMMARY REPORT

RunID: GC8\_090211A

SampType: LCS Analyte Methyl tert-butyl ether	Run ID:	GC8_0 Result	90211A	Analys	sis Date: 2/11	1/2009 7:55:	17 PM	Prep Date	: 2/11/	/2009
		Recult								
Methyl tert-butyl ether		Result	RL	SPK value	Ref Val	%REC	LowLin	it HighLimit	%RPD	RPDLimit Qua
		0.0555	0.00600	0.0500	0	111	78	122		
Benzene		0.0541	0.00200	0.0500	0	108	81	125		
Toluene		0.0533	0.00600	0.0500	0	107	84	123		
Ethylbenzene		0.0528	0.00600	0.0500	0	106	83	119		
Xylenes, Total		0.156	0.00900	0.150	0	104	81	117		
Surr: a,a,a-Trifluorotoluene		188		200.0		94.1	87	113		
Sample ID: MB-33424	Batch ID:	33424		TestNo	: <b>SW</b>	8021B		Units:	mg/L	
SampType: MBLK	Run ID:	GC8_0	90211A	Analys	is Date: <b>2/1</b> 1	/2009 8:14:	10 PM	Prep Date	: 2/11/	/2009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD	RPDLimit Qual
Methyl tert-butyl ether		ND	0.00600							
Benzene		ND	0.00200							
Toluene		ND	0.00600							
Ethylbenzene		ND	0.00600							
Xylenes, Total		ND	0.00900							
Surr: a,a,a-Trifluorotoluene		192		200.0		96.0	87	113		
Sample ID: 0901170-12AMS	Batch ID:	33424		TestNo	: SW	8021B		Units:	mg/L	
SampType: <b>MS</b>	Run ID:	GC8_0	90211A	Analys	is Date: 2/11	/2009 8:51:	49 PM	Prep Date	: 2/11/	2009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD	RPDLimit Qual
Methyl tert-butyl ether		0.0588	0.00600	0.0500	0	118	78	122		
Benzene		0.0535	0.00200	0.0500	0	107	81	125		
Toluene		0.0529	0.00600	0.0500	0	106	84	123		
Ethylbenzene		0.0522	0.00600	0.0500	0	104	83	119		
Xylenes, Total		0.156	0.00900	0.150	0	104	81	117		
Surr: a,a,a-Trifluorotoluene		188		200.0		94.2	87	113		
Sample ID: 0901170-12AMSD	Batch ID:	33424		TestNo	: SW	8021B		Units:	mg/L	
SampType: <b>MSD</b>	Run ID:	GC8_0	90211A	Analys	is Date: <b>2/11</b>	/2009 9:11:	00 PM	Prep Date	: 2/11/	2009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD	RPDLimit Qual
Methyl tert-butyl ether		0.0603	0.00600	0.0500	0	121	78	122	2.52	20
Benzene		0.0533	0.00200	0.0500	0	107	81	125	0.425	20
Toluene		0.0527	0.00600	0.0500	0	105	84	123	0.386	20
		0.0519	0.00600	0.0500	0	104	83	119	0.517	20
Ethylbenzene		0.155	0.00900	0.150	0	103	81	117	0.437	20
Ethylbenzene Xylenes, Total		0.100								
•		184		200.0		91.9	87	113	0	0
Xylenes, Total						91.9	87	113	0	0

- Analyte detected in the associated Method Blank J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- Analyte detected between SDL and RL J
- DF Dilution Factor MDL Method Detection Limit
- R RPD outside accepted control limits

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- S Spike Recovery outside control limits
- Ν Parameter not NELAC certified

#### **CLIENT:** INTERA Inc. Work Order: 0901170

#### ANALYTICAL QC SUMMARY REPORT

**Project:** Dugout Creek

#### GC8\_090211A RunID:

Sample ID: ICV-090211	Batch ID:	R41823	;	TestNo:	SW8	3021B		Units:	mg/L	
SampType: ICV	Run ID:	GC8_0	90211A	Analysis	s Date: 2/11	/2009 7:36:	18 PM	Prep Date	:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit	%RPD	RPDLimit Qual
Methyl tert-butyl ether		0.104	0.00600	0.100	0	104	80	120		
Benzene		0.103	0.00200	0.100	0	103	85	1 <b>1</b> 5		
Toluene		0.102	0.00600	0.100	0	102	85	115		
Ethylbenzene		0.101	0.00600	0.100	0	101	85	115		
Xylenes, Total		0.300	0.00900	0.300	0	100	85	115		
Surr: a,a,a-Trifluorotoluene		192		200.0		95.8	87	113		_
Sample ID: CCV1-090211	Batch ID:	R41823		TestNo:	SW8	8021B		Units:	mg/L	
Sampie ID: CCV1-090211 SampType: CCV	Batch ID: Run ID:	R41823 GC8_09			<b>SW8</b> Date: <b>2/11</b>		54 PM	Units: Prep Date:	-	
	Run ID:							Prep Date	:	RPDLimit Qual
SampType: CCV	Run ID:	GC8_09	90211A	Analysis	Date: 2/11	/2009 9:29:		Prep Date	:	RPDLimit Qual
SampType: CCV Analyte	Run ID:	GC8_09	80211A RL	Analysis SPK value	Date: 2/11 Ref Val	/2009 9:29: %REC	LowLimit	Prep Date: HighLimit	:	RPDLimit Qual
SampType: CCV Analyte Methyl tert-butyl ether	Run ID:	GC8_09 Result 0.0534	80211A RL 0.00600	Analysis SPK value 0.0500	5 Date: 2/11/ Ref Val 0	/2009 9:29: %REC 107	LowLimit 80	Prep Date HighLimit 120	:	RPDLimit Qual
SampType: CCV Analyte Methyl tert-butyl ether Benzene	Run ID:	GC8_09 Result 0.0534 0.0529	RL 0.00600 0.00200	Analysis SPK value 0.0500 0.0500	Date: 2/11, Ref Val 0 0	/2009 9:29: %REC 107 106	LowLimit 80 85	Prep Date HighLimit 120 115	:	RPDLimit Qual
SampType: CCV Analyte Methyl tert-butyl ether Benzene Toluene	Run ID:	GC8_09 Result 0.0534 0.0529 0.0524	RL 0.00600 0.00200 0.00600	Analysis SPK value 0.0500 0.0500 0.0500	Date: 2/11, Ref Val 0 0 0	/2009 9:29: %REC 107 106 105	LowLimit 80 85 85	Prep Date HighLimit 120 115 115	:	RPDLimit Qual

Qualifiers:

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL **Reporting Limit** 

В

J Analyte detected between SDL and RL DF **Dilution Factor** 

MDL Method Detection Limit R RPD outside accepted control limits

S Spike Recovery outside control limits

Ν Parameter not NELAC certified Page 5 of 19

#### ANALYTICAL QC SUMMARY REPORT

RunID: IC\_090212B

Sample ID: LCS-33450	Batch ID:	33450		TestNo	: E30	0		Units:	mg/L	
SampType: L <b>CS</b>	Run ID:	IC_090212	2B	Analysi	s Date: <b>2/12</b>	/2009 12:4	7:02 PM	Prep Date	: 2/12/2	009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD R	PDLimit Qual
Bromide		21.2	1.00	20.00	0	106	90	110		
Chloride		10.7	1.00	10.00	0	107	90	110		
Sulfate	• • • •	31.5	3.00	30.00	0	105	90	110		
Sample ID: LCSD-33450	Batch ID:	33450		TestNo	E30	0		Units:	mg/L	
SampType: <b>LCSD</b>	Run ID:	IC_090212	2B	Analysi	s Date: <b>2/12</b>	/2009 1:02:	44 PM	Prep Date:	2/12/2	009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD R	PDLimit Qual
Bromide		21.4	1.00	20.00	0	107	90	110	0.915	20
Chloride		10.8	1.00	10.00	0	108	90	110	0.907	20
Sulfate		31.8	3.00	30.00	0	106	90	110	0.951	20
Sample ID: MB-33450	Batch ID:	33450		TestNo	E300	<u>כ</u>		Units:	mg/L	
SampType: <b>MBLK</b>	Run ID:	IC_090212	B	Analysi	s Date: 2/12	/2009 1:18:	27 PM	Prep Date:	2/12/2	009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD R	PDLimit Qual
Bromide		ND	1.00							
Chloride		ND	1.00							,
Sulfate		ND	3.00							
Sample ID: 0901170-12B MS	Batch ID:	33450		TestNo:	E300	)		Units:	mg/L	
SampType: <b>MS</b>	Run ID:	IC_090212	B	Analysis	s Date: <b>2/12</b>	/2009 2:23:	06 PM	Prep Date:	2/12/20	009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD R	PDLimit Qual
Chloride		21600	1000	10000	11000	106	90	110		
Sample ID: 0901170-12B MSD	Batch ID:	33450		TestNo:	E300	)		Units:	mg/L	
SampType: <b>MSD</b>	Run ID:	IC_090212	в	Analysis	s Date: <b>2/12/</b>	2009 2:38:	48 PM	Prep Date:	2/12/20	09
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit	%RPD RI	PDLimit Qual
Chloride		21600	1000	10000	11000	106	90	110	0.0361	20
Sample ID: 0901170-12B MS	Batch ID:	33450		TestNo:	E300	)		Units:	mg/L	
SampType: <b>MS</b>	Run ID:	IC_090212	В	Analysis	a Date: <b>2/12</b> /	2009 3:10:	13 PM	Prep Date:	2/12/20	09
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit	%RPD R	PDLimit Qual
Sulfate		4290	300	3000	1161	104	90	110		

Qualifiers:

- $B \quad \ \ Analyte \ detected \ in the \ associated \ Method \ Blank$
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDLMethod Detection LimitRRPD outside accepted control limits
- S Spike Recovery outside control limits

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- N Parameter not NELAC certified

CLIENT: Work Order:	INTERA 1 0901170	inc.			AN	ALYT	ICAL (	QC SI	UMMA	RYR	EPO	RT
Project:	Dugout Ci	reek					RunII	): 1	C_090212	B		
Sample ID: 09011 SampType: MSD	70-12B MSD	Batch ID: Run ID:	33450 IC_0902	212B	TestNo: Analysis		0 2/2009 3:25:	53 PM	Units: Prep Date:	mg/L 2/12/2	2009	
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit '	%RPD F	RPDLimi	t Qual
Sulfate			4300	300	3000	1161	105	90	110	0.181	20	
Sample ID: 09011	70-12B MS	Batch ID:	33450		TestNo:	E30	0		Units:	mg/L		
SampType: <b>MS</b>		Run ID:	IC_0902	12B	Analysis	Date: 2/12	/2009 4:28:	41 PM	Prep Date:	2/12/2	2009	
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit '	%RPD F	RPDLimi	t Qual
Bromide			250	10.0	200.0	23.78	113	90	110			S
Sample ID: 09011	70-12B MSD	Batch ID:	33450	·	TestNo:	E30	0		Units:	mg/L		
SampType: <b>MSD</b>		Run ID:	IC_0902	12B	Analysis	Date: 2/12	/2009 4:44:	23 PM	Prep Date:	2/12/2	2009	
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD F	RPDLimi	t Qual
Bromide		<del></del>	252	10.0	200.0	23.78	114	90	110	0.572	20	S

Qualifiers:

**CLIENT:** 

INTERA Inc.

Analyte detected in the associated Method Blank Analyte detected between MDL and  $\ensuremath{\mathsf{RL}}$ 

- J ND Not Detected at the Method Detection Limit
- RL Reporting Limit

В

- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits

Page 7 of 19

- S Spike Recovery outside control limits
- Ν Parameter not NELAC certified

### CLIENT:INTERA Inc.Work Order:0901170

Dugout Creek

**Project:** 

#### ANALYTICAL QC SUMMARY REPORT

RunID: IC 090212B

Sample ID: ICV-090212 Batch ID: R41836 TestNo: E300 mg/L Units: IC\_090212B Analysis Date: 2/12/2009 9:30:14 AM SampType: ICV Run ID: Prep Date: 2/12/2009 Analyte RL SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Result Bromide 54.0 1.00 50.00 0 108 90 110 0 109 Chloride 27.1 1.00 25.00 90 110 Sulfate 80.1 3.00 75.00 0 107 90 110 Sample ID: CCV1-090212 Batch ID: R41836 TestNo: E300 Units: mg/L SampType: CCV Run ID: IC\_090212B Analysis Date: 2/12/2009 12:25:30 PM Prep Date: 2/12/2009 SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Analyte Result RL 0 107 21.4 1.00 20.00 90 110 Bromide 10.00 0 90 110 Chloride 10.8 1.00 108 Sulfate 31.8 3.00 30.00 0 106 90 110 Sample ID: CCV2-090212 Batch ID: R41836 TestNo: E300 Units: mg/L Run ID: Prep Date: 2/12/2009 SampType: CCV IC\_090212B Analysis Date: 2/12/2009 4:12:59 PM RL SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Result Analyte Bromide 21.2 1.00 20.00 0 106 90 110 Chloride 10.00 0 108 90 110 10.8 1.00 Sulfate 31.5 3.00 30.00 0 105 90 110 Sample ID: CCV3-090212 Batch ID: R41836 TestNo: E300 Units: mg/L SampType: CCV Run ID: IC\_090212B Analysis Date: 2/12/2009 5:15:48 PM Prep Date: 2/12/2009 LowLimit HighLimit %RPD RPDLimit Qual Analvte Result RL SPK value Ref Val %REC 0 20.00 106 90 Bromide 21.3 1.00 110

Qualifiers:

#### B Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limitsS Spike Recovery outside control limits
- 5 Spike Recovery outside control minis
- N Parameter not NELAC certified

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#### ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_090202A

Sample ID:	LCS-33262	Batch ID:	33262		TestN	o: E300	0		Units:	mg/L	
SampType:	LCS	Run ID:	IC2_090	202A	Analys	sis Date: <b>2/2/2</b>	2009 9:30:1	0 AM	Prep Date:	: 2/2/20	09
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD R	PDLimit Qua
Bromide			18.7	1.00	20.00	0	93.7	90	110		
Chloride			9.22	1.00	10.00	0	92.2	90	110		
Sulfate			28.3	3.00	30.00	0	94.2	90	110		
Sample ID:	LCSD-33262	Batch ID:	33262		TestN	o: <b>E300</b>	)		Units:	mg/L	
SampType:	LCSD	Run ID:	IC2_090	202A	Analys	sis Date: <b>2/2/2</b>	2009 9:44:5	60 AM	Prep Date:	2/2/200	09
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD R	PDLimit Qual
Bromide			19.1	1.00	20.00	0	95.3	90	110	1.75	20
Chloride			9.34	1.00	10.00	0	93.4	90	110	1.28	20
Sulfate			28.7	3.00	30.00	0	95.8	90	110	1.66	20
Sample ID: I	MB-33262	Batch ID:	33262		TestNo	D: <b>E300</b>	)		Units:	mg/L	
SampType: I	MBLK	Run ID:	IC2_090	202A	Analys	is Date: <b>2/2/2</b>	009 9:59:3	1 AM	Prep Date:	2/2/200	09
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	t HighLimit	%RPD RI	PDLimit Qual
Bromide			ND	1.00							
Chloride			ND	1.00							
Sulfate			ND	3.00							
Sample ID: (	0901170-01AMS	Batch ID:	33262		TestNo	D: <b>E300</b>	)		Units:	mg/L	
SampType: I	MS	Run ID:	IC2_090	202A	Analys	is Date: 2/2/2	009 12:05:	01 PM	Prep Date:	2/2/200	)9
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	t HighLimit	%RPD RI	PDLimit Qual
Chloride			367	10.0	100.0	263.8	104	90	110		
Sulfate	-		486	30.0	300.0	189.8	98.7	90	110		
Sample ID: (	0901170-01AMSD	Batch ID:	33262		TestNo	D: E300	)		Units:	mg/L	
SampType: I	MSD	Run ID:	IC2_090	202A	Analys	is Date: <b>2/2/2</b>	009 12:18:	44 PM	Prep Date:	2/2/200	)9
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit	%RPD R	PDLimit Qual
Chloride			368	10.0	100.0	263.8	104	90	110	0.188	20
Sulfate			486	30.0	300.0	189.8	98.7	90	110	0.00309	20
Sample ID: (	0901170-01A MS	Batch ID:	33262		TestNo	o: <b>E300</b>	)		Units:	mg/L	
SampType: I	MS	Run ID:	IC2_090	202A	Analys	is Date: <b>2/2/2</b>	009 5:02:2	2 PM	Prep Date:	2/2/200	9
			Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit	%RPD R	PDLimit Qual
Analyte											
Analyte Bromide			20.1	1.00	20.00	1.170	94.7	90	110		
	B Analyte dete	ected in the as				1.170 Dilution Factor		90	110		
Bromide			ssociated M	ethod Blank	DF			90	110	Ра	ge 9 of 19

RL Reporting Limit

J Analyte detected between SDL and RL

S Spike Recovery outside control limits

N Parameter not NELAC certified

#### ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_090202A

Sample ID: 0901170-01A MSD	Batch ID:	33262		TestNo	): <b>E3</b>	00		Units:	mg/	L ·
SampType: <b>MSD</b>	Run ID:	IC2_090	202A	Analys	is Date: 2/2	2/2009 5:17:0	2 PM	Prep Date	: <b>2/2/</b> :	2009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit	%RPD	RPDLimit Qual
Bromide		20.4	1.00	20.00	1.170	96.1	90	110	1.37	20

Qualifiers:

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

- ND Not Detected at the Method Detection Limit
- RL Reporting Limit

В

- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

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#### ANALYTICAL QC SUMMARY REPORT

RunID: IC

IC2\_090202A

Sample ID: I	CV-090202	Batch ID:	R41641		TestNo	: E30	0		Units:	mg/L
SampType: I	cv	Run ID:	IC2_090	)202A	Analysi	s Date: <b>2/2/</b> :	2009 9:11:2	4 AM	Prep Date:	2/2/2009
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit '	%RPD RPDLimit Qual
Bromide			50.1	1.00	50.00	0	100	90	110	
Chloride			24.9	1.00	25.00	0	99.5	90	110	
Sulfate			75.5	3.00	75.00	0	101	90	110	
Sample ID: 0	CCV1-090202	Batch ID:	R41641		TestNo	E30	0		Units:	mg/L
SampType: 0	CCV	Run ID:	IC2_090	202A	Analysi	s Date: 2/2/2	2009 12:33:	25 P <b>M</b>	Prep Date:	2/2/2009
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD RPDLimit Qual
Bromide			19.3	1.00	20.00	0	96.7	90	110	
Chloride			9.49	1.00	10.00	0	94.9	90	110	
Sulfate			29.0	3.00	30.00	0	96.7	90	110	
Sample ID: 0	CCV2-090202	Batch ID:	R41641		TestNo	E30	0		Units:	mg/L
SampType: 0	ccv	Run ID:	IC2_090	202A	Analysi	s Date: <b>2/2</b> /2	2009 3:30:4	7 PM	Prep Date:	2/2/2009
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD RPDLimit Qual
Bromide			19.3	1.00	20.00	0	96.7	90	110	
Chloride			9.51	1.00	10.00	0	95.1	90	110	
Sulfate			29.1	3.00	30.00	0	97.1	90	110	
Sample ID: 0	CV3-090202	Batch ID:	R41641		TestNo:	E300	0		Units:	mg/L
SampType: 0	ccv	Run ID:	IC2_090	202A	Analysis	s Date: 2/2/2	2009 6:45:0	5 PM	Prep Date:	2/2/2009
Analyte		1	Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit 9	6RPD RPDLimit Qual
Bromide			19.5	1.00	20.00	0	97.4	90	110	
Chloride			9.86	1.00	10.00	0	98.6	90	110	
Sulfate			29.5	3.00	30.00	0	98.5	90	110	
Sample ID: 0	CV4-090202	Batch ID:	R41641		TestNo:	E300	)		Units:	mg/L
SampType: <b>C</b>	cv	Run ID:	IC2_090	202A	Analysis	s Date: 2/2/2	2009 8:27:49	9 PM	Prep Date:	2/2/2009
Analyte		I	Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD RPDLimit Qual
Bromide			19.5	1.00	20.00	0	97.3	90	110	<u></u>

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit R RPD outside accepted control limits

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- S Spike Recovery outside control limits
- N Parameter not NELAC certified
- 46

-	901170			AN	NALYT	ICAL (	QC SI	UMMAI	RY RI	EPORT
	Jugout Creek					RunII	D: ]	C2_09020	3A	
Sample ID: LCS-3327	8 Batch ID:	33278		TestNo	): E300	0		Units:	mg/L	
SampType: LCS	Run ID:	IC2_0902	03A	Analys	is Date: 2/3/2	2009 9:47:4	6 AM	Prep Date:	2/3/200	9
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD R	PDLimit Qual
Bromide		19.7	1.00	20.00	0	98.6	90	110		
Chloride		9.59	1.00	10.00	0	95.9	90	110		
Sulfate		29.6	3.00	30.00	0	98.6	90	110		
Sample ID: LCSD-332	Batch ID:	33278		TestNo	E300	D		Units:	mg/L	
SampType: LCSD	Run ID:	IC2_0902	03A	Analysi	is Date: 2/3/2	2009 10:02:	26 AM	Prep Date:	2/3/200	9
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit 9	%RPD R	PDLimit Qual
Bromide		19.6	1.00	20.00	0	98.2	90	110	0.321	20
Chloride		9.57	1.00	10.00	0	95.7	90	110	0.173	20
Sulfate		29.5	3.00	30.00	0	98.2	90	110	0.367	20
Sample ID: MB-33278	Batch ID:	33278		TestNo	: E300	D		Units:	mg/L	
SampType: MBLK	Run ID:	IC2_0902	03A	Analysi	is Date: 2/3/2	2009 10:17:	06 AM	Prep Date:	2/3/200	9
Analyte	· · · · · · · · · · · · · · · · · · ·	Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit 9	%RPD RF	PDLimit Qual
Bromide		ND	1.00							
Chloride		ND	1.00							
Sulfate		ND	3.00							
Sample ID: 0901170-1	3BMS Batch ID:	33278		TestNo	: E300	נ		Units:	mg/L	
SampType: <b>MS</b>	Run ID:	IC2_0902	03A	Analysi	s Date: 2/3/2	2009 12:24:	29 PM	Prep Date:	2/3/200	9
Analyte		Result	RL.	SPK value	Ref Val	%REC	LowLim	it HighLimit %	%RPD RF	PDLimit Qual
Bromide		220	10.0	200.0	6.696	107	90	110		
Sample ID: 0901170-1	3BMSD Batch ID:	33278		TestNo	: E300	)	. <u></u>	Units:	mg/L	
SampType: <b>MSD</b>	Run ID:	IC2_0902	03A	Analysi	s Date: 2/3/2	2009 12:39:	09 PM	Prep Date:	2/3/200	9
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD RF	PDLimit Qual
Bromide	,	220	10.0	200.0	6.696	107	90	110	0.110	20
Sample ID: 0901170-1	3BMS Batch ID:	33278		TestNo	: E300	)		Units:	mg/L	
Samp⊤ype: <b>MS</b>	Run ID:	IC2_0902	03A	Analysi	s Date: 2/3/2	2009 3:13:2	1 PM	Prep Date:	2/3/200	9
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD RF	PDLimit Qual
Sulfate		4190	300	3000	1112	103	90	110		

Qualifiers:

**CLIENT:** 

INTERA Inc.

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits

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ANALYTICAL QC SUMMARY REPORT

N Parameter not NELAC certified

CLIENT:	INTERA Inc.
Work Order:	0901170
Project:	Dugout Creek

**Project:** 

#### ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_090203A

Sample ID: 0901170-13BMSD	Batch ID:	33278		TestNo:	E30	0		Units:	mg/L	
SampType: <b>MSD</b>	Run ID:	IC2_090	203A	Analysis	Date: 2/3/2	2009 3:28:0 <sup>,</sup>	I PM	Prep Date:	2/3/20	09
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD F	RPDLimit Qua
Sulfate		4230	300	3000	1112	104	90	110	0.878	20
Sample ID: 0901170-13BMS	Batch ID:	33278		TestNo:	E30	0		Units:	mg/L	
SampType: <b>MS</b>	Run ID:	IC2_090	203A	Analysis	PM	PM Prep Date: 2/3/2009				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD F	PDLimit Qu
Chloride		21000	1000	10000	9960	110	90	110		
Sample ID: 0901170-13BMSD	Batch ID:	33278		TestNo:	E30	0		Units:	mg/L	· · · · · · · · ·
SampType: <b>MSD</b>	Run ID:	IC2_090	203A	Analysis	Date: 2/3/2	2009 3:56:31	PM	Prep Date:	2/3/20	09
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD F	PDLimit Qua
Chloride		20900	1000	10000	9960	110	90	110	0.301	20

Qualifiers:

В

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

- Reporting Limit RL
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit
- RPD outside accepted control limits R
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

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CLIENT:	INTERA Inc.
Work Order:	0901170

Dugout Creek

**Project:** 

#### ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_090203A

Sample ID: ICV-090203	Batch ID:	R41687		TestNo:	E30	0		Units:	mg/L
SampType: ICV	Run ID:	IC2_090	203A	Analysis	a Date: <b>2/3/</b> 2	2009 9:21:5	0 AM	Prep Date:	2/3/2009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD RPDLimit Qua
Bromide		50.3	1.00	50.00	0	101	90	110	
Chloride		24.9	1.00	25.00	0	99.5	90	110	
Sulfate		76.2	3.00	75.00	0	102	90	110	
Sample ID: CCV1-090203	Batch ID:	R41687		TestNo:	E30	0		Units:	mg/L
SampType: CCV	Run ID: IC2_090203A			Analysis	2009 1:08:3	1 PM Prep Date: 2/3/2009			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD RPDLimit Qual
Bromide		19.6	1.00	20.00	0	98.2	90	110	
Chloride		9.79	1.00	10.00	0	97.9	90	110	
Sulfate		29.7	3.00	30.00	0	98.9	90	110	
Sample ID: CCV2-090203	Batch ID:	R41687		TestNo:	E30	0		Units:	mg/L
SampType: CCV	Run ID:	IC2_0902	203A	Analysis	Date: 2/3/2	2009 4:11:1	1 PM	Prep Date:	2/3/2009
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD RPDLimit Qual
Bromide		19.6	1.00	20.00	0	98.1	90	110	
Chloride		9.59	1.00	10.00	0	95.9	90	110	
Sulfate		29.5	3.00	30.00	0	98.3	90	110	

Qualifiers:

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

В

J Analyte detected between SDL and RL

DF Dilution Factor

MDL Method Detection Limit R RPD outside accepted control limits

S Spike Recovery outside control limits

b spike receivery outside control min

N Parameter not NELAC certified

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#### CLIENT: INTERA Inc. Work Order: 0901170

#### ANALYTICAL QC SUMMARY REPORT

Project: Dugout Creek

#### RunID: IC2\_090204A

Sample ID: ICV-090204	Batch ID:	R41702		TestNo:	E300			Units:	mg/L
SampType: ICV	Run ID:	IC2_0902	204A	Analysis	Date: 2/4/2	Prep Date:	2/4/2009		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	RPD RPDLimit Qual
Bromide		49.5	1.00	50.00	0	98.9	90	110	
Chloride		24.5	1.00	25.00	0	98.1	90	110	
Sulfate		75.4	3.00	75.00	0	101	90	110	
Sample ID: CCV1-090204	Batch ID:	R41702		TestNo:	E300			Units:	mg/L
SampType: CCV				Analysis Date: 2/4/2009 12:17:19 P					
SampType: CCV	Run ID:	IC2_0902	204A	Analysis	Date: 2/4/2	009 12:17:	19 PM	Prep Date:	2/4/2009
Analyte		IC2_0902 Result	204A 	Analysis SPK value	Date: 2/4/2	%REC		•	2/4/2009 RPD RPDLimit Qual
								•	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	

Qualifiers:

Analyte detected in the associated Method Blank

- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit

В

- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit R RPD outside accepted control limits
- IC ICI D'outside accepted control minis
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

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CLIENT: Work Order:	INTERA 0901170				ANALYTICAL QC SUMMARY REPORT							
Project:	Dugout						IC2_09020:	90205A				
Sample ID: ICV-0	90205	Batch ID:	R41725		TestNo	: E30	0		Units:	mg/L		
SampType: ICV		Run ID:	IC2_090	205A	Analysi	s Date: <b>2/5/</b> 2	2009 9:22:5	2 AM	Prep Date:	2/5/2009		
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLin	nit HighLimit %	6RPD RPDLimit Qual		
Chloride			24.6	1.00	25.00	0	98.6	90	110			
Sulfate			75.6	3.00	75.00	0	101	90	110			
Sample ID: CCV1	-090205	Batch ID:	R41725		TestNo	: E300	0		Units:	mg/L		
SampType: CCV		Run ID:	IC2_0902	205A	Analysi	s Date: <b>2/5/2</b>	2009 11:13:	53 AM	Prep Date:	2/5/2009		
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLin	nit HighLimit %	RPD RPDLimit Qual		
Chloride			9.33	1.00	10.00	0	93.3	90	110			
Sulfate			28.7	3.00	30.00	0	95.7	90	110			
Sample ID: CCV2	-090205	Batch ID:	R41725		TestNo	: E300	0		Units:	mg/L		
SampType: CCV		Run ID:	IC2_0902	205A	Analysi	s Date: <b>2/5/2</b>	2009 3:06:2	1 PM	Prep Date:	2/5/2009		
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLin	nit HighLimit %	RPD RPDLimit Qual		
Chloride			9.62	1.00	10.00	0	96.2	90	110			
Sulfate			28.9	3.00	30.00	0	96.2	90	110			

Qualifiers:

CLIENT:

INTERA Inc.

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

В

J Analyte detected between SDL and RL DF Dilution Factor

- MDL Method Detection Limit
- RPD outside accepted control limits R
- S Spike Recovery outside control limits

Parameter not NELAC certified Ν

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CLIENT: Work Order: Project:	INTERA 0901170 Dugout Ci				ANALYTICAL QC SUMMARY REPORT RunID: WC_090203B							
Sample ID: MB-33 SampType: MBLK	297	Batch ID: Run ID:	33297 WC_09	0203B	TestNo Analysi		40C 2009 4:30:00 PM	Units: Prep Date:	mg/L 2/3/2009			
Analyte			Result	RL	SPK value	Ref Val	%REC Low	Limit HighLimit %	6RPD RPDLimit Qual			
Total Dissolved So	ids (Residue,	Filtera	ND	10.0								
Sample ID: LCS-3	3297	Batch ID:	33297		TestNo	: M25	40C	Units:	mg/L			
SampType: LCS		Run ID:	WC_09	0203B	Analysi	s Date: <b>2/3/2</b>	2009 4:30:00 PM	Prep Date:	2/3/2009			
Analyte			Result	RL	SPK value	Ref Val	%REC Low	/Limit HighLimit %	6RPD RPDLimit Qual			
Total Dissolved Sol	ids (Residue,	Filtera	753	10.0	745.6	0	101 9	90 113	······································			
Sample ID: 09011 SampType: DUP	70-06A-DUP	Batch ID: Run ID:	33297 WC_09	0203B	TestNo Analysi		40C 2009 4:30:00 PM	Units: Prep Date:	mg/L 2/3/2009			
Analyte			Result	RL	SPK value	Ref Val	%REC Low	/Limit HighLimit %	6RPD RPDLimit Qual			
Total Dissolved Sol	ids (Residue,	Filtera	14800	10.0	0	14810			0.169 5			

Qualifiers:

Analyte detected in the associated Method Blank

- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit

RL Reporting Limit

В

J Analyte detected between SDL and RL DF **Dilution Factor** 

- MDL Method Detection Limit
- R RPD outside accepted control limits

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S Spike Recovery outside control limits

Ν Parameter not NELAC certified

CLIENT: Work Order: Project:	INTERA I 0901170 Dugout Cr				AN	ALYT	ICAL Q RunID	-	UMMAR WC_090204		PORT
Sample ID: MB-33	333	Batch ID:	33333		TestNo:	M25	540C		Units:	mg/L	
SampType: <b>MBLK</b>		Run ID:	WC_0902	04A	Analysis	5 Date: 2/4/	2009 3:50:00	PM	Prep Date:	2/4/2009	)
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLin	nit HighLimit %	RPD RP	DLimit Qual
Total Dissolved Soli	ds (Residue,	Filtera	ND	10.0							
Sample ID: LCS-33	333	Batch ID:	33333		TestNo:	M25	540C		Units:	mg/L	
SampType: LCS		Run ID:	WC_0902	04A	Analysis	Date: 2/4/2	2009 3:50:00	PM	Prep Date:	2/4/2009	
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	nit HighLimit %	RPD RP	DLimit Qual
Total Dissolved Soli	ds (Residue,	Filtera	782	10.0	745.6	0	105	90	113		
Sample ID: 090117	0-13B-DUP	Batch ID:	33333		TestNo:	M25	540C		Units:	mg/L	
SampType: DUP		Run ID:	WC_0902	04A	Analysis	Date: 2/4/2	2009 3:50:00	PM	Prep Date:	2/4/2009	
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	RPD RPI	DLimit Qual
Total Dissolved Solid	ds (Residue,	Filtera	35500	10.0	0	34820	···			1.99	5

Qualifiers:

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

В

J Analyte detected between SDL and RL

DF Dilution Factor

MDL Method Detection Limit

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R RPD outside accepted control limits

S Spike Recovery outside control limits

N Parameter not NELAC certified

CLIENT: Work Order: Project:	INTERA 0901170 Dugout Ci				AN	ALYI	FICAL ( RunII	-	J <b>MMAF</b> VC_09021		EPORT
Sample ID: <b>MB-33</b> SampType: <b>MBLK</b>	478	Batch ID: Run ID:	33478 WC_09	0213A	TestNo: Analysis		540C 3/2009 4:00:0	00 AM	Units: Prep Date:	mg/L 2/13/20	09
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	RPD RF	PDLimit Qual
Total Dissolved Soli	ds (Residue,	Filtera	ND	10.0							
Sample ID: LCS-33 SampType: LCS	3478	Batch ID: Run ID:	33478 WC_09	0213A	TestNo: Analysis		540C 3/2009 4:00:0	00 AM	Units: Prep Date:	mg/L 2/13/20	09
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %	RPD RF	DLimit Qual
Total Dissolved Soli	ds (Residue,	Filtera	711	10.0	745.6	0	95.4	90	113		
Sample ID: 090117 SampType: DUP	0-12B-DUP	Batch ID: Run ID:	33478 WC_09	0213A	TestNo: Analysis		540C 3/2009 4:00:0	00 AM	Units: Prep Date:	mg/L 2/13/20	09
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %	RPD RF	DLimit Qual
Total Dissolved Soli	ds (Residue,	Filtera	32400	10.0	0	32840				1.35	5

Qualifiers:

B Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

- J Analyte detected between SDL and RL
- DF Dilution Factor

MDL Method Detection Limit

R RPD outside accepted control limits

S Spike Recovery outside control limits

N Parameter not NELAC certified

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#### DHL Analytical

CLIENT: INTERA Inc.

Work Order: 0901170

Project: Dugout Creek

TestNo: E300	MDL	MQL
Analyte	mg/L	mg/L
Bromide	0.300	1.00
Chloride	0.300	1.00
Sulfate	1.00	3.00
TestNo: SW8021B	MDL	MQL
Analyte	mg/L	mg/L
Methyl tert-butyl ether	0.00200	0.00600
Benzene	0.000800	0.00200
Toluene	0.00200	0.00600
Ethylbenzene	0.00200	0.00600
Xylenes, Total	0.00300	0.00900
TestNo: M2540C	MDL	MQL
Analyte	mg/L	mg/L
Total Dissolved Solids (Residue, Filt	10.0	10.0

## MQL SUMMARY REPORT

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#### **Data Review Checklist**

Clie	ent/Project: RRC/ Dugart	Reviewer: L. Pr	ice		Review Date: 3/16/09	2010 A 1990 A
Lab	oratory: DHL rk Order No.: 09 01173	Analytical Method: Anions - 300	>		Matrix: Water	
#	Review Item or		Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sam	ple Preservation and Integr	ity				
1	Did samples arrive at the lat preserved (e.g., 4°C, correct sample)?	* * * *				
2	Were holding times met?		$\checkmark$			
Data	a Completeness					
3	Are results reported for all t no additional analytes?	arget analytes, with	$\checkmark$			
4	Was the requested analytica	l method followed?	~		~	
5	Do reported detection limits agree with the project specif		×	\ \ \	SPL was elevated due t dilution for Pharon seep, mw-D-7, mw-D-5, mw	o sample mw-D-01, Fin -D-4, mw-D
6	Are results reported for all s analysis?	amples submitted for	$\checkmark$		SPL was elevated due t dibition for phason seep, mw-D-7, mw-D-5, mw mw-0-7-3 and mw-D-3 was detected in diluted was no effect on data q	for Br. Anal samples. The velity-
Cali	bration and QC Sample Fre	quency		- (	<u> </u>	0
7	Were initial and continuing analyses performed? And re		$\checkmark$			
8	For each analytical batch, ar a method blank?	e results provided for	$\checkmark$			
9	For each analytical batch, ar an LCS/LCSD pair?	e results provided for	$\checkmark$			
10	For each analytical/preparati provided for an MS/MSD paresults for MS/MSD pairs pair	air? Alternately, are	$\checkmark$			
11	Are field duplicate results pr specified (QAPP) frequency	~ ~	$\checkmark$		Duplicati pairs DiRyan Seep / BS See	٥

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#### **Data Review Checklist (continued)**

Clie	nt/Project: RRL / Pugout	Reviewer: L. Pr	ΪÀ		Review Date: 3/14/09
8.4.2.4.2.÷	oratory: DHL rk Order No.: 0901173	Analytical Method: Amions - 3	00		Matrix: Water
#	Review Item or	Question	Yes	Ňo	Comments (List Exceptions, Explanations, etc.)
12	Organic Analyses Only: For and QC), are surrogate spike				NA
QC	Results				
13	Do method blank results sho concentrations of target anal ND)?				
14	Are LCS/LCSD recoveries a limits?	and RPDs within	$\checkmark$		
15	Are MS/MSD recoveries an	d RPDs within limits?	~		
16	Are surrogate recoveries wit analyses only)?	hin limits (organic			NA
Othe	er Data Quality-Related Issu	ies			
17	The laboratory did not issue not true (a CAR was issued) sample results.	•	$\checkmark$		
18	The analyst did not describe anomalies. If this is not true impact to sample results.		$\checkmark$		
19	No other potential data quali identified. If this is not true,		$\checkmark$		

<sup>a</sup> The laboratory will not be required to report all calibration results. Data validation efforts for this project will assume that the laboratory performed the method-specified calibration analyses.

CAR = Corrective Action Report

LCS/LCSD = Laboratory Control Sample/Duplicate Laboratory Control Sample

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Further Comments:

#### **Data Review Checklist**

Clie	nt/Project: RRC/ Duzov †	Reviewer: L. Pric	e		Review Date: 3/14/09
Lab	oratory: DHL rk Order No.: 0901173	Analytical Method: VOCs - SW86	ગ B		Matrix: Wates
#	Review Item o	r Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
San	ple Preservation and Integr	rity			
1	Did samples arrive at the la preserved (e.g., 4°C, correc sample)?		~		
2	Were holding times met?		V		
Data	a Completeness				
3	Are results reported for all no additional analytes?	arget analytes, with	~		
4	Was the requested analytica	l method followed?	~		
5	Do reported detection limits agree with the project speci		$\checkmark$		
6	Are results reported for all s analysis?	amples submitted for	~		
Cali	bration and QC Sample Fre	equency			
7	Were initial and continuing analyses performed? And r		$\checkmark$		
8	For each analytical batch, as a method blank?	e results provided for	$\checkmark$		
9	For each analytical batch, an an LCS/LCSD pair?	e results provided for		<u> </u>	ONLY LCS provided a lo ms/msD in controf a No data quality.
10	For each analytical/preparat provided for an MS/MSD p results for MS/MSD pairs p field samples analyzed?	air? Alternately, are	~		0
11	Are field duplicate results p specified (QAPP) frequency		$\checkmark$		

#### **Data Review Checklist (continued)**

Clie	nt/Project: RRC / Dugout	Reviewer: L. Price	ie.		Review Date: 3/16/09
100000000000000000000000000000000000000	oratory: 어머니 rk Order No.: 이익이173	Analytical Method:			Matrix: Water
#	Review Item or	Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
12	Organic Analyses Only: For and QC), are surrogate spike				
QC	Results				
13	Do method blank results sho concentrations of target anal ND)?		7	-	
14	Are LCS/LCSD recoveries a limits?	and RPDs within	$\checkmark$		No LCSD provided
15	Are MS/MSD recoveries and RPDs within limits?				
16	Are surrogate recoveries wit analyses only)?	hin limits (organic	~		
Oth	er Data Quality-Related Issu	les			
17	The laboratory did not issue not true (a CAR was issued) sample results.		$\checkmark$		
18	The analyst did not describe anomalies. If this is not true impact to sample results.		1		
19	No other potential data quali identified. If this is not true,	•	$\checkmark$		

<sup>a</sup> The laboratory will not be required to report all calibration results. Data validation efforts for this project will assume that the laboratory performed the method-specified calibration analyses.

CAR = Corrective Action Report

LCS/LCSD = Laboratory Control Sample/Duplicate Laboratory Control Sample

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Further Comments:



February 06, 2009

Barbara Rigney INTERA Inc. 1812 Centre Creek Dr. #300 Austin, Texas 78754

TEL: (512) 425-2097 FAX: (512) 425-2099

Order No.: 0901173

RE: Dugout Creek

Dear Barbara Rigney:

DHL Analytical received 15 sample(s) on 1/30/2009 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely

John DuPont General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-08A-TX



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This report for INTERA Inc.: Dugout Creek (DHL Work Order 0901173) contains the following information:

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•	Laboratory Data Package Signature Page	5
٠	Laboratory Review Checklist	6-7
•	Case Narrative	8
•	Work Order Summary	9
•	Preparation Dates Report	10-11
•	Analytical Dates Report	12-13
•	Sample Results	14-28
•	QC Summary Report	29-38
•	MQL Summary Report	39
•	Total Number of Pages	39

February 6, 2009

Approved: John DuPont

				2300 [ 2300 [	2300 Double Creek Drive • Round Rock, TX 7 Phone (512) 388-8222 • FAX (512) 388-8229	)reek 88-82	Drive 22 • F		ind B 512) 3	Round Rock, TX 78664 X (512) 388-8229	( 7866v 9	-					A HC	-NIN-	13 0F-0	Nº 13958 CHAIN-OF-CUST(	
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			ļ						-					i							

## DHL Analytical

Samp	le Receipt Cheo	cklist
Client Name INTERA Inc.		Date Received: 1/30/2009
Work Order Number 0901173		Received by JB
Checklist completed by Signature Da		Reviewed by I 30 0 9
· · · · · · · · · · · · · · · · · · ·	·	
Shipping container/cooler in good condition?	Yes 🗹	No 🗌 Not Present 🗌
Custody seals intact on shippping container/cooler?	Yes 🗌	No 🗌 Not Present 🗹
Custody seals intact on sample bottles?	Yes	No 🗌 Not Present 🗹
Chain of custody present?	Yes 🗹	No 🗔
Chain of custody signed when relinquished and received?	Yes 🗹	Νο
Chain of custody agrees with sample labels?	Yes 🗹	No 🗔
Samples in proper container/bottle?	Yes 🗹	No 🗔
Sample containers intact?	Yes 🗹	No 🗔
Sufficient sample volume for indicated test?	Yes 🗹	No 🗔
All samples received within holding time?	Yes 🗹	Νο
Container/Temp Blank temperature in compliance?	Yes 🗹	No 🗌 2.1 °C
Water - VOA vials have zero headspace?	Yes 🗹	No 🗌 No VOA vials submitted 📋
Water - pH acceptable upon receipt?	Yes	No 🗌 Not Applicable 🗹
Adjusted?	Cheo	ecked by

Any No response must be detailed in the comments section below.

Client contacted	Intera	Date contacted:	[-30-09	Person contacted	Barhara
Contacted by:	goala	Regarding:	Sampl	the COC	
Comments:	Per Bar	bena	fallows	the coc	Sumple
1Ds	<b>-</b>		0		<u> </u>
Corrective Action	Rogged	ā p	er cliev	to request	2
	) v				

Page 1 of 1

## Laboratory Data Package Signature Page

This data package consists of:

R4

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC 5.13
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
  - Surrogate recovery data including:
    - a) Calculated recovery (%R), and
    - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
- R10 Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

**Release Statement:** I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

gnature

<u>02/06/09</u>

Scott Schroeder – Project Manager John DuPont – General / QA Manager

5

DH	LA	nalytical, Inc.						
Lat	oora	tory Review Checklist: Reportable Data						
Proje	ect Na	me: Dugout Creek Date: 2/5/20	09					
Revi	ewer ]	Name: Evelyn Ferrero Laboratory V	Work Order: 0901173					
			See Analytical Dates Report					
$\frac{1}{\#^{1}}$			See Analytical Dates Report	Yes	No	NA <sup>3</sup>	NID4	ER#
Ŧ	A <sup>2</sup>							
		Chain-of-Custody (C-O-C)	4.1.11	No.				D1 01
1	O	1) Did samples meet the laboratory's standard conditions of sample acce		X		NV N		<u>R1-01</u>
		2) Were all departures from standard conditions described in an exception	n report?			X		
2	OI	Sample and Quality Control (QC) Identification						
		1) Are all field sample ID numbers cross-referenced to the laboratory ID		Х				
		2) Are all laboratory ID numbers cross-referenced to the corresponding (	QC data?	X				
3	OI	Test Reports						
		1) Were all samples prepared and analyzed within holding times?	177 (* . 1 10	X				
		2) Other than those results < MQL, were all other raw values bracketed b	by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?		X X		<u> </u>		
		4) Were all analyte identifications checked by a peer or supervisor?		$\frac{X}{X}$				
		<ul><li>5) Were sample quantitation limits reported for all analytes not detected?</li><li>6) Were all results for soil and sediment samples reported on a dry weight</li></ul>				X		
		7) Were % moisture (or solids) reported for all soil and sediment samples				л Х		
		8) If required for the project, TICs reported?	5:			X		
.4	0	Surrogate Recovery Data				$\overline{\Lambda}$		
.4	<u> </u>	1) Were surrogates added prior to extraction?		X				<u> </u>
		<ol> <li>Were surrogate percent recoveries in all samples within the laboratory</li> </ol>	OC limits?	X				
5	OI	Test Reports/Summary Forms for Blank Samples	<u>QO IIIIIIO.</u>					
		1) Were appropriate type(s) of blanks analyzed?		X				
		<ul><li>2) Were blanks analyzed at the appropriate frequency?</li></ul>	····	X				
	-	3) Where method blanks taken through the entire analytical process, incl	uding preparation and, if	x				
		applicable, cleanup procedures?						
		4) Were blank concentrations < MQL?		X				
.6	OI	Laboratory Control Samples (LCS):						
		1) Were all COCs included in the LCS?		Х				
		2) Was each LCS taken through the entire analytical procedure, including	g prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?		X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC li		Х				
		5) Does the detectability data document the laboratory's capability to det	ect the COCs at the MDL used	X				
		to calculate the SQLs?						
		6) Was the LCSD RPD within QC limits (if applicable)?		Χ				
.7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data						
		1) Were the project/method specified analytes included in the MS and M	SD?	X				
	•	2) Were MS/MSD analyzed at the appropriate frequency?		X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC lim	its?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?		Х				
.8	OI	Analytical Duplicate Data				v		
		1) Were appropriate analytical duplicates analyzed for each matrix?				X X		
		2) Were analytical duplicates analyzed at the appropriate frequency?				A X		
		3) Were RPDs or relative standard deviations within the laboratory QC li	mits?					
9	OI	Method Quantitation Limits (MQLs): 1) Are the MQLs for each method analyte included in the laboratory data	nackage?	X				
		<ol> <li>Are the MQLs for each method analyte included in the laboratory data</li> <li>Do the MQLs correspond to the concentration of the lowest non-zero of the lowest non-zer</li></ol>		л Х			-	
		3) Are unadjusted MQLs included in the laboratory data package?	Sanoration Standard!	л Х				
10	OI	Other Problems/Anomalies						
10	01	1) Are all known problems/anomalies/special conditions noted in this LR	C and ER?	X				
		<ol> <li>Are all known problems/anonanes/special conditions noted in this EX</li> <li>Were all necessary corrective actions performed for the reported data?</li> </ol>		X				
		3) Was applicable and available technology used to lower the SQL minir		X				
		affects on the sample results?	meeting meeting meeting on oo	<b>^</b>				

Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. Q =organic analyses; I = inorganic analyses (and general chemistry, when applicable). 

NA = Not applicable. NR = Not Reviewed. 

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

ł		nalytical, Inc.						
		tory Review Checklist (continued): Supportin me: Dugout Creek	ng Data htte: 2/5/2009		· · · ·			
		<u> </u>						
			boratory Work Order: 0901173	1	1.1	12113	2104	1 mm //5
# <sup>1</sup>	A <sup>2</sup>	Description		Yes	No	NA'	NR <sup>4</sup>	ER#°
<b>S</b> 1	OI	Initial Calibration (ICAL)						
		1) Were response factors and/or relative response factors for eac	ch analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?		X				
		3) Was the number of standards recommended in the method us	ed for all analytes?	X				
		4) Were all points generated between the lowest and highest star	ndard used to calculate the curve?	Х				
		5) Are ICAL data available for all instruments used?		X				
		6) Has the initial calibration curve been verified using an approp	priate second source standard?	Х				
S2	OI	Initial and Continuing calibration Verification (ICCV and C blank (CCB):	CCV) and Continuing Calibration					
		1) Was the CCV analyzed at the method-required frequency?		Х				
		2) Were percent differences for each analyte within the method-	required QC limits?	Х				
		3) Was the ICAL curve verified for each analyte?	•	Х				
:		4) Was the absolute value of the analyte concentration in the ino	organic CCB < MDL?	Х				
S3	0	Mass Spectral Tuning:						
		1) Was the appropriate compound for the method used for tuning	g?	Х				
		2) Were ion abundance data within the method-required QC limit	its?	Х				
S4	0	Internal Standards (IS):						
		1) Were IS area counts and retention times within the method-re	quired QC limits?	X				
S5	OI	Raw Data (NELAC section 1 appendix A glossary, and section	on 5.12)					
		1) Were the raw data (for example, chromatograms, spectral data		X				
		2) Were data associated with manual integrations flagged on the	raw data?	X				
S6	0	Dual Column Confirmation						
		1) Did dual column confirmation results meet the method-requir	ed QC?			Х		
<b>S</b> 7	0	Tentatively Identified Compounds (TICs):						
		1) If TICs were requested, were the mass spectra and TIC data s	ubject to appropriate checks?			Х		
S8	I	Interference Check Sample (ICS) Results:		1.5				
		1) Were percent recoveries within method QC limits?				X		
S9	I	Serial Dilutions, Post Digestion Spikes, and Method of Stand						
		1) Were percent differences, recoveries, and the linearity wi method?	ithin the QC limits specified in the			Х		
S10	OI	Method Detection Limit (MDL) Studies		A				
	·	1) Was a MDL study performed for each reported analyte?		X				
		2) Is the MDL either adjusted or supported by the analysis of DC	CSs?	X				
S11	OI	Proficiency Test Reports:		909/095000				
		1) Was the lab's performance acceptable on the applicable profic	eiency tests or evaluation studies?	X				
S12	OI	Standards Documentation	· · ·		3			
		1) Are all standards used in the analyses NIST-traceable or obtai	ined from other appropriate sources?	Х				
S13	OI	Compound/Analyte Identification Procedures						
		1) Are the procedures for compound/analyte identification docur	mented?	X				
S14	OI	Demonstration of Analyst Competency (DOC)						
		1) Was DOC conducted consistent with NELAC Chapter 5C?		Х				
		2) Is documentation of the analyst's competency up-to-date and	on file?	X				
S15	OI	Verification/Validation Documentation for Methods (NELAC						
~~~~	<u> </u>	1) Are all the methods used to generate the data document		X				
		applicable?	,,,,,					
S16	OI	Laboratory Standard Operating Procedures (SOPs):					÷2	
		1) Are laboratory SOPs current and on file for each method perfo	ormed?	Х				

,

2

- 3 NA = Not applicable.
- 4 NR = Not Reviewed.

Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. O =organic analyses; I = inorganic analyses (and general chemistry, when applicable). 1

<sup>5</sup> ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

#### **DHL Analytical**

**Date:** 06-Feb-09

CLIENT:INTERA Inc.Project:Dugout CreekLab Order:0901173

#### **CASE NARRATIVE**

The samples were analyzed using the methods outlined in the following references:

Method SW8021B - Volatile Organics by GC Method E300 - Anions by IC method - Water

Exception Report R1-01

A total of 15 samples were received and logged-in on 1/30/2009. The samples arrived in good condition and were properly packaged.

## DHL Analytical

**Date:** 06-Feb-09

# CLIENT: INTERA Inc. Project: Dugout Creek Work Order Sample Summary LabOrder: 0901173

LabSmpID	Client Sample ID	TagNumber	<b>Date Collected</b>	DateRecved
0901173-01	FINA-01		01/29/0909:50AM	1/30/2009
0901173-02	TripBlank		01/29/0910:10AM	1/30/2009
0901173-03	MW-P-9		01/29/0911:29AM	1/30/2009
0901173-04	O'Ryan Seep		01/29/0901:05PM	1/30/2009
0901173-05	BS Seep		01/29/0901:20PM	1/30/2009
0901173-06	Pharaoh Seep		01/29/0901:45PM	1/30/2009
0901173-07	MW-D-01		01/29/0902:34PM	1/30/2009
0901173-08	MW-D-8		01/29/0909:33AM	1/30/2009
0901173-09	MW-D-7		01/29/0910:20AM	1/30/2009
0901173-10	MW-D-6		01/29/0911:15AM	1/30/2009
0901173-11	MW-D-5		01/29/0912:05PM	1/30/2009
0901173-12	MW-D-4		01/29/0912:45PM	1/30/2009
0901173-13	MW-D-2		01/29/0901:25PM	1/30/2009
0901173-14	MW-07-3		01/29/0801:55PM	1/30/2009
0901173-15	MW-D-3		01/29/0902:57PM	1/30/2009

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DHL Analytical	lytical					06-Feb-09	
LabOrder: Client: Project:	0901173 INTERA Inc. Dugout Creek				PREP D	PREP DATES REPORT	E
Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0901173-01A	FINA-01	01/29/09 09:50 AM	Aqueous	SW5030B	Purge and Trap Water GC	02/02/09 09:02 AM	33252
0901173-01B	FINA-01	01/29/09 09:50 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	FINA-01	01/29/09 09:50 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	FINA-01	01/29/09 09:50 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
0901173-02A	Trip Blank	01/29/09 10:10 AM	Trip Blank	SW5030B	Purge and Trap Water GC	02/02/09 09:02 AM	33252
0901173-03A	MW-P-9	01/29/09 11:29 AM	Aqueous	SW5030B	Purge and Trap Water GC	02/02/09 09:02 AM	33252
0901173-03B	MW-P-9	01/29/09 11:29 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	MW-P-9	01/29/09 11:29 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
0901173-04A	O'Ryan Seep	01/29/09 01:05 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	O'Ryan Seep	01/29/09 01:05 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
0901173-05A	BS Seep	01/29/09 01:20 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	BS Seep	01/29/09 01:20 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
0901173-06A	Pharaoh Seep	01/29/09 01:45 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	Pharaoh Seep	01/29/09 01:45 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	Pharaoh Seep	01/29/09 01:45 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
0901173-07A	MW-D-01	01/29/09 02:34 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	MW-D-01	01/29/09 02:34 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	MW-D-01	01/29/09 02:34 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
0901173-08A	MW-D-8	01/29/09 09:33 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	MW-D-8	01/29/09 09:33 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
0901173-09A	MW-D-7	01/29/09 10:20 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	MW-D-7	01/29/09 10:20 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	MW-D-7	01/29/09 10:20 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
0901173-10A	MW-D-6	01/29/09 11:15 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	MW-D-6	01/29/09 11:15 AM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
0901173-11A	MW-D-5	01/29/09 12:05 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	MW-D-5	01/29/09 12:05 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
	MW-D-5	01/29/09 12:05 PM	Aqueous	E300	Anion Preparation	02/03/09 08:30 AM	33279
Page 1 of 2	of 2					<u></u>	

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DHL Analytical	lytical					06-Feb-09	
LabOrder: Client: Project:	0901173 INTERA Inc. Dugout Creek				PR	PREP DATES REPORT	E.
Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0901173-12A	MW-D-4	01/29/09 12:45 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-D-4	01/29/09 12:45 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-D-4	01/29/09 12:45 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
0901173-13A	MW-D-2	01/29/09 01:25 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-D-2	01/29/09 01:25 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-D-2	01/29/09 01:25 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-D-2	01/29/09 01:25 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-D-2	01/29/09 01:25 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
0901173-14A	MW-07-3	01/29/08 01:55 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-07-3	01/29/08 01:55 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-07-3	01/29/08 01:55 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
0901173-15A	MW-D-3	01/29/09 02:57 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-D-3	01/29/09 02:57 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-D-3	01/29/09 02:57 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-D-3	01/29/09 02:57 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-D-3	01/29/09 02:57 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317
	MW-D-3	01/29/09 02:57 PM	Aqueous	E300	Anion Preparation	02/04/09 08:30 AM	33317

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06-Feb-09

DHL Analytical

LabOrder: Client: Proiect:	0901173 INTERA Inc. Dugout Creek				ANA	ALYTIC	ANALYTICAL DATES REPORT	<b>EPORT</b>
Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0901173-01A	FINA-01	Aqueous	SW8021B	Volatile Organics by GC	33252	-	02/02/09 12:55 PM	GC8_090202A
0901173-01B	FINA-01	Aqueous	E300	Anions by IC method - Water	33279	100	02/03/09 10:44 AM	IC_090203A
	FINA-01	Aqueous	E300	Anions by IC method - Water	33279	1000	02/03/09 01:20 PM	IC_090203A
	FINA-01	Aqueous	E300	Anions by IC method - Water	33279	10	02/03/09 08:14 PM	IC_090203A
0901173-02A	Trip Blank	Trip Blank	SW8021B	Volatile Organics by GC	33252	-	02/02/09 07:00 PM	GC8_090202A
0901173-03A	MW-P-9	Aqueous	SW8021B	Volatile Organics by GC	33252	1	02/02/09 01:14 PM	GC8_090202A
0901173-03B	MW-P-9	Aqueous	E300	Anions by IC method - Water	33279	10	02/03/09 12:02 PM	IC_090203A
	0-q-WM	Aqueous	E300	Anions by IC method - Water	33279	1	02/03/09 04:59 PM	IC_090203A
0901173-04A	O'Ryan Seep	Aqueous	E300	Anions by IC method - Water	33279	100	02/03/09 11:15 AM	IC_090203A
	O'Ryan Seep	Aqueous	E300	Anions by IC method - Water	33279	1	02/03/09 05:44 PM	IC_090203A
0901173-05A	BS Seep	Aqueous	E300	Anions by IC method - Water	33279	100	02/03/09 11:31 AM	IC_090203A
	BS Seep	Aqueous	E300	Anions by IC method - Water	33279	1	02/03/09 05:59 PM	IC_090203A
0901173-06A	Pharaoh Seep	Aqueous	E300	Anions by IC method - Water	33279	1000	02/03/09 01:36 PM	IC_090203A
	Pharaoh Seep	Aqueous	E300	Anions by IC method - Water	33279	10	02/03/09 06:13 PM	IC_090203A
	Pharaoh Seep	Aqueous	E300	Anions by IC method - Water	33279	100	02/03/09 11:47 AM	IC_090203A
0901173-07A	MW-D-01	Aqueous	E300	Anions by IC method - Water	33279	100	02/03/09 01:51 PM	IC_090203A
	MW-D-01	Aqueous	E300	Anions by IC method - Water	33279	1000	02/03/09 02:25 PM	IC_090203A
	MW-D-01	Aqueous	E300	Anions by IC method - Water	33279	10	02/03/09 06:28 PM	IC_090203A
0901173-08A	MW-D-8	Aqueous	E300	Anions by IC method - Water	33279	10	02/03/09 03:26 PM	IC_090203A
	MW-D-8	Aqueous	E300	Anions by IC method - Water	33279	-	02/03/09 06:43 PM	IC_090203A
0901173-09A	MW-D-7	Aqueous	E300	Anions by IC method - Water	33279	10	02/03/09 07:27 PM	IC_090203A
	MW-D-7	Aqueous	E300	Anions by IC method - Water	33279	100	02/03/09 02:41 PM	IC_090203A
	MW-D-7	Aqueous	E300	Anions by IC method - Water	33279	1000	02/03/09 03:41 PM	$IC_090203A$
0901173-10A	MW-D-6	Aqueous	E300	Anions by IC method - Water	33279	1	02/03/09 07:42 PM	IC_090203A
	MW-D-6	Aqueous	E300	Anions by IC method - Water	33279	100	02/03/09 02:55 PM	IC_090203A
0901173-11A	MW-D-5	Aqueous	E300	Anions by IC method - Water	33279	100	02/03/09 03:10 PM	IC_090203A
	MW-D-5	Aqueous	E300	Anions by IC method - Water	33279	1000	02/03/09 04:28 PM	IC_090203A
	MW-D-5	Aqueous	E300	Anions by IC method - Water	33279	10	02/03/09 07:58 PM	IC_090203A
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DHL Analytical

06-Feb-09

LabOrder:	0901173							
Client: Proiset:	INTERA Inc. Durout Greek				ANA	ALYTIC	ANALYTICAL DATES REPORT	PORT
malar	Dugout Crew							
Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0901173-12A	MW-D-4	Aqueous	E300	Anions by IC method - Water	33317	100	02/04/09 10:44 AM	IC_090204A
	MW-D-4	Aqueous	E300	Anions by IC method - Water	33317	1000	02/04/09 11:46 AM	IC_090204A
	MW-D-4	Aqueous	E300	Anions by IC method - Water	33317	10	02/04/09 01:23 PM	IC_090204A
0901173-13A	MW-D-2	Aqueous	E300	Anions by IC method - Water	33317	1	02/04/09 02:42 PM	IC_090204A
	MW-D-2	Aqueous	E300	Anions by IC method - Water	33317	10	02/06/09 12:37 PM	IC_090206A
	MW-D-2	Aqueous	E300	Anions by IC method - Water	33317	100	02/06/09 11:26 AM	IC_090206A
	MW-D-2	Aqueous	E300	Anions by IC method - Water	33317	100	02/04/09 10:59 AM	IC_090204A
	MW-D-2	Aqueous	E300	Anions by IC method - Water	33317	1000	02/06/09 12:21 PM	IC_090206A
0901173-14A	MW-07-3	Aqueous	E300	Anions by IC method - Water	33317	100	02/04/09 11:15 AM	IC_090204A
	MW-07-3	Aqueous	E300	Anions by IC method - Water	33317	1000	02/04/09 12:52 PM	IC_090204A
	MW-07-3	Aqueous	E300	Anions by IC method - Water	33317	10	02/04/09 02:10 PM	IC_090204A
0901173-15A	MW-D-3	Aqueous	E300	Anions by IC method - Water	33317	10	02/06/09 12:52 PM	IC_090206A
	MW-D-3	Aqueous	E300	Anions by IC method - Water	33317	100	02/04/09 11:31 AM	IC_090204A
	MW-D-3	Aqueous	E300	Anions by IC method - Water	33317	1000	02/04/09 01:07 PM	IC_090204A
	MW-D-3	Aqueous	E300	Anions by IC method - Water	33317	10	02/04/09 02:26 PM	IC_090204A
	MW-D-3	Aqueous	E300	Anions by IC method - Water	33317	100	02/06/09 11:42 AM	IC_090206A
	MW-D-3	Aqueous	E300	Anions by IC method - Water	33317	1000	02/06/09 12:05 PM	IC_090206A

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DHL Ana	lytical				D	ate:	06-Fel	5-09
CLIENT:	INTERA Inc.				Client	Sample ID	FINA-	D1
Project:	Dugout Creek					LabID	: 090117	3-01
ProjectNo:					Colle	ection Date	: 01/29/0	0909:50AM
LabOrder:	0901173					Matrix	AQUE	OUS
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
VOLATILEORO	GANICSBYGC	······	SW80	)21B		·····	<b></b> <sup></sup> . <u>-</u>	Analyst: JAW
Methyl tert-but	yl ether	ND	0.00200	0.00600		mg/L	1	02/02/09 12:55 PM
Benzene		0.00752	0.000800	0.00200		mg/L	1	02/02/09 12:55 PM
Toluene		ND	0.00200	0.00600		mg/L	1	02/02/09 12:55 PM
Ethylbenzene		ND	0.00200	0.00600		mg/L	1	02/02/09 12:55 PM
Xylenes, Total		ND	0.00300	0.00900		mg/L	1	02/02/09 12:55 PM
Surr: a,a,a-T	Frifluorotoluene	90.2	0	87-113		%REC	1	02/02/09 12:55 PM
	METHOD-WATER		E3	00				Analyst: <b>JBC</b>
Bromide		103	3.00	10.0		mg/L	10	02/03/09 08:14 PM
Chloride		33900	300	1000		mg/L	1000	02/03/0901:20PM

100

1480

300

mg/L

100

Qualifiers: ND - Not Detected at the SDL

Sulfate

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size) SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

02/03/09 10:44 AM

DHL Ana	lytical				D	ate:	06-Fe	b-09
CLIENT:	INTERA Inc.				Client	Sample ID:	TripB	lank
Project:	Dugout Creek					LabID:	09011	73-02
ProjectNo:					Colle	ection Date:	01/29/	0910:10AM
LabOrder:	0901173					Matrix:	TRIPH	BLANK
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
VOLATILEOR	GANICSBYGC	·	SW80	021B	÷	<u>/</u>	· ····-	Analyst: JAW
Methyl tert-but	yl ether	ND	0.00200	0.00600		mg/L	1	02/02/0907:00PM
Benzene		ND	0.000800	0.00200		mg/L	1	02/02/0907:00PN
Toluene		ND	0.00200	0.00600		mg/L	1	02/02/0907:00PM
Ethylbenzene		ND	0.00200	0.00600		mg/L	1	02/02/0907:00PM
Xylenes, Total		ND	0.00300	0.00900		mg/L	1	02/02/0907:00PN
Surr: a,a,a-T	Frifluorotoluene	94.6	0	87-113		%REC	1	02/02/0907:00PM

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

 $\operatorname{RL}$  - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

C - Sample Result or QC discussed in Case Narrative

DHL Ana	lytical				Da	te:	06-Fe	<i>b-09</i>
CLIENT:	INTERA Inc.				ClientS	Sample ID:	MW-J	P-9
Project:	Dugout Creek					LabID:	09011	73-03
ProjectNo:					Collec	ction Date:	01/29/	/0911:29AM
LabOrder:	0901173					Matrix:	AQUI	EOUS
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
VOLATILEORO	GANICSBYGC		SW8	021B		· · · · · · · · · · · · · · · · · · ·		Analyst: JAW
Methyl tert-but	yl ether	ND	0.00200	0.00600		mg/L	1	02/02/0901:14PM
Benzene		ND	0.000800	0.00200		mg/L	1	02/02/0901:14PM
Toluene		ND	0.00200	0.00600		mg/L	1	02/02/0901:14PM
Ethylbenzene		ND	0.00200	0.00600		mg/L	1	02/02/0901:14PM
Xylenes, Total		ND	0.00300	0.00900		mg/L	1	02/02/0901:14PM

Surr: a,a,a-Trifluorotoluene	93.3	0	87-113	%REC	1	02/02/0901:14PM	
ANIONSBYICMETHOD-WATER		E30	0			Analyst: <b>JBC</b>	
Bromide	1.23	0.300	1.00	mg/L	1	02/03/09 04:59 PM	
Chloride	434	3.00	10.0	mg/L	10	02/03/09 12:02 PM	
Sulfate	104	10.0	30.0	mg/L	10	02/03/09 12:02 PM	

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

C - Sample Result or QC discussed in Case Narrative

DHL Ana	lytical				D	ate:	06-Fe	<i>b-09</i>
CLIENT:	INTERA Inc.	<u> </u>			Client	Sample ID	: O'Rya	n Seep
Project:	Dugout Creek					LabID	• 09011′	73-04
ProjectNo:					Colle	ection Date	: 01/29/	/0901:05PM
LabOrder:	0901173					Matrix	: AQUE	EOUS
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
ANIONSBYIC	METHOD-WATER	· · · · · · · · · · · · · · · · · · ·	E300			··· · · · · · · · · · · · · · · · · ·	······	Analyst: JBC
Bromide		13.0	0.300	1.00		mg/L	1	02/03/0905:44 PM
Chloride		1220	30.0	100		mg/L	100	02/03/09 11:15 AM

300

100

mg/L

02/03/09 11:15 AM

100

395

Qualifiers: ND - Not Detected at the SDL

Sulfate

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Ana	lytical				D	ate:	06-Fe	Ь-09
CLIENT:	INTERA Inc.				Client	Sample ID	BS Se	ep
Project:	Dugout Creek					LabID	<b>: 09011</b>	73-05
ProjectNo:					Coll	ection Date	<b>:</b> 01/29/	0901:20PM
LabOrder:	0901173					Matrix	: AQUE	COUS
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
ANIONSBYIC	METHOD-WATER		E300	)=		:		Analyst: JBC
Bromide		13.5	0.300	1.00		mg/L	1	02/03/09 05:59 PM
Chloride		1220	30.0	100		mg/L	100	02/03/09 11:31 AM
Sulfate		378	100	300		mg/L	100	02/03/09 11:31 AM

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Ana	lytical				D	ate:	06-Fei	5-09
CLIENT:	INTERA Inc.				Client	Sample ID	: Pharac	h Seep
Project:	Dugout Creek					LabID	<b>: 090117</b>	73-06
ProjectNo:					Coll	ection Date	: 01/29/	0901:45PM
LabOrder:	0901173					Matrix	: AQUE	OUS
Analyses	· · · · · · · · · · · · · · · · · · ·	Result	SDL	RL	Qual	Units	DF	DateAnalyzed
ANIONSBYIC	METHOD-WATER		E300	·				-Analyst:-JBC
Bromide		38.0	3.00	10.0		mg/L	10	02/03/09 06:13 PM
Chloride		16300	300	1000		mg/L	1000	02/03/0901:36PM
Sulfate		1100	100	300		mg/L	100	02/03/09 11:47 AM

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

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DHL Anal	lytical			D	ate:	06-Fel	5-09	
CLIENT:	INTERA Inc.				Client	Sample ID	: MW-D	<b>D-01</b>
Project:	Dugout Creek					LabID	<b>:</b> 090117	/3-07
ProjectNo:					Colle	ection Date	: 01/29/0	0902:34PM
LabOrder:	0901173					Matrix	: AQUE	OUS
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
ANIONSBYICI	METHOD-WATER		E30	0				Analyst: JBC
Bromide		26.1	3.00	10.0		mg/L	10	02/03/09 06:28 PM
Chloride		10300	300	1000		mg/L	1000	02/03/09 02:25 PM
Sulfate		1490	100	300		mg/L	100	02/03/0901:51PM

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Ana	lytical			D	ate:	06-Fe	<i>b-09</i>	
CLIENT:	INTERA Inc.				Client	Sample ID	: MW-I	D-8
Project:	Dugout Creek					LabID	<b>: 090</b> 11	73-08
ProjectNo:					Colle	ection Date	: 01/29/	/0909:33AM
LabOrder:	0901173					Matrix	: AQUE	EOUS
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
ANIONSBYICI	METHOD-WATER		E300	)				Analyst: JBC
Bromide		1.09	0.300	1.00		mg/L	1	02/03/0906:43PM
Chloride		440	3.00	10.0		mg/L	10	02/03/0903:26 PM
Sulfate		133	10.0	30.0		mg/L	10	02/03/0903:26 PM

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative
- RL Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Ana	lytical			Date	:	06-Feb-09		
CLIENT:	INTERA Inc.				Client Sa	mple ID:	MW-D	-7
Project:	Dugout Creek					LabID:	090117	3-09
ProjectNo:					Collecti	ion Date:	01/29/0	)910:20AM
LabOrder:	0901173					Matrix:	AQUE	OUS
Analyses		Result	SDL	RL	Qual U	Units	DF	DateAnalyzed
ANIONSBYIC	METHOD-WATER	· · · · · · · · · · · · · · · · · · ·	E300	0	• • • • • • •			Analyst: JBC
Bromide		26.7	3.00	10.0	m	ng/L	10	02/03/09 07:27 PM
Chloride		10300	300	1000	m	ng/L	1000	02/03/09 03:41 PM

100

300

mg/L

100

02/03/09 02:41 PM

1770

Qualifiers: ND - Not Detected at the SDL

Sulfate

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Anal	lytical			D	ate:	06-Fe	b-09	
CLIENT:	INTERA Inc.				Client	Sample ID	: MW-I	D-6
Project:	Dugout Creek					LabID	• <b>09</b> 0113	73-10
ProjectNo:					Coll	ection Date	: 01/29/	0911:15AM
LabOrder:	0901173					Matrix	: AQUE	COUS
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
	METHOD-WATER		E300	)				Analyst: JBC
Bromide		6.96	0.300	1.00		mg/L	1	02/03/0907:42PM
Chloride		2980	30.0	100		mg/L	100	02/03/09 02:55 PM
Sulfate		1440	100	300		mg/L	100	02/03/09 02:55 PM

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

DHL Ana	lytical			Date	:	06-Fel	06-Feb-09		
CLIENT:	INTERA Inc.				Client Sa	mple ID	: MW-D	9-5	
Project:	Dugout Creek					LabID	<b>: 090</b> 117	3-11	
ProjectNo:					Collecti	ion Date	: 01/29/0	0912:05PM	
LabOrder:	0901173					Matrix	: AQUE	OUS	
Analyses		Result	SDL	RL	Qual 1	Units	DF	DateAnalyzed	
	METHOD-WATER	<sup>1</sup>	E30	<b>)</b>			. <u></u>	Analyst: JBC	
Bromide		28.8	3.00	10.0	rr	ng/L	10	02/03/09 07:58 PM	
Chloride		10400	300	1000	rr	ıg/L	1000	02/03/0904:28PM	
Sulfate		2000	100	300	rr	ıg/L	100	02/03/0903:10PM	

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

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DHL Ana	lytical			D	ate:	06-Fel	b-09	
CLIENT:	INTERA Inc.				Client	Sample ID	: MW-D	)-4
Project:	Dugout Creek					LabID	<b>:</b> 090117	3-12
ProjectNo:					Colle	ection Date	: 01/29/0	0912:45PM
LabOrder:	0901173					Matrix	: AQUE	OUS
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
ANIONSBYICI	METHOD-WATER		E300	0				Analyst: JBC
Bromide		29.8	3.00	10.0		mg/L	10	02/04/0901:23PM
Chloride		5720	300	1000		mg/L	1000	02/04/09 11:46 AM
Sulfate		2140	100	300		mg/L	100	02/04/09 10:44 AM

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

- N Parameter not NELAC certified
- See Final Page of Report for MQLs and MDLs
- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size) SDL - Sample Detection Limit

DHL Ana	lytical			D	ate:	06-Fel	b-09	
CLIENT:	INTERA Inc.				Client	SampleID	: MW-D	p-2
Project:	Dugout Creek					LabIII	<b>:</b> 090117	3-13
ProjectNo:					Coll	ection Date	: 01/29/0	0901:25PM
LabOrder:	0901173					Matrix	: AQUE	OUS
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed
ANIONSBYICI	METHOD-WATER		E300	)				Analyst: JBC
Bromide		13.3	3.00	10.0		mg/L	10	02/06/09 12:37 PM
Chloride		2970	300	1000		mg/L	1000	02/06/09 12:21 PM
Sulfate		3720	100	300		mg/L	100	02/06/09 11:26 AM

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

DHL Ana	lytical			D	ate:	06-Fel	06-Feb-09		
CLIENT:	INTERA Inc.				Client	Sample ID	: MW-0	7-3	
Project:	Dugout Creek					LabID	<b>):</b> 090117	3-14	
ProjectNo:					Colle	ection Date	: 01/29/0	0801:55PM	
LabOrder:	0901173					Matrix	: AQUE	OUS	
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed	
ANIONSBYICI	METHOD-WATER		E300	)				-Analyst: <b>JBC</b>	
Bromide		68.8	3.00	10.0		mg/L	10	02/04/0902:10PM	
Chloride		36800	300	1000		mg/L	1000	02/04/09 12:52 PM	
Sulfate		3330	100	300		mg/L	100	02/04/09 11:15 AM	

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits

C - Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

E - TPH pattern not Gas or Diesel Range Pattern

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DHL Ana	lytical			D	ate:	06-Fel	06-Feb-09		
CLIENT:	INTERA Inc.		<u> </u>		Client	Sample ID	: MW-D		
Project:	Dugout Creek					LabIII	<b>:</b> 090117	3-15	
ProjectNo:					Colle	ection Date	: 01/29/0	0902:57PM	
LabOrder:	0901173					Matrix	: AQUE	OUS	
Analyses		Result	SDL	RL	Qual	Units	DF	DateAnalyzed	
	METHOD-WATER		E30	0				-Analyst: JBC	
Bromide		33.6	3.00	10.0		mg/L	10	02/06/09 12:52 PM	
Chloride		10600	300	1000		mg/L	1000	02/06/09 12:05 PM	
Sulfate		1770	100	300		mg/L	100	02/06/09 11:42 AM	

J - Analyte detected between SDL and RL

B - Analyte detected in the associated Method Blank

DF- Dilution Factor

N - Parameter not NELAC certified

See Final Page of Report for MQLs and MDLs

- S Spike Recovery outside control limits
- C Sample Result or QC discussed in Case Narrative

RL - Reporting Limit (MQL adjusted for moisture and sample size)

SDL - Sample Detection Limit

## DHLAnalytical

CLIENT: IN Work Order: 09

INTERA Inc. 0901173

## ANALYTICAL QC SUMMARY REPORT

Project:

Dugout Creek

RunID: GC8\_090202A

SampleID: LCS-33252	Batch D:	33252		TestN	lo: SW8	8021B		Units:	mg/I	L
SampType: LCS	RunID:	GC8_09	90202A	Analy	sis Date: <b>2/2/</b> 2	2009 12:10:	40 PM	PrepDate:	2/2/2	2009
Analyte		Result	RL.	SPKvalue	Ref Val	%REC-	LowLimit	HighLimit	%RPD	RPDLimit Qual
Methyl tert-butyl ether		0.0533	0.00600	0.0500	0	107	78	122		
Benzene		0.0518	0.00200	0.0500	0	104	81	125		
Toluene		0.0510	0.00600	0.0500	0	102	84	123		
Ethylbenzene		0.0506	0.00600	0.0500	0	101	83	119		
Xylenes, Total		0.150	0.00900	0.150	0	100	81	117		
Surr: a,a,a-Trifluorotoluene		189		200.0		94.3	87	113		
SampleID: MB-33252	Batch D:	33252		TestN	o: SW8	3021B		Units:	mg/l	L
SampType: MBLK	RunID:	GC8_09	90202A	Analys	sis Date: <b>2/2/</b> 2	2009 12:30:	16 PM	PrepDate:	2/2/2	2009
Analyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Methyl tert-butyl ether		ND	0.00600							
Benzene		ND	0.00200							
Toluene		ND	0.00600							
Ethylbenzene		ND	0.00600							
Xylenes, Total		ND	0.00900							
Surr: a,a,a-Trifluorotoluene		193		200.0		96.4	87	113		
SampleID: 0901170-13AMS	Batch D:	33252		TestN	o: <b>SW</b> 8	3021B		Units:	mg/l	-
SampType: <b>MS</b>	RunID:	GC8_09	0202A	Analys	sis Date: 2/2/2	2009 7:20:1	4 PM	PrepDate:	2/2/2	009
Analyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit %	%RPD	RPDLimit Qual
Methyl tert-butyl ether		0.0598	0.00600	0.0500	0	120	78	122		
Benzene		0.0534	0.00200	0.0500	0	107	81	125		
Benzene Toluene		0.0534 0.0527	0.00200 0.00600	0.0500 0.0500	0 0	107 105	81 84	125 123		
Toluene		0.0527	0.00600	0.0500	0	105	84	123 119 117		
Toluene Ethylbenzene		0.0527 0.0516	0.00600 0.00600	0.0500 0.0500	0 0	105 103	84 83	123 119		
Toluene Ethylbenzene Xylenes, Total	Batch D:	0.0527 0.0516 0.154	0.00600 0.00600	0.0500 0.0500 0.150	0 0 0	105 103 103	84 83 81	123 119 117	mg/l	-
Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene	Batch D: RunID:	0.0527 0.0516 0.154 188	0.00600 0.00600 0.00900	0.0500 0.0500 0.150 200.0 TestN	0 0 0	105 103 103 94.1 8021B	84 83 81 87	123 119 117 113	mg/l 2/2/2	
Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene SampleID: 0901170-13AMSD		0.0527 0.0516 0.154 188 <b>33252</b>	0.00600 0.00600 0.00900	0.0500 0.0500 0.150 200.0 TestN	0 0 0	105 103 103 94.1 8021B	84 83 81 87 5 PM	123 119 117 113 Units: Prep Date:	2/2/2	
Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene SampleID: 0901170-13AMSD SampType: MSD		0.0527 0.0516 0.154 188 33252 GC8_09	0.00600 0.00600 0.00900	0.0500 0.0500 0.150 200.0 TestN Analys	0 0 0 0: SW8 sis Date: 2/2/2	105 103 94.1 3021B 2009 7:39:4	84 83 81 87 5 PM	123 119 117 113 Units: Prep Date:	2/2/2	009
Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene SampleID: 0901170-13AMSD SampType: MSD Analyte		0.0527 0.0516 0.154 188 33252 GC8_09 Result	0.00600 0.00600 0.00900 90202A RL	0.0500 0.0500 0.150 200.0 TestN Analys	0 0 0 o: <b>SW8</b> sis Date: 2/2/2 Ref Val	105 103 94.1 8021B 2009 7:39:4 %REC	84 83 81 87 5 PM LowLimit	123 119 117 113 Units: Prep Date: HighLimit 9	2/2/2 %RPD	009 RPDLimit Qual
Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene SampleID: 0901170-13AMSD SampType: MSD Analyte Methyl tert-butyl ether		0.0527 0.0516 0.154 188 33252 GC8_09 Result 0.0604	0.00600 0.00900 0.00900 0.00900 80202A RL 0.00600	0.0500 0.0500 0.150 200.0 TestN Analys SPKvalue 0.0500	0 0 0 0: <b>SW</b> 8 sis Date: 2/2/2 Ref Val 0	105 103 94.1 3021B 2009 7:39:4 %REC 121	84 83 81 87 5 PM LowLimit 78	123 119 117 113 Units: Prep Date: HighLimit 9 122	2/2/2 %RPD 0.969	009 RPDLimit Qual 20
Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene SampleID: 0901170-13AMSD SampType: MSD Analyte Methyl tert-butyl ether Benzene		0.0527 0.0516 0.154 188 33252 GC8_09 Result 0.0604 0.0520	0.00600 0.00900 0.00900 0.00900 RL 0.00600 0.00200	0.0500 0.0500 0.150 200.0 TestN Analys SPKvalue 0.0500 0.0500	0 0 0 0 0 0 0 8 0 0 0 0	105 103 94.1 3021B 2009 7:39:4 %REC 121 104	84 83 81 87 5 PM LowLimit 78 81	123 119 117 113 Units: Prep Date: HighLimit 9 122 125	2/2/2 %RPD 0.969 2.84	009 RPDLimit Qual 20 20
Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene SampleID: 0901170-13AMSD SampType: MSD Analyte Methyl tert-butyl ether Benzene Toluene		0.0527 0.0516 0.154 188 33252 GC8_09 Result 0.0604 0.0520 0.0514	0.00600 0.00900 0.00900 00202A RL 0.00600 0.00200 0.00600	0.0500 0.0500 0.150 200.0 TestN Analys SPKvalue 0.0500 0.0500 0.0500	0 0 0 0 0 0 0 8 0 0 0 0 0	105 103 94.1 8021B 2009 7:39:4 %REC 121 104 103	84 83 81 87 5 PM LowLimit 78 81 84	123 119 117 113 Units: Prep Date: HighLimit 9 122 125 123	2/2/2 %RPD 0.969 2.84 2.50	RPDLimit Qual 20 20 20
Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene SampleID: 0901170-13AMSD SampType: MSD Analyte Methyl tert-butyl ether Benzene Toluene Ethylbenzene		0.0527 0.0516 0.154 188 <b>33252</b> <b>GC8_09</b> Result 0.0604 0.0520 0.0514 0.0505	0.00600 0.00900 0.00900 0.00900 RL 0.00600 0.00600 0.00600 0.00600	0.0500 0.0500 0.150 200.0 TestN Analys SPK value 0.0500 0.0500 0.0500 0.0500	0 0 0 0 0 0 8 1 0 0 0 0 0 0 0 0	105 103 94.1 3021B 2009 7:39:4 %REC 121 104 103 101	84 83 81 87 5 PM LowLimit 78 81 84 83	123 119 117 113 Units: Prep Date: HighLimit 9 122 125 123 119	2/2/2 %RPD 0.969 2.84 2.50 2.11	20 20 20 20 20 20 20 20
Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene SampleID: 0901170-13AMSD SampType: MSD Analyte Methyl tert-butyl ether Benzene Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene	RunID:	0.0527 0.0516 0.154 188 <b>33252</b> <b>GC8_09</b> <b>Result</b> 0.0604 0.0520 0.0514 0.0505 0.151 185	0.00600 0.00900 0.00900 0.00900 RL 0.00600 0.00600 0.00600 0.00600	0.0500 0.0500 0.150 200.0 TestN Analys SPK value 0.0500 0.0500 0.0500 0.0500 0.150 200.0	0 0 0 0 0 0 8 1 0 0 0 0 0 0 0 0	105 103 94.1 3021B 2009 7:39:4 %REC 121 104 103 101 100 92.3	84 83 81 87 5 PM LowLimit 78 81 84 83 81	123 119 117 113 Units: Prep Date: HighLimit 9 122 125 123 119 117	2/2/2 %RPD 0.969 2.84 2.50 2.11 2.18	2009 RPDLimit Qual 20 20 20 20 20 20
Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene SampleID: 0901170-13AMSD SampType: MSD Analyte Methyl tert-butyl ether Benzene Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene	RunID:	0.0527 0.0516 0.154 188 33252 GC8_09 Result 0.0604 0.0520 0.0514 0.0505 0.151 185 e associated	0.00600 0.00900 0.00900 0.00900 RL 0.00600 0.00600 0.00600 0.00600 0.00900	0.0500 0.0500 0.150 200.0 TestN Analys SPK value 0.0500 0.0500 0.0500 0.0500 0.150 200.0 ak DF	0 0 0 0 0 0 8 1 8 1 8 1 9 0 0 0 0 0 0 0 0 0 0 0 0	105 103 94.1 3021B 2009 7:39:4 %REC 121 104 103 101 100 92.3 or	84 83 81 87 5 PM LowLimit 78 81 84 83 81	123 119 117 113 Units: Prep Date: HighLimit 9 122 125 123 119 117	2/2/2 %RPD 0.969 2.84 2.50 2.11 2.18 0	2009 RPDLimit Qual 20 20 20 20 20 20
Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene SampleID: 0901170-13AMSD SampType: MSD Analyte Methyl tert-butyl ether Benzene Toluene Ethylbenzene Xylenes, Total Surr: a,a,a-Trifluorotoluene Qualifiers: B Analyte dete	RunID:	0.0527 0.0516 0.154 188 33252 GC8_09 Result 0.0604 0.0520 0.0514 0.0505 0.151 185 e associated en MDL at	0.00600 0.00900 0.00900 0.00900 RL 0.00600 0.00600 0.00600 0.00600 0.00900 1 Method Blar ad RL	0.0500 0.0500 0.150 200.0 TestN Analys SPK value 0.0500 0.0500 0.0500 0.0500 0.150 200.0 ak DF	0 0 0 0 0 0 8 Sis Date: 2/2/2 Ref Val 0 0 0 0 0 0 0 0 0 0 0	105 103 94.1 8021B 2009 7:39:4 %REC 121 104 103 101 100 92.3 or ction Limit	84 83 81 87 5 PM LowLimit 78 81 84 83 81 87	123 119 117 113 Units: Prep Date: HighLimit 9 122 125 123 119 117 113	2/2/2 %RPD 0.969 2.84 2.50 2.11 2.18 0	009 RPDLimit Qual 20 20 20 20 20 20 0

RL Reporting Limit

J Analyte detected between SDL and RL

S Spike Recovery outside control limits

N Parameter not NELAC certified

#### CLIENT: INTERA Inc.

#### **Work Order:** 0901173

Project: Dugout Creek

## ANALYTICAL QC SUMMARY REPORT

RunID: GC8\_090202A

SampielD: 0901154-05AMS SampType: MS	Batch D: RunID:	33252 GC8	090202A	TestNo: Analysis		W8021B 2/2009 9:57:54	L PM	Units: PrepDate:	mg/l	
Analyte		Result	RL	SPKvalue	Ref Val			t HighLimit		RPDLimit Qual
Methyl-tert-butyl-ether		0.0537	0.00600 -	0.0500	0		78	-122	··	
Benzene		0.0527	0.00200	0.0500	0	105	81	125		
Toluene		0.0521	0.00600	0.0500	0	104	84	123		
Ethylbenzene		0.0515	0.00600	0.0500	0	103	83	119		
Xylenes, Total		0.153	0.00900	0.150	0	102	81	117		
Surr: a,a,a-Trifluorotoluene		189		200.0		94.6	87	113		
SampleID: 0901154-05AMSD	Batch D:	33252		TestNo:	SV	V8021B		Units:	mg/l	-
SampleID: 0901154-05AMSD SampType: MSD	Batch D: RunID:		)90202A			W8021B 2/2009 10:17:4	4 PM	Units: PrepDate:	-	
			090202A RL			2/2009 10:17:4			2/2/2	
SampType: <b>MSD</b>	RunID:	GC8_(		Analysis	Date: 2/2	2/2009 10:17:4		PrepDate:	2/2/2	009
SampType: <b>MSD</b> Analyte	RunID:	GC8_0 Result	RL	Analysis SPKvalue	Date: 2/2 Ref Val	2/2009 10:17:4 %REC	LowLimit	PrepDate: HighLimit	2/2/2 %RPD	009 RPDLimit Qual
SampType: <b>MSD</b> Analyte Methyl tert-butyl ether	RunID:	GC8_0 Result 0.0535	RL 0.00600	Analysis SPKvalue 0.0500	Date: 2/2 Ref Val	2/2009 10:17:4 %REC 107	LowLimit	PrepDate: HighLimit 122	2/2/2 %RPD 0.340	009 RPDLimit Qual 20
SampType: MSD Analyte Methyl tert-butyl ether Benzene	RunID:	GC8_0 Result 0.0535 0.0523	RL 0.00600 0.00200	Analysis SPKvalue 0.0500 0.0500	Date: 2/2 Ref Val 0 0	2/2009 10:17:4 %REC 107 105	LowLimit 78 81	Prep Date: HighLimit 122 125	2/2/2 %RPD 0.340 0.653	009 RPDLimit Qual 20 20
SampType: MSD Analyte Methyl tert-butyl ether Benzene Toluene	RunID:	GC8_0 Result 0.0535 0.0523 0.0518	RL 0.00600 0.00200 0.00600	Analysis SPK value 0.0500 0.0500 0.0500	Date: 2/2 Ref Val 0 0	2/2009 10:17:4 %REC 107 105 104	LowLimit 78 81 84	Prep Date: HighLimit 122 125 123	2/2/2 %RPD 0.340 0.653 0.535	009 RPDLimit Qual 20 20 20

Qualifiers:

В

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

J Analyte detected between SDL and RL

DF Dilution Factor

MDL Method Detection Limit R RPD outside accepted control limits

S Spike Recovery outside control limits

N Parameter not NELAC certified

Page 2 of 10

CLIENT:	INTERA Inc.	ANA
Work Order:	0901173	

## ANALYTICAL QC SUMMARY REPORT

Project:

Dugout Creek

## RunID: GC8\_090202A

SampleID: ICV-090202	Batch D:	R41670		TestNo	o: <b>SW8</b>	3021B		Units:	mg/	L
SampType: ICV	RunID:	GC8_09	0202A	Analys	is Date: 2/2/2	2009 11:51	:07 AM	PrepDate	):	
Anaiyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Methyl tert-butyl ether	,	0.101	0.00600	0.100	··· ·· 0· ·· ·	101-	80	120		
Benzene		0.102	0.00200	0.100	0	102	85	115		
Toluene		0.0998	0.00600	0.100	0	99.8	85	115		
Ethylbenzene		0.0988	0.00600	0.100	0	98.8	85	115		
Xylenes, Total		0.294	0.00900	0.300	0	97.9	85	115		
Surr: a,a,a-Trifluorotoluene		192		200.0		96.2	87	113		
SampleID: CCV1-090202	Batch D:	R41670		TestNo	): <b>SW</b> 8	021B		Units:	mg/	L
SampType: CCV	RunID:	GC8_09	)202A	Analys	is Date: 2/2/2	2009 3:49:3	8 PM	PrepDate	:	
Analyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Methyl tert-butyl ether		0.0520	0.00600	0.0500	0	104	80	120		
Benzene		0.0531	0.00200	0.0500	0	106	85	115		
Toluene		0.0523	0.00600	0.0500	0	105	85	115		
Ethylbenzene		0.0519	0.00600	0.0500	0	104	85	115		
Xylenes, Total		0.154	0.00900	0.150	0	103	85	115		
Surr: a,a,a-Trifluorotoluene		191		200.0		95.7	87	113		
SampleID: CCV2-090202	Batch D:	R41670		TestNo	: <b>SW8</b>	021B		Units:	mg/	_
SampType: CCV	RunID:	GC8_090	)202A	Analys	is Date: 2/2/2	2009 9:18:4	4PM	Prep Date	:	
Analyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Methyl tert-butyl ether		0.0493	0.00600	0.0500	0	98.6	80	120		
Benzene		0.0513	0.00200	0.0500	0	103	85	115		
Toluene		0.0506	0.00600	0.0500	0	101	85	115		
Ethylbenzene		0.0502	0.00600	0.0500	0	100	85	115		
Xylenes, Total		0.149	0.00900	0.150	0	99.4	85	115		
Surr: a,a,a-Trifluorotoluene		192		200.0		95.8	87	113		ui
SampleID: CCV3-090202	Batch D:	R41670		TestNo	: SW8	021B		Units:	mg/	-
SampType: CCV	RunID:	GC8_090	202A	Analysi	s Date: 2/2/2	2009 10:58:	11 PM	Prep Date	:	
Analyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Methyl tert-butyl ether		0.0520	0.00600	0.0500	0	104	80	120		
Benzene		0.0514	0.00200	0.0500	0	103	85	115		
Toluene		0.0509	0.00600	0.0500	0	102	85	115		
Ethylbenzene		0.0505	0.00600	0.0500	0	101	85	115		
Xylenes, Total		0.150	0.00900	0.150	0	99.9	85	115		
Surr: a,a,a-Trifluorotoluene		190		200.0		94.9	87	113		

Qualifiers:

B Analyte detected in the associated Method BlankJ Analyte detected between MDL and RL

- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits

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N Parameter not NELAC certified

Work Order:	INTERA Inc. 0901173			AN	ALYTI		-			EPORT
Project:	Dugout Creek					RunIl	D: IO	C_09020	3A	·····
SampleID: LCS-332	79 Batch D:	33279		TestNo	: E300	1		Units:	mg/l	-
SampType: LCS	RunID:	IC_0902	203A	Analysi	s Date: <b>2/3/2</b>	009 9:47:2	7 AM	PrepDate	2/3/2	009
Anaiyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Bromide	·	20.8	1.00	20.00		104	90	110		
Chloride		10.3	1.00	10.00	0	103	90	110		
Sulfate		31.3	3.00	30.00	0	104	90	110		
SampleID: LCSD-33	279 Batch D:	33279		TestNo	E300			Units:	mg/l	-
SampType: LCSD	RunID:	IC_0902	203A	Analysis	s Date: 2/3/2	009 10:03:	12 AM	Prep Date:	2/3/2	009
Analyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Bromide		21.0	1.00	20.00	0	105	90	110	0.579	20
Chloride		10.3	1.00	10.00	0	103	90	110	0.608	20
Sulfate		31.3	3.00	30.00	0	104	90	110	0.0824	20
SampleID: MB-3327	9 Batch D:	33279		TestNo	E300			Units:	mg/L	-
SampType: MBLK	RunID:	IC_0902	203A	Analysis	a Date: <b>2/3/2</b> 0	009 10:18:	51 AM	PrepDate:	2/3/2	009
Analyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Bromide		ND	1.00							
Chloride		NiD	1.00							
Sulfate		ND	3.00							·····
SampleID: 0901173-	03BMS Batch D:	33279		TestNo:	E300			Units:	mg/L	-
SampType: <b>MS</b>	RuniD:	IC_0902	03A	Analysis	3 Date: 2/3/20	009 12:30:	16 PM	PrepDate:	2/3/2	009
Analyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Chloride		355	10.0	100.0	260.5	94.7	90	110		
Sulfate		367	30.0	300.0	62.31	101	90	110		
SampleID: 0901173-	03B MSD Batch D:	33279		TestNo:	E300			Units:	mg/L	
SampType: <b>MSD</b>	RunID:	IC_0902	03A	Analysis	Date: 2/3/20	009 12:45:	58 PM	PrepDate:	2/3/2	009
Analyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Chloride	<u></u>	354	10.0	100.0	260.5	93.9	90	110	0.213	20
Sulfate		366	30.0	300.0	62.31	101	90	110	0.134	20
SampleID: 0901173-	03B MS Batch D:	33279		TestNo:	E300			Units:	mg/L	
SampType: <b>MS</b>	RunID:	IC_0902	03A	Analysis	Date: 2/3/20	009 5:15:0	8 PM	PrepDate:	2/3/2	009
Analyte		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide		19.5	1.00	20.00	0.7400	93.8	90	110		
	Analyte detected in the Analyte detected betwe			MDL N	Dilution Factor fethod Detect	tion Limit			]	Page 4 of 10

ND Not Detected at the Method Detection Limit

RL Reporting Limit

J Analyte detected between SDL and RL  $% \left( {{{\rm{SDL}}}} \right)$  R RPD outside accepted control limits

Spike Recovery outside control limits S

Ν Parameter not NELAC certified

CLIENT: Work Order:	INTERA I 0901173	nc.			AN	ALYTI	CAL Q	C SU	MMA]	RY R	EPORT
Project:	Dugout Cr	reek		-			RunD	: 10	C_09020	3A	
SampleID: 0901 <sup>,</sup> SampType: <b>MSD</b>	173-03B MSD	Batch D: RuniD:	33279 IC_09020	)3A	TestNo: Analysis		) :009 5:29:48	PM	Units: PrepDate	mg/L : 2/3/20	
Analyte			Result	RL	SPKvalue	Ref Val	%REC	_owLimit	HighLimit	%RPD	RPDLimit Qual

Bromide 19.8 1.00 20.00 0.7400 95.2 90 -110 1.41 20 -

Qualifiers:

В

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit

- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit R RPD outside accepted control limits
  - S Spike Recovery outside control limits

Page 5 of 10

- N Parameter not NELAC certified
- 33

Work Orde							<b>N N</b>	-	~		
Project:	Dugo	ut Creek					RunD	D: 10	C_09020	03A	
SampleID: I	ICV-090203	Batch D:	R41681		TestNo	): <b>E30</b>	0		Units:	mg/	L
SampType: I	ICV	RunID:	IC_090	203A	Analys	is Date: 2/3/2	2009 9:24:1	8 A M	PrepDate	: 2/3/2	2009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Bromide			53.2	1.00	50.00	······	106	90	110		
Chloride			26.2	1.00	25.00	0	105	90	110		
Sulfate			79.8	3.00	75.00	0	106	90	110		
SampleID: 0	CCV1-090203	Batch D:	R41681		TestNo	E300	0		Units:	mg/	L .
SampType: (	ccv	RunID:	IC_090	203A	Analys	s Date: 2/3/2	2009 1:01:4	0 PM	PrepDate	: 2/3/2	2009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide			20.8	1.00	20.00	0	104	90	110		
Chloride			10.4	1.00	10.00	0	104	90	110		
Sulfate			31.3	3.00	30.00	0	104	90	110		
SampleID: 0	CCV2-090203	Batch D:	R41681		TestNo	: E300	)		Units:	mg/l	_
SampType: (	ccv	RunID:	IC_090	203A	Analys	s Date: 2/3/2	2009 3:57:3	3 PM	PrepDate	2/3/2	009
Anaiyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide			20.9	1.00	20.00	0	104	90	110		
Chloride			10.4	1.00	10.00	0	104	90	110		
Sulfate			31.4	3.00	30.00	0	105	90	110		
SampleID: 0	CCV3-090203	Batch D:	R41681		TestNo	: E300	)		Units:	mg/l	_
SampType: 0	ccv	RunID:	IC_090	203A	Analysi	s Date: <b>2/3/2</b>	2009 7:12:3	2 PM	PrepDate	2/3/2	009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide			20.6	1.00	20.00	0	103	90	110	·	
Chloride			10.4	1.00	10.00	0	104	90	110		
Sulfate			30.9	3.00	30.00	0	103	90	110		
SampleID: 0	CCV4-090203	Batch D:	R41681		TestNo	: E300	)		Units:	mg/l	-
SampType: 0	ccv	RunID:	IC_090	203A	Analysi	s Date: 2/3/2	2009 8:45:44	4 PM	PrepDate	2/3/2	009
Anaiyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide			20.8	1.00	20.00	0	104	90	110		

Qualifiers:

В

Analyte detected in the associated Method Blank Analyte detected between MDL and RL

J ND Not Detected at the Method Detection Limit

RL Reporting Limit

J Analyte detected between SDL and RL DF **Dilution** Factor

MDL Method Detection Limit R RPD outside accepted control limits

S Spike Recovery outside control limits Page 6 of 10

Ν Parameter not NELAC certified

ANALYTICAL QC SUMMARY REPORT

CLIENT: INTERA Inc. 0901173

CLIENT:	INTERA Inc.
Work Order:	0901173

Dugout Creek

**Project:** 

## ANALYTICAL QC SUMMARY REPORT

RunID: IC\_090204A

SampleiD:	LCS-33317	Batch D:	33317		TestNo	: <b>E300</b>			Units:	mg/	L
SampType:	LCS	RunID:	IC_090204	A	Analysi	s Date: <b>2/4/20</b>	09 9:34:0	)7 AM	PrepDate:	2/4/2	2009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Bromide			20.8	1.00	20.00		104	.90	- 110		
Chloride			10.4	1.00	10.00	0	104	90	110		
Sulfate			31.1	3.00	30.00	0	104	90	110		
SampleID:	LCSD-33317	Batch D:	33317		TestNo	E300			Units:	mg/	L
SampType:	LCSD	RunID:	IC_090204/	A	Analysis	s Date: 2/4/20	09 9:49:0	1 AM	PrepDate:	2/4/2	2009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qua
Bromide			20.9	1.00	20.00	. 0	104	90	110	0.338	20
Chloride			10.5	1.00	10.00	0	105	90	110	0.377	20
Sulfate			31.4	3.00	30.00	0	105	90	110	0.982	20
SampleID:	MB-33317	Batch D:	33317		TestNo:	E300			Units:	mg/l	L
SampType:	MBLK	RunID:	IC_090204/	<b>A</b>	Analysis	s Date: <b>2/4/20</b>	09 10:03:	36 AM	PrepDate:	2/4/2	2009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide			ND	1.00							
Chloride			ND	1.00							
Sulfate			ND	3.00							
SampleID:	0901173-13A MS	Batch D:	33317		TestNo:	E300			Units:	mg/l	-
SampType:	MS	RunID:	IC_090204/	4	Analysis	a Date: 2/4/20	09 12:02:	42 PM	Prep Date:	2/4/2	2009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Chloride			2860	100	1000	1816	105	90	110		
Sulfate			5360	300	3000	2199	105	90	110		
SampleID:	0901173-13A MSD	Batch D:	33317		TestNo:	E300	•		Units:	mg/l	_
SampType:	MSD	RunID:	IC_0902044	4	Analysis	3 Date: 2/4/20	09 12:18:	21 PM	PrepDate:	2/4/2	009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Chloride			2850	100	1000	1816	104	90	110	0.393	20
Sulfate			5350	300	3000	2199	105	90	110	0.136	20
SampleID:	0901173-12A MS	Batch D:	33317		TestNo:	E300			Units:	mg/l	_
SampType:	MS	RunID:	IC_0902044	4	Analysis	B Date: 2/4/20	09 1:39:1	6 PM	PrepDate:	2/4/2	009
Analyte		· · · · · · · · · · · · · · · · · · ·	Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit '	%RPD	RPDLimit Qual
Bromide			237	10.0	200.0	17.89	110	90	110		

- Analyte detected in the associated Method Blank Analyte detected between MDL and RL
- J ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL
- Dilution Factor DF MDL Method Detection Limit

Page 7 of 10

- R RPD outside accepted control limits
- Spike Recovery outside control limits S

Ν Parameter not NELAC certified

#### **CLIENT:** INTERA Inc. ANALYTICAL QC SUMMARY REPORT Work Order: 0901173 IC\_090204A RunID: Dugout Creek **Project:** SampleID: 0901173-12A MSD Batch D: 33317 TestNo: E300 Units: mg/L SampType: MSD RunID: IC\_090204A Analysis Date: 2/4/2009 1:54:58 PM 2/4/2009 PrepDate:

SPKvalue

200.0

Ref Val

17.89 90.4

%REC

LowLimit HighLimit %RPD RPDLimit Qual

20

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90-110-17.7-

Result

199-

RL

10.0

Qualifiers:

В

Analyte

Bromide

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit

- Reporting Limit RL
- J Analyte detected between SDL and RL
- DF **Dilution** Factor
- MDL Method Detection Limit R RPD outside accepted control limits
  - S
  - Spike Recovery outside control limits
  - N Parameter not NELAC certified

Work Order:	0901173		ANALY IICAL QC SUMMARY REPOR							LFURI	
Project:	Dugout Cr	eek					RunI	D: 10	C_09020	<b>4A</b>	
SampielD: ICV	/-090204	Batch D:	R41701		TestNo	: E300			Units:	mg/L	-
SampType: ICV	/	RunID:	IC_090204	<b>1</b> A	Analysi	s Date: 2/4/20	09 9:11:3	89 AM	PrepDate:	2/4/2	009
Analyte	· · · · · · · · · · · · · · · · · · ·		Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide			53.3	-1.00	50.00		- 107-	90-		· · · · ·	
Chloride	•		26.5	1.00	25.00	0	106	90	110		
Sulfate			79.8	3.00	75.00	0	106	90	110		
SampleID: CC	V1-090204	Batch D:	R41701	,	TestNo	: <b>E300</b>			Units:	mg/L	-
SampType: CC	v	RunID:	IC_090204	\$A	Analysi	s Date: <b>2/4/20</b>	09 12:34:	00 PM	PrepDate:	2/4/2	009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit (	%RPD	RPDLimit Qual
Bromide			21.3	1.00	20.00	0	106	90	110		
Chloride			10.6	1.00	10.00	0	106	90	110		
Sulfate			32.5	3.00	30.00	0	108	90	110		
SampleID: CC	V2-090204	Batch D:	R41701		TestNo	E300			Units:	mg/L	
SampType: CCV	v	RunID:	IC_090204	A	Analysis	s Date: <b>2/4/20</b>	09 3:31:4	2 PM	PrepDate:	2/4/2	009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide			20.9	1.00	20.00	0	104	90	110		
Chloride			10.6	1.00	10.00	0	106	90	110		

30.00

ANALYTICAL OC SUMMARY REPORT

Qualifiers:

В

Sulfate

CLIENT:

INTERA Inc.

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit

31.9

3.00

RL Reporting Limit

Analyte detected between SDL and RL J

DF Dilution Factor

0

106

90

110

Page 9 of 10

MDL Method Detection Limit R

RPD outside accepted control limits

S Spike Recovery outside control limits

Ν Parameter not NELAC certified

CLIENT: Work Order:	INTER 0901173			ANAI	<b>YTI</b>	CAL QC	SU
Project:	Dugout	-				RunID:	I
SampleID: ICV-0	090206	Batch D:	R41742	TestNo:	E300		

## **UMMARY REPORT**

IC\_090206A

SampleID:	ICV-090206	Batch D:	R41742		TestNo:	E300			Units:	mg/	L
SampType:	ICV	RunID:	IC_09020	6A	Analysis	s Date: 2/6/2	009 9:07:2	8 AM	PrepDate	: 2/6/2	2009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide			53.2	1.00	50.00		106-	90	1-10	i	
Chloride			26.5	1.00	25.00	0	106	90	110		
Sulfate			79.8	3.00	75.00	0	106	90	110		
SampleID:	CCV1-090206	Batch D:	R41742		TestNo:	E300			Units:	mg/	<u> </u>
SampType:	ccv	RunID:	IC_090206	6A	Analysis	B Date: <b>2/6/2</b>	0091:24:2	0 PM	PrepDate	: 2/6/2	2009
Analyte			Result	RL	SPKvalue	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide			21.5	1.00	20.00	0	108	90	110		
Chloride			11.0	1.00	10.00	0	110	90	110		

Qualifiers:

В

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit

RL Reporting Limit

- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit R RPD outside accepted control limits
  - S Spike Recovery outside control limits
- Ν Parameter not NELAC certified

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## DHLAnalytical

Date: 06-Feb-09

CLIENT:	INTERA Inc.
Work Order:	0901173

## **Project:**

Dugout Creek

TestNo: E300	MDL	MQL
Analyte	mg/L	mg/L
Bromide	0.300	1.00
Chloride	0.300	1.00
Sulfate	1.00	3.00
TestNo: SW8021B	MDL	MQL
Analyte	mg/L	mg/L
Methyl tert-butyl ether	0.00200	0.00600
Benzene	0.000800	0.00200
Toluene	0.00200	0.00600
Ethylbenzene	0.00200	0.00600
Xylenes, Total	0.00300	0.00900

## MQL SUMMARY REPORT