FINAL

Site Investigation Report

West O'Daniel Seep
Howard County, Texas

Prepared for:

Railroad Commission of Texas
Oil and Gas Division
Site Remediation and Special Response

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1.0 INTRODUCTION

1.1 Site Background

The Railroad Commission of Texas (RRC), Oil and Gas Division, has documented the occurrence of several saltwater seeps in the Snyder Oil Field, Block 30, of Howard County, Texas. The saltwater seeps in the Snyder Oil Field, including the West O'Daniel Seep, emanate from the base of the Ogallala Formation, which lies unconformably on the Dockum Group (Ogallala/Dockum Contact). These seeps are associated with an outlier of the Ogallala Aquifer. The water from these seeps discharges into tributaries of Beals Creek, which ultimately empties into the Colorado River. There is concern that the Ogallala is being impacted and that the seeps will degrade the quality of receiving waters by increasing the overall chloride content.

Preliminary investigations of the East O'Daniel Seep and Click Seep documented elevated chloride concentrations and areas of distressed vegetation. The West O'Daniel Seep is located between these two seeps. The RRC applied to the United States Environmental Protection Agency (USEPA) for a non-point source grant to investigate and remediate/abate saltwater impacts in the Upper Colorado River drainage basin upstream of Spence Reservoir (Texas Surface Water Segment 1411). The funding from the USEPA is administered by the Texas Commission on Environmental Quality (TCEQ). As part of this effort to identify sources and reduce the salinity of the affected drainage ways and ultimately the Colorado River, the RRC asked that an assessment be performed on the West O'Daniel Seep. On behalf of the RRC, TRC Environmental Corporation (TRC) conducted a site assessment of the area surrounding the West O'Daniel Seep from April 10 to 14, 2006 and on April 21, 2006.

1.2 Investigation Objectives

The objectives of this site investigation were to gather information to further delineate the extent of saltwater impacts from oil and gas operations and to identify possible source(s) of the impacts. This information will be used to design a remedy for the site.

1.3 Report Contents

This report provides a brief site history, summarizes the site investigation field methods, presents the results of the site investigation including analytical data, and provides conclusions and recommendations.

2.0 SITE INFORMATION

This section provides a summary of the West O'Daniel Seep (Site) history as provided by the RRC including information on previous site investigations. The site is located in the Snyder Oil Field, Block 30, of Howard County, Texas.

2.1 Site History

The RRC has documented the occurrence of several saltwater seeps in the Coahoma, Texas area. The water from these seeps discharges into intermittent streams and drainage ways that lead to tributaries of the Colorado River and eventually into the Colorado River. In order to reduce the salinity of the affected drainage ways and ultimately the Colorado River, the RRC asked TRC to investigate the West O'Daniel Seep.

The saltwater seeps in the Snyder Oil Field, including the West O'Daniel Seep, emanate along the Ogallala/Dockum Contact. These seeps are associated with an outlier of the Ogallala Aquifer. The water from these seeps discharges into tributaries of Beals Creek, which ultimately empties into the Colorado River. There is concern that the Ogallala is being impacted and that the seeps will degrade the quality of receiving waters by increasing the overall chloride content.

2.2 Previous Site Investigations

The Bureau of Economic Geology (BEG) conducted an investigation of the Snyder Oil Field in 1998. The investigation consisted of a geophysical survey, drilling soil borings, installing monitoring wells, exploratory trenching, and water sampling. The results of the BEG investigation are presented in the April 1999 report titled *Investigation of the Snyder Field Site, Howard County, Texas*.

On December 30, 1998, the RRC began a dye tracing test. Fluorescein dye was mixed with produced water at two tank batteries and then pumped by the operator into 10 injection wells located near the East and West O'Daniel Seeps. The Fluorescein dye was detected in several of the nearby monitoring wells and the East O'Daniel Seep.

In September 1999, the operator conducted a second dye tracing test during which Eosine OJ dye was pumped into injection well 17W, D&C Red #28 dye was pumped into injection well 8W, and Sulforhodamine B was pumped into injection well 18W. These dyes were again detected in several of the nearby monitoring wells and the East O'Daniel Seep.

At the request of the RRC, TRC performed an initial investigation of the site in February and June 2001 while conducting an assessment of the adjacent Click Seep site.

During this assessment, two boreholes were drilled at the West O'Daniel Seep site. One of these boreholes was converted into temporary monitoring well S-MW-01, and the other borehole was converted into permanent monitoring well S-MW-02. Groundwater samples were collected from both monitoring wells, and the analytical results were compared to the assessment results of the adjacent Click Seep. BEG monitoring well BEG-MW-11, located north of the West O'Daniel Seep area, was also groundwater sampled. BEG monitoring well BEG-MW-11 was installed during the site investigation of the adjacent East O'Daniel Seep. Groundwater samples were collected from the three wells and analyzed for complete salinity (pH, electrical conductivity, cations, and anions), benzene, toluene, ethyl benzene, total xylenes (BTEX), and total petroleum hydrocarbons (TPH). The chloride analytical results exhibited concentrations of 1,244.30 milligrams per liter (mg/L) in BEG-MW-11, 21,432.60 mg/L in S-MW-01, and 22,000 mg/L in S-MW-02. According to the April 1999 BEG report titled *Investigation of the Snyder Field Site, Howard County, Texas*, chloride concentrations typically range from 100 to 1,000 mg/L in the Ogallala Aquifer in Howard County. Therefore, the chloride concentrations in wells S-MW-01 and S-MW-02 exceeded typical background levels. BTEX and TPH concentrations were below detection limits for all three samples signifying no recent impact from produced water. Three additional boreholes located near these wells were completed as part of the Click Seep Assessment but were dry holes and therefore were not sampled.

3.0 INVESTIGATION METHODOLOGY

TRC conducted site investigation activities at the West O'Daniel Seep site from April 10 to 14, 2006, and on April 21, 2006. Mr. Tim Prude, Site Remediation Coordinator for the RRC Districts 8 and 8A, was present during field activities. The investigation was conducted in accordance with the following documents:

- *Final Work Plan and Health and Safety Plan, West O'Daniel Seep Site Assessment* (TRC, 2005) submitted to the RRC by TRC in May 2005 ("Work Plan").
- *Investigations and Abatement of Produced Water Impacts and Seeps to Surface Water in the Upper Colorado River Basin Upstream of Spence Reservoir (Segment 1411) Quality Assurance Project Plan* (RRC, 2005) submitted by the RRC to the TCEQ and USEPA in September 2005 ("QAPP").

The field investigation consisted of the following tasks: (1) inspecting and field sampling the drainage basin downstream of the West O'Daniel Seep, (2) installing five monitoring wells, (3) collecting groundwater samples from eight monitoring wells, one water well, and two sumps, (4) collecting water samples from one surface and one shallow subsurface location within the drainage basin downstream of the West O'Daniel Seep, (5) synoptic well gauging, and (6) managing investigation-derived waste (IDW). The field investigation tasks were completed in accordance with the Work Plan and QAPP with the following variances:

- Water well S-WW-52 was not sampled because the well was dry.
- The groundwater sample from water well S-WW-53 was collected as a grab sample using a bailer rather than by purging with the well pump. The well was not purged because the well pump was not operational and purging using a bailer would have been ineffective based on the unknown well depth and large well diameter (six inches).
- Groundwater samples were collected from existing monitoring wells BEG-MW-06 and BEG-MW-07 to evaluate conditions upgradient of S-MW-04.
- The location for monitoring well S-MW-05 was inaccessible to a drilling rig, so S-MW-05 was drilled and installed using a temporary casing, hand auger, shovel, and dozer. The well was installed in loose alluvial sediments; so, to ensure a proper sand pack, a six-inch diameter polyvinyl chloride (PVC)

casing was pushed to seven feet below ground surface (bgs) using a dozer. Soil samples were collected from inside the casing using a 3-inch outside diameter hand auger and shovel to seven feet bgs. The two-inch diameter PVC well casing and screen were installed inside the six-inch PVC casing, and then the annular space was filled with sand and bentonite chips. The six-inch PVC casing was then removed from the ground using the dozer.

A summary of the groundwater data points is provided as Table 3-1.

Table 3-1. Summary of Groundwater Data Points

Sample Location Type	Description	Sample Location ID
Monitoring Well	Installed by BEG	BEG-MW-06, BEG-MW-07, BEG-MW-11, BEG-MW-14, and BEG-MW-15
	Installed by TRC	S-MW-01 (abandoned), S-MW-02, S-MW-03, S-MW-04, S-MW-05, S-MW-06, and S-MW-07
Water Well	Existing wells located east of the West O'Daniel Seep	S-WW-52 and S-WW-53
Sump	Located at the East O'Daniel Seep	E-S-55 and E-S-56

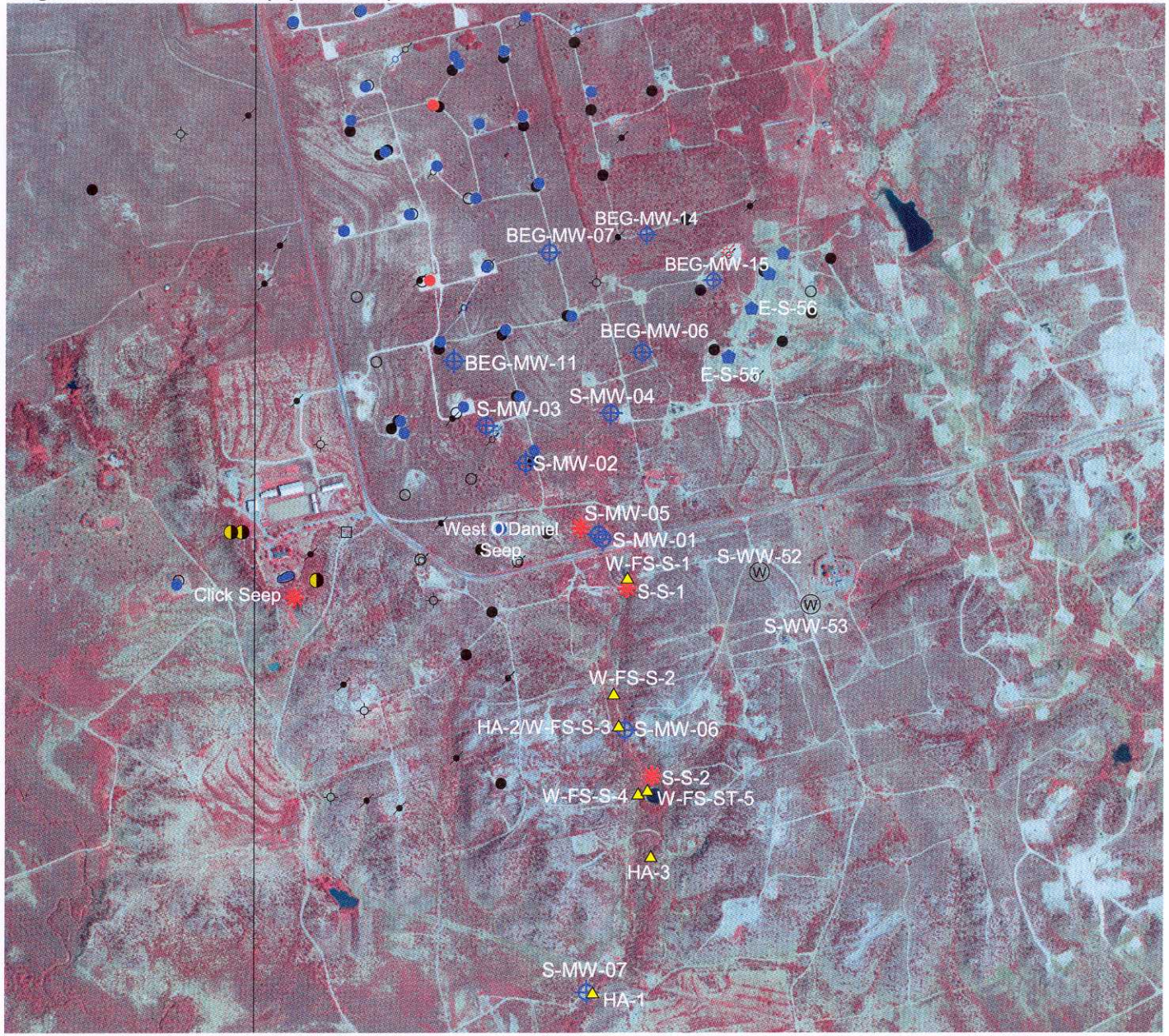
3.1 Field Inspection of the Drainage Basin

A field inspection of the drainage basin downstream of the West O'Daniel Seep was conducted on April 10, 2006, and indicated a decreasing trend in chloride concentrations in the downstream direction. The sample locations are shown on Figure 3-1, and the field chloride data are shown on Figure 3-2.

The West O'Daniel Seep was dry; however, surface water was observed at a seep identified as S-S-1, which was approximately 650 feet downstream of the West O'Daniel Seep. A sample (W-FS-S-1) was collected at this location and had a field chloride concentration of 23,800 mg/L. A sample (S-S-1) from this location was also submitted for laboratory analysis. The surface water flowed within the drainage basin for approximately 1,100 feet to field sample location W-FS-S-2 where the surface flow stopped most likely due to recharge into the subsurface. A sample (W-FS-S-2) was collected at this location and had a field chloride concentration of 26,000 mg/L.

Hand auger boring HA-2 was completed approximately 350 feet downstream from the end of the surface water flow to evaluate groundwater conditions in the shallow

Figure 3-1. Site Plan (April 2006)



LEGEND

TRC Monitoring Well Locations
- Monitoring Well
- Field Sample

TRC Verified Well Locations
- Oil
- Injection / Disposal
- Problem Oil
- Problem Plugged Oil Well
- Seep
- Sumps
- Problem Injection
- Salt Cedars
- Plugged Problem Injection
- Water Well

RRC Recorded Well Locations
- Permitted Location
- Dry Hole
- Oil
- Plugged Oil
- Injection / Disposal
- Injection / Disposal from Oil

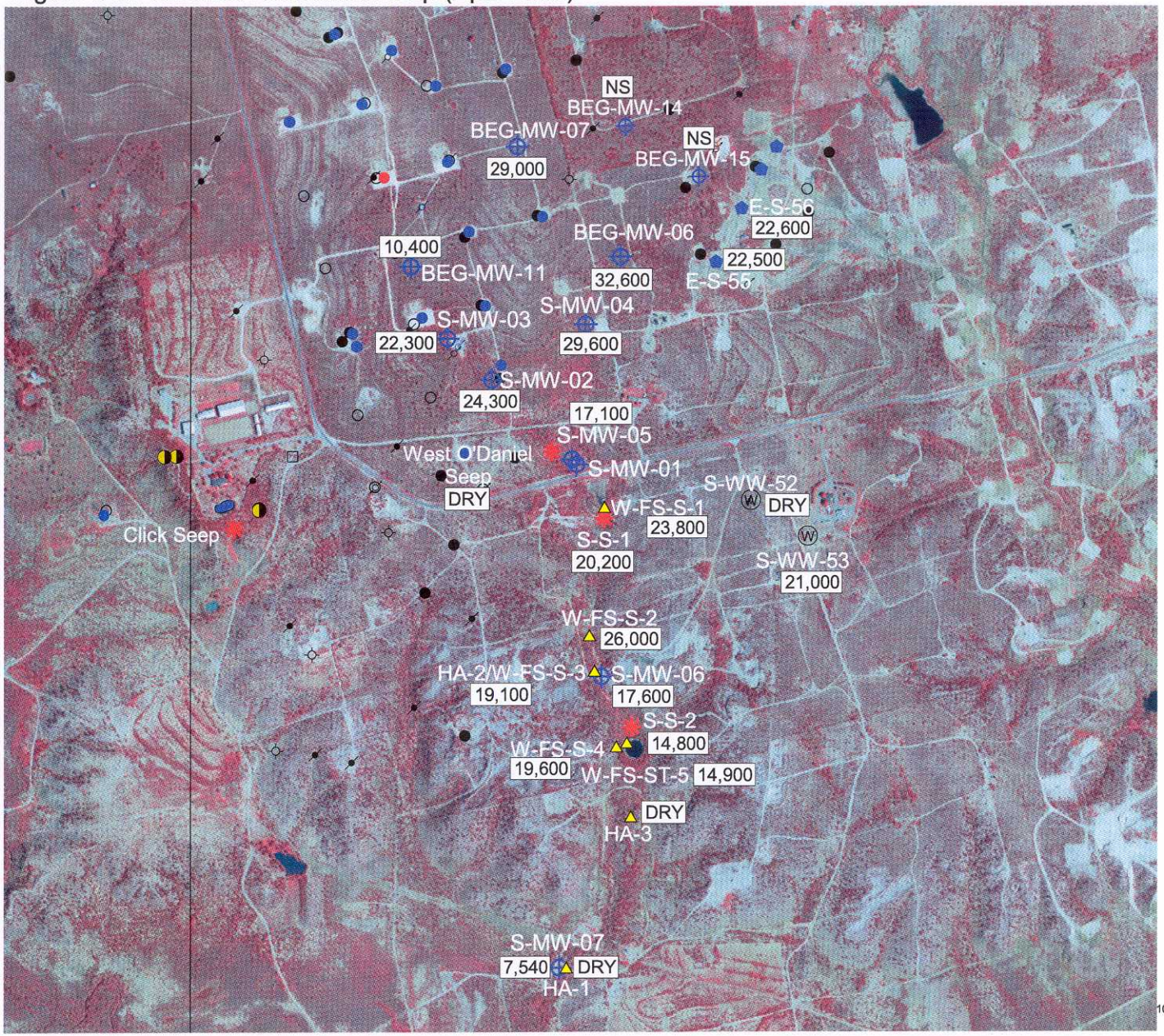
Note:
1. S-MW-01 is abandoned.

Reference: U.S.G.S. Digital Orthophoto Quarter Quadrangle (DOQ) Hyman SW (2004) and Moss Creek Lake NE (2004),Texas DOQs.

N

1000 0 1000 Feet

Figure 3-2. Chloride Distribution Map (April 2006)



LEGEND

TRC Monitoring Well Locations
- Monitoring Well
- Field Sample

TRC Verified Well Locations
- Oil
- Injection / Disposal
- Problem Oil
- Problem Plugged Oil Well
- Seep
- Sumps
- Problem Injection
- Salt Cedars
- Plugged Problem Injection
- Water Well

RRC Recorded Well Locations
- Permitted Location
- Dry Hole
- Oil
- Plugged Oil
- Injection / Disposal
- Injection / Disposal from Oil

Chloride Concentration (mg/L)
- 21,000 Chloride Concentration
- NS Not Sampled

Note:
1. The following concentration data are field samples: E-MW-07, W-FS-S-1, W-FS-S-2, W-FS-S-3, W-FS-S-4, and W-FS-ST-5.
2. S-MW-01 is abandoned.

Reference: U.S.G.S. Digital Orthophoto Quarter Quadrangle (DOQ) Hyman SW (2004) and Moss Creek Lake NE (2004),Texas DOQs.

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GEOLOGY
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PROFESSIONAL GEOSCIENTIST
8/20/06

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alluvial material. Boring HA-2 was completed to a depth of five feet bgs and groundwater was observed at three feet bgs. The field chloride concentration at HA-2 was 19,100 mg/L (sample W-FS-S-3). Monitoring well S-MW-06 was installed at this location based on the moderate decrease in chloride concentration.

A stock tank and minor tributary draining into the stock tank were identified approximately 900 feet downstream of boring HA-2. A sample (W-FS-S-4) was collected from the minor tributary and had a field chloride concentration of 19,600 mg/L. A sample (S-S-2) from this location was submitted for laboratory analysis. A sample (W-FS-ST-5) was collected from the stock tank and had a field chloride concentration of 14,900 mg/L.

Hand auger boring HA-3 was completed approximately 650 feet downstream of the stock tank to evaluate groundwater conditions in the shallow alluvial material. Boring HA-3 was completed to a depth of two feet bgs where refusal was encountered; the boring was dry.

Hand auger boring HA-1 was completed approximately 1,500 feet downstream of HA-2 and approximately 1,300 feet upstream of the confluence with Beals Creek. The boring was completed to evaluate groundwater conditions in the shallow alluvial material and to delineate chloride in the downstream direction. Boring HA-1 was completed to a depth of 10 feet bgs and was dry, so monitoring well S-MW-07 was drilled and installed to a depth of 33.48 feet bgs at this location.

3.2 Monitoring Well Installation

Five monitoring wells were installed on April 11 and 12, 2006, to characterize lithology, collect groundwater samples, and measure the depth to groundwater. The locations of the monitoring wells were selected based on the results of previous investigations and the chloride field test results discussed in Section 3.1. Borehole and well information are summarized on Table 1 of Appendix A, and the boring logs and well construction diagrams are included in Appendix B. Wells S-MW-03 and S-MW-04 were placed upgradient of the West O'Daniel Seep to evaluate potential source pathways along the two drainage basins. Well S-MW-05 was placed near the West O'Daniel Seep and near former temporary well S-MW-01. Wells S-MW-06 and S-MW-07 were placed downgradient of the West O'Daniel Seep for delineation; the locations of these two wells were based on the field data discussed in Section 3.1.

All five boreholes produced groundwater, so they were converted into monitoring wells S-MW-03, S-MW-04, S-MW-05, S-MW-06, and S-MW-07. All of the boreholes except S-MW-05 were completed using an air rotary drilling rig. Well S-MW-05 was

completed using a temporary casing, hand auger, shovel, and dozer because the location was inaccessible to the drill rig. The boreholes were converted into two-inch diameter PVC monitoring wells and were developed until groundwater parameters (i.e., pH, temperature, conductivity, and oxidation-reduction potential [ORP]) stabilized to within ten percent of the previous two readings and a minimum of three well volumes had been purged. The well development forms are presented in Appendix C. The soil IDW was spread on the ground surface because there was no obvious evidence of hydrocarbon impacts.

3.3 Well Gauging

Before the monitoring wells were purged and sampled, the depth to groundwater was gauged. The data were recorded using a water level meter with an accuracy of 0.01 feet. A synoptic gauging of the five new monitoring wells and the six existing wells was conducted on April 21, 2006. Gauging data were used to determine the groundwater flow direction and gradient at the site. The water level meter was decontaminated between wells. The well gauging data are provided in Table 2 of Appendix A.

3.4 Water Sampling

Groundwater samples were collected from eight monitoring wells (three existing wells and five new wells), one water well, and two sumps. One surface water sample and one shallow subsurface water sample were collected at two locations within the drainage basin downstream of the West O'Daniel Seep. The surface water sample (S-S-1) and the shallow subsurface water sample (S-S-2) were collected as grab samples. The water samples from the sumps were also collected as grab samples. The sumps were equipped with pumps so the samples were collected directly from a sample port on the effluent pipe. The sample from the water well was collected as a grab sample using a bailer.

Prior to purging the monitoring wells, the depth to water and total depth of the monitoring wells were measured and recorded. Each monitoring well was purged with a dedicated 1.5-inch diameter disposable PVC bailer until the water quality parameters (temperature, pH, conductivity, and ORP) stabilized to within 10 percent of the previous two readings and a minimum of three well volumes was purged. The field meter was calibrated according to the manufacturer's specifications. The meter probes were triple rinsed with groundwater from the next sample aliquot. A description of the water quality (e.g., turbidity, sheen, odor) was also recorded. Each sample was collected using the PVC bailer used for purging. The field sampling forms are presented in Appendix C.

The samples were collected on April 13, 14, and 21, 2006, and were submitted to DHL Analytical in Round Rock, Texas, for analysis of the following chemicals:

- BTEX by SW846 Method 8021B
- Barium, calcium, iron, magnesium, potassium, and sodium by SW846 Method 6020
- Bromide, chloride, nitrate, and sulfate by USEPA Method 300.0
- Alkalinity by USEPA Method 310.1
- pH by USEPA Method 150.1
- Specific conductance by USEPA Method 120.1

The samples were placed in coolers with ice, and the coolers remained in the custody of TRC personnel until they were shipped. Signed and dated chain-of-custody records and custody seals were completed for each cooler. The analytical data are provided in Tables 3, 4, 5, and 6 of Appendix A.

Quality assurance/quality control (QA/QC) samples were collected in the field to check the validity of the data. Field duplicate samples and matrix spike/matrix spike duplicate (MS/MSD) samples were collected at a frequency of 10 percent from sample locations being analyzed for complete salinity and BTEX. Trip blanks were included with each cooler that contained samples for BTEX analysis.

The water IDW, was contained in 55-gallon drums, properly labeled, and stored on-site for future disposal by the RRC.

3.5 Monitoring Well Survey

In order to determine the location and elevation of the wells, a survey of the five newly installed monitoring wells was conducted on May 10, 2006, using a global positioning system (GPS) unit. Coordinates, ground elevation, and top-of-casing elevation were surveyed by Crim and Bradshaw Engineering of Big Spring, Texas. The survey data are provided in Table 1 of Appendix A.

3.6 Dye Tracing

The RRC installed dye detectors in nine monitoring wells during July and August 2006 to determine whether the tracer dyes injected in 1998 and 1999 were still present in the groundwater. The dye detectors were installed in each monitoring well for seven days and this procedure was repeated over a three week period from July 24 to August 14, 2006. The dye detectors consisted of activated charcoal in a mesh packet that was placed approximately one foot above the bottom of each well and secured with white nylon twine. The charcoal packets were removed from the nine wells after seven days,

placed in a sealed plastic bag, and submitted to Ozark Underground Laboratory, Inc. in Protem, Missouri, for analyses. After removal of the charcoal packets, a groundwater sample was collected from each of the nine wells using a bailer that was dropped to the bottom of the well. On July 31 and August 7, 2006, a new charcoal packet was placed in each of the nine monitoring wells after collection of the groundwater sample. The laboratory analytical data are presented in Appendix D.

4.0 INVESTIGATION RESULTS

This section presents the geologic and groundwater data, analytical results and field measurements, and quality assurance information. TRC conducted site investigation activities from April 10 to 14, 2006, and on April 21, 2006. The investigation was conducted to achieve the objectives discussed in Section 1.2.

4.1 Geology and Groundwater

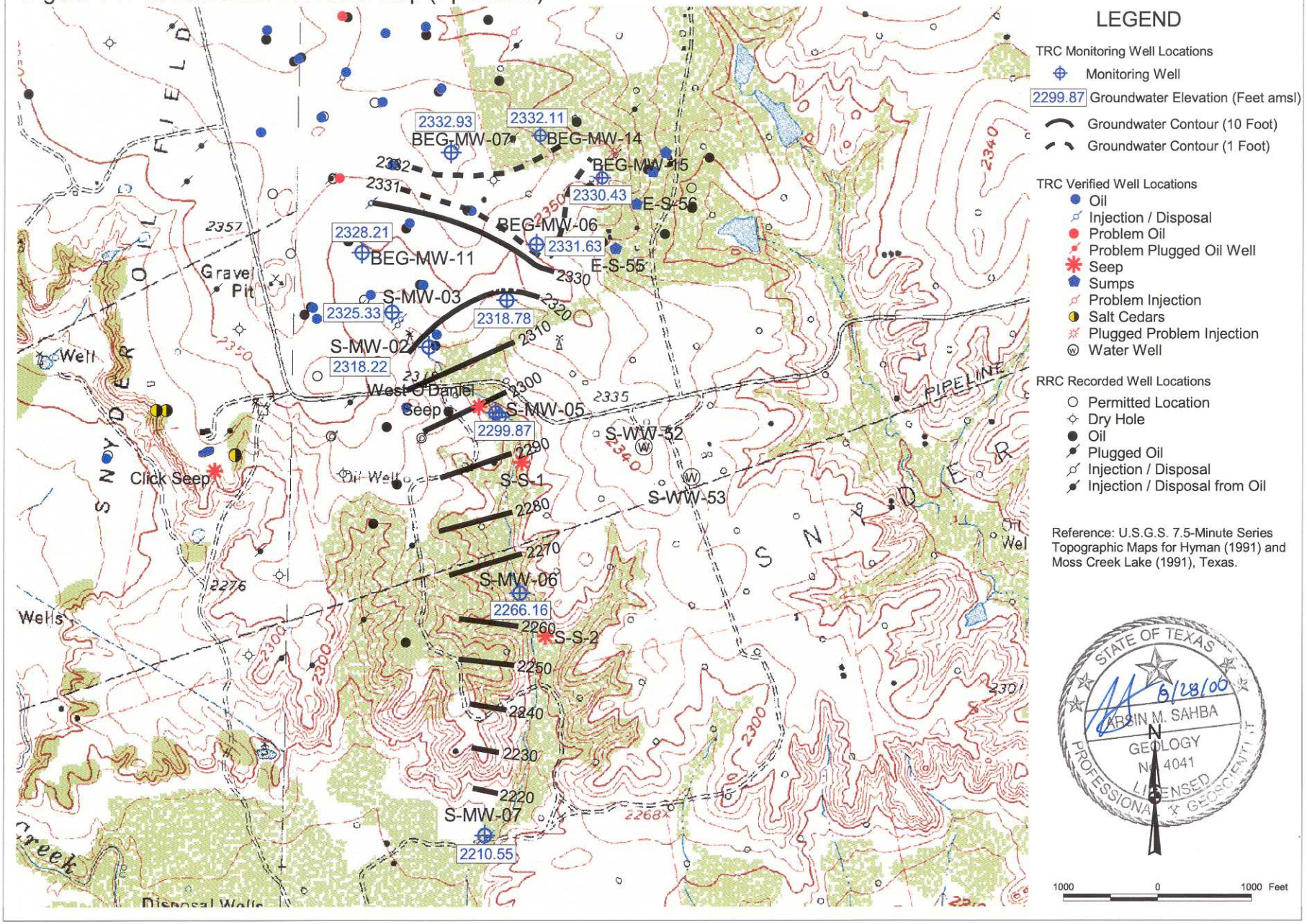
The subsurface lithology was interpreted to a maximum depth of 35 feet bgs based on boring logs for monitoring wells S-MW-02 through S-MW-07. The general lithology consists of sand overlying clay. The sand is primarily fine grained with some medium and coarse grain particles and includes minor amounts of gravel, silt and clay. There are intermittent lenses of silt within the sand, especially at wells S-MW-05 and S-MW-06. At well S-MW-07, there is five feet of clay at the surface, most likely topsoil. The topsoil was only encountered at well S-MW-07 because it is not as close to the sandy drainage basin as the other wells. A red clay (Dockum Group) occurs beneath the sand at depths ranging from 9 feet bgs at S-MW-02 to 27 feet bgs at S-MW-07. In general, the contact between the sand and clay mimics the ground topography.

A synoptic gauging of the six monitoring wells at the West O'Daniel Seep and five monitoring wells at the East O'Daniel Seep was conducted on April 21, 2006. The groundwater elevations are provided in Table 2 of Appendix A and are shown in Figure 4-1. Based on the groundwater elevation data, groundwater occurs in the sand unit under unconfined conditions. The groundwater flow pattern roughly follows the surface water flow pattern to the south at a hydraulic gradient of 0.019 feet per foot. There is a minor groundwater flow component to the east towards the East O'Daniel Seep. It would be expected that sources of saltwater and hydrocarbons would be located at or north (upgradient) of the monitoring wells with elevated chloride and BTEX concentrations, and would then migrate to the south.

4.2 Analytical Results and Field Measurements

This section discusses the analytical data from April 2006 and compares the results to previous analytical data. A summary of the analytical results from the April 2006 site investigation and the previous investigations are provided in Tables 3, 4, 5, and 6 of Appendix A. The laboratory analytical reports are provided in Appendix E. The evaluation of the current chemical concentrations in the wells was conducted to determine any potential source(s) of salinity and hydrocarbons at the site, determine the extent of impact, and determine any temporal trends.

Figure 4-1. Groundwater Elevation Map (April 2006)



4.2.1 Chloride Data

The 1999 BEG investigation report documented that chloride concentrations typically range from 100 to 1,000 mg/L in the Ogallala Formation in Howard County, and that background chloride values in the Ogallala within the investigation area ranged from 100 to 700 mg/L (BEG, 1999). For the purposes of this study, chloride concentrations below 1,000 mg/L are considered indicative of background conditions typical of the Ogallala Formation in this area. All of the April 2006 chloride concentrations from the West O'Daniel Seep investigation area exceeded the background level. Several BEG wells located approximately 0.5 miles north of the West O'Daniel Seep investigation area had concentrations indicative of background conditions. Figure 3-2 presents a chloride distribution map of the investigation area.

Monitoring wells BEG-MW-06, BEG-MW-07, and S-MW-04 had the highest chloride concentrations (32,600 mg/L, 29,000 mg/L, and 29,600 mg/L, respectively) and well S-MW-07 had the lowest chloride concentration (7,450 mg/L). The highest chloride concentrations occurred at the upgradient extent of the investigation area, which is west of the East O'Daniel Seep and north of the West O'Daniel Seep. Chloride concentrations decreased in the crossgradient direction to the west, and in the downgradient directions to south and east. The chloride concentration decreases rapidly from BEG-MW-06 (32,000 mg/L) to S-MW-05 (17,100 mg/L) that is near the West O'Daniel Seep, then stays relatively stable from S-MW-05 (17,100 mg/L) to S-MW-06 (17,600 mg/L), and finally decreases rapidly from S-MW-06 (17,600 mg/l) to S-MW-07 (7,540 mg/L).

The chloride results from two of the three previously installed monitoring wells, BEG-MW-11 and BEG-MW-06, increased since the previous investigations. The chloride concentration at BEG-MW-11 increased significantly from 1,244.30 mg/L in February 2001 (TRC, 2001) to 10,400 mg/L in April 2006. Sulfate, sodium, calcium, magnesium, and electrical conductivity also increased at BEG-MW-11 over this same time period; yet, carbonate and bicarbonate decreased over this time period. The chloride concentration at BEG-MW-06 increased from 26,565 mg/L in September 1998 (BEG, 1999) to 32,600 mg/L in April 2006. The results from the third previously installed monitoring well, S-MW-02, remained relatively stable from June 2001 (22,000 mg/L) to April 2006 (24,300 mg/L). Tables 3 and 4 of Appendix A presents the cation and anion concentrations measured in the samples collected during the site investigation. The pH and electrical conductivity are presented in Table 4 of Appendix A.

Delineation of chloride to the background concentration of 1,000 mg/L was not achieved. However, a notable decrease in the chloride concentration from 32,600 mg/L to 7,540 mg/L was documented to the south (downgradient). The significant increase in

chloride concentration at BEG-MW-11 may indicate migration of the plume to the west or a recent source in the vicinity.

4.2.2 Salinity Data

The concentration of salinity or total dissolved solids (TDS) can be used to classify water as fresh, saline, or brine. More than 90 percent of the TDS in groundwater can be attributed to eight ions: sodium, calcium, potassium, magnesium, sulfate, chloride, carbonate, and bicarbonate. Therefore, an estimate of the TDS concentration can be obtained by summing the concentration of these eight ions (Fetter, 1994.) The calculated TDS concentrations are included in Table 5 of Appendix A.

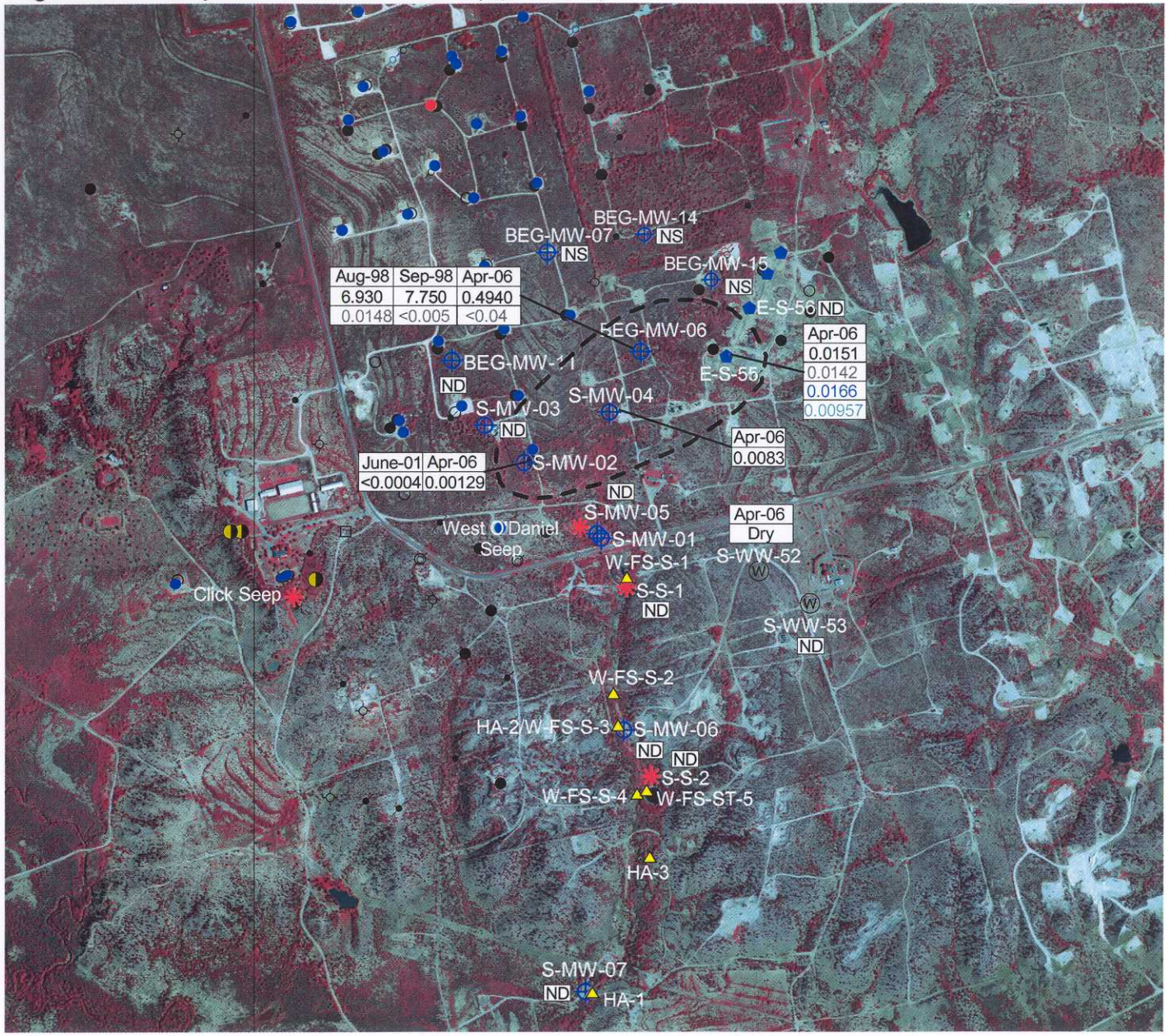
The Texas Water Development Board (TWDB) outlines five categories of water based on the TDS concentration (TWDB, 1969). Based on the TWDB report categories, the water samples collected from locations BEG-MW-06, sump E-S-55, sump E-S-56, S-MW-02, S-MW-03, S-MW-04, S-S-1, and S-WW-53) are characterized as brine. The water samples collected from S-MW-05, S-MW-06, S-MW-07, BEG-MW-11, and S-S-2 are characterized as very saline. TDS concentrations in the very saline and brine ranges that usually exhibit elevated sodium chloride content are often associated with produced water.

4.2.3 BTEX Data

The presence of BTEX can be an indicator of produced water associated with oil-field operations. Produced water typically contains residual BTEX compounds as a result of the contact between the produced water and oil. However, it is not unusual to see negligible concentrations of BTEX when high chloride concentrations are caused by produced water since the BTEX compounds may volatilize or biodegrade as the groundwater migrates through the subsurface.

The April 2006 data indicated the presence of benzene at BEG-MW-06, S-MW-02, S-MW-04, and sump E-S-55, and toluene, ethylbenzene and total xylenes at sump E-S-55. Figure 4-2 and Table 6 of Appendix A present the BTEX analytical results. The BTEX extent is located upgradient of the West O'Daniel Seep and has been delineated to the south (downgradient) by S-MW-05 and to the west (crossgradient) by S-MW-03 and BEG-MW-11 as shown on Figure 4-2. The highest benzene concentration occurs at BEG-MW-06 and decreases in the downgradient directions (south and east). The benzene concentration at BEG-MW-06 decreased significantly from September 1998 (7.750 mg/L) to April 2006 (0.4940 mg/l). The benzene concentration at S-MW-02

Figure 4-2. Analytical Results for BTEX (April 2006)



LEGEND

TRC Monitoring Well Locations

- Monitoring Well
- Field Sample

TRC Verified Well Locations

- Oil
- Injection / Disposal
- Problem Oil
- Problem Plugged Oil Well
- Seep
- Sumps
- Problem Injection
- Salt Cedars
- Plugged Problem Injection
- Water Well

RRC Recorded Well Locations

- Permitted Location
- Dry Hole
- Oil
- Plugged Oil
- Injection / Disposal
- Injection / Disposal from Oil

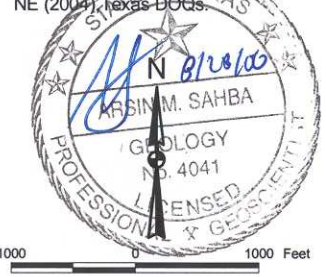
BTEX Concentration (mg/L)

0.0151	Benzene
0.0142	Toluene
0.0166	Ethyl Benzene
0.00957	Total Xylenes
ND	Well has always been non-detect for BTEX
NS	Not Sampled

— — Approximate extent of BTEX detections (April 2006)

Note:
1. This map only shows detected concentrations.
2. S-MW-01 is abandoned.

Reference: U.S.G.S. Digital Orthophoto Quarter Quadrangle (DOQ) Hyman SW (2004) and Moss Creek Lake NE (2004) Texas DOQs.



1000 0 1000 Feet

increased slightly from June 2001 (<0.0004 mg/L) to April 2006 (0.00129 mg/l). The benzene concentrations at BEG-MW-06, S-MW-04, and sump E-S-55 exceed the Texas Risk Reduction Program (TRRP) Tier 1 Residential Protective Concentration Level (PCL) of 0.005 mg/L for Class 1 Groundwater (TCEQ, 2006).

The BTEX data may indicate an inactive source area that is located near or upgradient of BEG-MW-06. The BTEX compounds then migrate to the south towards the West O'Daniel Seep and east towards the East O'Daniel Seep due to a groundwater divide that occurs near BEG-MW-06. There is no BTEX data available north (upgradient) of BEG-MW-06 to more precisely determine the potential source location.

4.2.4 Dye Tracer Data

The dye tracer data indicates that Fluorescein dye was only detected in BEG-MW-07. Eosine, Rhodamine WT, and Sulforhodamine B dyes were not detected in any of the wells.

4.3 Quality Assurance

The analytical results were reviewed by TRC's QA/QC chemist for compliance with the criteria presented in the QAPP. The QC review is provided in Appendix F. QC data associated with laboratory measurements indicate that measurement data are defensible and that measurement data reliability is generally within expected limits of sampling and analytical error given the data interpretation issues identified in the evaluation. The data user is advised that, based on MS/MSD recoveries, the reported concentration of sulfate in sample S-S-2-1 includes a low bias and should not be used for decision-making purposes.

Two duplicate samples (S-MW-02-2 and S-MW-04-2) were submitted for laboratory analysis of the same parameters as the original samples. The duplicate samples were collected at a frequency of five percent. The duplicate samples were collected from S-MW-02 and S-MW-04 by collecting a water sample immediately subsequent to the original sample from each well (S-MW-02-1 and S-MW-04-1).

Three trip blanks (Trip Blank 4-13-06, Trip Blank 4/14/06, and TB-4-21-06-1) were submitted for laboratory analysis. The trip blanks consisted of two 40-milliliter vials of reagent water provided by the laboratory. A trip blank was included in the cooler each day water samples were collected for BTEX analysis. Consequently, these trip blanks were analyzed for BTEX only. The trip blanks analytical results are included in the laboratory analytical reports presented in Appendix E.

5.0 CONCLUSIONS

A site investigation was conducted at the West O'Daniel Seep site to achieve the objectives identified in Section 1.2. The following conclusions were developed based on the investigation results:

- Groundwater occurs under unconfined conditions in the sand unit. Groundwater generally flows to the south with a minor flow component to the east.
- All of the sample locations had chloride concentrations above background conditions.
- The highest chloride concentrations occurred in the vicinity of BEG-MW-06, BEG-MW-07, and S-MW-04, which are located at the upgradient extent of the investigation area, which is west of the East O'Daniel Seep and north of the West O'Daniel Seep.
- The lowest chloride concentration occurred at S-MW-07, which is located at the downgradient extent of the investigation area.
- Chloride concentrations decreased in the crossgradient direction to the west, and in the downgradient directions to south and west.
- The chloride, sulfate, sodium, calcium, magnesium, and electrical conductivity results at BEG-MW-11 increased significantly since the previous investigations. The significant increase in chloride concentration at BEG-MW-11 may indicate plume migration to the west or a recent source in the vicinity.
- The chloride results at BEG-MW-06 increased from the previous investigations and may be related to effects from the potential source area.
- Delineation of chloride concentrations to the background level was not achieved, but a notable decrease in the chloride concentration was documented to the south (downgradient).
- Benzene is present at BEG-MW-06, S-MW-02, S-MW-04, and sump E-S-55, and toluene, ethylbenzene and total xylenes are present at sump E-S-55. The BTEX extent is located upgradient of the West O'Daniel Seep and has been delineated in the downgradient direction.

- The highest benzene concentration occurs at BEG-MW-06 and decreases in the downgradient directions (south and east).
- The benzene concentration at BEG-MW-06 decreased significantly from the previous investigations.
- The benzene concentrations at BEG-MW-06, S-MW-04, and sump E-S-55 exceed the TRRP Tier 1 Residential PCL of 0.005 mg/L for Class 1 Groundwater.
- The source area seems to be located near or upgradient of BEG-MW-06 based on this well having the highest chloride and benzene concentrations. There is no BTEX data available north (upgradient) of BEG-MW-06 to more precisely determine the potential source location.
- The significant decrease in BTEX concentrations, especially at BEG-MW-06, may indicate that the source is no longer active. There had not been a corresponding decrease in the chloride concentration. This may be because chloride undergoes negligible, if any, attenuation and thus concentrations of chloride take a longer time to decrease even when the source area is eliminated.
- There seems to be a groundwater divide near BEG-MW-06, with groundwater flow from this location going east towards the East O'Daniel Seep and south towards the West O'Daniel Seep. The presence of benzene in the wells isolated to the drainage basin for the East O'Daniel Seep (e.g., sump E-S-55 and BEG-MW-15) and isolated to the drainage basin for the West O'Daniel Seep (e.g., S-MW-04) may indicate that the two seeps have a common source located generally to the north.

6.0 RECOMMENDATIONS

The following recommendations are provided based on the currently available data:

1. Continue to periodically monitor water concentrations at the current sample locations, possibly on an annual schedule.
2. Add upgradient sample locations BEG-MW-07, BEG-MW-14, and BEG-MW-15 to the monitoring program to delineate chemical concentrations and possibly identify the potential source location(s).
3. Consider reducing the analytical suite to chloride, electrical conductivity, and BTEX.
4. Consider installing one monitoring well southeast of BEG-MW-06 and S-MW-04 for delineation and additional information regarding the possible groundwater divide between the East and West O'Daniel Seeps.
5. Conduct a preliminary feasibility study for the abatement of high salinity water from the West O'Daniel Seep investigation area into Beals Creek and the Colorado River. The feasibility study will focus on best management practices (BMPs) and will consider the abatement measures already deployed for the East O'Daniel Seep. Alternatives will be evaluated on their ability to achieve the project goal (abatement of high salinity water), implementability, regulatory acceptance, and cost.

7.0 REFERENCES

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APPENDIX A

TABLES

Table 1. Monitoring Well and Borehole Information

Location ID	Completion Date	Latitude (ºN)	Longitude (ºW)	Ground Elevation (ft)	Top-of-Casing Elevation (ft)	Screened Interval (ft bgs)	Total Depth (ft bgs)
S-MW-01	2/16/01	32.22885	-101.24415	2225*	NA	NA	7.0
S-MW-02	6/15/01	32.229396	-101.245730	2321.78	2324.10	4.5-14.5	13.95
S-MW-03	4/12/06	32.230679	-101.247021	2335.79	2337.94	8-23	23.30
S-MW-04	4/11/06	32.231093	-101.243066	2337.07	2339.48	16-26	26.07
S-MW-05	4/11/06	32.227831	-101.243368	2302.11	2304.74	1-6	6.06
S-MW-06	4/12/06	32.222628	-101.242404	2270.35	2272.28	3-13	13.48
S-MW-07	4/12/06	32.215624	-101.243415	2230.71	2232.85	13-33	33.48
BEG-MW-06	8/12/98	32.23273	-101.24211	2347.6	2350.89	NA	24.8
BEG-MW-07	8/12/98	32.2353	-101.2451	2370.9	2373.50	NA	45.7
BEG-MW-11	8/18/98	32.232389	-101.248096	2347.4	2350.88	NA	24.8
BEG-MW-14	8/14/98	32.2359	-101.2421	2355.2	2358.10	NA	25.0
BEG-MW-15	8/11/98	32.2347	-101.2399	2348.4	2351.46	NA	29.5

Notes
ft bgs = feet below ground surface
NA = not available
Elevation Survey Benchmark = U.S.C & G.S. MOOR ELEVATION 2754.0 MSL (FEET)
* Estimated

Table 2. Water Level Gauging Data

Location ID	Ground Elevation (ft)	Top-of-Casing Elevation (ft)	Date Water Level Measured	Total Depth of Well (ft btoc)	Depth to Water (ft btoc)	Water Elevation (ft)
West O'Daniel Monitoring Well 01 (Estimated Data)						
S-MW-01	2225	NA	2/21/01	NA	5	NA
West O'Daniel Monitoring Well 02						
S-MW-02	2321.78	2324.10	4/21/06	25.9	5.88	2318.22
S-MW-02	2321.8	2324.10	6/16/01	25.9	4.99	2319.11
West O'Daniel Monitoring Well 03						
S-MW-03	2335.79	2337.94	4/21/06	25.45	12.61	2325.33
West O'Daniel Monitoring Well 04						
S-MW-04	2337.07	2339.48	4/21/06	28.48	20.70	2318.78
West O'Daniel Monitoring Well 05						
S-MW-05	2302.11	2304.74	4/21/06	8.69	4.87	2299.87
West O'Daniel Monitoring Well 06						
S-MW-06	2270.35	2272.28	4/21/06	27.85	6.12	2266.16
West O'Daniel Monitoring Well 07						
S-MW-07	2230.71	2232.85	4/21/06	15.39	22.30	2210.55
East O'Daniel Monitoring Well 06						
BEG-MW-06	2347.6	2350.89	4/21/06	28.1	19.26	2331.63
BEG-MW-06	2347.6	2350.89	9/9/98	28.1	17.41	2333.48
BEG-MW-06	2347.6	2350.89	8/29/98	28.1	17.45	2333.44
BEG-MW-06	2347.6	2350.89	8/26/98	28.1	17.44	2333.45
East O'Daniel Monitoring Well 07						
BEG-MW-07	2370.9	2373.50	4/21/06	48.31	40.57	2332.93
BEG-MW-07	2370.9	2373.50	9/9/98	48.3	38.56	2334.9
BEG-MW-07	2370.9	2373.50	8/29/98	48.3	38.95	2334.6
East O'Daniel Monitoring Well 11						
BEG-MW-11	2347.4	2350.88	4/21/06	28.3	22.67	2328.21
BEG-MW-11	2347.4	2350.8	2/22/01	NA	14.21	2336.67
BEG-MW-11	2347.4	2350.88	9/9/98	28.3	16.81	2334.07
BEG-MW-11	2347.4	2350.88	8/29/98	28.3	16.82	2334.06
BEG-MW-11	2347.4	2350.88	8/25/98	28.3	16.85	2334.03

Table 2. Water Level Gauging Data (cont.)

Location ID	Ground Elevation (ft)	Top-of-Casing Elevation (ft)	Date Water Level Measured	Total Depth of Well (ft btoc)	Depth to Water (ft btoc)	Water Elevation (ft)
East O'Daniel Monitoring Well 14						
BEG-MW-14	2355.2	2358.10	4/21/06	27.9	25.99	2332.11
BEG-MW-14	2355.2	2358.10	9/9/98	27.9	24.83	2333.27
BEG-MW-14	2355.2	2358.10	8/29/98	27.9	24.97	2333.13
East O'Daniel Monitoring Well 15						
BEG-MW-15	2348.4	2351.46	4/21/06	32.6	21.03	2330.43
BEG-MW-15	2348.4	2351.46	9/9/98	32.6	19.37	2332.09
BEG-MW-15	2348.4	2351.46	8/29/98	32.6	19.47	2331.99
BEG-MW-15	2348.4	2351.46	8/26/98	32.6	19.29	2332.17

Notes
ft btoc = feet below top of casing
NA = Not available

Table 3. Analytical Results for Cations and Anions

Location ID	Field Sample ID	Sample Date	Results of Cations and Anions Analysis (reported in mg/L)									
			Chloride	Sulfate	Nitrate	Bromide	Sodium	Calcium	Magnesium	Potassium	Iron	Barium
West O'Daniel Monitoring Well 01												
S-MW-01	Click 2-1-1	2/21/01	21,432.60	1976.14	NA	NA	8,972.19	4313.20	1150.63	28.07	NA	NA
West O'Daniel Monitoring Well 02												
S-MW-02	S-MW-02-1	4/13/06	23,700	2,130	<1	56.50	9,410	3,980	1,210	30.7	1.97	0.0959
S-MW-02 (duplicate)	S-MW-02-2	4/13/06	24,300	2,140	<1	56.70	9,440	3,990	1,200	30.9	5.48	0.105
S-MW-02	9029	6/16/01	22,000	1,810	NA	NA	9,630	2,780	902	NA	0.273	0.134
West O'Daniel Monitoring Well 03												
S-MW-03	S-MW-03-1	4/13/06	22,300	1,930	1.24	56.10	9,240	3,780	1,080	12.3	0.55	0.108
West O'Daniel Monitoring Well 04												
S-MW-04	S-MW-04-1	4/13/06	29,600	2,780	29.40	69.20	14,200	3,230	728	207	1.75	0.223
S-MW-04 (duplicate)	S-MW-04-2	4/13/06	29,600	2,850	33.70	74.90	16,000	3,250	756	214	1.89	0.224
West O'Daniel Monitoring Well 05												
S-MW-05	S-MW-05-1	4/14/06	17,100	1,710	<1	44.30	9,130	2,930	730	22.3	5.5	0.497
West O'Daniel Monitoring Well 06												
S-MW-06	S-MW-06-1	4/14/06	17,600	1,380	1.27	43.60	6,060	3,810	975	34.9	5.06	0.521
West O'Daniel Monitoring Well 07												
S-MW-07	S-MW-07-1	4/14/06	7,540	480	ND	20.10	1,950	1,670	746	37.6	0.833	0.373

Table 3. Analytical Results for Cations and Anions (cont.)

Location ID	Field Sample ID	Sample Date	Results of Cations and Anions Analysis (reported in mg/L)									
			Chloride	Sulfate	Nitrate	Bromide	Sodium	Calcium	Magnesium	Potassium	Iron	Barium
East O'Daniel Monitoring Well 06												
BEG-MW-06	E-MW-06-1	4/13/06	32,600	3,310	6.51	85	18,800	2,670	757	313.0	0.192	0.141
BEG-MW-06	9042	9/09/98	26,565	3,214	<1	650	15,980	2,277	788	459	<0.1	0.15
East O'Daniel Monitoring Well 11												
BEG-MW-11	S-MW-BEG-11-1	4/13/06	10,400	1,080	3.92	25.50	2,650	2,750	632	20.3	0.0984	0.096
BEG-MW-11	Click 3-11-1	2/22/01	1,244.30	504.30	NA	NA	395.42	456.91	103.28	394.91	NA	NA
BEG-MW-11	9032	8/29/98	538	244	25	2	280	137	38	<5	<0.1	0.2
BEG-MW-11	9032	8/29/98	521	253	30.80	3.96	366	127	28.7	6.61	0.0174	NA
East O'Daniel Sump 55												
E-S-55	E-S-55-1	4/14/06	22,500	2,210	<1	62.30	15,300	2,320	759	106.0	0.707	0.108
East O'Daniel Sump 56												
E-S-56	E-S-56-1	4/21/06	22,600	2,190	14.00	57.10	11,600	1,850	447	172.0	0.0642	0.0779
West O'Daniel Seep 1												
S-S-1	S-S-1-1	4/14/06	20,200	1,830	<1	52.00	9,780	3,590	1,070	34.9	3.05	0.205
West O'Daniel Seep 2												
S-S-2	S-S-2-1	4/14/06	14,800	1,060*	<1	37.80	5,400	3,240	1,050	14.6	1.79	0.216
West O'Daniel Water Well 53												
S-WW-53	S-WW-53-1	4/14/06	21,000	2,090	19.80	54.70	8,890	3,560	1,280	56.5	9.93	0.199

Notes
TDS = total dissolved solids (sum of cations and anions)
NA = not analyzed
mg/L = milligrams per liter
* - Analytical result rejected during QA process based on MS/MSD recoveries

Table 4. Analytical Results for Conductivity and pH

Location ID	Field Sample ID	Sample Date	pH (SU)	Electrical Conductivity (µmhos/cm)
S-MW-01	Click-2-1-1	2/21/01	6.6	58,000
S-MW-02	S-MW-02-1	4/13/06	6.45	73,100
S-MW-02 (duplicate)	S-MW-02-2	4/13/06	6.47	74,000
S-MW-02	W-O'Daniel-2-1	6/16/01	6.59	54,200
S-MW-03	S-MW-03-1	4/13/06	6.61	67,000
S-MW-04	S-MW-04-1	4/13/06	6.67	90,500
S-MW-04 (duplicate)	S-MW-04-2	4/13/06	6.65	90,800
S-MW-05	S-MW-05-1	4/14/06	6.71	56,800
S-MW-06	S-MW-06-1	4/14/06	6.39	55,800
S-MW-07	S-MW-07-1	4/14/06	6.73	24,400
BEG-MW-06	E-MW-06-1	4/13/06	6.42	98,300
BEG-MW-06	9042	9/09/98	7.63	69,100
BEG-MW-11	S-MW-BEG11-1	4/13/06	6.78	32,600
BEG-MW-11	Click 3-11-1	2/22/01	7.4	5,200
BEG-MW-11	9032	8/29/98	8.43	2,710
E-S-55	E-S-55-1	4/14/06	6.75	77,400
E-S-56	E-S-56-1	4/21/06	7.15	81,000
S-S-1	S-S-1-1	4/14/06	7.23	63,400
S-S-2	S-S-2-1	4/14/06	7.13	46,200
S-WW-53	S-WW-53-1	4/14/06	6.45	67,400

Notes
SU = standard units
NA= not analyzed
µmhos/cm = micromhos per centimeter

Table 5. Analytical Results for Alkalinity and TDS

Location ID	Field Sample ID	Sample Date	Results of Cations and Anions Analysis (reported in mg/L)				
			Bicarbonate	Carbonate	Hydroxide	Total Alkalinity	Calculated TDS*
West O'Daniel Monitoring Well 01							
S-MW-01	Click-2-1-1	2/21/01	258.37	<3	NA	258.37	38,131.20
West O'Daniel Monitoring Well 02							
S-MW-02	S-MW-02-1	4/13/06	259	<10	<10	259	40,719.70
S-MW-02 (duplicate)	S-MW-02-2	4/13/06	259	<10	<10	259	41,359.90
S-MW-02	W-O'Daniel-2-1	6/16/01	293	<2	NA	293	37,415
West O'Daniel Monitoring Well 03							
S-MW-03	S-MW-03-1	4/13/06	123	<10	<10	123	38,465.30
West O'Daniel Monitoring Well 04							
S-MW-04	S-MW-04-1	4/13/06	180	<10	<10	180	50,925.00
S-MW-04 (duplicate)	S-MW-04-2	4/13/06	181	<10	<10	181	52,851.00
West O'Daniel Monitoring Well 05							
S-MW-05	S-MW-05-1	4/14/06	264	<10	<10	264	31,886.30
West O'Daniel Monitoring Well 06							
S-MW-06	S-MW-06-1	4/14/06	188	<10	<10	188	30,047.90
West O'Daniel Monitoring Well 07							
S-MW-07	S-MW-07-1	4/14/06	119	<10	<10	119	12,542.60

Table 5. Analytical Results for Alkalinity and TDS (cont.)

Location ID	Field Sample ID	Sample Date	Results of Cations and Anions Analysis (reported in mg/L)				
			Bicarbonate	Carbonate	Hydroxide	Total Alkalinity	Calculated TDS*
East O'Daniel Monitoring Well 06							
BEG-MW-06	E-MW-06-1	4/13/06	260	<10	<10	260	58,710.00
BEG-MW-06	9042	9/09/98	393	0	NA	393	49,676.00
East O'Daniel Monitoring Well 11							
BEG-MW-11	S-MW-BEG11-1	4/13/06	112	<10	<10	112	17,644.30
BEG-MW-11	Click 3-11-1	2/22/01	213.56	<3.0	NA	213.56	3,312.68
BEG-MW-11	9032	8/29/98	298	8	NA	306	1,543.00
BEG-MW-11	9032	8/29/98	255	0	NA	255	1,557.61
East O'Daniel Sump 55							
E-S-55	E-S-55-1	4/14/06	287	<10	<10	287	43,482.00
East O'Daniel Sump 56							
E-S-56	E-S-56-1	4/21/06	135	<10	<10	135	38,994.00
West O'Daniel Seep 1							
S-S-1	S-S-1-1	4/14/06	111.0	<10	<10	111.0	36,615.90
West O'Daniel Seep 2							
S-S-2	S-S-2-1	4/14/06	83.9	<10	<10	83.9	25,648.50
West O'Daniel Water Well 53							
S-WW-53	S-WW-53-1	4/14/06	70.5	<10	<10	70.5	36,947.00

Notes
NA= not analyzed
*Includes data from Table 4
mg/L = milligrams per liter

Table 6. Analytical Results for BTEX

Sample Location ID	Field Sample ID	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)
West O'Daniel Monitoring Well 01						
S-MW-01	Click-2-1-1	2/21/01	<0.002	<0.005	<0.005	<0.005
West O'Daniel Monitoring Well 02						
S-MW-02	S-MW-02-1	4/13/06	0.00129	<0.005	<0.005	<0.005
S-MW-02 (duplicate)	S-MW-02-2	4/13/06	<0.005	<0.005	<0.005	<0.005
S-MW-02	W-O'Daniel-2-1	6/16/01	<0.0004	<0.0003	<0.0003	<0.001
West O'Daniel Monitoring Well 03						
S-MW-03	S-MW-03-1	4/13/06	<0.005	<0.005	<0.005	<0.005
West O'Daniel Monitoring Well 04						
S-MW-04	S-MW-04-1	4/13/06	**0.0083**	<0.005	<0.005	<0.005
S-MW-04 (duplicate)	S-MW-04-2	4/13/06	**0.00692**	<0.005	<0.005	<0.005
West O'Daniel Monitoring Well 05						
S-MW-05	S-MW-05-1	4/14/06	<0.005	<0.005	<0.005	<0.005
West O'Daniel Monitoring Well 06						
S-MW-06	S-MW-06-1	4/14/06	<0.005	<0.005	<0.005	<0.005
West O'Daniel Monitoring Well 07						
S-MW-07	S-MW-07-1	4/14/06	<0.005	<0.005	<0.005	<0.005

Table 6. Analytical Results for BTEX (cont.)

Sample Location ID	Field Sample ID	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)
East O'Daniel Monitoring Well 06						
BEG-MW-06	E-MW-06-1	4/13/06	**0.494**	<0.005	<0.005	<0.005
BEG-MW-06	9042D	9/09/98	**7.750**	<0.005	<0.005	<0.005
BEG-MW-06	9040-2	8/29/98	**6.930**	0.0148	<0.005	<0.005
East O'Daniel Monitoring Well 11						
BEG-MW-11	S-MW-BEG11-1	4/13/06	<0.005	<0.005	<0.005	<0.005
BEG-MW-11	Click 3-11-1	2/22/01	<0.002	<0.005	<0.005	<0.005
BEG-MW-11	9032	8/29/98	<0.005	<0.005	<0.005	<0.005
East O'Daniel Sump 55						
E-S-55	E-S-55-1	4/14/06	**0.0151**	0.0142	0.0166	0.00957
East O'Daniel Sump 56						
E-S-56	E-S-56-1	4/21/06	<0.005	<0.005	<0.005	<0.005
West O'Daniel Seep 1						
S-S-1	S-S-1-1	4/14/06	<0.005	<0.005	<0.005	<0.005
West O'Daniel Seep 2						
S-S-2	S-S-2-1	4/14/06	<0.005	<0.005	<0.005	<0.005
West O'Daniel Water Well 53						
S-WW-53	S-WW-53-1	4/14/06	<0.005	<0.005	<0.005	<0.005

Notes
mg/L = milligrams per liter
bold = exceeds Texas Risk Reduction Program (TRRP) Residential Land Use, Class 1 Groundwater Protective Concentration Level (PCL) for the groundwater ingestion exposure pathway

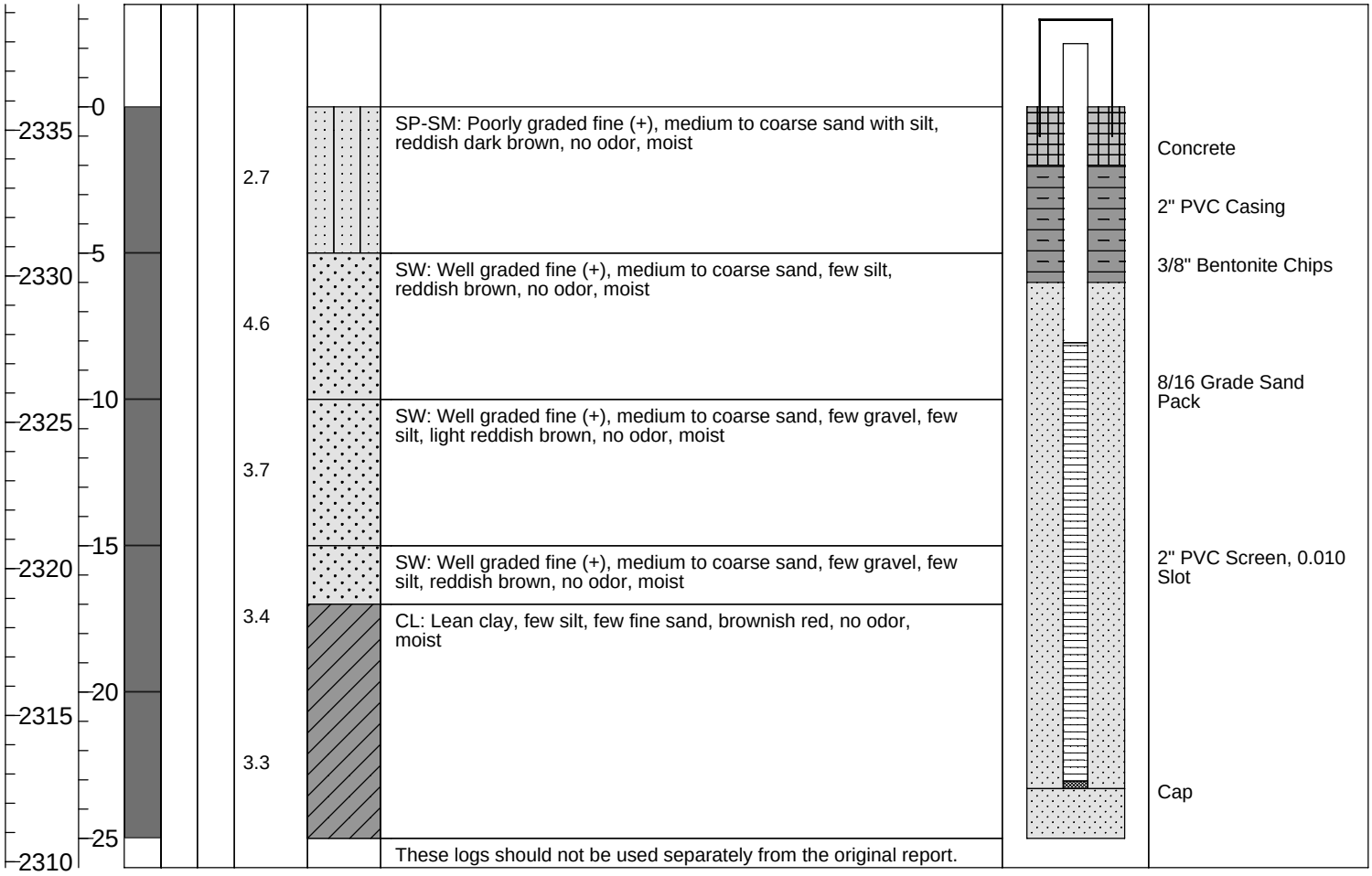
APPENDIX B

BORING LOGS AND WELL CONSTRUCTION REPORTS

BORING LOG and WELL CONSTRUCTION

S-MW-03

Client: Railroad Commission of Texas	TRC Project #: 53680
Site: West O'Daniel Seep	Start Date: 4/12/06
Address: Synder Oil Field, Howard County, TX	Finish Date: 4/12/06
Project: Site Assessment	Permit #: NA
Drilling Company: Scarborough Drilling Drilling Crew: L. Scarborough & Crew	TRC Site Rep.: M.Webre, B.Clark
Drilling Method: Air Rotary	TRC Reviewer: A. Sahba
Boring Diameter (in): 5.25 Boring Depth (ft bgs): 25	X-Y Coord. System: Lat-Long
Sampling Method: Cuttings	Latitude: 32.230679
Blow Count Method: NA	Longitude: -101.247021
Field Screening Parameter: Volatile Organic Vapors	Elevation Datum: NGVD 29
Meter: PID - MiniRAE 2000 Units: ppm	Ground Elevation (ft): 2335.79
Well Depth (ft bgs): 23.30 Well Depth (ft toc): 25.45	Well Elevation (ft): 2337.94
Casing Length (ft): 10.20 Screen Length (ft): 15	Well Measuring Point: Top of Casing
Surface Completion: Steel Stick-up with Concrete Pad (2'x2')	Depth to Water (ft toc): 12.61
Well Development: Bail-Surge with Bailer total 11.25 gal	Date/Time: 4/21/06, 1230

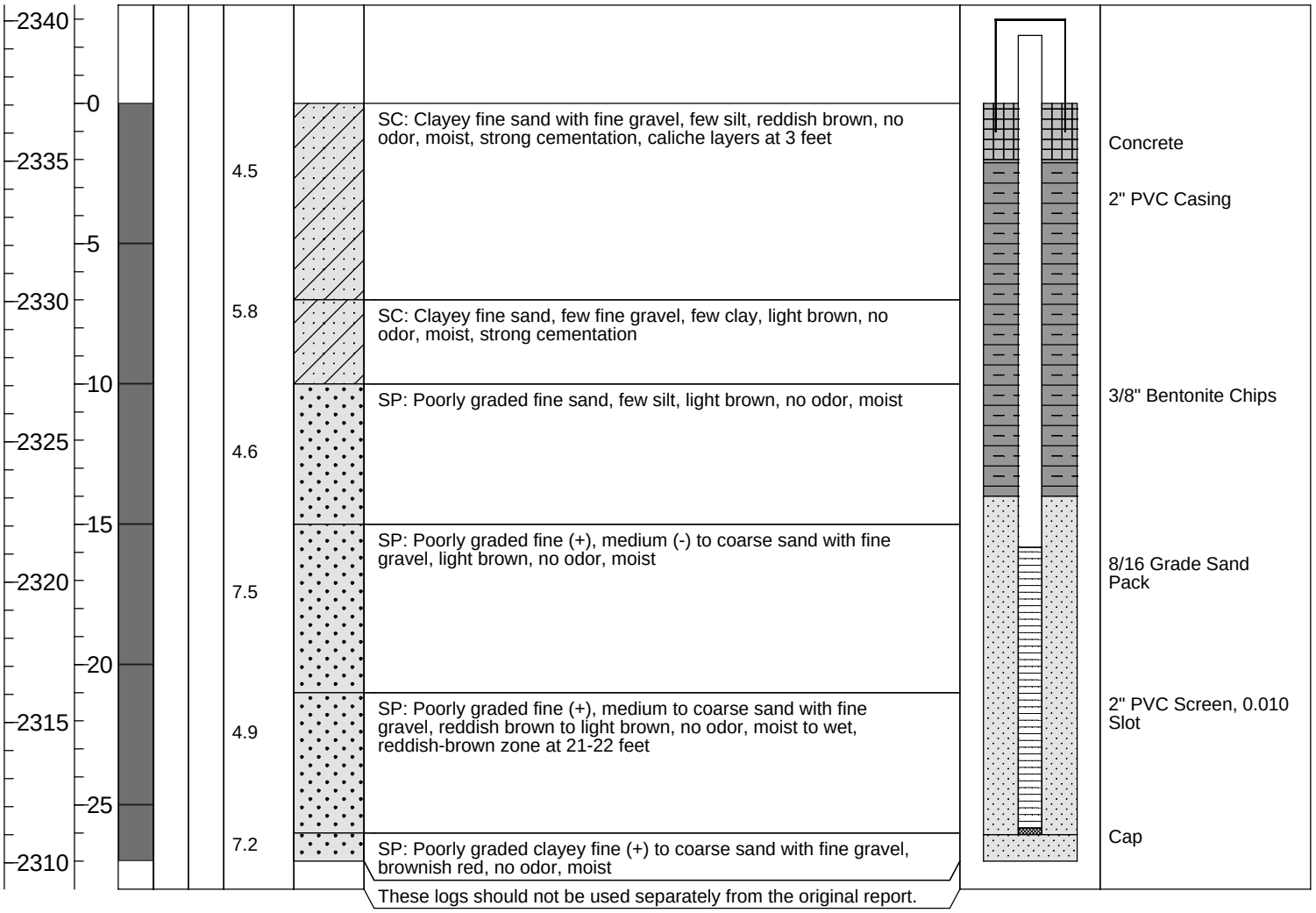


These logs should not be used separately from the original report.

BORING LOG and WELL CONSTRUCTION

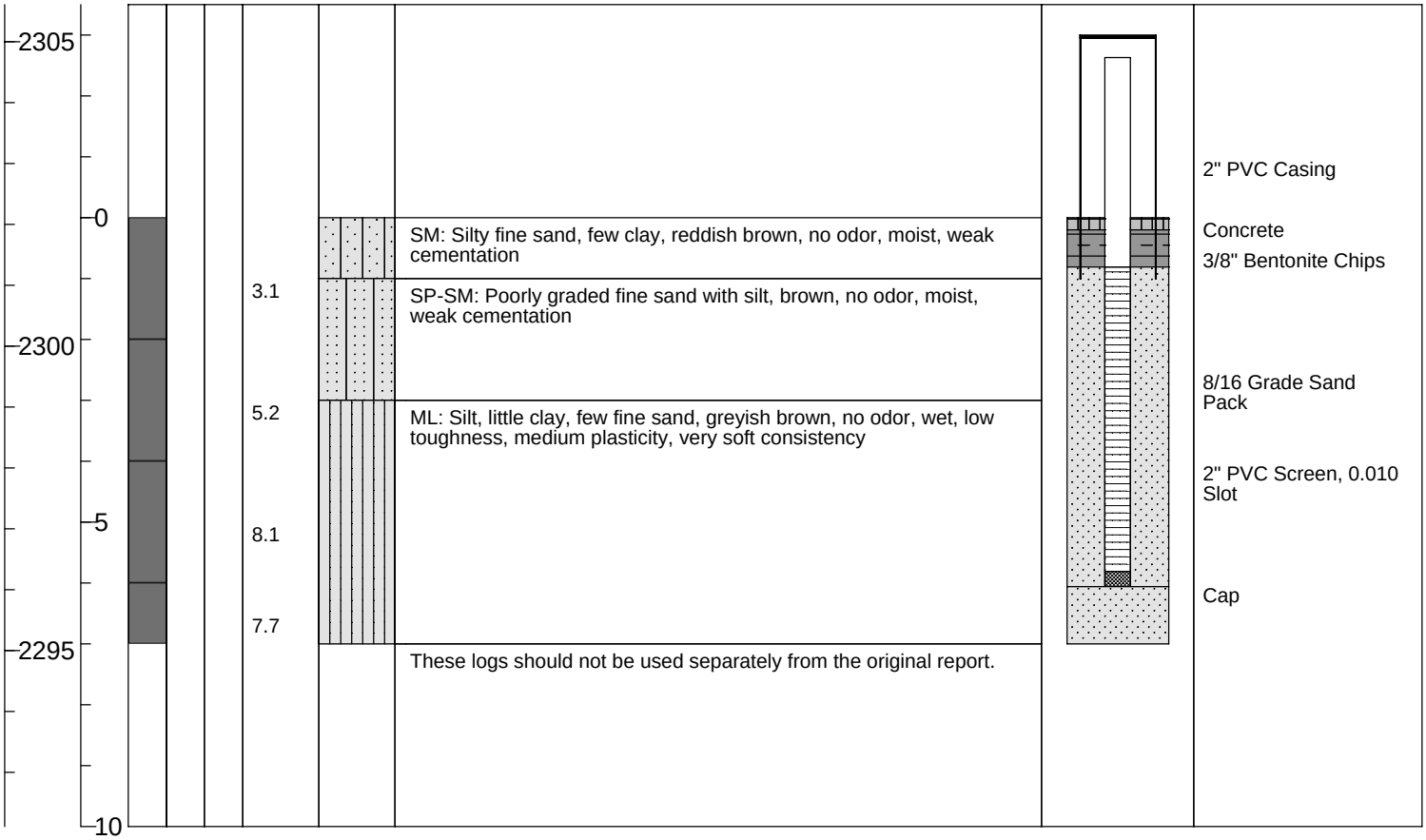
S-MW-04

Client: Railroad Commission of Texas	TRC Project #: 53680
Site: West O'Daniel Seep	Start Date: 4/11/06
Address: Synder Oil Field, Howard County, TX	Finish Date: 4/11/06
Project: Site Assessment	Permit #: NA
Drilling Company: Scarborough Drilling Drilling Crew: L. Scarborough & Crew	TRC Site Rep.: M. Webre, B. Clark
Drilling Method: Air Rotary	TRC Reviewer: A. Sahba
Boring Diameter (in): 5.25 Boring Depth (ft bgs): 27	X-Y Coord. System: Lat-Long
Sampling Method: Cuttings	Latitude: 32.231093
Blow Count Method: NA	Longitude: -101.243066
Field Screening Parameter: Volatile Organic Vapors	Elevation Datum: NGVD 29
Meter: PID - MiniRAE 2000 Units: ppm	Ground Elevation (ft): 2337.07
Well Depth (ft bgs): 26.07 Well Depth (ft toc): 28.48	Well Elevation (ft): 2339.48
Casing Length (ft): 18.23 Screen Length (ft): 10	Well Measuring Point: Top of Casing
Surface Completion: Steel Stick-up with Concrete Pad (2'x2')	Depth to Water (ft toc): 20.70
Well Development: Bail-Surge with Bailer total 10 gal	Date/Time: 4/21/06, 1240



TRC BORING LOG and WELL CONSTRUCTION	S-MW-05

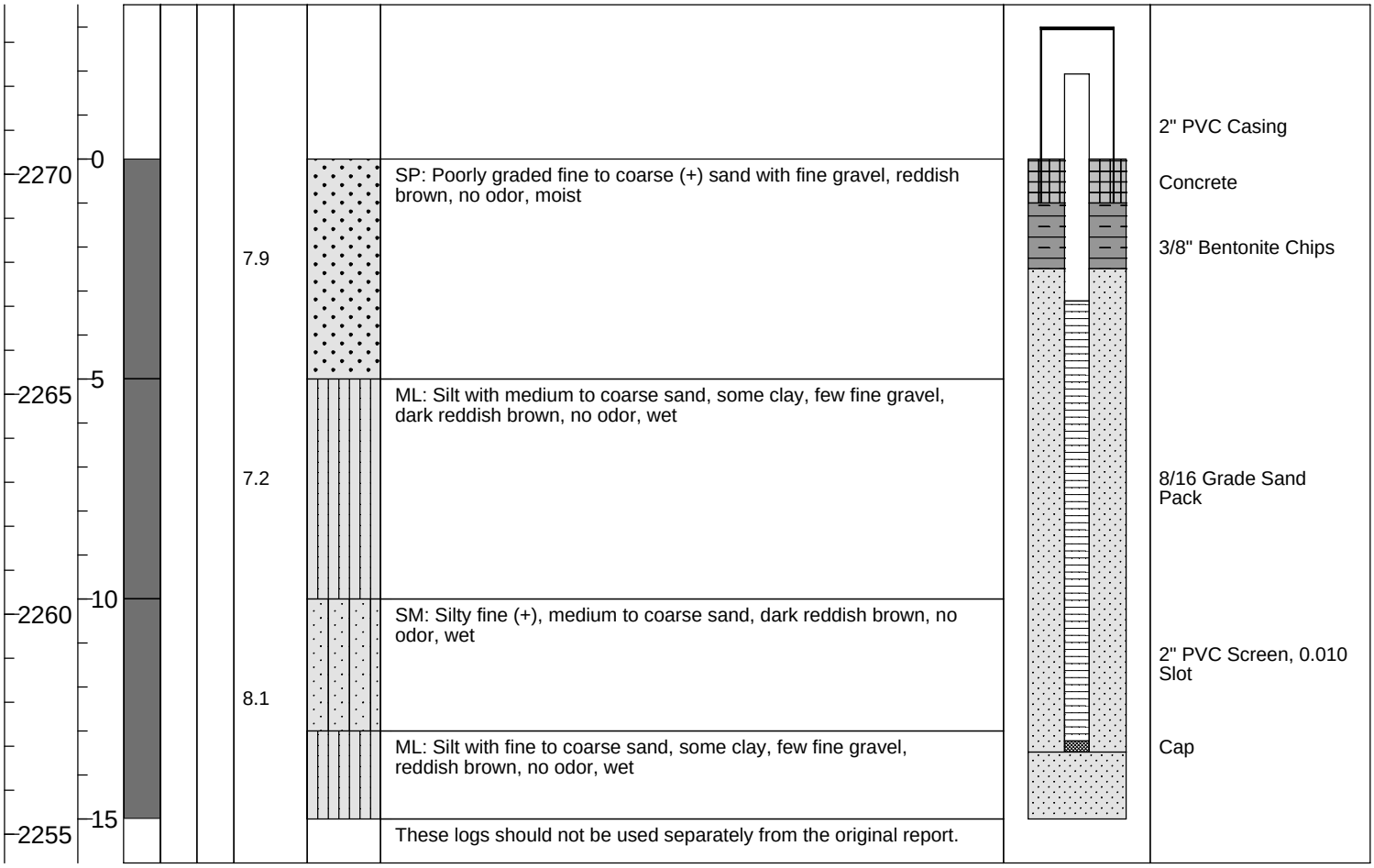
Client: Railroad Commission of Texas	TRC Project #: 53680
Site: West O'Daniel Seep	Start Date: 4/11/06
Address: Synder Oil Field, Howard County, TX	Finish Date: 4/11/06
Project: Site Assessment	Permit #: NA
Drilling Company: Scarborough Drilling Drilling Crew: L. Scarborough & Crew	TRC Site Rep.: M. Webre, B.Clark
Drilling Method: Hand Auger and 6-inch PVC Casing	TRC Reviewer: A. Sahba
Boring Diameter (in): 6 Boring Depth (ft bgs): 7	X-Y Coord. System: Lat-Long
Sampling Method: Hand Auger	Latitude: 32.227831
Blow Count Method: NA	Longitude: -101.243368
Field Screening Parameter: Volatile Organic Vapors	Elevation Datum: NGVD 29
Meter: PID - MiniRAE 2000 Units: ppm	Ground Elevation (ft): 2302.11
Well Depth (ft bgs): 6.06 Well Depth (ft toc): 8.69	Well Elevation (ft): 2304.74
Casing Length (ft): 3.44 Screen Length (ft): 5	Well Measuring Point: Top of Casing
Surface Completion: Steel Stick-up with Concrete Pad (2'x2')	Depth to Water (ft toc): 4.87
Well Development: Bail-Surge with Bailer total 2.5 gal	Date/Time: 4/21/06, 1250



BORING LOG and WELL CONSTRUCTION

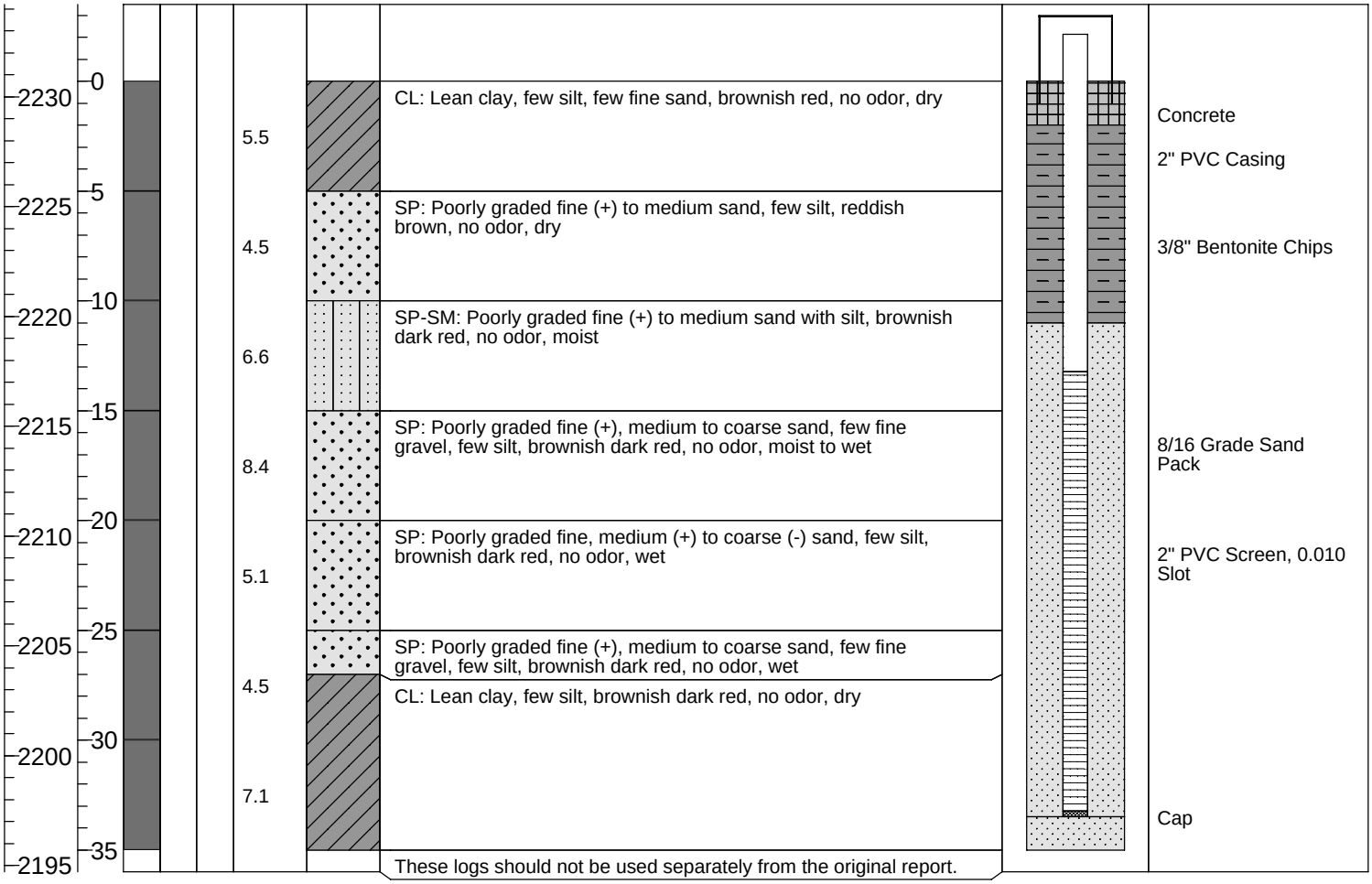
S-MW-06

Client: Railroad Commission of Texas	TRC Project #: 53680
Site: West O'Daniel Seep	Start Date: 4/12/06
Address: Synder Oil Field, Howard County, TX	Finish Date: 4/12/06
Project: Site Assessment	Permit #: NA
Drilling Company: Scarborough Drilling Drilling Crew: L. Scarborough & Crew	TRC Site Rep.: M. Webre, B. Clark
Drilling Method: Air Rotary	TRC Reviewer: A. Sahba
Boring Diameter (in): 5.25 Boring Depth (ft bgs): 15	X-Y Coord. System: Lat-Long
Sampling Method: Cuttings	Latitude: 32.222628
Blow Count Method: NA	Longitude: -101.242404
Field Screening Parameter: Volatile Organic Vapors	Elevation Datum: NGVD 29
Meter: PID - MiniRAE 2000 Units: ppm	Ground Elevation (ft): 2270.35
Well Depth (ft bgs): 13.48 Well Depth (ft toc): 15.41	Well Elevation (ft): 2272.28
Casing Length (ft): 5.16 Screen Length (ft): 10	Well Measuring Point: Top of Casing
Surface Completion: Steel Stick-up with Concrete Pad (2'x2')	Depth to Water (ft toc): 6.12
Well Development: Bail-Surge with Bailer total 9 gal	Date/Time: 4/21/06, 1310



TRC	BORING LOG and WELL CONSTRUCTION	S-MW-07

Client: Railroad Commission of Texas	TRC Project #: 53680
Site: West O'Daniel Seep	Start Date: 4/12/06
Address: Synder Oil Field, Howard County, TX	Finish Date: 4/12/06
Project: Site Assessment	Permit #: NA
Drilling Company: Scarborough Drilling Drilling Crew: L. Scarborough & Crew	TRC Site Rep.: M. Webre, B. Clark
Drilling Method: Air Rotary	TRC Reviewer: A. Sahba
Boring Diameter (in): 5.25 Boring Depth (ft bgs): 35	X-Y Coord. System: Lat-Long
Sampling Method: Cuttings	Latitude: 32.215624
Blow Count Method: NA	Longitude: -101.243415
Field Screening Parameter: Volatile Organic Vapors	Elevation Datum: NGVD 29
Meter: PID - MiniRAE 2000 Units: ppm	Ground Elevation (ft): 2230.71
Well Depth (ft bgs): 33.48 Well Depth (ft toc): 35.62	Well Elevation (ft): 2232.85
Casing Length (ft): 15.37 Screen Length (ft): 20	Well Measuring Point: Top of Casing
Surface Completion: Steel Stick-up with Concrete Pad (2'x2')	Depth to Water (ft toc): 22.30
Well Development: Bail-Surge with Bailer total 8 gal	Date/Time: 4/21/06, 1325



Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of Licensing and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512) 463-7880 FAX (512) 463-8616
Toll free (800) 803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner **within 60 days** upon completion of the well.

WOD - MW-3

WELL REPORT

1) OWNER — A. WELL IDENTIFICATION AND LOCATION DATA

Name	Address	City	State	Zip
Railroad Commission of Texas	**1701 North Congress**	**Austin**	**Tx**	**79811**

2) WELL LOCATION

County	Physical Address	City	State	Zip
Howard	**South Snyder Field Road**	**Coahoma**	**Tx**	**79511**

3) Type of Work: ☒ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

Lat. 32° 330' 679" **Long.** 101° 247' 021" **Grid #**

4) Proposed Use (check): ☒ Monitor ☐ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply ☐ Stock or Livestock — If Public Supply, were plans approved? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 4/11/6
Completed 4/12/6

Diameter of Hole

Dia. (in)	From (ft)	To (ft)
5	Surface 0	25

7) Drilling Method (check): ☐ Driven ☒ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Hollow Stem Auger ☐ Reverse Circulation ☐ Other

From (ft)	To (ft)	Description and color of formation material
0	5	Poorly graded fine sand w/silt, reddish dk. brown.
5	17	Well graded coarse to fine sand, reddish brown to light reddish brown.
17	25	Claystone, brownish red

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☒ Gravel Packed ☐ Other _____

Gravel Packed interval from **6** ft. to **25** ft. Size:

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
2	N	Pvc	+2	10	.010
2	N	Pvc screen	10	25	

9) Annular Seal Data: i.e. *(from 0 ft to 100 ft #sacks & material 13 cement)*

from 0 ft. to 2 ft. #sacks & material 1 cement
from 2 ft. to 6 ft. #sacks & material 2 bentonite
from 6 ft. to 25 ft. #sacks & material 4 sand

Method Used _____
Distance to septic field or other concentrated contamination _____ ft.
Distance to Property Line _____ ft Method _____
Verified: _____

13) Plugged ☐ Well plugged within 48 hours

Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Material used & # Sacks

10) Surface Completion (If steel cased, leave blank)
☒ Surface Slab Installed ☒ Surface Sleeve Installed ☐ Pitless Adapter Used ☐ Alternative Procedure Used

14) Type Pump
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., ft.

11) Water Level
Static level **10.46** ft. Date / /
Artesian Flow _____ gpm

15) Water Test
Type test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

12) Packers

Type	Depth	Type	Depth

16) Water Quality
Type of water: _____ Depth of Strata: _____ Was a chemical analysis made? ☒ Yes ☐ No
Did you knowingly penetrate a strata which contains undesirable constituents? ☐ Yes ☒ No If yes, Continue:
Check One: ☐ Naturally poor-quality groundwater – type _____ ☐ Hydrocarbons (i.e. gas, oil, etc.) ☐ Hazardous material/waste contamination encountered ☐ Other (describe) _____

☐ *I certify that while drilling, deepening, or otherwise altering the above described well, undesirable water or constituents was encountered and the landowner was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.*

Company or Individual's Name (type or print) **Scarborough Drilling, Inc.**			Lic. No. **WPK2969**
Address **P.O. Box 305**	City **Lamesa**	State **Tx**	Zip **79331**
Signature Carl Scarborough 6/2/06		Signature	/ /
Licensed Driller/Pump Installer	**Date**	**Apprentice**	**Date**

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

WOD - MW-4

Texas Department of Licensing and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512) 463-7880 FAX (512) 463-8616
Toll free (800) 803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner **within 60 days** upon completion of the well.

WELL REPORT

1) OWNER — A. WELL IDENTIFICATION AND LOCATION DATA

Name	Address	City	State	Zip
Railroad Commission of Texas	**1701 North Congress**	**Austin**	**Tx**	**79811**

2) WELL LOCATION

County	Physical Address	City	State	Zip
Howard	**South Snyder Field Road**	**Coahoma**	**Tx**	**79511**

3) Type of Work
☒ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

Lat. 32° 231' 093" **Long.** 101° 243' 066" **Grid #**

4) Proposed Use (check) ☒ Monitor ☐ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply ☐ Stock or Livestock If Public Supply, were plans approved? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 4/11/6
Completed 4/11/6

Diameter of Hole

Dia. (in)	From (ft)	To (ft)
5	Surface 0	27

7) Drilling Method (check)
☐ Driven ☒ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Hollow Stem Auger ☐ Reverse Circulation ☐ Other

From (ft)	To (ft)	Description and color of formation material
0	10	Clayey fine sand, reddish brown to lt. brown
10	15	Poorly graded fine sand, lt brown.
15	27	Well graded coarse to fine sandstone with fine gravel, lt. brown to reddish brown to brownish red.

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☒ Gravel Packed ☐ Other _____
Gravel Packed interval from **14** ft. to **27** ft. Size:

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
2	N	Pvc	+2	17	.010
2	N	Pvc screen	17	27	

9) Annular Seal Data: i.e. *(from 0 ft to 100 ft #sacks & material 13 cement)*
from **0** ft. to **2** ft. #sacks & material **1 cement**
from **2** ft. to **14** ft. #sacks & material **4 bentonite**
from **14** ft. to **27** ft. #sacks & material **4 sand**
Method Used _____
Distance to septic field or other concentrated contamination _____ ft.
Distance to Property Line _____ ft Method _____
Verified: _____

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Material used & # Sacks

10) Surface Completion (If steel cased, leave blank)
☒ Surface Slab Installed ☒ Surface Sleeve Installed ☐ Pitless Adapter Used ☐ Alternative Procedure Used

11) Water Level
Static level **18.29** ft. Date / /
Artesian Flow _____ gpm

14) Type Pump
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., ft.

15) Water Test
Type test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

12) Packers

Type	Depth	Type	Depth

16) Water Quality
Type of water: _____ Depth of Strata: _____ Was a chemical analysis made? ☒ Yes ☐ No
Did you knowingly penetrate a strata which contains undesirable constituents? ☐ Yes ☒ No If yes, Continue:
Check One: ☐ Naturally poor-quality groundwater – type _____ ☐ Hydrocarbons (i.e. gas, oil, etc.) ☐ Hazardous material/waste contamination encountered ☐ Other (describe) _____

☐ *I certify that while drilling, deepening, or otherwise altering the above described well, undesirable water or constituents was encountered and the landowner was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.*

Company or Individual's Name (type or print) **Scarborough Drilling, Inc.**		Lic. No. **WPK2969**	
Address **P.O. Box 305**	City **Lamesa**	State **Tx**	Zip **79331**
Signature [signature] 6/2/06		Signature	/ /

TDLR FORM 001WWD / 9-03 Copies to TDLR - Owner - Driller/Pump Installer

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of Licensing and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512) 463-7880 FAX (512) 463-8616
Toll free (800) 803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner **within 60 days** upon completion of the well.

WOD-MW-5

WELL REPORT

1) OWNER — A. WELL IDENTIFICATION AND LOCATION DATA

Name	Address	City	State	Zip
Railroad Commission of Texas	**1701 North Congress**	**Austin**	**Tx**	**79811**

2) WELL LOCATION

County	Physical Address	City	State	Zip
Howard	**South Snyder Field Road**	**Coahoma**	**Tx**	**79511**

3) Type of Work
☒ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

Lat. 32° 227' 831" **Long.** 101° 243' 368" **Grid #**

4) Proposed Use (check) ☒ Monitor ☐ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply ☐ Stock or Livestock
If Public Supply, were plans approved? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 4/11/6
Completed 4/11/6

Diameter of Hole

Dia. (in)	From (ft)	To (ft)
5	Surface 0	7

7) Drilling Method (check)
☐ Driven ☒ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Hollow Stem Auger ☐ Reverse Circulation ☐ Other

From (ft)	To (ft)	Description and color of formation material
0	1	Silty fine sand, reddish brown
1	3	Fine sand with silt, brown
3	7	Silt, greyish brown

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☒ Gravel Packed ☐ Other _____
Gravel Packed interval from 1 ft. to 7 ft. Size:

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
2	N	Pvc	+2	1	.010
2	N	Pvc screen	1	7	

9) Annular Seal Data: i.e. *(from 0 ft to 100 ft #sacks & material 13 cement)*
from 0 ft. to .02 ft. #sacks & material 1/2 cement
from .02 ft. to 1 ft. #sacks & material 1/2 bentonite
from 1 ft. to 7 ft. #sacks & material 1 sand
Method Used _____
Distance to septic field or other concentrated contamination _____ ft.
Distance to Property Line _____ ft Method _____
Verified: _____

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Material used & # Sacks

10) Surface Completion (If steel cased, leave blank)
☒ Surface Slab Installed ☒ Surface Sleeve Installed ☐ Pitless Adapter Used ☐ Alternative Procedure Used

14) Type Pump
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., ft.

11) Water Level
Static level 3.24 ft. Date / /
Artesian Flow _____ gpm

15) Water Test
Type test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

12) Packers

Type	Depth	Type	Depth

16) Water Quality
Type of water: _____ Depth of Strata: _____ Was a chemical analysis made? ☒ Yes ☐ No
Did you knowingly penetrate a strata which contains undesirable constituents? ☐ Yes ☒ No If yes, Continue:
Check One: ☐ Naturally poor-quality groundwater – type _____ ☐ Hydrocarbons (i.e. gas, oil, etc.) ☐ Hazardous material/waste contamination encountered ☐ Other (describe) _____

☐ *I certify that while drilling, deepening, or otherwise altering the above described well, undesirable water or constituents was encountered and the landowner was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.*

Company or Individual's Name (type or print) **Scarborough Drilling, Inc.** Lic. No. **WPK2969**
Address **P.O. Box 305** City **Lamesa** State **Tx** Zip **79331**

Signature	Date	Signature	Date
Licensed Driller/Pump Installer	6/2/06	Apprentice	/ /

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of Licensing and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512) 463-7880 FAX (512) 463-8616
Toll free (800) 803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner **within 60 days** upon completion of the well.

WOD-MW-6

WELL REPORT

1) OWNER — A. WELL IDENTIFICATION AND LOCATION DATA

Name	Address	City	State	Zip
Railroad Commission of Texas	**1701 North Congress**	**Austin**	**Tx**	**79811**

2) WELL LOCATION

County	Physical Address	City	State	Zip
Howard	**South Snyder Field Road**	**Coahoma**	**Tx**	**79511**

3) Type of Work: ☒ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

Lat. 32° 222' 628" **Long.** 101° 242' 404" **Grid #**

4) Proposed Use (check): ☒ Monitor ☐ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply ☐ Stock or Livestock — If Public Supply, were plans approved? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 4/12/6
Completed 4/12/6

Diameter of Hole

Dia. (in)	From (ft)	To (ft)
5	Surface 0	15

7) Drilling Method (check): ☐ Driven ☒ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Hollow Stem Auger ☐ Reverse Circulation ☐ Other

From (ft)	To (ft)	Description and color of formation material
0	5	Well graded coarse and fine sand with fine gravel, reddish brown.
5	10	Silt with fine gravel, dark reddish brown
10	13	Silty coarse to fine sand, dark reddish brown
13	15	Silt with coarse to fine sand, reddish brown

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☒ Gravel Packed ☐ Other _____
Gravel Packed interval from **2.5** ft. to **15** ft. Size:

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
2	N	Pvc	+2	5	.010
2	N	Pvc screen	5	15	

9) Annular Seal Data: i.e. *(from 0 ft to 100 ft #sacks & material 13 cement)*
from 0 ft. to 1 ft. #sacks & material 1/2 cement
from 1 ft. to 2.5 ft. #sacks & material 1/2 bentonite
from 2.5 ft. to 15 ft. #sacks & material 1 sand
Method Used _____
Distance to septic field or other concentrated contamination _____ ft.
Distance to Property Line _____ ft Method _____
Verified: _____

13) Plugged ☐ Well plugged within 48 hours

Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Material used & # Sacks

10) Surface Completion (If steel cased, leave blank)
☒ Surface Slab Installed ☒ Surface Sleeve Installed ☐ Pitless Adapter Used ☐ Alternative Procedure Used

14) Type Pump
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., ft.

11) Water Level
Static level **4.19** ft. Date / /
Artesian Flow _____ gpm

15) Water Test
Type test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

12) Packers

Type	Depth	Type	Depth

16) Water Quality
Type of water: _____ Depth of Strata: _____ Was a chemical analysis made? ☒ Yes ☐ No
Did you knowingly penetrate a strata which contains undesirable constituents? ☐ Yes ☒ No If yes, Continue:
Check One: ☐ Naturally poor-quality groundwater – type _____ ☐ Hydrocarbons (i.e. gas, oil, etc.) ☐ Hazardous material/waste contamination encountered ☐ Other (describe) _____

☐ *I certify that while drilling, deepening, or otherwise altering the above described well, undesirable water or constituents was encountered and the landowner was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.*

Company or Individual's Name (type or print) **Scarborough Drilling, Inc.** Lic. No. **WPK2969**
Address **P.O. Box 305** City **Lamesa** State **Tx** Zip **79331**

Signature	Date	Signature	Date
Licensed Driller/Pump Installer		Apprentice	

Attention Owner:
Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of Licensing and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512) 463-7880 FAX (512) 463-8616
Toll free (800) 803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner **within 60 days** upon completion of the well.

LWD - MW-7

WELL REPORT

1) OWNER — A. WELL IDENTIFICATION AND LOCATION DATA

Name	Address	City	State	Zip
Railroad Commission of Texas	1701 North Congress	Austin	Tx	79811

2) WELL LOCATION

County	Physical Address	City	State	Zip
Howard	South Snyder Field Road	Coahoma	Tx	79511

3) Type of Work: ☒ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

Lat. 32° 215' 624" **Long.** 101° 243' 415" **Grid #**

4) Proposed Use (check): ☒ Monitor ☐ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply ☐ Stock or Livestock — If Public Supply, were plans approved? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 4/12/6
Completed 4/12/6

Diameter of Hole

Dia. (in)	From (ft)	To (ft)
5	Surface 0	35

7) Drilling Method (check): ☐ Driven ☒ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Hollow Stem Auger ☐ Reverse Circulation ☐ Other

From (ft)	To (ft)	Description and color of formation material
0	5	Lean clay, brownish red
5	10	Poorly graded fine sand, reddish brown
10	15	Poorly graded medium to fine sand, brownish dark red.
15	25	Well graded coarse to fine sand, brownish dark red.
25	27	Poorly graded coarse to fine sand, brownish dark red.
27	35	Claystone, brownish dark red.

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☒ Gravel Packed ☐ Other _____
Gravel Packed interval from **11** ft. to **35** ft. Size:

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
2	N	Pvc	+2	15	.010
2	N	Pvc screen	15	35	

9) Annular Seal Data: i.e. *(from 0 ft to 100 ft #sacks & material 13 cement)*
from 0 ft. to 2 ft. #sacks & material 1/2 cement
from 2 ft. to 11 ft. #sacks & material 8 bentonite
from 11 ft. to 35 ft. #sacks & material 6 sand
Method Used _____
Distance to septic field or other concentrated contamination _____ ft.
Distance to Property Line _____ ft Method _____
Verified: _____

13) Plugged ☐ Well plugged within 48 hours

Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Material used & # Sacks

10) Surface Completion (If steel cased, leave blank)
☒ Surface Slab Installed ☒ Surface Sleeve Installed ☐ Pitless Adapter Used ☐ Alternative Procedure Used

14) Type Pump
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., ft.

11) Water Level
Static level **20.16** ft. Date / /
Artesian Flow _____ gpm

15) Water Test
Type test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

12) Packers

Type	Depth	Type	Depth

16) Water Quality
Type of water: _____ Depth of Strata: _____ Was a chemical analysis made? ☒ Yes ☐ No
Did you knowingly penetrate a strata which contains undesirable constituents? ☐ Yes ☒ No If yes, Continue:
Check One: ☐ Naturally poor-quality groundwater – type _____ ☐ Hydrocarbons (i.e. gas, oil, etc.) ☐ Hazardous material/waste contamination encountered ☐ Other (describe) _____

☐ *I certify that while drilling, deepening, or otherwise altering the above described well, undesirable water or constituents was encountered and the landowner was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.*

Company or Individual's Name (type or print)	Lic. No.
Scarborough Drilling, Inc.	WPK2969

Address	City	State	Zip
P.O. Box 305	Lamesa	Tx	79331

Signature	Date	Signature	Date
Licensed Driller/Pump Installer	6/2/06	Apprentice	/ /

APPENDIX C

WELL DEVELOPMENT AND WATER SAMPLING FIELD FORMS

(WOD-MW02)

TRC

Sample Location	S-MW-~~WOD-MW~~02-1
Client	RRC
Site	West O'Donnel

Depth to Water (ft)	Before Sampling	5.88	Sample Collection Time	1107
	After Sampling	6.38	Purge Method	Disposable Bailer
Total Depth (ft)		17.15	Sample Method	Disposable Bailer
Standing Water Column (ft)		11.27	Water Description	Slightly silty red - clear
One Purge Volume (gal)		1.92	Sampling Personnel	MW BC

Date	Time	Purge Volume (gal) This Period	Purge Volume (gal) Cumulative	Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (u siemens/cm) Millia	~~TDS (ppm)~~	ORP (mV)	~~Dissolved Oxygen (mg/L)~~	~~Turbidity (NTUs)~~
~~4/13/06~~	~~1044~~ 1040			5.66							
	1044	2.0	2.0		4.21	15.1	52.95		-209		
	1047	2.0	4.0		~~3.85~~	14.6	53.29		-179		
	1057	2.0	6.0		6.11	17.4	56.67		-~~5~~70		
	1100	1.0	7.0		6.~~40~~	17.00	56.90		-32		
	1102	1.0	8.00		6.40	16.9	56.98		-24		
	1105	1.25	9.25		6.41	16.8	56.91		5		

Well headspace PID 0.5 ppm

Field Cl- result (S.V. 0.5mL) ; DT 262

Field result 26,200 ppm

1050 Recalibrated ultrameter b/c of malfunction

TRC

Sample Location	(WOD - MW03) S-MW-03-1
Client	RRC
Site	West End Ditch

Depth to Water (ft)	Before Sampling	12.50	Sample Collection Time	1525
	After Sampling	12.70	Purge Method	Disp. Bailer
Total Depth (ft)		25.45	Sample Method	Disp. Bailer
Standing Water Column (ft)		12.95	Water Description	Silty - slightly silty - reddish from soils
One Purge Volume (gal)		2.20	Sampling Personnel	MWB

5/13/06 — 12.50 ft — 11/15/06

Date	Time	Purge Volume (gal) This Period	Purge Volume (gal) Cumulative	Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (µ-siemens/cm)	~~TDS (ppm)~~	ORP (mV)	~~Dissolved Oxygen (mg/L)~~	~~Turbidity (NTUs)~~
~~11/15/06~~	~~1216~~										
11/15/06	1216	2.25	2.25		6.91	19.00	45,125		45		
	1221	2.25	4.5		6.68	19.4	51.50		9		
	1227	2.25	6.75		6.70	18.3	52.40		6		
	1231	2.25	9.0		6.70	19.0	51.25		24		
	1234	2.25	11.25		6.77	19.3	53,40		50		
	1240			24.05	6.40	19.9	50.54		162		
	1523	.25	11.50		↓	↓	↓		↓		
	1524	.5	12.00		6.53	19.1	48.41		142		

Well headspace PID 3.5 ppm

Field Cl⁻ test (S.V. 0.5mL), DT 255

Cl⁻ result 25,500 ppm

S-MW-03

TRC	WELL # WoD-MW03	Client	~~WoD MW-3~~ RRC	Date & Time 4/13/06	Start	1210
		Site	West O'Donel		Finish	1240

Development Equipment	Disposable bailer
Turbidity Meter	—

Actual Time	Development Action (e.g., surge, pump, bail, etc)	Volume Extracted (gal)	Turbidity (NTUs)	Water Level (ft toc)
1240	Begin surge/purge	—		
1246		2.25	Silty Red	
1251		2.25	Silty Red	
1257		2.25	Silty Red	
1304		2.25	Silty Red	
1310	End Development / well DRY (slow recovery)	2.25	Silty Red	24.05'

TRC

Sample Location	S-MW-04-1 (WOD-MW04)
Client	RRC
Site	WEST O'DANIEL

Depth to Water (ft)	Before Sampling	20.61	Sample Collection Time	1410
	After Sampling	~~28.49~~ MW 20.68	Purge Method	DISP. BAILER
Total Depth (ft)		28.49 (hard bottom)	Sample Method	DISP. BAILER
Standing Water Column (ft)		7.87	Water Description	slightly silty (very fine sand
One Purge Volume (gal)		1.34	Sampling Personnel	MW BC

Date	Time	Purge Volume (gal) This Period	Purge Volume (gal) Cumulative	Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (u-siemens/cm)	TDS (ppm)	ORP (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)
~~4/13/06~~	1313			20.61							
	1321	1.5	1.5		6.66	21.1	63.92		70		
	1325	1.5	3.0		6.63	19.7	65.98		29		
	1331	2.0	5.0		6.64	20.4	66.19		34		
	1335	1.5	6.5		6.55	20.4	67.65		39		
	1339	1.5	8.0		~~6.58~~ 6.54	~~20.5~~	68.41		41		
	1356	2.0	10.0		6.55	20.9	68.52		44		

Well headspace with PID 0.5 ppm

Field Cl⁻ result (S.V. 0.5mL) DT 305

Cl⁻ result 30,500 ppm

S-MW-04

TRC	WELL # WOD-MW04	Client	RRC	Date & Time 4/13/06	Start	1313
		Site	WOD		Finish	1400
Development Equipment	Disp. Bailer					
Turbidity Meter						

Actual Time	Development Action (e.g., surge, pump, bail, etc)	Volume Extracted (gal)	Turbidity (NTUs) Visual	Water Level (ft toc)
1313	Begin Surge/Purge	-	Silty Light Brown	
1321		1.5	Silty Light Brown	
1325		1.5	Silty Light Brown	
1331		2.0	Silty Light Brown	
1335		1.5	Slightly Silty Light Brown	
1339	End Surge/Purge	1.5	Slightly Silty Light Brown	
1356	Purge	2.0	Slightly Silty Light Brown	

Form Date: 09/07/04

S-MW-05-1

TRC

Sample Location	WOD-MW05
Client	RRC
Site	West O'Daniel

Depth to Water (ft)	Before Sampling	5.48 ft. TOC	Sample Collection Time	1140
	After Sampling	5.53 ft TOC	Purge Method	Disp. Bailer
Total Depth (ft)		8.69 ft TOC (hard bottom)	Sample Method	Disp Bailer
Standing Water Column (ft)		3.21	Water Description	Sandy/silty brown
One Purge Volume (gal)		.55	Sampling Personnel	MW BC

5.48

Date	Time	Purge Volume (gal) This Period	Purge Volume (gal) Cumulative	Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (u-siemens/cm)	~~TDS (ppm)~~	ORP (mV)	~~Dissolved Oxygen (mg/L)~~	~~Turbidity (NTUs)~~
4/14/06	1123	.5	.5	~~5.48~~	6.26	18.0	38.00		49		
	1126	.5	1.0		6.28	18.4	39.51		43		
	1129	.5	1.5		6.26	18.8	41.04		36		
	1131	.5	2.0		6.25	18.2	41.90		26		
	1133	.5	2.5		6.23	18.7	42.84		14		
	1134	.5	3.0		6.18	19.0	43.49		10		

Well headspace 0.5 ppm

Field Cl⁻ result (S.V. 0.5 mL) DF result 20,000

Cl⁻ result 20,500 ppm

S-MW-05

TRC	WELL # WOD-MW05	Client	RRC	Date & Time 4/14/06	Start	1121
		Site	WOD		Finish	
Development Equipment	Disposable bailer					
Turbidity Meter						

Actual Time	Development Action (e.g., surge, pump, bail, etc)	Volume Extracted (gal)	Turbidity (NTUs)	Water Level (ft toc)
1121	Begin Surge/purge	—	Silty/sandy Brown	
1123		.5		
1126		.5		
1129		.5		
1131	End Surge	.5		
1133		.5		
1134	End purge			

Form Date: 09/07/04

TRC

Sample Location	~~E~~OD - MW6 (E ~~18~~ - MW - ~~E~~06 - 1)
Client	RRC
Site	WEST O'DANIEL

Depth to Water (ft)	Before Sampling	19.21	Sample Collection Time	0851
	After Sampling	19.21	Purge Method	Disposable bailer
Total Depth (ft)		27.85 soft bottom	Sample Method	Disposable bailer
Standing Water Column (ft)		8.64	Water Description	Slight silty red - clear
.17 x One Purge Volume (gal)		BL ~~1.46~~ 1.47	Sampling Personnel	MW & BL

Date	Time	Purge Volume (gal) This Period	Purge Volume (gal) Cumulative	Depth to Water (ft)	pH (SU)	Temp (C)	~~M~~ Conductivity (µ-siemens/cm)	~~TDS (ppm)~~	ORP (mV)	~~Dissolved Oxygen (mg/L)~~	~~Turbidity (NTUs)~~
4/13/06	829	1.5	1.5		6.87	14.1	71.20		-~~55~~		
	831	1.5	3.0		6.81	15.8	74.28		-49		
	834	1.5	4.5		7.00	16.8	75.63		-99		
	836	.5	5		6.67	17.5	76.41		-100		
	841	.5	5.5		6.67	17.6	76.60		-130		
↓	842	.5	6.0		6.60	17.7	76.71		-136		
						0.5	2.25				

WELL HEADSPACE PID 0.5 ppm

Field Cl⁻ test 5V. 0.5mL, DT result 347

Field result 34,700 ppm

S-MW-06-1

TRC

Sample Location	WOD MW-06
Client	RRC
Site	WEST O'DANIEL

Depth to Water (ft)	Before Sampling	7.06	Sample Collection Time	0808
	After Sampling	~~7.10~~	Purge Method	Disposable Bailer
Total Depth (ft)		15.39 (soft bottom)	Sample Method	Disposable Bailer
Standing Water Column (ft)		8.33	Water Description	Smelly - red
One Purge Volume (gal)		1.42	Sampling Personnel	MW BC

Date	Time	Purge Volume (gal)		Depth to Water (ft)	pH (SU)	Temp (C)	~~Conductivity~~ (µ-siemens/cm)	~~TDS (ppm)~~	ORP (mV)	~~Dissolved Oxygen (mg/L)~~	~~Turbidity (NTUs)~~
		This Period	Cumulative								
4/14/06				7.06							
	742	1.5	1.5		5.82	15.7	37.31		82		
	747	1.5	3.0		6.07	16.2	38.65		76		
	751	1.5	4.5		6.14	15.7	38.87		72		
	756	1.5	6.0		6.25	14.9	38.06		64		
	759	1.5	7.5		6.24	15.4	39.73		61		
	804	1.5	9.0		6.26	15.4	39.32		62		

PID Headspace 1.7 ppm ~~15.41~~

Field Cl⁻ result (3 x 0.5 mL) DT 212

Cl⁻ result 21,200 ppm

5-MW-06

TRC	WELL # WOD MW-06	Client	RRC	Date & Time 4/14/06	Start	736
		Site	West ODAnie(		Finish	
Development Equipment						
Turbidity Meter						

Actual Time	Development Action (e.g., surge, pump, bail, etc)	Volume Extracted (gal)	Turbidity (NTUs) VISUAL	Water Level (ft toc)
736	Begin SURGE/purge	—	SANDY/ red	
742		1.5		
747		1.5		
751		1.5		
756	End Surge	1.5		
759		1.5		
804	End Purge	1.5	↓	
825	Remeasured TD → 15.41 ft, small amt of silt/sand in bottom, hard bottom			7.10
	1			

5-MW-07-1

TRC

Sample Location	WOD MW-07
Client	RRC
Site	WEST O'DANIEL

Depth to Water (ft)	Before Sampling	22.30	Sample Collection Time	930
	After Sampling	29.15	Purge Method	DISP. BAILER
Total Depth (ft)		35.62 (hard bottom)	Sample Method	DISP. BAILER
Standing Water Column (ft)		13.32	Water Description	SANDY Red
One Purge Volume (gal)		2.26	Sampling Personnel	MW BC

Date	Time	Purge Volume (gal)		Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (µ-siemens/cm)	~~TDS (ppm)~~	ORP (mV)	~~Dissolved Oxygen (mg/L)~~	~~Turbidity (NTUs)~~
		This Period	Cumulative								
4/14/06	852			22.30							
	903	2.25	2.25		6.54	18.5	21.46		77		
	908	2.25	4.50		6.70	19.1	20.70		67		
	914	2.25	6.75		6.75	19.0	20.25		55		
	919	1.25	8.0		6.77	19.5	20.03		61		

PID HEADSPACE 2.3 ppm

Field Cl⁻ result (S.V. 0.5mL) DT result 119

Cl⁻ result 11,900 ppm

S-MW-07

TRC	WELL # WSD MW-07	Client	RRC	Date & Time	Start	857
		Site	West of Ranch	4/14/06	Finish	
Development Equipment	Disposable bailer					
Turbidity Meter	—					

Actual Time	Development Action (e.g., surge, pump, bail, etc)	Volume Extracted (gal)	Turbidity (NTUs)	Water Level (ft toc)
857	Begin surge/purge	0	Visual Study Red	
903		2.25		
908		2.25		
914	END Surge	2.25		(29.15 DTW
919	End purge	1.25		35.62 TD)

(BEG-11)

TRC

Sample Location	~~S-BEGMW-11-1~~ S-MW-BEG11-1
Client	RRC
Site	WEST O'DANIEL

Depth to Water (ft)	Before Sampling	18.26	Sample Collection Time	1520
	After Sampling		Purge Method	Disposable Bailer
Total Depth (ft)		28.26	Sample Method	Disposable Bailer
Standing Water Column (ft)		10.00	Water Description	Silty Red
One Purge Volume (gal)		1.7	Sampling Personnel	MW + BC

Date	Time	Purge Volume (gal) This Period	Purge Volume (gal) Cumulative	Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (µ siemens/cm)	~~TDS (ppm)~~	ORP (mV)	~~Dissolved Oxygen (mg/L)~~	~~Turbidity (NTUs)~~
4/13/06	0940			18.26							
	0944	1.75	1.75		6.62	17.7	28.25		-30		
	0952	1.75	3.50		6.38	18.8	28.09		-70		
	0957	1.75	5.25		6.71	18.5	27.75		-38		
	0957	Purged dry - will return to sample									
	1450	.25	5.5		6.70	22.7	25.89		103		
	~~1523~~ (30)										

Well headspace PID reading 0.1 ppm

Field Cl⁻ test (S.V. 5 mL) DT result >400 · Cl⁻ result >4,000 ppm

(S.V. 2mL) DT result 425 Cl⁻ result 10,625 ppm

Form Date: 09/27/02

S-WW-53-1

TRC

Sample Location	WOD-WW-53
Client	RRC
Site	WOD

Depth to Water (ft)	Before Sampling	28.10	Sample Collection Time	1005
	After Sampling	NA	Purge Method	—
Total Depth (ft)		38.75	Sample Method	Disposable Bailer
Standing Water Column (ft)			Water Description	Clear / slightly silty
One Purge Volume (gal)		NA	Sampling Personnel	MW BC

Date	Time	Purge Volume (gal)		Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (u-siemens/cm)	~~TDS (ppm)~~	ORP (mV)	~~Dissolved Oxygen (mg/L)~~	~~Turbidity (NTUs)~~
		This Period	Cumulative								
4/14/06	1005				5.99	19.8	49,26		12		

Steel 6" casing @ surface

Field Cl⁻ result (5.v. 0.5mL) DT result 240

Cl⁻ result 24,000 ppm

5-MW-52

TRC

Sample Location	WOD MW52
Client	RRC
Site	WOD

Depth to Water (ft)	Before Sampling	DRY	Sample Collection Time	
	After Sampling		Purge Method	
Total Depth (ft)		21.5 bgs	Sample Method	~~Disp Bailer~~
Standing Water Column (ft)			Water Description	
One Purge Volume (gal)			Sampling Personnel	

Date	Time	Purge Volume (gal)		Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (u-siemens/cm)	TDS (ppm)	ORP (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)
		This Period	Cumulative								

Visually observed bottom of hole (dry) using reflection from watch

Surface Water Sample

TRC

Sample Location	SS-1-1
Client	KRC
Site	WOD

Depth to Water (ft)	Before Sampling		Sample Collection Time	1310
	After Sampling	NA	Purge Method	NA
Total Depth (ft)			Sample Method	NA
Standing Water Column (ft)			Water Description	clear
One Purge Volume (gal)			Sampling Personnel	MW BC

Date	Time	Purge Volume (gal)		Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (µsiemens/cm)	TDS (ppm)	ORP (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)
		This Period	Cumulative								
4/14/16	1305 →				6.92	32.6	49.25		518		

TRC

Sample Location	S-5-2-1
Client	RRC
Site	West Odessa

Depth to Water (ft)	Before Sampling		Sample Collection Time	1355
	After Sampling	NA	Purge Method	NA
Total Depth (ft)			Sample Method	
Standing Water Column (ft)			Water Description	slightly silty
One Purge Volume (gal)			Sampling Personnel	MW/BC

Date	Time	Purge Volume (gal)		Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (u-siemens/cm)	TDS (ppm)	ORP (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)
		This Period	Cumulative								
4/14/06	1350				6.90	32.9	37.36		531		

Field Cl⁻ result (S.V. 1 mL) DT result 335

Field Cl⁻ result

E-5-55-1

TRC		
	Sample Location	EOD-5-55
	Client	RRC
	Site	NOD

Depth to Water (ft)	Before Sampling		Sample Collection Time	1245
	After Sampling	NA	Purge Method	—
Total Depth (ft)			Sample Method	Sample pump
Standing Water Column (ft)			Water Description	Clear
One Purge Volume (gal)			Sampling Personnel	MW BC

Date	Time	Purge Volume (gal)		Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (u-siemens/cm)	TDS (ppm)	ORP (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)
		This Period	Cumulative								
4/14/06	1253				6.56	22.9	56.80		-22.1		

Field Cl⁻ result (S.V. 0.5mL), DT result 285

Cl⁻ result 28,500 ppm

E-5-55-1

TRC

Sample Location	EOD-5-56
Client	RRC
Site	WOD

Depth to Water (ft)	Before Sampling		Sample Collection Time	1520
	After Sampling	NA	Purge Method	
Total Depth (ft)			Sample Method	NA
Standing Water Column (ft)			Water Description	clear
One Purge Volume (gal)			Sampling Personnel	BC EG

Date	Time	Purge Volume (gal)		Depth to Water (ft)	pH (SU)	Temp (C)	Conductivity (u-siemens/cm)	~~TDS~~ (ppm)	ORP (mV)	~~Dissolved Oxygen~~ (mg/L)	~~Turbidity~~ (NTUs)
		This Period	Cumulative								
4/21/06	1515				6.94	22.7	59.79		-219		

APPENDIX D

LABORATORY ANALYTICAL REPORTS - OZARK UNDERGROUND LABORATORY, INC.

August 14, 2006

CERTIFICATE OF ANALYSIS

Bill Renfro
Tim Prude
Texas Railroad Commission
10 Desta Drive, Suite 500 E
Midland, Texas 79705-4515

RE: West O'Daniel Seep Area, Week 1
Analysis results for charcoal and water samples shipped on August 1, 2006
Ozark Underground Laboratory (OUL) numbers P9217 through P9228

Dear Mr. Renfro and Mr. Prude:

We have completed analysis of the charcoal and water samples received at the OUL on August 2, 2006. We have indicated the OUL number for each of these samples on the enclosed Table 1.

The fluorescein, eosine, rhodamine WT (RWT) and sulforhodamine B (SRB) dye concentrations are based upon standards routinely used at the OUL. The fluorescein, eosine and SRB are mixtures of 75% dye and 25% diluent; the RWT is a 20% solution. The concentrations are based upon the as-sold weight of the dye.

Additional sampling information is available on the enclosed analysis graphs.

Sincerely,

Thomas J. Aley, PHG and RG

Enclosures:
1) Table 1 - Analysis results for charcoal and water samples
2) Sample collection data sheets
3) Sample analysis graphs

Ozark Underground Laboratory, Inc. for
Texas Railroad Commission

Project name: West O'Daniel Seep Area
Samples collected by: Tim Prude
Date samples shipped: August 1, 2006
Date samples rec'd at OUL: August 2, 2006
Date samples analyzed by OUL: August 3 and 9, 2006

Table 1. Results for charcoal and water samples analyzed for the presence of fluorescein, eosine, rhodamine WT (RWT) and sulforhodamine B (SRB) dyes. Peak wavelengths are reported in nanometers (nm); dye concentrations are reported in parts per billion (ppb). Results are for charcoal unless otherwise indicated.

OUL	Stn.	Station Name	Date/Time	Date/Time	Fluorescein		Eosine		RWT		SRB	
#	#		Placed	Collected	Peak	Conc.	Peak	Conc.	Peak	Conc.	Peak	Conc.
P9217	MW2	West O'Daniel Seep Area	7/24/06 1230	7/31/06 1720	ND		ND		ND		ND	
P9218	MW3	West O'Daniel Seep Area	7/24/06 1255	7/31/06 1705	ND		ND		ND		ND	
P9219	MW4	West O'Daniel Seep Area	7/24/06 1320	7/31/06 1645	ND		549.8 *	5.75	ND		ND	
P9220	Laboratory control charcoal blank											
P9221	MW5	West O'Daniel Seep Area	7/24/06 1150	7/31/06 1735	ND		ND		ND		ND	
P9222	MW6	West O'Daniel Seep Area	7/24/06 1425	7/31/06 1540	ND		ND		ND		ND	
P9223	MWBeg6	West O'Daniel Seep Area	7/24/06 1440	7/31/06 1630	ND		539.0 *	2.23	ND		ND	
P9224	MWBEg7	West O'Daniel Seep Area	7/24/06 1505	7/31/06 1615	515.9	14.3	ND		ND		ND	
P9225	MWBeg11	West O'Daniel Seep Area	7/24/06 1405	7/31/06 1745	ND		ND		ND		ND	
P9226	MWBeg15	West O'Daniel Seep Area	7/24/06 1340	7/31/06 1550	ND		533.2 *	2.31	ND		ND	
P9227	MW4	West O'Daniel Seep Area	**Water**	7/31/06 1645	ND		ND		ND		ND	
P9228	MWBEg7	West O'Daniel Seep Area	**Water**	7/31/06 1615	508.7	0.124	ND		ND		ND	

FOOTNOTES:

ND = None Detected

* = A fluorescence peak is present that does not meet all the requirements for a positive dye result. However, it has been calculated as though it were the tracer dye for background purposes.

August 16, 2006

CERTIFICATE OF ANALYSIS

Bill Renfro
Tim Prude
Texas Railroad Commission
10 Desta Drive, Suite 500 E
Midland, Texas 79705-4515

RE: West O'Daniel Seep Area, Week 2
Analysis results for charcoal and water samples shipped on August 8, 2006
Ozark Underground Laboratory (OUL) numbers P9335 through P9344 and P9367

Dear Mr. Renfro and Mr. Prude:

We have completed analysis of the charcoal and water samples received at the OUL on August 9, 2006. We have indicated the OUL number for each of these samples on the enclosed Table 1.

The fluorescein, eosine, rhodamine WT (RWT) and sulforhodamine B (SRB) dye concentrations are based upon standards routinely used at the OUL. The fluorescein, eosine and SRB are mixtures of 75% dye and 25% diluent; the RWT is a 20% solution. The concentrations are based upon the as-sold weight of the dye.

Additional sampling information is available on the enclosed analysis graphs.

Sincerely,

Thomas J. Aley, PHG and RG

Enclosures:
1) Table 1 - Analysis results for charcoal and water samples
2) Sample collection data sheets
3) Sample analysis graphs

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Ozark Underground Laboratory, Inc. for
Texas Railroad Commission

Project name: West O'Daniel Seep Area
Samples collected by: Tim Prude
Date samples shipped: August 8, 2006
Date samples rec'd at OUL: August 9, 2006
Date samples analyzed by OUL: August 14, 2006

Table 1. Results for charcoal and water samples analyzed for the presence of fluorescein, eosine, rhodamine WT (RWT) and sulforhodamine B (SRB) dyes. Peak wavelengths are reported in nanometers (nm); dye concentrations are reported in parts per billion (ppb). Results are for charcoal unless otherwise indicated.

OUL	Stn.	Station Name	Date/Time	Date/Time	Fluorescein		Eosine		RWT		SRB	
#	#		Placed	Collected	Peak	Conc.	Peak	Conc.	Peak	Conc.	Peak	Conc.
P9335	MW2	West O'Daniel Seep Area	7/31/06 1720	8/7/06 1150	ND		ND		ND		ND	
P9336	MW3	West O'Daniel Seep Area	7/31/06 1705	8/7/06 1140	ND		ND		ND		ND	
P9337	MW4	West O'Daniel Seep Area	7/31/06 1645	8/7/06 1120	ND		550.6 *	4.81	ND		ND	
P9338	MW5	West O'Daniel Seep Area	7/31/06 1735	8/7/06 1200	ND		ND		ND		ND	
P9339	MW6	West O'Daniel Seep Area	7/31/06 1540	8/7/06 1030	ND		ND		ND		ND	
P9340	Laboratory control charcoal blank											
P9341	MWBeg6	West O'Daniel Seep Area	7/31/06 1630	8/7/06 1110	ND		535.6 *	2.51	ND		ND	
P9342	MWBEg7	West O'Daniel Seep Area	7/31/06 1615	8/7/06 1130	516.6	15.3	ND		ND		ND	
P9343	MWBeg11	West O'Daniel Seep Area	7/31/06 1745	8/7/06 1215	ND		ND		ND		ND	
P9344	MWBeg15	West O'Daniel Seep Area	7/31/06 1550	8/7/06 1055	ND		533.4 *	1.38	ND		ND	
P9367	MWBEg7	West O'Daniel Seep Area	**Water**	8/7/06 1130	509.0	0.046	ND		ND		ND	

FOOTNOTES:

ND = None Detected

* = A fluorescence peak is present that does not meet all the requirements for a positive dye result. However, it has been calculated as though it were the tracer dye for background purposes.

August 25, 2006

CERTIFICATE OF ANALYSIS

Bill Renfro
Tim Prude
Texas Railroad Commission
10 Desta Drive, Suite 500 E
Midland, Texas 79705-4515

RE: West O'Daniel Seep Area, Week 3
Analysis results for charcoal and water samples shipped on August 15, 2006
Ozark Underground Laboratory (OUL) numbers P9439 through P9448 and P9462

Dear Mr. Renfro and Mr. Prude:

We have completed analysis of the charcoal and water samples received at the OUL on August 17, 2006. We have indicated the OUL number for each of these samples on the enclosed Table 1.

The fluorescein, eosine, rhodamine WT (RWT) and sulforhodamine B (SRB) dye concentrations are based upon standards routinely used at the OUL. The fluorescein, eosine and SRB are mixtures of 75% dye and 25% diluent; the RWT is a 20% solution. The concentrations are based upon the as-sold weight of the dye.

Additional sampling information is available on the enclosed analysis graphs.

Sincerely,

Thomas J. Aley, PHG and RG

Enclosures:
1) Table 1 - Analysis results for charcoal and water samples
2) Sample collection data sheets
3) Sample analysis graphs

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Ozark Underground Laboratory, Inc. for
Texas Railroad Commission

Project name: West O'Daniel Seep Area, Week 3
Samples collected by: Tim Prude
Date samples shipped: August 15, 2006
Date samples rec'd at OUL: August 17, 2006
Date samples analyzed by OUL: August 21, 2006

Table 1. Results for charcoal and water samples analyzed for the presence of fluorescein, eosine, rhodamine WT (RWT) and sulforhodamine B (SRB) dyes. Peak wavelengths are reported in nanometers (nm); dye concentrations are reported in parts per billion (ppb). Results are for charcoal unless otherwise indicated.

OUL	Stn.	Station Name	Date/Time	Date/Time	Fluorescein		Eosine		RWT		SRB	
#	#		Placed	Collected	Peak	Conc.	Peak	Conc.	Peak	Conc.	Peak	Conc.
P9439	MW2	West O'Daniel Seep Area	8/7/06 1150	8/14/06 1140	ND		ND		ND		ND	
P9440	Laboratory control charcoal blank											
P9441	MW3	West O'Daniel Seep Area	8/7/06 1140	8/14/06 1130	ND		ND		ND		ND	
P9442	MW4	West O'Daniel Seep Area	8/7/06 1120	8/14/06 1110	ND		550.9 *	10.3	ND		ND	
P9443	MW5	West O'Daniel Seep Area	8/7/06 1200	8/14/06 1150	ND		ND		ND		ND	
P9444	MW6	West O'Daniel Seep Area	8/7/06 1030	8/14/06 1010	ND		ND		ND		ND	
P9445	MWBeg6	West O'Daniel Seep Area	8/7/06 1110	8/14/06 1100	ND		536.4 *	1.48	ND		ND	
P9446	MWBeg7	West O'Daniel Seep Area	8/7/06 1130	8/14/06 1120	516.7	11.2	ND		ND		ND	
P9447	MWBeg11	West O'Daniel Seep Area	8/7/06 1215	8/14/06 1200	ND		ND		ND		ND	
P9448	MWBeg15	West O'Daniel Seep Area	8/7/06 1055	8/14/06 1040	ND		535.2 *	2.09	ND		ND	
P9462	MWBeg7	West O'Daniel Seep Area	**Water**	8/14/06 1120	ND		ND		ND		ND	

FOOTNOTES:

ND = None Detected

* = A fluorescence peak is present that does not meet all the requirements for a positive dye result. However, it has been calculated as though it were the tracer dye for background purposes.

APPENDIX E

LABORATORY ANALYTICAL REPORTS – DHL ANALYTICAL

DHL ANALYTICAL

April 21, 2006

Steve Miller
TRC Environmental Corp.
505 East Huntland Drive
Suite 250
Austin, Texas 78752

TEL: (512) 329-6080
FAX (512) 329-8750

Order No.: 0604091

RE: RRC West O'Daniel

Dear Steve Miller:

DHL Analytical received 8 sample(s) on 4/14/2006 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

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

DHL ANALYTICAL

TABLE OF CONTENTS

This report for TRC Environmental: RRC West O'Daniel (DHL Work Order 0604091) contains the following information:

ITEM	Page
• Cover Page	1
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• Laboratory Data Package Signature Page	6
• Laboratory Review Checklist	7-8
• Case Narrative	9-10
• Work Order Sample Summary	11
• Prep Dates Report	12-14
• Analytical Dates Report	15-17
• Sample Results	18-25
• QC Summary Report	26-43
• MQL Summary Report	44
• Total Number of Pages	44

April 21, 2006 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

№ 23526

CHAIN-OF-CUSTODY

CLIENT: TRC
ADDRESS: 505 E. Huntland Dr Suite 250 Austin, TX 78752
PHONE: 512-329-6080 FAX 512-329-8750
DATA REPORTED TO: Steve Miller
ADDITIONAL REPORT COPIES TO:

DATE: 4/13/06 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 0604091
PROJECT LOCATION OR NAME: RRC West O'Daniel
CLIENT PROJECT #: 46513-0000-00002 COLLECTOR: Matt Weber / Barrett Cl

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	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 ☐	CHLORIDES ☒ ANIONS ☐ ALKALINITY ☒	Metals	Ions	Electrical conductivity	FIELD NOTES
E-MW-06-1	01	4/13/06	0855	W	4-40mL 2-250mL 1-500mL	7	X	X		X	X	X														X		X	X	X	X		Metals include
S-MW-02-1	02	4/13/06	1107	W	4-40mL 2-250mL 1-500mL	7	X	X		X	X	X														X		X	X	X	X		Ba, Ca, Fe, Mg, Na,
S-MW-02-2	03	4/13/06	1107	W	4-40mL 2-250mL 1-500mL	7	X	X		X	X	X														X		X	X	X	X		Ions include
S-MW-04-1	04	4/13/06	1410	W	4-40mL 2-250mL 1-500mL	7	X	X		X	X	X														X		X	X	X	X		Br, ~~Cl~~, Nitrate,
S-MW-04-2	05	4/13/06	1410	W	8-40mL 2-500mL 4-250mL	14	X	X		X	X	X														X		X	X	X	X		Sulfate
S-MW-BEG11-1	06	4/13/06	1500	W	4-40mL 1-500mL 2-250mL	7	X	X		X	X	X														X		X	X	X	X		Refer to
S-MW-03-1	07	4/13/06	1525	W	4-40mL 1-500mL 2-250mL	7	X	X		X	X	X														X		X	X	X	X		Upper Colorado
Trip blank-4-13-06	08	4/13/06	—	W	2-40mL	2	X					X																					River Basin QAPP
																																	Sept. 2005 – Aug. 20
																																	S-MW-04-2 is MS/MSD
																																	4 2nd Lot 4/14/06
																																	Seal OK MD
TOTAL																																	

RELINQUISHED BY: (Signature) DATE/TIME 4/13/06 1745 RECEIVED BY: (Signature) 4/14/06 0900
RELINQUISHED BY: (Signature) DATE/TIME 4/14/06 0900 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: 5.6 THERM #: 92
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☒ CARRIER BILL # Fed Ex
☐ APC DELIVERY
☐ HAND DELIVERED

FedEx Express *US Airbill*

FedEx Tracking Number 8528 1881 3760

[redacted]

Form ID No. 0200

Recipient's Copy

1 From

Date [illegible]

Sender's Name [illegible] Phone [illegible]

Company TRC

Address [illegible] Dept./Floor/Suite/Room

City Austin State TX ZIP [illegible]

2 Your Internal Billing Reference 46513 [illegible]

3 To

Recipient's Name [illegible] Phone [illegible]

Company DHL [illegible]

Recipient's Address [illegible] 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 [illegible] State TX ZIP [illegible]

L

8528 1881 3760

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

- [ ] FedEx Priority Overnight — Next business morning*
- [ ] FedEx Standard Overnight — Next business afternoon*
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations*
- [ ] FedEx 2Day — Second business day*
- [ ] FedEx Express Saver — Third business day*

FedEx Envelope rate not available. Minimum charge: One-pound rate

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

- [ ] FedEx 1Day Freight* — Next business day**
- [ ] FedEx 2Day Freight — Second business day**
- [ ] FedEx 3Day Freight — Third business day**

* Call for Confirmation ** Declared value limit $500

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available ONLY for FedEx Priority Overnight, FedEx 2Day, FedEx 1Day Freight, and FedEx 2Day Freight to select ZIP codes
- [ ] 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.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ___ x ___ kg
- [ ] Cargo Aircraft Only

Dangerous goods (including Dry Ice) cannot be shipped in FedEx packaging.

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

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

[redacted]

Total Packages	Total Weight	Total Declared Value†	Total Charges
1	38	$ .00	Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See back for details.

8 Sign to Authorize Delivery Without a Signature

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

Questions? Visit our Web site at fedex.com

or call 1.800.GoFedEx 1.800.463.3339.

Rev. Date 11/03 • Part #158281 • ©1994-2003 FedEx • PRINTED IN U.S.A. SRY 03/05

467

DHL Analytical

Sample Receipt Checklist

Client Name TRC Environmental Corp. Date Received: 4/14/2006

Work Order Number 0604091 Received by MLW

Checklist completed by: Mark Wow (Signature) 4.19.6 (Date) Reviewed by JD (Initials) 04/14/06 (Date)

Carrier name

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? NO Checked by MW

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

Client contacted TRC Date contacted: 04/14/06 Person contacted S. Miller

Contacted by: J. DuPont Regarding: ① Cooler mis-delivery ② Sample ID's

Comments: ① FED EX delivered cooler to wrong location. Cooler was opened. COC has been signed from the wrong location

② Some of the S-MW-04-2 samples are labled as S-MW-02-2. Time is correct

Corrective Action ① Will note in case narrative. TRC has info from the other lab. ② Corrected the ID on labels as per S. Miller directive

Laboratory Data Package Signature Page

This data package consists of:

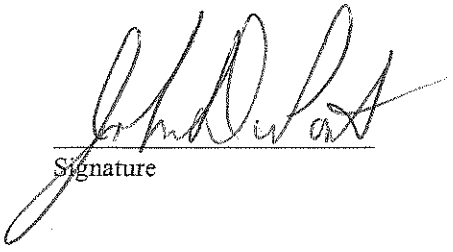
This signature page, the laboratory review checklist, and the following reportable data:

- 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
Michelle Green – QA Manager
John DuPont – General Manager



Signature

04/21/06

Date

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: RRC West O'Daniel	Date: 4/21/06
Reviewer Name: Carlos Castro	Laboratory Work Order: 0604091
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?		✓			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) Were 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, (prep and cleanup steps)?	✓				
		3) Were LCSs analyzed at the required frequency?	✓				
		4) Were LCS (and LCSD, if applicable) %Rs & RPD recovery 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?	✓				
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?		✓			27-03
		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?	✓				

DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: RRC West O'Daniel	Date: 4/21/06
Reviewer Name: Carlos Castro	Laboratory Work Order: 0604091

#[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, & 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?		✓			S9-01
S10	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	✓				
S11	OI	**PROFICIENCY TEST REPORTS**					
		1) Was the laboratory'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?	✓				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS (NELAC)**					
		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 the 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).

CLIENT: TRC Environmental Corp.
Project: RRC West O'Daniel
Lab Order: 0604091

CASE NARRATIVE

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

Method SW6020 - Metals Analysis
Method SW8021B - Volatiles by GC
Method E300 - Anions Analysis
Method E310.1 - Alkalinity Analysis
Method E120.1 - Specific Conductivity
Method E150.1 - pH of a Water

Exception Report R1-01

The samples were received and log-in performed on 4/14/06. A total of 8 samples were received. The cooler was delivered to the wrong location and subsequently the cooler was opened. The Chain-Of-Custody (COC) was signed for at the wrong location and all information from the other location was released to the client. Some of the sample labels for sample S-MW-04-2 had the sample IDs incorrect (S-MW-02-2). Corrected the sample IDs on all the sample labels as per the client.

Exception Report R7-03

For Anions analysis performed on 4/17/06 the matrix spike duplicate recovery was slightly above control limits for Sulfate. This is flagged accordingly in the QC summary report. The reference sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken and the sample results were not adversely affected.

For Metals analysis performed on 4/19/06 the matrix spike and matrix spike duplicate recoveries were out of control limits for all or most analytes. These are flagged accordingly. The reference sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for these analytes. No further corrective actions were taken and the sample results were not adversely affected.

Exception Report S9-01

For Metals analysis performed on 4/19/06 the PDS recovery was out of control limits for a few analytes. These are flagged accordingly in the QC summary report. The serial dilution was within control limit for these analytes therefore no further corrective actions were required.

DATA REPORTING

Sample reports include the Sample Quantitation Limit (SQL) and the Reporting Limit (RL) for each analyte. The computer system allows for reporting SQL with 2 significant figures and the RL with 3 significant figures. Because of rounding it may sometime appear that a "J" flagged result is lower than the SQL if the sample result is very near the SQL.

DHL Analytical

Date: *21-Apr-06*

CLIENT: TRC Environmental Corp.
Project: RRC West O'Daniel
Lab Order: 0604091

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
0604091-01	E-MW-06-1		4/13/2006 8:51:00 AM	4/14/2006
0604091-02	S-MW-02-1		4/13/2006 11:07:00 AM	4/14/2006
0604091-03	S-MW-02-2		4/13/2006 11:07:00 AM	4/14/2006
0604091-04	S-MW-04-1		4/13/2006 2:10:00 PM	4/14/2006
0604091-05	S-MW-04-2		4/13/2006 2:10:00 PM	4/14/2006
0604091-06	S-MW-BEG11-1		4/13/2006 3:00:00 PM	4/14/2006
0604091-07	S-MW-03-1		4/13/2006 3:25:00 PM	4/14/2006
0604091-08	Trip Blank 4-13-06		4/13/2006	4/14/2006

Lab Order: 0604091
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0604091-01A	E-MW-06-1	4/13/2006 8:51:00 AM	Aqueous	SW5030B	Purge and Trap Water GC	4/19/2006 10:39:42 A	21947
0604091-01B	E-MW-06-1	4/13/2006 8:51:00 AM	Aqueous	E150.1	pH	4/14/2006 2:01:00 PM	R25851
0604091-01C	E-MW-06-1	4/13/2006 8:51:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	E-MW-06-1	4/13/2006 8:51:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	E-MW-06-1	4/13/2006 8:51:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
0604091-01D	E-MW-06-1	4/13/2006 8:51:00 AM	Aqueous	E310.1	Alkalinity	4/17/2006 10:53:00 A	R25867
0604091-01E	E-MW-06-1	4/13/2006 8:51:00 AM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	E-MW-06-1	4/13/2006 8:51:00 AM	Aqueous	E300	Anions by IC method - Water	4/14/2006	R25868
	E-MW-06-1	4/13/2006 8:51:00 AM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604091-02A	S-MW-02-1	4/13/2006 11:07:00 AM	Aqueous	SW5030B	Purge and Trap Water GC	4/19/2006 10:39:42 A	21947
0604091-02B	S-MW-02-1	4/13/2006 11:07:00 AM	Aqueous	E150.1	pH	4/14/2006 2:02:00 PM	R25851
0604091-02C	S-MW-02-1	4/13/2006 11:07:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-02-1	4/13/2006 11:07:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-02-1	4/13/2006 11:07:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-02-1	4/13/2006 11:07:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
0604091-02D	S-MW-02-1	4/13/2006 11:07:00 AM	Aqueous	E310.1	Alkalinity	4/17/2006 11:02:00 A	R25867
0604091-02E	S-MW-02-1	4/13/2006 11:07:00 AM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-02-1	4/13/2006 11:07:00 AM	Aqueous	E300	Anions by IC method - Water	4/14/2006	R25868
	S-MW-02-1	4/13/2006 11:07:00 AM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-02-1	4/13/2006 11:07:00 AM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604091-03A	S-MW-02-2	4/13/2006 11:07:00 AM	Aqueous	SW5030B	Purge and Trap Water GC	4/19/2006 10:39:42 A	21947
0604091-03B	S-MW-02-2	4/13/2006 11:07:00 AM	Aqueous	E150.1	pH	4/14/2006 2:03:00 PM	R25851
0604091-03C	S-MW-02-2	4/13/2006 11:07:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-02-2	4/13/2006 11:07:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-02-2	4/13/2006 11:07:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-02-2	4/13/2006 11:07:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
0604091-03D	S-MW-02-2	4/13/2006 11:07:00 AM	Aqueous	E310.1	Alkalinity	4/17/2006 11:11:00 A	R25867
0604091-03E	S-MW-02-2	4/13/2006 11:07:00 AM	Aqueous	E300	Anions by IC method - Water	4/14/2006	R25868

Lab Order: 0604091
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0604091-03E	S-MW-02-2	4/13/2006 11:07:00 AM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-02-2	4/13/2006 11:07:00 AM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-02-2	4/13/2006 11:07:00 AM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604091-04A	S-MW-04-1	4/13/2006 2:10:00 PM	Aqueous	SW5030B	Purge and Trap Water GC	4/19/2006 10:39:42 A	21947
0604091-04B	S-MW-04-1	4/13/2006 2:10:00 PM	Aqueous	E150.1	pH	4/14/2006 2:04:00 PM	R25851
0604091-04C	S-MW-04-1	4/13/2006 2:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-04-1	4/13/2006 2:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-04-1	4/13/2006 2:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-04-1	4/13/2006 2:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
0604091-04D	S-MW-04-1	4/13/2006 2:10:00 PM	Aqueous	E310.1	Alkalinity	4/17/2006 11:18:00 A	R25867
0604091-04E	S-MW-04-1	4/13/2006 2:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/14/2006	R25868
	S-MW-04-1	4/13/2006 2:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-04-1	4/13/2006 2:10:00 PM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604091-05A	S-MW-04-2	4/13/2006 2:10:00 PM	Aqueous	SW5030B	Purge and Trap Water GC	4/19/2006 10:39:42 A	21947
0604091-05B	S-MW-04-2	4/13/2006 2:10:00 PM	Aqueous	E150.1	pH	4/14/2006 2:05:00 PM	R25851
0604091-05C	S-MW-04-2	4/13/2006 2:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-04-2	4/13/2006 2:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-04-2	4/13/2006 2:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-04-2	4/13/2006 2:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
0604091-05D	S-MW-04-2	4/13/2006 2:10:00 PM	Aqueous	E310.1	Alkalinity	4/17/2006 11:24:00 A	R25867
0604091-05E	S-MW-04-2	4/13/2006 2:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-04-2	4/13/2006 2:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/14/2006	R25868
	S-MW-04-2	4/13/2006 2:10:00 PM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604091-06A	S-MW-BEG11-1	4/13/2006 3:00:00 PM	Aqueous	SW5030B	Purge and Trap Water GC	4/19/2006 10:39:42 A	21947
0604091-06B	S-MW-BEG11-1	4/13/2006 3:00:00 PM	Aqueous	E150.1	pH	4/14/2006 2:07:00 PM	R25851
0604091-06C	S-MW-BEG11-1	4/13/2006 3:00:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-BEG11-1	4/13/2006 3:00:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-BEG11-1	4/13/2006 3:00:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931

Lab Order: 0604091
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0604091-06D	S-MW-BEG11-1	4/13/2006 3:00:00 PM	Aqueous	E310.1	Alkalinity	4/17/2006 11:36:00 A	R25867
0604091-06E	S-MW-BEG11-1	4/13/2006 3:00:00 PM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-BEG11-1	4/13/2006 3:00:00 PM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-BEG11-1	4/13/2006 3:00:00 PM	Aqueous	E300	Anions by IC method - Water	4/14/2006	R25868
	S-MW-BEG11-1	4/13/2006 3:00:00 PM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604091-07A	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	SW5030B	Purge and Trap Water GC	4/19/2006 10:39:42 A	21947
0604091-07B	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	E150.1	pH	4/14/2006 2:08:00 PM	R25851
0604091-07C	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/18/2006 9:27:49 AM	21931
0604091-07D	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	E310.1	Alkalinity	4/17/2006 11:41:00 A	R25867
0604091-07E	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	E300	Anions by IC method - Water	4/14/2006	R25868
	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	E300	Anions by IC method - Water	4/14/2006	R25868
	S-MW-03-1	4/13/2006 3:25:00 PM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604091-08A	Trip Blank 4-13-06	4/13/2006	Aqueous	SW5030B	Purge and Trap Water GC	4/19/2006 10:39:42 A	21947

Lab Order: 0604091
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0604091-01A	E-MW-06-1	Aqueous	SW8021B	Volatile Organics by GC	21947	20	4/19/2006 5:42:57 PM	GC9_060419A
0604091-01B	E-MW-06-1	Aqueous	E150.1	pH	R25851	1	4/14/2006 2:01:00 PM	TITRATOR_060414B
0604091-01C	E-MW-06-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	500	4/19/2006 1:48:00 PM	ICP-MS2_060419A
	E-MW-06-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	2500	4/19/2006 2:06:00 PM	ICP-MS2_060419A
	E-MW-06-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	1	4/19/2006 3:53:00 PM	ICP-MS2_060419A
0604091-01D	E-MW-06-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 10:53:00 AM	TITRATOR_060417B
0604091-01E	E-MW-06-1	Aqueous	E300	Anions by IC method - Water	R25868	20	4/14/2006 6:51:50 PM	IC_060414A
	E-MW-06-1	Aqueous	E300	Anions by IC method - Water	R25875	1000	4/17/2006 12:12:46 PM	IC_060417A
	E-MW-06-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604091-02A	S-MW-02-1	Aqueous	SW8021B	Volatile Organics by GC	21947	1	4/19/2006 1:29:50 PM	GC9_060419A
0604091-02B	S-MW-02-1	Aqueous	E150.1	pH	R25851	1	4/14/2006 2:02:00 PM	TITRATOR_060414B
0604091-02C	S-MW-02-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	500	4/19/2006 1:57:00 PM	ICP-MS2_060419A
	S-MW-02-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	2500	4/19/2006 2:02:00 PM	ICP-MS2_060419A
	S-MW-02-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	10	4/19/2006 3:39:00 PM	ICP-MS2_060419A
	S-MW-02-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	1	4/19/2006 3:57:00 PM	ICP-MS2_060419A
0604091-02D	S-MW-02-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 11:02:00 AM	TITRATOR_060417B
0604091-02E	S-MW-02-1	Aqueous	E300	Anions by IC method - Water	R25875	20	4/17/2006 2:41:43 PM	IC_060417A
	S-MW-02-1	Aqueous	E300	Anions by IC method - Water	R25875	1000	4/17/2006 12:26:59 PM	IC_060417A
	S-MW-02-1	Aqueous	E300	Anions by IC method - Water	R25868	10	4/14/2006 5:21:42 PM	IC_060414A
	S-MW-02-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604091-03A	S-MW-02-2	Aqueous	SW8021B	Volatile Organics by GC	21947	1	4/19/2006 1:48:02 PM	GC9_060419A
0604091-03B	S-MW-02-2	Aqueous	E150.1	pH	R25851	1	4/14/2006 2:03:00 PM	TITRATOR_060414B
0604091-03C	S-MW-02-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	500	4/19/2006 2:11:00 PM	ICP-MS2_060419A
	S-MW-02-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	2500	4/19/2006 2:16:00 PM	ICP-MS2_060419A
	S-MW-02-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	10	4/19/2006 3:45:00 PM	ICP-MS2_060419A

Lab Order: 0604091
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0604091-03C	S-MW-02-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	1	4/19/2006 4:00:00 PM	ICP-MS2_060419A
0604091-03D	S-MW-02-2	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 11:11:00 AM	TITRATOR_060417B
0604091-03E	S-MW-02-2	Aqueous	E300	Anions by IC method - Water	R25875	20	4/17/2006 2:55:56 PM	IC_060417A
	S-MW-02-2	Aqueous	E300	Anions by IC method - Water	R25868	10	4/14/2006 5:35:54 PM	IC_060414A
	S-MW-02-2	Aqueous	E300	Anions by IC method - Water	R25875	1000	4/17/2006 12:41:11 PM	IC_060417A
	S-MW-02-2	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604091-04A	S-MW-04-1	Aqueous	SW8021B	Volatile Organics by GC	21947	1	4/19/2006 2:24:35 PM	GC9_060419A
0604091-04B	S-MW-04-1	Aqueous	E150.1	pH	R25851	1	4/14/2006 2:04:00 PM	TITRATOR_060414B
0604091-04C	S-MW-04-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	1	4/20/2006 11:07:00 AM	ICP-MS2_060420A
	S-MW-04-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	2500	4/19/2006 2:36:00 PM	ICP-MS2_060419A
	S-MW-04-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	500	4/19/2006 2:48:00 PM	ICP-MS2_060419A
	S-MW-04-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	1	4/19/2006 4:04:00 PM	ICP-MS2_060419A
0604091-04D	S-MW-04-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 11:18:00 AM	TITRATOR_060417B
0604091-04E	S-MW-04-1	Aqueous	E300	Anions by IC method - Water	R25868	20	4/14/2006 5:50:07 PM	IC_060414A
	S-MW-04-1	Aqueous	E300	Anions by IC method - Water	R25875	1000	4/17/2006 12:55:23 PM	IC_060417A
	S-MW-04-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604091-05A	S-MW-04-2	Aqueous	SW8021B	Volatile Organics by GC	21947	1	4/19/2006 2:42:53 PM	GC9_060419A
0604091-05B	S-MW-04-2	Aqueous	E150.1	pH	R25851	1	4/14/2006 2:05:00 PM	TITRATOR_060414B
0604091-05C	S-MW-04-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	2500	4/19/2006 1:52:00 PM	ICP-MS2_060419A
	S-MW-04-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	1	4/19/2006 4:08:00 PM	ICP-MS2_060419A
	S-MW-04-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	500	4/19/2006 1:38:00 PM	ICP-MS2_060419A
	S-MW-04-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	1	4/18/2006 4:31:00 PM	ICP-MS2_060418A
0604091-05D	S-MW-04-2	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 11:24:00 AM	TITRATOR_060417B
0604091-05E	S-MW-04-2	Aqueous	E300	Anions by IC method - Water	R25868	20	4/14/2006 6:21:44 PM	IC_060414A
	S-MW-04-2	Aqueous	E300	Anions by IC method - Water	R25875	1000	4/17/2006 1:09:34 PM	IC_060417A

Lab Order: 0604091
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0604091-05E	S-MW-04-2	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604091-06A	S-MW-BEG11-1	Aqueous	SW8021B	Volatile Organics by GC	21947	1	4/19/2006 3:01:11 PM	GC9_060419A
0604091-06B	S-MW-BEG11-1	Aqueous	E150.1	pH	R25851	1	4/14/2006 2:07:00 PM	TITRATOR_060414B
0604091-06C	S-MW-BEG11-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	10	4/19/2006 3:49:00 PM	ICP-MS2_060419A
	S-MW-BEG11-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	1	4/20/2006 11:10:00 AM	ICP-MS2_060420A
	S-MW-BEG11-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	500	4/19/2006 2:52:00 PM	ICP-MS2_060419A
0604091-06D	S-MW-BEG11-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 11:36:00 AM	TITRATOR_060417B
0604091-06E	S-MW-BEG11-1	Aqueous	E300	Anions by IC method - Water	R25868	1	4/14/2006 4:08:14 PM	IC_060414A
	S-MW-BEG11-1	Aqueous	E300	Anions by IC method - Water	R25875	1000	4/17/2006 1:23:46 PM	IC_060417A
	S-MW-BEG11-1	Aqueous	E300	Anions by IC method - Water	R25875	20	4/17/2006 3:10:08 PM	IC_060417A
	S-MW-BEG11-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604091-07A	S-MW-03-1	Aqueous	SW8021B	Volatile Organics by GC	21947	1	4/19/2006 3:19:31 PM	GC9_060419A
0604091-07B	S-MW-03-1	Aqueous	E150.1	pH	R25851	1	4/14/2006 2:08:00 PM	TITRATOR_060414B
0604091-07C	S-MW-03-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	2500	4/19/2006 2:44:00 PM	ICP-MS2_060419A
	S-MW-03-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	5	4/20/2006 11:20:00 AM	ICP-MS2_060420A
	S-MW-03-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	500	4/19/2006 2:56:00 PM	ICP-MS2_060419A
	S-MW-03-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21931	1	4/20/2006 11:14:00 AM	ICP-MS2_060420A
0604091-07D	S-MW-03-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 11:41:00 AM	TITRATOR_060417B
0604091-07E	S-MW-03-1	Aqueous	E300	Anions by IC method - Water	R25868	1	4/14/2006 4:22:26 PM	IC_060414A
	S-MW-03-1	Aqueous	E300	Anions by IC method - Water	R25868	10	4/14/2006 6:35:55 PM	IC_060414A
	S-MW-03-1	Aqueous	E300	Anions by IC method - Water	R25875	1000	4/17/2006 1:37:59 PM	IC_060417A
	S-MW-03-1	Aqueous	E300	Anions by IC method - Water	R25875	20	4/17/2006 3:24:21 PM	IC_060417A
	S-MW-03-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604091-08A	Trip Blank 4-13-06	Aqueous	SW8021B	Volatile Organics by GC	21947	1	4/19/2006 3:37:51 PM	GC9_060419A

DHL Analytical

Date: *21-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	E-MW-06-1
Project:	RRC West O'Daniel	**Lab ID:**	0604091-01
Project No:	46513-0000-00002	**Collection Date:**	4/13/2006 8:51:00 AM
Lab Order:	0604091	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	494	16.0	40.0		µg/L	20	4/19/2006 5:42:57 PM
Ethylbenzene	ND	40.0	120		µg/L	20	4/19/2006 5:42:57 PM
Toluene	ND	40.0	120		µg/L	20	4/19/2006 5:42:57 PM
Xylenes, Total	ND	60.0	180		µg/L	20	4/19/2006 5:42:57 PM
Surr: a,a,a-Trifluorotoluene	109	0	87-113		%REC	20	4/19/2006 5:42:57 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	141	3.00	10.0		µg/L	1	4/19/2006 3:53:00 PM
Calcium	2670000	50000	50000		µg/L	500	4/19/2006 1:48:00 PM
Iron	192	50.0	100		µg/L	1	4/19/2006 3:53:00 PM
Magnesium	757000	50000	50000		µg/L	500	4/19/2006 1:48:00 PM
Potassium	313000	50000	50000		µg/L	500	4/19/2006 1:48:00 PM
Sodium	18800000	250000	250000		µg/L	2500	4/19/2006 2:06:00 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	85.0	6.00	20.0		mg/L	20	4/14/2006 6:51:50 PM
Chloride	32600	300	1000		mg/L	1000	4/17/2006 12:12:46 PM
Nitrate-N	6.51	2.00	10.0	J	mg/L	20	4/14/2006 6:51:50 PM
Sulfate	3310	1000	3000		mg/L	1000	4/17/2006 12:12:46 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	260	10.0	10.0		mg/L	1	4/17/2006 10:53:00 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 10:53:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 10:53:00 AM
Alkalinity, Total (As CaCO3)	260	10.0	10.0		mg/L	1	4/17/2006 10:53:00 AM
PH		**E150.1**					Analyst: **JBC**
pH	6.42	0	0		pH Units	1	4/14/2006 2:01:00 PM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	98300	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

ND - Not Detected at the SQL
J - Analyte detected between SQL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *21-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-MW-02-1
Project:	RRC West O'Daniel	**Lab ID:**	0604091-02
Project No:	46513-0000-00002	**Collection Date:**	4/13/2006 11:07:00 AM
Lab Order:	0604091	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	1.29	0.800	2.00	J	µg/L	1	4/19/2006 1:29:50 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/19/2006 1:29:50 PM
Toluene	ND	2.00	6.00		µg/L	1	4/19/2006 1:29:50 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/19/2006 1:29:50 PM
Surr: a,a,a-Trifluorotoluene	110	0	87-113		%REC	1	4/19/2006 1:29:50 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	95.9	3.00	10.0		µg/L	1	4/19/2006 3:57:00 PM
Calcium	3980000	50000	50000		µg/L	500	4/19/2006 1:57:00 PM
Iron	1970	50.0	100		µg/L	1	4/19/2006 3:57:00 PM
Magnesium	1210000	50000	50000		µg/L	500	4/19/2006 1:57:00 PM
Potassium	30700	1000	1000		µg/L	10	4/19/2006 3:39:00 PM
Sodium	9410000	250000	250000		µg/L	2500	4/19/2006 2:02:00 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	56.5	3.00	10.0		mg/L	10	4/14/2006 5:21:42 PM
Chloride	23700	300	1000		mg/L	1000	4/17/2006 12:26:59 PM
Nitrate-N	ND	1.00	5.00		mg/L	10	4/14/2006 5:21:42 PM
Sulfate	2130	20.0	60.0		mg/L	20	4/17/2006 2:41:43 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	259	10.0	10.0		mg/L	1	4/17/2006 11:02:00 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:02:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:02:00 AM
Alkalinity, Total (As CaCO3)	259	10.0	10.0		mg/L	1	4/17/2006 11:02:00 AM
PH		**E150.1**					Analyst: **JBC**
pH	6.45	0	0		pH Units	1	4/14/2006 2:02:00 PM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	73100	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

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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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *21-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-MW-02-2
Project:	RRC West O'Daniel	**Lab ID:**	0604091-03
Project No:	46513-0000-00002	**Collection Date:**	4/13/2006 11:07:00 AM
Lab Order:	0604091	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/19/2006 1:48:02 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/19/2006 1:48:02 PM
Toluene	ND	2.00	6.00		µg/L	1	4/19/2006 1:48:02 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/19/2006 1:48:02 PM
Surr: a,a,a-Trifluorotoluene	112	0	87-113		%REC	1	4/19/2006 1:48:02 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	105	3.00	10.0		µg/L	1	4/19/2006 4:00:00 PM
Calcium	3990000	50000	50000		µg/L	500	4/19/2006 2:11:00 PM
Iron	5480	50.0	100		µg/L	1	4/19/2006 4:00:00 PM
Magnesium	1200000	50000	50000		µg/L	500	4/19/2006 2:11:00 PM
Potassium	30900	1000	1000		µg/L	10	4/19/2006 3:45:00 PM
Sodium	9440000	250000	250000		µg/L	2500	4/19/2006 2:16:00 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	56.7	3.00	10.0		mg/L	10	4/14/2006 5:35:54 PM
Chloride	24300	300	1000		mg/L	1000	4/17/2006 12:41:11 PM
Nitrate-N	ND	1.00	5.00		mg/L	10	4/14/2006 5:35:54 PM
Sulfate	2140	20.0	60.0		mg/L	20	4/17/2006 2:55:56 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	259	10.0	10.0		mg/L	1	4/17/2006 11:11:00 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:11:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:11:00 AM
Alkalinity, Total (As CaCO3)	259	10.0	10.0		mg/L	1	4/17/2006 11:11:00 AM
PH		**E150.1**					Analyst: **JBC**
pH	6.47	0	0		pH Units	1	4/14/2006 2:03:00 PM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	74000	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

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C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *21-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-MW-04-1
Project:	RRC West O'Daniel	**Lab ID:**	0604091-04
Project No:	46513-0000-00002	**Collection Date:**	4/13/2006 2:10:00 PM
Lab Order:	0604091	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	8.30	0.800	2.00		µg/L	1	4/19/2006 2:24:35 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/19/2006 2:24:35 PM
Toluene	ND	2.00	6.00		µg/L	1	4/19/2006 2:24:35 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/19/2006 2:24:35 PM
Surr: a,a,a-Trifluorotoluene	110	0	87-113		%REC	1	4/19/2006 2:24:35 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	223	3.00	10.0		µg/L	1	4/20/2006 11:07:00 AM
Calcium	3230000	50000	50000		µg/L	500	4/19/2006 2:48:00 PM
Iron	1750	50.0	100		µg/L	1	4/19/2006 4:04:00 PM
Magnesium	728000	50000	50000		µg/L	500	4/19/2006 2:48:00 PM
Potassium	207000	50000	50000		µg/L	500	4/19/2006 2:48:00 PM
Sodium	14200000	250000	250000		µg/L	2500	4/19/2006 2:36:00 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	69.2	6.00	20.0		mg/L	20	4/14/2006 5:50:07 PM
Chloride	29600	300	1000		mg/L	1000	4/17/2006 12:55:23 PM
Nitrate-N	29.4	2.00	10.0		mg/L	20	4/14/2006 5:50:07 PM
Sulfate	2780	20.0	60.0		mg/L	20	4/14/2006 5:50:07 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	180	10.0	10.0		mg/L	1	4/17/2006 11:18:00 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:18:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:18:00 AM
Alkalinity, Total (As CaCO3)	180	10.0	10.0		mg/L	1	4/17/2006 11:18:00 AM
PH		**E150.1**					Analyst: **JBC**
pH	6.67	0	0		pH Units	1	4/14/2006 2:04:00 PM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	90500	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

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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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *21-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-MW-04-2
Project:	RRC West O'Daniel	**Lab ID:**	0604091-05
Project No:	46513-0000-00002	**Collection Date:**	4/13/2006 2:10:00 PM
Lab Order:	0604091	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	6.92	0.800	2.00		µg/L	1	4/19/2006 2:42:53 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/19/2006 2:42:53 PM
Toluene	ND	2.00	6.00		µg/L	1	4/19/2006 2:42:53 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/19/2006 2:42:53 PM
Surr: a,a,a-Trifluorotoluene	104	0	87-113		%REC	1	4/19/2006 2:42:53 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	224	3.00	10.0		µg/L	1	4/18/2006 4:31:00 PM
Calcium	3250000	50000	50000		µg/L	500	4/19/2006 1:38:00 PM
Iron	1890	50.0	100		µg/L	1	4/19/2006 4:08:00 PM
Magnesium	756000	50000	50000		µg/L	500	4/19/2006 1:38:00 PM
Potassium	214000	50000	50000		µg/L	500	4/19/2006 1:38:00 PM
Sodium	16000000	250000	250000		µg/L	2500	4/19/2006 1:52:00 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	74.9	6.00	20.0		mg/L	20	4/14/2006 6:21:44 PM
Chloride	29600	300	1000		mg/L	1000	4/17/2006 1:09:34 PM
Nitrate-N	33.7	2.00	10.0		mg/L	20	4/14/2006 6:21:44 PM
Sulfate	2850	20.0	60.0		mg/L	20	4/14/2006 6:21:44 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	181	10.0	10.0		mg/L	1	4/17/2006 11:24:00 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:24:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:24:00 AM
Alkalinity, Total (As CaCO3)	181	10.0	10.0		mg/L	1	4/17/2006 11:24:00 AM
PH		**E150.1**					Analyst: **JBC**
pH	6.65	0	0		pH Units	1	4/14/2006 2:05:00 PM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	90800	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

ND - Not Detected at the SQL
J - Analyte detected between SQL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *21-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-MW-BEG11-1
Project:	RRC West O'Daniel	**Lab ID:**	0604091-06
Project No:	46513-0000-00002	**Collection Date:**	4/13/2006 3:00:00 PM
Lab Order:	0604091	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/19/2006 3:01:11 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/19/2006 3:01:11 PM
Toluene	ND	2.00	6.00		µg/L	1	4/19/2006 3:01:11 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/19/2006 3:01:11 PM
Surr: a,a,a-Trifluorotoluene	111	0	87-113		%REC	1	4/19/2006 3:01:11 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	96.0	3.00	10.0		µg/L	1	4/20/2006 11:10:00 AM
Calcium	2750000	50000	50000		µg/L	500	4/19/2006 2:52:00 PM
Iron	98.4	50.0	100	J	µg/L	1	4/20/2006 11:10:00 AM
Magnesium	632000	50000	50000		µg/L	500	4/19/2006 2:52:00 PM
Potassium	20300	1000	1000		µg/L	10	4/19/2006 3:49:00 PM
Sodium	2650000	50000	50000		µg/L	500	4/19/2006 2:52:00 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	25.5	0.300	1.00		mg/L	1	4/14/2006 4:08:14 PM
Chloride	10400	300	1000		mg/L	1000	4/17/2006 1:23:46 PM
Nitrate-N	3.92	0.100	0.500		mg/L	1	4/14/2006 4:08:14 PM
Sulfate	1080	20.0	60.0		mg/L	20	4/17/2006 3:10:08 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	112	10.0	10.0		mg/L	1	4/17/2006 11:36:00 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:36:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:36:00 AM
Alkalinity, Total (As CaCO3)	112	10.0	10.0		mg/L	1	4/17/2006 11:36:00 AM
PH		**E150.1**					Analyst: **JBC**
pH	6.78	0	0		pH Units	1	4/14/2006 2:07:00 PM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	32600	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

ND - Not Detected at the SQL
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DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *21-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-MW-03-1
Project:	RRC West O'Daniel	**Lab ID:**	0604091-07
Project No:	46513-0000-00002	**Collection Date:**	4/13/2006 3:25:00 PM
Lab Order:	0604091	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/19/2006 3:19:31 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/19/2006 3:19:31 PM
Toluene	ND	2.00	6.00		µg/L	1	4/19/2006 3:19:31 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/19/2006 3:19:31 PM
Surr: a,a,a-Trifluorotoluene	109	0	87-113		%REC	1	4/19/2006 3:19:31 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	108	3.00	10.0		µg/L	1	4/20/2006 11:14:00 AM
Calcium	3780000	50000	50000		µg/L	500	4/19/2006 2:56:00 PM
Iron	550	50.0	100		µg/L	1	4/20/2006 11:14:00 AM
Magnesium	1080000	50000	50000		µg/L	500	4/19/2006 2:56:00 PM
Potassium	12300	500	500		µg/L	5	4/20/2006 11:20:00 AM
Sodium	9240000	250000	250000		µg/L	2500	4/19/2006 2:44:00 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	56.1	3.00	10.0		mg/L	10	4/14/2006 6:35:55 PM
Chloride	22300	300	1000		mg/L	1000	4/17/2006 1:37:59 PM
Nitrate-N	1.24	0.100	0.500		mg/L	1	4/14/2006 4:22:26 PM
Sulfate	1930	20.0	60.0		mg/L	20	4/17/2006 3:24:21 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	123	10.0	10.0		mg/L	1	4/17/2006 11:41:00 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:41:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:41:00 AM
Alkalinity, Total (As CaCO3)	123	10.0	10.0		mg/L	1	4/17/2006 11:41:00 AM
PH		**E150.1**					Analyst: **JBC**
pH	6.61	0	0		pH Units	1	4/14/2006 2:08:00 PM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	67000	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

ND - Not Detected at the SQL
J - Analyte detected between SQL and RL
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DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *21-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	Trip Blank 4-13-06
Project:	RRC West O'Daniel	**Lab ID:**	0604091-08
Project No:	46513-0000-00002	**Collection Date:**	4/13/2006
Lab Order:	0604091	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/19/2006 3:37:51 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/19/2006 3:37:51 PM
Toluene	ND	2.00	6.00		µg/L	1	4/19/2006 3:37:51 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/19/2006 3:37:51 PM
Surr: a,a,a-Trifluorotoluene	111	0	87-113		%REC	1	4/19/2006 3:37:51 PM

Qualifiers

ND - Not Detected at the SQL
J - Analyte detected between SQL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_060419A

Sample ID **LCS-21947**	Batch ID: **21947**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **LCS**	Run ID: **GC9_060419A**	Analysis Date: **4/19/2006 11:13:11 A**	Prep Date: **4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	51.5	2.00	50.00	0	103	81	125			
Toluene	51.4	6.00	50.00	0	103	84	123			
Ethylbenzene	50.5	6.00	50.00	0	101	83	119			
Xylenes, Total	154	9.00	150.0	0	103	81	117			
Surr: a,a,a-Trifluorotoluene	221		200.0		110	87	113			

Sample ID **MB-21947**	Batch ID: **21947**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **MBLK**	Run ID: **GC9_060419A**	Analysis Date: **4/19/2006 11:31:21 A**	Prep Date: **4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	2.00								
Toluene	ND	6.00								
Ethylbenzene	ND	6.00								
Xylenes, Total	ND	9.00								
Surr: a,a,a-Trifluorotoluene	214		200.0		107	87	113			

Sample ID **0604091-05AMS**	Batch ID: **21947**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **MS**	Run ID: **GC9_060419A**	Analysis Date: **4/19/2006 12:17:00 P**	Prep Date: **4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	63.2	2.00	50.00	6.921	113	81	125			
Toluene	54.1	6.00	50.00	0	108	84	123			
Ethylbenzene	53.3	6.00	50.00	0	107	83	119			
Xylenes, Total	164	9.00	150.0	0	109	81	117			
Surr: a,a,a-Trifluorotoluene	220		200.0		110	87	113			

Sample ID **0604091-05AMSD**	Batch ID: **21947**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **MSD**	Run ID: **GC9_060419A**	Analysis Date: **4/19/2006 12:35:10 P**	Prep Date: **4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	63.8	2.00	50.00	6.921	114	81	125	0.949	20	
Toluene	55.2	6.00	50.00	0	110	84	123	2.11	20	
Ethylbenzene	54.3	6.00	50.00	0	109	83	119	1.87	20	
Xylenes, Total	167	9.00	150.0	0	111	81	117	1.99	20	
Surr: a,a,a-Trifluorotoluene	220		200.0		110	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 Dection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_060419A

Sample ID **ICV-060419**	Batch ID: **R25913**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **ICV**	Run ID: **GC9_060419A**	Analysis Date: **4/19/2006 10:54:59 A**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	97.4	2.00	100.0	0	97.4	85	115			
Toluene	99.8	6.00	100.0	0	99.8	85	115			
Ethylbenzene	100	6.00	100.0	0	100	85	115			
Xylenes, Total	303	9.00	300.0	0	101	85	115			
Surr: a,a,a-Trifluorotoluene	216		200.0		108	87	113			

Sample ID **CCV1-060419**	Batch ID: **R25913**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **CCV**	Run ID: **GC9_060419A**	Analysis Date: **4/19/2006 2:06:18 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	54.2	2.00	50.00	0	108	85	115			
Toluene	53.4	6.00	50.00	0	107	85	115			
Ethylbenzene	52.6	6.00	50.00	0	105	85	115			
Xylenes, Total	160	9.00	150.0	0	107	85	115			
Surr: a,a,a-Trifluorotoluene	216		200.0		108	87	113			

Sample ID **CCV2-060419**	Batch ID: **R25913**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **CCV**	Run ID: **GC9_060419A**	Analysis Date: **4/19/2006 6:01:05 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	53.8	2.00	50.00	0	108	85	115			
Toluene	53.7	6.00	50.00	0	107	85	115			
Ethylbenzene	52.5	6.00	50.00	0	105	85	115			
Xylenes, Total	162	9.00	150.0	0	108	85	115			
Surr: a,a,a-Trifluorotoluene	218		200.0		109	87	113			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_060418A

Sample ID	**0604091-05C SD**	Batch ID:	**21931**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**SD**	Run ID:	**ICP-MS2_060418A**	Analysis Date:	**4/18/2006 4:35:00 PM**	Prep Date:	**4/18/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	221	50.0	0	223.9				1.12	10	

Sample ID	**0604091-05C PDS**	Batch ID:	**21931**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**PDS**	Run ID:	**ICP-MS2_060418A**	Analysis Date:	**4/18/2006 4:58:00 PM**	Prep Date:	**4/18/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	403	10.0	200	224	89.5	75	125			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_060418A

Sample ID	**ICV1-060418**	Batch ID:	**R25880**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**ICV**	Run ID:	**ICP-MS2_060418A**	Analysis Date:	**4/18/2006 4:04:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	95.2	10.0	100.0	0	95.2	90	110			

Sample ID	**CCV1-060418**	Batch ID:	**R25880**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS2_060418A**	Analysis Date:	**4/18/2006 5:06:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	195	10.0	200.0	0	97.6	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_060419A

Sample ID	**MB-21931**	Batch ID:	**21931**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**MBLK**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 11:31:00 A**	Prep Date:	**4/18/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	10.0								
Calcium	ND	100								
Iron	ND	100								
Magnesium	ND	100								
Potassium	ND	100								
Sodium	ND	100								

Sample ID	**LCS-21931**	Batch ID:	**21931**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**LCS**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 12:07:00 P**	Prep Date:	**4/18/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	190	10.0	200.0	0	95.2	80	120			
Calcium	5080	100	5000	0	102	80	120			
Iron	4850	100	5000	0	97.0	80	120			
Magnesium	5100	100	5000	0	102	80	120			
Potassium	4990	100	5000	0	99.9	80	120			
Sodium	5170	100	5000	0	103	80	120			

Sample ID	**LCSD-21931**	Batch ID:	**21931**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**LCSD**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 12:11:00 P**	Prep Date:	**4/18/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	189	10.0	200.0	0	94.3	80	120	0.950	15	
Calcium	5100	100	5000	0	102	80	120	0.550	15	
Iron	4900	100	5000	0	97.9	80	120	0.985	15	
Magnesium	5030	100	5000	0	101	80	120	1.38	15	
Potassium	4970	100	5000	0	99.4	80	120	0.442	15	
Sodium	5060	100	5000	0	101	80	120	2.23	15	

Sample ID	**0604091-05C SD**	Batch ID:	**21931**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**SD**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 1:43:00 PM**	Prep Date:	**4/18/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	3310000	250000	0	3254000				1.69	10	
Iron	0	250000	0	0				0	10	
Magnesium	789000	250000	0	755500				4.34	10	
Potassium	0	250000	0	213800				0	10	
Sodium	15900000	250000	0	15750000				0.948	10	

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_060419A

Sample ID	**0604091-05C PDS**	Batch ID:	**21931**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**PDS**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 2:20:00 PM**	Prep Date:	**4/18/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2740000	50000	5000	3250000	-20.7	75	125			S
Iron	2400000	50000	2500000	0	95.9	75	125			
Magnesium	2570000	50000	5000	756000	72.5	75	125			S
Potassium	2410000	50000	5000	214000	88.0	75	125			
Sodium	3960000	50000	2500000	15800000	-471	75	125			S

Sample ID	**0604091-05C MS**	Batch ID:	**21931**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**MS**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 3:00:00 PM**	Prep Date:	**4/18/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	0	5000	200.0	0	0	80	120			S
Calcium	4180000	50000	5000	3254000	18500	80	120			S
Magnesium	788000	50000	5000	755500	640	80	120			S
Potassium	225000	50000	5000	213800	217	80	120			S
Sodium	16300000	50000	5000	15750000	10600	80	120			S

Sample ID	**0604091-05C MSD**	Batch ID:	**21931**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**MSD**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 3:04:00 PM**	Prep Date:	**4/18/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	0	5000	200.0	0	0	80	120	0	15	S
Calcium	4200000	50000	5000	3254000	18900	80	120	0.430	15	S
Magnesium	792000	50000	5000	755500	730	80	120	0.570	15	S
Potassium	227000	50000	5000	213800	263	80	120	1.02	15	S
Sodium	16200000	50000	5000	15750000	9800	80	120	0.246	15	S

Sample ID	**0604091-05C MS**	Batch ID:	**21931**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**MS**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 4:12:00 PM**	Prep Date:	**4/18/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Iron	6190	100	5000	0	124	80	120			S

Sample ID	**0604091-05C MSD**	Batch ID:	**21931**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**MSD**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 4:16:00 PM**	Prep Date:	**4/18/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Iron	5980	100	5000	0	120	80	120	3.37	15	

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_060419A

Sample ID	**ICV1-060419**	Batch ID:	**R25897**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**ICV**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 11:19:00 A**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	96.3	10.0	100.0	0	96.3	90	110			
Calcium	2690	100	2500	0	108	90	110			
Iron	2580	100	2500	0	103	90	110			
Magnesium	2620	100	2500	0	105	90	110			
Potassium	2560	100	2500	0	102	90	110			
Sodium	2590	100	2500	0	104	90	110			

Sample ID	**CCV1-060419**	Batch ID:	**R25897**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 12:23:00 P**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	196	10.0	200.0	0	98.2	90	110			
Calcium	5180	100	5000	0	104	90	110			
Iron	5090	100	5000	0	102	90	110			
Magnesium	5140	100	5000	0	103	90	110			
Potassium	5040	100	5000	0	101	90	110			
Sodium	5200	100	5000	0	104	90	110			

Sample ID	**CCV2-060419**	Batch ID:	**R25897**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 2:28:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	201	10.0	200.0	0	100	90	110			
Calcium	5180	100	5000	0	104	90	110			
Iron	5190	100	5000	0	104	90	110			
Magnesium	5240	100	5000	0	105	90	110			
Potassium	5120	100	5000	0	102	90	110			
Sodium	5290	100	5000	0	106	90	110			

Sample ID	**CCV3-060418**	Batch ID:	**R25897**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 3:12:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	196	10.0	200.0	0	98.0	90	110			
Calcium	5130	100	5000	0	103	90	110			
Iron	5030	100	5000	0	101	90	110			
Magnesium	5190	100	5000	0	104	90	110			
Potassium	5100	100	5000	0	102	90	110			
Sodium	5230	100	5000	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 Dection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_060419A

Sample ID	**CCV4-060419**	Batch ID:	**R25897**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS2_060419A**	Analysis Date:	**4/19/2006 4:28:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	195	10.0	200.0	0	97.4	90	110			
Iron	4960	100	5000	0	99.3	90	110			
Potassium	5360	100	5000	0	107	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_060420A

Sample ID	**ICV1-060420**	Batch ID:	**R25920**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**ICV**	Run ID:	**ICP-MS2_060420A**	Analysis Date:	**4/20/2006 9:37:00 AM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	92.4	10.0	100.0	0	92.4	90	110			
Iron	2550	100	2500	0	102	90	110			
Potassium	2530	100	2500	0	101	90	110			

Sample ID	**CCV1-060420**	Batch ID:	**R25920**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS2_060420A**	Analysis Date:	**4/20/2006 10:35:00 A**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	195	10.0	200.0	0	97.7	90	110			
Iron	5320	100	5000	0	106	90	110			
Potassium	5210	100	5000	0	104	90	110			

Sample ID	**CCV2-060420**	Batch ID:	**R25920**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS2_060420A**	Analysis Date:	**4/20/2006 11:52:00 A**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	189	10.0	200.0	0	94.6	90	110			
Iron	5360	100	5000	0	107	90	110			
Potassium	5400	100	5000	0	108	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060414A

Sample ID	**ICV-060414**	Batch ID:	**R25868**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**IC_060414A**	Analysis Date:	**4/14/2006 1:34:49 PM**	Prep Date:	**4/14/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	50.5	1.00	50.00	0	101	90	110			
Nitrate-N	12.9	0.500	12.50	0	103	90	110			
Sulfate	75.6	3.00	75.00	0	101	90	110			

Sample ID	**MB-060414**	Batch ID:	**R25868**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**IC_060414A**	Analysis Date:	**4/14/2006 1:53:24 PM**	Prep Date:	**4/14/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	1.00								
Nitrate-N	ND	0.500								
Sulfate	ND	3.00								

Sample ID	**LCS-060414**	Batch ID:	**R25868**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**IC_060414A**	Analysis Date:	**4/14/2006 2:07:36 PM**	Prep Date:	**4/14/2006**

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			
Nitrate-N	5.03	0.500	5.000	0	101	90	110			
Sulfate	29.4	3.00	30.00	0	98.0	90	110			

Sample ID	**CCV1-060414**	Batch ID:	**R25868**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC_060414A**	Analysis Date:	**4/14/2006 4:53:16 PM**	Prep Date:	**4/14/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.3	1.00	20.00	0	96.4	90	110			
Nitrate-N	4.90	0.500	5.000	0	98.0	90	110			
Sulfate	29.2	3.00	30.00	0	97.5	90	110			

Sample ID	**0604091-05EMS**	Batch ID:	**R25868**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**IC_060414A**	Analysis Date:	**4/14/2006 7:06:02 PM**	Prep Date:	**4/14/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	465	20.0	400.0	59.96	101	90	110			
Nitrate-N	128	10.0	100.0	26.99	101	90	110			
Sulfate	2840	60.0	600.0	2284	93.5	90	110			

Sample ID	**0604091-05EMSD**	Batch ID:	**R25868**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**IC_060414A**	Analysis Date:	**4/14/2006 7:20:15 PM**	Prep Date:	**4/14/2006**

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 Dection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060414A

Sample ID	0604091-05EMSD	Batch ID:	R25868	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_060414A	Analysis Date:	4/14/2006 7:20:15 PM	Prep Date:	4/14/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	461	20.0	400.0	59.96	100	90	110	0.985	20	
Nitrate-N	127	10.0	100.0	26.99	100	90	110	0.740	20	
Sulfate	2850	60.0	600.0	2284	94.2	90	110	0.159	20	

Sample ID	CCV2-060414	Batch ID:	R25868	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC_060414A	Analysis Date:	4/14/2006 7:34:28 PM	Prep Date:	4/14/2006

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			
Nitrate-N	5.03	0.500	5.000	0	101	90	110			
Sulfate	29.9	3.00	30.00	0	99.5	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060417A

Sample ID	**ICV-060417**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 8:46:47 AM**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.0	1.00	25.00	0	96.0	90	110			
Sulfate	72.3	3.00	75.00	0	96.4	90	110			

Sample ID	**MB-060417**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 9:00:59 AM**	Prep Date:	**4/17/2006**

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-060417**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 9:15:12 AM**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.50	1.00	10.00	0	95.0	90	110			
Sulfate	29.0	3.00	30.00	0	96.8	90	110			

Sample ID	**LCSD-060417**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCSD**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 9:29:24 AM**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.51	1.00	10.00	0	95.1	90	110	0.0652	20	
Sulfate	28.9	3.00	30.00	0	96.5	90	110	0.392	20	

Sample ID	**0604098-02EMS**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 11:30:08 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	11100	500	5000	6031	102	90	110			

Sample ID	**0604098-02EMSD**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 11:44:21 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	11200	500	5000	6031	103	90	110	0.504	20	

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060417A

Sample ID	CCV1-060417	Batch ID:	R25875	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC_060417A	Analysis Date:	4/17/2006 11:58:33 A	Prep Date:	4/17/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.58	1.00	10.00	0	95.8	90	110			
Sulfate	29.2	3.00	30.00	0	97.2	90	110			

Sample ID	0604091-05EMS	Batch ID:	R25875	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC_060417A	Analysis Date:	4/17/2006 1:52:12 PM	Prep Date:	4/17/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	33600	1000	10000	23700	98.6	90	110			

Sample ID	0604091-05EMSD	Batch ID:	R25875	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_060417A	Analysis Date:	4/17/2006 2:06:24 PM	Prep Date:	4/17/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	33700	1000	10000	23700	99.6	90	110	0.291	20	

Sample ID	CCV2-060417	Batch ID:	R25875	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC_060417A	Analysis Date:	4/17/2006 2:20:37 PM	Prep Date:	4/17/2006

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	29.0	3.00	30.00	0	96.7	90	110			

Sample ID	CCV3-060417	Batch ID:	R25875	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC_060417A	Analysis Date:	4/17/2006 3:38:33 PM	Prep Date:	4/17/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	28.9	3.00	30.00	0	96.2	90	110			

Sample ID	0604091-07EMS	Batch ID:	R25875	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC_060417A	Analysis Date:	4/17/2006 5:42:14 PM	Prep Date:	4/17/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	2150	60.0	600.0	1542	101	90	110			

Sample ID	0604091-07EMSD	Batch ID:	R25875	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_060417A	Analysis Date:	4/17/2006 5:58:58 PM	Prep Date:	4/17/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	2260	60.0	600.0	1542	119	90	110	4.92	20	S

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060417A

Sample ID	**CCV4-060417**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 6:13:10 PM**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	29.0	3.00	30.00	0	96.7	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_060414B

Sample ID	**ICV-060414**	Batch ID:	**R25851**	TestNo:	**E150.1**	Units:	**pH Units**
SampType:	**ICV**	Run ID:	**TITRATOR_060414B**	Analysis Date:	**4/14/2006 1:02:00 PM**	Prep Date:	**4/14/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
pH	9.99	0	10.00	0	99.9	99	101			

Sample ID	**0604091-05B DUP**	Batch ID:	**R25851**	TestNo:	**E150.1**	Units:	**pH Units**
SampType:	**DUP**	Run ID:	**TITRATOR_060414B**	Analysis Date:	**4/14/2006 2:06:00 PM**	Prep Date:	**4/14/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
pH	6.63	0	0	6.650				0.301	15	

Sample ID	**CCV-060414**	Batch ID:	**R25851**	TestNo:	**E150.1**	Units:	**pH Units**
SampType:	**CCV**	Run ID:	**TITRATOR_060414B**	Analysis Date:	**4/14/2006 2:09:00 PM**	Prep Date:	**4/14/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
pH	7.01	0	7.000	0	100	97.1	102.9			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_060417B

Sample ID	**ICV-060417**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 10:23:00 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	13.0	10.0	0							
Alkalinity, Carbonate (As CaCO3)	87.4	10.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0							
Alkalinity, Total (As CaCO3)	100	10.0	100.0	0	100	98	102			

Sample ID	**LCS-060417**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 10:27:00 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	51.5	10.0	50.00	0	103	74	129			

Sample ID	**0604091-05D DUP**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 11:32:00 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	182	10.0	0	181.1				0.368	20	
Alkalinity, Carbonate (As CaCO3)	0	10.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	182	10.0	0	181.1				0.368	20	

Sample ID	**CCV1-060417**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 11:46:00 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	18.9	10.0	0							
Alkalinity, Carbonate (As CaCO3)	82.4	10.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0							
Alkalinity, Total (As CaCO3)	101	10.0	100.0	0	101	90	110			

Sample ID	**0604098-07D DUP**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 12:30:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	84.5	10.0	0	83.95				0.697	20	
Alkalinity, Carbonate (As CaCO3)	0	10.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	84.5	10.0	0	83.95				0.697	20	

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_060417B

Sample ID	**CCV2-060417**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 12:36:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	23.0	10.0	0							
Alkalinity, Carbonate (As CaCO3)	78.1	10.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0							
Alkalinity, Total (As CaCO3)	101	10.0	100.0	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 Dection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: WC_060417B

Sample ID	**ICV-060417**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**ICV**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12800	10.0	12880	0	99.8	90	110			

Sample ID	**LCS-060417**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**LCS**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	1360	10.0	1413	0	96.0	93	109			

Sample ID	**CCV1-060417**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**CCV**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12600	10.0	12880	0	98.1	90	110			

Sample ID	**0604091-05EDUP**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**DUP**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	91400	100	0	90800				0.659	20	

Sample ID	**0604098-07EDUP**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**DUP**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	47000	100	0	46200				1.72	20	

Sample ID	**CCV2-060417**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**CCV**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12500	10.0	12880	0	97.0	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604091
Project: RRC West O'Daniel

MQL SUMMARY REPORT

TestNo: E300	MDL	MQL
Analyte	**mg/L**	**mg/L**
Bromide	0.3	1
Chloride	0.3	1
Nitrate-N	0.1	0.5
Sulfate	1	3

TestNo: SW6020	MDL	MQL
Analyte	**µg/L**	**µg/L**
Barium	3	10
Calcium	100	100
Iron	50	100
Magnesium	100	100
Potassium	100	100
Sodium	100	100

TestNo: SW8021B	MDL	MQL
Analyte	**µg/L**	**µg/L**
Benzene	0.8	2
Toluene	2	6
Ethylbenzene	2	6
Xylenes, Total	3	9

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

DHL ANALYTICAL

April 24, 2006

Steve Miller
TRC Environmental Corp.
505 East Huntland Drive
Suite 250
Austin, Texas 78752

TEL: (512) 329-6080
FAX (512) 329-8750

Order No.: 0604098

RE: RRC West O'Daniel

Dear Steve Miller:

DHL Analytical received 8 sample(s) on 4/15/2006 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

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 TRC Environmental: RRC West O'Daniel (DHL Work Order 0604098) contains the following information:

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April 24, 2006

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

№ 23527

CHAIN-OF-CUSTODY

CLIENT: TRC
ADDRESS: 505 E. Huntland Dr. Ste. 250 Austin, TX 78752
PHONE: 512-329-6080 FAX 512-329-8750
DATA REPORTED TO: STEVE MILLER
ADDITIONAL REPORT COPIES TO:

DATE: 4-14-06 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 0604018
PROJECT LOCATION OR NAME: RRC WEST O'DANIEL
CLIENT PROJECT #: 46513-0000-00002 COLLECTOR: Matt Weber / Barrett C

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 ☒ | METALS | IONS | Electrical Conductivity

☐ Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	FIELD NOTES
S-MW-06-1	01	4/14/06	0908	W	40mL 250mL 500mL	7	X	X		X	X	X	METALS include Ba,
S-MW-07-1	02	4/14/06	0930	W	40mL 250mL 500mL	7	X	X		X	X	X	Ca, Fe, Mg, Na, K
S-WW-53-1	03	4/14/06	1005	W	40mL 250mL 500mL	7	X	X		X	X	X	
S-MW-05-1	04	4/14/06	1140	W	40mL 250mL 500mL	7	X	X		X	X	X	IONS include Br,
E-S-55-1	05	4/14/06	1245	W	40mL 250mL 500mL	7	X	X		X	X	X	Nitrate, Sulfate
S-S-1-1	06	4/14/06	1310	W	40mL 250mL 500mL	7	X	X		X	X	X	* *
S-S-2-1	07	4/14/06	1355	W	40mL 250mL 500mL	7	X	X		X	X	X	REFER TO Upper Colorado River Basin QAPP Sept 2005-Aug 200
Trip Blank-4-14-06	08	4/14/06	—	W	40mL	2	X					X	
													* * /
TOTAL													

RELINQUISHED BY: (Signature) DATE/TIME 4/14/06 1740 RECEIVED BY: (Signature) FED EX
RELINQUISHED BY: (Signature) FED EX DATE/TIME 4/15/06 1330 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: 3.4 THERM #: 42
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL # ____
☐ APC DELIVERY
☐ HAND DELIVERED

FedEx Express **US Airbill**

FedEx Tracking Number 8528 1881 3770

Form ID No. 0200

Recipient's Copy

1 From

Date 4/11/ [redacted]

Sender's Name M— W— Phone 5—

Company TR

Address 505 E. Huntland Dr. 210

Dept./Floor/Suite/Room

City Austin State TX ZIP 7—

2 Your Internal Billing Reference 46513-

3 To

Recipient's Name Dr. Luna Phone 512 3— - —

Company

Recipient's Address 3737 Royal Port Rush

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

Dept./Floor/Suite/Room

Address

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

City Round Rock State TX ZIP 78—

8528 1881 3770

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

- [X] FedEx Priority Overnight — Next business morning*
- [ ] FedEx Standard Overnight — Next business afternoon*
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations*
- [ ] FedEx 2Day — Second business day*
- [ ] FedEx Express Saver — Third business day*

FedEx Envelope rate not available. Minimum charge: One-pound rate

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

- [ ] FedEx 1Day Freight* — Next business day**
- [ ] FedEx 2Day Freight — Second business day**
- [ ] FedEx 3Day Freight — Third business day**

* Call for Confirmation

5 Packaging * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling Include FedEx address in Section 3.

- [X] SATURDAY Delivery — Available ONLY for FedEx Priority Overnight, FedEx 2Day, FedEx 1Day Freight, and FedEx 2Day Freight to select ZIP codes
- [ ] 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.

- [X] 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.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check
- [ ] Obtain Recip. Acct. No.

[redacted]

Total Packages	Total Weight	Total Declared Value†	Total Charges
1	55	$ .00	

Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See back for details.

8 Sign to Authorize Delivery Without a Signature

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

Questions? Visit our Web site at fedex.com

or call 1.800.GoFedEx 1.800.463.3339.

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467

P.O. Box 1160
Beaver, WV 25813
800-255-3950 • 304-255-3900
Quality Environmental Containers

PROJECT NAME COC SEAL

SAMPLE ID | SAMPLE DATE

SAMPLED BY | SAMPLE TIME

PRESERVATIVE | ____ GRAB ____ COMPOSITE

ANALYSIS REQUESTED

SD 4/14/20 1740

QEC
P.O. Box 1160
Beaver, WV 25813
800-255-3950 • 304-255-3900
Quality Environmental Containers

PROJECT NAME COC SEAL

SAMPLE ID | SAMPLE DATE

SAMPLED BY | SAMPLE TIME

PRESERVATIVE | ____ GRAB ____ COMPOSITE

ANALYSIS REQUESTED

SD 4/14/20 1740

DHL Analytical

Sample Receipt Checklist

Client Name TRC Environmental Corp. Date Received: 4/15/2006

Work Order Number 0604098 Received by **DEW**

Checklist completed by: Signature 4/15/06 Date Reviewed by CR Initials 4/17/06 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 ☐	MS 4/15/06
Water - VOA vials have zero headspace?	Yes ☑	No ☐	MS No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☒	Not Applicable ☐

Adjusted? Yes Checked by MS

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: Sample S-S-1-1 the metals portion, the pH was greater than 3

Corrective Action added HNO_3

Laboratory Data Package Signature Page

This data package consists of:

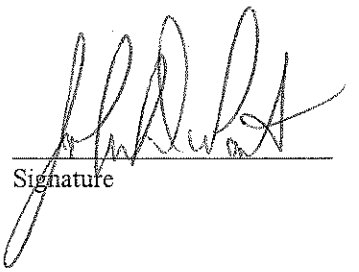
This signature page, the laboratory review checklist, and the following reportable data:

- 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
Michelle Green – QA Manager
John DuPont – General Manager



Signature

04/25/06
Date

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: RRC West O'Daniel	Date: 4/24/06
Reviewer Name: Carlos Castro	Laboratory Work Order: 604093
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) Were 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, (prep and cleanup steps)?	✓				
		3) Were LCSs analyzed at the required frequency?	✓				
		4) Were LCS (and LCSD, if applicable) %Rs & RPD recovery 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?	✓				
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?		✓			R7-03
		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?	✓				

DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: RRC West O'Daniel	Date: 4/24/06
Reviewer Name: Carlos Castro	Laboratory Work Order: 0604098

#[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, & 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?		✓			S9-01
S10	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	✓				
S11	OI	**PROFICIENCY TEST REPORTS**					
		1) Was the laboratory'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?	✓				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS (NELAC)**					
		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 the 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).

CLIENT: TRC Environmental Corp.
Project: RRC West O'Daniel
Lab Order: 0604098

CASE NARRATIVE

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

Method SW6020 - Metals Analysis
Method SW8021B - Volatiles by GC
Method E300 - Anions Analysis
Method E310.1 - Alkalinity Analysis
Method E120.1 - Specific Conductivity
Method E150.1 - pH of a Water

Exception Report R1-01

The samples were received and log-in performed on 4/15/06. A total of 8 samples were received. For sample S-S-1-1 nitric acid was added to the metals fraction.

Exception Report R7-03

For Anions analysis performed on 4/15/06 and 4/17/06 the matrix spike and/or matrix spike duplicate recoveries were out of control limits for Sulfate. These are flagged accordingly in the QC summary report. The reference sample selected for the matrix spike and matrix spike duplicate (4/15/06) was from this work order. The reference sample selected for the matrix spike and matrix spike duplicate (4/17/06) was not from this work order. The LCSs were within control limits for this analyte. No further corrective actions were taken and the sample results were not adversely affected.

For Metals analysis performed on 4/20/06 and 4/21/06 the matrix spikes and matrix spike duplicate recoveries were out of control limits for a few analytes. These are flagged accordingly. The reference sample selected for the matrix spikes and matrix spike duplicates were not from this work order. The LCSs were within control limits for these analytes. No further corrective actions were taken and the sample results were not adversely affected.

Exception Report S9-01

For Metals analysis performed on 4/20/06 the PDS recovery was slightly below control limits for Calcium. This is flagged accordingly in the QC summary report. The serial dilution was within control limit for this analyte therefore no further corrective actions were required.

For Metals analysis performed on 4/20/06 the RPD for the serial dilution was slightly above control limits for Iron. This is flagged accordingly. The PDS was within control limits for this analyte therefore no further corrective actions were required.

DATA REPORTING

Sample reports include the Sample Quantitation Limit (SQL) and the Reporting Limit (RL) for each analyte. The computer system allows for reporting SQL with 2 significant figures and the RL with 3 significant figures. Because of rounding it may sometime appear that a "J" flagged result is lower than the SQL if the sample result is very near the SQL.

DHL Analytical

Date: *24-Apr-06*

CLIENT: TRC Environmental Corp.
Project: RRC West O'Daniel
Lab Order: 0604098

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
0604098-01	S-MW-06-1		4/14/2006 8:08:00 AM	4/15/2006
0604098-02	S-MW-07-1		4/14/2006 9:30:00 AM	4/15/2006
0604098-03	S-WW-53-1		4/14/2006 10:05:00 AM	4/15/2006
0604098-04	S-MW-05-1		4/14/2006 11:40:00 AM	4/15/2006
0604098-05	E-S-55-1		4/14/2006 12:45:00 PM	4/15/2006
0604098-06	S-S-1-1		4/14/2006 1:10:00 PM	4/15/2006
0604098-07	S-S-2-1		4/14/2006 1:55:00 PM	4/15/2006
0604098-08	Trip Blank 4/14/06		4/14/2006	4/15/2006

Lab Order: 0604098
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0604098-01A	S-MW-06-1	4/14/2006 8:08:00 AM	Aqueous	E150.1	pH	4/17/2006 9:34:00 AM	R25858
0604098-01B	S-MW-06-1	4/14/2006 8:08:00 AM	Aqueous	SW5030B	Purge and Trap Water GC	4/20/2006 9:12:24 AM	21955
0604098-01C	S-MW-06-1	4/14/2006 8:08:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-MW-06-1	4/14/2006 8:08:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-MW-06-1	4/14/2006 8:08:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
0604098-01D	S-MW-06-1	4/14/2006 8:08:00 AM	Aqueous	E310.1	Alkalinity	4/17/2006 11:53:00 A	R25867
0604098-01E	S-MW-06-1	4/14/2006 8:08:00 AM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-MW-06-1	4/14/2006 8:08:00 AM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-MW-06-1	4/14/2006 8:08:00 AM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-06-1	4/14/2006 8:08:00 AM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604098-02A	S-MW-07-1	4/14/2006 9:30:00 AM	Aqueous	E150.1	pH	4/17/2006 9:35:00 AM	R25858
0604098-02B	S-MW-07-1	4/14/2006 9:30:00 AM	Aqueous	SW5030B	Purge and Trap Water GC	4/20/2006 9:12:24 AM	21955
0604098-02C	S-MW-07-1	4/14/2006 9:30:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-MW-07-1	4/14/2006 9:30:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-MW-07-1	4/14/2006 9:30:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
0604098-02D	S-MW-07-1	4/14/2006 9:30:00 AM	Aqueous	E310.1	Alkalinity	4/17/2006 11:57:00 A	R25867
0604098-02E	S-MW-07-1	4/14/2006 9:30:00 AM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-MW-07-1	4/14/2006 9:30:00 AM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-07-1	4/14/2006 9:30:00 AM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-MW-07-1	4/14/2006 9:30:00 AM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604098-03A	S-WW-53-1	4/14/2006 10:05:00 AM	Aqueous	E150.1	pH	4/17/2006 9:36:00 AM	R25858
0604098-03B	S-WW-53-1	4/14/2006 10:05:00 AM	Aqueous	SW5030B	Purge and Trap Water GC	4/20/2006 9:12:24 AM	21955
0604098-03C	S-WW-53-1	4/14/2006 10:05:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-WW-53-1	4/14/2006 10:05:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-WW-53-1	4/14/2006 10:05:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
0604098-03D	S-WW-53-1	4/14/2006 10:05:00 AM	Aqueous	E310.1	Alkalinity	4/17/2006 12:01:00 P	R25867
0604098-03E	S-WW-53-1	4/14/2006 10:05:00 AM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-WW-53-1	4/14/2006 10:05:00 AM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871

Lab Order: 0604098
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0604098-03E	S-WW-53-1	4/14/2006 10:05:00 AM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-WW-53-1	4/14/2006 10:05:00 AM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-WW-53-1	4/14/2006 10:05:00 AM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604098-04A	S-MW-05-1	4/14/2006 11:40:00 AM	Aqueous	E150.1	pH	4/17/2006 9:37:00 AM	R25858
0604098-04B	S-MW-05-1	4/14/2006 11:40:00 AM	Aqueous	SW5030B	Purge and Trap Water GC	4/20/2006 9:12:24 AM	21955
0604098-04C	S-MW-05-1	4/14/2006 11:40:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-MW-05-1	4/14/2006 11:40:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-MW-05-1	4/14/2006 11:40:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
0604098-04D	S-MW-05-1	4/14/2006 11:40:00 AM	Aqueous	E310.1	Alkalinity	4/17/2006 12:09:00 P	R25867
0604098-04E	S-MW-05-1	4/14/2006 11:40:00 AM	Aqueous	E300	Anions by IC method - Water	4/16/2006	R25871
	S-MW-05-1	4/14/2006 11:40:00 AM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-MW-05-1	4/14/2006 11:40:00 AM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-MW-05-1	4/14/2006 11:40:00 AM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-MW-05-1	4/14/2006 11:40:00 AM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604098-05A	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	E150.1	pH	4/17/2006 9:38:00 AM	R25858
0604098-05B	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	SW5030B	Purge and Trap Water GC	4/20/2006 9:12:24 AM	21955
0604098-05C	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
0604098-05D	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	E310.1	Alkalinity	4/17/2006 12:17:00 P	R25867
0604098-05E	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	E300	Anions by IC method - Water	4/16/2006	R25871
	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	E-S-55-1	4/14/2006 12:45:00 PM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604098-06A	S-S-1-1	4/14/2006 1:10:00 PM	Aqueous	E150.1	pH	4/17/2006 9:39:00 AM	R25858
0604098-06B	S-S-1-1	4/14/2006 1:10:00 PM	Aqueous	SW5030B	Purge and Trap Water GC	4/20/2006 9:12:24 AM	21955

Lab Order: 0604098
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0604098-06C	S-S-1-1	4/14/2006 1:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-S-1-1	4/14/2006 1:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-S-1-1	4/14/2006 1:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
0604098-06D	S-S-1-1	4/14/2006 1:10:00 PM	Aqueous	E310.1	Alkalinity	4/17/2006 12:22:00 P	R25867
0604098-06E	S-S-1-1	4/14/2006 1:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-S-1-1	4/14/2006 1:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-S-1-1	4/14/2006 1:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-S-1-1	4/14/2006 1:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/16/2006	R25871
	S-S-1-1	4/14/2006 1:10:00 PM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604098-07A	S-S-2-1	4/14/2006 1:55:00 PM	Aqueous	E150.1	pH	4/17/2006 9:41:00 AM	R25858
0604098-07B	S-S-2-1	4/14/2006 1:55:00 PM	Aqueous	SW5030B	Purge and Trap Water GC	4/20/2006 9:12:24 AM	21955
0604098-07C	S-S-2-1	4/14/2006 1:55:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-S-2-1	4/14/2006 1:55:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
	S-S-2-1	4/14/2006 1:55:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/19/2006 10:15:57 A	21946
0604098-07D	S-S-2-1	4/14/2006 1:55:00 PM	Aqueous	E310.1	Alkalinity	4/17/2006 12:26:00 P	R25867
0604098-07E	S-S-2-1	4/14/2006 1:55:00 PM	Aqueous	E300	Anions by IC method - Water	4/17/2006	R25875
	S-S-2-1	4/14/2006 1:55:00 PM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-S-2-1	4/14/2006 1:55:00 PM	Aqueous	E300	Anions by IC method - Water	4/15/2006	R25871
	S-S-2-1	4/14/2006 1:55:00 PM	Aqueous	E120.1	Specific Conductance	4/17/2006	CONDW-04/17/06
0604098-08A	Trip Blank 4/14/06	4/14/2006	Aqueous	SW5030B	Purge and Trap Water GC	4/20/2006 9:12:24 AM	21955

Lab Order: 0604098
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0604098-01A	S-MW-06-1	Aqueous	E150.1	pH	R25858	1	4/17/2006 9:34:00 AM	TITRATOR_060417A
0604098-01B	S-MW-06-1	Aqueous	SW8021B	Volatile Organics by GC	21955	1	4/20/2006 11:49:59 AM	GC9_060420A
0604098-01C	S-MW-06-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	1	4/20/2006 3:20:00 PM	ICP-MS_060420A
	S-MW-06-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	2500	4/21/2006 11:00:00 AM	ICP-MS_060421A
	S-MW-06-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	10	4/21/2006 1:55:00 PM	ICP-MS_060421A
0604098-01D	S-MW-06-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 11:53:00 AM	TITRATOR_060417B
0604098-01E	S-MW-06-1	Aqueous	E300	Anions by IC method - Water	R25875	500	4/17/2006 9:43:37 AM	IC_060417A
	S-MW-06-1	Aqueous	E300	Anions by IC method - Water	R25871	10	4/15/2006 2:49:33 PM	IC_060415A
	S-MW-06-1	Aqueous	E300	Anions by IC method - Water	R25871	1	4/15/2006 5:28:56 PM	IC_060415A
	S-MW-06-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604098-02A	S-MW-07-1	Aqueous	E150.1	pH	R25858	1	4/17/2006 9:35:00 AM	TITRATOR_060417A
0604098-02B	S-MW-07-1	Aqueous	SW8021B	Volatile Organics by GC	21955	1	4/20/2006 12:08:04 PM	GC9_060420A
0604098-02C	S-MW-07-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	1	4/20/2006 3:24:00 PM	ICP-MS_060420A
	S-MW-07-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	500	4/21/2006 11:16:00 AM	ICP-MS_060421A
	S-MW-07-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	10	4/21/2006 1:59:00 PM	ICP-MS_060421A
0604098-02D	S-MW-07-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 11:57:00 AM	TITRATOR_060417B
0604098-02E	S-MW-07-1	Aqueous	E300	Anions by IC method - Water	R25875	500	4/17/2006 9:57:49 AM	IC_060417A
	S-MW-07-1	Aqueous	E300	Anions by IC method - Water	R25871	10	4/15/2006 3:03:45 PM	IC_060415A
	S-MW-07-1	Aqueous	E300	Anions by IC method - Water	R25871	1	4/15/2006 5:43:08 PM	IC_060415A
	S-MW-07-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604098-03A	S-WW-53-1	Aqueous	E150.1	pH	R25858	1	4/17/2006 9:36:00 AM	TITRATOR_060417A
0604098-03B	S-WW-53-1	Aqueous	SW8021B	Volatile Organics by GC	21955	1	4/20/2006 12:26:04 PM	GC9_060420A
0604098-03C	S-WW-53-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	1	4/20/2006 3:28:00 PM	ICP-MS_060420A
	S-WW-53-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	2500	4/21/2006 11:27:00 AM	ICP-MS_060421A
	S-WW-53-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	10	4/21/2006 2:03:00 PM	ICP-MS_060421A

Lab Order: 0604098
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0604098-03D	S-WW-53-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 12:01:00 PM	TITRATOR_060417B
0604098-03E	S-WW-53-1	Aqueous	E300	Anions by IC method - Water	R25871	1	4/15/2006 5:57:20 PM	IC_060415A
	S-WW-53-1	Aqueous	E300	Anions by IC method - Water	R25871	20	4/15/2006 11:58:12 PM	IC_060415A
	S-WW-53-1	Aqueous	E300	Anions by IC method - Water	R25871	10	4/15/2006 3:17:57 PM	IC_060415A
	S-WW-53-1	Aqueous	E300	Anions by IC method - Water	R25875	500	4/17/2006 10:17:05 AM	IC_060417A
	S-WW-53-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604098-04A	S-MW-05-1	Aqueous	E150.1	pH	R25858	1	4/17/2006 9:37:00 AM	TITRATOR_060417A
0604098-04B	S-MW-05-1	Aqueous	SW8021B	Volatile Organics by GC	21955	1	4/20/2006 12:44:07 PM	GC9_060420A
0604098-04C	S-MW-05-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	1	4/20/2006 3:32:00 PM	ICP-MS_060420A
	S-MW-05-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	2500	4/21/2006 11:32:00 AM	ICP-MS_060421A
	S-MW-05-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	10	4/21/2006 2:08:00 PM	ICP-MS_060421A
0604098-04D	S-MW-05-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 12:09:00 PM	TITRATOR_060417B
0604098-04E	S-MW-05-1	Aqueous	E300	Anions by IC method - Water	R25871	20	4/16/2006 12:12:24 AM	IC_060415A
	S-MW-05-1	Aqueous	E300	Anions by IC method - Water	R25875	500	4/17/2006 10:31:17 AM	IC_060417A
	S-MW-05-1	Aqueous	E300	Anions by IC method - Water	R25871	1	4/15/2006 6:11:33 PM	IC_060415A
	S-MW-05-1	Aqueous	E300	Anions by IC method - Water	R25871	10	4/15/2006 3:32:10 PM	IC_060415A
	S-MW-05-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604098-05A	E-S-55-1	Aqueous	E150.1	pH	R25858	1	4/17/2006 9:38:00 AM	TITRATOR_060417A
0604098-05B	E-S-55-1	Aqueous	SW8021B	Volatile Organics by GC	21955	1	4/20/2006 3:17:35 PM	GC9_060420A
0604098-05C	E-S-55-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	10	4/21/2006 2:12:00 PM	ICP-MS_060421A
	E-S-55-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	50	4/21/2006 2:38:00 PM	ICP-MS_060421A
	E-S-55-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	2500	4/21/2006 11:42:00 AM	ICP-MS_060421A
	E-S-55-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	1	4/20/2006 3:37:00 PM	ICP-MS_060420A
0604098-05D	E-S-55-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 12:17:00 PM	TITRATOR_060417B
0604098-05E	E-S-55-1	Aqueous	E300	Anions by IC method - Water	R25871	10	4/15/2006 3:46:22 PM	IC_060415A

Lab Order: 0604098
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0604098-05E	E-S-55-1	Aqueous	E300	Anions by IC method - Water	R25871	1	4/15/2006 6:25:45 PM	IC_060415A
	E-S-55-1	Aqueous	E300	Anions by IC method - Water	R25871	20	4/16/2006 12:26:37 AM	IC_060415A
	E-S-55-1	Aqueous	E300	Anions by IC method - Water	R25875	500	4/17/2006 10:47:31 AM	IC_060417A
	E-S-55-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604098-06A	S-S-1-1	Aqueous	E150.1	pH	R25858	1	4/17/2006 9:39:00 AM	TITRATOR_060417A
0604098-06B	S-S-1-1	Aqueous	SW8021B	Volatile Organics by GC	21955	1	4/20/2006 1:06:32 PM	GC9_060420A
0604098-06C	S-S-1-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	1	4/20/2006 3:41:00 PM	ICP-MS_060420A
	S-S-1-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	10	4/21/2006 2:16:00 PM	ICP-MS_060421A
	S-S-1-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	2500	4/21/2006 11:57:00 AM	ICP-MS_060421A
0604098-06D	S-S-1-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 12:22:00 PM	TITRATOR_060417B
0604098-06E	S-S-1-1	Aqueous	E300	Anions by IC method - Water	R25871	10	4/15/2006 4:00:35 PM	IC_060415A
	S-S-1-1	Aqueous	E300	Anions by IC method - Water	R25871	1	4/15/2006 6:39:58 PM	IC_060415A
	S-S-1-1	Aqueous	E300	Anions by IC method - Water	R25871	20	4/16/2006 12:40:49 AM	IC_060415A
	S-S-1-1	Aqueous	E300	Anions by IC method - Water	R25875	500	4/17/2006 11:01:43 AM	IC_060417A
	S-S-1-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B
0604098-07A	S-S-2-1	Aqueous	E150.1	pH	R25858	1	4/17/2006 9:41:00 AM	TITRATOR_060417A
0604098-07B	S-S-2-1	Aqueous	SW8021B	Volatile Organics by GC	21955	1	4/20/2006 1:24:35 PM	GC9_060420A
0604098-07C	S-S-2-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	2500	4/21/2006 12:01:00 PM	ICP-MS_060421A
	S-S-2-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	10	4/21/2006 2:32:00 PM	ICP-MS_060421A
	S-S-2-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	21946	1	4/20/2006 3:45:00 PM	ICP-MS_060420A
0604098-07D	S-S-2-1	Aqueous	E310.1	Alkalinity	R25867	1	4/17/2006 12:26:00 PM	TITRATOR_060417B
0604098-07E	S-S-2-1	Aqueous	E300	Anions by IC method - Water	R25871	10	4/15/2006 4:14:47 PM	IC_060415A
	S-S-2-1	Aqueous	E300	Anions by IC method - Water	R25871	1	4/15/2006 6:54:10 PM	IC_060415A
	S-S-2-1	Aqueous	E300	Anions by IC method - Water	R25875	500	4/17/2006 11:15:56 AM	IC_060417A
	S-S-2-1	Aqueous	E120.1	Specific Conductance	CONDW-04/17/06	10	4/17/2006 12:00:00 PM	WC_060417B

Lab Order: 0604098
Client: TRC Environmental Corp.
Project: RRC West O'Daniel

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0604098-08A	Trip Blank 4/14/06	Aqueous	SW8021B	Volatile Organics by GC	21955	1	4/20/2006 11:31:53 AM	GC9_060420A

DHL Analytical

Date: *24-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-MW-06-1
Project:	RRC West O'Daniel	**Lab ID:**	0604098-01
Project No:	46513-0000-00002	**Collection Date:**	4/14/2006 8:08:00 AM
Lab Order:	0604098	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/20/2006 11:49:59 AM
Toluene	ND	2.00	6.00		µg/L	1	4/20/2006 11:49:59 AM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/20/2006 11:49:59 AM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/20/2006 11:49:59 AM
Surr: a,a,a-Trifluorotoluene	108	0	87-113		%REC	1	4/20/2006 11:49:59 AM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	521	3.00	10.0		µg/L	1	4/20/2006 3:20:00 PM
Calcium	3810000	250000	250000		µg/L	2500	4/21/2006 11:00:00 AM
Iron	5060	50.0	100		µg/L	1	4/20/2006 3:20:00 PM
Magnesium	975000	250000	250000		µg/L	2500	4/21/2006 11:00:00 AM
Potassium	34900	1000	1000		µg/L	10	4/21/2006 1:55:00 PM
Sodium	6060000	250000	250000		µg/L	2500	4/21/2006 11:00:00 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	43.6	3.00	10.0		mg/L	10	4/15/2006 2:49:33 PM
Chloride	17600	150	500		mg/L	500	4/17/2006 9:43:37 AM
Nitrate-N	1.27	0.100	0.500		mg/L	1	4/15/2006 5:28:56 PM
Sulfate	1380	10.0	30.0		mg/L	10	4/15/2006 2:49:33 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	188	10.0	10.0		mg/L	1	4/17/2006 11:53:00 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:53:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:53:00 AM
Alkalinity, Total (As CaCO3)	188	10.0	10.0		mg/L	1	4/17/2006 11:53:00 AM
PH		**E150.1**					Analyst: **JBC**
pH	6.39	0	0		pH Units	1	4/17/2006 9:34:00 AM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	55800	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

ND - Not Detected at the SQL
J - Analyte detected between SQL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *24-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-MW-07-1
Project:	RRC West O'Daniel	**Lab ID:**	0604098-02
Project No:	46513-0000-00002	**Collection Date:**	4/14/2006 9:30:00 AM
Lab Order:	0604098	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/20/2006 12:08:04 PM
Toluene	ND	2.00	6.00		µg/L	1	4/20/2006 12:08:04 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/20/2006 12:08:04 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/20/2006 12:08:04 PM
Surr: a,a,a-Trifluorotoluene	108	0	87-113		%REC	1	4/20/2006 12:08:04 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	373	3.00	10.0		µg/L	1	4/20/2006 3:24:00 PM
Calcium	1670000	50000	50000		µg/L	500	4/21/2006 11:16:00 AM
Iron	833	50.0	100		µg/L	1	4/20/2006 3:24:00 PM
Magnesium	746000	50000	50000		µg/L	500	4/21/2006 11:16:00 AM
Potassium	37600	1000	1000		µg/L	10	4/21/2006 1:59:00 PM
Sodium	1950000	50000	50000		µg/L	500	4/21/2006 11:16:00 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	20.1	0.300	1.00		mg/L	1	4/15/2006 5:43:08 PM
Chloride	7540	150	500		mg/L	500	4/17/2006 9:57:49 AM
Nitrate-N	ND	0.100	0.500		mg/L	1	4/15/2006 5:43:08 PM
Sulfate	480	10.0	30.0		mg/L	10	4/15/2006 3:03:45 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	119	10.0	10.0		mg/L	1	4/17/2006 11:57:00 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:57:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 11:57:00 AM
Alkalinity, Total (As CaCO3)	119	10.0	10.0		mg/L	1	4/17/2006 11:57:00 AM
PH		**E150.1**					Analyst: **JBC**
pH	6.73	0	0		pH Units	1	4/17/2006 9:35:00 AM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	24400	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

ND - Not Detected at the SQL
J - Analyte detected between SQL and RL
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DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *24-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-WW-53-1
Project:	RRC West O'Daniel	**Lab ID:**	0604098-03
Project No:	46513-0000-00002	**Collection Date:**	4/14/2006 10:05:00 AM
Lab Order:	0604098	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/20/2006 12:26:04 PM
Toluene	ND	2.00	6.00		µg/L	1	4/20/2006 12:26:04 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/20/2006 12:26:04 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/20/2006 12:26:04 PM
Surr: a,a,a-Trifluorotoluene	108	0	87-113		%REC	1	4/20/2006 12:26:04 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	199	3.00	10.0		µg/L	1	4/20/2006 3:28:00 PM
Calcium	3560000	250000	250000		µg/L	2500	4/21/2006 11:27:00 AM
Iron	9930	50.0	100		µg/L	1	4/20/2006 3:28:00 PM
Magnesium	1280000	250000	250000		µg/L	2500	4/21/2006 11:27:00 AM
Potassium	56500	1000	1000		µg/L	10	4/21/2006 2:03:00 PM
Sodium	8890000	250000	250000		µg/L	2500	4/21/2006 11:27:00 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	54.7	3.00	10.0		mg/L	10	4/15/2006 3:17:57 PM
Chloride	21000	150	500		mg/L	500	4/17/2006 10:17:05 AM
Nitrate-N	19.8	0.100	0.500		mg/L	1	4/15/2006 5:57:20 PM
Sulfate	2090	20.0	60.0		mg/L	20	4/15/2006 11:58:12 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	70.5	10.0	10.0		mg/L	1	4/17/2006 12:01:00 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 12:01:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 12:01:00 PM
Alkalinity, Total (As CaCO3)	70.5	10.0	10.0		mg/L	1	4/17/2006 12:01:00 PM
PH		**E150.1**					Analyst: **JBC**
pH	6.45	0	0		pH Units	1	4/17/2006 9:36:00 AM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	67400	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

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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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *24-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-MW-05-1
Project:	RRC West O'Daniel	**Lab ID:**	0604098-04
Project No:	46513-0000-00002	**Collection Date:**	4/14/2006 11:40:00 AM
Lab Order:	0604098	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/20/2006 12:44:07 PM
Toluene	ND	2.00	6.00		µg/L	1	4/20/2006 12:44:07 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/20/2006 12:44:07 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/20/2006 12:44:07 PM
Surr: a,a,a-Trifluorotoluene	110	0	87-113		%REC	1	4/20/2006 12:44:07 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	497	3.00	10.0		µg/L	1	4/20/2006 3:32:00 PM
Calcium	2930000	250000	250000		µg/L	2500	4/21/2006 11:32:00 AM
Iron	5500	50.0	100		µg/L	1	4/20/2006 3:32:00 PM
Magnesium	730000	250000	250000		µg/L	2500	4/21/2006 11:32:00 AM
Potassium	22300	1000	1000		µg/L	10	4/21/2006 2:08:00 PM
Sodium	9130000	250000	250000		µg/L	2500	4/21/2006 11:32:00 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	44.3	3.00	10.0		mg/L	10	4/15/2006 3:32:10 PM
Chloride	17100	150	500		mg/L	500	4/17/2006 10:31:17 AM
Nitrate-N	ND	0.100	0.500		mg/L	1	4/15/2006 6:11:33 PM
Sulfate	1710	20.0	60.0		mg/L	20	4/16/2006 12:12:24 AM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	264	10.0	10.0		mg/L	1	4/17/2006 12:09:00 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 12:09:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 12:09:00 PM
Alkalinity, Total (As CaCO3)	264	10.0	10.0		mg/L	1	4/17/2006 12:09:00 PM
PH		**E150.1**					Analyst: **JBC**
pH	6.71	0	0		pH Units	1	4/17/2006 9:37:00 AM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	56800	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

ND - Not Detected at the SQL
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B - Analyte detected in the associated Method Blank
DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *24-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	E-S-55-1
Project:	RRC West O'Daniel	**Lab ID:**	0604098-05
Project No:	46513-0000-00002	**Collection Date:**	4/14/2006 12:45:00 PM
Lab Order:	0604098	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	15.1	0.800	2.00		µg/L	1	4/20/2006 3:17:35 PM
Toluene	14.2	2.00	6.00		µg/L	1	4/20/2006 3:17:35 PM
Ethylbenzene	16.6	2.00	6.00		µg/L	1	4/20/2006 3:17:35 PM
Xylenes, Total	9.57	3.00	9.00		µg/L	1	4/20/2006 3:17:35 PM
Surr: a,a,a-Trifluorotoluene	110	0	87-113		%REC	1	4/20/2006 3:17:35 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	108	30.0	100		µg/L	10	4/21/2006 2:12:00 PM
Calcium	2320000	250000	250000		µg/L	2500	4/21/2006 11:42:00 AM
Iron	707	50.0	100		µg/L	1	4/20/2006 3:37:00 PM
Magnesium	759000	250000	250000		µg/L	2500	4/21/2006 11:42:00 AM
Potassium	106000	5000	5000		µg/L	50	4/21/2006 2:38:00 PM
Sodium	15300000	250000	250000		µg/L	2500	4/21/2006 11:42:00 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	62.3	3.00	10.0		mg/L	10	4/15/2006 3:46:22 PM
Chloride	22500	150	500		mg/L	500	4/17/2006 10:47:31 AM
Nitrate-N	ND	0.100	0.500		mg/L	1	4/15/2006 6:25:45 PM
Sulfate	2210	20.0	60.0		mg/L	20	4/16/2006 12:26:37 AM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	287	10.0	10.0		mg/L	1	4/17/2006 12:17:00 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 12:17:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 12:17:00 PM
Alkalinity, Total (As CaCO3)	287	10.0	10.0		mg/L	1	4/17/2006 12:17:00 PM
PH		**E150.1**					Analyst: **JBC**
pH	6.75	0	0		pH Units	1	4/17/2006 9:38:00 AM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	77400	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

ND - Not Detected at the SQL
J - Analyte detected between SQL and RL
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DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *24-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-S-1-1
Project:	RRC West O'Daniel	**Lab ID:**	0604098-06
Project No:	46513-0000-00002	**Collection Date:**	4/14/2006 1:10:00 PM
Lab Order:	0604098	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/20/2006 1:06:32 PM
Toluene	ND	2.00	6.00		µg/L	1	4/20/2006 1:06:32 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/20/2006 1:06:32 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/20/2006 1:06:32 PM
Surr: a,a,a-Trifluorotoluene	107	0	87-113		%REC	1	4/20/2006 1:06:32 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	205	30.0	100		µg/L	10	4/21/2006 2:16:00 PM
Calcium	3590000	250000	250000		µg/L	2500	4/21/2006 11:57:00 AM
Iron	3050	50.0	100		µg/L	1	4/20/2006 3:41:00 PM
Magnesium	1070000	250000	250000		µg/L	2500	4/21/2006 11:57:00 AM
Potassium	34900	1000	1000		µg/L	10	4/21/2006 2:16:00 PM
Sodium	9780000	250000	250000		µg/L	2500	4/21/2006 11:57:00 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	52.0	3.00	10.0		mg/L	10	4/15/2006 4:00:35 PM
Chloride	20200	150	500		mg/L	500	4/17/2006 11:01:43 AM
Nitrate-N	ND	0.100	0.500		mg/L	1	4/15/2006 6:39:58 PM
Sulfate	1830	20.0	60.0		mg/L	20	4/16/2006 12:40:49 AM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	111	10.0	10.0		mg/L	1	4/17/2006 12:22:00 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 12:22:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 12:22:00 PM
Alkalinity, Total (As CaCO3)	111	10.0	10.0		mg/L	1	4/17/2006 12:22:00 PM
PH		**E150.1**					Analyst: **JBC**
pH	7.23	0	0		pH Units	1	4/17/2006 9:39:00 AM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	63400	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

ND - Not Detected at the SQL
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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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *24-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	S-S-2-1
Project:	RRC West O'Daniel	**Lab ID:**	0604098-07
Project No:	46513-0000-00002	**Collection Date:**	4/14/2006 1:55:00 PM
Lab Order:	0604098	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/20/2006 1:24:35 PM
Toluene	ND	2.00	6.00		µg/L	1	4/20/2006 1:24:35 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/20/2006 1:24:35 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/20/2006 1:24:35 PM
Surr: a,a,a-Trifluorotoluene	109	0	87-113		%REC	1	4/20/2006 1:24:35 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	216	30.0	100		µg/L	10	4/21/2006 2:32:00 PM
Calcium	3240000	250000	250000		µg/L	2500	4/21/2006 12:01:00 PM
Iron	1790	50.0	100		µg/L	1	4/20/2006 3:45:00 PM
Magnesium	1050000	250000	250000		µg/L	2500	4/21/2006 12:01:00 PM
Potassium	14600	1000	1000		µg/L	10	4/21/2006 2:32:00 PM
Sodium	5400000	250000	250000		µg/L	2500	4/21/2006 12:01:00 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	37.8	3.00	10.0		mg/L	10	4/15/2006 4:14:47 PM
Chloride	14800	150	500		mg/L	500	4/17/2006 11:15:56 AM
Nitrate-N	ND	0.100	0.500		mg/L	1	4/15/2006 6:54:10 PM
Sulfate	1060	10.0	30.0		mg/L	10	4/15/2006 4:14:47 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	83.9	10.0	10.0		mg/L	1	4/17/2006 12:26:00 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 12:26:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/17/2006 12:26:00 PM
Alkalinity, Total (As CaCO3)	83.9	10.0	10.0		mg/L	1	4/17/2006 12:26:00 PM
PH		**E150.1**					Analyst: **JBC**
pH	7.13	0	0		pH Units	1	4/17/2006 9:41:00 AM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	46200	100	100		µmhos/cm	10	4/17/2006 12:00:00 PM

Qualifiers

ND - Not Detected at the SQL
J - Analyte detected between SQL and RL
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DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *24-Apr-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	Trip Blank 4/14/06
Project:	RRC West O'Daniel	**Lab ID:**	0604098-08
Project No:	46513-0000-00002	**Collection Date:**	4/14/2006
Lab Order:	0604098	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/20/2006 11:31:53 AM
Toluene	ND	2.00	6.00		µg/L	1	4/20/2006 11:31:53 AM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/20/2006 11:31:53 AM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/20/2006 11:31:53 AM
Surr: a,a,a-Trifluorotoluene	107	0	87-113		%REC	1	4/20/2006 11:31:53 AM

Qualifiers

ND - Not Detected at the SQL
J - Analyte detected between SQL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_060420A

Sample ID **LCS-21955**	Batch ID: **21955**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **LCS**	Run ID: **GC9_060420A**	Analysis Date: **4/20/2006 10:24:35 A**	Prep Date: **4/20/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	53.3	2.00	50.00	0	107	81	125			
Toluene	53.3	6.00	50.00	0	107	84	123			
Ethylbenzene	52.4	6.00	50.00	0	105	83	119			
Xylenes, Total	161	9.00	150.0	0	107	81	117			
Surr: a,a,a-Trifluorotoluene	221		200.0		111	87	113			

Sample ID **MB-21955**	Batch ID: **21955**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **MBLK**	Run ID: **GC9_060420A**	Analysis Date: **4/20/2006 10:42:42 A**	Prep Date: **4/20/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	2.00								
Toluene	ND	6.00								
Ethylbenzene	ND	6.00								
Xylenes, Total	ND	9.00								
Surr: a,a,a-Trifluorotoluene	214		200.0		107	87	113			

Sample ID **0604098-01BMSD**	Batch ID: **21955**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **MSD**	Run ID: **GC9_060420A**	Analysis Date: **4/20/2006 2:59:30 PM**	Prep Date: **4/20/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	52.1	2.00	50.00	0	104	81	125	1.88	20	
Toluene	52.3	6.00	50.00	0	105	84	123	2.80	20	
Ethylbenzene	51.0	6.00	50.00	0	102	83	119	3.57	20	
Xylenes, Total	156	9.00	150.0	0	104	81	117	4.10	20	
Surr: a,a,a-Trifluorotoluene	221		200.0		111	87	113	0	0	

Sample ID **0604098-01BMS**	Batch ID: **21955**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **MS**	Run ID: **GC9_060420A**	Analysis Date: **4/20/2006 3:52:20 PM**	Prep Date: **4/20/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	53.1	2.00	50.00	0	106	81	125			
Toluene	53.8	6.00	50.00	0	108	84	123			
Ethylbenzene	52.8	6.00	50.00	0	106	83	119			
Xylenes, Total	162	9.00	150.0	0	108	81	117			
Surr: a,a,a-Trifluorotoluene	218		200.0		109	87	113			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_060420A

Sample ID	**ICV-060420**	Batch ID:	**R25928**	TestNo:	**SW8021B**	Units:	**µg/L**
SampType:	**ICV**	Run ID:	**GC9_060420A**	Analysis Date:	**4/20/2006 10:06:23 A**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	103	2.00	100.0	0	103	85	115			
Toluene	105	6.00	100.0	0	105	85	115			
Ethylbenzene	104	6.00	100.0	0	104	85	115			
Xylenes, Total	315	9.00	300.0	0	105	85	115			
Surr: a,a,a-Trifluorotoluene	218		200.0		109	87	113			

Sample ID	**CCV1-060420**	Batch ID:	**R25928**	TestNo:	**SW8021B**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**GC9_060420A**	Analysis Date:	**4/20/2006 2:00:45 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	52.8	2.00	50.00	0	106	85	115			
Toluene	52.4	6.00	50.00	0	105	85	115			
Ethylbenzene	51.6	6.00	50.00	0	103	85	115			
Xylenes, Total	157	9.00	150.0	0	105	85	115			
Surr: a,a,a-Trifluorotoluene	221		200.0		111	87	113			

Sample ID	**CCV2-060420**	Batch ID:	**R25928**	TestNo:	**SW8021B**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**GC9_060420A**	Analysis Date:	**4/20/2006 4:10:20 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	52.5	2.00	50.00	0	105	85	115			
Toluene	52.8	6.00	50.00	0	106	85	115			
Ethylbenzene	51.4	6.00	50.00	0	103	85	115			
Xylenes, Total	158	9.00	150.0	0	105	85	115			
Surr: a,a,a-Trifluorotoluene	218		200.0		109	87	113			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_060420A

Sample ID	**MB-21946**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**MBLK**	Run ID:	**ICP-MS_060420A**	Analysis Date:	**4/20/2006 12:56:00 P**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	10.0								
Calcium	ND	100								
Iron	ND	100								
Potassium	ND	100								

Sample ID	**0604110-02A SD**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**SD**	Run ID:	**ICP-MS_060420A**	Analysis Date:	**4/20/2006 1:04:00 PM**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	4.47	50.0	0	4.692				4.79	10	
Calcium	232000	500	0	225400				3.08	10	
Iron	882	500	0	758.5				15.1	10	R
Potassium	5560	500	0	5587				0.484	10	

Sample ID	**LCS-21946**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**LCS**	Run ID:	**ICP-MS_060420A**	Analysis Date:	**4/20/2006 1:17:00 PM**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	188	10.0	200.0	0	94.2	80	120			
Calcium	4960	100	5000	0	99.2	80	120			
Iron	4720	100	5000	0	94.5	80	120			
Potassium	4860	100	5000	0	97.2	80	120			

Sample ID	**LCSD-21946**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**LCSD**	Run ID:	**ICP-MS_060420A**	Analysis Date:	**4/20/2006 1:21:00 PM**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	185	10.0	200.0	0	92.6	80	120	1.77	15	
Calcium	4860	100	5000	0	97.2	80	120	2.06	15	
Iron	4660	100	5000	0	93.1	80	120	1.45	15	
Potassium	4700	100	5000	0	94.1	80	120	3.24	15	

Sample ID	**0604110-02A MS**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**MS**	Run ID:	**ICP-MS_060420A**	Analysis Date:	**4/20/2006 1:25:00 PM**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	200	10.0	200.0	4.692	97.9	80	120			
Calcium	230000	100	5000	225400	102	80	120			
Iron	5160	100	5000	758.5	88.1	80	120			
Potassium	10100	100	5000	5587	89.7	80	120			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_060420A

Sample ID	**0604110-02A MSD**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**MSD**	Run ID:	**ICP-MS_060420A**	Analysis Date:	**4/20/2006 1:29:00 PM**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	199	10.0	200.0	4.692	97.0	80	120	0.902	15	
Calcium	229000	100	5000	225400	78.0	80	120	0.522	15	S
Iron	5010	100	5000	758.5	85.0	80	120	3.09	15	
Potassium	10200	100	5000	5587	93.3	80	120	1.77	15	

Sample ID	**0604110-02A PDS**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**PDS**	Run ID:	**ICP-MS_060420A**	Analysis Date:	**4/20/2006 1:33:00 PM**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	198	10.0	200	4.69	96.7	75	125			
Calcium	229000	100	5000	225000	68.0	75	125			S
Iron	5010	100	5000	758	85.0	75	125			
Potassium	10700	100	5000	5590	102	75	125			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_060420A

Sample ID	**ICV1-060420**	Batch ID:	**R25926**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**ICV**	Run ID:	**ICP-MS_060420A**	Analysis Date:	**4/20/2006 12:32:00 P**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	96.8	10.0	100.0	0	96.8	90	110			
Calcium	2600	100	2500	0	104	90	110			
Iron	2750	100	2500	0	110	90	110			
Potassium	2400	100	2500	0	96.2	90	110			

Sample ID	**CCV1-060420**	Batch ID:	**R25926**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS_060420A**	Analysis Date:	**4/20/2006 2:33:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	200	10.0	200.0	0	99.8	90	110			
Calcium	5140	100	5000	0	103	90	110			
Iron	4960	100	5000	0	99.2	90	110			
Potassium	5320	100	5000	0	106	90	110			

Sample ID	**CCV2-060420**	Batch ID:	**R25926**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS_060420A**	Analysis Date:	**4/20/2006 4:04:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	191	10.0	200.0	0	95.6	90	110			
Iron	4980	100	5000	0	99.6	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_060421A

Sample ID	**MB-21946**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**MBLK**	Run ID:	**ICP-MS_060421A**	Analysis Date:	**4/21/2006 10:41:00 A**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	ND	100								
Sodium	ND	100								

Sample ID	**0604110-02A SD**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**SD**	Run ID:	**ICP-MS_060421A**	Analysis Date:	**4/21/2006 10:52:00 A**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	173000	250000	0	165200				4.82	10	
Sodium	801000	250000	0	822500				2.68	10	

Sample ID	**LCS-21946**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**LCS**	Run ID:	**ICP-MS_060421A**	Analysis Date:	**4/21/2006 12:51:00 P**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	5280	100	5000	0	106	80	120			
Sodium	5240	100	5000	0	105	80	120			

Sample ID	**LCSD-21946**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**LCSD**	Run ID:	**ICP-MS_060421A**	Analysis Date:	**4/21/2006 12:55:00 P**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	5280	100	5000	0	106	80	120	0.114	15	
Sodium	5340	100	5000	0	107	80	120	1.81	15	

Sample ID	**0604110-02A MS**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**MS**	Run ID:	**ICP-MS_060421A**	Analysis Date:	**4/21/2006 12:59:00 P**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	202000	50000	5000	165200	732	80	120			S
Sodium	952000	50000	5000	822500	2600	80	120			S

Sample ID	**0604110-02A PDS**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**PDS**	Run ID:	**ICP-MS_060421A**	Analysis Date:	**4/21/2006 1:07:00 PM**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	2820000	50000	2500000	165000	106	75	125			
Sodium	3440000	50000	2500000	822000	105	75	125			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_060421A

Sample ID	**0604110-02A MSD**	Batch ID:	**21946**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**MSD**	Run ID:	**ICP-MS_060421A**	Analysis Date:	**4/21/2006 1:11:00 PM**	Prep Date:	**4/19/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	194000	50000	5000	165200	573	80	120	4.02	15	S
Sodium	872000	50000	5000	822500	980	80	120	8.88	15	S

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_060421A

Sample ID	**ICV1-060421**	Batch ID:	**R25940**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**ICV**	Run ID:	**ICP-MS_060421A**	Analysis Date:	**4/21/2006 10:25:00 A**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	96.8	10.0	100.0	0	96.8	90	110			
Calcium	2590	100	2500	0	104	90	110			
Magnesium	2600	100	2500	0	104	90	110			
Potassium	2600	100	2500	0	104	90	110			
Sodium	2520	100	2500	0	101	90	110			

Sample ID	**CCV1-060421**	Batch ID:	**R25940**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS_060421A**	Analysis Date:	**4/21/2006 12:31:00 P**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4900	100	5000	0	97.9	90	110			
Magnesium	5230	100	5000	0	105	90	110			
Sodium	5290	100	5000	0	106	90	110			

Sample ID	**CCV2-060421**	Batch ID:	**R25940**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS_060421A**	Analysis Date:	**4/21/2006 1:19:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	196	10.0	200.0	0	98.0	90	110			
Magnesium	5240	100	5000	0	105	90	110			
Potassium	4840	100	5000	0	96.8	90	110			
Sodium	5340	100	5000	0	107	90	110			

Sample ID	**CCV3-060421**	Batch ID:	**R25940**	TestNo:	**SW6020**	Units:	**µg/L**
SampType:	**CCV**	Run ID:	**ICP-MS_060421A**	Analysis Date:	**4/21/2006 2:54:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Barium	197	10.0	200.0	0	98.7	90	110			
Potassium	5070	100	5000	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 Dection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060415A

Sample ID	**ICV-060415**	Batch ID:	**R25871**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**IC_060415A**	Analysis Date:	**4/15/2006 1:49:37 PM**	Prep Date:	**4/15/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	50.3	1.00	50.00	0	101	90	110			
Nitrate-N	12.7	0.500	12.50	0	101	90	110			
Sulfate	75.3	3.00	75.00	0	100	90	110			

Sample ID	**MB-060415**	Batch ID:	**R25871**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**IC_060415A**	Analysis Date:	**4/15/2006 2:06:55 PM**	Prep Date:	**4/15/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	1.00								
Nitrate-N	ND	0.500								
Sulfate	ND	3.00								

Sample ID	**LCS-060415**	Batch ID:	**R25871**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**IC_060415A**	Analysis Date:	**4/15/2006 2:21:07 PM**	Prep Date:	**4/15/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.8	1.00	20.00	0	99.1	90	110			
Nitrate-N	4.96	0.500	5.000	0	99.1	90	110			
Sulfate	29.5	3.00	30.00	0	98.4	90	110			

Sample ID	**LCSD-060415**	Batch ID:	**R25871**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCSD**	Run ID:	**IC_060415A**	Analysis Date:	**4/15/2006 2:35:20 PM**	Prep Date:	**4/15/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.8	1.00	20.00	0	99.1	90	110	0	20	
Nitrate-N	5.00	0.500	5.000	0	100	90	110	0.892	20	
Sulfate	29.5	3.00	30.00	0	98.3	90	110	0.0915	20	

Sample ID	**0604098-07EMS**	Batch ID:	**R25871**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**IC_060415A**	Analysis Date:	**4/15/2006 4:32:05 PM**	Prep Date:	**4/15/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	215	10.0	200.0	30.25	92.4	90	110			
Nitrate-N	49.8	5.00	50.00	0	99.6	90	110			
Sulfate	690	30.0	300.0	851.3	-53.8	90	110			S

Sample ID	**0604098-07EMSD**	Batch ID:	**R25871**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**IC_060415A**	Analysis Date:	**4/15/2006 4:46:18 PM**	Prep Date:	**4/15/2006**

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 Dection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060415A

Sample ID	0604098-07EMSD	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_060415A	Analysis Date:	4/15/2006 4:46:18 PM	Prep Date:	4/15/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	216	10.0	200.0	30.25	92.8	90	110	0.367	20	
Nitrate-N	49.7	5.00	50.00	0	99.4	90	110	0.195	20	
Sulfate	692	30.0	300.0	851.3	-53.2	90	110	0.260	20	S

Sample ID	CCV1-060415	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC_060415A	Analysis Date:	4/15/2006 5:14:43 PM	Prep Date:	4/15/2006

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			
Nitrate-N	4.99	0.500	5.000	0	99.8	90	110			
Sulfate	29.6	3.00	30.00	0	98.8	90	110			

Sample ID	0604098-02EMS	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC_060415A	Analysis Date:	4/15/2006 7:10:03 PM	Prep Date:	4/15/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	37.6	1.00	20.00	16.09	107	90	110			
Nitrate-N	5.07	0.500	5.000	0	101	90	110			

Sample ID	0604098-02EMSD	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_060415A	Analysis Date:	4/15/2006 7:24:15 PM	Prep Date:	4/15/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	36.5	1.00	20.00	16.09	102	90	110	2.78	20	
Nitrate-N	5.07	0.500	5.000	0	101	90	110	0.0769	20	

Sample ID	CCV2-060415	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC_060415A	Analysis Date:	4/15/2006 7:52:40 PM	Prep Date:	4/15/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.6	1.00	20.00	0	98.1	90	110			
Nitrate-N	4.90	0.500	5.000	0	98.0	90	110			
Sulfate	29.2	3.00	30.00	0	97.4	90	110			

Sample ID	ICV-060415B	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC_060415A	Analysis Date:	4/15/2006 8:10:50 PM	Prep Date:	4/15/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Nitrate-N	12.5	0.500	12.50	0	100	90	110			
Sulfate	74.1	3.00	75.00	0	98.8	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060415A

Sample ID	MB-060415B	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC_060415A	Analysis Date:	4/15/2006 8:25:03 PM	Prep Date:	4/15/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Nitrate-N	ND	0.500								
Sulfate	ND	3.00								

Sample ID	LCS-060415B	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC_060415A	Analysis Date:	4/15/2006 8:39:16 PM	Prep Date:	4/15/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Nitrate-N	5.02	0.500	5.000	0	100	90	110			
Sulfate	30.0	3.00	30.00	0	99.9	90	110			

Sample ID	LCSD-060415B	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC_060415A	Analysis Date:	4/15/2006 8:53:28 PM	Prep Date:	4/15/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Nitrate-N	5.02	0.500	5.000	0	100	90	110	0.0677	20	
Sulfate	29.9	3.00	30.00	0	99.7	90	110	0.192	20	

Sample ID	CCV1-060415	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC_060415A	Analysis Date:	4/15/2006 11:29:46 P	Prep Date:	4/15/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Nitrate-N	4.92	0.500	5.000	0	98.4	90	110			
Sulfate	29.2	3.00	30.00	0	97.2	90	110			

Sample ID	0604098-03EMS	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC_060415A	Analysis Date:	4/16/2006 12:55:02 A	Prep Date:	4/16/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	2300	60.0	600.0	1675	104	90	110			

Sample ID	0604098-03EMSD	Batch ID:	R25871	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_060415A	Analysis Date:	4/16/2006 1:09:14 AM	Prep Date:	4/16/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	2300	60.0	600.0	1675	104	90	110	0.0953	20	

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060415A

Sample ID	**CCV2-060415B**	Batch ID:	**R25871**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC_060415A**	Analysis Date:	**4/16/2006 1:51:52 AM**	Prep Date:	**4/16/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Nitrate-N	5.01	0.500	5.000	0	100	90	110			
Sulfate	29.8	3.00	30.00	0	99.3	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060417A

Sample ID	**ICV-060417**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 8:46:47 AM**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.0	1.00	25.00	0	96.0	90	110			

Sample ID	**MB-060417**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 9:00:59 AM**	Prep Date:	**4/17/2006**

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

Sample ID	**LCS-060417**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 9:15:12 AM**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.50	1.00	10.00	0	95.0	90	110			

Sample ID	**LCSD-060417**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCSD**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 9:29:24 AM**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.51	1.00	10.00	0	95.1	90	110	0.0652	20	

Sample ID	**0604098-02EMS**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 11:30:08 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	11100	500	5000	6031	102	90	110			

Sample ID	**0604098-02EMSD**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 11:44:21 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	11200	500	5000	6031	103	90	110	0.504	20	

Sample ID	**CCV1-060417**	Batch ID:	**R25875**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC_060417A**	Analysis Date:	**4/17/2006 11:58:33 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.58	1.00	10.00	0	95.8	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_060417A

Sample ID	**ICV-060417**	Batch ID:	**R25858**	TestNo:	**E150.1**		Units:	**pH Units**	
SampType:	**ICV**	Run ID:	**TITRATOR_060417A**	Analysis Date:	**4/17/2006 9:10:00 AM**		Prep Date:	**4/17/2006**	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
pH	9.99	0	10.00	0	99.9	99	101			

Sample ID	**0604098-01A DUP**	Batch ID:	**R25858**	TestNo:	**E150.1**		Units:	**pH Units**	
SampType:	**DUP**	Run ID:	**TITRATOR_060417A**	Analysis Date:	**4/17/2006 9:42:00 AM**		Prep Date:	**4/17/2006**	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
pH	6.70	0	0	6.390				4.74	15	

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_060417B

Sample ID	**ICV-060417**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 10:23:00 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	13.0	10.0	0							
Alkalinity, Carbonate (As CaCO3)	87.4	10.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0							
Alkalinity, Total (As CaCO3)	100	10.0	100.0	0	100	98	102			

Sample ID	**LCS-060417**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 10:27:00 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	51.5	10.0	50.00	0	103	74	129			

Sample ID	**0604091-05D DUP**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 11:32:00 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	182	10.0	0	181.1				0.368	20	
Alkalinity, Carbonate (As CaCO3)	0	10.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	182	10.0	0	181.1				0.368	20	

Sample ID	**CCV1-060417**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 11:46:00 A**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	18.9	10.0	0							
Alkalinity, Carbonate (As CaCO3)	82.4	10.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0							
Alkalinity, Total (As CaCO3)	101	10.0	100.0	0	101	90	110			

Sample ID	**0604098-07D DUP**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 12:30:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	84.5	10.0	0	83.95				0.697	20	
Alkalinity, Carbonate (As CaCO3)	0	10.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	84.5	10.0	0	83.95				0.697	20	

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_060417B

Sample ID	**CCV2-060417**	Batch ID:	**R25867**	TestNo:	**E310.1**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**TITRATOR_060417B**	Analysis Date:	**4/17/2006 12:36:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	23.0	10.0	0							
Alkalinity, Carbonate (As CaCO3)	78.1	10.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0							
Alkalinity, Total (As CaCO3)	101	10.0	100.0	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 Dection Limit	Page 16 of 17
	ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits	
	RL	Reporting Limit	S	Spike Recovery outside control limits	

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: WC_060417B

Sample ID	**ICV-060417**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**ICV**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12800	10.0	12880	0	99.8	90	110			

Sample ID	**LCS-060417**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**LCS**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	1360	10.0	1413	0	96.0	93	109			

Sample ID	**CCV1-060417**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**CCV**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12600	10.0	12880	0	98.1	90	110			

Sample ID	**0604091-05EDUP**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**DUP**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	91400	100	0	90800				0.659	20	

Sample ID	**0604098-07EDUP**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**DUP**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	47000	100	0	46200				1.72	20	

Sample ID	**CCV2-060417**	Batch ID:	**CONDW-04/17/06**	TestNo:	**E120.1**	Units:	**µmhos/cm**
SampType:	**CCV**	Run ID:	**WC_060417B**	Analysis Date:	**4/17/2006 12:00:00 P**	Prep Date:	**4/17/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12500	10.0	12880	0	97.0	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604098
Project: RRC West O'Daniel

MQL SUMMARY REPORT

TestNo: E300	MDL	MQL
Analyte	**mg/L**	**mg/L**
Bromide	0.3	1
Chloride	0.3	1
Nitrate-N	0.1	0.5
Sulfate	1	3

TestNo: SW6020	MDL	MQL
Analyte	**µg/L**	**µg/L**
Barium	3	10
Calcium	100	100
Iron	50	100
Magnesium	100	100
Potassium	100	100
Sodium	100	100

TestNo: SW8021B	MDL	MQL
Analyte	**µg/L**	**µg/L**
Benzene	0.8	2
Toluene	2	6
Ethylbenzene	2	6
Xylenes, Total	3	9

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

DHL ANALYTICAL

May 03, 2006

Steve Miller
TRC Environmental Corp.
505 East Huntland Drive
Suite 250
Austin, Texas 78752

TEL: (512) 329-6080
FAX (512) 329-8750

Order No.: 0604152

RE: RRC-West O'Daniel

Dear Steve Miller:

DHL Analytical received 2 sample(s) on 4/22/2006 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

DHL ANALYTICAL

TABLE OF CONTENTS

This report for TRC Environmental: RRC-West Daniel (DHL Work Order 0604152) contains the following information:

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• Laboratory Data Package Signature Page	5
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May 3, 2006

Approved: _____
John DuPont

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

№ 23530

CHAIN-OF-CUSTODY

CLIENT: TRC
ADDRESS: 505 E. Huntland Dr Ste 250 Austin, TX 78752
PHONE: (512) 329-6080 FAX (512) 329-8750
DATA REPORTED TO: Steve Miller
ADDITIONAL REPORT COPIES TO:

DATE: 4/21/06 PAGE 2 OF 2
PO #: DHL WORK ORDER #: 0604152
PROJECT LOCATION OR NAME: RAE - West O'Daniel
CLIENT PROJECT #: 46513-0000-00002 COLLECTOR: MW / BC

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

change ID Per B. Clark 5/9/06 (BC)

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 ☐ SemiVOC ☐ | 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 ☒ | METALS | IONS | Electrical Conductivity | FIELD NOTES

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4	ICE	UNPRESERVED	pH	CHLORIDE	METALS	IONS	Electrical Conductivity	FIELD NOTES
~~EQD-S-56~~ E-S-56-1		4/21/06	1510	W	250ml poly 40ml VOA	7	X	X		X	X	X	X	X	X	X	METALS Include: Ba, Ca, Fe, Mg, Na, K
TB-4-21-06-1		4/21/06	—	W	40 ml	2	X			X	X						Ions include: Br, Nitrate, Sulfate
																	* * Refer to Upper Colorado River Basin QAPP Sept 2005 - Aug 2009 * *

TOTAL

RELINQUISHED BY: (Signature) DATE/TIME 4/22/06 1600 RECEIVED BY: (Signature) 4/22/06 1400

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: 3.8 THERM #: 42
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # ____
☐ APC DELIVERY
☒ HAND DELIVERED

DHL Analytical

Sample Receipt Checklist

Client Name TRC Environmental Corp. Date Received: 4/21/2006

Work Order Number 0604152 Received by **DEW**

Checklist completed by: Signature 4246 Date Reviewed by JD Initials 04/24/06 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? NO Checked by MW

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:

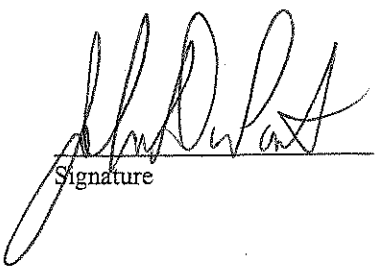
This signature page, the laboratory review checklist, and the following reportable data:

- 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
Michelle Green – QA Manager
John DuPont – General Manager



Signature

05/03/06
Date

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: RRC- West O'Daniel	Date: 5-3-06
Reviewer Name: Michelle Green	Laboratory Work Order: 0604152
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) Were 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, (prep and cleanup steps)?	✓				
		3) Were LCSs analyzed at the required frequency?	✓				
		4) Were LCS (and LCSD, if applicable) %Rs & RPD recovery 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?	✓				
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?		✓			R7-03
		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?	✓				

DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: RRC- West O'Daniel | Date: 5-3-06

Reviewer Name: Michelle Green | Laboratory Work Order: 0604152

#[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, & 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?		✓			59-01
S10	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	✓				
S11	OI	**PROFICIENCY TEST REPORTS**					
		1) Was the laboratory'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?	✓				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS (NELAC)**					
		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 the 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 BR# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

CLIENT: TRC Environmental Corp.
Project: RRC-West O'Daniel
Lab Order: 0604152

CASE NARRATIVE

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

Method SW6020 - Metals Analysis
Method SW8021B - Volatile Organics by GC
EPA Method 300 - Anions by IC
EPA Method 310.1 - Alkalinity Analysis
EPA Method 120.1 - Specific Conductivity
EPA Method 150.1 - pH of a Water

Exception Report R1-01

The samples were received and log-in performed on 4/15/06. A total of 8 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Metals analysis the recovery for the matrix spikes and matrix spike duplicate recoveries were below control limits for Calcium, Magnesium and Sodium. These are flagged accordingly. The reference sample selected for the matrix spikes and matrix spike duplicates was not from this work order. The LCS was within control limits for these analytes. No further corrective actions were taken and the sample results were not adversely affected.

Exception Report S9-01

For Metals analysis recovery for the PDS was below control limits for Calcium and Magnesium. The serial dilution was within control limit for these analytes therefore no further corrective actions were taken.

DATA REPORTING

Sample reports include the Sample Quantitation Limit (SQL) and the Reporting Limit (RL) for each analyte. The computer system allows for reporting SQL with 2 significant figures and the RL with 3 significant figures. Because of rounding it may sometime appear that a "J" flagged result is lower than the SQL if the sample result is very near the SQL.

DHL Analytical

Date: *04-May-06*

CLIENT: TRC Environmental Corp.
Project: RRC-West O'Daniel
Lab Order: 0604152

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
0604152-01	E-S-56-1		4/21/2006 3:10:00 PM	4/22/2006
0604152-02	TB-4-21-06-1		4/21/2006	4/22/2006

Lab Order: 0604152
Client: TRC Environmental Corp.
Project: RRC-West O'Daniel

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0604152-01A	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/25/2006	R25970
	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/22/2006	R25960
	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/22/2006	R25960
	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	E300	Anions by IC method - Water	4/22/2006	R25960
	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	E120.1	Specific Conductance	4/25/2006	CONDW-04/25/06
0604152-01B	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	E150.1	pH	4/24/2006	PH_W-04/24/06
0604152-01C	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/27/2006 10:07:16 A	22030
	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/27/2006 10:07:16 A	22030
	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/27/2006 10:07:16 A	22030
	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	4/27/2006 10:07:16 A	22030
0604152-01D	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	SW5030B	Purge and Trap Water GC	4/29/2006 7:13:07 PM	22064
0604152-01E	E-S-56-1	4/21/2006 3:10:00 PM	Aqueous	E310.1	Alkalinity	4/26/2006 10:17:00 A	R25990
0604152-02A	TB-4-21-06-1	4/21/2006	Trip Blank	SW5030B	Purge and Trap Water GC	4/29/2006 7:13:07 PM	22064

Lab Order: 0604152
Client: TRC Environmental Corp.
Project: RRC-West O'Daniel

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0604152-01A	E-S-56-1	Aqueous	E300	Anions by IC method - Water	R25970	500	4/25/2006 10:35:10 AM	IC_060425A
	E-S-56-1	Aqueous	E300	Anions by IC method - Water	R25960	20	4/22/2006 4:25:29 PM	IC_060422A
	E-S-56-1	Aqueous	E300	Anions by IC method - Water	R25960	10	4/22/2006 2:54:59 PM	IC_060422A
	E-S-56-1	Aqueous	E300	Anions by IC method - Water	R25960	1	4/22/2006 2:24:07 PM	IC_060422A
	E-S-56-1	Aqueous	E120.1	Specific Conductance	CONDW-04/25/06	10	4/25/2006 3:50:00 PM	WC_060425A
0604152-01B	E-S-56-1	Aqueous	E150.1	pH	PH_W-04/24/06	1	4/24/2006 11:45:00 AM	PH_060424A
0604152-01C	E-S-56-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	22030	100	5/3/2006 1:43:00 PM	ICP-MS2_060503A
	E-S-56-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	22030	2000	5/2/2006 5:25:00 PM	ICP-MS2_060502B
	E-S-56-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	22030	1000	5/2/2006 5:19:00 PM	ICP-MS2_060502B
	E-S-56-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	22030	1	5/1/2006 3:00:00 PM	ICP-MS_060501A
0604152-01D	E-S-56-1	Aqueous	SW8021B	Volatile Organics by GC	22064	1	4/30/2006 11:27:09 PM	GC9_060430A
0604152-01E	E-S-56-1	Aqueous	E310.1	Alkalinity	R25990	1	4/26/2006 10:17:00 AM	TITRATOR_060426A
0604152-02A	TB-4-21-06-1	Trip Blank	SW8021B	Volatile Organics by GC	22064	1	5/1/2006 12:21:08 AM	GC9_060430A

DHL Analytical

Date: *04-May-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	E-S-56-1
Project:	RRC-West O'Daniel	**Lab ID:**	0604152-01
Project No:	46513-0000-00002	**Collection Date:**	4/21/2006 3:10:00 PM
Lab Order:	0604152	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/30/2006 11:27:09 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/30/2006 11:27:09 PM
Toluene	ND	2.00	6.00		µg/L	1	4/30/2006 11:27:09 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/30/2006 11:27:09 PM
Surr: a,a,a-Trifluorotoluene	111	0	87-113		%REC	1	4/30/2006 11:27:09 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	77.9	3.00	10.0		µg/L	1	5/1/2006 3:00:00 PM
Calcium	1850000	100000	100000		µg/L	1000	5/2/2006 5:19:00 PM
Iron	64.2	50.0	100	J	µg/L	1	5/1/2006 3:00:00 PM
Magnesium	491000	100000	100000		µg/L	1000	5/2/2006 5:19:00 PM
Magnesium	447000	10000	10000		µg/L	100	5/3/2006 1:43:00 PM
Potassium	172000	10000	10000		µg/L	100	5/3/2006 1:43:00 PM
Potassium	194000	100000	100000		µg/L	1000	5/2/2006 5:19:00 PM
Sodium	11600000	200000	200000		µg/L	2000	5/2/2006 5:25:00 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	57.1	3.00	10.0		mg/L	10	4/22/2006 2:54:59 PM
Chloride	22600	150	500		mg/L	500	4/25/2006 10:35:10 AM
Nitrate-N	14.0	1.00	5.00		mg/L	10	4/22/2006 2:54:59 PM
Sulfate	2190	20.0	60.0		mg/L	20	4/22/2006 4:25:29 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	135	10.0	10.0		mg/L	1	4/26/2006 10:17:00 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/26/2006 10:17:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/26/2006 10:17:00 AM
Alkalinity, Total (As CaCO3)	135	10.0	10.0		mg/L	1	4/26/2006 10:17:00 AM
PH		**E150.1**					Analyst: **JBC**
pH	7.15	0	0		pH Units	1	4/24/2006 11:45:00 AM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	81000	100	100		µmhos/cm	10	4/25/2006 3:50:00 PM

Qualifiers

ND - Not Detected at the SQL
J - Analyte detected between SQL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *04-May-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	TB-4-21-06-1
Project:	RRC-West O'Daniel	**Lab ID:**	0604152-02
Project No:	46513-0000-00002	**Collection Date:**	4/21/2006
Lab Order:	0604152	**Matrix:**	TRIP BLANK

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	5/1/2006 12:21:08 AM
Ethylbenzene	ND	2.00	6.00		µg/L	1	5/1/2006 12:21:08 AM
Toluene	ND	2.00	6.00		µg/L	1	5/1/2006 12:21:08 AM
Xylenes, Total	ND	3.00	9.00		µg/L	1	5/1/2006 12:21:08 AM
Surr: a,a,a-Trifluorotoluene	107	0	87-113		%REC	1	5/1/2006 12:21:08 AM

Qualifiers

ND - Not Detected at the SQL
J - Analyte detected between SQL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_060430A

Sample ID: **LCS-22064**	Batch ID: **22064**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **LCS**	Run ID: **GC9_060430A**	Analysis Date: **4/30/2006 10:51:06 PM**	Prep Date: **4/29/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	48.5	2.00	50.00	0	96.9	81	125			
Toluene	49.5	6.00	50.00	0	99.0	84	123			
Ethylbenzene	48.1	6.00	50.00	0	96.1	83	119			
Xylenes, Total	145	9.00	150.0	0	97.0	81	117			
Surr: a,a,a-Trifluorotoluene	214		200.0		107	87	113			

Sample ID: **MB-22064**	Batch ID: **22064**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **MBLK**	Run ID: **GC9_060430A**	Analysis Date: **4/30/2006 11:09:09 PM**	Prep Date: **4/29/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	2.00								
Toluene	ND	6.00								
Ethylbenzene	ND	6.00								
Xylenes, Total	ND	9.00								
Surr: a,a,a-Trifluorotoluene	220		200.0		110	87	113			

Sample ID: **0604152-01DMS**	Batch ID: **22064**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **MS**	Run ID: **GC9_060430A**	Analysis Date: **4/30/2006 11:45:07 PM**	Prep Date: **4/29/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	52.7	2.00	50.00	0	105	81	125			
Toluene	53.4	6.00	50.00	0	107	84	123			
Ethylbenzene	51.9	6.00	50.00	0	104	83	119			
Xylenes, Total	158	9.00	150.0	0	105	81	117			
Surr: a,a,a-Trifluorotoluene	221		200.0		110	87	113			

Sample ID: **0604152-01DMSD**	Batch ID: **22064**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **MSD**	Run ID: **GC9_060430A**	Analysis Date: **5/1/2006 12:03:07 AM**	Prep Date: **4/29/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	52.9	2.00	50.00	0	106	81	125	0.348	20	
Toluene	53.3	6.00	50.00	0	107	84	123	0.251	20	
Ethylbenzene	52.0	6.00	50.00	0	104	83	119	0.191	20	
Xylenes, Total	159	9.00	150.0	0	106	81	117	0.819	20	
Surr: a,a,a-Trifluorotoluene	223		200.0		112	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 Dection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_060430A

Sample ID: **ICV-060430**	Batch ID: **R26057**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **ICV**	Run ID: **GC9_060430A**	Analysis Date: **4/30/2006 10:32:59 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	96.8	2.00	100.0	0	96.8	85	115			
Toluene	101	6.00	100.0	0	101	85	115			
Ethylbenzene	99.6	6.00	100.0	0	99.6	85	115			
Xylenes, Total	299	9.00	300.0	0	99.8	85	115			
Surr: a,a,a-Trifluorotoluene	212		200.0		106	87	113			

Sample ID: **CCV1-060430**	Batch ID: **R26057**	TestNo: **SW8021B**	Units: **µg/L**
SampType: **CCV**	Run ID: **GC9_060430A**	Analysis Date: **5/1/2006 1:51:40 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	50.5	2.00	50.00	0	101	85	115			
Toluene	51.0	6.00	50.00	0	102	85	115			
Ethylbenzene	49.4	6.00	50.00	0	98.7	85	115			
Xylenes, Total	149	9.00	150.0	0	99.3	85	115			
Surr: a,a,a-Trifluorotoluene	220		200.0		110	87	113			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_060501A

Sample ID: MB-22030	Batch ID: 22030	TestNo: SW6020	Units: µg/L
SampType: MBLK	Run ID: ICP-MS_060501A	Analysis Date: 5/1/2006 2:47:00 PM	Prep Date: 4/27/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	10.0								
Calcium	ND	100								
Iron	ND	100								
Magnesium	ND	100								
Potassium	ND	100								
Sodium	ND	100								

Sample ID: 0604173-02A SD	Batch ID: 22030	TestNo: SW6020	Units: µg/L
SampType: SD	Run ID: ICP-MS_060501A	Analysis Date: 5/1/2006 3:04:00 PM	Prep Date: 4/27/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0	50.0	0	4.156				0	10	
Calcium	228000	500	0	223200				2.19	10	
Iron	553	500	0	536.4				3.05	10	
Magnesium	155000	500	0	157200				1.15	10	
Potassium	5520	500	0	5097				7.97	10	

Sample ID: LCS-22030	Batch ID: 22030	TestNo: SW6020	Units: µg/L
SampType: LCS	Run ID: ICP-MS_060501A	Analysis Date: 5/1/2006 3:29:00 PM	Prep Date: 4/27/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	186	10.0	200.0	0	92.8	80	120			
Calcium	4940	100	5000	0	98.9	80	120			
Iron	4600	100	5000	0	92.1	80	120			
Magnesium	4920	100	5000	0	98.3	80	120			
Potassium	4840	100	5000	0	96.9	80	120			
Sodium	5740	100	5000	0	115	80	120			

Sample ID: LCSD-22030	Batch ID: 22030	TestNo: SW6020	Units: µg/L
SampType: LCSD	Run ID: ICP-MS_060501A	Analysis Date: 5/1/2006 3:33:00 PM	Prep Date: 4/27/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	184	10.0	200.0	0	92.2	80	120	0.541	15	
Calcium	4930	100	5000	0	98.5	80	120	0.365	15	
Iron	4530	100	5000	0	90.7	80	120	1.51	15	
Magnesium	4910	100	5000	0	98.2	80	120	0.102	15	
Potassium	4850	100	5000	0	97.0	80	120	0.186	15	
Sodium	5570	100	5000	0	111	80	120	3.11	15	

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_060501A

Sample ID: **0604173-02A MS** Batch ID: **22030** TestNo: **SW6020** Units: **µg/L**
SampType: **MS** Run ID: **ICP-MS_060501A** Analysis Date: **5/1/2006 3:37:00 PM** Prep Date: **4/27/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	194	10.0	200.0	4.156	94.9	80	120			
Calcium	225000	100	5000	223200	34.0	80	120			S
Iron	4740	100	5000	536.4	84.1	80	120			
Magnesium	151000	100	5000	157200	-118	80	120			S
Potassium	9590	100	5000	5097	89.8	80	120			
Sodium	0	100	5000	0	0	80	120			S

Sample ID: **0604173-02A MSD** Batch ID: **22030** TestNo: **SW6020** Units: **µg/L**
SampType: **MSD** Run ID: **ICP-MS_060501A** Analysis Date: **5/1/2006 3:41:00 PM** Prep Date: **4/27/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	195	10.0	200.0	4.156	95.4	80	120	0.566	15	
Calcium	229000	100	5000	223200	116	80	120	1.81	15	
Iron	4800	100	5000	536.4	85.3	80	120	1.34	15	
Magnesium	152000	100	5000	157200	-108	80	120	0.330	15	S
Potassium	9560	100	5000	5097	89.2	80	120	0.303	15	
Sodium	0	100	5000	0	0	80	120	0	15	S

Sample ID: **0604173-02A PDS** Batch ID: **22030** TestNo: **SW6020** Units: **µg/L**
SampType: **PDS** Run ID: **ICP-MS_060501A** Analysis Date: **5/1/2006 3:45:00 PM** Prep Date: **4/27/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	192	10.0	200	4.16	94.1	75	125			
Calcium	219000	100	5000	223000	-78.0	75	125			S
Iron	4750	100	5000	536	84.3	75	125			
Magnesium	146000	100	5000	157000	-220	75	125			S
Potassium	9260	100	5000	5100	83.2	75	125			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_060501A

Sample ID: **ICV1-060501** Batch ID: **R26047** TestNo: **SW6020** Units: **µg/L**
SampType: **ICV** Run ID: **ICP-MS_060501A** Analysis Date: **5/1/2006 10:06:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	97.5	10.0	100.0	0	97.5	90	110			
Calcium	2680	100	2500	0	107	90	110			
Iron	2610	100	2500	0	104	90	110			
Magnesium	2670	100	2500	0	107	90	110			
Potassium	2550	100	2500	0	102	90	110			
Sodium	2660	100	2500	0	106	90	110			

Sample ID: **CCV3-060501** Batch ID: **R26047** TestNo: **SW6020** Units: **µg/L**
SampType: **CCV** Run ID: **ICP-MS_060501A** Analysis Date: **5/1/2006 1:36:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	192	10.0	200.0	0	96.0	90	110			
Calcium	5040	100	5000	0	101	90	110			
Iron	4670	100	5000	0	93.4	90	110			
Magnesium	5130	100	5000	0	103	90	110			
Potassium	4940	100	5000	0	98.7	90	110			
Sodium	5230	100	5000	0	105	90	110			

Sample ID: **CCV4-060501** Batch ID: **R26047** TestNo: **SW6020** Units: **µg/L**
SampType: **CCV** Run ID: **ICP-MS_060501A** Analysis Date: **5/1/2006 3:57:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	189	10.0	200.0	0	94.6	90	110			
Calcium	5040	100	5000	0	101	90	110			
Iron	4680	100	5000	0	93.6	90	110			
Magnesium	4820	100	5000	0	96.4	90	110			
Potassium	4870	100	5000	0	97.4	90	110			
Sodium	5360	100	5000	0	107	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_060502A

Sample ID: **0604173-02A SD**	Batch ID: **22030**	TestNo: **SW6020**	Units: **µg/L**
SampType: **SD**	Run ID: **ICP-MS2_060502A**	Analysis Date: **5/2/2006 12:57:00 PM**	Prep Date: **4/27/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	870000	50000	0	900300				3.42	10	

Sample ID: **0604173-02A PDS**	Batch ID: **22030**	TestNo: **SW6020**	Units: **µg/L**
SampType: **PDS**	Run ID: **ICP-MS2_060502A**	Analysis Date: **5/2/2006 1:26:00 PM**	Prep Date: **4/27/2006**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	1400000	10000	500000	900000	98.9	75	125			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_060502A

Sample ID: **ICV1-060502** Batch ID: **R26072** TestNo: **SW6020** Units: **µg/L**
SampType: **ICV** Run ID: **ICP-MS2_060502A** Analysis Date: **5/2/2006 12:32:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2650	100	2500	0	106	90	110			
Iron	2610	100	2500	0	104	90	110			
Magnesium	2630	100	2500	0	105	90	110			
Potassium	2540	100	2500	0	102	90	110			
Sodium	2560	100	2500	0	102	90	110			

Sample ID: **CCV1-060502** Batch ID: **R26072** TestNo: **SW6020** Units: **µg/L**
SampType: **CCV** Run ID: **ICP-MS2_060502A** Analysis Date: **5/2/2006 1:33:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5120	100	5000	0	102	90	110			
Iron	5240	100	5000	0	105	90	110			
Magnesium	5200	100	5000	0	104	90	110			
Potassium	5080	100	5000	0	102	90	110			
Sodium	5170	100	5000	0	103	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_060503A

Sample ID: **ICV2-060502**	Batch ID: **R26081**	TestNo: **SW6020**	Units: **µg/L**
SampType: **ICV**	Run ID: **ICP-MS2_060503A**	Analysis Date: **5/2/2006 4:01:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	98.2	10.0	100.0	0	98.2	90	110			
Calcium	2680	100	2500	0	107	90	110			
Iron	2550	100	2500	0	102	90	110			
Magnesium	2520	100	2500	0	101	90	110			
Potassium	2480	100	2500	0	99.2	90	110			
Sodium	2490	100	2500	0	99.6	90	110			

Sample ID: **CCV2-060502**	Batch ID: **R26081**	TestNo: **SW6020**	Units: **µg/L**
SampType: **CCV**	Run ID: **ICP-MS2_060503A**	Analysis Date: **5/2/2006 4:52:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	204	10.0	200.0	0	102	90	110			
Calcium	5140	100	5000	0	103	90	110			
Iron	5040	100	5000	0	101	90	110			
Magnesium	5050	100	5000	0	101	90	110			
Potassium	5000	100	5000	0	100	90	110			
Sodium	5070	100	5000	0	101	90	110			

Sample ID: **CCV3-060502**	Batch ID: **R26081**	TestNo: **SW6020**	Units: **µg/L**
SampType: **CCV**	Run ID: **ICP-MS2_060503A**	Analysis Date: **5/2/2006 6:16:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5070	100	5000	0	101	90	110			
Iron	4990	100	5000	0	99.8	90	110			
Magnesium	5050	100	5000	0	101	90	110			
Potassium	5060	100	5000	0	101	90	110			
Sodium	5070	100	5000	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 Dection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060422A

Sample ID: ICV-060422	Batch ID: R25960	TestNo: E300	Units: mg/L
SampType: ICV	Run ID: IC_060422A	Analysis Date: 4/22/2006 1:22:57 PM	Prep Date: 4/22/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	47.2	1.00	50.00	0	94.5	90	110			
Nitrate-N	12.0	0.500	12.50	0	96.0	90	110			
Sulfate	70.3	3.00	75.00	0	93.7	90	110			

Sample ID: MB-060422	Batch ID: R25960	TestNo: E300	Units: mg/L
SampType: MBLK	Run ID: IC_060422A	Analysis Date: 4/22/2006 1:41:30 PM	Prep Date: 4/22/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	1.00								
Nitrate-N	ND	0.500								
Sulfate	ND	3.00								

Sample ID: LCS-060422	Batch ID: R25960	TestNo: E300	Units: mg/L
SampType: LCS	Run ID: IC_060422A	Analysis Date: 4/22/2006 1:55:42 PM	Prep Date: 4/22/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	18.8	1.00	20.00	0	94.2	90	110			
Nitrate-N	4.75	0.500	5.000	0	95.1	90	110			
Sulfate	27.9	3.00	30.00	0	93.0	90	110			

Sample ID: LCSD-060422	Batch ID: R25960	TestNo: E300	Units: mg/L
SampType: LCSD	Run ID: IC_060422A	Analysis Date: 4/22/2006 2:09:55 PM	Prep Date: 4/22/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	18.8	1.00	20.00	0	94.1	90	110	0.186	20	
Nitrate-N	4.73	0.500	5.000	0	94.6	90	110	0.550	20	
Sulfate	27.7	3.00	30.00	0	92.4	90	110	0.569	20	

Sample ID: 0604152-01A MS	Batch ID: R25960	TestNo: E300	Units: mg/L
SampType: MS	Run ID: IC_060422A	Analysis Date: 4/22/2006 3:28:39 PM	Prep Date: 4/22/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	239	10.0	200.0	45.66	96.8	90	110			
Nitrate-N	59.3	5.00	50.00	11.19	96.2	90	110			

Sample ID: 0604152-01A MSD	Batch ID: R25960	TestNo: E300	Units: mg/L
SampType: MSD	Run ID: IC_060422A	Analysis Date: 4/22/2006 3:42:51 PM	Prep Date: 4/22/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	239	10.0	200.0	45.66	96.7	90	110	0.0757	20	

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060422A

Sample ID: 0604152-01A MSD	Batch ID: R25960	TestNo: E300	Units: mg/L
SampType: MSD	Run ID: IC_060422A	Analysis Date: 4/22/2006 3:42:51 PM	Prep Date: 4/22/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate-N	59.1	5.00	50.00	11.19	95.8	90	110	0.285	20	

Sample ID: CCV1-060422	Batch ID: R25960	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC_060422A	Analysis Date: 4/22/2006 4:11:16 PM	Prep Date: 4/22/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	18.7	1.00	20.00	0	93.6	90	110			
Nitrate-N	4.70	0.500	5.000	0	94.0	90	110			
Sulfate	27.7	3.00	30.00	0	92.3	90	110			

Sample ID: 0604152-01A MS	Batch ID: R25960	TestNo: E300	Units: mg/L
SampType: MS	Run ID: IC_060422A	Analysis Date: 4/22/2006 4:39:42 PM	Prep Date: 4/22/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	2300	60.0	600.0	1752	90.7	90	110			

Sample ID: 0604152-01A MSD	Batch ID: R25960	TestNo: E300	Units: mg/L
SampType: MSD	Run ID: IC_060422A	Analysis Date: 4/22/2006 4:53:54 PM	Prep Date: 4/22/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	2300	60.0	600.0	1752	91.4	90	110	0.160	20	

Sample ID: CCV2-060422	Batch ID: R25960	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC_060422A	Analysis Date: 4/22/2006 5:22:19 PM	Prep Date: 4/22/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	18.8	1.00	20.00	0	94.1	90	110			
Nitrate-N	4.72	0.500	5.000	0	94.4	90	110			
Sulfate	27.8	3.00	30.00	0	92.8	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060425A

Sample ID: ICV-060425	Batch ID: R25970	TestNo: E300	Units: mg/L
SampType: ICV	Run ID: IC_060425A	Analysis Date: 4/25/2006 8:20:36 AM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	22.8	1.00	25.00	0	91.1	90	110			
Sulfate	69.0	3.00	75.00	0	92.0	90	110			

Sample ID: MB-060425	Batch ID: R25970	TestNo: E300	Units: mg/L
SampType: MBLK	Run ID: IC_060425A	Analysis Date: 4/25/2006 8:41:30 AM	Prep Date: 4/25/2006

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

Sample ID: LCS-060425	Batch ID: R25970	TestNo: E300	Units: mg/L
SampType: LCS	Run ID: IC_060425A	Analysis Date: 4/25/2006 8:55:43 AM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.06	1.00	10.00	0	90.7	90	110			
Sulfate	27.8	3.00	30.00	0	92.6	90	110			

Sample ID: LCSD-060425	Batch ID: R25970	TestNo: E300	Units: mg/L
SampType: LCSD	Run ID: IC_060425A	Analysis Date: 4/25/2006 9:09:55 AM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.06	1.00	10.00	0	90.6	90	110	0.110	20	
Sulfate	27.9	3.00	30.00	0	93.0	90	110	0.413	20	

Sample ID: CCV1-060425	Batch ID: R25970	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC_060425A	Analysis Date: 4/25/2006 1:20:50 PM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.27	1.00	10.00	0	92.7	90	110			
Sulfate	28.5	3.00	30.00	0	95.1	90	110			

Sample ID: 0604156-01A MS	Batch ID: R25970	TestNo: E300	Units: mg/L
SampType: MS	Run ID: IC_060425A	Analysis Date: 4/25/2006 1:38:39 PM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	309	10.0	100.0	206.7	102	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: IC_060425A

Sample ID: 0604156-01A MSD	Batch ID: R25970	TestNo: E300	Units: mg/L
SampType: MSD	Run ID: IC_060425A	Analysis Date: 4/25/2006 1:52:52 PM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	309	10.0	100.0	206.7	102	90	110	0.0240	20	

Sample ID: 0604168-02E MS	Batch ID: R25970	TestNo: E300	Units: mg/L
SampType: MS	Run ID: IC_060425A	Analysis Date: 4/25/2006 3:32:19 PM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	173	10.0	100.0	83.47	89.8	90	110			
Sulfate	574	30.0	300.0	297.0	92.4	90	110			

Sample ID: 0604168-02E MSD	Batch ID: R25970	TestNo: E300	Units: mg/L
SampType: MSD	Run ID: IC_060425A	Analysis Date: 4/25/2006 3:46:32 PM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	174	10.0	100.0	83.47	90.4	90	110	0.364	20	
Sulfate	576	30.0	300.0	297.0	92.9	90	110	0.245	20	

Sample ID: CCV2-060425	Batch ID: R25970	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC_060425A	Analysis Date: 4/25/2006 4:14:57 PM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.08	1.00	10.00	0	90.8	90	110			
Sulfate	27.8	3.00	30.00	0	92.6	90	110			

Sample ID: CCV3-060425	Batch ID: R25970	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC_060425A	Analysis Date: 4/25/2006 6:24:59 PM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.09	1.00	10.00	0	90.9	90	110			
Sulfate	28.0	3.00	30.00	0	93.4	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: PH_060424A

Sample ID: ICV	Batch ID: PH_W-04/24/06	TestNo: E150.1	Units: pH Units
SampType: ICV	Run ID: PH_060424A	Analysis Date: 4/24/2006 11:45:00 AM	Prep Date: 4/24/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	10.0	0	10.00	0	100	99	101			

Sample ID: 0604152-01B DUP	Batch ID: PH_W-04/24/06	TestNo: E150.1	Units: pH Units
SampType: DUP	Run ID: PH_060424A	Analysis Date: 4/24/2006 11:45:00 AM	Prep Date: 4/24/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.11	0	0	7.153				0.659	15	

Sample ID: CCV-060424	Batch ID: PH_W-04/24/06	TestNo: E150.1	Units: pH Units
SampType: CCV	Run ID: PH_060424A	Analysis Date: 4/24/2006 11:45:00 AM	Prep Date: 4/24/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.06	0	7.000	0	101	97.1	102.9			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_060426A

Sample ID: ICV-060426	Batch ID: R25990	TestNo: E310.1	Units: mg/L
SampType: ICV	Run ID: TITRATOR_060426A	Analysis Date: 4/26/2006 9:57:00 AM	Prep Date: 4/26/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	16.2	10.0	0							
Alkalinity, Carbonate (As CaCO3)	85.4	10.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0							
Alkalinity, Total (As CaCO3)	102	10.0	100.0	0	102	98	102			

Sample ID: LCS-060426	Batch ID: R25990	TestNo: E310.1	Units: mg/L
SampType: LCS	Run ID: TITRATOR_060426A	Analysis Date: 4/26/2006 10:10:00 AM	Prep Date: 4/26/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	50.8	10.0	50.00	0	102	74	129			

Sample ID: 0604152-01E DUP	Batch ID: R25990	TestNo: E310.1	Units: mg/L
SampType: DUP	Run ID: TITRATOR_060426A	Analysis Date: 4/26/2006 10:22:00 AM	Prep Date: 4/26/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	135	10.0	0	134.9				0.400	20	
Alkalinity, Carbonate (As CaCO3)	0	10.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	135	10.0	0	134.9				0.400	20	

Sample ID: CCV-060426	Batch ID: R25990	TestNo: E310.1	Units: mg/L
SampType: CCV	Run ID: TITRATOR_060426A	Analysis Date: 4/26/2006 11:03:00 AM	Prep Date: 4/26/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	21.3	10.0	0							
Alkalinity, Carbonate (As CaCO3)	79.8	10.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	10.0	0							
Alkalinity, Total (As CaCO3)	101	10.0	100.0	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 Dection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

ANALYTICAL QC SUMMARY REPORT

RunID: WC_060425A

Sample ID: ICV-060425	Batch ID: CONDW-04/25/06	TestNo: E120.1	Units: µmhos/cm
SampType: ICV	Run ID: WC_060425A	Analysis Date: 4/25/2006 3:50:00 PM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12900	10.0	12880	0	100	90	110			

Sample ID: LCS-060425	Batch ID: CONDW-04/25/06	TestNo: E120.1	Units: µmhos/cm
SampType: LCS	Run ID: WC_060425A	Analysis Date: 4/25/2006 3:50:00 PM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	1400	10.0	1413	0	99.1	93	109			

Sample ID: 0604152-01A DUP	Batch ID: CONDW-04/25/06	TestNo: E120.1	Units: µmhos/cm
SampType: DUP	Run ID: WC_060425A	Analysis Date: 4/25/2006 3:50:00 PM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	79800	100	0	81000				1.49	20	

Sample ID: CCV-060425	Batch ID: CONDW-04/25/06	TestNo: E120.1	Units: µmhos/cm
SampType: CCV	Run ID: WC_060425A	Analysis Date: 4/25/2006 3:50:00 PM	Prep Date: 4/25/2006

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12800	10.0	12880	0	99.1	90	110			

Qualifiers:

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

CLIENT: TRC Environmental Corp.
Work Order: 0604152
Project: RRC-West O'Daniel

MQL SUMMARY REPORT

TestNo: E300	MDL	MQL
Analyte	**mg/L**	**mg/L**
Bromide	0.3	1
Chloride	0.3	1
Nitrate-N	0.1	0.5
Sulfate	1	3

TestNo: SW6020	MDL	MQL
Analyte	**µg/L**	**µg/L**
Barium	3	10
Calcium	100	100
Iron	50	100
Magnesium	100	100
Potassium	100	100
Sodium	100	100

TestNo: SW8021B	MDL	MQL
Analyte	**µg/L**	**µg/L**
Benzene	0.8	2
Toluene	2	6
Ethylbenzene	2	6
Xylenes, Total	3	9

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

DHL ANALYTICAL

August 2, 2006

Steve Miller
TRC Environmental Corp.
505 East Hutland Drive
Suite 250
Austin, Texas 78752

TEL: (512) 329-6080
FAX: (512) 329-8750

RE: RRC-West O'Daniel
Amendment Number 1 for Work Order 0604152

Dear Steve,

DHL Analytical received 2 samples on 4/22/06 for the analyses presented in the following REVISED Data report. The duplicate results for the metals analyses for sample E-S-56-1 were corrected. Please replace these pages in the revised data package.

There is a total of 3 pages in Amendment Number 1.

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 test results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont
General Manager

DHL Analytical

Date: *02-Aug-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	E-S-56-1
Project:	RRC-West O'Daniel	**Lab ID:**	0604152-01
Project No:	46513-0000-00002	**Collection Date:**	4/21/2006 3:10:00 PM
Lab Order:	0604152	**Matrix:**	AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	4/30/2006 11:27:09 PM
Ethylbenzene	ND	2.00	6.00		µg/L	1	4/30/2006 11:27:09 PM
Toluene	ND	2.00	6.00		µg/L	1	4/30/2006 11:27:09 PM
Xylenes, Total	ND	3.00	9.00		µg/L	1	4/30/2006 11:27:09 PM
Surr: a,a,a-Trifluorotoluene	111	0	87-113		%REC	1	4/30/2006 11:27:09 PM
TRACE METALS: ICP-MS - WATER		**SW6020**					Analyst: **AJR**
Barium	77.9	3.00	10.0		µg/L	1	5/1/2006 3:00:00 PM
Calcium	1850000	100000	100000		µg/L	1000	5/2/2006 5:19:00 PM
Iron	64.2	50.0	100	J	µg/L	1	5/1/2006 3:00:00 PM
Magnesium	447000	10000	10000		µg/L	100	5/3/2006 1:43:00 PM
Potassium	172000	10000	10000		µg/L	100	5/3/2006 1:43:00 PM
Sodium	11600000	200000	200000		µg/L	2000	5/2/2006 5:25:00 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **DEW**
Bromide	57.1	3.00	10.0		mg/L	10	4/22/2006 2:54:59 PM
Chloride	22600	150	500		mg/L	500	4/25/2006 10:35:10 AM
Nitrate-N	14.0	1.00	5.00		mg/L	10	4/22/2006 2:54:59 PM
Sulfate	2190	20.0	60.0		mg/L	20	4/22/2006 4:25:29 PM
ALKALINITY		**E310.1**					Analyst: **JBC**
Alkalinity, Bicarbonate (As CaCO3)	135	10.0	10.0		mg/L	1	4/26/2006 10:17:00 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	10.0		mg/L	1	4/26/2006 10:17:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	10.0		mg/L	1	4/26/2006 10:17:00 AM
Alkalinity, Total (As CaCO3)	135	10.0	10.0		mg/L	1	4/26/2006 10:17:00 AM
PH		**E150.1**					Analyst: **JBC**
pH	7.15	0	0		pH Units	1	4/24/2006 11:45:00 AM
SPECIFIC CONDUCTANCE		**E120.1**					Analyst: **JBC**
Specific Conductance	81000	100	100		µmhos/cm	10	4/25/2006 3:50:00 PM

Qualifiers:

- ND - Not Detected at the SQL
- J - Analyte detected between SQL 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)
- SQL - Sample Quantitation Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical

Date: *02-Aug-06*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	TB-4-21-06-1
Project:	RRC-West O'Daniel	**Lab ID:**	0604152-02
Project No:	46513-0000-00002	**Collection Date:**	4/21/2006
Lab Order:	0604152	**Matrix:**	TRIP BLANK

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **KC**
Benzene	ND	0.800	2.00		µg/L	1	5/1/2006 12:21:08 AM
Ethylbenzene	ND	2.00	6.00		µg/L	1	5/1/2006 12:21:08 AM
Toluene	ND	2.00	6.00		µg/L	1	5/1/2006 12:21:08 AM
Xylenes, Total	ND	3.00	9.00		µg/L	1	5/1/2006 12:21:08 AM
Surr: a,a,a-Trifluorotoluene	107	0	87-113		%REC	1	5/1/2006 12:21:08 AM

Qualifiers:

ND - Not Detected at the SQL
J - Analyte detected between SQL 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)
SQL - Sample Quantitation Limit
E - TPH pattern not Gas or Diesel Range Pattern

APPENDIX F

ANALYTICAL DATA REVIEW/VALIDATION CHECKLISTS

Background

Thirteen water samples, two field duplicate samples, and three trip blanks were collected on April 13, 14, and 21, 2006 at the West O'Daniel Seep site in Howard County, Texas. These samples were submitted to DHL Analytical in Round Rock, Texas for analyses by the following methods:

- Benzene, toluene, ethylbenzene, and xylenes (BTEX) by SW846 Method 8021B
- Barium, calcium, iron, magnesium, potassium, and sodium by SW846 Method 6020
- Bromide, chloride, nitrate-N, sulfate (Anions) by USEPA Method 300.0
- Alkalinity by USEPA Method 310.1
- pH by USEPA Method 150.1
- Specific conductance by USEPA Method 120.1

TRC Quality Assurance (QA) staff reviewed resultant data on July 31 and August 1, 2006. Three separate data packages were reviewed to generate this document. Sample identifiers cross-referenced to laboratory identifications are presented in Table 1. Data were reviewed for compliance with the criteria presented in *Investigations and Abatement of Produced Water Impacts and Seeps to Surface Water in the Upper Colorado River Basin Upstream of Spence Reservoir (Segment 1411) Quality Assurance Project Plan* (Railroad Commission of Texas, September 9, 2005) (the QAPP). Items reviewed during the data validation process included the following:

- Sample integrity
- Sensitivity
- Blank analyses
- Spike recoveries
- Duplicate recoveries
- Completeness

The following is a discussion of the QC analyses performed with the site samples and any potential data limitations associated with the results of analyses.

Sample Preservation and Holding Times

Maximum holding times and sample preservation guidelines are established for each method to reduce the chance of generating results that are not representative of the original sample due to changes in analyte concentration. Adequate sample preservation is documented on chain-of-custody records. All sample preparation and analytical steps

were performed within specified holding times. No data interpretation issues are indicated.

Sensitivity

Reporting limits for several analytes are greater than QAPP-specified concentrations. In each instance, the sample required dilution to get a target analyte concentration within the upper half of the calibrated concentration range. All reporting limits associated with non-detected results are at or below QAPP-specified values. No data interpretation issues are indicated for sensitivity.

Blank Analyses

Blanks are analyzed to help ensure that reported concentrations of analytes of interest are not biased high due to contributions from sources outside the media (or the site) being investigated. The blanks analyzed as part of this event were laboratory method blanks and trip blanks.

Laboratory Method Blank—An aliquot of reagent water taken through the analytical process as though it were an actual sample. The purpose of method blank analyses is to monitor for laboratory sources of contamination.

Target analytes were not detected in the method blanks indicating that laboratory efforts to control internal sources of contamination were successful.

Trip Blanks— Aliquots of reagent water that are prepared in the laboratory, shipped to the site, and shipped back to the laboratory with the investigation or field samples. Trip blank results are used to assess potential cross contamination between samples during shipping and storage or contamination from outside sources present during sample collection or shipping. Trip blanks are usually only analyzed by volatile organics methods.

Target analytes were not detected in reported trip blank indicating that field samples were not contaminated with BTEX compounds during shipment and/or storage,

Spike Recoveries

Spiked samples are samples into which known amounts of analytes of interest have been added. Spike recoveries can be used to assess measurement accuracy. Laboratory control sample (LCS), matrix spike (MS), and surrogate spike analyses were included in the QC effort associated with the samples collected as part of this event.

Laboratory Control Samples—Target analytes are spiked at known concentrations into analyte-free water and processed (prepared and analyzed) with the project samples. This type of spiked sample is analyzed to assess the preparatory and analytical control of the laboratory in the absence of matrix effects.

All LCS recoveries fall within QAPP-defined limits indicating that measurement control was adequate at the time of sample analyses.

Matrix Spikes—A matrix spike (MS) sample is a field sample that is spiked at known concentrations with target analytes. Both spiked and un-spiked aliquots of this sample are analyzed. This type of spiked sample is analyzed to assess matrix effects for the specific sites associated with the investigation as well as on the preparatory and analytical procedures.

Sample S-MW-04-2 was analyzed as an MS/MSD pair for BTEX compounds, bromide, nitrate-N, sulfate, and chloride. Reported recoveries associated with these analyses are within QAPP-specified limits. These results are indicative of minimal matrix interferences with the accuracy of the listed target analytes in this sample.

Sample S-MW-04-2 was also analyzed as an MS/MSD pair for metals. Recoveries of calcium, magnesium, potassium, and sodium are greater than QAPP-specified control limits; however, the concentrations of these metals in the un-spiked sample are more than forty times the spiking concentration. No interpretation issues are indicated for calcium, magnesium, potassium, and sodium. Recoveries of barium are zero percent; however, the spiking concentration is less than the reporting limit (which is raised due to a dilution for high target analyte concentrations). Therefore, no data interpretation issues are indicated for barium.

Sample S-MW-03-1 was analyzed as an MS/MSD pair for sulfate. Recovery in the MS is within QAPP-specified limits, but recovery in the associated MSD is greater than acceptance criteria. No data interpretation issues are indicated since at least one recovery is within control limits.

Sample S-MW-06-1 was analyzed as an MS/MSD pair for BTEX compounds. Reported recoveries associated with these analyses are within QAPP-specified limits. These results are indicative of minimal matrix interferences with the accuracy of the listed target analytes in this sample.

Sample S-S-2-1 was analyzed as an MS/MSD pair for bromide, nitrate-N, and sulfate. Recoveries of bromide and nitrate-N are within QAPP-specified limits and are not indicative of matrix interferences. Recoveries of sulfate are extremely low (-53.8% and –53.2%) and are indicative of a very low bias in reported sulfate results in this sample. Since associated LCS recoveries are within limits, the low sulfate recoveries are likely due to matrix interferences. The extremely low bias should exclude the use of the reported sulfate result from being used for decision-making purposes.

Sample S-WW-53-1 was analyzed as an MS/MSD pair for sulfate. Reported recoveries associated with these analyses are within QAPP-specified limits. These results are indicative of minimal matrix interferences with the accuracy of the listed target analytes in this sample.

Sample S-MW-07-1 was analyzed as an MS/MSD pair for chloride, bromide, and nitrate-N. Reported recoveries associated with these analyses are within QAPP-specified limits. These results are indicative of minimal matrix interferences with the accuracy of the listed target analytes in this sample.

Sample E-S-56-1 was analyzed as an MS/MSD pair for BTEX compounds, bromide, nitrate-N, and sulfate. Reported recoveries associated with these analyses are within QAPP-specified limits. These results are indicative of minimal matrix interferences with the accuracy of the listed target analytes in this sample.

Surrogate Spikes—Surrogate spike compounds are added to each sample (including QC samples) analyzed for volatile organics. Surrogate spike recoveries provide sample-specific information regarding extraction and analysis efficiency. Surrogate spikes are compounds that are chemically similar to the target analytes but are not expected to be found in environmental media. Acceptance criteria for surrogate recoveries are those limits specified by the laboratory. Surrogate recoveries are reported in association with BTEX analyses only.

All field sample surrogate recoveries fall within laboratory-derived acceptance criteria indicating that extraction and analysis efficiency was adequate for these samples.

Duplicate Sample Analyses

Measurement precision can be estimated by calculating the relative percent difference (RPD) between recoveries of the corresponding duplicate samples. The analysis of duplicate LCS analyses, duplicate MS analyses, laboratory duplicates, and field duplicates were included in the QC effort associated with the samples collected in this event as well as field duplicate analyses.

Laboratory Control Sample Duplicates—A laboratory control sample duplicate is a second laboratory-spiked aliquot of a blank matrix. LCS/LCSD pairs provide an indication of measurement variability in sample preparation and analysis in the absence of potential matrix effects. LCS/LCSD pairs are reported in association with metals analytical batches 21931, 21946, and 22030 as well as anion analytical batches R25875, R25871, R25960, and R25970.

All reported RPD values fall within laboratory-specified limits indicating adequate precision in the absence of potential matrix interferences.

Matrix Spike Duplicates—A matrix spike duplicate is a second spiked aliquot of a single field sample. The matrix spike/matrix spike duplicate (MS/MSD) pairs provide an indication of measurement variability in sample preparation and analysis given the presence of matrix effects.

All reported RPD values for MS/MSD pairs are within laboratory-derived limits indicating adequate precision in the presence of potential matrix interferences.

Laboratory Duplicates—A laboratory duplicate is a duplicate analysis of a field sample initiated in the laboratory to satisfy a method, procedural, or policy requirement. The client does not request laboratory duplicate analyses and a separate sample is not collected. Laboratory duplicate pairs provide an added indication of measurement variability in sample preparation and analysis as well as sample collection procedures given the presence of potential matrix effects. Acceptance criteria are those in the QAPP for MS/MSD analyses

Sample S-MW-04-2 was analyzed as laboratory duplicates for pH, alkalinity, and specific conductance. Reported RPD values are within QAPP-specified limits indicating adequate precision in the presence of potential matrix interferences.

Sample S-MW-06-1 was analyzed as a laboratory duplicate for pH. The reported RPD value is within QAPP-specified limits indicating adequate precision in the presence of potential matrix interferences.

Sample S-S-2-1 was analyzed as a laboratory duplicate for alkalinity and specific conductance. Reported RPD values are within QAPP-specified limits indicating adequate precision in the presence of potential matrix interferences.

Sample E-S-56-1 was analyzed as a laboratory duplicate for pH, alkalinity, and specific conductance. The reported RPD value is within QAPP-specified limits indicating adequate precision in the presence of potential matrix interferences.

Field Duplicates—A field duplicate is a second field sample taken as close in space and time as another sample. Field duplicate pairs provide an indication of measurement variability in sample preparation and analysis as well as sample collection procedures given the presence of potential matrix effects.

Sample S-MW-02-2 was collected as a field duplicate of sample S-MW-02-1. Calculated RPD values are presented in Table 2. The RPD value for iron is greater than expected and is indicative of excessive variability in reported results.

Sample S-MW-04-2 was collected as field duplicate of sample S-MW-04-1. Calculated RPD values are presented in Table 3. All calculated RPD values are within QAPP-specified limits indicating adequate precision in the presence of potential matrix interferences for this sample.

Completeness

All submitted samples were analyzed for all requested analytes. The total number of requested analytical results is 312. One analytical result is rejected (i.e., the sulfate result in sample S-S-2-1 is rejected based on MS/MSD recoveries). Therefore, completeness for the field effort is calculated to be 100% while completeness for the laboratory effort is calculated as 99.7%. The QAPP-specified field completeness objective of 90% is met as well as the laboratory completeness objective of 95%.

Other Issues

Federal Express delivered samples associated with DHL work order 0604091 to the incorrect laboratory. The other laboratory opened the coolers prior to discovering the mistake. Once the delivery error was realized, samples were re-packaged and arrangements were made to get the shipment to the proper laboratory. The laboratory documented that sample integrity had not been compromised. The situation is documented in a Corrective Action Report (CAR) included in Attachment A of this evaluation.

DHL discovered that some containers for work order 0604091 were incorrectly labeled based on matching label information with chain-of-custody information as well as noticing the way samples were segregated in the cooler. DHL personnel contacted TRC personnel to confirm correct sample identities. It was confirmed by the TRC sample collection team that sample times should be used as the primary sample identifier. This issue is documented in a CAR included in Attachment A of this evaluation.

Conclusions

QC data associated with laboratory measurements indicate that measurement data are defensible and that measurement data reliability is generally within expected limits of sampling and analytical error given the data interpretation issues identified in this evaluation.

The data user is advised that, based on MS/MSD recoveries, the reported concentration of sulfate in sample S-S-2-1 includes an extreme low bias and should not be used for decision-making purposes. It should also be noted that the low sulfate bias is likely only to apply to sample S-S-2-1 since other samples in this project were analyzed as MS/MSD pairs for sulfate and exhibit compliant recoveries.

Table 1: Cross-Reference of Field Sample Identifications and Laboratory Identifications

Sample Identifier	Collection Date	Matrix	Lab Identifier
E-MW-06-1	4/13/06	Aqueous	0604091-01
S-MW-02-1	4/13/06	Aqueous	0604091-02
S-MW-02-2	4/13/06	Aqueous	0604091-03
S-MW-04-1	4/13/06	Aqueous	0604091-04
S-MW-04-2	4/13/06	Aqueous	0604091-05
S-MW-BEG11-1	4/13/06	Aqueous	0604091-06
S-MW-03-1	4/13/06	Aqueous	0604091-07
Trip Blank 4-13-06	4/13/06	Aqueous	0604091-08
S-MW-06-1	4/14/06	Aqueous	0604098-01
S-MW-07-1	4/14/06	Aqueous	0604098-02
S-WW-53-1	4/14/06	Aqueous	0604098-03
S-MW-05-1	4/14/06	Aqueous	0604098-04
E-S-55-1	4/14/06	Aqueous	0604098-05
S-S-1-1	4/14/06	Aqueous	0604098-06
S-S-2-1	4/14/06	Aqueous	0604098-07
Trip Blank 4/14/06	4/14/06	Aqueous	0604098-08
E-S-56-1	4/21/06	Aqueous	0604152-01
TB-4-21-06-1	4/21/06	Aqueous	0604152-02

Table 2: Calculated RPD Values for Field Duplicate Analyses of Sample S-MW-02-1

Analyte	Results		Units	RPD
	S-MW-02-1	S-MW-02-2		
Benzene	1.29	ND	µg/L	NC
Ethylbenzene	ND	ND	µg/L	NC
Toluene	ND	ND	µg/L	NC
Xylenes, total	ND	ND	µg/L	NC
Barium	95.9	105	µg/L	9
Calcium	3980000	3990000	µg/L	0.25
Iron	1970	5480	µg/L	**94**
Magnesium	1210000	1200000	µg/L	0.83
Potassium	30700	30900	µg/L	0.65
Sodium	9410000	9440000	µg/L	0.32
Bromide	56.5	56.7	mg/L	0.35
Chloride	23700	24300	mg/L	2
Nitrate-N	ND	ND	mg/L	NC
Sulfate	2130	2140	mg/L	0.47
Alkalinity, Bicarbonate	259	259	mg/L	0
Alkalinity, Carbonate	ND	ND	mg/L	NC
Alkalinity, Hydroxide	ND	ND	mg/L	NC
Alkalinity, Total	259	259	mg/L	0
pH	6.45	6.47	pH Units	0.31
Specific Conductance	73100	74000	µmhos/cm	1

Bold font indicates an RPD value that is greater than expected (RPD > 30%).

NC Not Calculated
ND Not detected
RPD Relative Percent Difference

Table 3: Calculated RPD Values for Field Duplicate Analyses of Sample S-MW-04-1

Analyte	Results		Units	RPD
	S-MW-04-1	S-MW-04-2		
Benzene	8.30	6.92	µg/L	18
Ethylbenzene	ND	ND	µg/L	NC
Toluene	ND	ND	µg/L	NC
Xylenes, total	ND	ND	µg/L	NC
Barium	223	224	µg/L	0.45
Calcium	3230000	3250000	µg/L	0.62
Iron	1750	1890	µg/L	8
Magnesium	728000	756000	µg/L	4
Potassium	207000	214000	µg/L	3
Sodium	14200000	16000000	µg/L	12
Bromide	69.2	74.9	mg/L	8
Chloride	29600	29600	mg/L	0
Nitrate-N	29.4	33.7	mg/L	14
Sulfate	2780	2850	mg/L	2
Alkalinity, Bicarbonate	180	181	mg/L	0.55
Alkalinity, Carbonate	ND	ND	mg/L	NC
Alkalinity, Hydroxide	ND	ND	mg/L	NC
Alkalinity, Total	180	181	mg/L	0.55
pH	6.67	6.65	pH Units	0.30
Specific Conductance	90500	90800	µmhos/cm	0.33

Bold font indicates an RPD value that is greater than expected (RPD > 30%).

NC Not Calculated

ND Not detected

RPD Relative Percent Difference

Attachment A

West O'Daniel Seep Data Evaluation

Review Checklists/Corrective Action Reports

Analytical Data Review / Validation Checklist

Date of Review:	**7/31/2006**	Work Order:	**0604091**
Reviewed By:	**Steve Miller**	Analytical Method:	**8021B-6020-300.0-310.1-150.1-120.1**
Client/Project:	**RRC-West O'Daniel Seep**	Matrix:	**Aqueous**
Data From:	**DHL Analytical**		

Reviewer's Signature/Date:

Question	Answer	Comment
1. Did samples arrive at the laboratory appropriately preserved?	Yes	
2. Were hold times met?	Yes	
3. Are results reported for all target analytes, with no additional analytes?	Yes	
4. Was the analytical method followed?	Yes	
5. Do reported detection limits (or reporting limits) agree with project specifications (QAPP or Work Plan)?	No	Several RLs high. These are all due to dilutions for high concentrations. NDs OK. No interpretation issues indicated.
6. Are results reported for all samples submitted for analysis?	Yes	
7. Were initial and continuing instrument calibration analyses performed? and reported?	Yes	
8. Are results provided for a method blank for each analytical batch?	Yes	
9. Are results provided for a LCS/LCSD pair for each analytical batch?	Yes	
10. Are results provided for a MS/MSD pair for every batch - or are results provided for every 20 field samples?	Yes	
11. Are field duplicate results provided at the project-specified (QAPP or Work Plan) frequency?	Yes	High RPD for iron in S-MW-02-1.
12. Organic Analyses Only: For each field sample (field and QC), are surrogate spike results provided?	Yes	
13. Do method blanks show no detectable cocentrations of target analytes?	Yes	
14. Are LCS/LCSD recoveries and RPDs within limits?	Yes	
15. Are MS/MSD recoveries and RPDs within limits?	No	Several metals out in S-MW-04-2. More than 40 times spiking concentration or spiked at less than RL. No interpretation issues indicated.
16. Are surrogate recoveries within limits?	Yes	
17. The laboratory did not issue any CARs?	Yes	Cooler delivered to wrong lab. Some samples labeled incorrectly. See attached CARs.
18. The analyst did not describe any analytical anomalies?	Yes	
19. No other potential data quality issues were identified?	Yes	

Corrective Action Report

Site:

West O'Daniel

Nonconforming Activity/Item:

FedEx delivered cooler containing samples to STL-Austin, not DHL. Cooler was properly addressed. Cooler was opened by STL personnel who then noticed the delivery error. DHL personnel were notified and ultimately picked up the cooler.

Root Cause(s):

FedEx error.

Potential Impact(s):

Chain-of-custody might be broken.

First Reported By:	**Date:**
Reported by John Dupont (DHL) to Steve Miller (TRC)	4/14/06

Action(s) to Prevent Recurrence

Action	Responsible Individual(s)	Timetable

Documentation Requirement(s):

Statement by STL that sample integrity was not compromised between the time the cooler was opened and pick up by DHL.

Further Comments:

See attached documentation.

Miller, Steve

From: Voigt, Linda [LVoigt@stl-inc.com]
Sent: Friday, April 14, 2006 1:40 PM
To: Miller, Steve
Cc: Laster, Richard; Voigt, Linda
Subject: TRC Misdirected Shipment to DHL

_0414142118_001.pdf

Hi Steve,

As discussed there was a misdirected sample shipment that was received at STL Austin today. Please note that that the integrity of these samples was not compromised while at STL Austin. I have attached our COC addendum to document this. The samples were pickup up by DHL. If you need other information regarding sample integrity please check DHL.

Thanks,
Linda

Linda Voigt

Customer Service Manager

STL Austin

Phone: 512-310-5202

Cell: 512-576-9276

Leaders in Environmental Testing

<<_0414142118_001.pdf>>

SEVERN TRENT STL

CHAIN-OF-CUSTODY ADDENDUM

Lot No: _____

RECEIVED BY: WA

COC NUMBER: _____

DATE/TIME RECEIVED: 4/14/06 0900

QUOTE/PROFILE: _____

UNPACKED DATE/TIME: 4/14/06 0930

CLIENT/PROJECT: TRC

SAMPLES LOGGED IN: _____ LOG-IN REVIEWED: _____

Number of Shipping Containers Received with Chain of Custody 1

VOC AIR / FILTER SAMPLES ☐ YES **SEE SECTIONS 1.0, 2.0, & 6.0**

1.0 CONTAINERS EXAMINED UPON RECEIPT: WA

Container Sealed: ☑ YES ☐ NO — Custody Seal Signed/Dated: ☑ YES ☐ NO

Custody Seal Present: ☑ YES ☐ NO — Containers checked for radioactivity: ☐ YES ☐ NO ☑ N/A

If seal not intact or Geiger counter reading >0.5 mR/hr, list air bill number of that container(s): _____

2.0 VOC CANISTERS EXAMINED UPON RECEIPT: _____

Canister Valves Closed:	☐ YES	☐ NO	Samples Received Match Chain:	☐ YES	☐ NO
Canister Valves Capped:	☐ YES	☐ NO	Other Equipment Received:	☐ YES	☐ NO
Valve Cap Tightened Properly:	☐ YES	☐ NO	See Additional Comments (Section 5.0 and / or 7.0)	☐ YES	☐ NO
Packing Material Used: (circle)			Chain-of-Custody form properly maintained:	☐ YES	☐ NO

None / Absorbent / Paper / Bubble Wrap — Can Size: ☐ 6L ☐ 15L Other _____

3.0 SAMPLE TEMPERATURE UPON RECEIPT BY: WA **IR THERMOMETER #:** Pist

Temperature of the container(s):

Circle selection: TB = Temp. Blank and/or SC = Sample Container *[acceptable tolerance 4.0°C ± 2.0°; (NC, WI: 1-4.4°C)]*

TB	TB	TB	TB	TB	TB	TB	TB	TB	TB
SC 4.2	SC	SC	SC	SC	SC	SC	SC	SC	SC

If temperature is outside acceptable tolerance, Project Manager was notified (_____PM). Date: _____ Time: _____

Samples received do not require cooling _____ OK to analyze samples: ☑ YES ☐ NO

PRESERVATION OF SAMPLES REQUIRED: ☐ NA ☑ YES **VERIFIED BY:** WA

Base samples are>pH 12: ☐ YES ☐ NO — Acid preserved are<pH 2: ☑ YES ☐ NO

Cyanide samples checked for sulfides: ☐ YES — Sulfide samples appear to be preserved with zinc acetate: ☐ YES ☐ NO

Samples checked for chlorine per specification (N.C.) ☐ YES — Free chlorine present: ☐ YES ☐ NO

If sample preservation is outside acceptable tolerance, Project Manager was notified (_____PM)

Date: _____ Time: _____ ☐ see pH adjustment form

VOLATILE SAMPLES FILLED COMPLETELY, IF NOT, LIST ID AND HEADSPACE OF VOA's CONTAINING BUBBLES EXCEEDING 6MM IN DIAMETER:

Sample ID	mm Headspace

Sample ID	mm Headspace

4.0 CONDITION OF BOTTLES/CONTAINERS VERIFIED BY: _____

Samples received match COC:	☐ YES ☑ NO	Bottles received intact:	☐ YES ☐ NO
See additional discrepancies/comments section:	☑ YES ☐ NO	Samples received from USDA restricted area:	☐ YES ☑ NO
Chain-of-Custody form properly maintained:	☑ YES ☐ NO	VOA trip blanks included: 2 x 40ml	☑ YES ☐ NO ☐ N/A

5.0 ADDITIONAL DISCREPANCIES

Appears on COC		Appears on Label		
Sample ID	**Date/Time**	**Sample ID**	**Date/Time**	**Comments**
S-MW-04-2	4/13/04 1410	S-MW-02-2	4/13/04 1410	1 Qt per COC

6.0 SHIPPING DOCUMENTATION:

Air/freight bill is available and attached to COC: ☑ YES ☐ NO Air bill #: _____

Hand-delivered Carrier: _____ Date: _____ Time: _____

7.0 OTHER COMMENTS:

_____

_____

_____

_____

_____

_____

CORRECTIVE ACTION:

Client's Name: _____ Informed verbally on: _____ By: _____

Client's Name: _____ Informed verbally on: _____ By: _____

Sample(s) processed "as is" comments: _____

_____

_____

_____

Samples(s) on hold until: _____ If released, notify: _____

REVIEW:

Project Management: _____ Date: _____

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

Corrective Action Report

Site:

West O'Daniel

Nonconforming Activity/Item:

Samples for several "S-MW-04-2" containers labeled as "S-MW-02-2". All label suspect times match "S-MW-04-2". Determined at the laboratory by matching samples listed on chain-of-custody forms with actual containers. Also, samples segregated in zip-lock bags by location.

Root Cause(s):

Improper information written on label by field personnel.

Potential Impact(s):

Results for incorrectly labeled samples could be erroneously reported by the laboratory. Data end user could make decisions based on improperly located data.

First Reported By:	**Date:**
Reported by John Dupont (DHL) to Steve Miller (TRC)	4/14/06

Action(s) to Prevent Recurrence

Action	Responsible Individual(s)	Timetable
Discuss with sampling team.	Arsin Sahba	Prior to next sampling event
If present, second person should check sample labels prior to shipping.	Collection Team	All future events

Documentation Requirement(s):

Written documentation (email) from Arsin Sahba (TRC) that labelling discussed with collection team.

Field logbook should indicate through signature that a second person, if available, checked sample labels.

Further Comments:

Steve Miller (TRC) contacted Matt Webre (TRC) immediately (4/14/06) and confirmed that collection times should be used to identify samples. Forwarded this information on to John Dupont (DHL).

Analytical Data Review / Validation Checklist

Date of Review:	**8/1/2006**	Work Order:	**0604098**
Reviewed By:	**Steve Miller**	Analytical Method:	**8021B-6020-300.0-310.1-150.1-120.1**
Client/Project:	**RRC-West O'Daniel Seep**	Matrix:	**Aqueous**
Data From:	**DHL Analytical**		

Reviewer's Signature/Date:

Question	Answer	Comment
1. Did samples arrive at the laboratory appropriately preserved?	Yes	
2. Were hold times met?	Yes	
3. Are results reported for all target analytes, with no additional analytes?	Yes	
4. Was the analytical method followed?	Yes	
5. Do reported detection limits (or reporting limits) agree with project specifications (QAPP or Work Plan)?	No	Several RLs high. These are all due to dilutions due to high concentrations. NDs OK. No interpretation issues.
6. Are results reported for all samples submitted for analysis?	Yes	
7. Were initial and continuing instrument calibration analyses performed? and reported?	Yes	
8. Are results provided for a method blank for each analytical batch?	Yes	
9. Are results provided for a LCS/LCSD pair for each analytical batch?	Yes	
10. Are results provided for a MS/MSD pair for every batch - or are results provided for every 20 field samples?	Yes	
11. Are field duplicate results provided at the project-specified (QAPP or Work Plan) frequency?	Not Applicable	Field duplicate not reported in this work order.
12. Organic Analyses Only: For each field sample (field and QC), are surrogate spike results provided?	Yes	
13. Do method blanks show no detectable cocentrations of target analytes?	Yes	
14. Are LCS/LCSD recoveries and RPDs within limits?	Yes	
15. Are MS/MSD recoveries and RPDs within limits?	No	Very low sulfate %Rs in sample S-S-2-1.
16. Are surrogate recoveries within limits?	Yes	
17. The laboratory did not issue any CARs?	Yes	
18. The analyst did not describe any analytical anomalies?	Yes	
19. No other potential data quality issues were identified?	Yes	

Analytical Data Review / Validation Checklist

Date of Review:	**8/1/2006**	Work Order:	**0604152**
Reviewed By:	**Steve Miller**	Analytical Method:	**8021B-6020-300.0-310.1-150.1-120.1**
Client/Project:	**RRC-West O'Daniel Seep**	Matrix:	**Aqueous**
Data From:	**DHL Analytical**		

Reviewer's Signature/Date:

Question	Answer	Comment
1. Did samples arrive at the laboratory appropriately preserved?	Yes	
2. Were hold times met?	Yes	
3. Are results reported for all target analytes, with no additional analytes?	Yes	
4. Was the analytical method followed?	Yes	
5. Do reported detection limits (or reporting limits) agree with project specifications (QAPP or Work Plan)?	No	Several RLs high. These are all due to dilutions due to high concentrations. All NDs OK. No interpretation issues.
6. Are results reported for all samples submitted for analysis?	Yes	
7. Were initial and continuing instrument calibration analyses performed? and reported?	Yes	
8. Are results provided for a method blank for each analytical batch?	Yes	
9. Are results provided for a LCS/LCSD pair for each analytical batch?	Yes	
10. Are results provided for a MS/MSD pair for every batch - or are results provided for every 20 field samples?	Yes	
11. Are field duplicate results provided at the project-specified (QAPP or Work Plan) frequency?	Not Applicable	Field duplicate not reported in this work order.
12. Organic Analyses Only: For each field sample (field and QC), are surrogate spike results provided?	Yes	
13. Do method blanks show no detectable cocentrations of target analytes?	Yes	
14. Are LCS/LCSD recoveries and RPDs within limits?	Yes	
15. Are MS/MSD recoveries and RPDs within limits?	Yes	
16. Are surrogate recoveries within limits?	Yes	
17. The laboratory did not issue any CARs?	Yes	
18. The analyst did not describe any analytical anomalies?	Yes	
19. No other potential data quality issues were identified?	Yes	