Sitewide Groundwater and Surface Water Monitoring Report for the Dugout Creek Area (Including O'Ryan Seep, Pharaoh Seep, and Dugout Creek)

Howard and Mitchell Counties, Texas

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Railroad Commission of Texas

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May 2008

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The information in this report was prepared under my supervision. The information is accurate and correct to the best of my knowledge. The information, data, and figures should not be used for purposes other than as elements of this overall report.

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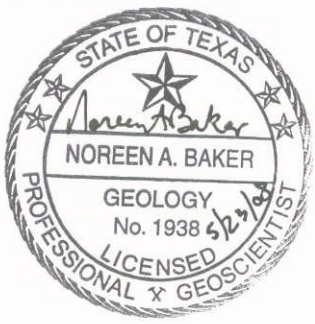

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1.0 INTRODUCTION

INTERA Incorporated (INTERA) was contracted by the Railroad Commission of Texas (RRC) to provide professional environmental engineering services at oil and gas industry exploration and production sites and associated facilities across the State of Texas. Under this contract, INTERA has prepared this Report to document the current groundwater and surface water conditions in the Dugout Creek area, including O' Ryan Seep and Pharaoh Seep in Howard and Mitchell Counties, Texas. A site location map is included as Figure 1A.

1.1 Background

INTERA conducted environmental assessments at the O' Ryan and Pharaoh Seeps during several previous field events in an effort to delineate the extent of chloride-impacted groundwater at these locations and to determine the source of the chlorides. The results of these assessments have been documented in several reports (DE&S 2001a, DE&S 2001b, INTERA 2002a, INTERA 2002b, INTERA 2003a, INTERA 2006a, and INTERA 2006b). In addition, initial assessment activities were conducted along Dugout Creek in 2006, the results of which are documented in *Environmental Assessment of Dugout Creek, Howard and Mitchell Counties, Texas* (INTERA 2006c). Additional investigation of Dugout Creek and preparation of a memorandum regarding evaluation and development of best management practices was provided in August 2007 (INTERA, 2007). This report describes conduct of a sitewide groundwater and surface water monitoring event for collection of groundwater elevation data and water quality data for all wells and available surface water.

1.2 Objectives

The objective of this fieldwork was to conduct a sitewide groundwater and surface water monitoring event to collect additional data that will be used to help develop the best management practices (BMPs) for the mitigation of chloride impacts from O'Ryan Seep, Pharaoh Seep or other sources along Dugout Creek. The overall BMP objective is to reduce the salinity load to the Colorado River. A complete round of groundwater data and water quality data will provide necessary data to focus each management practice before feasibility testing of the BMPs occurs.

The objectives of the monitoring event were as follows:

- Perform a site visit to assess current conditions and collect groundwater and surface water samples from the site monitor wells, Dugout Creek, O'Ryan Seep and Pharaoh Seep, if possible,
- Compare the groundwater and surface water data to current regulatory standards,
- Determine if additional data collection is warranted, and

- Gather logistical information needed to proceed with selection of BMPs to reduce the chloride load to Dugout Creek, and eventually, the Colorado River.

2.0 SITE CONCEPTUAL MODEL

As described in the August 2007 INTERA report, the working hypothesis for the process by which chloride moves from the seeps to Dugout Creek in the absence of continuous surface water flow or groundwater flow is as follows. Groundwater-bearing alluvium is limited in the channels to the area just downstream of the seeps and to the area just up-channel of the confluences with Dugout Creek. Groundwater in the alluvium downgradient of the seeps receives chloride-containing recharge water directly from the seeps. As the groundwater moves downgradient through the alluvium, the chlorides become concentrated as water is removed through evapotranspiration (i.e. at MW-O-07 downgradient of the O'Ryan Seep). Evapotranspiration not only works to concentrate chloride in the groundwater, but as the process continues, evapotranspiration also draws the chloride-laden groundwater to the soil surface where the water evaporates and chloride salts are left behind on the soil surface. The chloride salt deposits on the soil surface are then available to be dissolved and carried downstream by surface water runoff during precipitation events. Depending on the amount of surface water runoff, the chloride may be carried all the way to Dugout Creek or only down the channel until the surface water dries up and the process starts again. In this way, chloride can migrate in slugs down the channel until reaching the alluvium just upstream of the confluence with Dugout Creek where it may migrate into Dugout Creek either via surface water flow or by groundwater flow in the alluvium. Once in the Dugout Creek flow system, chloride transport may continue in a similar fashion to the Colorado River. The collection of analytical data during a single event along Dugout Creek and from the O' Ryan and Pharaoh Seeps during a single event has helped to determine the current site conditions. This information will aid in the selection of a suitable BMP for the mitigation of chloride impacts to the Colorado River.

3.0 FIELD ACTIVITIES

The objective of the sitewide monitoring event was to collect groundwater elevation data for monitor wells and water samples from groundwater monitor wells and from surface water bodies and seeps, if available, in the Dugout Creek, O' Ryan Seep and Pharaoh Seep study area. A total of 37 groundwater monitor wells are present in the Dugout Creek, O' Ryan Seep and Pharaoh Seep study area. These wells are summarized in Table 1 and located on Figure 1B. The wells were gauged and sampled as planned with two exceptions. MW-O-07, which was located in the drainage way downstream of the O'Ryan Seep, has been destroyed as a result of erosion in the drainage way. However, at the recommendation of Tim Prude, RRC Midland District office site remediation coordinator, an auger was used to dig a hole adjacent to the former well location so that a sample could be obtained at this location. MW-D-03, which is located along Dugout Creek, was overlooked during the sampling event, and a sample was not collected from this well during the January 2008 field effort. Subsequent to the

discovery that the sample was missing, INTERA arranged for the RRC Midland District office site remediation coordinator to collect a groundwater sample from MW-D-03 for field titration with a Hach chloride test kit so that information on the concentration of chloride in this well could be obtained.

Surface water was not present in Dugout Creek at the time of the field effort, therefore a surface water sample could not be collected. Both the O'Ryan Seep and the Pharaoh Seep were flowing, and surface water samples were collected from each of the seeps. Therefore, a total of 36 groundwater samples and two surface water samples were collected.

Groundwater samples and surface water samples were analyzed for total dissolved solids (TDS) and anions (chloride, sulfate, bromide). Based on previous results, a set of select wells were also analyzed for benzene, toluene, ethyl benzene and xylene plus methyl tert-butyl ether (BTEX/MTBE). QA/QC samples for BTEX included a trip blank, an equipment rinsate and sample replicate. QA/QC samples for TDS and chloride included a sample replicate only.

Groundwater sampling was conducted using a bladder pump or disposable bailer depending on the analyses required for each well. The bladder pump was used to collect samples at wells where BTEX analyses were specified, and disposable bailers were used to collect samples at wells where only TDS and anion analyses were specified. Prior to collecting groundwater samples, the wells were purged per INTERA standard operating procedures as provided in the INTERA Sampling and Analysis Plan for the RRC (INTERA, 2003b). Purge water was collected and contained in 55-gallon drums staged at each well location. The drums were labeled with the contents, date, and monitor well number. These drums will remain staged at the study areas for later disposal at an appropriate facility by the RRC.

4.0 RESULTS

4.1 Groundwater Elevation Data

Depth to water measurements were made at all monitor wells except MW-O-07, which was destroyed as noted above, and groundwater elevations were calculated based on previously-surveyed top of PVC casing elevations, where available (Table 1). Surveyed top of casing data is not available for any of the monitor wells located along Dugout Creek (MW-D-01 through MW-D-10), or the three wells installed during the September 2007 field effort (MW-07-01 through MW-07-03). Survey locations and elevations were not conducted by a professionally licensed surveyor for these wells due to the terrain and long distances between monitor wells. RRC staff determined that a survey was cost prohibitive and decided to assume that groundwater flowed in the direction of the topographical gradient of Dugout Creek. This is a valid assumption because the shallow groundwater in this area is perched on the surface of the red clay of the

Dockum Group that outcrops in this area and is only found along creek beds. As such, groundwater elevations cannot be determined for wells in Dugout Creek. Locations of the monitor wells in Dugout Creek were determined in UTM coordinates using a handheld GPS unit.

Potentiometric surface maps were generated for the O' Ryan and Pharaoh Seep study areas and are provided as Figures 2A and 2B. Groundwater elevation and flow direction in January 2008 for the study areas are similar to those determined during the last monitoring event at each study area in March 2006 (refer to INTERA, 2006a and INTERA, 2006b).

Groundwater flow in the area of the O' Ryan Seep is to the southeast, east and northeast toward the seeps and then continues to the northeast along the drainage way away from the seeps and toward Dugout Creek. Elevations in January 2008 are approximately one to two feet higher than those measured in August 2006; these differences are likely due to variations in rainfall and seasonal fluctuations. Monitor wells MW-O-04 and MW-O-02 remain dry.

Groundwater flow in the area of the Pharaoh Seep is to the southeast directed toward Pharaoh Seep and the associated drainage way. Similar to the observations in the O'Ryan Seep area, groundwater elevations in January 2008 around the Pharaoh Seep area are approximately two feet higher than those measured in August 2006. In addition, while MW-P-07 remains dry, groundwater is again present in MW-P-02.

4.2 Groundwater Analytical Results

During the January 2008 field effort, INTERA sampled 36 wells and two seeps for a total of 38 samples. Groundwater and surface water analytical results are presented in Tables 2 through 4. Groundwater samples were analyzed for anions (chloride, sulfate, bromide) and TDS, and select samples were analyzed for BTEX/MTBE. Petroleum hydrocarbon-related odors were not noted during the purging and sampling of the wells.

Chloride

In general, chloride distribution and pattern of occurrence remains essentially unchanged for data obtained in January 2008 as compared to data obtained in March 2006 and August 2007. The lowest chloride value observed in the Dugout Creek, O' Ryan Seep and Pharaoh Seep area was in MW-O-23 at 43.6 mg/L and the highest value was observed in MW-07-03 just upstream of the confluence of the Pharaoh Seep drainage with Dugout Creek at 33,500 mg/L.

In the O'Ryan Seep study area, chloride concentrations remain highest in upgradient well MW-O-21 at 17,200 mg/L and in downgradient well MW-O-07 at 13,100 mg/L. Out of the 15 wells with data from both time periods, 9 wells show decreases in chloride concentrations while 6 wells show increases. Significant increases (increase of 40% or more) were noted in MW-O-03, MW-O-05 and MW-O-11 while significant decreases

(decrease of 40% or more) were noted in MW-O-07, MW-O-12, MW-O-13 and MW-O-23. Wells with increasing chloride concentrations appear confined to upgradient portions of the study area while wells with decreasing concentrations are located throughout the O'Ryan Seep area.

As noted above in Section 3, during the January 2008 field effort, MW-O-07 was discovered washed away. The well completion pad with protective steel casing was eroded away and was broken off from the PVC riser pipe, and therefore, in no condition to sample. A sample was collected approximately fifteen feet up the channel from the original MW-O-07 well location. A sample hole was dug using an auger that penetrated to three and a half feet, and the sample was withdrawn from the hole using a bailer.

In the Pharaoh Seep study area, chloride concentrations remain highest in FINA-01 at 33,300 mg/L and at downgradient well MW-P-01 at 16,900 mg/L. Out of the 6 wells with data from both time periods, 3 wells show decreases in chloride concentrations while 3 wells show increases. Significant increases (increase of 40% or more) were noted in MW-P-01 and MW-P-10 while the largest decrease was noted in MW-P-09 with a decrease in chloride concentration of approximately 26%. Wells with increasing chloride concentrations are located throughout the study area while wells with decreasing concentrations are located in upgradient portions of the Pharaoh Seep area.

Along Dugout Creek, chloride concentrations remain highest at the confluences of the O'Ryan Seep drainage and the Pharaoh Seep drainage at 11,600 mg/L and 33,500 mg/L, respectively. Out of the 6 wells with data from both time periods, 2 wells show decreases in chloride concentrations while 4 wells show increases. Wells with increases were noted throughout the length of the creek sampled and include MW-D-01, MW-D-02, MW-D-06 and MW-D-08 while decreases in chloride concentrations were noted in upgradient well MW-D-10 and in MW-07-03. Chloride concentrations in MW-D-05 and MW-D-07, which were dry in August 2007, are very high at 11,400 mg/L and 10,400 mg/L, respectively, and indicate that chloride impacts persist throughout the sampled length of Dugout Creek.

The high chloride concentration in MW-07-03, which is located in the Pharaoh Seep drainage just above the confluence with Dugout Creek supports the working hypothesis described above in Section 2 and indicates that Pharaoh Seep is contributing a significant amount of chloride to Dugout Creek. Similar results were anticipated for MW-07-02, which is located in the O'Ryan Seep drainage just above its confluence with Dugout Creek. Chloride was detected in MW-07-02 at a concentration of 7,480 mg/L which is an order of magnitude lower than that in MW-07-03. However, chloride in MW-07-02 is still significantly elevated as is the chloride concentration in MW-D-01, which is located in Dugout Creek right at the confluence with the O'Ryan drainage way, both of which indicate that the O'Ryan Seep is also contributing significant amounts of chloride to Dugout Creek.

TDS

TDS concentrations in the Dugout Creek, O' Ryan Seep and Pharaoh Seep groundwater show a positive correlation, as expected, to the chloride concentrations. The TDS values are approximately twice as high as the chloride values, and also appear to be increasing slightly as compared to March 2006 and August 2007 data. The lowest TDS value observed in the Dugout Creek, O' Ryan Seep and Pharaoh Seep area was in MW-D-10 at 544 mg/L and the highest value was observed in MW-07-03 along Dugout Creek at 61,500 mg/L.

BTEX

Six wells were analyzed for BTEX/MTBE; three wells, MW-O-07, MW-O-21 and MW-07-01, were in the O'Ryan Seep study area and three wells, MW-P-01, MW-P-09, and Fina-01, are in the Pharaoh Seep study area. Of the six wells analyzed for BTEX/MTBE, four wells (MW-07-01, MW-O-21, MW-O-07 and MW-P-09) were below detection limits for benzene, toluene, ethylbenzene, xylenes and MTBE. The two remaining wells, FINA-01 and MW-P-01 were nondetect for all constituents except benzene which was detected at 0.0125 mg/L and 0.0136 mg/L, respectively. These values are similar to previous results at these wells and both values exceed the maximum contaminant level of 0.005 mg/L. The BTEX sample for MW-O-07 was collected from the auger-dug hole.

4.3 Surface Water Analytical Results

No flow was present in Dugout Creek at any point during the field effort, therefore a Dugout Creek surface water sample was not collected. However, precipitation has been such over the last several months that both the O' Ryan Seep and Pharaoh Seep were flowing and were sampled. Two field replicate samples were taken at O' Ryan and Pharaoh Seeps by a RRC site remediation coordinator for chloride analyses to be conducted at the RRC District Office in Midland. The replicate samples were analyzed using a Hach test kit for chloride, and were compared to chloride lab analyses for the same sample locations. The analytical results from surface water samples taken at the two seeps are listed in Table 5. Chloride concentration in the O'Ryan Seep surface water sample was detected at 1,740 mg/L chloride based on Hach kit test results as compared to 1,090 mg/L based on laboratory analytical results. Chloride concentration in the Pharaoh Seep surface water sample was detected at 12,040 mg/L chloride based on Hach kit test results as compared to 13,000 mg/L based on laboratory analytical results. These results are similar to those from March 2006 results at 1,210 mg/L and 13,800 mg/L, respectively.

The laboratory data packages from DHL Analytical along with the data review checklists completed by INTERA are included in Appendix A. The data review was conducted in accordance with the Quality Assurance Project Plan (RRC, 2007). Deviations from quality control criteria as presented in the QAPP are noted on the checklists provided in Appendix A. None of the deviations caused significant effects on the data results as

provided by the laboratory. The data presented herein passed data quality review and is considered useable for project purposes.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on analytical data from this field effort, the groundwater at Dugout Creek, O' Ryan and Pharaoh Seeps continue to be impacted by chloride, likely due to reinjection of produced water during the oil production activities that have been underway since at least the 1950's. Chloride concentrations are elevated and exceed the TCEQ drinking water standard of 300 mg/L in 27 out of 33 monitor wells where a sample could be collected. TDS data correlate well with chloride data, and both O'Ryan Seep and Pharaoh Seep contribute to chloride and total dissolved solids impacts downstream in the Colorado River.

The objective of this sitewide groundwater and surface water monitoring event was to collect additional data that will be used to help develop the best management practices for the mitigation of chloride impacts from O'Ryan Seep, Pharaoh Seep or other sources along Dugout Creek. The overall BMP objective is to reduce the salinity load to the Colorado River. The working hypothesis proposed for the transport of chloride and other dissolved constituents appears to be supported in light of the newly collected data. Ongoing reinjection of produced water to facilitate oil production activities in Howard and Mitchell Counties is likely contributing to the exceedingly high chloride and TDS concentrations in the study areas. Alluvial deposits located along the channels in Dugout Creek and O'Ryan and Pharaoh Seeps serve to retain and concentrate chloride loads via evaporation, precipitation and subsequent dissolution and continued movement downstream.

From the previous site reconnaissance work, Crespo has provided INTERA with a BMP evaluation of the Dugout Creek project site. Crespo has provided a list of possible BMPs that can now be used as discussion points for INTERA and RRC moving forward with implementation of a remedy. Moving forward, Crespo, INTERA and RRC should work to determine scope of work and budgetary restraints on the project. The team will work to refine the site conceptual model and to define the process needed for designing BMP(s).

6.0 REFERENCES

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INTERA 2007. Investigation and Best Management Practice (BMP) Evaluation and Development Memorandum for O'Ryan Seep, Pharaoh Seep and Dugout Creek, Howard and Mitchell Counties, Texas.

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Tables

Table 1. Monitor Well Summary and Groundwater Elevations

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

*All depth to water measurements were taken January 8, 2008.
**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
NA: Not Available

Table 2. Groundwater Analytical Results- Dugout Creek

Analyte	CAS	Maximum Contaminant Level (MCL) mg/L	MW-D-01	MW-D-02	MW-D-04	MW-D-05	MW-D-06	MW-D-07	MW-D-08
			1/10/2008	1/10/2008	1/10/2008	1/10/2008	1/10/2008	1/9/2008	1/9/2008
			801064	801064	801064	801064	801064	801064	801064
			DHL	DHL	DHL	DHL	DHL	DHL	DHL
			Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Anions									
Bromide	24959-67-9	-	**23.4**	**7.17**	**93.3**	**22.8**	**2.47**	**20.7**	**4.35**
Chloride	16887-00-6	300*	**11600**	**3480**	**5710**	**11400**	**1550**	**10400**	**482**
Sulfate	14808-79-8	300*	**1470**	**4620**	**2310**	**2280**	**1370**	**2130**	**126**
Total Dissolved Solids									
TDS	NL	500**	**20100**	**13300**	**12700**	**19700**	**4660**	**18400**	**1250**

Analyte	CAS	Maximum Contaminant Level (MCL) mg/L	MW-D-09	MW-D-10	MW-07-02	MW-07-03	MW-D-03***
			DRY	1/10/2008	1/10/2008	1/10/2008	2/7/2008
			-	801064	801064	801064	
			-	DHL	DHL	DHL	RRC
			-	Aqueous	Aqueous	Aqueous	Aqueous
			-	mg/L	mg/L	mg/L	mg/L
Anions							
Bromide	24959-67-9	-	NA	< 1.0 U	**14.2**	**116**	NS
Chloride	16887-00-6	300*	NA	**68.9**	**7480**	**33500**	**8949**
Sulfate	14808-79-8	300*	NA	**35.2**	**4800**	**3740**	NS
Total Dissolved Solids							
TDS	NL	500**	NA	**544**	**16900**	**61500**	NS

NL- Not listed

NS- Not sampled

NA- Not available for sampling because the well was dry.

Data Qualifiers:

U- The analyte was analyzed for, but not detected. The associated numerical value is is at or below the method detection limit (MDL).

Value exceeds MCL

Note: Detected values are in bold font.

* TCEQ drinking water standard based on secondary MCL criteria.

** EPA drinking water standard based on secondary MCL critieria.

***Data from field titration using Hach test kit

Table 3. Groundwater Analytical Results- O'Ryan Seep

Analyte	CAS	Maximum Contaminant Level (MCL) mg/L	MW-O-01 1/9/2008 801064 DHL Aqueous mg/L	MW-O-02 DRY - - -	MW-O-03 1/9/2008 801064 DHL Aqueous mg/L	MW-O-04 DRY - - -	MW-O-05 1/9/2008 801064 DHL Aqueous mg/L	MW-O-06 1/9/2008 801064 DHL Aqueous mg/L	MW-O-07 1/9/2008 801064 DHL Aqueous mg/L	MW-O-08 1/9/2008 801064 DHL Aqueous mg/L	MW-O-09 1/9/2008 801064 DHL Aqueous mg/L	MW-O-11 1/9/2008 801064 DHL Aqueous mg/L
Anions												
Bromide	24959-67-9	-	< 1.0 U	NA	< 1.0 U	NA	< 1.0 U	< 1.0 U	**17.6**	**2.21**	**3.96**	**5.28**
Chloride	16887-00-6	300*	**1040**	NA	**1450**	NA	**2800**	**2320**	**13100**	**2510**	**330**	**3130**
Sulfate	14808-79-8	300*	**184**	NA	**291**	NA	**686**	**636**	**1870**	**440**	**794**	**455**
Total Dissolved Solids												
TDS	NL	500**	**2530**	NA	**3200**	NA	**6180**	**4920**	**25100**	**5520**	**2110**	**6560**
Volatiles												
Methyl tert-butyl ether	1634-04-4	-	NS	NS	NS	NS	NS	NS	< 0.004 U	NS	NS	NS
Benzene	71-43-2	0.005	NS	NS	NS	NS	NS	NS	< 0.002 U	NS	NS	NS
Toluene	108-88-3	1	NS	NS	NS	NS	NS	NS	< 0.004 U	NS	NS	NS
Ethylbenzene	100-41-4	0.7	NS	NS	NS	NS	NS	NS	< 0.004 U	NS	NS	NS
Xylenes, Total	1330-20-7	10	NS	NS	NS	NS	NS	NS	< 0.004 U	NS	NS	NS

Analyte	CAS	Maximum Contaminant Level (MCL) mg/L	MW-O-12 1/9/2008 801064 DHL Aqueous mg/L	MW-O-13 1/9/2008 801064 DHL Aqueous mg/L	MW-O-15 1/9/2008 801064 DHL Aqueous mg/L	MW-O-21 1/9/2008 801064 DHL Aqueous mg/L	MW-0-31 Dup MW-O-21 1/9/2008 801064 DHL Aqueous mg/L	MW-O-22 1/9/2008 801064 DHL Aqueous mg/L	MW-O-23 1/9/2008 801064 DHL Aqueous mg/L	MW-1-23 Dup MW-O-23 1/9/2008 801064 DHL Aqueous mg/L	MW-O7-01 1/8/2008 801050 DHL Aqueous mg/L
Anions											
Bromide	24959-67-9	-	< 1.0 U	< 1.0 U	**6.76**	< 10.0 U	< 10.0 U	**3.15**	< 1.0 U	< 1.0 U	**67.7**
Chloride	16887-00-6	300*	**229**	**245**	**4600**	**17200**	**17000**	**336**	**43.6**	**42.7**	**7980**
Sulfate	14808-79-8	300*	**116**	**130**	**1340**	**2210**	**1610**	**313**	**124**	**117**	**727**
Total Dissolved Solids											
TDS	NL	500**	**931**	**1000**	**11200**	**32100**	**30600**	**1490**	**699**	**706**	**15400**
Volatiles											
Methyl tert-butyl ether	1634-04-4	-	NS	NS	NS	< 0.004 U	< 0.004 U	NS	NS	NS	< 0.004 U
Benzene	71-43-2	0.005	NS	NS	NS	< 0.002 U	< 0.002 U	NS	NS	NS	< 0.002 U
Toluene	108-88-3	1	NS	NS	NS	< 0.004 U	< 0.004 U	NS	NS	NS	< 0.004 U
Ethylbenzene	100-41-4	0.7	NS	NS	NS	< 0.004 U	< 0.004 U	NS	NS	NS	< 0.004 U
Xylenes, Total	1330-20-7	10	NS	NS	NS	< 0.004 U	< 0.004 U	NS	NS	NS	< 0.004 U

NL- Not listed

NA- Not available for sampling because the well was dry.

NS- Not sampled for BTEX.

Data Qualifiers:

U- The analyte was analyzed for, but not detected. The associated numerical value is is at or below the method detection limit (MDL).

Value exceeds MCL

Note: Detected values are in bold font.

* TCEQ drinking water standard based on secondary MCL criteria.

** EPA drinking water standard based on secondary MCL critieria.

Table 4. Groundwater Analytical Results- Pharaoh Seep

Analyte	CAS	Maximum Contaminant Level (MCL) mg/L	MW-P-01 1/9/2008 801064 DHL Aqueous mg/L	MW-P-02 1/8/2008 801050 DHL Aqueous mg/L	MW-P-03 1/8/2008 801050 DHL Aqueous mg/L	MW-P-07 DRY - - -	MW-P-08 1/8/2008 801050 DHL Aqueous mg/L	MW-P-09 1/9/2008 801064 DHL Aqueous mg/L	MW-P-10 1/8/2008 801050 DHL Aqueous mg/L	FINA-01 1/9/2008 801064 DHL Aqueous mg/L
Anions										
Bromide	24959-67-9	-	**33.5**	**0.346 J**	**0.505 J**	NA	< 1.0 U	**1.29**	**3.19**	**73.9**
Chloride	16887-00-6	300*	**16900**	**93.7**	**142**	NA	**420**	**542**	**497**	**33300**
Sulfate	14808-79-8	300*	**2540**	**113**	**125**	NA	**225**	**152**	**179**	**1640**
Total Dissolved Solids										
TDS	NL	500**	**31500**	**723**	**836**	NA	**1380**	**1550**	**1410**	**58500**
Volatiles										
Methyl tert-butyl ether	1634-04-4	-	< 0.004 U	NS	NS	NS	NS	< 0.004 U	NS	< 0.004 U
Benzene	71-43-2	0.005	**0.0136**	NS	NS	NS	NS	< 0.002 U	NS	**0.0128**
Toluene	108-88-3	1.0	< 0.004 U	NS	NS	NS	NS	< 0.004 U	NS	< 0.004 U
Ethylbenzene	100-41-4	0.7	< 0.004 U	NS	NS	NS	NS	< 0.004 U	NS	< 0.004 U
Xylenes, Total	1330-20-7	10.0	< 0.004 U	NS	NS	NS	NS	< 0.004 U	NS	< 0.004 U

NL- Not listed

NA- Not available for sampling because the well was dry.

NS- Not sampled for BTEX.

Data Qualifiers:

J- The reported result is an estimated value.

U- The analyte was analyzed for, but not detected. The associated numerical value is is at or below the method detection limit (MDL).

Value exceeds MCL

Note: Detected values are in bold font.

* TCEQ drinking water standard based on secondary MCL criteria.

** EPA drinking water standard based on secondary MCL critieria.

Table 5. Surface Water Analytical Results- O'Ryan and Pharaoh Seeps

Analyte	CAS	Maximum Contaminant Level (MCL) mg/L	SW-O-Seep 1/10/2008 801064 DHL Aqueous mg/L	SW-P-Seep 1/10/2008 801064 DHL Aqueous mg/L	SW-O-Seep Rep*** 1/10/2008 RRC Aqueous mg/L	SW-P-Seep Rep*** 1/10/2008 RRC Aqueous mg/L
Anions						
Bromide	24959-67-9	-	< 10.0 U	**26.8**	NS	NS
Chloride	16887-00-6	300*	**1090**	**13000**	**1740**	**12040**
Sulfate	14808-79-8	300*	**442**	**1250**	NS	NS
Total Dissolved Solids						
TDS	NL	500**	**2460**	**24200**	NS	NS

Data Qualifiers:

U- The analyte was analyzed for, but not detected. The associated numerical value is is at or below the method detection limit (MDL).

Value exceeds MCL

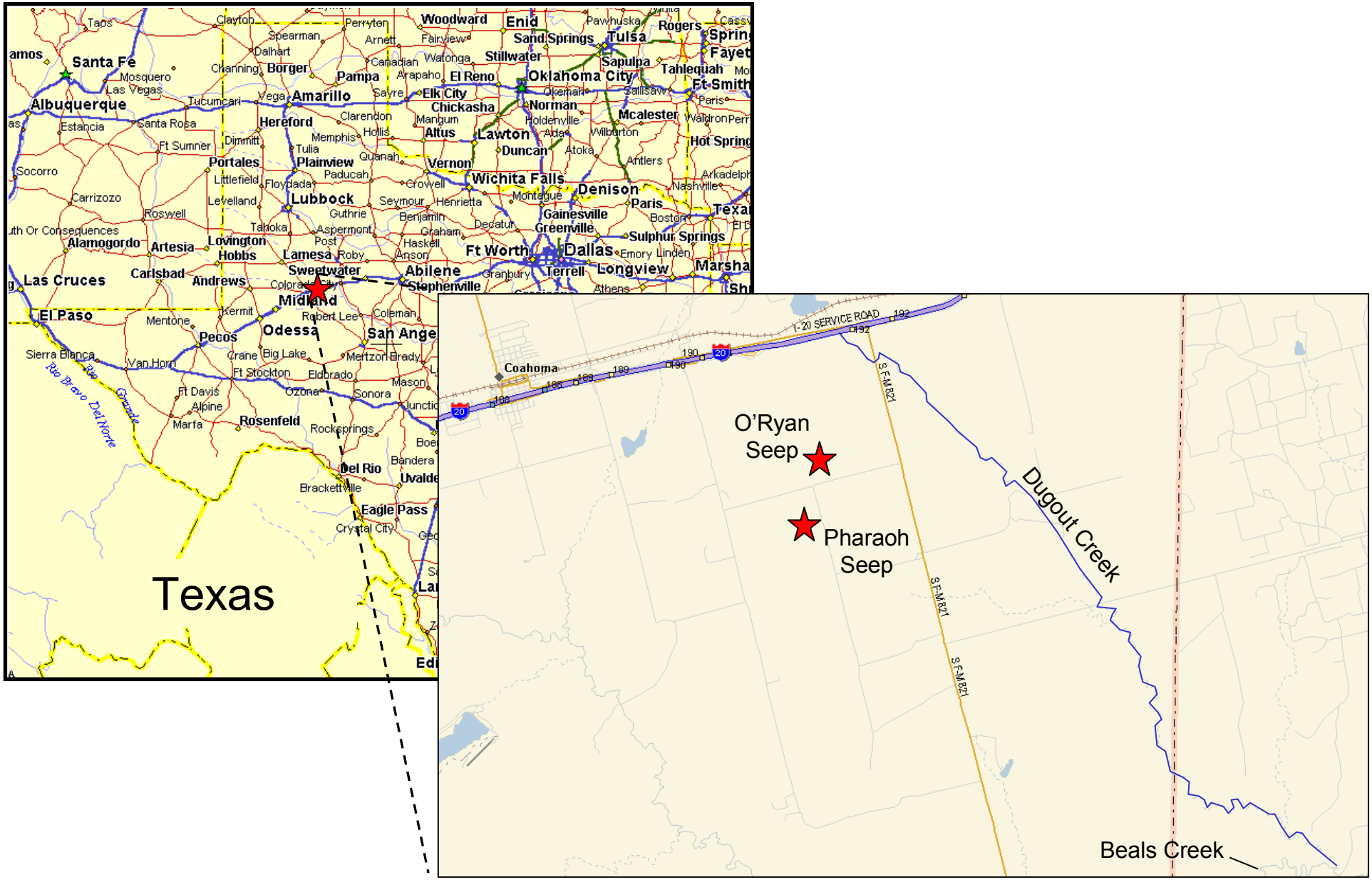
Note: Detected values are in bold font.

* TCEQ drinking water standard based on secondary MCL criteria.

** EPA drinking water standard based on secondary MCL critieria.

***Data from field titration using Hach test kit

Figures



DATE: 02/08/08

REF: 01098.01.0001.03.00001

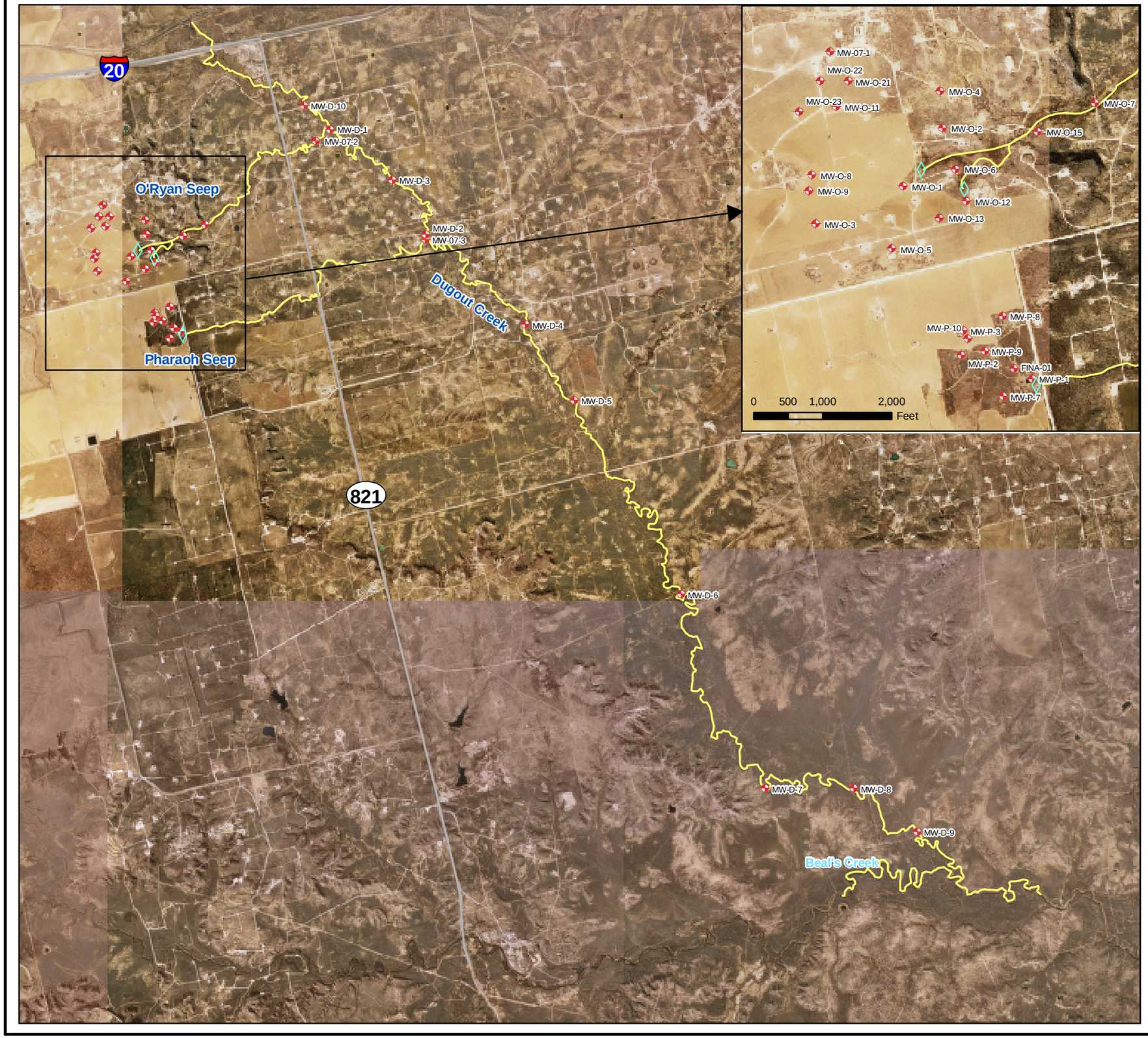
FILE: Fig1A_Location_Map.ppt

Site Location Map

INTERA
1812 Centre Creek Dr Ste. 300
Austin, TX 78754

Dugout Creek, Coahoma, Texas

Figure 1A



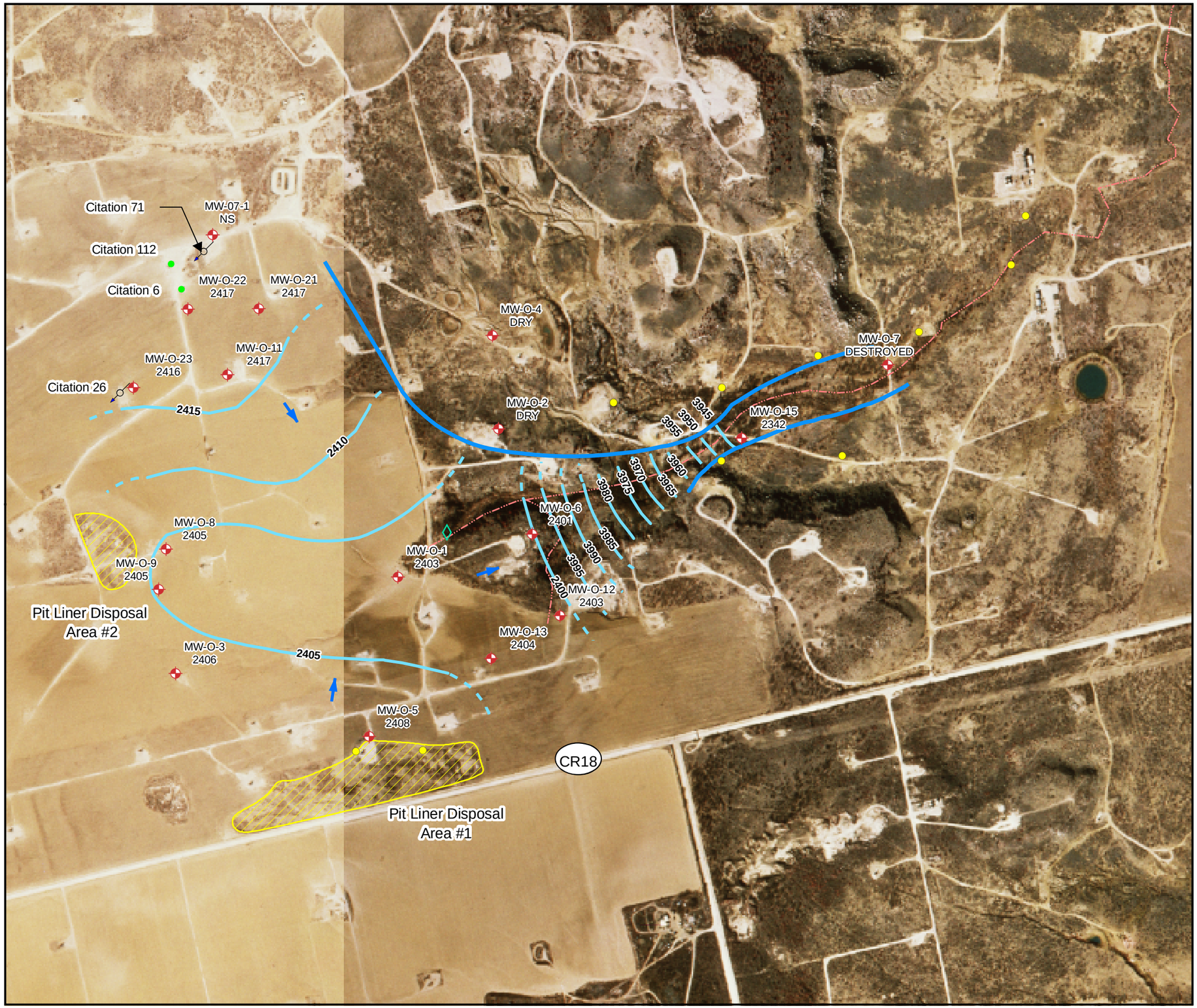
Legend

- Monitor Well
- Seep
- Creek Bed
- Interstate Highway
- State Highway

N
W E
S

0 2,500 5,000 7,500 10,000
Feet

Date: 2/8/2008	Well Location Map	
File: Fig1B_Well_Location_Map.mxd		
Projection: NAD83, UTM Zone 14N		
INTERA	Dugout Creek Near Coahoma, TX	FIGURE 1B



N

0 750 1,500

Feet

Legend

- MW-O-3 2406 — Monitor Well, Water Level Elevation (ft msl)
- Injection Well
- Oil Production Well
- Soil Boring From Previous Investigations
- O'Ryan Seep
- Stream Bed
- Pit Liner
- 2405 — Groundwater Elevation Contour (ft msl), Contour Interval = 5 ft
- Dry Line
- Flow Direction
- CR18 — County Road

Potentiometric Surface Map - O'Ryan Seep

Date: 2/8/08

File: Fig2A_ORyan_Potentio.mxd

Proj: UTM, NAD83 Zone 14

INTERA

O'Ryan Seep
Coahoma, Texas

Figure 2A

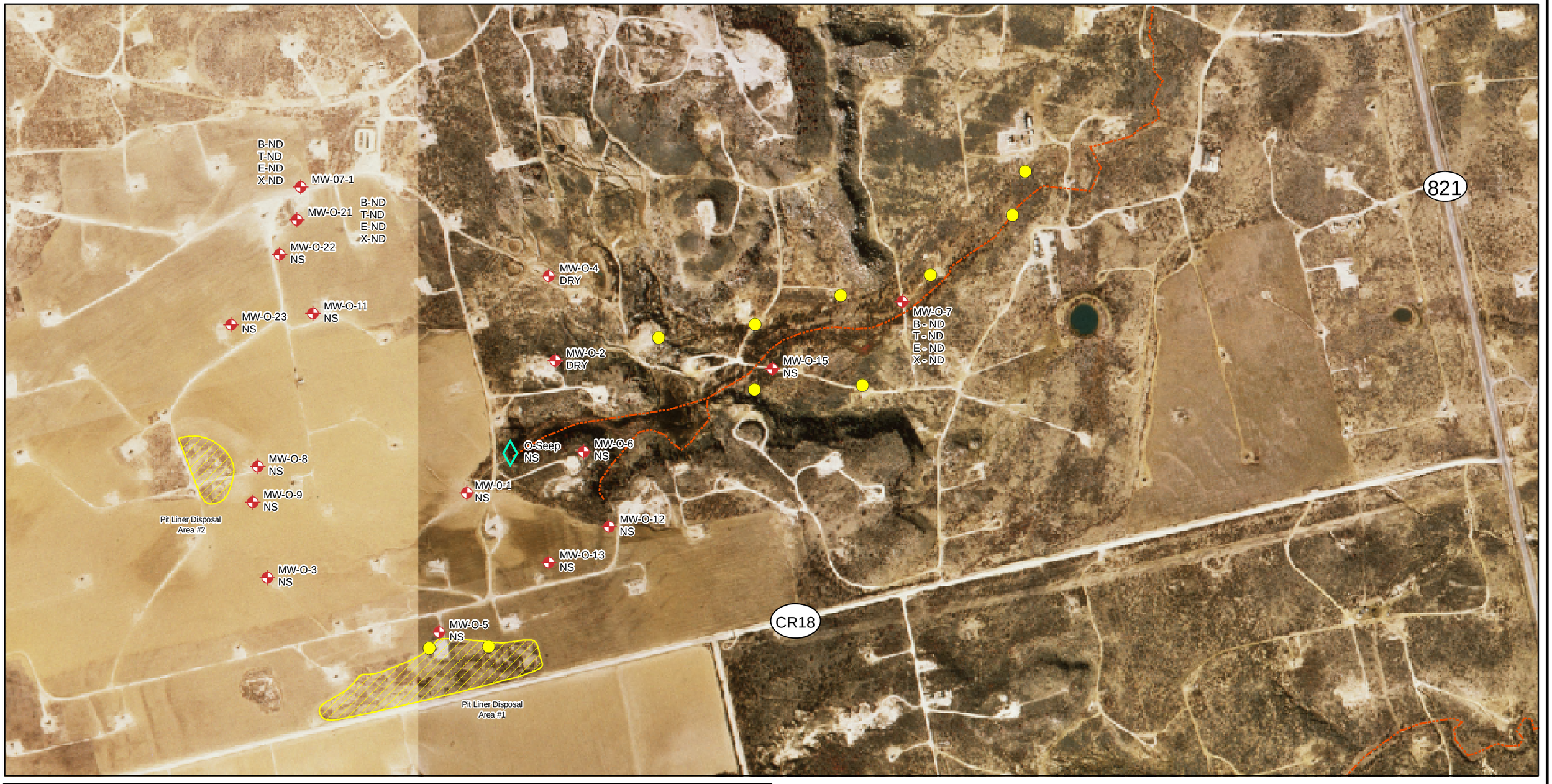
N
W E
S

0 150 300 450
Feet

Legend

- MW-P-2 / 2404 — Monitor Well / Water Level Elevation (ft msl)
- Abandoned Collection Line Manifold
- Pharaoh Seep
- Producing Oil Well
- Groundwater Elevation Contours (ft msl) Contour Interval = 5 ft
- Dry Line
- Flow Direction
- Former Pit Location
- Creek Bed

Date: 2/8/08	Potentiometric Surface Map - Pharaoh Seep	
File: Fig2B_Phar_Potentio.mxd		
Project: RRC-PHR 01-03		
INTERA	Pharaoh Seep Caohoma, Texas	Figure 2B



Legend

- MW-O-21 — Monitor Well
- NS — Not Sampled for BTEX
- ND — No BTEX Constituent Detected
- B — Benzene (mg/L)
- T — Toluene (mg/L)
- E — Ethyl benzene (mg/L)
- X — Xylene (mg/L)
- Seep
- Creek Bed
- 821 — State Highway
- CR18 — County Road
- Soil Borings from Previous Investigations
- Pit Liner

N W E S

0 250 500 1,000 1,500 Feet

Date: 2/8/2008	BTEX Constituents in Groundwater - O' Ryan Seep
File: Fig3A_OR_BTEX.mxd	
Projection: NAD83, UTM Zone 14N	
INTERA	Dugout Creek Near Coahoma, TX — FIGURE 3A

Legend

MW-P-3	Monitor Well	Seep	
NS	Not Sampled for BTEX	Creek	
ND	No BTEX Constituent Detected		
B	Benzene (mg/L), Regulatory Limit = 0.005 mg/L		
T	Toluene (mg/L)		
E	Ethyl benzene (mg/L)		
X	Xylene (mg/L)		

N
W E
S

0 100 200 400 600 Feet

Date: 2/8/2008	BTEX Constituents in Groundwater - Pharaoh Seep	
File: Fig3B_Phar_BTEX.mxd		
Projection: NAD83, UTM Zone 14N		
INTERA	Dugout Creek Near Caohoma, TX	FIGURE 3B

Legend

MW-D-01
11,600
Monitor Well
Chloride Concentration (mg/L)
Regulatory Limit = 300 mg/L

Dugout Creek

0 2,000 4,000 6,000 Feet

N W E S

Date: 2/8/2008	Chloride Levels in Groundwater - Dugout Creek	
File: Fig4A_Dug_Chlor.mxd		
Projection: NAD83, UTM Zone 14N		
INTERA	Dugout Creek Near Caohoma, TX	FIGURE 4A

N

W E

S

0 250 500 1,000 Feet

Legend

MW-O-21 Monitor Well
17,200 Chloride Concentration (mg/L)
Regulatory Limit = 300 mg/L

Soil Borings from Previous Investigations

Seep

Dry Line

Chloride Concentration Contour (mg/L)
Concentration Interval = 1,000 ft
Concentration Interval = 5,000 ft

Creek Bed

Former Pit Location

CR18 County Road

Date: 2/8/08	Chloride Levels in Groundwater- O'Ryan Seep	
File: Fig4B_OR_Chlor.mxd		
Projection: NAD83, UTM Zone 14N		
INTERA	Dugout Creek Near Coahoma, TX	FIGURE 4B

N

W E

S

0 150 300 450

Feet

Legend

- MW-P-3 Monitor Well
  142 Chloride Concentration (mg/L)
  Regulatory Limit = 300 mg/L
- Abandoned Collection Line Manifold
- Seep
- Producing Oil Well
- Former Pit Location
- Chloride Concentration Contour (mg/L)
  Contour Interval = 2000 ft
- Dry Line
- Creek Bed

Date: 2/8/08	Chloride Levels in Groundwater - Pharaoh Seep	
File: Fig4C_Phar_Chlor.mxd		
Project: RRC-PHR 01-03		
INTERA	Pharaoh Seep Caohoma, Texas	Figure 4C

APPENDIX A

DHL Laboratory Analytical Packages

with Data Review Checklists

Data Review Checklist

Client/Project: RRC / Dugout Creek	**Reviewer:** B Rigney	**Review Date:** 2/6/08
Laboratory: DHL **Work Order No.:** 0801050	**Analytical Method:** Anions - E300	**Matrix:** Water

#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
Sample Preservation and Integrity				
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	✓		
2	Were holding times met?	✓		
Data Completeness				
3	Are results reported for all target analytes, with no additional analytes?	✓		
4	Was the requested analytical method followed?	✓		
5	Do reported detection limits (or reporting limits/MDL) agree with the project specifications (QAPP)?		✓	SDL's elevated due to dilution for MW-07-01 for Br + Cl. Both analytes detected. No effect on data quality
6	Are results reported for all samples submitted for analysis?	✓		
Calibration and QC Sample Frequency				
7	Were initial and continuing instrument calibration analyses performed? And reported? [a]	✓		
8	For each analytical batch, are results provided for a method blank?	✓		
9	For each analytical batch, are results provided for an LCS/LCSD pair?	✓		
10	For each analytical batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?	✓		
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	✓		

Data Review Checklist (continued)

Client/Project: RRC / Dragon Creek	Reviewer: B Rigney	Review Date: 2/4/08
Laboratory: DHL	Analytical Method: Anions E300	Matrix: Water
Work Order No.: 0801050		

#	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 **no** detectable concentrations of target analytes (i.e., results = ND)?	✓		
14	Are LCS/LCSD recoveries and RPDs within limits?	✓		
15	Are MS/MSD recoveries and RPDs within limits?	✓		
16	Are surrogate recoveries within limits (organic analyses only)?			NA
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 any analytical anomalies. If this is not true, describe potential impact to sample results.	✓		
19	No other potential data quality issues were identified. If this is not true, describe issues.	✓		

[a] 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

Client/Project: RRC/Dragoon Creek	Reviewer: B Kinney	Review Date: 2/6/08
Laboratory: DHL	Analytical Method: VOCs - 8021	Matrix: Water
Work Order No.: 0801050		

#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
Sample Preservation and Integrity				
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	✓		
2	Were holding times met?	✓		
Data Completeness				
3	Are results reported for all target analytes, with no additional analytes?	✓		
4	Was the requested analytical method followed?	✓		
5	Do reported detection limits (or reporting limits/MDL) agree with the project specifications (QAPP)?	✓		
6	Are results reported for all samples submitted for analysis?	✓		
Calibration and QC Sample Frequency				
7	Were initial and continuing instrument calibration analyses performed? And reported? [a]	✓		
8	For each analytical batch, are results provided for a method blank?	✓		
9	For each analytical batch, are results provided for an LCS/LCSD pair?		✓	Only LCS reported. It is in control as in ICV/CCVs + MS/MSDs. No effect on data quality and data was not qualified.
10	For each analytical batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?	✓		
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	✓		

Data Review Checklist (continued)

Client/Project: RRC / Dugout Creek	Reviewer: BRigney	Review Date: 2/6/08
Laboratory: DHC	Analytical Method: VOCs 8021	Matrix: Water
Work Order No.: 0801050		

#	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?	✓		
QC Results				
13	Do method blank results show **no** detectable concentrations of target analytes (i.e., results = ND)?	✓		
14	Are LCS/LCSD recoveries and RPDs within limits?		✓	LCS is within limits, no LCSD provided. no effect on data quality
15	Are MS/MSD recoveries and RPDs within limits?	✓		
16	Are surrogate recoveries within limits (organic analyses only)?	✓		
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 any analytical anomalies. If this is not true, describe potential impact to sample results.	✓		
19	No other potential data quality issues were identified. If this is not true, describe issues.	✓		

[a] 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:

Trip blank was included in sample cooler; however, it was not on COC. Lab added trip blank to COC and analyzed. There was no effect to data quality.

Data Review Checklist

Client/Project: RRC/Dugout Creek	**Reviewer:** B Rigney	**Review Date:** 2/6/08
Laboratory: DAL **Work Order No.:** 0801050	**Analytical Method:** TDS 2540C	**Matrix:** Water

#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
Sample Preservation and Integrity				
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	✓		
2	Were holding times met?	✓		
Data Completeness				
3	Are results reported for all target analytes, with no additional analytes?	✓		
4	Was the requested analytical method followed?	✓		
5	Do reported detection limits (or reporting limits/MDL) agree with the project specifications (QAPP)?	✓		
6	Are results reported for all samples submitted for analysis?	✓		
Calibration and QC Sample Frequency				
7	Were initial and continuing instrument calibration analyses performed? And reported? [a]		✓	Report of calibration not required. Lab Checklist reports ICV/CCVs were in control. No effect on data quality and data were not qualified.
8	For each analytical batch, are results provided for a method blank?	✓		
9	For each analytical batch, are results provided for an LCS/LCSD pair?		✓	Only LCS provided. Lab dup provided and in control. No effect on data
10	For each analytical batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?		✓	MS/MSD is not run for TDS analysis. LCS + Lab dup ok, No effect on data quality
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	✓		

Data Review Checklist (continued)

Client/Project: ERC / Dupont Creek	Reviewer: BLigney	Review Date: 2/14/08
Laboratory: DHL	Analytical Method: TDS 2540C	Matrix: water
Work Order No.: 0801050		

#	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 **no** detectable concentrations of target analytes (i.e., results = ND)?	✓		
14	Are LCS/LCSD recoveries and RPDs within limits?		✓	No LCSD provided.
15	Are MS/MSD recoveries and RPDs within limits?		✓	No MS/MSD provided
16	Are surrogate recoveries within limits (organic analyses only)?			Lab dup RPD ok. no effect on data quality NA
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 any analytical anomalies. If this is not true, describe potential impact to sample results.	✓		
19	No other potential data quality issues were identified. If this is not true, describe issues.	✓		

[a] 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:

DHL ANALYTICAL

January 22, 2008

Daniel Krause
INTERA Inc.
1812 Centre Creek Dr. #300
Austin, Texas 78754

TEL: (512) 425-2000
FAX (512) 425-2099

Order No.: 0801050

RE: Pharoah

Dear Daniel Krause:

DHL Analytical received 6 sample(s) on 1/10/2008 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: T104704211-06-TX

2300 Double Creek Drive • Round Rock, TX 78664 • Phone (512) 388-8222 • FAX (512) 388-8229
www.dhlanalytical.com

DHL ANALYTICAL

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This report for INTERA Inc. : Pharoah (DHL Work Order 0801050) contains the following information:

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• Analytical Dates Report	12
• Sample Results	13-18
• QC Summary Report	19-27
• MQL Summary Report	28
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January 21, 2008

Approved: _____
John DuPont

2300 Double Creek Drive • Round Rock, TX 78664 • Phone (512) 388-8222 • FAX (512) 388-8229
www.dhlanalytical.com

DHL ANALYTICAL
2300 Double Creek Drive • Round Rock, TX 78664
Phone (512) 388-8222 • FAX (512) 388-8229

№ 34702

CHAIN-OF-CUSTODY

CLIENT: INTERA, INC.
ADDRESS: 1812 Centre Creek Dr, Ste. 300
PHONE: 512-425-2000 FAX 512-425-2099
DATA REPORTED TO: DANIEL KRAUSE, BARBARA RIGNEY
ADDITIONAL REPORT COPIES TO: LYNDA PRICE, MICHELLE TIEMEIER

DATE: 1-8-08 PAGE 1 OF 1
PO #: RRC DUG-03-02 DHL WORK ORDER #: 0801050
PROJECT LOCATION OR NAME: PHARAOH
CLIENT PROJECT #: COLLECTOR:

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

S=SOIL P=PAINT W=WATER SL=SLUDGE A=AIR OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☒ MTBE ☒ | TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☐ | DIESEL - MOD 8015 ☐ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☒ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☒ ALKALINITY ☐

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 NaOH	ICE	UNPRESERVED	BTEX/MTBE	TRPH	GASOLINE	DIESEL	VOC	SVOC	PESTICIDES	PCBS	TCLP METALS	TCLP PEST	TOTAL METALS	LEAD	RCI	TDS	pH	EXPLOSIVES	CHLORIDE	FIELD NOTES
MW-P-08	01	1/8/08	1545	W	P	1				X														X			X	BROMIDE, SULFATE
MW-P-10	02	1/8/08	1635	W	P	1				X														X			X	BROMIDE, SULFATE
MW-P-03	03	1/8/08	1700	W	P	1				X														X			X	BROMIDE, SULFATE
MW-P-02	04	1/8/08	1746	W	P	1				X														X			X	BROMIDE, SULFATE
MW-07-01	05	1/8/08	1707	W	P, G	4	X			X		X												X			X	BROMIDE, SULFATE
Trip Blank	06	1/8/08	—	TB								X																Add TB to COC & analyze for BTEX/MTBE per Daniel K. 1-10-08
TOTAL																													

RELINQUISHED BY: (Signature) DANIEL KRAUSE Daniel Krause DATE/TIME 1/9/08 0730 RECEIVED BY: (Signature) FEDEX TRK 8613 8427 9438
RELINQUISHED BY: (Signature) Fed Ex DATE/TIME 1.10.08 9:00 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ ____

LABORATORY USE ONLY:
RECEIVING TEMP: 4.8°C THERM #: 57
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☒ CARRIER BILL # FX
☐ APC DELIVERY
☐ HAND DELIVERED

49

200

FedEx Express **US Airbill**

FedEx Tracking Number 8613 8427 9438

Form ID No. 0215 — **Recipient's Copy**

1 From This portion can be removed for Recipient's records.

Date 1-9-08 FedEx Tracking Number 861384279438

Sender's Name DANIEL KRAUSE Phone 512 740-0314

Company INTERA INC

Address 1812 CENTRE CREEK DR STE 300 Dept./Floor/Suite/Room

City AUSTIN State TX ZIP 78754

2 Your Internal Billing Reference RRC-DUG-03-02

3 To

Recipient's Name SAMPLE RECEIVING Phone

Company DHL ANALYTICAL

Recipient's Address 2300 DOUBLE CREEK DRIVE Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City ROUND ROCK State TX ZIP 78664

0360460465

8613 8427 9438

4a Express Package Service *Packages up to 150 lbs.*

- ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☒ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- ☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- ☐ FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx 2Day Freight* — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation: ** To most locations.

5 Packaging 1 COOLER

☐ FedEx Envelope* ☐ FedEx Pak* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak. ☐ FedEx Box ☐ FedEx Tube ☒ Other

* Declared value limit $500.

6 Special Handling Include FedEx address in Section 3.

- ☐ SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- ☐ HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- ☐ HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

☒ No ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. ☐ Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below. Obtain Recip. Acct. No. ☐

☒ Sender Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages: 1 Total Weight: 25 lbs. Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- ☐ No Signature Required — Package may be left without obtaining a signature for delivery.
- ☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

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Rev. Date 10/06 Part #158279 ©1994–2006 FedEx PRINTED IN U.S.A. SRF

FedEx 1 Day Freight 1 Day 2 Day Express Saver 3 Day Freight Ground Home Delivery

IX-US 78664

AO-BSMA

Emp# 472383 09JAN08 MAFA

CUSTODY SEAL QE

DATE 1/9/08

SIGNATURE

Quality Environmental Containers
800-255-3950 • 304-255-3900

DANIEL KRAUSE

4.8

DHL Analytical

Sample Receipt Checklist

Client Name INTERA Inc. Date Received: 1/10/2008

Work Order Number 0801050 Received by DU

Checklist completed by: [signature] 1.10.08 (Signature / Date) Reviewed by JD 01/10/08 (Initials / Date)

Carrier name: FedEx 1day

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 ☑	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 ☐	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Adjusted? _____ Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Laboratory Data Package Signature Page

This data package consists of:

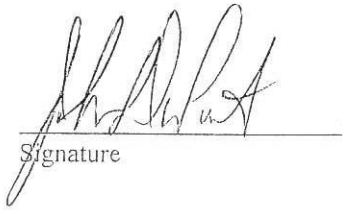
This signature page, the laboratory review checklist, and the following reportable data:

- 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



Signature

01/22/08
Date

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: Pharaoh	Date: 1/22/08
Reviewer Name: Carlos Castro	Laboratory Work Order: 0801050
Prep Batch Number(s): See Prep Dates Report	Run Batch: See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-Custody (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				21-01
		2) Were all departures from standard conditions described in an exception report?			✓		
R2	OI	**Sample and Quality Control (QC) Identification**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
R3	OI	**Test Reports**					
		1) Were all samples prepared and analyzed within holding times?	✓				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	✓				
		3) Were calculations checked by a peer or supervisor?	✓				
		4) Were all analyte identifications checked by a peer or supervisor?	✓				
		5) Were sample quantitation limits reported for all analytes not detected?	✓				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			✓		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			✓		
		8) If required for the project, TICs reported?			✓		
R4	O	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?	✓				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?	✓				
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		1) Were appropriate type(s) of blanks analyzed?	✓				
		2) Were blanks analyzed at the appropriate frequency?	✓				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
		4) Were blank concentrations < MQL?	✓				
R6	OI	**Laboratory Control Samples (LCS):**					
		1) Were all COCs included in the LCS?	✓				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
		3) Were LCSs analyzed at the required frequency?	✓				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
		6) Was the LCSD RPD within QC limits (if applicable)?	✓				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		1) Were the project/method specified analytes included in the MS and MSD?	✓				
		2) Were MS/MSD analyzed at the appropriate frequency?	✓				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	✓				
		4) Were MS/MSD RPDs within laboratory QC limits?	✓				
R8	OI	**Analytical Duplicate Data**					
		1) Were appropriate analytical duplicates analyzed for each matrix?	✓				
		2) Were analytical duplicates analyzed at the appropriate frequency?	✓				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	✓				
R9	OI	**Method Quantitation Limits (MQLs):**					
		1) Are the MQLs for each method analyte included in the laboratory data package?	✓				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
		3) Are unadjusted MQLs included in the laboratory data package?	✓				
R10	OI	**Other Problems/Anomalies**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?			✓		
		2) Were all necessary corrective actions performed for the reported data?	✓				
		3) Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				

1 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.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

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).

DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: Pharaoh	Date: 1/22/08
Reviewer Name: Carlos Castro	Laboratory Work Order: 0801050

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	✓				
		2) Were percent RSDs or correlation coefficient criteria met?	✓				
		3) Was the number of standards recommended in the method used for all analytes?	✓				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
		5) Are ICAL data available for all instruments used?	✓				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	✓				
S2	OI	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):**					
		1) Was the CCV analyzed at the method-required frequency?	✓				
		2) Were percent differences for each analyte within the method-required QC limits?	✓				
		3) Was the ICAL curve verified for each analyte?	✓				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	✓				
S3	O	**Mass Spectral Tuning:**					
		1) Was the appropriate compound for the method used for tuning?			✓		
		2) Were ion abundance data within the method-required QC limits?			✓		
S4	O	**Internal Standards (IS):**					
		1) Were IS area counts and retention times within the method-required QC limits?			✓		
S5	OI	**Raw Data (NELAC section 1 appendix A glossary, and section 5.12)**					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
		2) Were data associated with manual integrations flagged on the raw data?	✓				
S6	O	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?	✓				
S7	O	**Tentatively Identified Compounds (TICs):**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
S8	I	**Interference Check Sample (ICS) Results:**					
		1) Were percent recoveries within method QC limits?			✓		
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
S10	OI	**Method Detection Limit (MDL) Studies**					
		1) Was a MDL study performed for each reported analyte?	✓				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
S11	OI	**Proficiency Test Reports:**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	✓				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5C?	✓				
		2) Is documentation of the analyst's competency up-to-date and on file?	✓				
S15	OI	**Verification/Validation Documentation for Methods** (NELAC Chap 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
S16	OI	**Laboratory Standard Operating Procedures (SOPs):**					
		1) Are laboratory SOPs current and on file for each method performed?	✓				

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.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

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).

CLIENT:	INTERA Inc.
Project:	Pharoah
Lab Order:	0801050

CASE NARRATIVE

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

Method SW8021B - Volatile Organics by GC Analysis
Method E300 - Anions Analysis
Method M2540C - Total Dissolved Solids

Exception Report R1-01

Samples were received and log-in performed on 1/10/07. A total of 6 samples were received. The Trip Blank was included in the cooler but not listed on the Chain-of-Custody (COC). Added the Trip Blank to the COC as per the client. The samples arrived in good condition and were properly packaged.

CLIENT: INTERA Inc.
Project: Pharoah
Lab Order: 0801050

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
0801050-01	MW-P-08		01/08/08 03:45 PM	1/10/2008
0801050-02	MW-P-10		01/08/08 04:35 PM	1/10/2008
0801050-03	MW-P-03		01/08/08 05:00 PM	1/10/2008
0801050-04	MW-P-02		01/08/08 05:46 PM	1/10/2008
0801050-05	MW-07-01		01/08/08 05:07 PM	1/10/2008
0801050-06	Trip Blank		01/08/08	1/10/2008

Lab Order: 0801050
Client: INTERA Inc.
Project: Pharoah

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0801050-01A	MW-P-08	01/08/08 03:45 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-P-08	01/08/08 03:45 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-P-08	01/08/08 03:45 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-P-08	01/08/08 03:45 PM	Aqueous	M2540C	Total Dissolved Solids	01/11/08 10:00 AM	TDS_W-01/11/08
0801050-02A	MW-P-10	01/08/08 04:35 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-P-10	01/08/08 04:35 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-P-10	01/08/08 04:35 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-P-10	01/08/08 04:35 PM	Aqueous	M2540C	Total Dissolved Solids	01/11/08 10:00 AM	TDS_W-01/11/08
0801050-03A	MW-P-03	01/08/08 05:00 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-P-03	01/08/08 05:00 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-P-03	01/08/08 05:00 PM	Aqueous	M2540C	Total Dissolved Solids	01/11/08 10:00 AM	TDS_W-01/11/08
0801050-04A	MW-P-02	01/08/08 05:46 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-P-02	01/08/08 05:46 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-P-02	01/08/08 05:46 PM	Aqueous	M2540C	Total Dissolved Solids	01/11/08 10:00 AM	TDS_W-01/11/08
0801050-05A	MW-07-01	01/08/08 05:07 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-07-01	01/08/08 05:07 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-07-01	01/08/08 05:07 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-07-01	01/08/08 05:07 PM	Aqueous	E300	Anions by IC method - Water	01/10/08	R35574
	MW-07-01	01/08/08 05:07 PM	Aqueous	E300	Anions by IC method - Water	01/11/08	R35602
	MW-07-01	01/08/08 05:07 PM	Aqueous	E300	Anions by IC method - Water	01/18/08	R35721
	MW-07-01	01/08/08 05:07 PM	Aqueous	M2540C	Total Dissolved Solids	01/11/08 10:00 AM	TDS_W-01/11/08
0801050-05B	MW-07-01	01/08/08 05:07 PM	Aqueous	SW5030B	Purge and Trap Water GC	01/14/08 09:44 AM	28697
0801050-06A	Trip Blank	01/08/08	Trip Blank	SW5030B	Purge and Trap Water GC	01/14/08 09:44 AM	28697

Lab Order: 0801050
Client: INTERA Inc.
Project: Pharoah

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0801050-01A	MW-P-08	Aqueous	E300	Anions by IC method - Water	R35574	10	01/10/08 05:31 PM	IC2_080110A
	MW-P-08	Aqueous	E300	Anions by IC method - Water	R35574	10	01/10/08 08:41 PM	IC2_080110A
	MW-P-08	Aqueous	E300	Anions by IC method - Water	R35574	1	01/10/08 04:17 PM	IC2_080110A
	MW-P-08	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/11/08	1	01/14/08 08:30 AM	WC_080111C
0801050-02A	MW-P-10	Aqueous	E300	Anions by IC method - Water	R35574	1	01/10/08 04:32 PM	IC2_080110A
	MW-P-10	Aqueous	E300	Anions by IC method - Water	R35574	10	01/10/08 05:45 PM	IC2_080110A
	MW-P-10	Aqueous	E300	Anions by IC method - Water	R35574	20	01/10/08 06:00 PM	IC2_080110A
	MW-P-10	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/11/08	1	01/14/08 08:30 AM	WC_080111C
0801050-03A	MW-P-03	Aqueous	E300	Anions by IC method - Water	R35574	1	01/10/08 04:47 PM	IC2_080110A
	MW-P-03	Aqueous	E300	Anions by IC method - Water	R35574	5	01/10/08 06:15 PM	IC2_080110A
	MW-P-03	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/11/08	1	01/14/08 08:30 AM	WC_080111C
0801050-04A	MW-P-02	Aqueous	E300	Anions by IC method - Water	R35574	5	01/10/08 06:29 PM	IC2_080110A
	MW-P-02	Aqueous	E300	Anions by IC method - Water	R35574	1	01/10/08 05:01 PM	IC2_080110A
	MW-P-02	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/11/08	1	01/14/08 08:30 AM	WC_080111C
0801050-05A	MW-07-01	Aqueous	E300	Anions by IC method - Water	R35574	1	01/10/08 05:16 PM	IC2_080110A
	MW-07-01	Aqueous	E300	Anions by IC method - Water	R35574	50	01/10/08 07:28 PM	IC2_080110A
	MW-07-01	Aqueous	E300	Anions by IC method - Water	R35574	100	01/10/08 07:43 PM	IC2_080110A
	MW-07-01	Aqueous	E300	Anions by IC method - Water	R35574	1000	01/10/08 07:57 PM	IC2_080110A
	MW-07-01	Aqueous	E300	Anions by IC method - Water	R35602	5	01/11/08 11:19 AM	IC2_080111A
	MW-07-01	Aqueous	E300	Anions by IC method - Water	R35721	1000	01/18/08 12:11 PM	IC2_080118A
	MW-07-01	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/11/08	1	01/14/08 08:30 AM	WC_080111C
0801050-05B	MW-07-01	Aqueous	SW8021B	Volatile Organics by GC	28697	1	01/14/08 12:41 PM	GC9_080114A
0801050-06A	Trip Blank	Trip Blank	SW8021B	Volatile Organics by GC	28697	1	01/14/08 03:38 PM	GC9_080114A

DHL Analytical

Date: *22-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-P-08
oject:	Pharoah	**Lab ID:**	0801050-01
rroject No:	RRC-DUG-03-02	**Collection Date:**	01/08/08 03:45 PM
Lab Order:	0801050	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	0.300	1.00		mg/L	1	01/10/08 04:17 PM
Chloride	420	3.00	10.0		mg/L	10	01/10/08 08:41 PM
Sulfate	225	10.0	30.0		mg/L	10	01/10/08 05:31 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	1380	10.0	10.0		mg/L	1	01/14/08 08:30 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

CLIENT:	INTERA Inc.	Client Sample ID:	MW-P-10
Project:	Pharoah	Lab ID:	0801050-02
Project No:	RRC-DUG-03-02	Collection Date:	01/08/08 04:35 PM
Lab Order:	0801050	Matrix:	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	3.19	0.300	1.00		mg/L	1	01/10/08 04:32 PM
Chloride	497	3.00	10.0		mg/L	10	01/10/08 05:45 PM
Sulfate	179	10.0	30.0		mg/L	10	01/10/08 05:45 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	1410	10.0	10.0		mg/L	1	01/14/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-P-03
oject:	Pharoah	**Lab ID:**	0801050-03
roject No:	RRC-DUG-03-02	**Collection Date:**	01/08/08 05:00 PM
Lab Order:	0801050	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	0.505	0.300	1.00	J	mg/L	1	01/10/08 04:47 PM
Chloride	142	1.50	5.00		mg/L	5	01/10/08 06:15 PM
Sulfate	125	5.00	15.0		mg/L	5	01/10/08 06:15 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	836	10.0	10.0		mg/L	1	01/14/08 08:30 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

CLIENT:	INTERA Inc.	Client Sample ID:	MW-P-02
Project:	Pharoah	Lab ID:	0801050-04
Project No:	RRC-DUG-03-02	Collection Date:	01/08/08 05:46 PM
Lab Order:	0801050	Matrix:	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: JBC
Bromide	0.346	0.300	1.00	J	mg/L	1	01/10/08 05:01 PM
Chloride	93.7	1.50	5.00		mg/L	5	01/10/08 06:29 PM
Sulfate	113	5.00	15.0		mg/L	5	01/10/08 06:29 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: JBC
Total Dissolved Solids (Residue, Filterable)	723	10.0	10.0		mg/L	1	01/14/08 08:30 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

DHL Analytical

Date: *22-Jan-08*

CLIENT:	INTERA Inc.	Client Sample ID:	MW-07-01
Project:	Pharoah	Lab ID:	0801050-05
Project No:	RRC-DUG-03-02	Collection Date:	01/08/08 05:07 PM
Lab Order:	0801050	Matrix:	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **JAW**
Benzene	ND	0.00100	0.00200		mg/L	1	01/14/08 12:41 PM
Ethylbenzene	ND	0.00200	0.00400		mg/L	1	01/14/08 12:41 PM
Methyl tert-butyl ether	ND	0.00200	0.00400		mg/L	1	01/14/08 12:41 PM
Toluene	ND	0.00200	0.00400		mg/L	1	01/14/08 12:41 PM
Xylenes, Total	ND	0.00200	0.00400		mg/L	1	01/14/08 12:41 PM
Surr: a,a,a-Trifluorotoluene	98.4	0	87-113		%REC	1	01/14/08 12:41 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	67.7	1.50	5.00		mg/L	5	01/11/08 11:19 AM
Chloride	7980	300	1000		mg/L	1000	01/18/08 12:11 PM
Sulfate	727	50.0	150		mg/L	50	01/10/08 07:28 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	15400	10.0	10.0		mg/L	1	01/14/08 08:30 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

DHL Analytical

Date: *22-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	Trip Blank
Project:	Pharoah	**Lab ID:**	0801050-06
Project No:	RRC-DUG-03-02	**Collection Date:**	01/08/08
Lab Order:	0801050	**Matrix:**	TRIP BLANK

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **JAW**
Benzene	ND	0.00100	0.00200		mg/L	1	01/14/08 03:38 PM
Ethylbenzene	ND	0.00200	0.00400		mg/L	1	01/14/08 03:38 PM
Methyl tert-butyl ether	ND	0.00200	0.00400		mg/L	1	01/14/08 03:38 PM
Toluene	ND	0.00200	0.00400		mg/L	1	01/14/08 03:38 PM
Xylenes, Total	ND	0.00200	0.00400		mg/L	1	01/14/08 03:38 PM
Surr: a,a,a-Trifluorotoluene	97.6	0	87-113		%REC	1	01/14/08 03:38 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
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: INTERA Inc.
Work Order: 0801050
Project: Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_080114A

Sample ID **LCS-28697**	Batch ID: **28697**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC9_080114A**	Analysis Date: **1/14/2008 10:52:31 A**	Prep Date: **1/14/2008**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0432	0.00600	0.0500	0	86.5	78	122			
Benzene	0.0485	0.00200	0.0500	0	97.1	81	125			
Toluene	0.0505	0.00600	0.0500	0	101	84	123			
Ethylbenzene	0.0496	0.00600	0.0500	0	99.3	83	119			
Xylenes, Total	0.149	0.00900	0.150	0	99.5	81	117			
Surr: a,a,a-Trifluorotoluene	199		200.0		99.4	87	113			

Sample ID **MB-28697**	Batch ID: **28697**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC9_080114A**	Analysis Date: **1/14/2008 11:09:21 A**	Prep Date: **1/14/2008**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	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	200		200.0		100	87	113			

Sample ID **0801064-14AMS**	Batch ID: **28697**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MS**	Run ID: **GC9_080114A**	Analysis Date: **1/14/2008 1:14:57 PM**	Prep Date: **1/14/2008**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0543	0.00600	0.0500	0	109	78	122			
Benzene	0.0508	0.00200	0.0500	0	102	81	125			
Toluene	0.0526	0.00600	0.0500	0	105	84	123			
Ethylbenzene	0.0513	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	201		200.0		101	87	113			

Sample ID **0801064-14AMSD**	Batch ID: **28697**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC9_080114A**	Analysis Date: **1/14/2008 1:31:48 PM**	Prep Date: **1/14/2008**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0535	0.00600	0.0500	0	107	78	122	1.48	20	
Benzene	0.0508	0.00200	0.0500	0	102	81	125	0.0571	20	
Toluene	0.0525	0.00600	0.0500	0	105	84	123	0.147	20	
Ethylbenzene	0.0509	0.00600	0.0500	0	102	83	119	0.716	20	
Xylenes, Total	0.153	0.00900	0.150	0	102	81	117	0.823	20	
Surr: a,a,a-Trifluorotoluene	203		200.0		102	87	113	0	0	

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801050
Project: Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_080114A

Sample ID ICV-080114	Batch ID: R35636	TestNo: SW8021B	Units: mg/L
SampType: ICV	Run ID: GC9_080114A	Analysis Date: 1/14/2008 10:35:40 A	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0890	0.00600	0.100	0	89.0	80	120			
Benzene	0.0972	0.00200	0.100	0	97.2	85	115			
Toluene	0.102	0.00600	0.100	0	102	85	115			
Ethylbenzene	0.101	0.00600	0.100	0	101	85	115			
Xylenes, Total	0.301	0.00900	0.300	0	100	85	115			
Surr: a,a,a-Trifluorotoluene	204		200.0		102	87	113			

Sample ID CCV1-080114	Batch ID: R35636	TestNo: SW8021B	Units: mg/L
SampType: CCV	Run ID: GC9_080114A	Analysis Date: 1/14/2008 2:22:21 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0471	0.00600	0.0500	0	94.1	80	120			
Benzene	0.0512	0.00200	0.0500	0	102	85	115			
Toluene	0.0529	0.00600	0.0500	0	106	85	115			
Ethylbenzene	0.0512	0.00600	0.0500	0	102	85	115			
Xylenes, Total	0.153	0.00900	0.150	0	102	85	115			
Surr: a,a,a-Trifluorotoluene	201		200.0		100	87	113			

Sample ID CCV2-080114	Batch ID: R35636	TestNo: SW8021B	Units: mg/L
SampType: CCV	Run ID: GC9_080114A	Analysis Date: 1/14/2008 8:25:48 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0543	0.00600	0.0500	0	109	80	120			
Benzene	0.0501	0.00200	0.0500	0	100	85	115			
Toluene	0.0515	0.00600	0.0500	0	103	85	115			
Ethylbenzene	0.0508	0.00600	0.0500	0	102	85	115			
Xylenes, Total	0.155	0.00900	0.150	0	103	85	115			
Surr: a,a,a-Trifluorotoluene	194		200.0		96.9	87	113			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801050
Project: Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080110A

Sample ID	ICV-080110	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 9:29:09 AM	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	51.8	1.00	50.00	0	104	90	110			
Chloride	25.6	1.00	25.00	0	102	90	110			
Sulfate	78.4	3.00	75.00	0	104	90	110			

Sample ID	MB-080110	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 9:50:51 AM	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	1.00								
Chloride	ND	1.00								
Sulfate	ND	3.00								

Sample ID	LCS-080110	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 10:05:31 A	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.9	1.00	20.00	0	99.6	90	110			
Chloride	9.84	1.00	10.00	0	98.4	90	110			
ate	30.1	3.00	30.00	0	100	90	110			

Sample ID	LCSD-080110	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 10:20:12 A	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.0	1.00	20.00	0	99.8	90	110	0.256	20	
Chloride	9.86	1.00	10.00	0	98.6	90	110	0.167	20	
Sulfate	30.3	3.00	30.00	0	101	90	110	0.656	20	

Sample ID	CCV1-080110	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 1:21:35 PM	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.9	1.00	20.00	0	99.6	90	110			
Chloride	9.94	1.00	10.00	0	99.4	90	110			
Sulfate	30.5	3.00	30.00	0	102	90	110			

Sample ID	0801046-01D MS	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 2:05:36 PM	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801050
Project: Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080110A

Sample ID	0801046-01D MS	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 2:05:36 PM	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	186	10.0	100.0	91.61	94.5	90	110			

Sample ID	0801046-01D MSD	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 2:20:16 PM	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	186	10.0	100.0	91.61	94.3	90	110	0.112	20	

Sample ID	CCV2-080110	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 4:02:59 PM	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.1	1.00	20.00	0	100	90	110			
Chloride	9.98	1.00	10.00	0	99.8	90	110			
Sulfate	30.6	3.00	30.00	0	102	90	110			

Sample ID	CCV3-080110	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 6:44:23 PM	Prep Date:	1/10/2008

ılyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			
Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	30.5	3.00	30.00	0	102	90	110			

Sample ID	0801050-04A MS	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 6:59:04 PM	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.8	1.00	20.00	0.2000	98.1	90	110			
Sulfate	100	3.00	30.00	69.18	104	90	110			

Sample ID	0801050-04A MSD	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 7:13:44 PM	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.0	1.00	20.00	0.2000	99.2	90	110	1.14	20	
Sulfate	100	3.00	30.00	69.18	104	90	110	0.0115	20	

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801050
Project: Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080110A

Sample ID	CCV4-080110	Batch ID:	R35574	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080110A	Analysis Date:	1/10/2008 9:11:09 PM	Prep Date:	1/10/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			
Chloride	9.98	1.00	10.00	0	99.8	90	110			
Sulfate	30.5	3.00	30.00	0	102	90	110			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801050
Project: Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080111A

Sample ID	ICV-080111	Batch ID:	R35602	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC2_080111A	Analysis Date:	1/11/2008 10:07:13 A	Prep Date:	1/11/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	50.4	1.00	50.00	0	101	90	110			

Sample ID	MB-080111	Batch ID:	R35602	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC2_080111A	Analysis Date:	1/11/2008 10:21:53 A	Prep Date:	1/11/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	1.00								

Sample ID	LCS-080111	Batch ID:	R35602	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC2_080111A	Analysis Date:	1/11/2008 10:36:34 A	Prep Date:	1/11/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.6	1.00	20.00	0	98.0	90	110			

Sample ID	LCSD-080111	Batch ID:	R35602	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC2_080111A	Analysis Date:	1/11/2008 10:51:14 A	Prep Date:	1/11/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
ide	19.7	1.00	20.00	0	98.6	90	110	0.592	20	

Sample ID	CCV1-080111	Batch ID:	R35602	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080111A	Analysis Date:	1/11/2008 11:45:06 A	Prep Date:	1/11/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.0	1.00	20.00	0	99.8	90	110			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801050
Project: Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080118A

Sample ID	ICV-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 9:50:57 AM	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.5	1.00	25.00	0	102	90	110			

Sample ID	MB-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 10:15:42 A	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.00								

Sample ID	LCS-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 10:30:22 A	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.89	1.00	10.00	0	98.9	90	110			

Sample ID	LCSD-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 10:45:02 A	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
ride	9.90	1.00	10.00	0	99.0	90	110	0.140	20	

Sample ID	CCV1-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 12:41:15 P	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.87	1.00	10.00	0	98.7	90	110			

Sample ID	CCV2-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 3:48:13 PM	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.0	1.00	10.00	0	100	90	110			

Sample ID	0801092-01B MS	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 4:04:57 PM	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1750	50.0	500.0	1258	98.0	90	110			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801050
Project: Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080118A

Sample ID	0801092-01B MSD	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 4:19:37 PM	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1740	50.0	500.0	1258	96.8	90	110	0.333	20	

Sample ID	CCV3-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 5:02:59 PM	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.0	1.00	10.00	0	100	90	110			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801050
Project: Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: WC_080111C

Sample ID	MB-080111	Batch ID:	TDS_W-01/11/08	TestNo:	M2540C	Units:	mg/L
SampType:	MBLK	Run ID:	WC_080111C	Analysis Date:	1/14/2008 8:30:00 AM	Prep Date:	1/11/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10.0								

Sample ID	LCS-080111	Batch ID:	TDS_W-01/11/08	TestNo:	M2540C	Units:	mg/L
SampType:	LCS	Run ID:	WC_080111C	Analysis Date:	1/14/2008 8:30:00 AM	Prep Date:	1/11/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	717	10.0	745.6	0	96.2	70	126			

Sample ID	0801046-01D DUP	Batch ID:	TDS_W-01/11/08	TestNo:	M2540C	Units:	mg/L
SampType:	DUP	Run ID:	WC_080111C	Analysis Date:	1/14/2008 8:30:00 AM	Prep Date:	1/11/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	2260	10.0	0	2224				1.56	5	

Sample ID	0801050-05A DUP	Batch ID:	TDS_W-01/11/08	TestNo:	M2540C	Units:	mg/L
SampType:	DUP	Run ID:	WC_080111C	Analysis Date:	1/14/2008 8:30:00 AM	Prep Date:	1/11/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Solids (Residue, Filtera	14900	10.0	0	15420				3.16	5	

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801050
Project: Pharoah

MQL SUMMARY REPORT

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

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

Data Review Checklist

Client/Project: RRC/Dugout Creek	**Reviewer:** B Rigney	**Review Date:** 2/6/08
Laboratory: DHL **Work Order No.:** 0801064	**Analytical Method:** Anions - 300	**Matrix:** Water

#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
Sample Preservation and Integrity				
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	✓		
2	Were holding times met?	✓		
Data Completeness				
3	Are results reported for all target analytes, with no additional analytes?	✓		
4	Was the requested analytical method followed?	✓		
5	Do reported detection limits (or reporting limits/MDL) agree with the project specifications (QAPP)?		✓	SDL was elevated due to sample dilution for MW-0-31, MW-FINA-01, MW-P-01, MW-0-07 MW-07-3, MW-D-01+ SW-P-Seep for Cl. Analyte was detected in all detect samples. There was no effect on data quality.
6	Are results reported for all samples submitted for analysis?	✓		
Calibration and QC Sample Frequency				
7	Were initial and continuing instrument calibration analyses performed? And reported? [a]	✓		
8	For each analytical batch, are results provided for a method blank?	✓		
9	For each analytical batch, are results provided for an LCS/LCSD pair?	✓		
10	For each analytical batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?	✓		
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	✓		Duplicate pairs are: MW-0-23 / MW-1-23 MW-0-21 / MW-0-31 RPD for MW-0-21 / MW-0-31 is above control limits for sulfate.

Data Review Checklist (continued)

Client/Project: RRC/Dugout Creek	**Reviewer:** B Rigney	**Review Date:** 2/6/08
Laboratory: DHL **Work Order No.:** 0801064	**Analytical Method:** Anions-300	**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 **no** detectable concentrations of target analytes (i.e., results = ND)?	✓		
14	Are LCS/LCSD recoveries and RPDs within limits?	✓		
15	Are MS/MSD recoveries and RPDs within limits?		✓	MS/MSD on MW-0-21 for Cl+Br, MW-0-11 for Br had %R below control limits. ICV/CCV + LCS/LCSD in control. Samples were not qualified on the basis of MS/MSD alone. There is no effect on the data quality.
16	Are surrogate recoveries within limits (organic analyses only)?			NA
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 any analytical anomalies. If this is not true, describe potential impact to sample results.	✓		
19	No other potential data quality issues were identified. If this is not true, describe issues.	✓		

[a] 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:

There was a discrepancy between sample id on sample label and id on COC. Lab noticed discrepancy upon sample log in. Lab called Intera and was informed COC was correct. Lab changed sample label. There was no effect on data quality.
Equipment rinse had concentration of 1.27 mg/L of Cl. All project samples had concentrations more than 5X ER. No effect on data.

Data Review Checklist

Client/Project: RRC / Dupont Creek	Reviewer: BKing	Review Date: 2/6/08
Laboratory: DHL Work Order No.: 0801064	Analytical Method: VOCs 8021	Matrix: Water

#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
Sample Preservation and Integrity				
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	✓		
2	Were holding times met?	✓		
Data Completeness				
3	Are results reported for all target analytes, with no additional analytes?	✓		
4	Was the requested analytical method followed?	✓		
5	Do reported detection limits (or reporting limits/MDL) agree with the project specifications (QAPP)?	✓		
6	Are results reported for all samples submitted for analysis?	✓		
Calibration and QC Sample Frequency				
7	Were initial and continuing instrument calibration analyses performed? And reported? [a]	✓		
8	For each analytical batch, are results provided for a method blank?	✓		
9	For each analytical batch, are results provided for an LCS/LCSD pair?		✓	Only LCS provided. ICV/CCV and MS/MSD are in control. No effect on data quality.
10	For each analytical batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?	✓		
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	✓		Duplicate pairs are: MW-0-23 / MW-1-23 MW-0-21 / MW-0-31 RPD's for duplicates are within control limits

Data Review Checklist (continued)

Client/Project: RRC / Dupont Creek	Reviewer: B Rigney	Review Date: 2/06/08
Laboratory: DHL	Analytical Method: VOCs 8021	Matrix: Water
Work Order No.: 0801064		

#	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?	✓		
QC Results				
13	Do method blank results show **no** detectable concentrations of target analytes (i.e., results = ND)?	✓		
14	Are LCS/LCSD recoveries and RPDs within limits?		✓	No LCSD provided. To Lab no effect on data quality
15	Are MS/MSD recoveries and RPDs within limits?	✓		
16	Are surrogate recoveries within limits (organic analyses only)?	✓		
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 any analytical anomalies. If this is not true, describe potential impact to sample results.	✓		
19	No other potential data quality issues were identified. If this is not true, describe issues.	✓		

[a] 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

Client/Project: KRC / Dupont Creek	Reviewer: B Rigney	Review Date: 2/20/08
Laboratory: DHL Work Order No.: 0801064	Analytical Method: TDS 2540C	Matrix: Water

#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
Sample Preservation and Integrity				
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	✓		
2	Were holding times met?	✓		
Data Completeness				
3	Are results reported for all target analytes, with no additional analytes?	✓		
4	Was the requested analytical method followed?	✓		
5	Do reported detection limits (or reporting limits/MDL) agree with the project specifications (QAPP)?	✓		
6	Are results reported for all samples submitted for analysis?	✓		
Calibration and QC Sample Frequency				
7	Were initial and continuing instrument calibration analyses performed? And reported? [a]		✓	Reporting ICV/CCVs is not required. Lab checklist indicates ICV/CCVs ok. no effect on data quality
8	For each analytical batch, are results provided for a method blank?	✓		
9	For each analytical batch, are results provided for an LCS/LCSD pair?		✓	only LCS provided. Lab dup provided and in control. No effect on data quality.
10	For each analytical batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?		✓	MS/MSD is not run for TDS. LCS & Lab dup ok. No effect on data quality.
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	✓		Duplicate pairs are: MW-0-23 / MW-1-23 MW-0-21 / MW-0-31

RPDs for duplicates are within control limits.

Data Review Checklist (continued)

Client/Project: RRC/Dugout Creek	Reviewer: RKinney	Review Date: 2/10/08
Laboratory: PHL	Analytical Method: TDS 2540C	Matrix: Water
Work Order No.: 0801064		

#	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 **no** detectable concentrations of target analytes (i.e., results = ND)?	✓		
14	Are LCS/LCSD recoveries and RPDs within limits?		✓	No LCSD provided.
15	Are MS/MSD recoveries and RPDs within limits?		✓	No MS/MSD provided.
16	Are surrogate recoveries within limits (organic analyses only)?			Lab dup RPD ok. No effect on data quality. NA
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 any analytical anomalies. If this is not true, describe potential impact to sample results.	✓		
19	No other potential data quality issues were identified. If this is not true, describe issues.	✓		

[a] 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:

There was a discrepancy between sample id on sample label and id on COC. Lab noticed discrepancy upon sample log in. Lab called Intera and was informed COC was correct. Lab changed sample label. There was no effect on data quality.

DHL ANALYTICAL

January 24, 2008

Daniel Krause
INTERA Inc.
1812 Centre Creek Dr. #300
Austin, Texas 78754

TEL: (512) 425-2000
FAX (512) 425-2099

Order No.: 0801064

RE: RRC-O'Ryan, Dugout, Pharoah

Dear Daniel Krause:

DHL Analytical received 33 sample(s) on 1/10/2008 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: T104704211-06-TX

2300 Double Creek Drive • Round Rock, TX 78664 • Phone (512) 388-8222 • FAX (512) 388-8229
www.dhlanalytical.com

DHL ANALYTICAL

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January 24, 2008

Approved: _____
John DuPont

2300 Double Creek Drive • Round Rock, TX 78664 • Phone (512) 388-8222 • FAX (512) 388-8229
www.dhlanalytical.com

DHL ANALYTICAL

2300 Double Creek Drive • Round Rock, TX 78664
Phone (512) 388-8222 • FAX (512) 388-8229

№ 34703

CHAIN-OF-CUSTODY

CLIENT: INTERA, Inc.
ADDRESS: 1812 Centre Creek Dr., Ste. 300
PHONE: 512-425-2000 FAX 512-425-2099
DATA REPORTED TO: BARBARA RIGNEY, DANIEL KRAUSE
ADDITIONAL REPORT COPIES TO: MICHELLE TIEMEIER, LYNDA PRICE

DATE: 1/9/08 PAGE 1 OF 2
PO #: DHL WORK ORDER #: 0801064
PROJECT LOCATION OR NAME: ORYAN, DUGOUT, PHARAOH
CLIENT PROJECT #: COLLECTOR:

Authorize 5% surcharge for TRRP report? ☒ Yes ☐ No

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO3	H2SO4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☒ MTBE ☒	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☒ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☒ ALKALINITY ☐	FIELD NOTES
MW-0-15	01	1/9/08	0850	W	P	1				X															X			X			ANIONS = BROMIDE, SULFATE
MW-0-23	02	1/9/08	1055	W	P	1				X															X			X			
MW-1-23	03	1/9/08	1040	W	P	1				X															X			X			
MW-0-11	04	1/9/08	1135	W	P	3				X															X			X			MS/MSD
MW-0-8	05	1/9/08	1223	W	P	1				X															X			X			
MW-0-9	06	1/9/08	1255	W	P	1				X															X			X			
MW-0-3	07	1/9/08	1350	W	P	1				X															X			X			
MW-0-5	08	1/9/08	1501	W	P	1				X															X			X			
MW-0-12	09	1/9/08	1530	W	P	1				X															X			X			
MW-0-13	10	1/9/08	1610	W	P	1				X															X			X			
MW-0-1	11	1/9/08	1637	W	P	1				X															X			X			
MW-0-6	12	1/9/08	1725	W	P	1				X															X			X			
MW-0-22	13	1/9/08	1015	W	P	1				X															X			X			
MW-0-21	14	1/9/08	0940	W	P, G	12	X			X															X			X			MS/MSD
MW-0-31	15	1/9/08	0848	W	P, G	4	X			X															X			X			
TOTAL																															

RELINQUISHED BY: (Signature) MYamen DATE/TIME 1/10/08 17:12 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐ ____

LABORATORY USE ONLY:
RECEIVING TEMP: 3.1°C THERM #: 57
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL # ____
☐ APC DELIVERY
☒ HAND DELIVERED

DHL ANALYTICAL

2300 Double Creek Drive • Round Rock, TX 78664
Phone (512) 388-8222 • FAX (512) 388-8229

№ 34705

CHAIN-OF-CUSTODY

CLIENT: INTERA, Inc
ADDRESS: 1812 Center Creek Dr, Suite 300
PHONE: 512-425-2000 FAX 512-425-2099
DATA REPORTED TO: D. Krause, L. Prile
ADDITIONAL REPORT COPIES TO: M. Tiemeier, B. Rigney

DATE: 1/9/08 PAGE 2 OF 2
PO #: DHL WORK ORDER #: 0801064
PROJECT LOCATION OR NAME: Dugout, ORYAN, Pharah
CLIENT PROJECT #: COLLECTOR:

Authorize 5% surcharge for TRRP report? ☒ Yes ☐ No

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☒ MTBE ☒ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☐ | DIESEL - MOD 8015 ☐ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☒ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	FIELD NOTES
MW-P-09	16	1/9/08	1155	W	P,G	4	X			X		ANIONS = Bromide, sulfate
MW-FINA-01	17	1/9/08	1305	W	P,G	4	X			X		
MW-P-01	18	1/9/08	1424	W	P,G	4	X			X		
ER	19	1/9/08	1500	W	P,G	4	X			X		
MW-0-7	20	1/9/08	1545	W	P,G	4	X			X		
MW-D-07	21	1/9/08	1655	W	P	1				X		
MW-D-08	22	1/9/08	1754	W	P	1				X		
TRIP BLANK	23	~~1/9/08~~	~~1910~~									
MW-07-2	24	1/10/08	~~1026~~ 0910	W	P	1				X		TIME 0910
MW-D-2	25	1/10/08	1026	W	P	1				X		
MW-07-3	26	1/10/08	1101	W	P	1				X		
~~MW-D-10~~ DUP		~~1/10/08~~	~~1026~~									
TOTAL												

RELINQUISHED BY: (Signature) Mary Tiemeier DATE/TIME 1/10/08 17:12 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐ ____

LABORATORY USE ONLY:
RECEIVING TEMP: 3.1 °C THERM #: 57
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL # ____
☐ APC DELIVERY
☒ HAND DELIVERED

DHL ANALYTICAL

2300 Double Creek Drive • Round Rock, TX 78664
Phone (512) 388-8222 • FAX (512) 388-8229

№ 34700

CHAIN-OF-CUSTODY

CLIENT: Intera, Inc.
ADDRESS: 1812 Center Creek Dr., Suite 300
PHONE: 512-425-2000 FAX 512-425-2099
DATA REPORTED TO: B. Rigney, D. Krause
ADDITIONAL REPORT COPIES TO: L. Price, M. Tiemeier

DATE: 1/10/08 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 0801064
PROJECT LOCATION OR NAME: Dugout Creek
CLIENT PROJECT #: RRC-DUG-13-02 COLLECTOR:

Authorize 5% surcharge for TRRP report? ☒ Yes ☐ No

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ | TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☐ | DIESEL - MOD 8015 ☐ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☒ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☒ ALKALINITY ☐

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 NaOH	ICE	UNPRESERVED	FIELD NOTES
MW-D-10	27	1/10/08	0904	W	P	1				X		
MW-D-01	28	1/10/08	1002	W	P	1				X		
MW-D-06	29	1/10/08	1306	W	P	1				X		
MW-D-05	30	1/10/08	1424	W	P	1				X		
MW-D-04	31	1/10/08	1502	W	P	1				X		
SW-D-Seep	32	1/10/08	1638	W	P	1				X		
SW-P-Seep	33	1/10/08	1656	W	P	1				X		

TOTAL

RELINQUISHED BY: (Signature) Lynda Price — DATE/TIME 1/11/08 11:15am — RECEIVED BY: (Signature) COURIER
RELINQUISHED BY: (Signature) APC — DATE/TIME 1-11-08 14:55 — RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) — DATE/TIME — RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ ____

LABORATORY USE ONLY:
RECEIVING TEMP: 5.5°C THERM #: 57
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL # ____
☒ APC DELIVERY
☐ HAND DELIVERED

AUSTIN PROFESSIONAL COURIERS

SERVING GREATER AUSTIN
415 Texas Avenue #A1
Round Rock, Texas 78664
(512) 246-1100
Fax (512) 246-8874

Account No.	Date	
	11/1/8	765531

SHIPPER		CONSIGNEE
Delivery charges paid by: Shipper ☐ Consignee ☐ Other ☐	Service Type: 1 Hr. ☐ 2 Hr. ☐ 4 Hr. ☐ After Hours. ☐ Round trip ☐	
INTERD	DHL	
	Attn: Suite No.:	

No. of Pieces	Description/Special Instruction
1	

Client Ref. No.		Weight			
		Extra time			
Driver 1		Mileage			
Driver 2		COD Amount			
P/U time	Del. time	Total Charges			
2:30	2:57				

Received by:

CUSTODY SE
DATE 1/10/8
SIGNATURE

AL QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900

DHL Analytical

Sample Receipt Checklist

Client Name INTERA Inc. Date Received: 1/10/2008

Work Order Number 0801064 Received by DU

Checklist completed by: [signature] 1.11.08 (Signature / Date) Reviewed by [initials] 01/11/08 (Initials / Date)

Carrier name: Hand Delivered

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 ☑	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 ☐	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Adjusted? _____ Checked by _____

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

Client contacted Intera Date contacted: 1.11.08 Person contacted Daniel Krause

Contacted by: Debbie H. Regarding: Sample -25 ID

Comments: Coc ID = MW-D-2 label ID = MW-D-10

Corrective Action COC ID is correct for this sample

Laboratory Data Package Signature Page

This data package consists of:

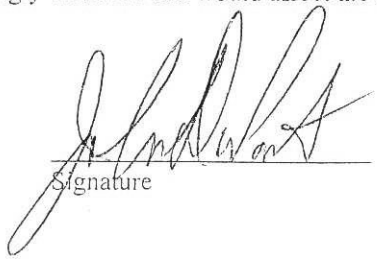
This signature page, the laboratory review checklist, and the following reportable data:

- 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



Signature

01/24/08
Date

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: RRC-O'Ryan, Dugout, Pharoah	Date: 1/24/08
Reviewer Name: Carlos Castro	Laboratory Work Order: 0801064
Prep Batch Number(s): See Prep Dates Report	Run Batch: See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-Custody (C-O-C)					
R1	OI	1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		✓			R1-01
		2) Were all departures from standard conditions described in an exception report?	✓				
R2	OI	**Sample and Quality Control (QC) Identification**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
R3	OI	**Test Reports**					
		1) Were all samples prepared and analyzed within holding times?	✓				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	✓				
		3) Were calculations checked by a peer or supervisor?	✓				
		4) Were all analyte identifications checked by a peer or supervisor?	✓				
		5) Were sample quantitation limits reported for all analytes not detected?	✓				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			✓		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			✓		
		8) If required for the project, TICs reported?			✓		
R4	O	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			✓		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			✓		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		1) Were appropriate type(s) of blanks analyzed?	✓				
		2) Were blanks analyzed at the appropriate frequency?	✓				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
		4) Were blank concentrations < MQL?	✓				
R6	OI	**Laboratory Control Samples (LCS):**					
		1) Were all COCs included in the LCS?	✓				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
		3) Were LCSs analyzed at the required frequency?	✓				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
		6) Was the LCSD RPD within QC limits (if applicable)?	✓				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		1) Were the project/method specified analytes included in the MS and MSD?	✓				
		2) Were MS/MSD analyzed at the appropriate frequency?	✓				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		✓			R2-03
		4) Were MS/MSD RPDs within laboratory QC limits?	✓				
R8	OI	**Analytical Duplicate Data**					
		1) Were appropriate analytical duplicates analyzed for each matrix?	✓				
		2) Were analytical duplicates analyzed at the appropriate frequency?	✓				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	✓				
R9	OI	**Method Quantitation Limits (MQLs):**					
		1) Are the MQLs for each method analyte included in the laboratory data package?	✓				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
		3) Are unadjusted MQLs included in the laboratory data package?	✓				
R10	OI	**Other Problems/Anomalies**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
		2) Were all necessary corrective actions performed for the reported data?	✓				
		3) Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				

1 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.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
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).

DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: RRC-O'Ryan, Ougout, Pharoah	Date: 1/24/08
Reviewer Name: Carlos Castro	Laboratory Work Order: 0801064

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	✓				
		2) Were percent RSDs or correlation coefficient criteria met?	✓				
		3) Was the number of standards recommended in the method used for all analytes?	✓				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
		5) Are ICAL data available for all instruments used?	✓				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	✓				
S2	OI	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):**					
		1) Was the CCV analyzed at the method-required frequency?	✓				
		2) Were percent differences for each analyte within the method-required QC limits?	✓				
		3) Was the ICAL curve verified for each analyte?	✓				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	✓				
S3	O	**Mass Spectral Tuning:**					
		1) Was the appropriate compound for the method used for tuning?			✓		
		2) Were ion abundance data within the method-required QC limits?			✓		
S4	O	**Internal Standards (IS):**					
		1) Were IS area counts and retention times within the method-required QC limits?			✓		
S5	OI	**Raw Data (NELAC section 1 appendix A glossary, and section 5.12)**					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
		2) Were data associated with manual integrations flagged on the raw data?	✓				
S6	O	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?	✓				
S7	O	**Tentatively Identified Compounds (TICs):**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
S8	I	**Interference Check Sample (ICS) Results:**					
		1) Were percent recoveries within method QC limits?			✓		
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
S10	OI	**Method Detection Limit (MDL) Studies**					
		1) Was a MDL study performed for each reported analyte?	✓				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
S11	OI	**Proficiency Test Reports:**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	✓				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5C?	✓				
		2) Is documentation of the analyst's competency up-to-date and on file?	✓				
S15	OI	**Verification/Validation Documentation for Methods** (NELAC Chap 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
S16	OI	**Laboratory Standard Operating Procedures (SOPs):**					
		1) Are laboratory SOPs current and on file for each method performed?	✓				

1 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.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

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).

DHL Analytical Date: *24-Jan-08*

CLIENT:	INTERA Inc.
Project:	RRC-O'Ryan, Dugout, Pharoah
Lab Order:	0801064

CASE NARRATIVE

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

Method SW8021B - Volatile Organics by GC Analysis
Method E300 - Anions Analysis
Method M2540C - Total Dissolved Solids

Exception Report R1-01

Samples were received and log-in performed on 1/10/07. A total of 33 samples were received. There was one discrepancy between the sample ID on the Chain of Custody (COC) and the sample label for a sample. The COC had the ID as MW-D-2 and the sample label had the ID MW-D-10. As per the client, the COC was correct and the ID on the label was changed.

Exception Report R7-03 and R7-04

For Anion analysis, the matrix spikes and/or matrix spike duplicates (0801064-04A MS/MSD and 0801064-14B MS) were slightly below control limits for Bromide or Chloride. These are flagged accordingly in the QC summary report. The reference samples selected for the matrix spikes and matrix spike duplicates were from this work order. The LCS was within control limits for these analytes. No further corrective actions were taken.

Exception Report R10-01

For Bromide analysis of samples MW-O-21 and SW-O-Seep, the Chloride concentration caused the Chloride peak to coelute with the Bromide peak and the sample required dilution. However, after dilution the bromide was below detection limits.

DHL Analytical

Date: *24-Jan-08*

CLIENT: INTERA Inc.
Project: RRC-O'Ryan, Dugout, Pharoah
Lab Order: 0801064

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
0801064-01	MW-O-15		01/09/08 08:50 AM	1/10/2008
0801064-02	MW-O-23		01/09/08 10:55 AM	1/10/2008
0801064-03	MW-I-23		01/09/08 10:40 AM	1/10/2008
0801064-04	MW-O-11		01/09/08 11:35 AM	1/10/2008
0801064-05	MW-O-8		01/09/08 12:23 PM	1/10/2008
0801064-06	MW-O-9		01/09/08 12:55 PM	1/10/2008
0801064-07	MW-O-3		01/09/08 01:50 PM	1/10/2008
0801064-08	MW-O-5		01/09/08 03:01 PM	1/10/2008
0801064-09	MW-O-12		01/09/08 03:30 PM	1/10/2008
0801064-10	MW-O-13		01/09/08 04:10 PM	1/10/2008
0801064-11	MW-O-1		01/09/08 04:37 PM	1/10/2008
0801064-12	MW-O-6		01/09/08 05:25 PM	1/10/2008
0801064-13	MW-O-22		01/09/08 10:15 AM	1/10/2008
0801064-14	MW-O-21		01/09/08 09:40 AM	1/10/2008
0801064-15	MW-O-31		01/09/08 08:48 AM	1/10/2008
0801064-16	MW-P-09		01/09/08 11:55 AM	1/10/2008
01064-17	MW-FINA-01		01/09/08 01:05 PM	1/10/2008
0801064-18	MW-P-01		01/09/08 02:24 PM	1/10/2008
0801064-19	ER		01/09/08 03:00 PM	1/10/2008
0801064-20	MW-O-7		01/09/08 03:45 PM	1/10/2008
0801064-21	MW-D-07		01/09/08 04:55 PM	1/10/2008
0801064-22	MW-D-08		01/09/08 05:54 PM	1/10/2008
0801064-23	Trip Blank		01/09/08	1/10/2008
0801064-24	MW-07-2		01/10/08 09:10 AM	1/10/2008
0801064-25	MW-D-2		01/10/08 10:26 AM	1/10/2008
0801064-26	MW-07-3		01/10/08 11:06 AM	1/10/2008
0801064-27	MW-D-10		01/10/08 09:04 AM	1/11/2008
0801064-28	MW-D-01		01/10/08 10:02 AM	1/11/2008
0801064-29	MW-D-06		01/10/08 01:06 PM	1/11/2008
0801064-30	MW-D-05		01/10/08 02:24 PM	1/11/2008
0801064-31	MW-D-04		01/10/08 03:02 PM	1/11/2008
0801064-32	SW-O-Seep		01/10/08 04:38 PM	1/11/2008
0801064-33	SW-P-Seep		01/10/08 04:56 PM	1/11/2008

Lab Order: 0801064
Client: INTERA Inc.
Project: RRC-O'Ryan, Dugout, Pharoah

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0801064-01A	MW-O-15	01/09/08 08:50 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-15	01/09/08 08:50 AM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-15	01/09/08 08:50 AM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-02A	MW-O-23	01/09/08 10:55 AM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-23	01/09/08 10:55 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-23	01/09/08 10:55 AM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-03A	MW-I-23	01/09/08 10:40 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-I-23	01/09/08 10:40 AM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-I-23	01/09/08 10:40 AM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-04A	MW-O-11	01/09/08 11:35 AM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-11	01/09/08 11:35 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-11	01/09/08 11:35 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-11	01/09/08 11:35 AM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-11	01/09/08 11:35 AM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-05A	MW-O-8	01/09/08 12:23 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-8	01/09/08 12:23 PM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-8	01/09/08 12:23 PM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-06A	MW-O-9	01/09/08 12:55 PM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-9	01/09/08 12:55 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-9	01/09/08 12:55 PM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-07A	MW-O-3	01/09/08 01:50 PM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-3	01/09/08 01:50 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-3	01/09/08 01:50 PM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-08A	MW-O-5	01/09/08 03:01 PM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-5	01/09/08 03:01 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-5	01/09/08 03:01 PM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-09A	MW-O-12	01/09/08 03:30 PM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-12	01/09/08 03:30 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658

Lab Order: 0801064
Client: INTERA Inc.
Project: RRC-O'Ryan, Dugout, Pharoah

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0801064-09A	MW-O-12	01/09/08 03:30 PM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-10A	MW-O-13	01/09/08 04:10 PM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-13	01/09/08 04:10 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-13	01/09/08 04:10 PM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-11A	MW-O-1	01/09/08 04:37 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-1	01/09/08 04:37 PM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-1	01/09/08 04:37 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-1	01/09/08 04:37 PM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-12A	MW-O-6	01/09/08 05:25 PM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-6	01/09/08 05:25 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-6	01/09/08 05:25 PM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-13A	MW-O-22	01/09/08 10:15 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-22	01/09/08 10:15 AM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-22	01/09/08 10:15 AM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-14A	MW-O-21	01/09/08 09:40 AM	Aqueous	SW5030B	Purge and Trap Water GC	01/14/08 09:44 AM	28697
0801064-14B	MW-O-21	01/09/08 09:40 AM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-21	01/09/08 09:40 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-21	01/09/08 09:40 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-21	01/09/08 09:40 AM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-15A	MW-O-31	01/09/08 08:48 AM	Aqueous	SW5030B	Purge and Trap Water GC	01/14/08 09:44 AM	28697
0801064-15B	MW-O-31	01/09/08 08:48 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-31	01/09/08 08:48 AM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-31	01/09/08 08:48 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-31	01/09/08 08:48 AM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-16A	MW-P-09	01/09/08 11:55 AM	Aqueous	SW5030B	Purge and Trap Water GC	01/14/08 09:44 AM	28697
0801064-16B	MW-P-09	01/09/08 11:55 AM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-P-09	01/09/08 11:55 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-P-09	01/09/08 11:55 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658

Lab Order: 0801064
Client: INTERA Inc.
Project: RRC-O'Ryan, Dugout, Pharoah

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0801064-16B	MW-P-09	01/09/08 11:55 AM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-17A	MW-FINA-01	01/09/08 01:05 PM	Aqueous	SW5030B	Purge and Trap Water GC	01/14/08 09:44 AM	28697
0801064-17B	MW-FINA-01	01/09/08 01:05 PM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-FINA-01	01/09/08 01:05 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-FINA-01	01/09/08 01:05 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-FINA-01	01/09/08 01:05 PM	Aqueous	E300	Anions by IC method - Water	01/18/08	R35721
	MW-FINA-01	01/09/08 01:05 PM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-18A	MW-P-01	01/09/08 02:24 PM	Aqueous	SW5030B	Purge and Trap Water GC	01/14/08 09:44 AM	28697
0801064-18B	MW-P-01	01/09/08 02:24 PM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-P-01	01/09/08 02:24 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-P-01	01/09/08 02:24 PM	Aqueous	E300	Anions by IC method - Water	01/18/08	R35721
	MW-P-01	01/09/08 02:24 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-P-01	01/09/08 02:24 PM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-19A	ER	01/09/08 03:00 PM	Equipment Blank	SW5030B	Purge and Trap Water GC	01/14/08 09:44 AM	28697
0801064-19B	ER	01/09/08 03:00 PM	Equipment Blank	E300	Anions by IC method - Water	01/15/08	R35658
	ER	01/09/08 03:00 PM	Equipment Blank	E300	Anions by IC method - Water	01/15/08	R35656
	ER	01/09/08 03:00 PM	Equipment Blank	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-20A	MW-O-7	01/09/08 03:45 PM	Aqueous	SW5030B	Purge and Trap Water GC	01/14/08 09:44 AM	28697
0801064-20B	MW-O-7	01/09/08 03:45 PM	Aqueous	E300	Anions by IC method - Water	01/14/08	R35633
	MW-O-7	01/09/08 03:45 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-7	01/09/08 03:45 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35658
	MW-O-7	01/09/08 03:45 PM	Aqueous	M2540C	Total Dissolved Solids	01/14/08 01:30 PM	TDS_W-01/14/08
0801064-21A	MW-D-07	01/09/08 04:55 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-07	01/09/08 04:55 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-07	01/09/08 04:55 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-07	01/09/08 04:55 PM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-22A	MW-D-08	01/09/08 05:54 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-08	01/09/08 05:54 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656

Lab Order: 0801064
Client: INTERA Inc.
Project: RRC-O'Ryan, Dugout, Pharoah

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0801064-22A	MW-D-08	01/09/08 05:54 PM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-23A	Trip Blank	01/09/08	Trip Blank	SW5030B	Purge and Trap Water GC	01/14/08 09:44 AM	28697
0801064-24A	MW-07-2	01/10/08 09:10 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-07-2	01/10/08 09:10 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-07-2	01/10/08 09:10 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-07-2	01/10/08 09:10 AM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-25A	MW-D-2	01/10/08 10:26 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-2	01/10/08 10:26 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-2	01/10/08 10:26 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-2	01/10/08 10:26 AM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-26A	MW-07-3	01/10/08 11:06 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-07-3	01/10/08 11:06 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-07-3	01/10/08 11:06 AM	Aqueous	E300	Anions by IC method - Water	01/18/08	R35721
	MW-07-3	01/10/08 11:06 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-07-3	01/10/08 11:06 AM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-27A	MW-D-10	01/10/08 09:04 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-10	01/10/08 09:04 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-10	01/10/08 09:04 AM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-28A	MW-D-01	01/10/08 10:02 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-01	01/10/08 10:02 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-01	01/10/08 10:02 AM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-01	01/10/08 10:02 AM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-29A	MW-D-06	01/10/08 01:06 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-06	01/10/08 01:06 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-06	01/10/08 01:06 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-06	01/10/08 01:06 PM	Aqueous	E300	Anions by IC method - Water	01/18/08	R35721
	MW-D-06	01/10/08 01:06 PM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-30A	MW-D-05	01/10/08 02:24 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656

Lab Order: 0801064
Client: INTERA Inc.
Project: RRC-O'Ryan, Du gout, Pharoah

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0801064-30A	MW-D-05	01/10/08 02:24 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-05	01/10/08 02:24 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-05	01/10/08 02:24 PM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-31A	MW-D-04	01/10/08 03:02 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-04	01/10/08 03:02 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-04	01/10/08 03:02 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	MW-D-04	01/10/08 03:02 PM	Aqueous	E300	Anions by IC method - Water	01/16/08	R35679
	MW-D-04	01/10/08 03:02 PM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-32A	SW-O-Seep	01/10/08 04:38 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	SW-O-Seep	01/10/08 04:38 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	SW-O-Seep	01/10/08 04:38 PM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08
0801064-33A	SW-P-Seep	01/10/08 04:56 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	SW-P-Seep	01/10/08 04:56 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	SW-P-Seep	01/10/08 04:56 PM	Aqueous	E300	Anions by IC method - Water	01/15/08	R35656
	SW-P-Seep	01/10/08 04:56 PM	Aqueous	E300	Anions by IC method - Water	01/16/08	R35679
	SW-P-Seep	01/10/08 04:56 PM	Aqueous	E300	Anions by IC method - Water	01/18/08	R35721
	SW-P-Seep	01/10/08 04:56 PM	Aqueous	M2540C	Total Dissolved Solids	01/16/08 01:00 PM	TDS_W-01/16/08

Lab Order: 0801064
Client: INTERA Inc.
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0801064-01A	MW-O-15	Aqueous	E300	Anions by IC method - Water	R35633	2	01/14/08 11:13 AM	IC2_080114A
	MW-O-15	Aqueous	E300	Anions by IC method - Water	R35658	100	01/15/08 11:35 AM	IC_080115A
	MW-O-15	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-02A	MW-O-23	Aqueous	E300	Anions by IC method - Water	R35658	10	01/15/08 11:50 AM	IC_080115A
	MW-O-23	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 11:27 AM	IC2_080114A
	MW-O-23	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-03A	MW-I-23	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 11:42 AM	IC2_080114A
	MW-I-23	Aqueous	E300	Anions by IC method - Water	R35658	10	01/15/08 12:06 PM	IC_080115A
	MW-I-23	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-04A	MW-O-11	Aqueous	E300	Anions by IC method - Water	R35658	10	01/15/08 01:40 PM	IC_080115A
	MW-O-11	Aqueous	E300	Anions by IC method - Water	R35633	2	01/14/08 11:57 AM	IC2_080114A
	MW-O-11	Aqueous	E300	Anions by IC method - Water	R35633	2	01/14/08 02:25 PM	IC2_080114A
	MW-O-11	Aqueous	E300	Anions by IC method - Water	R35658	100	01/15/08 12:22 PM	IC_080115A
	MW-O-11	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-05A	MW-O-8	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 12:12 PM	IC2_080114A
	MW-O-8	Aqueous	E300	Anions by IC method - Water	R35658	50	01/15/08 01:09 PM	IC_080115A
	MW-O-8	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-06A	MW-O-9	Aqueous	E300	Anions by IC method - Water	R35658	10	01/15/08 02:24 PM	IC_080115A
	MW-O-9	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 01:13 PM	IC2_080114A
	MW-O-9	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-07A	MW-O-3	Aqueous	E300	Anions by IC method - Water	R35658	50	01/15/08 02:39 PM	IC_080115A
	MW-O-3	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 01:27 PM	IC2_080114A
	MW-O-3	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-08A	MW-O-5	Aqueous	E300	Anions by IC method - Water	R35658	100	01/15/08 02:54 PM	IC_080115A
	MW-O-5	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 01:42 PM	IC2_080114A
	MW-O-5	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-09A	MW-O-12	Aqueous	E300	Anions by IC method - Water	R35658	10	01/15/08 03:08 PM	IC_080115A
	MW-O-12	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 01:57 PM	IC2_080114A

Lab Order: 0801064
Client: INTERA Inc.
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0801064-09A	MW-O-12	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-10A	MW-O-13	Aqueous	E300	Anions by IC method - Water	R35658	10	01/15/08 03:23 PM	IC_080115A
	MW-O-13	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 02:10 PM	IC2_080114A
	MW-O-13	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-11A	MW-O-1	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 03:09 PM	IC2_080114A
	MW-O-1	Aqueous	E300	Anions by IC method - Water	R35658	10	01/15/08 03:38 PM	IC_080115A
	MW-O-1	Aqueous	E300	Anions by IC method - Water	R35658	20	01/15/08 03:52 PM	IC_080115A
	MW-O-1	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-12A	MW-O-6	Aqueous	E300	Anions by IC method - Water	R35658	50	01/15/08 04:22 PM	IC_080115A
	MW-O-6	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 03:24 PM	IC2_080114A
	MW-O-6	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-13A	MW-O-22	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 03:57 PM	IC2_080114A
	MW-O-22	Aqueous	E300	Anions by IC method - Water	R35658	20	01/15/08 04:36 PM	IC_080115A
	MW-O-22	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-14A	MW-O-21	Aqueous	SW8021B	Volatile Organics by GC	28697	1	01/14/08 12:57 PM	GC9_080114A
0801064-14B	MW-O-21	Aqueous	E300	Anions by IC method - Water	R35658	100	01/15/08 04:51 PM	IC_080115A
	MW-O-21	Aqueous	E300	Anions by IC method - Water	R35658	500	01/15/08 05:46 PM	IC_080115A
	MW-O-21	Aqueous	E300	Anions by IC method - Water	R35633	10	01/14/08 04:11 PM	IC2_080114A
	MW-O-21	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-15A	MW-O-31	Aqueous	SW8021B	Volatile Organics by GC	28697	1	01/14/08 01:48 PM	GC9_080114A
0801064-15B	MW-O-31	Aqueous	E300	Anions by IC method - Water	R35633	10	01/14/08 04:55 PM	IC2_080114A
	MW-O-31	Aqueous	E300	Anions by IC method - Water	R35658	50	01/15/08 06:33 PM	IC_080115A
	MW-O-31	Aqueous	E300	Anions by IC method - Water	R35658	1000	01/15/08 06:48 PM	IC_080115A
	MW-O-31	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-16A	MW-P-09	Aqueous	SW8021B	Volatile Organics by GC	28697	1	01/14/08 02:05 PM	GC9_080114A
0801064-16B	MW-P-09	Aqueous	E300	Anions by IC method - Water	R35658	10	01/15/08 07:17 PM	IC_080115A
	MW-P-09	Aqueous	E300	Anions by IC method - Water	R35658	100	01/15/08 07:32 PM	IC_080115A
	MW-P-09	Aqueous	E300	Anions by IC method - Water	R35633	1	01/14/08 05:10 PM	IC2_080114A

Lab Order: 0801064
Client: INTERA Inc.
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0801064-16B	MW-P-09	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-17A	MW-FINA-01	Aqueous	SW8021B	Volatile Organics by GC	28697	1	01/14/08 04:29 PM	GC9_080114A
0801064-17B	MW-FINA-01	Aqueous	E300	Anions by IC method - Water	R35658	1000	01/15/08 07:47 PM	IC_080115A
	MW-FINA-01	Aqueous	E300	Anions by IC method - Water	R35658	20	01/15/08 08:01 PM	IC_080115A
	MW-FINA-01	Aqueous	E300	Anions by IC method - Water	R35633	20	01/14/08 05:25 PM	IC2_080114A
	MW-FINA-01	Aqueous	E300	Anions by IC method - Water	R35721	1000	01/18/08 10:58 AM	IC2_080118A
	MW-FINA-01	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-18A	MW-P-01	Aqueous	SW8021B	Volatile Organics by GC	28697	1	01/14/08 04:46 PM	GC9_080114A
0801064-18B	MW-P-01	Aqueous	E300	Anions by IC method - Water	R35658	50	01/15/08 08:16 PM	IC_080115A
	MW-P-01	Aqueous	E300	Anions by IC method - Water	R35633	10	01/14/08 05:39 PM	IC2_080114A
	MW-P-01	Aqueous	E300	Anions by IC method - Water	R35721	1000	01/18/08 11:13 AM	IC2_080118A
	MW-P-01	Aqueous	E300	Anions by IC method - Water	R35658	1000	01/15/08 08:31 PM	IC_080115A
	MW-P-01	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-19A	ER	quipment Blan	SW8021B	Volatile Organics by GC	28697	1	01/14/08 04:12 PM	GC9_080114A
0801064-19B	ER	quipment Blan	E300	Anions by IC method - Water	R35656	1	01/15/08 09:27 PM	IC2_080115A
	ER	quipment Blan	E300	Anions by IC method - Water	R35658	1	01/15/08 08:45 PM	IC_080115A
	ER	quipment Blan	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-20A	MW-O-7	Aqueous	SW8021B	Volatile Organics by GC	28697	1	01/14/08 05:03 PM	GC9_080114A
0801064-20B	MW-O-7	Aqueous	E300	Anions by IC method - Water	R35658	50	01/15/08 09:00 PM	IC_080115A
	MW-O-7	Aqueous	E300	Anions by IC method - Water	R35658	1000	01/15/08 09:15 PM	IC_080115A
	MW-O-7	Aqueous	E300	Anions by IC method - Water	R35633	5	01/14/08 06:09 PM	IC2_080114A
	MW-O-7	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/14/08	1	01/15/08 08:30 AM	WC_080114A
0801064-21A	MW-D-07	Aqueous	E300	Anions by IC method - Water	R35656	500	01/15/08 03:21 PM	IC2_080115A
	MW-D-07	Aqueous	E300	Anions by IC method - Water	R35656	50	01/15/08 03:06 PM	IC2_080115A
	MW-D-07	Aqueous	E300	Anions by IC method - Water	R35656	5	01/15/08 11:26 AM	IC2_080115A
	MW-D-07	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-22A	MW-D-08	Aqueous	E300	Anions by IC method - Water	R35656	1	01/15/08 11:41 AM	IC2_080115A
	MW-D-08	Aqueous	E300	Anions by IC method - Water	R35656	50	01/15/08 03:36 PM	IC2_080115A

Lab Order: 0801064
Client: INTERA Inc.
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0801064-22A	MW-D-08	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-23A	Trip Blank	Trip Blank	SW8021B	Volatile Organics by GC	28697	1	01/14/08 03:55 PM	GC9_080114A
0801064-24A	MW-07-2	Aqueous	E300	Anions by IC method - Water	R35656	50	01/15/08 04:05 PM	IC2_080115A
	MW-07-2	Aqueous	E300	Anions by IC method - Water	R35656	500	01/15/08 04:20 PM	IC2_080115A
	MW-07-2	Aqueous	E300	Anions by IC method - Water	R35656	5	01/15/08 11:56 AM	IC2_080115A
	MW-07-2	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-25A	MW-D-2	Aqueous	E300	Anions by IC method - Water	R35656	2	01/15/08 12:10 PM	IC2_080115A
	MW-D-2	Aqueous	E300	Anions by IC method - Water	R35656	50	01/15/08 04:34 PM	IC2_080115A
	MW-D-2	Aqueous	E300	Anions by IC method - Water	R35656	100	01/15/08 04:49 PM	IC2_080115A
	MW-D-2	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-26A	MW-07-3	Aqueous	E300	Anions by IC method - Water	R35656	50	01/15/08 05:04 PM	IC2_080115A
	MW-07-3	Aqueous	E300	Anions by IC method - Water	R35656	1000	01/15/08 05:18 PM	IC2_080115A
	MW-07-3	Aqueous	E300	Anions by IC method - Water	R35721	1000	01/18/08 11:27 AM	IC2_080118A
	MW-07-3	Aqueous	E300	Anions by IC method - Water	R35656	10	01/15/08 12:25 PM	IC2_080115A
	MW-07-3	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-27A	MW-D-10	Aqueous	E300	Anions by IC method - Water	R35656	1	01/15/08 12:40 PM	IC2_080115A
	MW-D-10	Aqueous	E300	Anions by IC method - Water	R35656	5	01/15/08 05:33 PM	IC2_080115A
	MW-D-10	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-28A	MW-D-01	Aqueous	E300	Anions by IC method - Water	R35656	50	01/15/08 06:16 PM	IC2_080115A
	MW-D-01	Aqueous	E300	Anions by IC method - Water	R35656	1000	01/15/08 06:46 PM	IC2_080115A
	MW-D-01	Aqueous	E300	Anions by IC method - Water	R35656	5	01/15/08 12:54 PM	IC2_080115A
	MW-D-01	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-29A	MW-D-06	Aqueous	E300	Anions by IC method - Water	R35656	1	01/15/08 01:24 PM	IC2_080115A
	MW-D-06	Aqueous	E300	Anions by IC method - Water	R35656	50	01/15/08 07:00 PM	IC2_080115A
	MW-D-06	Aqueous	E300	Anions by IC method - Water	R35656	500	01/15/08 07:15 PM	IC2_080115A
	MW-D-06	Aqueous	E300	Anions by IC method - Water	R35721	100	01/18/08 02:38 PM	IC2_080118A
	MW-D-06	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-30A	MW-D-05	Aqueous	E300	Anions by IC method - Water	R35656	5	01/15/08 01:38 PM	IC2_080115A

Lab Order: 0801064
Client: INTERA Inc.
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0801064-30A	MW-D-05	Aqueous	E300	Anions by IC method - Water	R35656	500	01/15/08 07:44 PM	IC2_080115A
	MW-D-05	Aqueous	E300	Anions by IC method - Water	R35656	50	01/15/08 07:30 PM	IC2_080115A
	MW-D-05	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-31A	MW-D-04	Aqueous	E300	Anions by IC method - Water	R35656	5	01/15/08 01:53 PM	IC2_080115A
	MW-D-04	Aqueous	E300	Anions by IC method - Water	R35656	50	01/15/08 07:59 PM	IC2_080115A
	MW-D-04	Aqueous	E300	Anions by IC method - Water	R35656	100	01/15/08 08:14 PM	IC2_080115A
	MW-D-04	Aqueous	E300	Anions by IC method - Water	R35679	200	01/16/08 11:49 AM	IC2_080116A
	MW-D-04	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-32A	SW-O-Seep	Aqueous	E300	Anions by IC method - Water	R35656	10	01/15/08 02:08 PM	IC2_080115A
	SW-O-Seep	Aqueous	E300	Anions by IC method - Water	R35656	50	01/15/08 08:29 PM	IC2_080115A
	SW-O-Seep	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A
0801064-33A	SW-P-Seep	Aqueous	E300	Anions by IC method - Water	R35656	10	01/15/08 02:22 PM	IC2_080115A
	SW-P-Seep	Aqueous	E300	Anions by IC method - Water	R35656	100	01/15/08 08:43 PM	IC2_080115A
	SW-P-Seep	Aqueous	E300	Anions by IC method - Water	R35656	200	01/15/08 08:58 PM	IC2_080115A
	SW-P-Seep	Aqueous	E300	Anions by IC method - Water	R35679	500	01/16/08 01:23 PM	IC2_080116A
	SW-P-Seep	Aqueous	E300	Anions by IC method - Water	R35721	1000	01/18/08 11:57 AM	IC2_080118A
	SW-P-Seep	Aqueous	M2540C	Total Dissolved Solids	TDS_W-01/16/08	1	01/17/08 09:40 AM	WC_080116A

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-15
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-01
Project No:		**Collection Date:**	01/09/08 08:50 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	6.76	0.600	2.00		mg/L	2	01/14/08 11:13 AM
Chloride	4600	30.0	100		mg/L	100	01/15/08 11:35 AM
Sulfate	1340	100	300		mg/L	100	01/15/08 11:35 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	11200	10.0	10.0		mg/L	1	01/15/08 08:30 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-23
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-02
Project No:		**Collection Date:**	01/09/08 10:55 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	0.300	1.00		mg/L	1	01/14/08 11:27 AM
Chloride	43.6	3.00	10.0		mg/L	10	01/15/08 11:50 AM
Sulfate	124	10.0	30.0		mg/L	10	01/15/08 11:50 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	699	10.0	10.0		mg/L	1	01/15/08 08:30 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-I-23
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-03
Project No:		**Collection Date:**	01/09/08 10:40 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	0.300	1.00		mg/L	1	01/14/08 11:42 AM
Chloride	42.7	3.00	10.0		mg/L	10	01/15/08 12:06 PM
Sulfate	117	10.0	30.0		mg/L	10	01/15/08 12:06 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	706	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-11
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-04
Project No:		**Collection Date:**	01/09/08 11:35 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	5.28	0.600	2.00		mg/L	2	01/14/08 11:57 AM
Chloride	3130	30.0	100		mg/L	100	01/15/08 12:22 PM
Sulfate	455	10.0	30.0		mg/L	10	01/15/08 01:40 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	6560	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-8
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-05
Project No:		**Collection Date:**	01/09/08 12:23 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	2.21	0.300	1.00		mg/L	1	01/14/08 12:12 PM
Chloride	2510	15.0	50.0		mg/L	50	01/15/08 01:09 PM
Sulfate	440	50.0	150		mg/L	50	01/15/08 01:09 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	5520	10.0	10.0		mg/L	1	01/15/08 08:30 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-9
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-06
Project No:		**Collection Date:**	01/09/08 12:55 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	3.96	0.300	1.00		mg/L	1	01/14/08 01:13 PM
Chloride	330	3.00	10.0		mg/L	10	01/15/08 02:24 PM
Sulfate	794	10.0	30.0		mg/L	10	01/15/08 02:24 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	2110	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-3
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-07
Project No:		**Collection Date:**	01/09/08 01:50 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	0.300	1.00		mg/L	1	01/14/08 01:27 PM
Chloride	1450	15.0	50.0		mg/L	50	01/15/08 02:39 PM
Sulfate	291	50.0	150		mg/L	50	01/15/08 02:39 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	3200	10.0	10.0		mg/L	1	01/15/08 08:30 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-5
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-08
Project No:		**Collection Date:**	01/09/08 03:01 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	0.300	1.00		mg/L	1	01/14/08 01:42 PM
Chloride	2800	30.0	100		mg/L	100	01/15/08 02:54 PM
Sulfate	686	100	300		mg/L	100	01/15/08 02:54 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	6180	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-12
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-09
Project No:		**Collection Date:**	01/09/08 03:30 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	0.300	1.00		mg/L	1	01/14/08 01:57 PM
Chloride	229	3.00	10.0		mg/L	10	01/15/08 03:08 PM
Sulfate	116	10.0	30.0		mg/L	10	01/15/08 03:08 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	931	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-13
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-10
Project No:		**Collection Date:**	01/09/08 04:10 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	0.300	1.00		mg/L	1	01/14/08 02:10 PM
Chloride	245	3.00	10.0		mg/L	10	01/15/08 03:23 PM
Sulfate	130	10.0	30.0		mg/L	10	01/15/08 03:23 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	1000	10.0	10.0		mg/L	1	01/15/08 08:30 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-1
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-11
Project No:		**Collection Date:**	01/09/08 04:37 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	0.300	1.00		mg/L	1	01/14/08 03:09 PM
Chloride	1040	6.00	20.0		mg/L	20	01/15/08 03:52 PM
Sulfate	184	10.0	30.0		mg/L	10	01/15/08 03:38 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	2530	10.0	10.0		mg/L	1	01/15/08 08:30 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-6
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-12
Project No:		**Collection Date:**	01/09/08 05:25 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	0.300	1.00		mg/L	1	01/14/08 03:24 PM
Chloride	2320	15.0	50.0		mg/L	50	01/15/08 04:22 PM
Sulfate	636	50.0	150		mg/L	50	01/15/08 04:22 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	4920	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	Client Sample ID:	MW-O-22
›ject:	RRC-O'Ryan, Dugout, Pharoah	Lab ID:	0801064-13
rroject No:		Collection Date:	01/09/08 10:15 AM
Lab Order:	0801064	Matrix:	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: JBC
Bromide	3.15	0.300	1.00		mg/L	1	01/14/08 03:57 PM
Chloride	336	6.00	20.0		mg/L	20	01/15/08 04:36 PM
Sulfate	313	20.0	60.0		mg/L	20	01/15/08 04:36 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: JBC
Total Dissolved Solids (Residue, Filterable)	1490	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-21
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-14
rroject No:		**Collection Date:**	01/09/08 09:40 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **JAW**
Benzene	ND	0.00100	0.00200		mg/L	1	01/14/08 12:57 PM
Ethylbenzene	ND	0.00200	0.00400		mg/L	1	01/14/08 12:57 PM
Methyl tert-butyl ether	ND	0.00200	0.00400		mg/L	1	01/14/08 12:57 PM
Toluene	ND	0.00200	0.00400		mg/L	1	01/14/08 12:57 PM
Xylenes, Total	ND	0.00200	0.00400		mg/L	1	01/14/08 12:57 PM
Surr: a,a,a-Trifluorotoluene	99.0	0	87-113		%REC	1	01/14/08 12:57 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	3.00	10.0		mg/L	10	01/14/08 04:11 PM
Chloride	17200	150	500		mg/L	500	01/15/08 05:46 PM
Sulfate	2210	100	300		mg/L	100	01/15/08 04:51 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	32100	10.0	10.0		mg/L	1	01/15/08 08:30 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-31
·oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-15
Project No:		**Collection Date:**	01/09/08 08:48 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **JAW**
Benzene	ND	0.00100	0.00200		mg/L	1	01/14/08 01:48 PM
Ethylbenzene	ND	0.00200	0.00400		mg/L	1	01/14/08 01:48 PM
Methyl tert-butyl ether	ND	0.00200	0.00400		mg/L	1	01/14/08 01:48 PM
Toluene	ND	0.00200	0.00400		mg/L	1	01/14/08 01:48 PM
Xylenes, Total	ND	0.00200	0.00400		mg/L	1	01/14/08 01:48 PM
Surr: a,a,a-Trifluorotoluene	100	0	87-113		%REC	1	01/14/08 01:48 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	3.00	10.0		mg/L	10	01/14/08 04:55 PM
Chloride	17000	300	1000		mg/L	1000	01/15/08 06:48 PM
Sulfate	1610	50.0	150		mg/L	50	01/15/08 06:33 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	30600	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-P-09
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-16
Project No:		**Collection Date:**	01/09/08 11:55 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **JAW**
Benzene	ND	0.00100	0.00200		mg/L	1	01/14/08 02:05 PM
Ethylbenzene	ND	0.00200	0.00400		mg/L	1	01/14/08 02:05 PM
Methyl tert-butyl ether	ND	0.00200	0.00400		mg/L	1	01/14/08 02:05 PM
Toluene	ND	0.00200	0.00400		mg/L	1	01/14/08 02:05 PM
Xylenes, Total	ND	0.00200	0.00400		mg/L	1	01/14/08 02:05 PM
Surr: a,a,a-Trifluorotoluene	97.5	0	87-113		%REC	1	01/14/08 02:05 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	1.29	0.300	1.00		mg/L	1	01/14/08 05:10 PM
Chloride	542	30.0	100		mg/L	100	01/15/08 07:32 PM
Sulfate	152	10.0	30.0		mg/L	10	01/15/08 07:17 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	1550	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-FINA-01
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-17
Project No:		**Collection Date:**	01/09/08 01:05 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **JAW**
Benzene	0.0128	0.00100	0.00200		mg/L	1	01/14/08 04:29 PM
Ethylbenzene	ND	0.00200	0.00400		mg/L	1	01/14/08 04:29 PM
Methyl tert-butyl ether	ND	0.00200	0.00400		mg/L	1	01/14/08 04:29 PM
Toluene	ND	0.00200	0.00400		mg/L	1	01/14/08 04:29 PM
Xylenes, Total	ND	0.00200	0.00400		mg/L	1	01/14/08 04:29 PM
Surr: a,a,a-Trifluorotoluene	95.2	0	87-113		%REC	1	01/14/08 04:29 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	73.9	6.00	20.0		mg/L	20	01/14/08 05:25 PM
Chloride	33300	300	1000		mg/L	1000	01/18/08 10:58 AM
Sulfate	1640	20.0	60.0		mg/L	20	01/15/08 08:01 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	58500	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-P-01
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-18
Project No:		**Collection Date:**	01/09/08 02:24 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **JAW**
Benzene	0.0136	0.00100	0.00200		mg/L	1	01/14/08 04:46 PM
Ethylbenzene	ND	0.00200	0.00400		mg/L	1	01/14/08 04:46 PM
Methyl tert-butyl ether	ND	0.00200	0.00400		mg/L	1	01/14/08 04:46 PM
Toluene	ND	0.00200	0.00400		mg/L	1	01/14/08 04:46 PM
Xylenes, Total	ND	0.00200	0.00400		mg/L	1	01/14/08 04:46 PM
Surr: a,a,a-Trifluorotoluene	97.1	0	87-113		%REC	1	01/14/08 04:46 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	33.5	3.00	10.0		mg/L	10	01/14/08 05:39 PM
Chloride	16900	300	1000		mg/L	1000	01/18/08 11:13 AM
Sulfate	2540	50.0	150		mg/L	50	01/15/08 08:16 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	31500	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	ER
ject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-19
Project No:		**Collection Date:**	01/09/08 03:00 PM
Lab Order:	0801064	**Matrix:**	EQUIPMENT BLANK

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **JAW**
Benzene	ND	0.00100	0.00200		mg/L	1	01/14/08 04:12 PM
Ethylbenzene	ND	0.00200	0.00400		mg/L	1	01/14/08 04:12 PM
Methyl tert-butyl ether	ND	0.00200	0.00400		mg/L	1	01/14/08 04:12 PM
Toluene	ND	0.00200	0.00400		mg/L	1	01/14/08 04:12 PM
Xylenes, Total	ND	0.00200	0.00400		mg/L	1	01/14/08 04:12 PM
Surr: a,a,a-Trifluorotoluene	97.3	0	87-113		%REC	1	01/14/08 04:12 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	0.300	1.00		mg/L	1	01/15/08 09:27 PM
Chloride	1.27	0.300	1.00		mg/L	1	01/15/08 09:27 PM
Sulfate	ND	1.00	3.00		mg/L	1	01/15/08 09:27 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	22.0	10.0	10.0		mg/L	1	01/17/08 09:40 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-O-7
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-20
Project No:		**Collection Date:**	01/09/08 03:45 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **JAW**
Benzene	ND	0.00100	0.00200		mg/L	1	01/14/08 05:03 PM
Ethylbenzene	ND	0.00200	0.00400		mg/L	1	01/14/08 05:03 PM
Methyl tert-butyl ether	ND	0.00200	0.00400		mg/L	1	01/14/08 05:03 PM
Toluene	ND	0.00200	0.00400		mg/L	1	01/14/08 05:03 PM
Xylenes, Total	ND	0.00200	0.00400		mg/L	1	01/14/08 05:03 PM
Surr: a,a,a-Trifluorotoluene	98.5	0	87-113		%REC	1	01/14/08 05:03 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	17.6	1.50	5.00		mg/L	5	01/14/08 06:09 PM
Chloride	13100	300	1000		mg/L	1000	01/15/08 09:15 PM
Sulfate	1870	50.0	150		mg/L	50	01/15/08 09:00 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	25100	10.0	10.0		mg/L	1	01/15/08 08:30 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-D-07
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-21
Project No:		**Collection Date:**	01/09/08 04:55 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	20.7	1.50	5.00		mg/L	5	01/15/08 11:26 AM
Chloride	10400	150	500		mg/L	500	01/15/08 03:21 PM
Sulfate	2130	50.0	150		mg/L	50	01/15/08 03:06 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	18400	10.0	10.0		mg/L	1	01/17/08 09:40 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-D-08
ject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-22
Project No:		**Collection Date:**	01/09/08 05:54 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	4.35	0.300	1.00		mg/L	1	01/15/08 11:41 AM
Chloride	482	15.0	50.0		mg/L	50	01/15/08 03:36 PM
Sulfate	126	1.00	3.00		mg/L	1	01/15/08 11:41 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	1250	10.0	10.0		mg/L	1	01/17/08 09:40 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	Trip Blank
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-23
Project No:		**Collection Date:**	01/09/08
Lab Order:	0801064	**Matrix:**	TRIP BLANK

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **JAW**
Benzene	ND	0.00100	0.00200		mg/L	1	01/14/08 03:55 PM
Ethylbenzene	ND	0.00200	0.00400		mg/L	1	01/14/08 03:55 PM
Methyl tert-butyl ether	ND	0.00200	0.00400		mg/L	1	01/14/08 03:55 PM
Toluene	ND	0.00200	0.00400		mg/L	1	01/14/08 03:55 PM
Xylenes, Total	ND	0.00200	0.00400		mg/L	1	01/14/08 03:55 PM
Surr: a,a,a-Trifluorotoluene	97.2	0	87-113		%REC	1	01/14/08 03:55 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
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-07-2
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-24
Project No:		**Collection Date:**	01/10/08 09:10 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	14.2	1.50	5.00		mg/L	5	01/15/08 11:56 AM
Chloride	7480	150	500		mg/L	500	01/15/08 04:20 PM
Sulfate	4800	50.0	150		mg/L	50	01/15/08 04:05 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	16900	10.0	10.0		mg/L	1	01/17/08 09:40 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-D-2
ject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-25
Project No:		**Collection Date:**	01/10/08 10:26 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	7.17	0.600	2.00		mg/L	2	01/15/08 12:10 PM
Chloride	3480	30.0	100		mg/L	100	01/15/08 04:49 PM
Sulfate	4620	50.0	150		mg/L	50	01/15/08 04:34 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	13300	10.0	10.0		mg/L	1	01/17/08 09:40 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-07-3
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-26
Project No:		**Collection Date:**	01/10/08 11:06 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	116	3.00	10.0		mg/L	10	01/15/08 12:25 PM
Chloride	33500	300	1000		mg/L	1000	01/18/08 11:27 AM
Sulfate	3740	50.0	150		mg/L	50	01/15/08 05:04 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	61500	10.0	10.0		mg/L	1	01/17/08 09:40 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-D-10
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-27
Project No:		**Collection Date:**	01/10/08 09:04 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	0.300	1.00		mg/L	1	01/15/08 12:40 PM
Chloride	68.9	1.50	5.00		mg/L	5	01/15/08 05:33 PM
Sulfate	35.2	1.00	3.00		mg/L	1	01/15/08 12:40 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	544	10.0	10.0		mg/L	1	01/17/08 09:40 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-D-01
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-28
Project No:		**Collection Date:**	01/10/08 10:02 AM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	23.4	1.50	5.00		mg/L	5	01/15/08 12:54 PM
Chloride	11600	300	1000		mg/L	1000	01/15/08 06:46 PM
Sulfate	1470	50.0	150		mg/L	50	01/15/08 06:16 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	20100	10.0	10.0		mg/L	1	01/17/08 09:40 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-D-06
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-29
Project No:		**Collection Date:**	01/10/08 01:06 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	2.47	0.300	1.00		mg/L	1	01/15/08 01:24 PM
Chloride	1550	30.0	100		mg/L	100	01/18/08 02:38 PM
Sulfate	1370	50.0	150		mg/L	50	01/15/08 07:00 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	4660	10.0	10.0		mg/L	1	01/17/08 09:40 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-D-05
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-30
Project No:		**Collection Date:**	01/10/08 02:24 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: JBC
Bromide	22.8	1.50	5.00		mg/L	5	01/15/08 01:38 PM
Chloride	11400	150	500		mg/L	500	01/15/08 07:44 PM
Sulfate	2280	50.0	150		mg/L	50	01/15/08 07:30 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: JBC
Total Dissolved Solids (Residue, Filterable)	19700	10.0	10.0		mg/L	1	01/17/08 09:40 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	MW-D-04
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-31
Project No:		**Collection Date:**	01/10/08 03:02 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	93.3	1.50	5.00		mg/L	5	01/15/08 01:53 PM
Chloride	5710	60.0	200		mg/L	200	01/16/08 11:49 AM
Sulfate	2310	50.0	150		mg/L	50	01/15/08 07:59 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	12700	10.0	10.0		mg/L	1	01/17/08 09:40 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

CLIENT:	INTERA Inc.	**Client Sample ID:**	SW-O-Seep
Project:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-32
Project No:		**Collection Date:**	01/10/08 04:38 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	ND	3.00	10.0		mg/L	10	01/15/08 02:08 PM
Chloride	1090	15.0	50.0		mg/L	50	01/15/08 08:29 PM
Sulfate	442	50.0	150		mg/L	50	01/15/08 08:29 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	2460	10.0	10.0		mg/L	1	01/17/08 09:40 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

DHL Analytical

Date: *24-Jan-08*

CLIENT:	INTERA Inc.	**Client Sample ID:**	SW-P-Seep
oject:	RRC-O'Ryan, Dugout, Pharoah	**Lab ID:**	0801064-33
rroject No:		**Collection Date:**	01/10/08 04:56 PM
Lab Order:	0801064	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **JBC**
Bromide	26.8	3.00	10.0		mg/L	10	01/15/08 02:22 PM
Chloride	13000	300	1000		mg/L	1000	01/18/08 11:57 AM
Sulfate	1250	100	300		mg/L	100	01/15/08 08:43 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JBC**
Total Dissolved Solids (Residue, Filterable)	24200	10.0	10.0		mg/L	1	01/17/08 09:40 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

CLIENT: INTERA Inc.
Work Order: 0801064
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_080114A

Sample ID **LCS-28697** Batch ID: **28697** TestNo: **SW8021B** Units: **mg/L**
SampType: **LCS** Run ID: **GC9_080114A** Analysis Date: **1/14/2008 10:52:31 A** Prep Date: **1/14/2008**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0432	0.00600	0.0500	0	86.5	78	122			
Benzene	0.0485	0.00200	0.0500	0	97.1	81	125			
Toluene	0.0505	0.00600	0.0500	0	101	84	123			
Ethylbenzene	0.0496	0.00600	0.0500	0	99.3	83	119			
Xylenes, Total	0.149	0.00900	0.150	0	99.5	81	117			
Surr: a,a,a-Trifluorotoluene	199		200.0		99.4	87	113			

Sample ID **MB-28697** Batch ID: **28697** TestNo: **SW8021B** Units: **mg/L**
SampType: **MBLK** Run ID: **GC9_080114A** Analysis Date: **1/14/2008 11:09:21 A** Prep Date: **1/14/2008**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	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	200		200.0		100	87	113			

Sample ID **0801064-14AMS** Batch ID: **28697** TestNo: **SW8021B** Units: **mg/L**
SampType: **MS** Run ID: **GC9_080114A** Analysis Date: **1/14/2008 1:14:57 PM** Prep Date: **1/14/2008**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0543	0.00600	0.0500	0	109	78	122			
Benzene	0.0508	0.00200	0.0500	0	102	81	125			
Toluene	0.0526	0.00600	0.0500	0	105	84	123			
Ethylbenzene	0.0513	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	201		200.0		101	87	113			

Sample ID **0801064-14AMSD** Batch ID: **28697** TestNo: **SW8021B** Units: **mg/L**
SampType: **MSD** Run ID: **GC9_080114A** Analysis Date: **1/14/2008 1:31:48 PM** Prep Date: **1/14/2008**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0535	0.00600	0.0500	0	107	78	122	1.48	20	
Benzene	0.0508	0.00200	0.0500	0	102	81	125	0.0571	20	
Toluene	0.0525	0.00600	0.0500	0	105	84	123	0.147	20	
Ethylbenzene	0.0509	0.00600	0.0500	0	102	83	119	0.716	20	
Xylenes, Total	0.153	0.00900	0.150	0	102	81	117	0.823	20	
Surr: a,a,a-Trifluorotoluene	203		200.0		102	87	113	0	0	

Qualifiers:

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

Sample ID ICV-080114	Batch ID: R35636	TestNo: SW8021B	Units: mg/L
SampType: ICV	Run ID: GC9_080114A	Analysis Date: 1/14/2008 10:35:40 A	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0890	0.00600	0.100	0	89.0	80	120			
Benzene	0.0972	0.00200	0.100	0	97.2	85	115			
Toluene	0.102	0.00600	0.100	0	102	85	115			
Ethylbenzene	0.101	0.00600	0.100	0	101	85	115			
Xylenes, Total	0.301	0.00900	0.300	0	100	85	115			
Surr: a,a,a-Trifluorotoluene	204		200.0		102	87	113			

Sample ID CCV1-080114	Batch ID: R35636	TestNo: SW8021B	Units: mg/L
SampType: CCV	Run ID: GC9_080114A	Analysis Date: 1/14/2008 2:22:21 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0471	0.00600	0.0500	0	94.1	80	120			
Benzene	0.0512	0.00200	0.0500	0	102	85	115			
Toluene	0.0529	0.00600	0.0500	0	106	85	115			
Ethylbenzene	0.0512	0.00600	0.0500	0	102	85	115			
Xylenes, Total	0.153	0.00900	0.150	0	102	85	115			
Surr: a,a,a-Trifluorotoluene	201		200.0		100	87	113			

·nple ID CCV2-080114	Batch ID: R35636	TestNo: SW8021B	Units: mg/L
SampType: CCV	Run ID: GC9_080114A	Analysis Date: 1/14/2008 8:25:48 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.0543	0.00600	0.0500	0	109	80	120			
Benzene	0.0501	0.00200	0.0500	0	100	85	115			
Toluene	0.0515	0.00600	0.0500	0	103	85	115			
Ethylbenzene	0.0508	0.00600	0.0500	0	102	85	115			
Xylenes, Total	0.155	0.00900	0.150	0	103	85	115			
Surr: a,a,a-Trifluorotoluene	194		200.0		96.9	87	113			

CLIENT: INTERA Inc.
Work Order: 0801064
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC_080115A

Sample ID	ICV-080115	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC_080115A	Analysis Date:	1/15/2008 9:24:46 AM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	26.2	1.00	25.00	0	105	90	110			
Sulfate	75.1	3.00	75.00	0	100	90	110			

Sample ID	MB-080115	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC_080115A	Analysis Date:	1/15/2008 10:46:05 A	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.00								
Sulfate	ND	3.00								

Sample ID	LCS-080115	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC_080115A	Analysis Date:	1/15/2008 11:01:47 A	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.52	1.00	10.00	0	95.2	90	110			
Sulfate	28.9	3.00	30.00	0	96.5	90	110			

Sample ID	LCSD-080115	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
npType:	LCSD	Run ID:	IC_080115A	Analysis Date:	1/15/2008 11:17:29 A	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.55	1.00	10.00	0	95.5	90	110	0.327	20	
Sulfate	29.2	3.00	30.00	0	97.3	90	110	0.847	20	

Sample ID	0801064-04A MS	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC_080115A	Analysis Date:	1/15/2008 12:38:04 P	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2810	100	1000	1879	92.9	90	110			

Sample ID	0801064-04A MSD	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_080115A	Analysis Date:	1/15/2008 12:53:44 P	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2920	100	1000	1879	105	90	110	4.07	20	

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801064
oject: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC_080115A

Sample ID	CCV1-080115	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC_080115A	Analysis Date:	1/15/2008 1:25:07 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.63	1.00	10.00	0	96.3	90	110			
Sulfate	29.0	3.00	30.00	0	96.6	90	110			

Sample ID	0801064-04A MS	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC_080115A	Analysis Date:	1/15/2008 1:55:26 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	564	30.0	300.0	273.1	96.9	90	110			

Sample ID	0801064-04A MSD	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_080115A	Analysis Date:	1/15/2008 2:10:03 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	568	30.0	300.0	273.1	98.3	90	110	0.733	20	

Sample ID	CCV2-080115	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC_080115A	Analysis Date:	1/15/2008 4:07:29 PM	Prep Date:	1/15/2008

lyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.63	1.00	10.00	0	96.3	90	110			
Sulfate	28.6	3.00	30.00	0	95.2	90	110			

Sample ID	0801064-14B MS	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC_080115A	Analysis Date:	1/15/2008 5:15:09 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	4290	300	3000	1325	98.9	90	110			

Sample ID	0801064-14B MSD	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_080115A	Analysis Date:	1/15/2008 5:30:51 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	4310	300	3000	1325	99.6	90	110	0.504	20	

Sample ID	0801064-14B MS	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC_080115A	Analysis Date:	1/15/2008 6:02:16 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14800	500	5000	10310	89.1	90	110			S

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801064
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC_080115A

Sample ID	0801064-14B MSD	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_080115A	Analysis Date:	1/15/2008 6:17:58 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14800	500	5000	10310	89.8	90	110	0.249	20	

Sample ID	CCV3-080115	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC_080115A	Analysis Date:	1/15/2008 7:02:58 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.62	1.00	10.00	0	96.2	90	110			
Sulfate	29.3	3.00	30.00	0	97.6	90	110			

Sample ID	CCV4-080115	Batch ID:	R35658	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC_080115A	Analysis Date:	1/15/2008 9:29:44 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.63	1.00	10.00	0	96.3	90	110			
Sulfate	28.8	3.00	30.00	0	96.0	90	110			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801064
·oject: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080114A

Sample ID	ICV-080114	Batch ID:	R35633	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC2_080114A	Analysis Date:	1/14/2008 10:07:24 A	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	51.3	1.00	50.00	0	103	90	110			

Sample ID	MB-080114	Batch ID:	R35633	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC2_080114A	Analysis Date:	1/14/2008 10:28:05 A	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	1.00								

Sample ID	LCS-080114	Batch ID:	R35633	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC2_080114A	Analysis Date:	1/14/2008 10:42:46 A	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.8	1.00	20.00	0	99.2	90	110			

Sample ID	LCSD-080114	Batch ID:	R35633	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC2_080114A	Analysis Date:	1/14/2008 10:57:26 A	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
›mide	20.0	1.00	20.00	0	100	90	110	0.839	20	

Sample ID	0801064-04A MS	Batch ID:	R35633	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_080114A	Analysis Date:	1/14/2008 12:29:00 P	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	37.3	2.00	40.00	3.168	85.3	90	110			S

Sample ID	0801064-04A MSD	Batch ID:	R35633	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC2_080114A	Analysis Date:	1/14/2008 12:43:40 P	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	37.7	2.00	40.00	3.168	86.4	90	110	1.13	20	S

Sample ID	CCV1-080114	Batch ID:	R35633	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080114A	Analysis Date:	1/14/2008 12:58:21 P	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801064
oject: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080114A

Sample ID	CCV2-080114	Batch ID:	R35633	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080114A	Analysis Date:	1/14/2008 3:38:42 PM	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			

Sample ID	0801064-14B MS	Batch ID:	R35633	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_080114A	Analysis Date:	1/14/2008 4:26:31 PM	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	178	10.0	200.0	0	88.9	90	110			S

Sample ID	0801064-14B MSD	Batch ID:	R35633	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC2_080114A	Analysis Date:	1/14/2008 4:41:11 PM	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	177	10.0	200.0	0	88.4	90	110	0.493	20	S

Sample ID	CCV3-080114	Batch ID:	R35633	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080114A	Analysis Date:	1/14/2008 8:50:40 PM	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
nide	20.1	1.00	20.00	0	100	90	110			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801064
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080115A

Sample ID	ICV-080115	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 9:23:45 AM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	51.2	1.00	50.00	0	102	90	110			
Chloride	26.9	1.00	25.00	0	107	90	110			
Sulfate	78.8	3.00	75.00	0	105	90	110			

Sample ID	MB-0801155	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 10:42:54 A	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	1.00								
Chloride	ND	1.00								
Sulfate	ND	3.00								

Sample ID	LCS-080115	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 10:57:35 A	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.9	1.00	20.00	0	99.7	90	110			
Chloride	9.89	1.00	10.00	0	98.9	90	110			
ate	30.5	3.00	30.00	0	102	90	110			

Sample ID	LCSD-080115	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 11:12:15 A	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.9	1.00	20.00	0	99.5	90	110	0.245	20	
Chloride	9.92	1.00	10.00	0	99.2	90	110	0.273	20	
Sulfate	30.6	3.00	30.00	0	102	90	110	0.419	20	

Sample ID	CCV1-080115	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 1:09:23 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.1	1.00	20.00	0	100	90	110			
Chloride	10.5	1.00	10.00	0	105	90	110			
Sulfate	30.8	3.00	30.00	0	103	90	110			

Sample ID	0801064-27A MS	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 2:37:25 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

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
- N Parameter not NELAC certified
- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits

CLIENT: INTERA Inc.
Work Order: 0801064
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080115A

Sample ID	0801064-27A MS	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 2:37:25 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			
Sulfate	51.7	3.00	30.00	21.14	102	90	110			

Sample ID	0801064-27A MSD	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 2:52:05 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110	0.0461	20	
Sulfate	51.7	3.00	30.00	21.14	102	90	110	0.0317	20	

Sample ID	CCV2-080115	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 3:50:47 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.9	1.00	20.00	0	99.4	90	110			
Chloride	9.95	1.00	10.00	0	99.5	90	110			
Sulfate	30.5	3.00	30.00	0	102	90	110			

Sample ID	0801064-27A MS	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 5:48:10 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	88.7	5.00	50.00	41.33	94.7	90	110			

Sample ID	0801064-27A MSD	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 6:02:14 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	88.8	5.00	50.00	41.33	94.9	90	110	0.125	20	

Sample ID	CCV3-080115	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 6:31:35 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.0	1.00	20.00	0	100	90	110			
Chloride	10.2	1.00	10.00	0	102	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801064
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080115A

Sample ID	CCV4-080115	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 9:13:01 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			
Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	31.7	3.00	30.00	0	106	90	110			

Sample ID	CCV4-080115	Batch ID:	R35656	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080115A	Analysis Date:	1/15/2008 9:42:22 PM	Prep Date:	1/15/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			
Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	30.7	3.00	30.00	0	102	90	110			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801064
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080116A

Sample ID	ICV-080116	Batch ID:	R35679	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC2_080116A	Analysis Date:	1/16/2008 9:36:39 AM	Prep Date:	1/16/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.4	1.00	25.00	0	101	90	110			

Sample ID	MB-080116	Batch ID:	R35679	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC2_080116A	Analysis Date:	1/16/2008 10:05:55 A	Prep Date:	1/16/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.00								

Sample ID	LCS-080116	Batch ID:	R35679	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC2_080116A	Analysis Date:	1/16/2008 10:20:35 A	Prep Date:	1/16/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.94	1.00	10.00	0	99.4	90	110			

Sample ID	LCSD-080116	Batch ID:	R35679	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC2_080116A	Analysis Date:	1/16/2008 10:35:16 A	Prep Date:	1/16/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
ride	9.99	1.00	10.00	0	99.9	90	110	0.531	20	

Sample ID	CCV1-080116	Batch ID:	R35679	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080116A	Analysis Date:	1/16/2008 1:57:43 PM	Prep Date:	1/16/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.0	1.00	10.00	0	100	90	110			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801064
oject: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080118A

Sample ID	ICV-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 9:50:57 AM	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.5	1.00	25.00	0	102	90	110			

Sample ID	MB-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 10:15:42 A	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.00								

Sample ID	LCS-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 10:30:22 A	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.89	1.00	10.00	0	98.9	90	110			

Sample ID	LCSD-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 10:45:02 A	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
ride	9.90	1.00	10.00	0	99.0	90	110	0.140	20	

Sample ID	CCV1-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 12:41:15 P	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.87	1.00	10.00	0	98.7	90	110			

Sample ID	CCV2-080118	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 3:48:13 PM	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.0	1.00	10.00	0	100	90	110			

Sample ID	0801092-01B MS	Batch ID:	R35721	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_080118A	Analysis Date:	1/18/2008 4:04:57 PM	Prep Date:	1/18/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1750	50.0	500.0	1258	98.0	90	110			

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801064
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080118A

Sample ID	**0801092-01B MSD**	Batch ID:	**R35721**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**IC2_080118A**	Analysis Date:	**1/18/2008 4:19:37 PM**	Prep Date:	**1/18/2008**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1740	50.0	500.0	1258	96.8	90	110	0.333	20	

Sample ID	**CCV3-080118**	Batch ID:	**R35721**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC2_080118A**	Analysis Date:	**1/18/2008 5:02:59 PM**	Prep Date:	**1/18/2008**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.0	1.00	10.00	0	100	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
N	Parameter not NELAC certified
DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits

CLIENT: INTERA Inc.
Work Order: 0801064
oject: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: WC_080114A

Sample ID	MB-080114	Batch ID:	TDS_W-01/14/08	TestNo:	M2540C	Units:	mg/L
SampType:	MBLK	Run ID:	WC_080114A	Analysis Date:	1/15/2008 8:30:00 AM	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10.0								

Sample ID	LCS-080114	Batch ID:	TDS_W-01/14/08	TestNo:	M2540C	Units:	mg/L
SampType:	LCS	Run ID:	WC_080114A	Analysis Date:	1/15/2008 8:30:00 AM	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	757	10.0	745.6	0	102	70	126			

Sample ID	0801064-04A DUP	Batch ID:	TDS_W-01/14/08	TestNo:	M2540C	Units:	mg/L
SampType:	DUP	Run ID:	WC_080114A	Analysis Date:	1/15/2008 8:30:00 AM	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	6620	10.0	0	6560				0.910	5	

Sample ID	0801064-14B DUP	Batch ID:	TDS_W-01/14/08	TestNo:	M2540C	Units:	mg/L
SampType:	DUP	Run ID:	WC_080114A	Analysis Date:	1/15/2008 8:30:00 AM	Prep Date:	1/14/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
l Dissolved Solids (Residue, Filtera	31500	10.0	0	32120				2.08	5	

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801064
Project: RRC-O'Ryan, Dugout, Pharoah

ANALYTICAL QC SUMMARY REPORT

RunID: WC_080116A

Sample ID	MB-080116	Batch ID:	TDS_W-01/16/08	TestNo:	M2540C	Units:	mg/L
SampType:	MBLK	Run ID:	WC_080116A	Analysis Date:	1/17/2008 9:40:00 AM	Prep Date:	1/16/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10.0								

Sample ID	LCS-080116	Batch ID:	TDS_W-01/16/08	TestNo:	M2540C	Units:	mg/L
SampType:	LCS	Run ID:	WC_080116A	Analysis Date:	1/17/2008 9:40:00 AM	Prep Date:	1/16/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	762	10.0	745.6	0	102	70	126			

Sample ID	0801092-02A DUP	Batch ID:	TDS_W-01/16/08	TestNo:	M2540C	Units:	mg/L
SampType:	DUP	Run ID:	WC_080116A	Analysis Date:	1/17/2008 9:40:00 AM	Prep Date:	1/16/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4250	10.0	0	4253				0.0706	5	

Sample ID	0801064-32A DUP	Batch ID:	TDS_W-01/16/08	TestNo:	M2540C	Units:	mg/L
SampType:	DUP	Run ID:	WC_080116A	Analysis Date:	1/17/2008 9:40:00 AM	Prep Date:	1/16/2008

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
l Dissolved Solids (Residue, Filtera	2440	10.0	0	2458				0.612	5	

Qualifiers:

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

CLIENT: INTERA Inc.
Work Order: 0801064
Project: RRC-O'Ryan, Dugout, Pharoah

MQL SUMMARY REPORT

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

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