

LIMITED SITE INVESTIGATION

Ballinger Seep Ballinger, Runnels County, Texas

Terracon Project No. 94057272B
August 28, 2007

Prepared for:

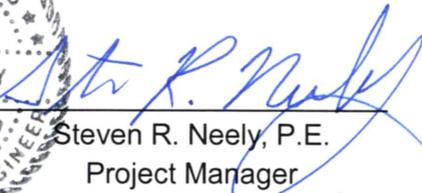
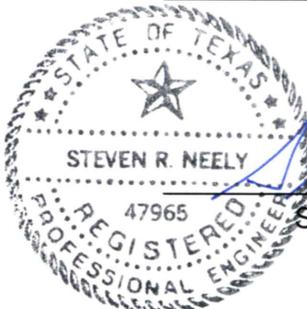
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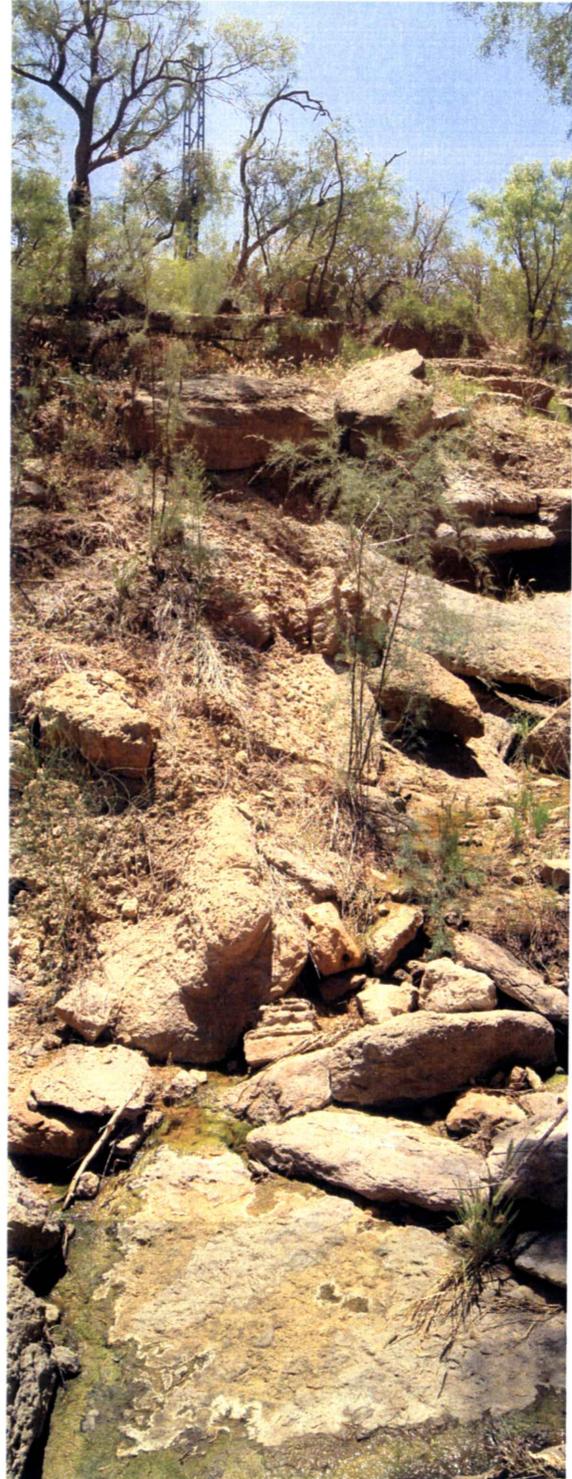


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LIMITED SITE INVESTIGATION

BALLINGER SEEP BALLINGER, RUNNELS COUNTY, TEXAS

Terracon Project No. 94057272B
August 28, 2007

1.0 INTRODUCTION

1.1 Site Background

Salinity in the Upper Colorado River Basin has been identified as a major water quality problem by the Texas Commission on Environmental Quality (TCEQ). Occurrences of poor quality water in Segment 1426 (Colorado River below E.V. Spence Reservoir) due to elevated salinity levels have been documented from numerous sources. Possible sources include activity associated with oil and gas operations such as improperly completed oil and gas wells, abandoned, unplugged oil and gas wells, wells that are improperly or inadequately plugged, saltwater injection and/or disposal wells, failed gathering and transporting pipelines, historical evaporation pit locations, abandoned surface facilities and natural sources.

The TCEQ has placed Segment 1426 of the Upper Colorado River on the State's 303(d) list of impaired surface water bodies. Figure 1 presents a Topographic Map of the project area. A mutual objective of the Railroad Commission of Texas (RRC) and the TCEQ is to locate sources of salinity and reduce the high salinity that contributes to water quality degradation. The RRC has received a Grant from the U.S. Environmental Protection Agency (EPA) to perform investigations and abatement of produced water impacts and seeps to surface water in Runnels and Coke Counties, Texas (Colorado River Segment 1426 Downstream of Spence Reservoir).

The RRC was first notified of the Ballinger seep via a complaint (Complaint No. 7C-2042) from the property owner, Mr. Jim Studer, on August 2, 1998. The Ballinger seep was observed to be flowing into a tributary of Segment 1426 of the Colorado River. The RRC conducted an investigation to identify the source of the seep and identified H&R Oils, Inc., Johnnie H. Barr Lease, Well No. 3 (Terracon ID No. 2 on Figure 2) as a potential source of the seep. This well was subsequently plugged by the RRC with state funds (Plugging Code No. 7C-10146) on August 11, 1998. As discussed in Section 2.1, RRC records indicate that based on observations during the plugging operations, it was concluded that this well was not contributing to the saltwater flow into the tributary.

During plugging activities associated with the H&R Oils Well No. 3, RRC personnel discovered the M. H. Wolverton, C. H. Willingham Lease, Well No. 1 (Terracon ID No. 1 on Figure 2), which appeared to be the source of the seep based upon visual observation of the presence of salt crystals on the ground surface covering an approximate 15 ft x 150 ft area from the Wolverton Well

No. 1 toward the tributary. This well was determined to have been an uncased cable tool dry hole which was drilled in 1935. The Wolverton Well No. 1 is located approximately 350 feet from the seep and was believed to be a source of the seep. The Wolverton Well No. 1 was subsequently plugged by the RRC with state funds (Plugging Code No. 7C-10154) on August 28, 1998. Mr. Ronnie Pollard with the RRC District 7C office reported to Terracon that during plugging activities, saltwater was observed at a depth of approximately 28 feet below the ground surface (bgs) in this well.

The Ballinger seep was identified by the RRC as a potential source of high salinity in the Colorado River since discharge from the Ballinger seep flows into a tributary of Segment 1426 of the Colorado River. Prior to plugging activities, RRC records indicated the chloride concentration in water from the seep was 58,000 milligrams per liter (mg/L). Measurements obtained approximately 3 to 4 years ago by the RRC reportedly indicated a chloride concentration of approximately 3,000 mg/L. According to RRC personnel, the seep appears to have decreased since plugging of the Wolverton Well No. 1; however, RRC personnel do not believe the plugging activities were completely successful due to the presence of metal debris that was left in the well bore.

Prior to conducting the Limited Site Investigation (LSI), Terracon performed a site visit in May 2005 to evaluate the seep and identify potential sample locations. Terracon initially observed a seep area in the upper portion of the tributary (upper seep), approximately 350 feet west-northwest of the Wolverton Well No. 1. Additionally, an apparent seep area was observed in the lower portion of the tributary (lower seep), approximately 600 feet northwest of the Wolverton Well No. 1. During the LSI activities in July-August 2006, Terracon observed that the upper seep was no longer active. This may have been due to the dry weather conditions. The lower seep was observed to be actively seeping in July-August 2006. During subsequent LSI activities performed by Terracon in April-May 2007, both the upper seep and lower seep areas were observed to be active. This appears to be attributable to the increased precipitation in the site area in the early part of 2007.

Figure 1 presents the general topography of the site on portions of the USGS topographic quadrangle map of Ballinger, Texas. Figure 2 is an aerial photograph of the site and surrounding area that indicates the approximate locations of pertinent site features (Appendix A).

1.2 Scope of Work

Terracon Consultants, Inc. (Terracon) conducted a Limited Site Investigation (LSI) at the Ballinger seep. The scope of work was based on Terracon's Work Orders for the site dated April 13, 2006 and March 28, 2007.

The objective of the work described herein was to identify and investigate the potential source(s) of the Ballinger seep and its hydraulic connection to the associated tributary into which it flows. Items completed to meet the objective included:

- Reviewing geologic information for the area and RRC records (i.e. well completion, plugging workover data and pits).
- Drilling and sampling soil borings near the potential source area(s) and in up- and down-gradient locations relative to the seep.
- Installing groundwater monitor wells and collecting water samples up- and down-gradient of the seep and apparent source area(s).
- Sampling water from the seep for water quality and quantity.
- Sampling water from the tributary and Colorado River for water quality.
- Preparing a report of site investigation activities together with recommendations for abatement of the seep, or further investigation, if warranted.

The scope of work was performed in general accordance with the RRC Quality Assurance Project Plan (QAPP) entitled *Investigations and Abatement of Produced Water Impacts and Seeps to Surface Water in the Upper Colorado River Basin Downstream of Spence Reservoir (Segment 1426)*, dated December 16, 2005 (July-August 2006 investigation activities) and revised February 1, 2007 (April-May 2007 investigation activities).

1.3 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work as presented in the final work orders dated April 13, 2006 and March 28, 2007.

1.4 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this LSI. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.5 Reliance

This report has been prepared for the exclusive use of the Railroad Commission of Texas, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of the Railroad Commission of Texas and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in our contract for professional services with the Railroad Commission and this LSI report.

2.0 FIELD ACTIVITIES

2.1 Records Review

Prior to conducting field activities, Terracon reviewed records for oil and gas wells present within an approximate one-half mile radius of the site. Historical aerial photographs and geologic maps of the area were reviewed as well. A site visit was performed by Terracon in May 2005 to observe the seep, evaluate potential sources of the seep, and determine appropriate locations and methods for the installation of soil borings/monitor wells. At the time of the site visit, Terracon discussed the project with local RRC personnel familiar with the seep and reviewed records available at the RRC District 7C office in San Angelo, Texas.

Oil and Gas Well Records

Terracon obtained a map of oil and gas wells for the Ballinger quadrangle from the RRC and reviewed data for oil and gas wells present within an approximate one-half mile radius of the site. Well data was obtained from RRC Central Records in Austin, Texas, and was supplemented with selected records available at the RRC District 7C office in San Angelo, Texas. Additional records reviewed at RRC Central Records included available records for disposal pits, injection wells and hearing files for the site area. A list of the oil and gas wells and summary of pertinent data identified from the records review is provided in Table 14 in Appendix C. The approximate locations of these wells (interpolated from RRC maps and site observations) are shown on Figures 1 and 2.

When first notified of the seep in 1998, the RRC conducted an investigation to identify the source of the seep and identified H&R Oils, Inc., Johnnie H. Barr Lease, Well No. 3 (Terracon ID No. 2 on Figure 2) as a potential source of the seep. This well was subsequently plugged by the RRC with state funds (Plugging Code No. 7C-10146) on August 11, 1998. RRC records indicate that based on observations during the plugging operations, it was determined that this well was not contributing to the saltwater flow into the tributary.

During plugging activities associated with the H&R Oils, Inc., Well No. 3, RRC personnel discovered the M. H. Wolverton, C. H. Willingham Lease, Well No. 1 (Terracon ID No. 1 on Figure 2), which appeared to be the source of the seep based upon visual observation of the presence of salt crystals on the ground surface covering an approximate 15 ft x 150 ft area from the Wolverton Well No. 1 toward the tributary. This well was determined to have been an uncased cable tool dry hole which was drilled in 1935. This well is located approximately 350 feet from the seep and was believed to be a source of the seep. The Wolverton Well No. 1 was subsequently plugged by the RRC with state funds (Plugging Code No. 7C-10154) on August 28, 1998. During plugging activities, saltwater was reportedly observed at a depth of approximately 28 feet bgs in this well.

Prior to plugging activities, RRC records indicated the chloride concentration in water from the seep was 58,000 milligrams per liter (mg/L). The Ballinger seep was therefore identified as a potential source of high salinity in the Colorado River since discharge from the Ballinger seep flows into a tributary of Segment 1426 of the Colorado River. Measurements obtained approximately 3 to 4 years ago by the RRC reportedly indicated a chloride concentration of approximately 3,000 mg/L in water from the seep. According to RRC personnel, the seep appears to have decreased in magnitude since plugging of the Wolverton Well No. 1; however, RRC personnel don't believe the plugging activities were completely successful due to the presence of metal debris that was left in the well bore.

Metal debris was encountered at a depth of approximately 182 feet bgs in this well during plugging activities. Following repeated attempts to drill through the debris, the well bore was drilled out to a depth of 182 feet bgs utilizing a 7 7/8-inch drill bit. During re-entry of the well bore, a small saltwater flow was encountered and continued to increase to a rate of approximately three barrels per hour as the well bore was drilled out. A 4 1/2-inch casing was cemented in the well bore from 164 feet bgs to the surface. A tubing packer was set at a depth of 126 feet bgs and 53 sacks of cement were squeezed below the packer. The packer was released the following day and no water flow was observed. A cement plug was subsequently set from 127 feet to the surface.

Two other wells, Pan American Petroleum Corp., Barr Gas Unit Lease, Well No. 1 and H&R Oils, Inc., Johnnie H. Barr Lease, Well No. 4 (Terracon ID Nos. 3 and 4, respectively, on Figure 2) were identified in relatively close proximity and topographically up-gradient of the seep. The Pan American Well No. 1 is located on the opposite (west) side of the tributary from the seep. Terracon may have identified the former location of this well during the initial site reconnaissance. An area of bare vegetation that may have been related to this well was identified in close proximity to the well location shown on the RRC maps. Terracon did not observe surficial evidence of seepage from this well, and there were no apparent seep areas identified down-gradient from this location. This well was reportedly plugged in 1966; however, a copy of the well plugging report could not be located.

The H&R Oils, Inc., Well No. 4 was plugged in 1984. A copy of the plugging report indicated that five plugs were placed in this well at the following depth intervals: 1) 3,600 feet to 3,450 feet, 2)

1,000 feet to 840 feet, 3) 840 feet to 690 feet, 4) 212 feet to 92 feet, and 5) 15 feet to 3 feet.

Based on review of available RRC file information, conversations with RRC personnel, site observations and an evaluation of field and laboratory data, it appears that the Wolverton Well No. 1 (Terracon ID No. 1 on Figure 2) is the likely source of the Ballinger seep.

Site Geology

Review of the *Soil Survey of Runnels County, Texas*, dated March 1970, indicates site soils consist of the Talpa-Kavett complex and the Colorado and Yahola soils. The Talpa clay loam and Kavett silty clay are very shallow soils situated over hard limestone and yellow marl. In areas where limestone crops out, these soils are stony and gravelly; runoff is rapid; and permeability is moderate to moderately low. The available water capacity is low in the Talpa soil and moderate in the Kavett soil. The Colorado and Yahola soil unit consists of eighty percent Colorado loam and twenty percent Yahola fine sandy loam. These soils occur as long narrow strips adjacent to the major streams in Runnels County and are most common along the Colorado River. Permeability is moderate and the available water capacity is high. These soil descriptions are consistent with the soils observed at the site as detailed in Section 2.2.

Review of the *Geologic Atlas of Texas, Brownwood Sheet*, dated 1976, indicates that the site is situated on alluvium and the Lueders Formation. Alluvium (observed along the Colorado River during drilling activities) consists of floodplain deposits comprised of gravel, sand, silt, clay and organic matter. The Lueders Formation consists of limestone and shale. The southern portion of the Lueders Formation, which was observed at the site during drilling activities, consists predominantly of limestone with thin shale interbeds.

The presence of groundwater in Runnels County is intermittent. No major or minor aquifers are present within the county. Groundwater occurs intermittently throughout the county in water-bearing Permian limestones and dolomites, basal Cretaceous sandstones and alluvial deposits at depths of up to 300 feet bgs. These formations typically yield small quantities of poor quality water. Terracon obtained groundwater quality monitoring data for water wells located in Runnels County that produce from the Lueders Formation online from the Texas Water Development Board (<http://www.twdb.state.tx.us>). This data was utilized to determine background concentrations for various anions and cations that were evaluated as part of this site investigation. A summary of this data is presented in Table 13 in Appendix C.

Based on a review of *Preliminary Assessment of Soil and Groundwater Salinity Problems in Runnels County, Texas*, Texas Energy and Natural Resources Advisory Council, dated February 1983, and conversations with RRC personnel, the source of the saltwater which has caused the seep is believed to be the Coleman Junction Formation. The Coleman Junction is typically encountered at depths ranging from 800 feet to 2,600 feet bgs in Runnels County. This formation contains highly

saline water which contains sufficient head pressure to flow at the land surface in many areas of Runnels County. The chloride content of water from the Coleman Junction has been found to exceed 40,000 mg/L. Information obtained from *A Survey of the Subsurface Saline Water of Texas: Volume 2 Chemical Analyses of Saline Water*, Texas Water Development Board, Report 157, dated September 1972, indicated the following analytical results (reported in mg/L) for a water sample collected from the Coleman Junction in Runnels County at a depth of approximately 2,280 feet bgs:

Total Dissolved Solids	Sodium	Calcium	Magnesium	Chloride	Sulfate	Bi-carbonate	pH	Specific Gravity
65,080	22,000	2,033	942	36,524	4,676	861	6.9	1.049

2.2 Borings and Monitor Wells

Terracon's field activities for the initial site investigation were conducted on July 17 through 21, August 15 and August 21, 2006, by Mr. Max Majesko and Mr. York Morgan, Terracon environmental professionals. Terracon's field activities for the additional site investigation were conducted on April 23 through 27 and May 21 through 25, 2007, by Mr. York Morgan and Mr. Mark Hillier, Terracon environmental professionals. Mr. Brian Floyd, Site Remediation Coordinator with the Railroad Commission of Texas District 7C, was present during portions of the investigation activities.

As part of the approved scope of work for the initial site investigation activities, seven soil borings were advanced on-site in July 2006 to evaluate the seep and potential source areas. One soil boring (MW-5) was advanced down-gradient of the suspected source of the seep (Wolverton Well No. 1), two soil borings (one shallow (MW-1), one deep (MW-2)) were advanced adjacent to the lower seep on the east side of the tributary, one soil boring (MW-4) was advanced on the west side of the tributary across from the lower seep, one soil boring (MW-3) was advanced adjacent to the upper seep area observed in May 2005 (not actively seeping in July-August 2006), one soil boring (MW-7) was advanced near the Colorado River and one soil boring (MW-6) was advanced between the suspected source and the active lower seep area.

Based on the results of the initial site investigation activities, additional site investigation activities were conducted at the site in April-May 2007 consisting of the advancement of ten soil borings. Two soil borings (MW-12 and MW-15) were advanced up-gradient of the suspect source area, one soil boring (MW-10) was advanced down-gradient to the southeast of the suspected source area, two soil borings (MW-11 and MW-13) were advanced in proximity to other potential source areas, two soil borings (MW-9 and MW-16) were advanced along the Colorado River, upstream of the tributary and three soil borings (MW-8, MW-14 and MW-17) were advanced along the Colorado River, downstream of the tributary. It should be noted that soil borings MW-16 and MW-17 were not included in the March 28, 2007 Work Order. However, since it was not necessary to perform rock coring during the additional investigation activities, the budget for the rock coring activities was

utilized for the advancement of soil borings MW-16 and MW-17 to further evaluate the area along the Colorado River.

Figure 3 is a site plan which indicates the approximate locations of the soil borings and monitoring wells in relation to pertinent site features (Appendix A).

Drilling services were performed by a State of Texas licensed Monitoring Well Driller using a truck-mounted air rotary drilling rig under the supervision of a Terracon environmental professional. Rock/soil samples were collected from select soil borings with five-foot core barrel samplers utilizing air-coring techniques. Additionally, hollow stem auger drilling (MW-7, MW-8, MW-9, MW-14, MW-16 and MW-17) and hand augering (MW-3) were performed at selected soil boring locations based on the observed lithology. Drilling equipment was cleaned using a high pressure washer prior to beginning the project and before beginning each soil boring. Sampling equipment was cleaned using an Alconox[®] wash and potable water rinse prior to the beginning of the project and before collecting each soil sample.

Rock/soil samples from soil borings MW-1, MW-2 (25 to 50 foot interval), MW-3, MW-5, MW-7, MW-8, MW-9, MW-14, MW-16 and MW-17 were collected continuously and observed to document lithology, color, moisture content and sensory evidence of impairment. Rock/soil cuttings were observed to document lithology in soil borings MW-4, MW-6, MW-10, MW-11, MW-12, MW-13 and MW-15. The rock/soil samples and cuttings were field-screened using a photoionization detector (PID – Thermo Environmental Instruments Model 580B OVM or equivalent) to indicate the presence of VOCs. Select rock/soil samples and cuttings were additionally field-screened for chloride utilizing Hach Quantab[®] strips.

The general soil lithology encountered during sample collection consisted of the following:

MW-1, MW-2, MW-4, MW-5, MW-6, MW-10, MW-11, MW-12, MW-13, MW-15

- Twelve to 29 feet of hard, yellowish-gray limestone (with occasional thin weathered seams) followed by hard medium bluish-gray limestone with thin shale seams to the terminus of the soil borings at depths ranging from 25 to 70 feet bgs.

MW-3

- Four feet of silty clay followed by hard medium bluish-gray limestone to the terminus of the soil boring at a depth of 15 feet bgs.

MW-7, MW-8

- Twenty to 21 feet of silty sand, silty clayey sand and sand followed by hard medium bluish-gray limestone with thin shale seams to the terminus of the soil borings at depths of 30 feet bgs.

MW-9

- Seven feet of silty sand followed by a four-foot zone of hard yellowish-gray limestone followed by sandy clayey silt to a depth of 23 feet bgs. Hard yellowish-gray limestone was present from a depth of 23 feet to 25 feet bgs followed by hard medium bluish-gray limestone with thin shale seams to the terminus of the soil boring at a depth of 35 feet bgs.

MW-14

- Seventeen feet of silty sand followed by a one-foot zone of hard yellowish-gray limestone followed by hard medium bluish-gray limestone with thin shale seams to the terminus of the soil boring at a depth of 30 feet bgs.

MW-16

- Fifteen feet of silty sand, sand and sandy clayey silt followed by a one-half foot zone of hard yellowish-gray limestone followed by hard medium bluish-gray limestone with thin shale seams to the terminus of the soil boring at a depth of 25 feet bgs.

MW-17

- Twenty-two feet of silty sand, silty clayey sand, sand and gravelly sand followed by hard medium bluish-gray limestone with thin shale seams to the terminus of the soil boring at a depth of 30 feet bgs.

Detailed lithologic descriptions are presented on the soil boring logs included in Appendix B.

Groundwater was not encountered during the advancement of soil borings MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14 or MW-15. However, groundwater did subsequently recharge into all of these monitor wells except for MW-13. A wet fracture was observed at an approximate depth of 15 to 16 feet bgs during the installation of monitor well MW-2 and very moist to wet zones were observed during the installation of monitor wells MW-8, MW-16 and MW-17.

PID readings ranging up to 14.2 parts per million (ppm) were detected in the soil samples collected from the soil borings converted to monitoring wells (MW-1 through MW-17). The highest PID

reading was observed in the soil sample collected from a depth of 11 to 12 feet bgs in the soil boring drilled for monitoring well MW-3. PID readings are detailed in the soil boring logs included in Appendix B.

Subsequent to advancement, soil borings MW-1 through MW-17 were converted to flush-mounted groundwater monitoring wells. The monitoring wells were completed using the following methodology:

- Installation of 12.5 to 55 feet of 2-inch diameter, 0.010-inch machine slotted PVC well screen with a threaded bottom cap;
- Installation of 2.5 to 25 feet of 2-inch diameter, threaded, flush joint PVC riser pipe to the surface;
- Addition of a pre-sieved 20/40-grade annular silica sand pack from the bottom of the boring to approximately 2 feet above the top of the well screen;
- Addition of a minimum of 2 feet of hydrated bentonite seal above the sand pack filter zone;
- Addition of a slurry mixture of powdered bentonite and Portland cement to the near surface;
- Installation of an 8-inch diameter, circular, bolt-down, steel, monitoring well cover with locking well cap inset in a flush-mount, concrete well pad.
- Installation of flexible well markers adjacent to each monitor well.

Monitoring well construction details are presented on the soil boring logs for these monitoring wells and are included in Appendix B.

The monitoring wells were developed by surging and removing groundwater with a new, disposable, polyethylene bailer and/or 12 Volt DC submersible centrifugal pump and disposable polyethylene tubing until the groundwater was relatively free of fine-grained sediment.

2.3 Soil and Groundwater Sampling

Terracon's soil sampling program involved submitting one to two soil samples from select soil borings for laboratory analysis during the initial investigation activities in July-August 2006. Soil samples were collected from either the zone exhibiting the highest PID reading, the capillary fringe zone or from the interval of most likely environmental impact as determined in the field by the sampling professional. Soil sample intervals for each boring are presented with the soil sample analytical results (Table 1) and are provided on the lithologic boring logs included in Appendix B.

One groundwater sample was collected and analyzed from each monitoring well during both the initial and additional investigation activities. Prior to sample collection, each monitoring well was purged utilizing one of the following methods based on the recharge rate of each well: 1) removal of a minimum of three well casing volumes of groundwater, 2) purging until the monitoring well formation failed to recharge (i.e., well ran dry) or, 3) purging until consistent values (i.e., less than

10% variance between consecutive readings) were obtained for pH, temperature and conductivity. Subsequent to sufficient recharge, one groundwater sample was collected from each monitoring well utilizing low flow sampling equipment or disposable polyethylene bailers.

Soil and groundwater samples were collected and placed in laboratory prepared glassware, sealed with custody tape and placed on ice in a cooler which was secured with a custody seal. For the initial sampling activities in July-August 2006, the sample coolers and completed chain-of-custody forms were relinquished to A-4 Scientific's analytical laboratory in Houston, Texas for standard turnaround. For the additional sampling activities in April-May 2007, the sample coolers and completed chain-of-custody forms were relinquished to DHL's analytical laboratory in Austin, Texas for standard turnaround.

2.4 Surface Water/Seep Sampling

Terracon's surface water/seep sampling program for the initial sampling activities in July-August 2006 involved submitting four surface water samples and one seep water sample for laboratory analysis. Surface water samples were collected from the tributary adjacent to the lower seep location (SW-Trib-1), approximately 100 feet downstream of the lower seep (SW-Trib-2) and from the Colorado River approximately 50 feet upstream (SW-CR-Up) and 50 feet downstream (SW-CR-Down) of the confluence of the tributary and Colorado River. One water sample (Seep-1) was additionally collected from the lower seep area where the seep was observed to be surfacing in the tributary adjacent to MW-1.

Terracon's surface water/seep sampling program for the additional sampling activities in April-May 2007 involved submitting 16 surface water samples and one seep water sample for laboratory analysis. Surface water samples were collected from the tributary adjacent to the lower seep location (SW-Trib-1) and approximately 100 feet downstream (SW-Trib-2) and 200 feet downstream (SW-Trib-3) of the lower seep. Surface water samples were also collected from the tributary adjacent to the upper seep location near MW-3 (SW-Trib-5) and approximately 50 feet upstream (SW-Trib-4) and 100 feet downstream (SW-Trib-6) of the upper seep location, adjacent to monitor well MW-3. Surface water samples were also collected from the Colorado River both upstream (SW-CR-50' Up, SW-CR-250' Up, SW-CR-1,000' Up, SW-CR-2,500' Up) and downstream (SW-CR-50' Down, SW-CR-500' Down, SW-CR-900' Down, SW-CR-1,500' Down, SW-CR-2,500' Down) of the confluence of the tributary and Colorado River. One additional surface water sample was collected from Elm Creek (SW-EC-2,500' Up) upstream of the tributary. The SW-CR-2,500' Up and SW-EC-2,500' Up surface water samples were collected approximately 100 to 200 feet upstream of the confluence of the Colorado River and Elm Creek, respectively.

Surface water samples were collected from a maximum depth of approximately one foot beneath the water surface utilizing discrete laboratory-provided glass sampling containers. The depth of water in the tributary was less than one foot and the depth of water in the Colorado River at the sample

locations ranged from one to two feet deep.

Surface water/seep samples were collected and placed in laboratory prepared glassware, sealed with custody tape and placed on ice in a cooler which was secured with a custody seal. For the initial sampling activities in July-August 2006, the sample coolers and completed chain-of-custody forms were relinquished to A-4 Scientific's analytical laboratory in Houston, Texas for standard turnaround. For the additional sampling activities in April-May 2007, the sample coolers and completed chain-of-custody forms were relinquished to DHL's analytical laboratory in Austin, Texas for standard turnaround.

3.0 LABORATORY ANALYTICAL METHODS

The soil samples collected at the site during the initial investigation activities in July 2006 were analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX) using EPA SW-846 Method 8021B, total petroleum hydrocarbons (TPH) using TCEQ Method TX1005 and Total Chloride using EPA SW-846 Method 300.0.

The groundwater and surface water samples collected at the site during the initial investigation activities in July-August 2006 were analyzed for BTEX using EPA SW-846 Method 8021B, TPH using TCEQ Method TX1005, total dissolved solids (TDS) using EPA Method 160.1, cations (sodium, potassium, magnesium, calcium) using EPA SW-846 Method 60101B, anions (chloride, sulfate, nitrate, bromide) using EPA SW-846 Method 300.0, carbonate/bicarbonate alkalinity using EPA SW-846 Method 310.1 and conductivity using EPA SW-846 Method 120.1.

The groundwater and surface water samples collected at the site during the additional investigation activities in April-May 2007 were analyzed for total dissolved solids (TDS) using EPA Method 160.1, cations (sodium, potassium, magnesium, calcium) using EPA SW-846 Method 60101B, anions (chloride, sulfate, nitrate, bromide) using EPA SW-846 Method 300.0, carbonate/bicarbonate alkalinity using EPA SW-846 Method 310.1 and conductivity using EPA SW-846 Method 120.1.

For the initial investigation activities, three duplicate samples (soil, groundwater and surface water), one equipment blank and four trip blanks were analyzed for BTEX for quality control (QC) purposes. The duplicate groundwater and surface water samples were additionally analyzed for TDS, cations, anions, alkalinity and conductivity for QC purposes. For the additional investigation activities, two duplicate samples (groundwater and surface water) were analyzed for TDS, cations, anions, alkalinity and conductivity for QC purposes.

Laboratory results are summarized in the tables included in Appendix C. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix D.

4.0 DATA EVALUATION

4.1 Field Screening

Field screening activities conducted for this project included screening of soil samples for VOCs with a PID, screening of soil, groundwater and surface water samples for chloride utilizing Hach Quantab[®] strips and measuring the conductivity of soil, groundwater and surface water samples utilizing a Hydac conductivity meter. A YSI 556 MPS water quality meter was used to collect geochemical parameters (including pH, temperature, conductivity, dissolved oxygen and oxidation-reduction potential) from each monitor well during the additional investigation activities in April-May 2007. A Hach high-range chloride test kit (Model CD-51) was utilized to test select water/groundwater samples during the additional investigation activities.

The scope of work for this project included only field screening of soil samples for chloride. However, to evaluate the accuracy of the field screening, Terracon elected to additionally analyze the soil samples for total chloride. Per the scope of work, groundwater and surface water samples were also analyzed for total chloride. Field screening of the water samples for chlorides was also performed for comparison purposes and to collect additional site data. For soils, the field readings for chloride were significantly lower than the analytical laboratory (by factors ranging from 1.4 to 4.5 times). For water, the field readings for chloride were higher than the analytical laboratory (by factors ranging from 1.1 to 1.9 times).

Field measurements for conductivity of soil, groundwater and surface water were also performed as part of the investigation activities. For groundwater and surface water, direct measurements were obtained utilizing the conductivity meter. However, it should be noted that for soils, these measurements should be considered to be relative to one another since approximate soil volumes were utilized in the conductivity measurement for each sample.

Field screening data has been provided on Figures 15 and 16 in Appendix A and in Tables 2, 5, 10 and 12 in Appendix C for reference purposes.

4.2 Soil Samples

A maximum PID reading of 14.2 parts per million (ppm) was detected at a depth of 11.0 to 12.0 feet bgs in a soil sample collected from soil boring MW-3. No sensory evidence of impairment was noted in soil samples collected at the site.

Field screening of soils for chloride and conductivity was also performed as part of the assessment. As stated previously, field screening results for chlorides in soil were significantly lower than the analytical laboratory results. However, the field screening data is still useful in identification of impacted areas and has been utilized to supplement the laboratory data. Field screening data for

chloride in soil is presented in Table 2 and shown on Figure 15. Field screening data for conductivity is presented in Table 12 and shown on Figure 16.

Five background soil samples were field screened for chloride with results indicating chloride concentrations <120 mg/kg in each of the background samples. Three soil samples (Seep-1, Seep-2 and Seep-3) were field screened for chloride at the location of the active lower seep (near MW-1). Results indicated a maximum chloride concentration of 1216 mg/kg. Two soil samples (Seep-4 and Seep-5) were field screened for chloride at the location of the upper seep (near MW-3) when it was inactive in July-August 2006. Results indicated a maximum chloride concentration of 24,700 mg/kg. One soil sample (Seep-A) was field screened for chloride at the location of the suspected source (Wolverton Well No. 1). Results indicated a chloride concentration of <120 mg/kg.

Soil samples collected from selected soil borings during the initial investigation activities in July 2006 were field screened for chlorides. Results indicated a maximum chloride concentration of 2,348 mg/kg in a soil sample collected from MW-3 at a depth of 6.0-7.0 feet bgs.

Additionally, during our site reconnaissance, several areas were identified between the suspected source (Wolverton Well No. 1) and the upper seep/lower seep that appeared to be areas where seeps may have surfaced in the past. These areas were identified based on their absence of vegetation, color with respect to surrounding soils and presence of salt crystals. One soil sample was field screened for chloride from the Seep-B, Seep-C and Seep-D locations. Results indicated the following chloride concentrations: Seep-B (2,348 mg/kg), Seep-C (<1,200 mg/kg) and Seep D (5,468 mg/kg).

The tributary consists of an east branch and west branch which merge into a single tributary approximately 50 feet downstream of MW-3. Monitor well MW-3 is located on the east side of the east branch. Two soil samples (Seep-E and Seep-F) obtained from the east side of the west branch were field screened for chloride and indicated a maximum chloride concentration of 2,348 mg/kg.

The tributary flows to the north and discharges into the Colorado River which flows to the east. Five soil samples (CR-1, CR-2, CR-3, CR-4 and CR-5) were collected along the southern bank of the Colorado River and field screened for chloride. Results for samples CR-1 and CR-2, located downstream (east) of the confluence of the tributary and Colorado River, indicated a maximum chloride concentration of 24,700 mg/kg. Results for samples CR-3 and CR-4, located upstream (west) of the confluence of the tributary and Colorado River, indicated a maximum chloride concentration of 11,088 mg/kg. Results for sample CR-5, located where the tributary enters the Colorado River, indicated a chloride concentration of 12,996 mg/kg.

Three soil samples (C-14, C-21 and C-29) from apparent unimpacted areas were field screened for conductivity with results indicating conductivity readings ranging from 170 to 230 microSiemens per centimeter ($\mu\text{S}/\text{cm}$). Three sediment samples (C-20A, C-20B and C-20C) located approximately

eight feet upstream of the lower seep were field screened for conductivity. Results indicated a conductivity reading of >20,000 $\mu\text{S}/\text{cm}$ along the east bank of the tributary (seep side), 2,020 $\mu\text{S}/\text{cm}$ in the middle and 4,890 $\mu\text{S}/\text{cm}$ along the west bank of the tributary.

Soil and/or sediment samples collected from selected locations along the tributary (C-4, C-13, C-22, C-23, C-26, C-27 and C-28) indicated the highest conductivity readings near the location of the active lower seep near MW-1 and near the location of the upper seep area near MW-3 when it was inactive in July-August 2006. A maximum conductivity reading of >18,000 $\mu\text{S}/\text{cm}$ was detected in soil sample impacted with salt crystals located adjacent to surface water sample SW-Trib-2, which was located approximately 100 feet downstream of the active lower seep. As discussed previously, the tributary consists of an east branch and west branch which merge into a single tributary approximately 50 feet downstream of MW-3. Monitor well MW-3 is located on the east side of the east branch. Several soil samples obtained from the west branch (C-24, C-25 and C-30) were field screened for conductivity. Results indicated a maximum conductivity reading of 3,620 $\mu\text{S}/\text{cm}$ in the west branch of the tributary.

Two soil samples were collected from the southern bank of the Colorado River (C-8A, C-10) and field screened for conductivity. Results indicated a maximum conductivity reading of 12,690 $\mu\text{S}/\text{cm}$ in a soil sample collected where the tributary enters the Colorado River.

Laboratory analysis of soil samples collected from monitor wells MW-1, MW-2, MW-3, MW-5 and MW-7 during the initial investigation in July 2006 did not indicate BTEX or TPH concentrations above the laboratory SQLs.

Laboratory analyses of soil samples collected during the installation of monitor wells MW-1, MW-2, MW-3, MW-5 and MW-7 during the initial investigation in July 2006 indicated chloride concentrations ranging from 730 milligrams per kilogram (mg/kg) to 5,490 mg/kg. The soil sample collected from monitor well MW-3 at a depth of 4.0-5.0 feet bgs indicated a chloride concentration of 5,490 mg/kg. Chloride concentrations detected in the remaining soil samples ranged from 730 to 2,200 mg/kg as summarized in Table 1.

Based on the field screening results and BTEX, TPH and chloride analytical results obtained during the initial investigation activities in July-August 2006, soil samples were not collected during the additional investigation activities in April-May 2007. However, soils were field screened for VOCs with a PID and for chloride utilizing Hach Quantab[®] strips during the additional investigation activities (as documented on the boring logs in Appendix B) to compare to the initial data to confirm that sampling was not necessary. Field PID and chloride screening readings did not exceed those obtained during the initial investigation.

4.3 Groundwater Samples

Field screening of groundwater for chloride and conductivity was performed as part of the assessment activities. As stated previously, field screening results for chloride in groundwater were higher than the analytical laboratory results. However, the field screening data is still useful in identification of impacted areas and has been utilized to supplement the laboratory data. Field screening data for chloride in groundwater is presented in Table 5 and shown on Figure 15. Field screening data for conductivity is presented in Table 12 and shown on Figure 16.

Groundwater samples from each of the monitor wells were field screened for chloride. Results indicated a maximum chloride concentration of >6,175 mg/L in groundwater samples collected from monitor wells MW-2, MW-3, MW-5, MW-6, MW-9 and MW-16. Monitor well MW-4 indicated a chloride concentration of 6,175 mg/L. The remaining field screening readings were below 6,175 mg/L. Groundwater samples from monitor wells MW-6, MW-9 and MW-16 were further field screened for high-range chloride levels with results for each of these wells indicating chloride concentrations of 10,000 mg/L.

Groundwater samples from each of the monitor wells were additionally field screened for conductivity. Results indicated maximum conductivity readings of >20,000 uS/cm in groundwater samples collected from monitor wells MW-3, MW-5, MW-6, MW-9 and MW-16.

Laboratory analyses of groundwater samples collected from monitor wells MW-1, MW-2, MW-3, MW-4, MW-5 and MW-7 during the initial investigation in July-August 2006 did not indicate BTEX or TPH concentrations above the laboratory SQLs. Based on field screening results, field observations and BTEX and TPH analytical results obtained during the initial investigation activities, groundwater samples were not analyzed for BTEX and TPH during the additional investigation activities in April-May 2007. However, soils were field screened with a PID during the additional investigation activities (as documented on the boring logs in Appendix B) to compare to the initial data to confirm that sampling for BTEX and TPH was not necessary. Field PID readings did not exceed those obtained during the initial investigation.

Laboratory analyses of groundwater samples collected from monitor wells MW-1, MW-2, MW-3, MW-4, MW-5 and MW-7 during the initial investigation in July-August 2006 indicated chloride concentrations ranging from 1,550 mg/L to 5,920 mg/L as detailed in Table 4. Monitor well MW-6 was dry during the July-August 2006 investigation.

Based on comparison of the laboratory analytical data for chloride to the field screening data for chloride as well as an evaluation of anion and cation balances, Terracon noted that the chloride results appeared to be biased low. Terracon contacted A4 Scientific to review the chloride data, and A4 stated that the large dilutions that had to be performed for the chloride analyses may have "effected accurate determination of chloride concentrations". A copy of a letter from A4 regarding

the chloride issue is included in Appendix J. In an effort to further evaluate the chloride concentrations present at the site, Terracon requested that A4 re-analyze selected groundwater and surface water samples for total chlorides. It should be noted that these samples were out of holding time. The initial analyses for chloride were performed utilizing EPA Method 300.0 (as specified in the QAPP). However, the re-run analyses were performed utilizing Standard Method 4500B after initial attempts at re-running the samples utilizing EPA Method 300.0 indicated inconsistent results. Results of the re-run analyses indicated that the accuracy of the initial analyses decreased as the concentrations increased. Results for surface water sample SW-CR-Down indicated an initial concentration of 626 mg/L and a re-run concentration of 620 mg/L. However, results for a groundwater sample collected from monitor well MW-5 indicated an initial concentration of 5,920 mg/L and a re-run concentration of 23,000 mg/L. A similar trend was exhibited in the other re-run analyses. Results of the initial and re-run analyses for groundwater are detailed in Table 4 and shown on Figure 5A.

Laboratory analyses of groundwater samples collected from monitor wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-14, MW-15, MW-16 and MW-17 during the additional investigation activities indicated chloride concentrations ranging from 36.6 mg/L to 13,300 mg/L as detailed in Table 4.

Terracon utilized DHL Analytical in Austin, Texas, for the additional site investigation activities in April-May 2007. Based upon conversations with DHL personnel and their prior experience with RRC projects, it was determined that EPA Method 300.0 was the appropriate method to utilize for the chloride analysis. Review of the anion and cation balances did not indicate issues associated with the DHL laboratory data for the April-May 2007 investigation.

4.4 Surface Water Samples

Field screening of surface water for chloride and conductivity was performed as part of the initial assessment activities in July-August 2006. As stated previously, field screening results for chloride in surface water were higher than the analytical laboratory results. However, the field screening data is still useful in identification of impacted areas and has been utilized to supplement the laboratory data. Field screening data for chloride in surface water is presented in Table 10 and shown on Figure 15. Field screening data for conductivity is presented in Table 12 and shown on Figure 16.

Surface water samples from each of the surface water sample locations (SW-Trib-1, SW-Trib-2, SW-CR-Up and SW-CR-Down) were field screened for chloride. Results for the tributary indicated a maximum chloride concentration of 2,772 mg/L in surface water sample SW-Trib-2. Results for the Colorado River indicated chloride concentrations of 655 mg/L for each of the surface water samples.

Surface water samples collected in April 2007 from the upper seep area (Upper Seep-1, Upper Seep-2 and Upper Seep-3) adjacent to monitor well MW-3 were field screened for high-range chloride levels with results for these samples indicating chloride concentrations of 15,000 mg/L, 20,000 mg/L and 20,000 mg/L, respectively.

Surface water samples from the tributary (C-5, C-15, C-16, C-17, C-18 and C-19) and Colorado River (C-6, C-7, C-8B, C-9, C-11 and C-12) were field screened for conductivity. Results for the tributary indicated a maximum conductivity reading 7,450 uS/cm in a surface water sample collected near SW-Trib-2. Results for the Colorado River indicated relatively consistent conductivity readings ranging from 3,200 to 3,650 μ S/cm for samples collected both upstream and downstream of the location where the tributary enters the Colorado River.

Laboratory analyses of surface water samples collected from the tributary and Colorado River during the initial investigation in July-August 2006 did not indicate BTEX or TPH concentrations above the laboratory SQLs. Based on field screening results, field observations and BTEX and TPH analytical results obtained during the initial investigation activities, surface water samples were not analyzed for BTEX and TPH during the additional investigation in April-May 2007.

Laboratory analyses of surface water samples collected from the tributary at and downstream of the lower seep area during the initial investigation activities in July-August 2006 indicated chloride concentrations ranging from 1,520 mg/L to 1,570 mg/L. Results of the re-run analysis for surface water sample SW-Trib-1 indicated a concentration of 2,220 mg/L compared to the initial concentration of 1,520 mg/L. Laboratory analyses of surface water samples collected from the tributary at and downstream of the lower seep area during the additional investigation activities in April-May 2007 indicated chloride concentrations ranging from 1,920 mg/L to 2,370 mg/L. Laboratory analyses of surface water samples collected from the tributary at and downstream of the upper seep area during the additional investigation activities in April-May 2007 indicated chloride concentrations ranging from 4,180 mg/L to 5,300 mg/L as detailed in Table 9. The upper seep was inactive during the initial investigation activities in July-August 2006.

Laboratory analyses of surface water samples collected from the Colorado River during the initial investigation activities in July-August 2006 indicated chloride concentrations ranging from 621 mg/L to 626 mg/L. Results of the re-run analysis for surface water sample SW-CR-Down indicated a concentration of 620 mg/L compared to the initial concentration of 626 mg/L. Laboratory analyses of surface water samples collected from the Colorado River during the additional investigation activities in April-May 2007 indicated chloride concentrations ranging from 218 mg/L to 240 mg/L. Surface water samples collected from the Colorado River and Elm Creek located approximately 2,500 feet upstream of the tributary indicated chloride concentrations of 351 mg/L and 158 mg/L, respectively.

4.5 Seep Samples

Field screening of the seep samples for chloride and conductivity was performed as part of the initial assessment activities in July-August 2006. As stated previously, field screening results for chloride in surface water were higher than the analytical laboratory results. However, the field screening data is still useful in identification of impacted areas and has been utilized to supplement the laboratory data. Field screening data for chloride in the seep surface water is presented in Table 10 and shown on Figure 15. Field screening data for conductivity is presented in Table 12 and shown on Figure 16.

Two surface water samples collected from the lower seep near monitor well MW-1 during the initial investigation in July-August 2006 were field screened for chloride. Results indicated a maximum chloride concentration of 1,367 mg/L.

Two surface water samples collected from the lower seep near monitor well MW-1 (C-18, Seep) during the initial investigation in July-August 2006 were field screened for conductivity. Results indicated a maximum conductivity reading of 4,160 uS/cm.

Laboratory analysis of a surface water sample collected from the lower seep near monitor well MW-1 during the initial investigation in July-August 2006 did not indicate BTEX or TPH concentrations above the laboratory SQLs. Based on field screening results, field observations and BTEX and TPH analytical results obtained during the initial investigation activities, surface water samples were not analyzed for BTEX and TPH during the additional investigation in April-May 2007.

Laboratory analysis of a surface water sample collected from the lower seep near monitor well MW-1 during the initial investigation in July-August 2006 indicated a chloride concentration of 1,060 mg/L. As discussed in Section 4.3, in an effort to further evaluate the chloride concentrations present at the site, Terracon requested that A4 re-analyze selected groundwater and surface water samples for total chlorides. Results of the re-run analyses for both surface water and groundwater indicated that the accuracy decreased as the concentrations increased. The seep sample was not re-run as part of this evaluation; however, based on its relatively low initial chloride concentration, a re-run of this sample would have been expected to exhibit slightly higher results than the initial concentration.

Laboratory analysis of a surface water sample collected from the lower seep near monitor well MW-1 during the additional investigation in April-May 2007 indicated a chloride concentration of 1,620 mg/L as detailed in Table 9.

Since monitor well MW-3 was installed within the upper seep area, data from MW-3 (detailed in Section 4.3) is considered representative of the upper seep and therefore, no additional samples were collected from the upper seep.

4.6 Anion/Cation Data

Per the scope of work, the groundwater and surface water samples collected at the site were analyzed for various water quality parameters including total dissolved solids (TDS), anions (carbonate/bicarbonate alkalinity, chloride, sulfate, nitrate, bromide), cations (sodium, potassium, magnesium, calcium) and conductivity.

The anion/cation data was plotted on radial plots presented in Figures 14A, 14B, 14C and 14D. Radial plots were completed for each of the monitor wells (except for MW-13 which was dry), each of the surface water samples, the lower seep sample, a sample from the Coleman Junction formation (referenced in Section 2.1) and an average of the water well data obtained from the TWDB for the Lueders Formation (referenced in Section 2.1). The radial plots are shown for both the initial chloride data and re-run chloride data from the initial investigation along with the chloride data from the additional investigation activities. Interpretation of anion/cation data was based upon the referenced radial plots as well as information contained in *Identification of Sources of Ground-Water Salinization Using Geochemical Techniques*, EPA/600/2-91/064, dated December 1991. It should be noted that evaluation of this data can be difficult due to potential mixing of brine with groundwater as well as the composition of the formation(s) that transmit this water. The following evaluation was based on common geochemical identification techniques; however, the evaluation is based on a small data set which may not have identified all of the factors potentially influencing anion/cation concentrations.

The radial plots were completed by first converting anion/cation concentrations into milliequivalents per liter (meq/L) and then determining the percent TDS for each respective anion/cation. The percent TDS values were then utilized to construct the radial plots. These calculations are presented in Tables 6A, 6B, 6C, 11A, 11B, 11C and 13 in Appendix C.

Based on the radial plots, the composition of groundwater in monitor wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-12 and MW-16 was relatively similar. All of these wells appear to have been impacted to varying degrees from the release. The major differences noted in the groundwater composition of these wells was the higher sodium percentage and lower percentage of calcium/magnesium in MW-2, MW-3, MW-5, MW-6 and MW-8 compared to MW-1, MW-4, MW-7, MW-9, MW-10, MW-12 and MW-16. The elevated sodium concentrations in the contaminating brine located at the source area (MW-5) would be expected to react with the calcium and magnesium present in the Lueders formation through base exchange processes; and therefore, sodium/(calcium + magnesium) ratios would be expected to decrease away from the source area. The following sodium/(calcium + magnesium) ratios were calculated for the site monitor wells and indicated a decreasing ratio away from the source area with the exception of MW-3 (May 2007) as discussed below.

Ratio of Na/(Ca+Mg)		
Monitor Well	July-August 2006	May 2007
MW-1	3.2	1.4
MW-2	3.6	1.9
MW-3	4.1	4.2
MW-4	1.8	1.3
MW-5	9.0	2.4
MW-6	NA	2.3
MW-7	0.5	1.5
MW-8	NA	2.1
MW-9	NA	0.7
MW-10	NA	1.0
MW-11	NA	0.4
MW-12 (before rain)	NA	1.4
MW-12 (after rain)	NA	1.3
MW-14	NA	0.4
MW-15	NA	0.7
MW-16	NA	0.9
MW-17	NA	0.5
Coleman Junction	5.4	
Average Water Well	0.6	

NA = not applicable, monitor well was installed in April 2007

Monitor well MW-3 currently has the highest sodium/(calcium + magnesium) ratio of the monitor wells present at the site. This may be due to evaporation in the upper seep which would concentrate the anions and cations resulting in higher sodium and chloride concentrations. The sodium/(calcium + magnesium) ratio was generally lower in the monitor wells in April-May 2007 than it was in July-August 2006 with the exception of MW-3 which was about the same and MW-7 which was higher. The higher sodium/(calcium + magnesium) ratio in MW-7 may be related to the higher groundwater elevation at the site as discussed below.

The water levels have risen in all of the monitor wells since July-August 2006. Rainfall for the three month period prior to the 2007 investigation activities indicated an increase of approximately 5.5 inches of rain over the rainfall for the three month period prior to the 2006 investigation. The recent rainfall is the likely cause of the general decrease in chloride concentrations in groundwater across the site with the exception of monitor wells MW-1 and MW-3 which have increased. Chloride concentrations have also increased in the lower seep and in the tributary at and downstream of the lower seep. Increases in chloride concentrations in monitor wells MW-1 and MW-3 may be due to mobilization of contaminants due to the high water levels in proximity to the upper and lower seeps. The groundwater elevation in MW-7 was previously lower than the water elevation in the Colorado River; however, the groundwater elevation in MW-7 is currently higher than the water elevation in

the Colorado River. This appears to have resulted in the change in the composition of the groundwater in MW-7 over the past year. Monitor well MW-7 previously had a similar composition to the water present in the Colorado River and the average water well composition indicating that the Colorado River was a losing stream at that time and was impacting MW-7. However, its current composition is more similar to monitor wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-8, MW-9, MW-10, MW-12 and MW-16 indicating that the Colorado River is currently a gaining stream and groundwater from MW-7 is likely discharging to the Colorado River.

It was also noted that monitor wells MW-10 and MW-12 (after rain) had higher percentages of bicarbonate alkalinity than the other impacted monitor wells. As detailed in Section 4.7, both of these wells were impacted for a short-duration by an apparent fresh water source (likely infiltration from recent rainfall). Monitor well MW-12 was sampled before and after the rainfall event and exhibited a higher percentage of bicarbonate following the rainfall event. The higher percentages of bicarbonate identified in these wells appears to be related to the influx of fresh water.

The sodium/(calcium + magnesium) ratio of 9.0 calculated for monitor well MW-5 based on the July-August 2006 sample data indicated that very little base exchange had taken place near the source area indicating that the source may still be active. However, the sodium/(calcium + magnesium) ratio decreased to 2.4 for MW-5 based on the April-May 2007 sample data. As noted above, this decrease appears to be related to the infiltration of fresh water from the recent rainfall.

The composition of the water samples from the lower seep (Lower Seep-1) and tributary (SW-Trib-1, SW-Trib-2 and SW-Trib-3) are similar to monitor well MW-1. Chloride levels were higher in the tributary than in the lower seep; however, this may be due to evaporation in the tributary which would concentrate the anions and cations resulting in higher chloride concentrations. Chloride levels were higher in MW-1 than in SW-Trib-1 and SW-Trib-2; however, the chloride level in surface water sample SW-Trib-3, which was the furthest downstream sample collected from the tributary, was higher than the chloride levels detected in samples MW-1, Lower Seep-1, SW-Trib-1 and SW-Trib-2. This may indicate that groundwater with higher chloride levels than those identified in MW-1 is seeping into the tributary further downstream or it may be a result of evaporation in the tributary.

The composition of the water samples from the tributary (SW-Trib-4, SW-Trib-5 and SW-Trib-6) adjacent to the upper seep and MW-3 are similar to monitor well MW-3. However, chloride levels were lower in the tributary than in MW-3, which is considered to be representative of the upper seep.

The composition of the water samples from the Colorado River are very similar to one another. However, the water samples collected from the Colorado River during the additional investigation in April-May 2007 indicated higher percentages of bicarbonate and lower percentages of sulfate compared to the samples collected from the Colorado River during the initial investigation in July-August 2006. This appears to be related to the influx of fresh water (rainfall) which typically has low sulfate concentrations. Higher percentages of bicarbonate were also noted in monitor wells MW-10

and MW-12 (as discussed above) which appeared to have been impacted by recent rainfall.

The composition of the water sample from the Coleman Junction is most similar to the composition of the water from monitor wells MW-2, MW-3, MW-5 and MW-6 with the exception of higher chloride and sodium concentrations in the Coleman Junction. The presence of lower chloride concentrations in monitor well MW-5 (located adjacent to the source area) appears to be related to the infiltration of fresh water based on the higher groundwater elevation in this monitor well in May 2007 compared to August 2006.

Based on the current data along with the groundwater elevations (as discussed in Section 4.7), it is difficult to determine whether brine is actively seeping from the Wolverton Well No. 1 or whether chloride concentrations detected in groundwater samples are related to residual contamination from a former source. It appears that multiple groundwater zones exist at the site which exhibit significant seasonal variations. It also appears that rainfall can have an impact on site groundwater conditions in a very short timeframe. The combination of these factors makes it difficult to make a determination as to whether there is an active source at the site. However, based on the elevated sodium and chloride levels detected in monitor well MW-5 during the initial investigation in July-August 2006 (indicating a lack of base exchange), it appears that the Wolverton Well No. 1 is an active source of brine water, although at an apparent reduced flow rate. The lower sodium and chloride levels detected in MW-5 during the additional investigation in April-May 2007 appear to be a result of dilution from the infiltration of fresh water.

Though the source may still be active, it appears to be having a minimal effect on chloride concentrations in the Colorado River. Chloride concentrations detected in surface water samples collected from the Colorado River both up-gradient and down-gradient of the Ballinger seep indicate that chloride levels are higher in the Colorado River (351 mg/L) prior to its confluence with Elm Creek (158 mg/L) than they are further downstream, along the seep area (218-240 mg/L). Therefore, it appears that the source is currently a minor contributor of salinity to the Colorado River. It should also be noted that the current chloride levels of 218-240 mg/L in the Colorado River are significantly lower than those detected in July-August 2006 (621-626 mg/L). Though the elevated water levels at the site have resulted in the Colorado River currently being a gaining stream (it was noted to be a losing stream in July-August 2006), the chloride-impacted groundwater present in the alluvium discharging to the Colorado River is being diluted by the apparent increased surface water flow in the Colorado River due to the recent rainfall. However, although the chloride concentration may be lower during periods of higher rainfall the chloride load in the river can increase due to the increased volume of water entering the river.

4.7 Water/Groundwater Elevation Data

The monitor wells and selected additional data points relative to evaluation of the seep were surveyed for top-of-casing (TOC) and/or ground surface elevations referred to a topographic bench

mark (USGS topographic quadrangle map of Ballinger, Texas) which is anticipated to be within +/- 5 feet of sea level datum. On August 21, 2006, and May 30, 2007, Terracon gauged the depth to water in each monitor well and also determined elevations for water in the tributary adjacent to the lower seep, the approximate top of the lower seep, the approximate top of the upper seep and the water elevation in the Colorado River. Water/groundwater elevation data was evaluated with respect to two seep areas in the tributary which included the lower seep area near monitor well MW-1 as well as the upper seep area near monitor well MW-3.

The groundwater elevation in monitor wells MW-1 and MW-4, located on either side of the tributary adjacent to the lower seep, is relatively similar (MW-1 is 1.35 feet higher in elevation). Observations of the tributary indicate bedding planes in the limestone bedrock present at this location have no discernable dip and therefore it is reasonable to assume that the seep could easily migrate beneath the tributary and have impacted MW-4. The groundwater elevation in MW-2, which is screened in a deeper zone adjacent to MW-1, is approximately 7.68 feet lower in elevation than MW-1 and approximately 6.33 feet lower in elevation than MW-4. This difference in elevation as well as the difference in chloride concentrations in groundwater samples collected from these monitor wells appears to indicate that there are at least two groundwater zones present at the site. Chloride concentrations in monitor wells MW-1 and MW-4 are significantly lower than in MW-2, which is the same approximate distance from the source area as MW-1 and MW-4. This appears to indicate that monitor wells MW-1 and MW-4 are being impacted from a shallow fresh water source related to MW-3.

The groundwater elevation at monitor well MW-3, which is located within the upper seep area, is 16.94 feet higher than the groundwater elevation at MW-5, near the source area. The elevation of the base of MW-3 is 4.84 feet above the current groundwater elevation in MW-5. The groundwater elevation at monitor well MW-6, which is located approximately halfway between MW-5 and MW-1, is 24.48 feet higher than the groundwater elevation at MW-5, near the source area. The elevation of the base of MW-6 is 2.08 feet above the current groundwater elevation in MW-5. Due to the significantly higher groundwater elevation at these locations with respect to the source area, it does not appear that water from the Wolverton Well No. 1 is currently impacting monitor wells MW-3 and MW-6. However, based on site elevation data, it is possible that groundwater from monitor wells MW-3 and MW-6 has had a minor impact on MW-5, which is located hydrologically down-gradient based upon the groundwater elevations. This higher groundwater elevation present in MW-3 and MW-6, which are topographically down-gradient of MW-5, appears to further support the conclusion that there are shallow and deep groundwater zones present at the site.

When the RRC plugged the Wolverton Well No. 1 in 1998, salt water was reportedly present at a depth of approximately 28 feet bgs in this well, which would have been at an approximate elevation of 1639 feet (compared to a current groundwater elevation of 1616.52 feet in MW-5). Based on this depth, the groundwater elevation at the source area would have been approximately 6 feet higher in elevation than the current groundwater elevation in MW-3. However, the elevation at the area

where the seep appeared to have historically surfaced in the tributary (approximately 50 feet upstream of MW-3) was indicated to be 1639.9 feet which supports the depth to salt water in the Wolverton Well No. 1 identified by the RRC. This elevation is also similar to the current groundwater elevation in MW-6 of 1641.00 feet. Additionally, RRC personnel observed salt crystals at the ground surface surrounding the Wolverton Well No. 1 covering an approximate 15 ft x 150 ft area from the well toward the tributary in 1998 indicating that salt water was flowing from this well at the ground surface at some point in time. Based on this information, it appears that the Wolverton Well No. 1 impacted the upper seep area and area in proximity to MW-6 historically and the current elevated chloride levels in monitor wells MW-3 and MW-6 may be due to residual chloride present in this area. Additionally, due to the significantly lower chloride levels in monitor wells MW-1 and MW-4 with respect to MW-2, it appears that the chloride levels detected in MW-1 and MW-4 may be due to residual chloride present in this area from the historic release.

Monitor well MW-6, which is located approximately halfway between MW-5 and MW-1, was initially dry in July-August 2006 and April 2007, but had water in May 2007. The groundwater elevation in this well is currently 1641.00 feet, which is similar to the elevation of the upper seep. This may indicate that the fresh water zone impacting MW-3 is now impacting MW-6 due to the elevated groundwater table across the site. The chloride concentration in MW-6 is currently similar to that in MW-5; however, based on the significant difference in groundwater elevations as well as the base of MW-6 being higher in elevation than the current groundwater elevation in MW-5, it appears unlikely that there is significant interaction of groundwater between MW-6 and MW-5 and that they are intercepting two separate groundwater zones.

Monitor well MW-12, which is located topographically up-gradient of MW-3, exhibited elevated chloride levels. However, the chloride levels were below those detected in MW-3. Additionally, the groundwater elevation in MW-12 is 7.8 feet lower than in MW-3. Groundwater from MW-3 appears to have migrated down-gradient resulting in impact to MW-12. It should also be noted that MW-12 appears to be subject to short-term impacts from an apparent fresh water source (possibly rainfall). Terracon initially sampled MW-12 on May 22, 2007 when it contained 1.5 feet of water. Due to the low water level, it was not possible to develop MW-12. Following a rainfall event on May 24, 2007, MW-12 was re-gauged on May 25, 2007 and found to have 3.8 feet of water present. MW-12 was subsequently developed and re-sampled with results indicating chloride concentrations of 4,610 mg/L on May 22, 2007 and 1,000 mg/L on May 25, 2007. MW-12 was re-gauged on May 30, 2007 and found to have 1.54 feet of water.

A similar situation was also encountered with MW-10. Terracon initially attempted to sample MW-10 on May 22, 2007; however, there was an insufficient amount of water present for sampling. Following a rainfall event on May 24, 2007, MW-10 was re-gauged on May 25, 2007 and found to have 12.79 feet of water present. MW-10 was subsequently developed and sampled with results indicating a chloride concentration of 670 mg/L. MW-10 was re-gauged on May 30, 2007 and found to have only a trace of water. Short-term impacts to groundwater elevations were not noted in

association with other monitor wells gauged during this timeframe. However, it should be noted that MW-11 was gauged on May 25, 2007 after the rainfall event and the groundwater elevation was indicated to be 3.38 feet lower than prior to the rainfall event on May 21, 2007. MW-11 was re-gauged on May 30, 2007 and indicated to be 8.21 feet lower in elevation than when measured on May 25, 2007.

The presence of less saline groundwater in monitor wells MW-10, MW-11 and MW-15 indicates that there is a deeper groundwater zone at the site, apparently unimpacted from the Wolverton Well No. 1. The chloride concentrations in MW-10 (670 mg/L), MW-11 (516 mg/L) and MW-15 (484 mg/L) are similar to the average chloride concentration (509 mg/L) in water wells present in the Lueders Formation. However, this zone appears to be discontinuous, based on MW-13 being dry. It is likely that MW-5 is intercepting this deeper zone and mixing with water from the Wolverton Well No. 1. It is also possible that the shallow zone has had some impact on MW-5, but the impact would appear to be minimal based on the groundwater elevations.

Monitor wells MW-7, MW-8, MW-9, MW-14, MW-16 and MW-17 were installed along the Colorado River to evaluate whether the seep could be directly impacting the Colorado River. Chloride concentrations were elevated in MW-7 (2,350 mg/L), MW-8 (1,740 mg/L), MW-9 (6,280 mg/L) and MW-16 (4,930 mg/L) and the groundwater elevation in these monitor wells was higher than the water elevation in the Colorado River. MW-7 had previously indicated a groundwater elevation lower than the water elevation in the Colorado River in July-August 2006. This data indicates that the Colorado River can be both a gaining stream or a losing stream, depending on seasonal conditions. The chloride concentrations detected in MW-7, MW-9 and MW-16 were higher than the chloride concentrations detected in monitor wells MW-1 and MW-4. This indicates that monitor wells MW-7, MW-9, and MW-16 are being more significantly influenced by groundwater from the Wolverton Well No. 1 (deep groundwater zone) and being influenced by shallow groundwater to a lesser degree. Based on groundwater elevations, the deeper groundwater zone may be discharging to the alluvium present along the Colorado River and spreading out laterally within the alluvium along the river bank. Based on the groundwater concentration and elevation data, impacted groundwater is migrating along the Colorado River both upstream and downstream of the tributary. However, based on the highly elevated chloride concentrations detected in MW-9 and MW-16, chloride-impacted groundwater from the deeper groundwater zone appears to be preferentially migrating along the alluvium in an upstream direction with respect to the Colorado River.

In conclusion, based on water composition and groundwater elevation data, it appears that there are at least two separate groundwater zones present at the site. It appears that there is a shallow water zone present along the tributary which was intercepted by monitor wells MW-1, MW-3, MW-4, MW-6 and MW-12. It is also possible that the shallow zone has had some impact to MW-5, but the impact would appear to be minimal based on the groundwater elevations. Elevated chloride levels detected in monitor wells MW-1, MW-3, MW-4, MW-6 and MW-12 may be due to residual chloride impact to this area from the Wolverton Well No. 1.

Additionally, it appears that there is a deeper zone that is being impacted by the Wolverton Well No. 1. Due to the presence of salt water in monitor well MW-5 and the elevated sodium and chloride levels (indicating a lack of base exchange), it appears that the Wolverton Well No. 1 is an active source of salt water. However, it appears that the source has been significantly reduced by plugging of this well. The elevated chloride levels present in monitor well MW-2 indicate that this well is being currently impacted from the deeper salt water zone seeping from the Wolverton Well No. 1.

At this time, it does not appear that the deeper salt water zone is directly impacting the tributary. It appears that this zone is discharging into the alluvium present along the Colorado River (intercepted by monitor wells MW-7, MW-8, MW-9, MW-14 and MW-16. The Colorado River was indicated to be a losing stream based on the groundwater elevation in monitor well MW-7 in July-August 2006; however, based on groundwater elevation data for monitor wells MW-7, MW-8, MW-9, MW-14, MW-16 and MW-17 in April-May 2007, it appears that the Colorado River is currently a gaining stream. It is also likely that water from the shallow zone (present in monitor wells MW-1, MW-3, MW-4, MW-6 and MW-12) is discharging into the alluvium. During our initial site investigation activities in July-August 2006, Terracon observed that water from the seep present in the tributary was not flowing into the Colorado River indicating that due to the low flow in the tributary, it was likely infiltrating downward into the alluvium along the Colorado River. Terracon's initial investigation activities were performed during a dry time of year. During the additional investigation activities in April-May 2007, Terracon observed the tributary to be flowing directly into the Colorado River. However, it is still likely that much of this water is infiltrating downward into the alluvium along the Colorado River.

5.0 EVALUATION OF SEEP QUANTITY

As part of the site investigation activities, Terracon estimated the quantity of the upper and lower seeps. To estimate the quantity of the seeps, Terracon performed one rising head and one falling head slug test on monitor wells MW-1 and MW-3 to characterize the hydraulic conductivity of the soils/rock and evaluate the yield of the shallow groundwater bearing zone. Rising head and falling head slug tests were also performed on additional site monitor wells, as detailed below, to evaluate site conditions.

Time-drawdown data collected during the slug tests was documented in the MathCAD worksheets in Appendix E. The Bouwer and Rice method was used to evaluate the hydraulic conductivity of the soils/rock in the vicinity of monitor wells MW-1 and MW-3. The sustained yield of a water well completed in soils and shallow bedrock was evaluated using the nonequilibrium well function equation described in Attachment B of the TCEQ guidance document *RG-366-TRRP-8 Groundwater Classification*, dated March 2003.

The hydraulic conductivities and estimated well yields calculated for MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-9 and MW-14 are summarized in the table below.

Monitor Well	Date	Hydraulic Conductivity (centimeters per second)	Estimated Well Yield (gallons per day)
MW-1 – Rising Head	July 21, 2006	1.9xE-4	300
MW-1 – Falling Head	July 21, 2006	4.8xE-4	600
MW-2 – Rising Head	July 21, 2006	7.8-E-6	48
MW-2 – Falling Head	July 21, 2006	1.6xE-5	89
MW-3 – Rising Head	April 26, 2007	1.4xE-6	3
MW-3 – Falling Head	April 26, 2007	1.3xE-5	14
MW-4 – Rising Head	August 15, 2006	8.8xE-6	28
MW-4 – Falling Head	August 15, 2006	1.2xE-5	20
MW-5 – Bail Down Test	April 26, 2007	Not Determined	3
MW-7 – Rising Head	May 30, 2007	1.7xE-3	1,000
MW-7 – Falling Head	May 30, 2007	5.6xE-4	400
MW-9 – Rising Head	May 30, 2007	1.4xE-5	12
MW-14 – Rising Head	May 30, 2007	3.1xE-5	29

Based on the slug test data from monitor well MW-1, the flow rate of the lower seep was estimated to be approximately 35 to 106 gallons per day. Seep quantity calculations are provided in Appendix E. Numerous assumptions were made in estimating the seep quantity. Since no obvious seep zone was encountered during drilling activities and based on the fact that it appears that there could be multiple thin seep zones (fractures and/or bedding planes within the limestone), it was assumed that the seep zone was 0.25 feet thick. Additionally, it was assumed that the material in the seep zone consisted of clay material and the groundwater gradient from monitor well MW-3 to monitor well MW-1 (0.0449 ft/ft) was utilized to calculate seepage velocity, which was used to quantify the seep flow. Though Terracon made numerous assumptions in calculation of the seep quantity, it should be noted that, based on visual observations of the seep, the quantity estimate appears to be a reasonable estimate.

Based on the slug test data from monitor well MW-3, the flow rate of the upper seep was estimated to be approximately 12 to 36 gallons per day. Seep quantity calculations are provided in Appendix E. Numerous assumptions were made in estimating the seep quantity. Since it appears that the seep zone was present within the weathered material overlying bedrock encountered during drilling activities, it was assumed that the seep zone was 4.0 feet thick. Additionally, it was assumed that the material in the seep zone consisted of clay material and the groundwater gradient from monitor well MW-3 to monitor well MW-1 (0.0449 ft/ft) was utilized to calculate seepage velocity, which was used to quantify the seep flow. Though Terracon made numerous assumptions in calculation of the seep quantity, it should be noted that, based on visual observations of the seep, the quantity estimate appears to be a reasonable estimate.

6.0 FINDINGS AND RECOMMENDATIONS

The findings and recommendations of this investigation are as follows:

- Laboratory analyses of soil, groundwater, surface water and seep water samples collected from the site during the initial investigation in July-August 2006 did not indicate BTEX or TPH concentrations above the laboratory SQLs.
- Laboratory analyses of soil samples collected from monitor wells MW-1, MW-2, MW-3, MW-5 and MW-7 during the initial investigation in July-August 2006 indicated chloride concentrations ranging from 730 mg/kg to 5,490 mg/kg. The soil sample collected from monitor well MW-3 at a depth of 4.0-5.0 feet bgs indicated a chloride concentration of 5,490 mg/kg. Chloride concentrations detected in the remaining soil samples ranged from 730 to 2,200 mg/kg.
- Based on the field screening results and BTEX, TPH and chloride analytical results obtained during the initial investigation activities in July-August 2006, soil samples were not collected during the additional investigation activities in April-May 2007. However, soils were field screened for VOCs with a PID and for chloride utilizing Hach Quantab® strips during the additional investigation activities to compare to the initial data to confirm that sampling was not necessary. Field PID and chloride screening readings did not exceed those obtained during the initial investigation.
- Laboratory analyses of groundwater samples collected from monitor wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-14, MW-15, MW-16 and MW-17 during the additional investigation activities in April-May 2007 indicated chloride concentrations ranging from 36.6 mg/L to 13,300 mg/L.
- Laboratory analyses of surface water samples collected from the tributary at and downstream of the lower seep area during the additional investigation activities in April-May 2007 indicated chloride concentrations ranging from 1,920 mg/L to 2,370 mg/L. Laboratory analysis of surface water samples collected from the tributary at and downstream of the upper seep area during the additional investigation activities in April-May 2007 indicated chloride concentrations ranging from 4,180 mg/L to 5,300 mg/L.
- Laboratory analyses of surface water samples collected from the Colorado River during the additional investigation activities in April-May 2007 indicated chloride concentrations ranging from 218 mg/L to 240 mg/L. Surface water samples collected from the Colorado River and Elm Creek located approximately 2,500 feet upstream of the tributary indicated chloride concentrations of 351 mg/L and 158 mg/L, respectively.

- Laboratory analyses of a surface water sample collected from the lower seep near monitor well MW-1 during the additional investigation in April-May 2007 indicated a chloride concentration of 1,620 mg/L.
- Based on water composition and groundwater elevation data, it appears that there are at least two separate groundwater zones present at the site. It appears that there is a shallow water zone present along the tributary which was intercepted by monitor wells MW-1, MW-3, MW-4, MW-6 and MW-12. It is also possible that the shallow zone has had some impact to MW-5, but the impact would appear to be minimal based on the groundwater elevations. Elevated chloride levels detected in monitor wells MW-1, MW-3, MW-4, MW-6 and MW-12 may be due to residual chloride impact to this area from the Wolverton Well No. 1.

Additionally, it appears that there is a deeper zone that is being impacted by the Wolverton Well No. 1. Due to the presence of salt water in monitor well MW-5 and the elevated sodium and chloride levels (indicating a lack of base exchange), it appears that the Wolverton Well No. 1 is an active source of salt water. However, it appears that the source has been significantly reduced by plugging of this well. The elevated chloride levels present in monitor well MW-2 appears to indicate that this well is being currently impacted from the deeper salt water zone seeping from the Wolverton Well No. 1.

- At this time, it does not appear that the deeper salt water zone is directly impacting the tributary. It appears that this zone is discharging into the alluvium present along the Colorado River (intercepted by monitor wells MW-7, MW-8, MW-9, MW-14 and MW-16). The Colorado River was indicated to be a losing stream based on the groundwater elevation in monitor well MW-7 in July-August 2006; however, based on groundwater elevation data for monitor wells MW-7, MW-8, MW-9, MW-14, MW-16 and MW-17 in April-May 2007, it appears that the Colorado River is currently a gaining stream. It is also likely that water from the shallow zone (present in monitor wells MW-1, MW-3, MW-4, MW-6 and MW-12) is discharging into the alluvium. During our initial site investigation activities in July-August 2006, Terracon observed that water from the seep present in the tributary was not flowing into the Colorado River indicating that due to the low flow in the tributary, it was likely infiltrating downward into the alluvium along the Colorado River. Terracon's initial investigation activities were performed during a dry time of year. During the additional investigation activities in April-May 2007, Terracon observed the tributary to be flowing directly into the Colorado River. However, it is still likely that much of this water is infiltrating downward into the alluvium along the Colorado River.
- Based on review of available RRC file information for an approximate one-half mile radius surrounding the site, conversations with RRC personnel, site observations and an evaluation of field and laboratory data, it appears that Wolverton Well No. 1 is an active source of saltwater impact at the site. Though the seep may still be active, it appears to be having a minimal effect on chloride concentrations in the Colorado River. Chloride concentrations detected in surface

water samples collected from the Colorado River both up-gradient and down-gradient of the Ballinger seep indicate that chloride levels are higher in the Colorado River (351 mg/L) prior to its confluence with Elm Creek (158 mg/L) than they are further downstream, along the seep area (218-240 mg/L). Therefore, it appears that the Ballinger seep is currently a minor source of salinity to the Colorado River. It should also be noted that the current chloride levels of 218-240 mg/L in the Colorado River are significantly lower than those detected in July-August 2006 (621-626 mg/L). Though the elevated water levels at the site have resulted in the Colorado River currently being a gaining stream (it was noted to be a losing stream in July-August 2006), the chloride-impacted groundwater present in the alluvium discharging to the Colorado River is being diluted by the apparent increased surface water flow in the Colorado River due to the recent rainfall. However, although the chloride concentration may be lower during periods of higher rainfall the chloride load in the river can increase due to the increased volume of water entering the river.

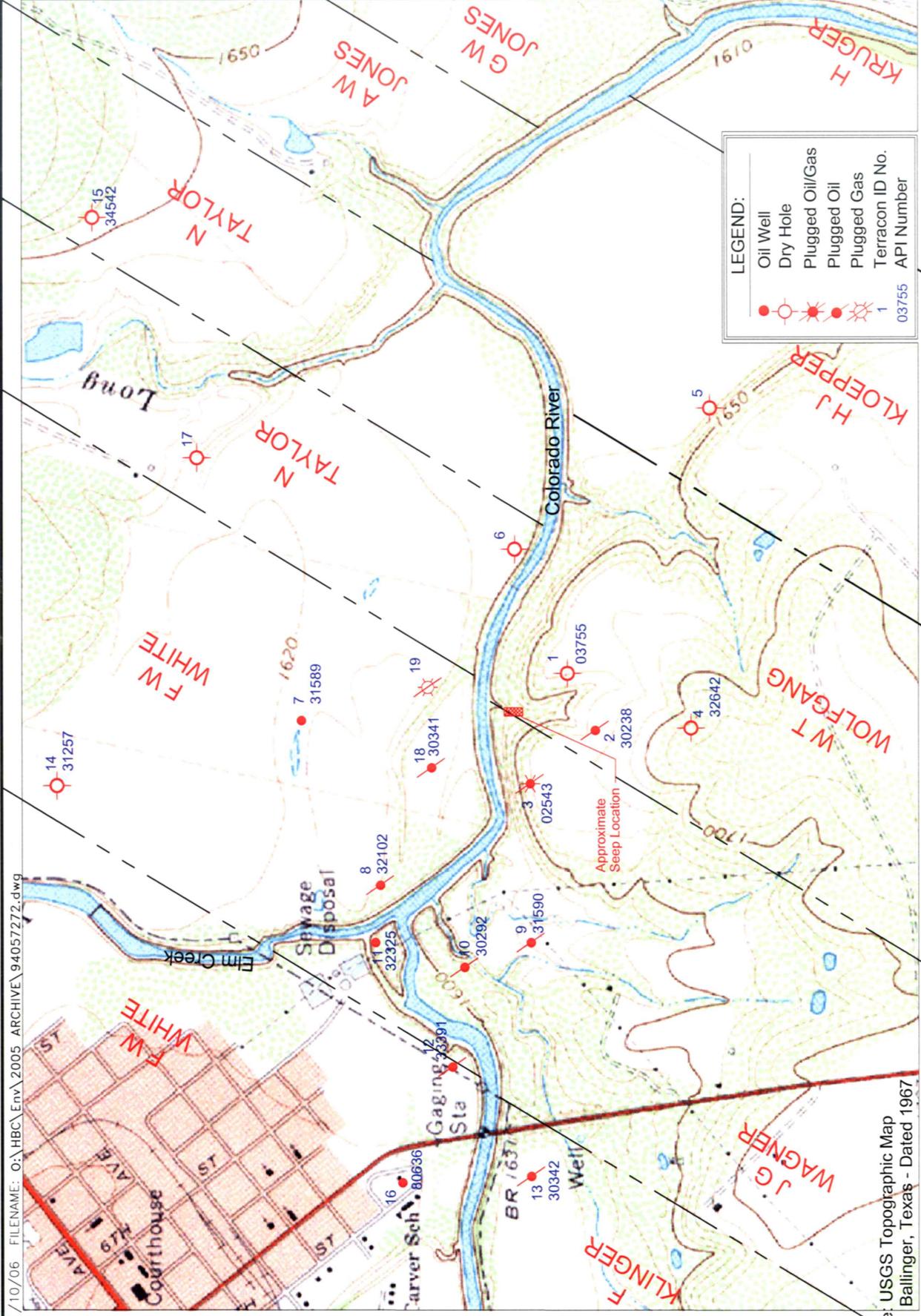
- Based on the slug test data from monitor well MW-3, the seep flow rate for the upper seep was estimated to be approximately 12 to 36 gallons per day. Based on the slug test data from monitor well MW-1, the seep flow rate for the lower seep was estimated to be approximately 35 to 106 gallons per day.

Based on the additional monitoring data, replugging of the Wolverton Well No. 1 may be necessary to eliminate the source of the release. Plugging of the Wolverton Well No. 1 will significantly reduce the chloride concentrations in groundwater over time. However, based on current surface water data for the site, it appears that the Ballinger seep is a minor source of salinity to the Colorado River. We recommend consideration be given to re-plugging Wolverton Well No. 1 and establishing a quarterly or semi annual monitoring program for the monitor wells, seeps and surface water in the tributary and Colorado River to see if conditions continue to improve.

APPENDIX A

- Figure 1 – Topographic Map**
- Figure 2 – 1995 Aerial Photograph**
- Figure 3 – Site Plan**
- Figure 4 – BTEX/TPH Concentrations in Groundwater (July-August 2006)**
- Figure 5A – Chloride Concentrations in Groundwater (July-August 2006)**
- Figure 5B – Chloride Concentrations in Groundwater (May 2007)**
- Figure 6 – BTEX/TPH Concentrations in Surface Water (July 2006)**
- Figure 7A – Chloride Concentrations in Surface Water (July 2006)**
- Figure 7B – Chloride Concentrations in Surface Water (May 2007)**
- Figure 8A – Water/Groundwater Elevations (August 21, 2006)**
- Figure 8B – Water/Groundwater Elevations (May 30, 2007)**
- Figure 9 – Cross-Section A-A'**
- Figure 10 – Cross-Section B-B'**
- Figure 11 – Cross-Section C-C'**
- Figure 12 – Cross-Section D-D'**
- Figure 13 – Cross-Section E-E'**
- Figure 14A – Radial Plots of Anion/Cation Data**
- Figure 14B – Radial Plots of Anion/Cation Data**
- Figure 14C – Radial Plots of Anion/Cation Data**
- Figure 14D – Radial Plots of Anion/Cation Data**
- Figure 15 – Field Screening Data – Chloride (July-August 2006)**
- Figure 16 – Field Screening Data – Conductivity (August 2006)**
- Figure 17 – Anion/Cation Data for Groundwater (May 2007)**

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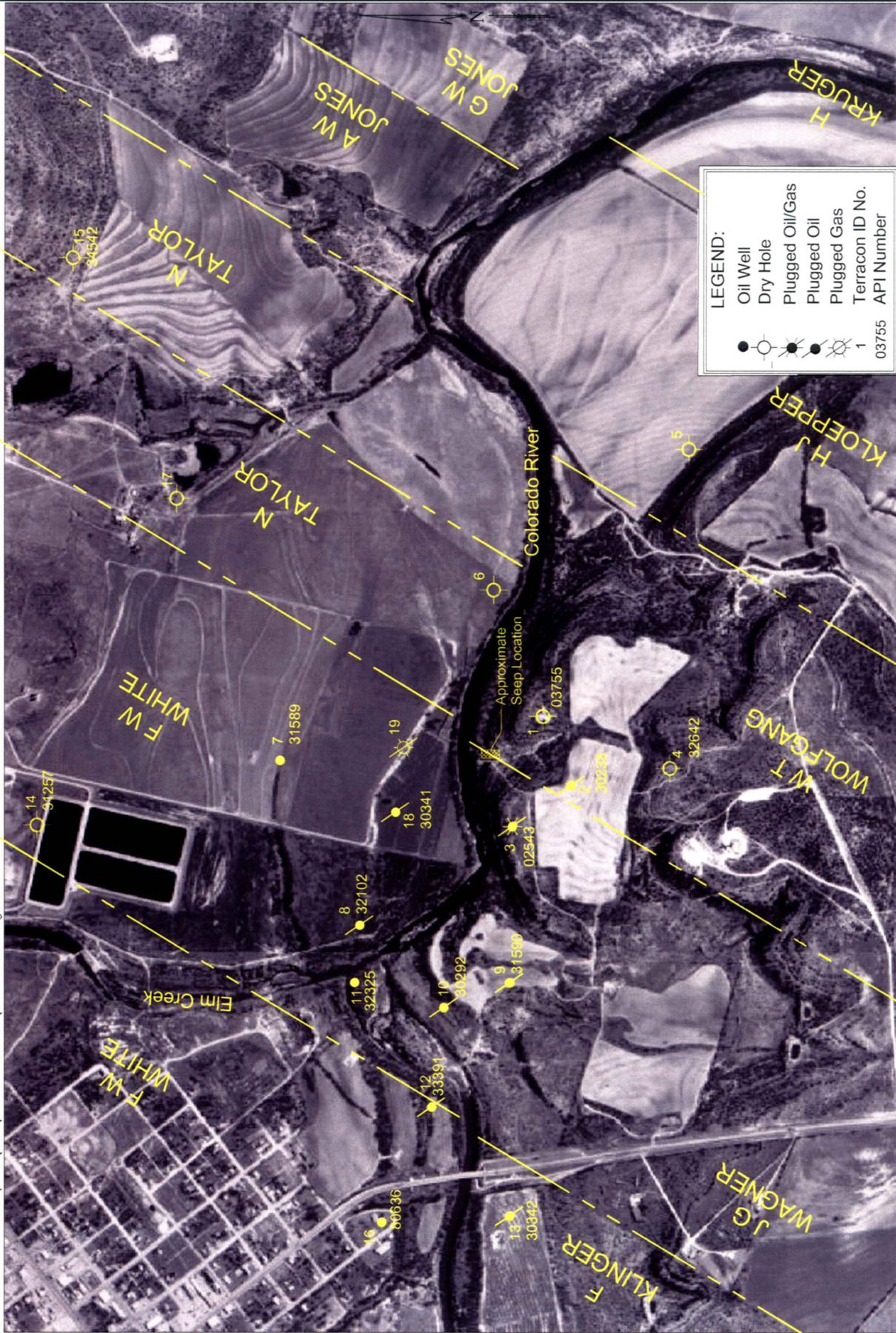
Source: USGS Topographic Map Ballinger, Texas - Dated 1967.

THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.



BALLINGER SEEP
RUNNELS COUNTY, TEXAS

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LEGEND:

- Oil Well
- Dry Hole
- Plugged Oil/Gas
- Plugged Oil
- Plugged Gas
- Terracon ID No.
- API Number

03755

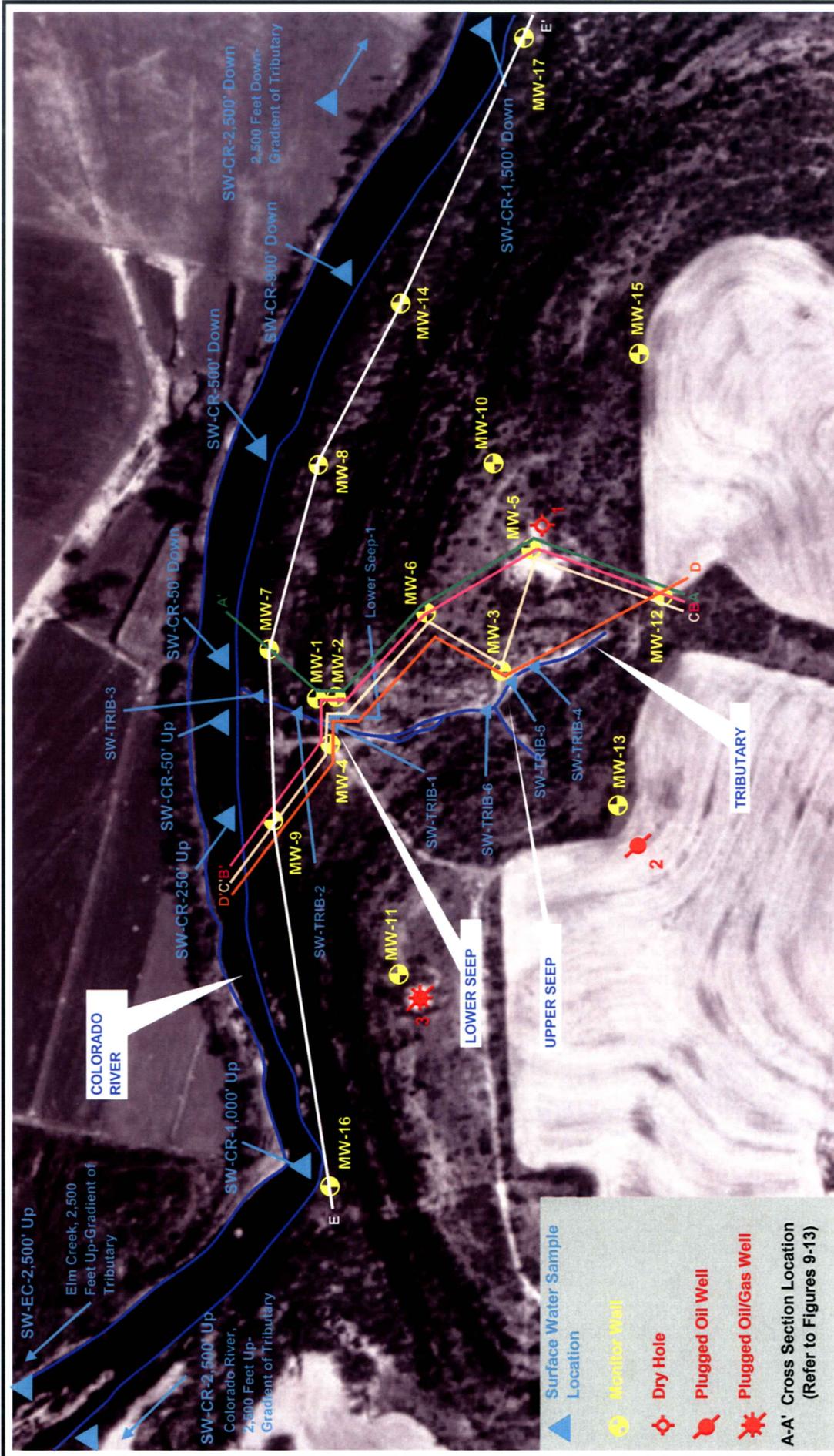
BALLINGER SEEP
 RUNNELS COUNTY, TEXAS

SOURCE: www.TerraServer.Homeadvisor.msn.com

0 600 1200 FEET
 APPROXIMATE SCALE

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 NOT BE USED SEPARATELY
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FIGURE 2: 1995 AERIAL PHOTOGRAPH



Source: www.terraserver.homeadvisor.msn.com, 1995 Aerial Photograph

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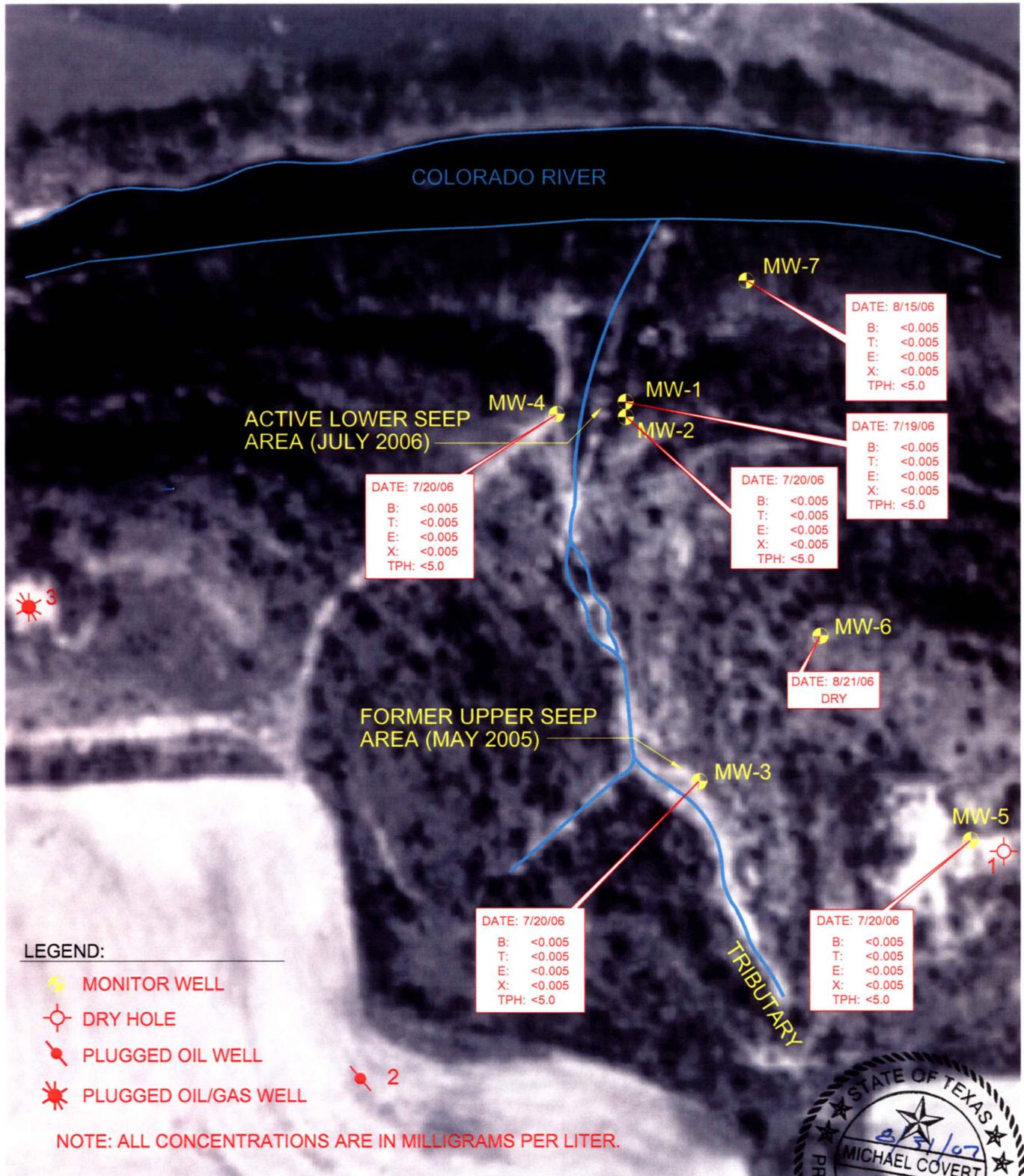


**BALLINGER SEEP
RUNNELS COUNTY, TEXAS**

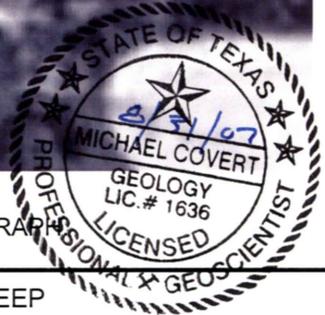
FIGURE 3: SITE PLAN

Terracon Project No. 94057272B

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SOURCE: HTTP://TERRASERVER.HOMEADVISOR.MSN.COM, 1995 AERIAL PHOTOGRAPH



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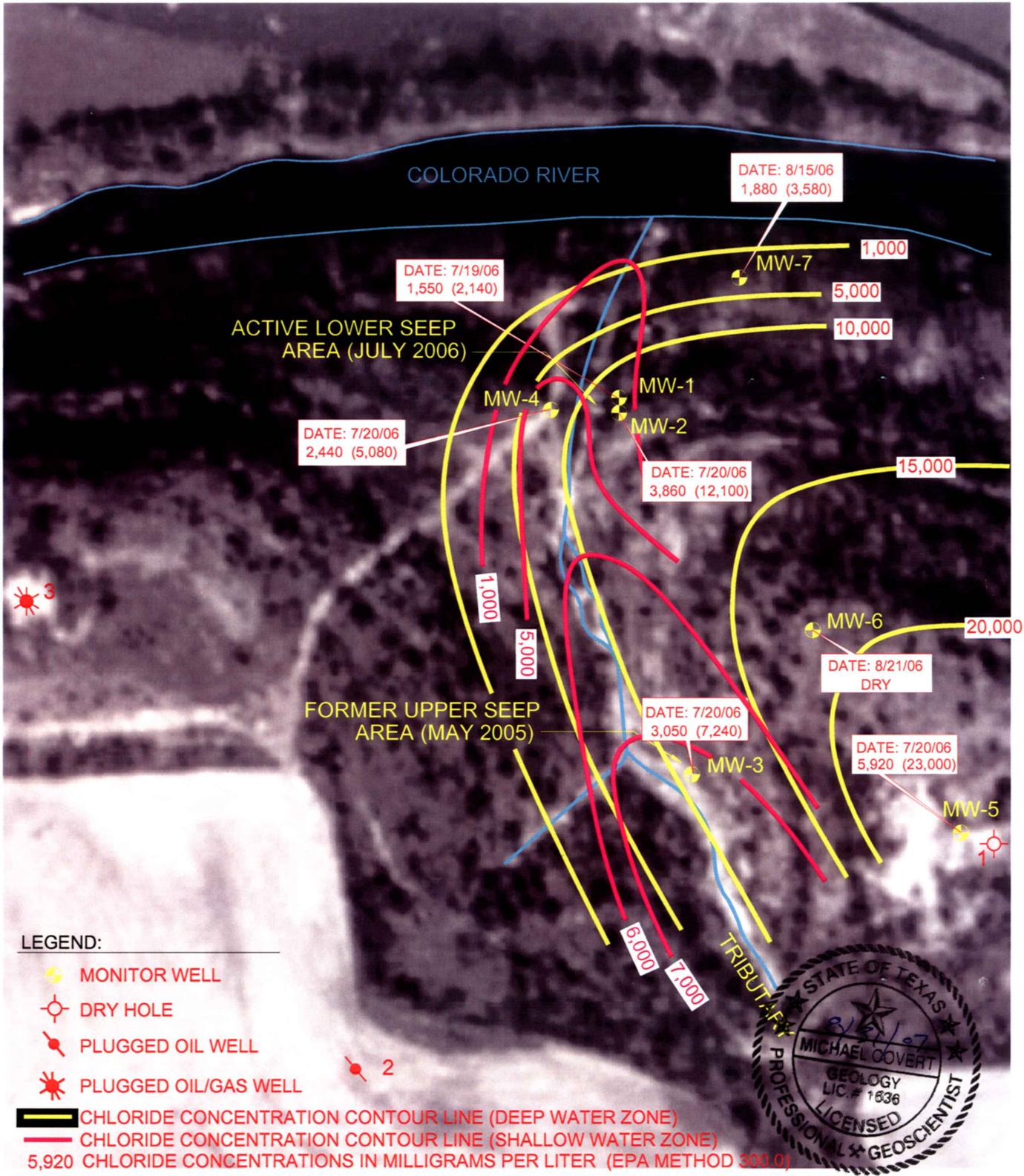
0 75 150 FEET
APPROXIMATE SCALE

BALLINGER SEEP
RUNNELS COUNTY, TEXAS

Terracon Project No.: 94057272

FIGURE 4: BTEX/TPH CONCENTRATIONS IN GROUNDWATER (JULY-AUGUST 2006)

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LEGEND:

- MONITOR WELL
- DRY HOLE
- PLUGGED OIL WELL
- PLUGGED OIL/GAS WELL

CHLORIDE CONCENTRATION CONTOUR LINE (DEEP WATER ZONE)
 CHLORIDE CONCENTRATION CONTOUR LINE (SHALLOW WATER ZONE)
 5,920 CHLORIDE CONCENTRATIONS IN MILLIGRAMS PER LITER (EPA METHOD 300.0)
 (23,000) CHLORIDE CONCENTRATIONS IN MILLIGRAMS PER LITER (STANDARD METHOD 4500B)

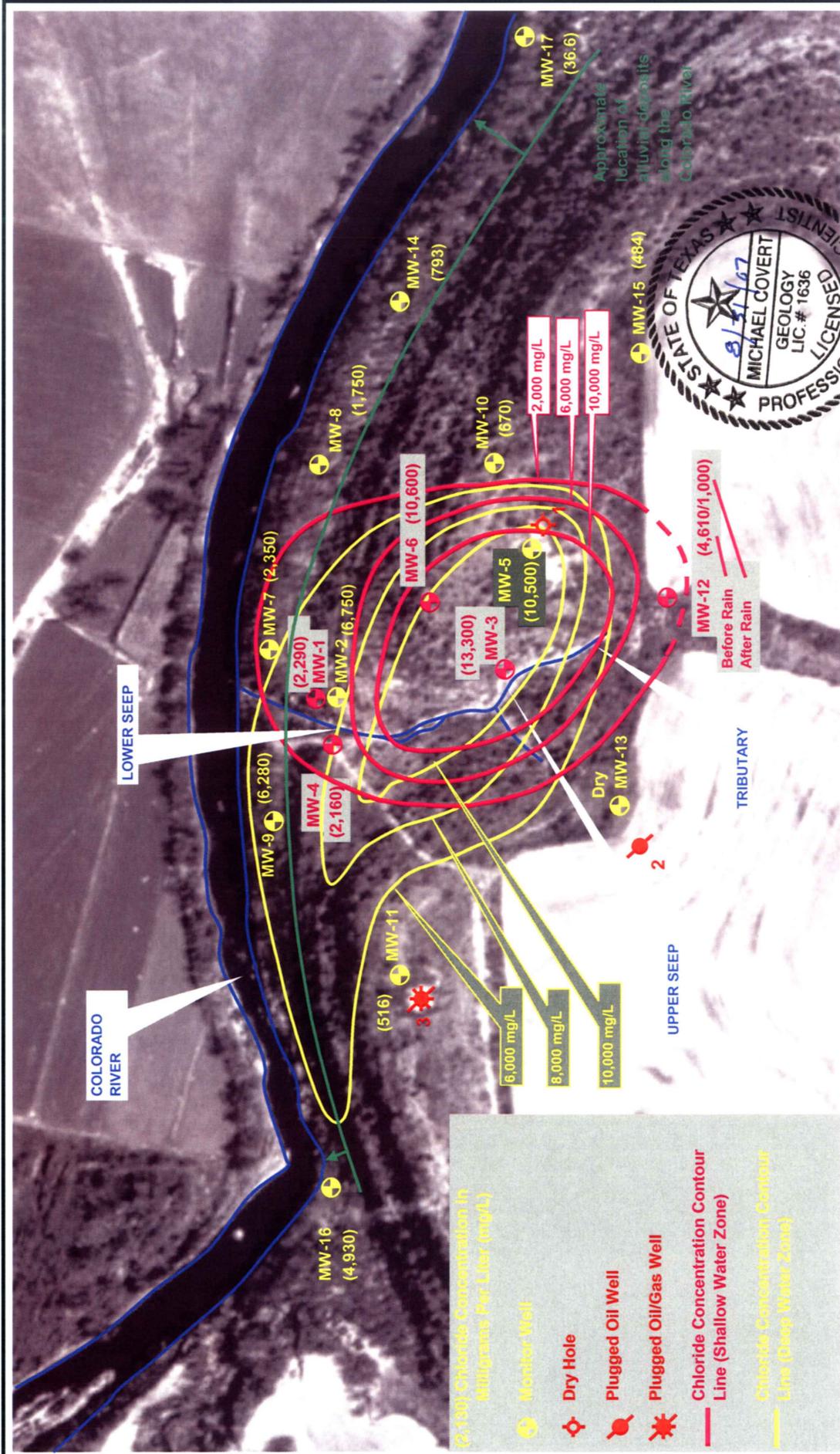
SOURCE: HTTP://TERRASERVER.HOMEADVISOR.MSN.COM, 1995 AERIAL PHOTOGRAPH.



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.



BALLINGER SEEP
RUNNELS COUNTY, TEXAS



Source: www.terracon.homeadvisor.msn.com, 1995 Aerial Photograph

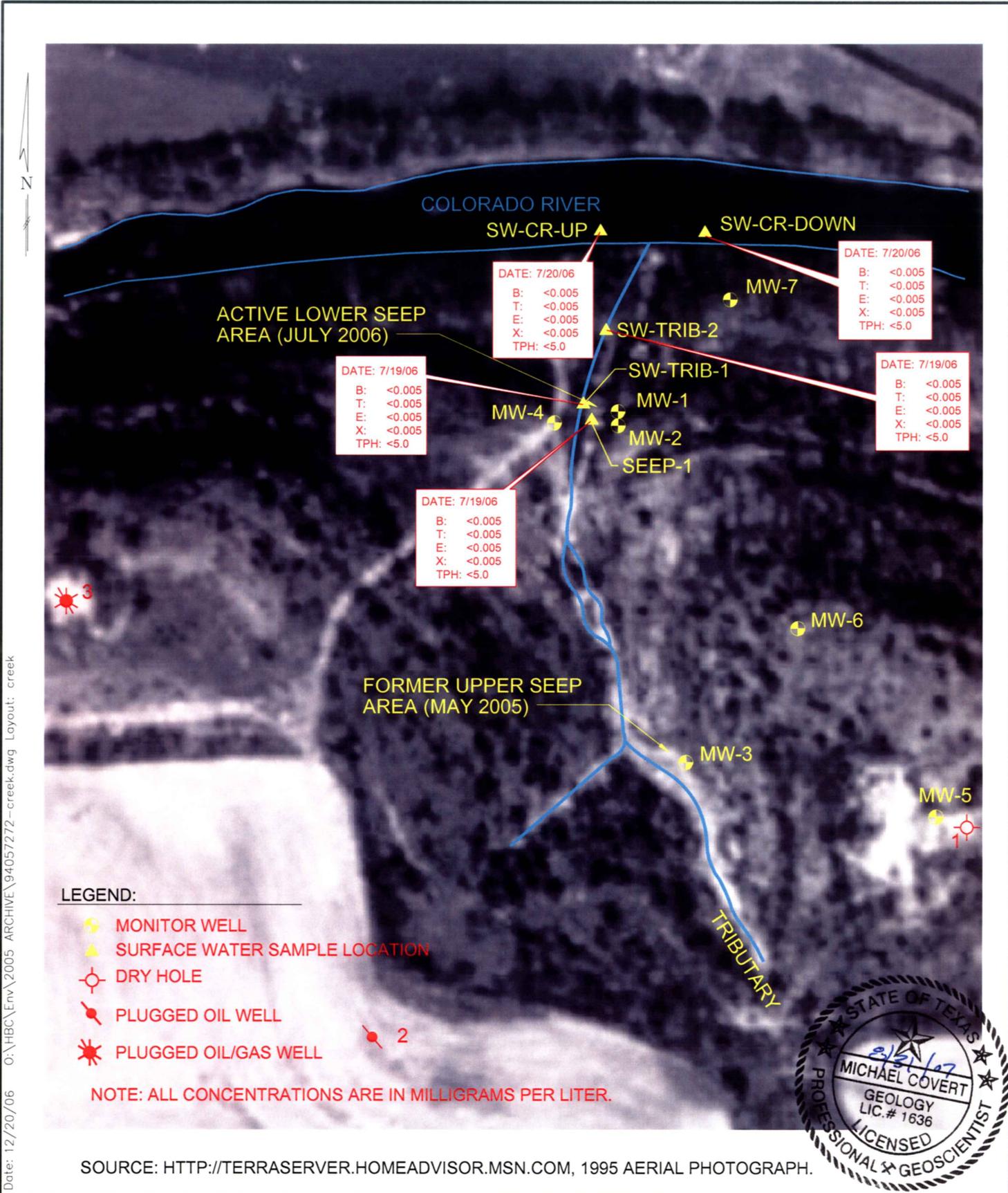
THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

0 155 310 FEET
APPROXIMATE SCALE



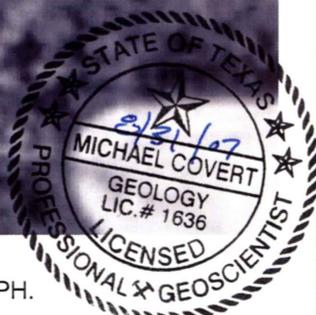
BALLINGER SEEP
RUNNELS COUNTY, TEXAS

FIGURE 5B: CHLORIDE CONCENTRATIONS IN GROUNDWATER (MAY 2007)



Date: 12/20/06 0:\HBC\Env\2005 ARCHIVE\94057272 - creek.dwg Layout: creek

SOURCE: HTTP://TERRASERVER.HOMEADVISOR.MSN.COM, 1995 AERIAL PHOTOGRAPH.



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

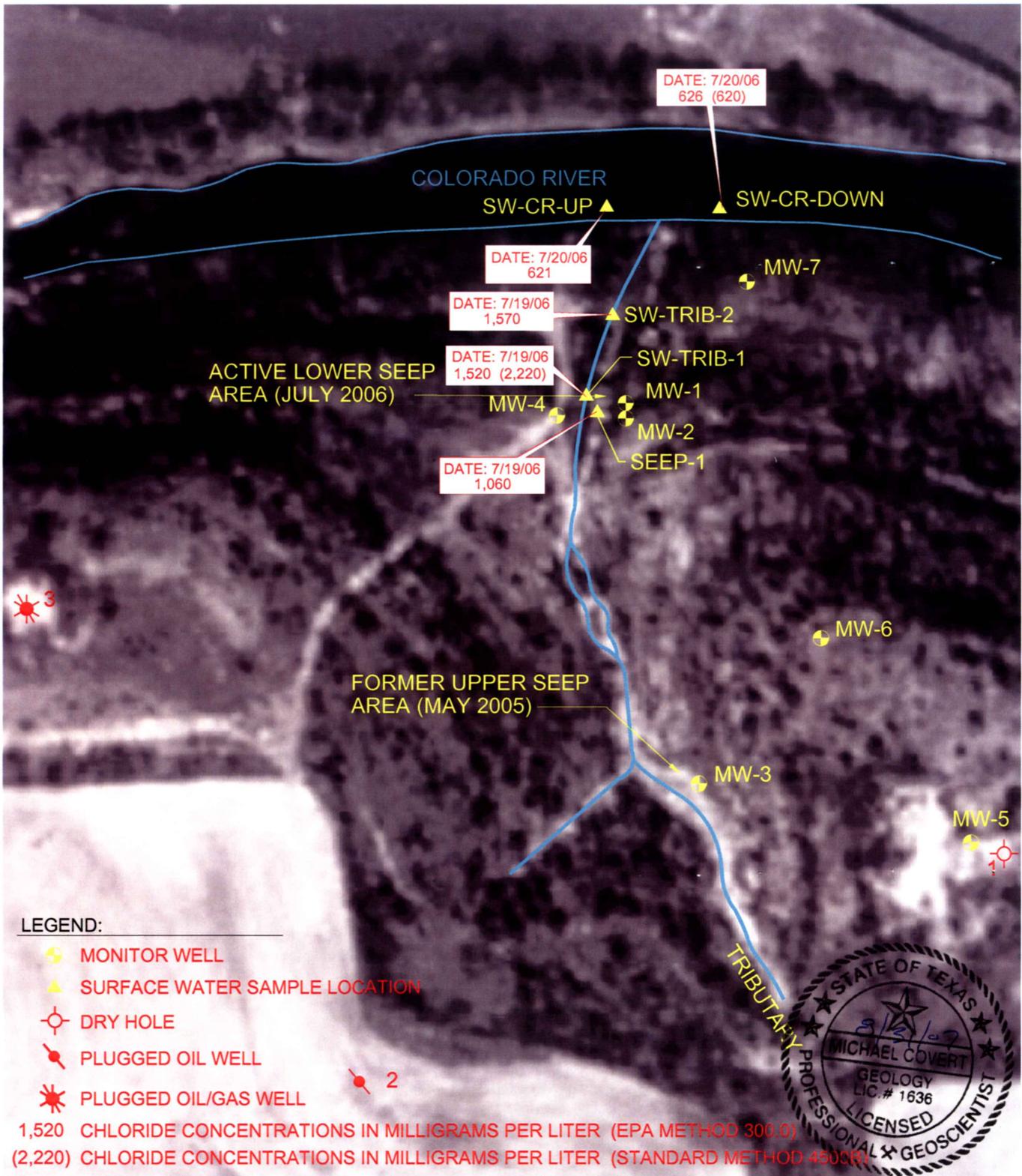
0 75 150 FEET
APPROXIMATE SCALE

BALLINGER SEEP
RUNNELS COUNTY, TEXAS

Terracon Project No.: 94057272

FIGURE 6: BTEX/TPH CONCENTRATIONS IN SURFACE WATER (JULY 2006)

Date: 07/18/07 O:\HBC\Env\2005 ARCHIVE\94057272-creek.dwg Layout: creek



LEGEND:

- MONITOR WELL
- SURFACE WATER SAMPLE LOCATION
- DRY HOLE
- PLUGGED OIL WELL
- PLUGGED OIL/GAS WELL

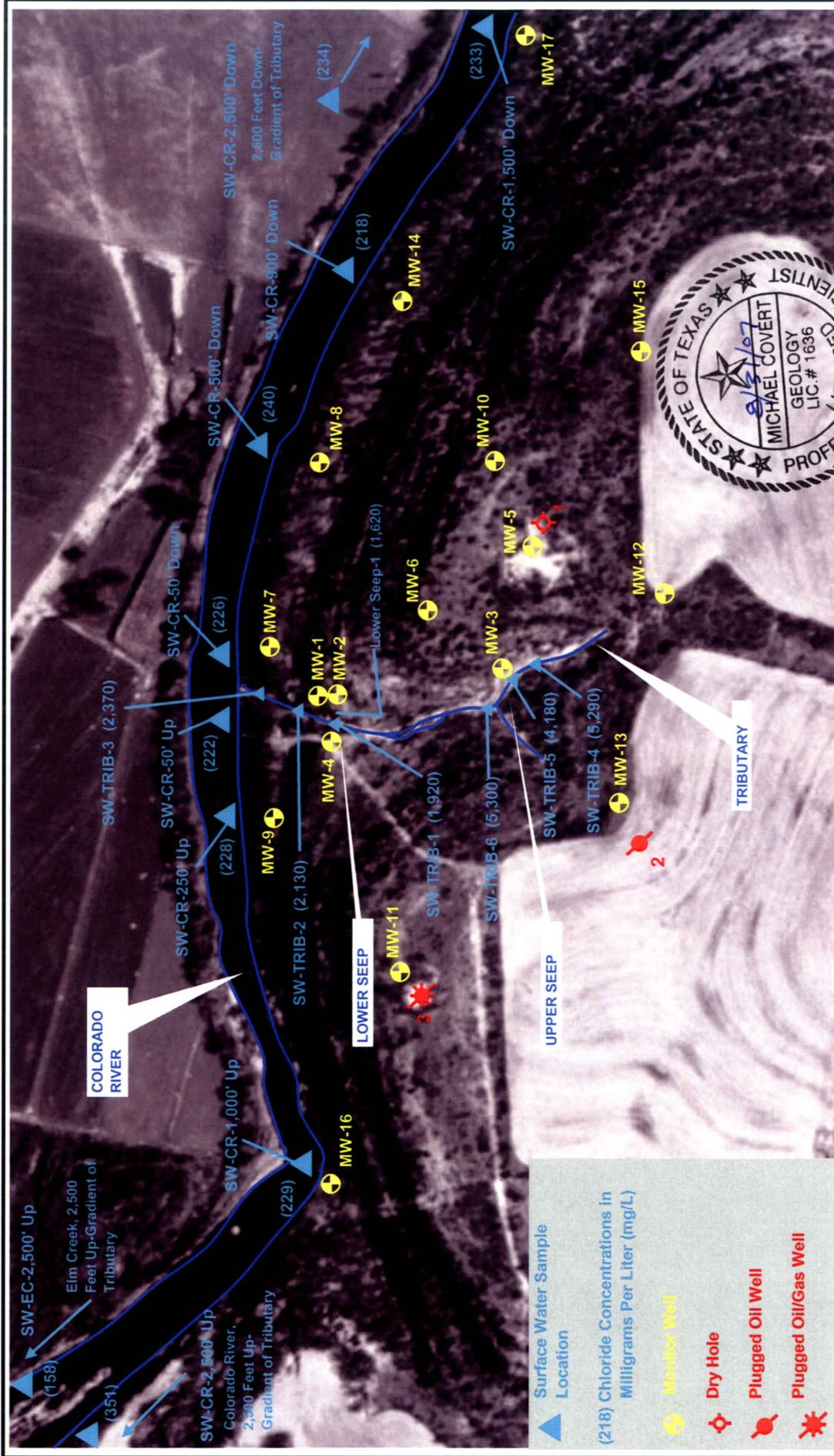
1,520 CHLORIDE CONCENTRATIONS IN MILLIGRAMS PER LITER (EPA METHOD 300.0)
 (2,220) CHLORIDE CONCENTRATIONS IN MILLIGRAMS PER LITER (STANDARD METHOD 4500Cl)

SOURCE: [HTTP://TERRASERVER.HOMEADVISOR.MSN.COM](http://TERRASERVER.HOMEADVISOR.MSN.COM), 1995 AERIAL PHOTOGRAPH.

THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.



BALLINGER SEEP
RUNNELS COUNTY, TEXAS



Source: www.terracon.com

THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

0 155 310 FEET
APPROXIMATE SCALE

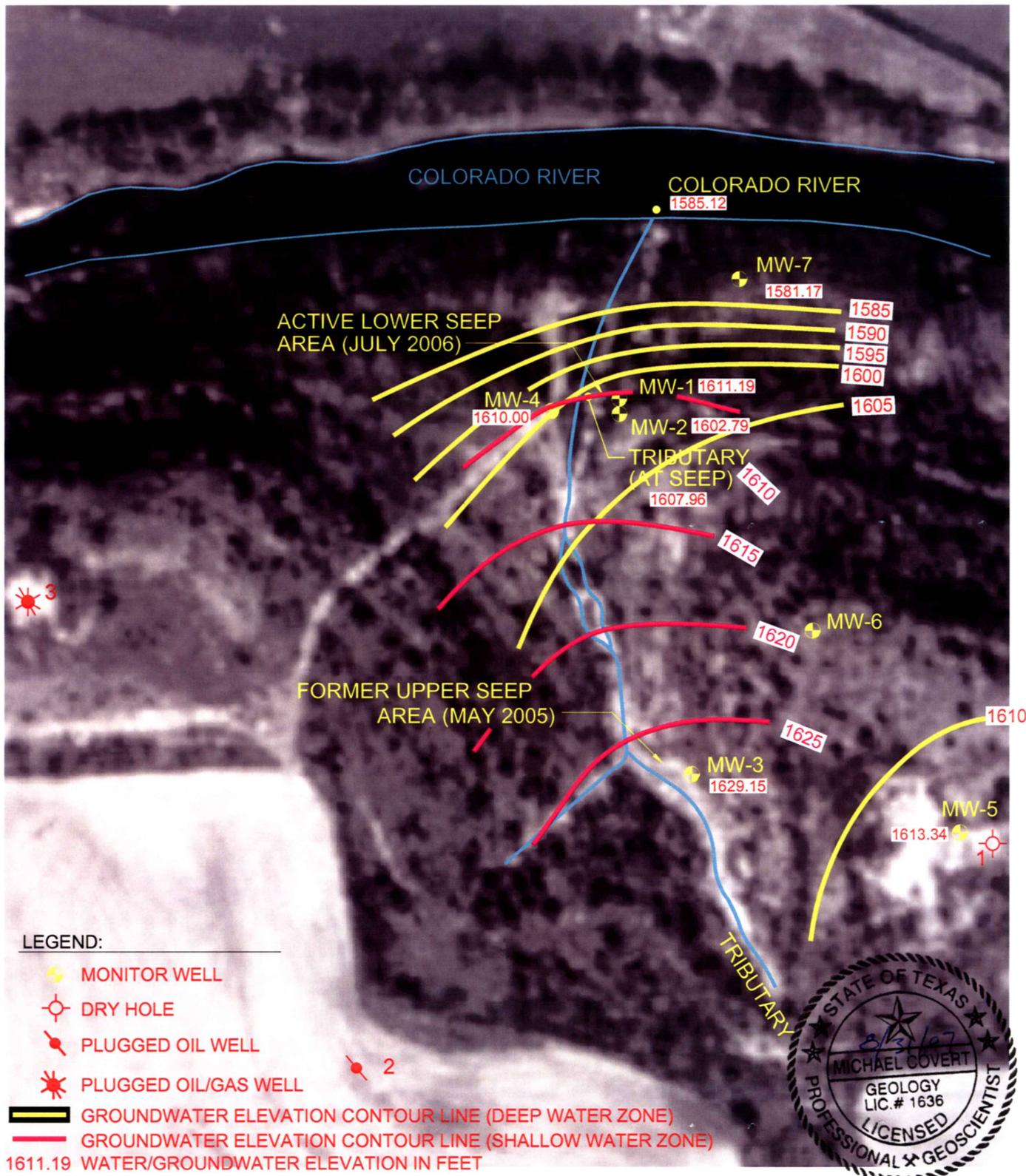


BALLINGER SEEP
RUNNELS COUNTY, TEXAS

Terracon Project No. 94057272B

FIGURE 7B: CHLORIDE CONCENTRATIONS IN SURFACE WATER (MAY 2007)

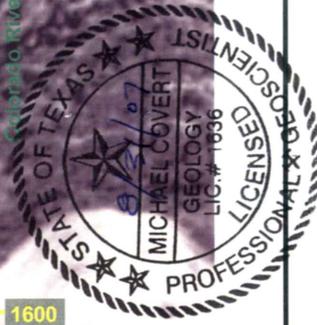
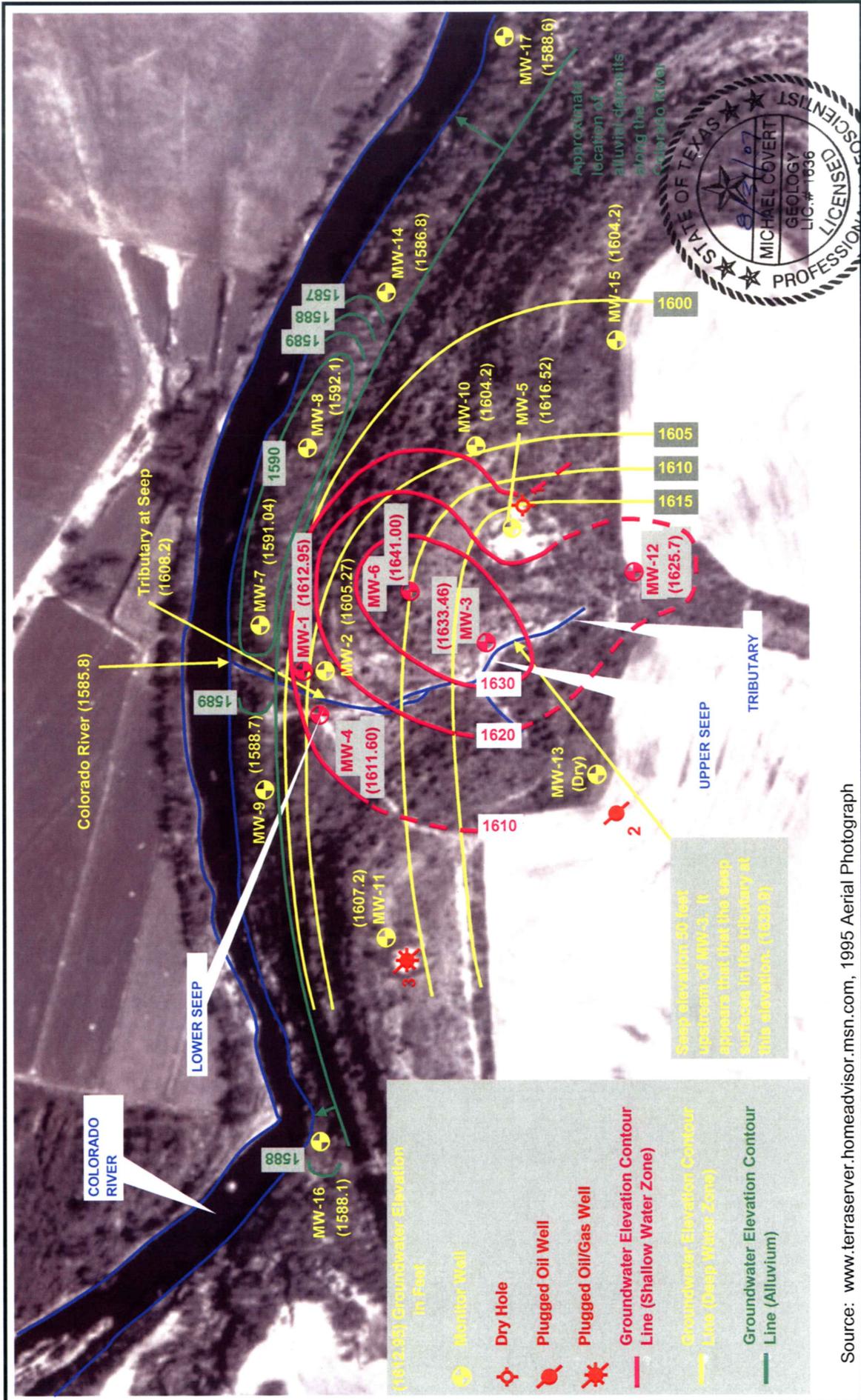
Date: 07/18/07 0:\HBC\Env\2005 ARCHIVE\94057272-creek.dwg Layout: creek



SOURCE: [HTTP://TERRASERVER.HOMEADVISOR.MSN.COM](http://TERRASERVER.HOMEADVISOR.MSN.COM), 1995 AERIAL PHOTOGRAPH.

<p>THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.</p>	<p>0 75 150 FEET</p> <p>APPROXIMATE SCALE</p>	<p>BALLINGER SEEP RUNNELS COUNTY, TEXAS</p>
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Terracon Project No.: 94057272 **FIGURE 8A: WATER/GROUNDWATER ELEVATIONS (AUGUST 21, 2006)**



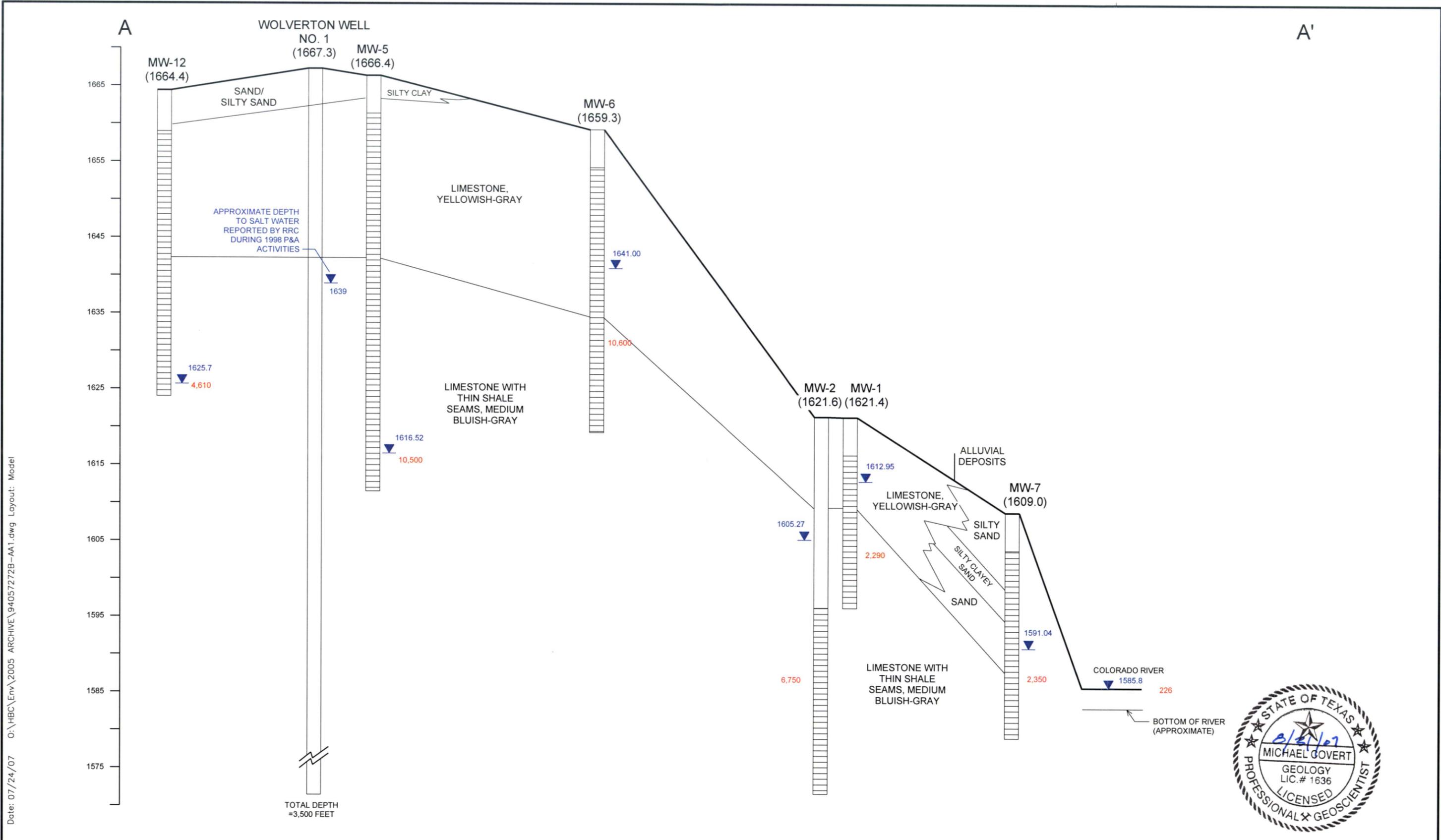
BALLINGER SEEP
RUNNELS COUNTY, TEXAS

FIGURE 8B: WATER/GROUNDWATER ELEVATIONS
(MAY 30, 2007)



Source: www.terraconserver.homeadvisor.msn.com, 1995 Aerial Photograph

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 USED SEPARATELY FROM ORIGINAL
 REPORT.



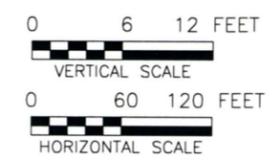
Date: 07/24/07 O:\HBC\Env\2005 ARCHIVE\94057272B-AA1.dwg Layout: Model



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

LEGEND:

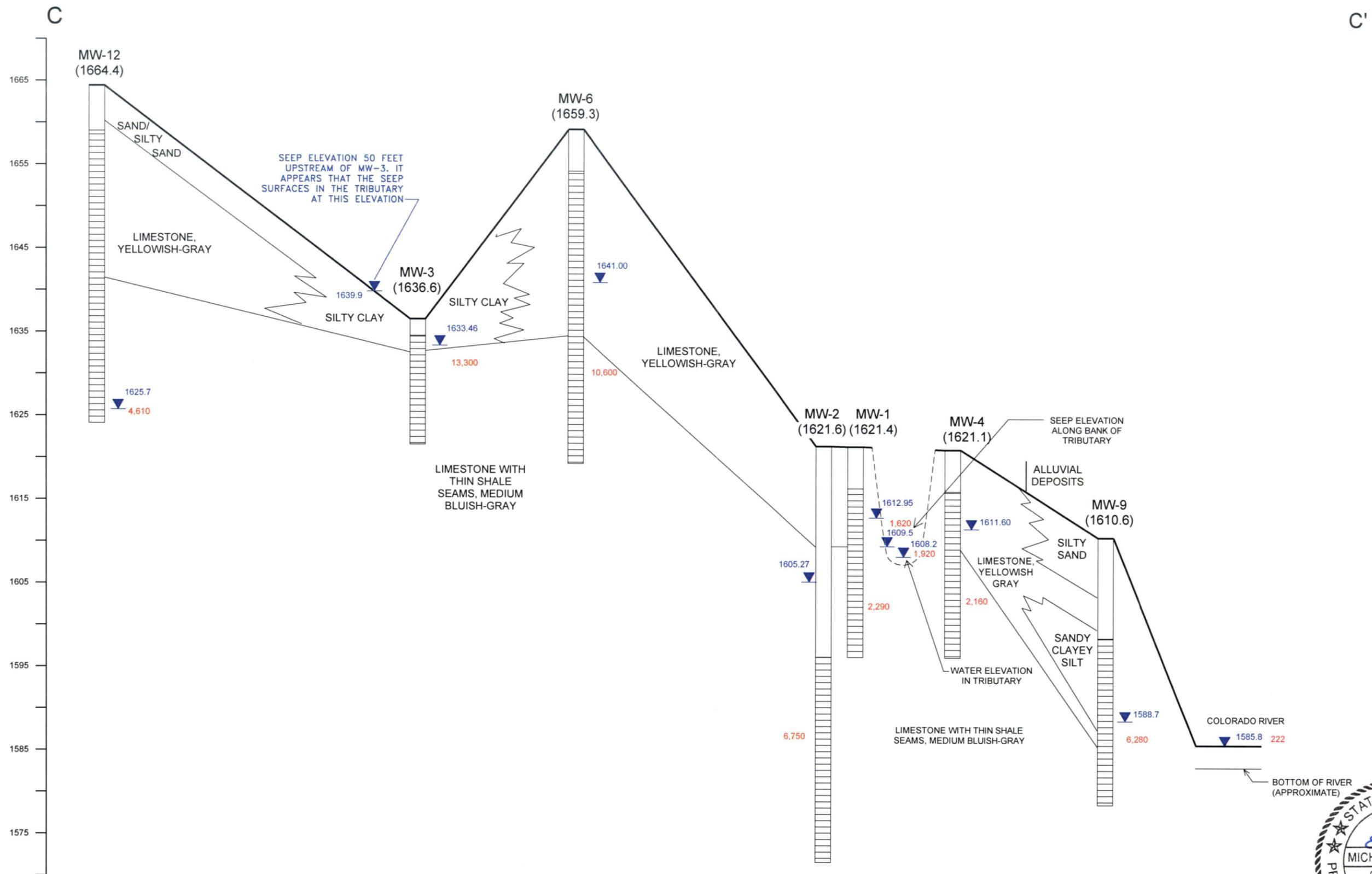
(1666.4)	GROUND SURFACE ELEVATION IN FEET
▼	GROUNDWATER ELEVATION IN FEET (MAY 30, 2007)
6,750	CHLORIDE CONCENTRATION IN MILLIGRAMS PER LITER (EPA METHOD 300.0) (MAY 2007)



BALLINGER SEEP RUNNELS COUNTY, TEXAS

FIGURE 9: CROSS SECTION A-A'

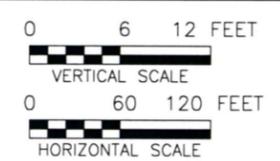
Date: 07/24/07 O:\HBC\Env\2005 ARCHIVE\94057272B-CC1.dwg Layout: Model



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

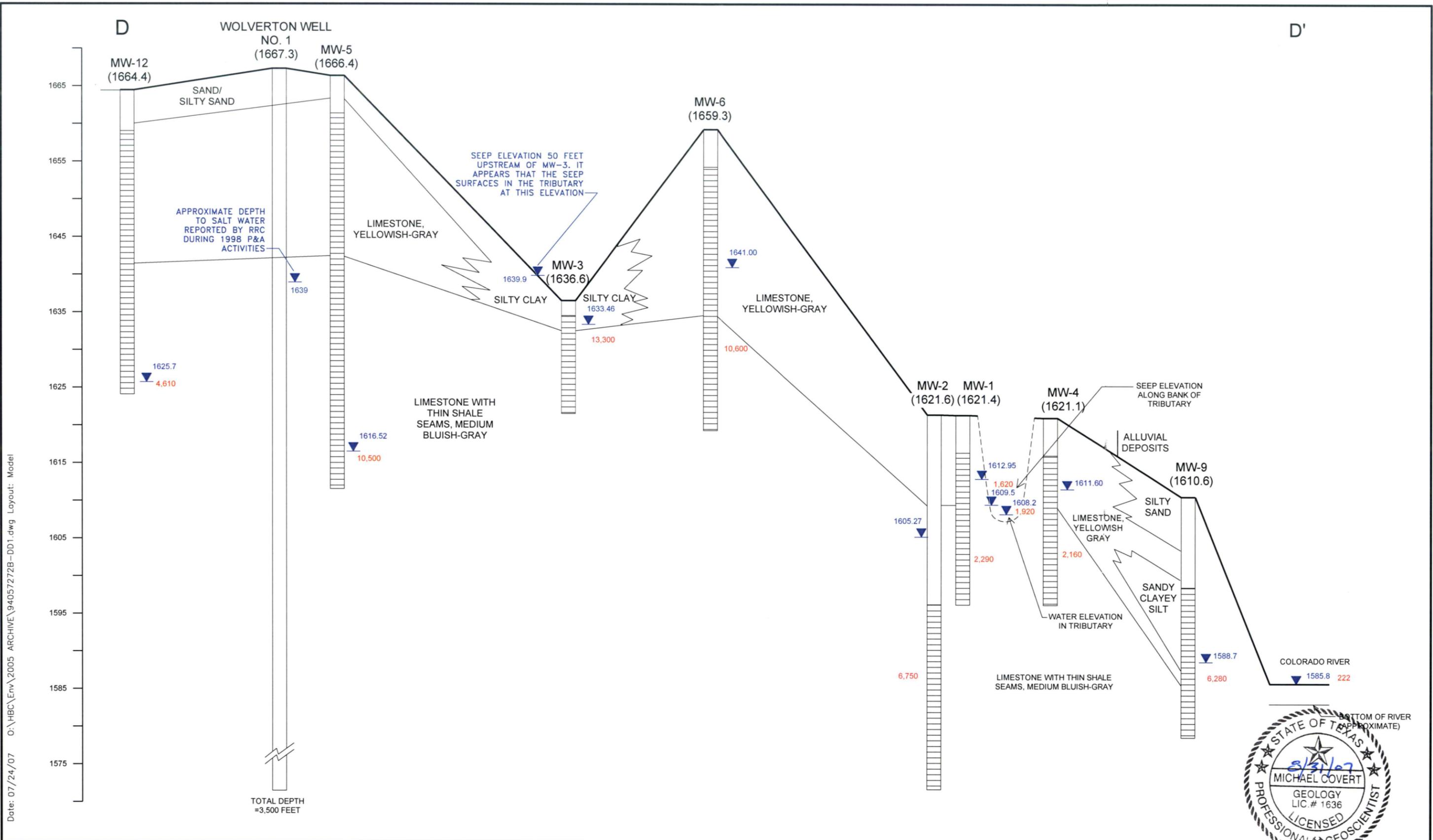
LEGEND :

(1664.4)	GROUND SURFACE ELEVATION IN FEET
▼	GROUNDWATER ELEVATION IN FEET (MAY 30, 2007)
6,750	CHLORIDE CONCENTRATION IN MILLIGRAMS PER LITER (EPA METHOD 300.0) (MAY 2007)



BALLINGER SEEP
 RUNNELS COUNTY, TEXAS

FIGURE 11: CROSS SECTION C-C'

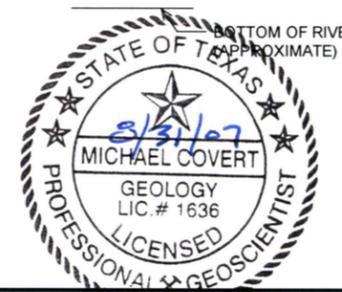
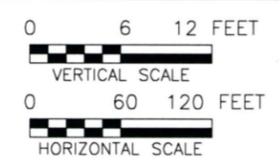


Date: 07/24/07 O:\HBC\Env\2005 ARCHIVE\94057272B-DD1.dwg Layout: Model

THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

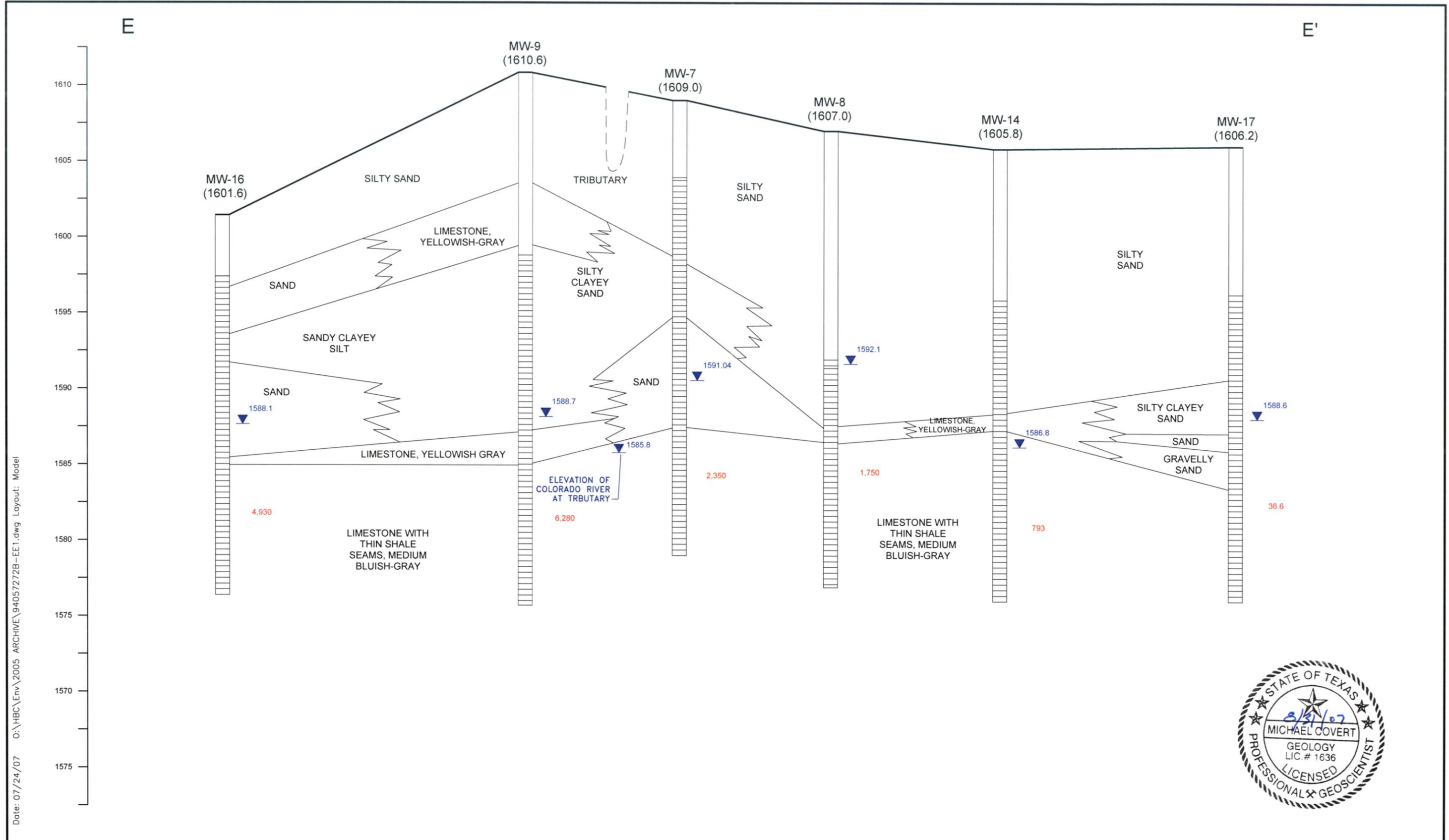
LEGEND:

(1666.4)	GROUND SURFACE ELEVATION IN FEET
▼	GROUNDWATER ELEVATION IN FEET (MAY 30, 2007)
6,750	CHLORIDE CONCENTRATION IN MILLIGRAMS PER LITER (EPA METHOD 300.0) (MAY 2007)



BALLINGER SEEP
 RUNNELS COUNTY, TEXAS

FIGURE 12: CROSS SECTION D-D'



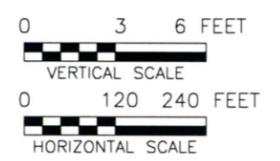
Date: 07/24/07 O:\HBC\Env\2005 ARCHIVE\94057272B-EE1.dwg Layout: Model



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

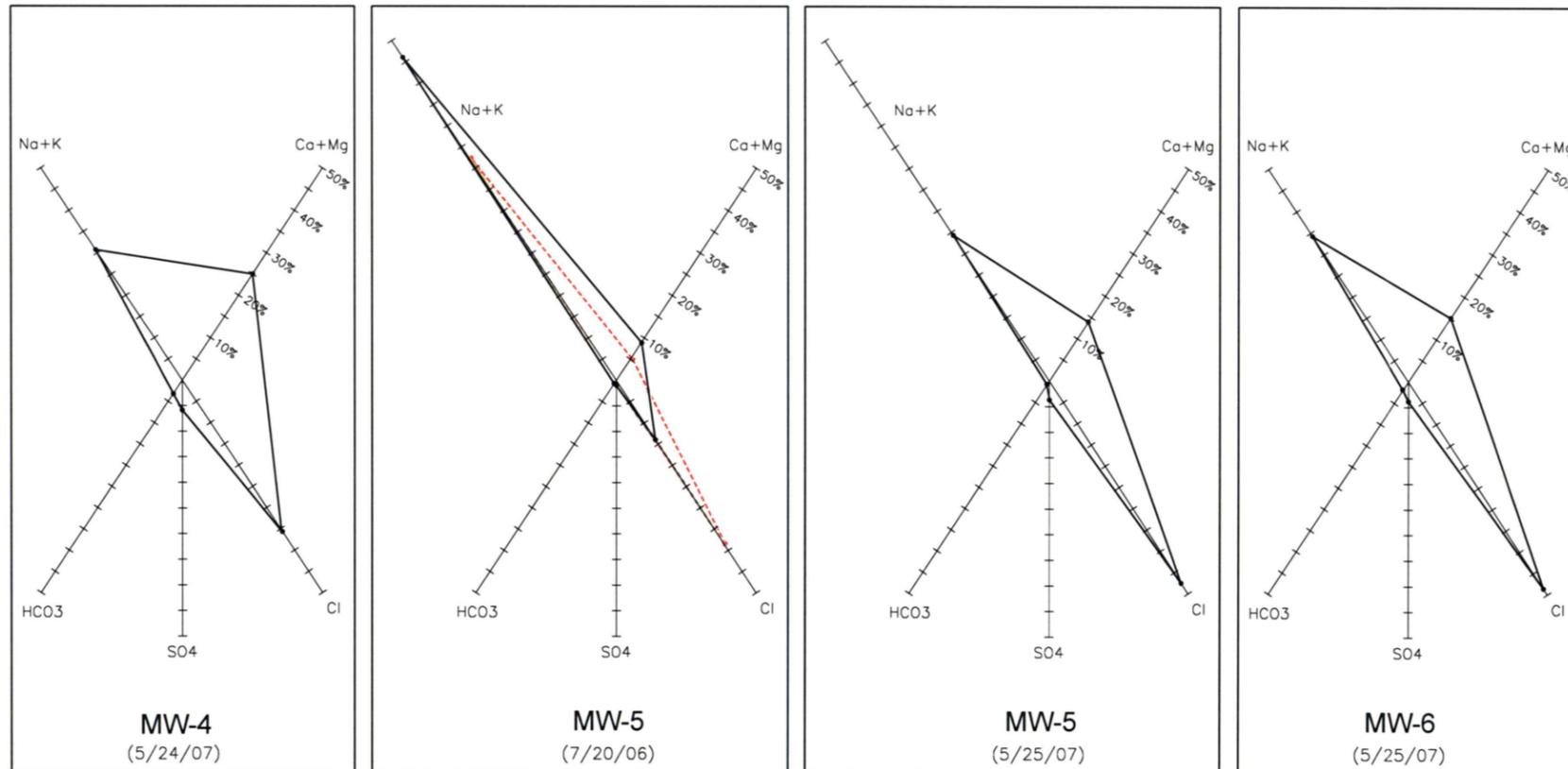
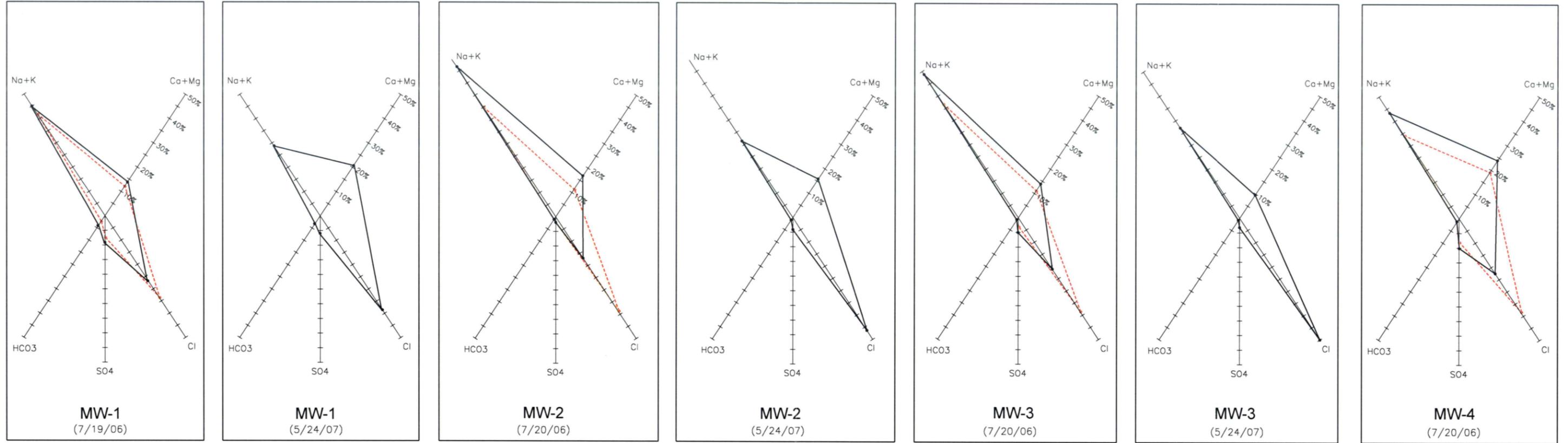
LEGEND:

- (1609.0) GROUND SURFACE ELEVATION IN FEET
- ▼ GROUNDWATER ELEVATION IN FEET (MAY 30, 2007)
- 2,350 CHLORIDE CONCENTRATION IN MILLIGRAMS PER LITER (EPA METHOD 300.0) (MAY 2007)



**BALLINGER SEEP
RUNNELS COUNTY, TEXAS**

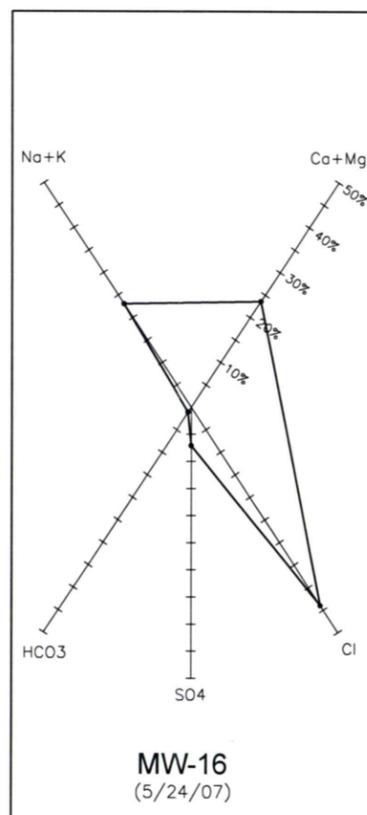
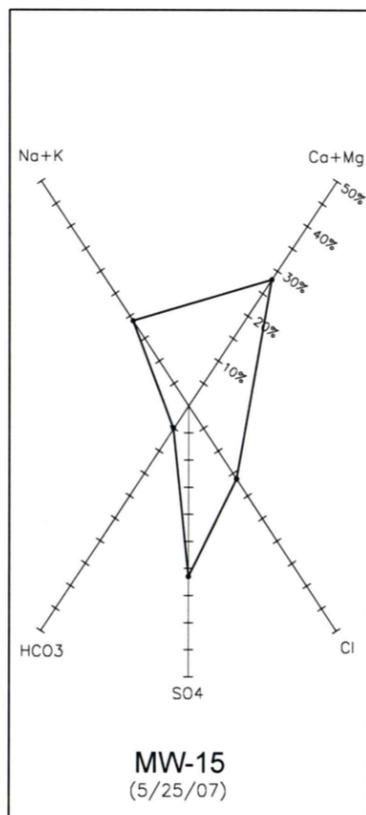
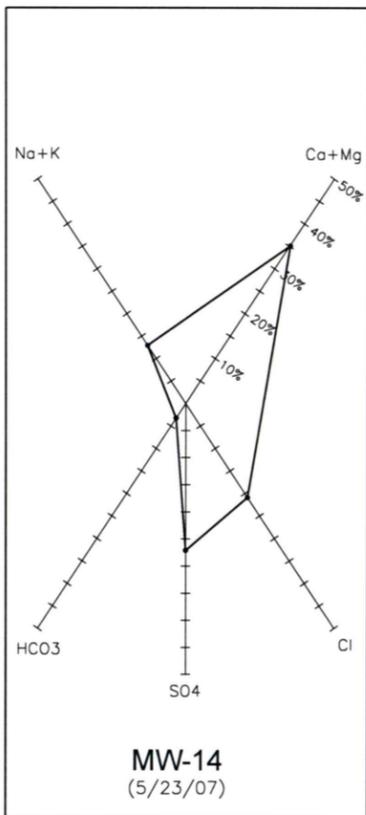
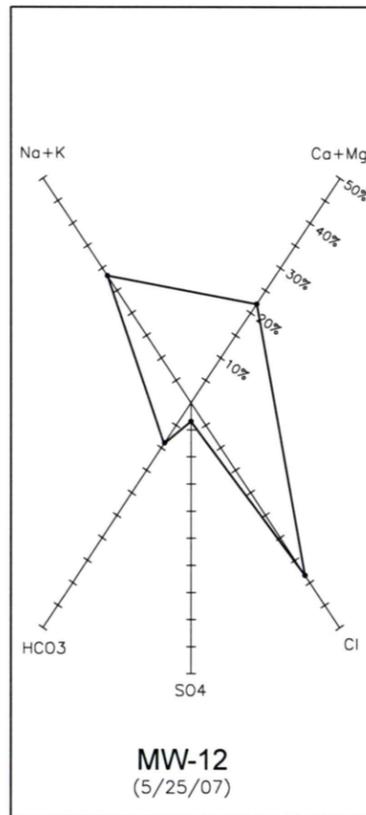
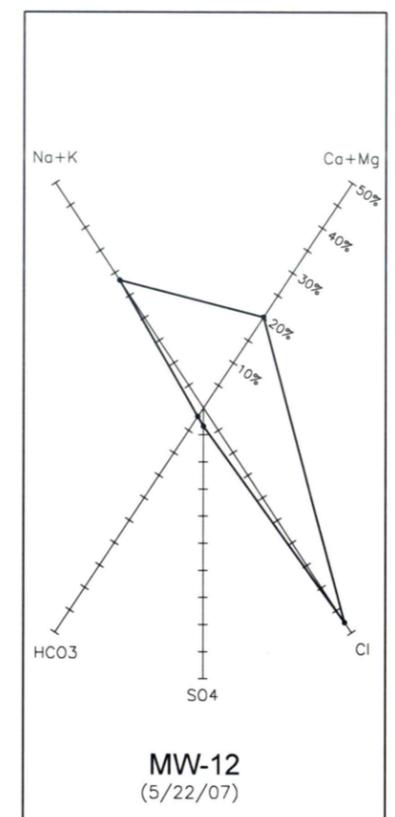
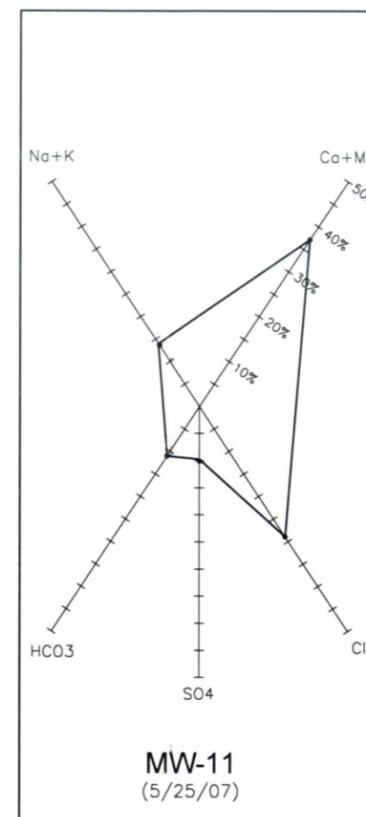
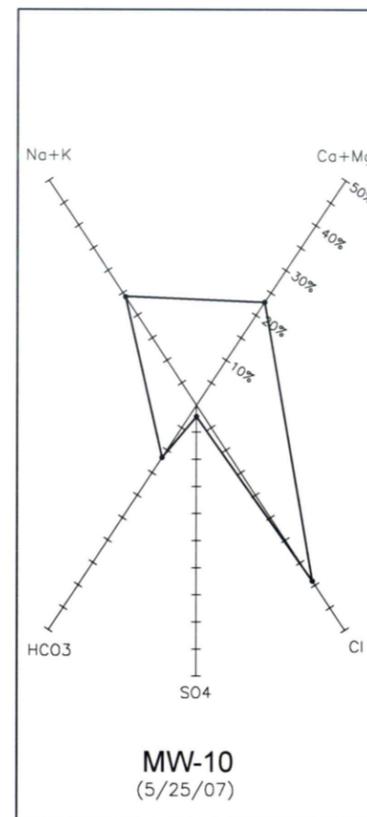
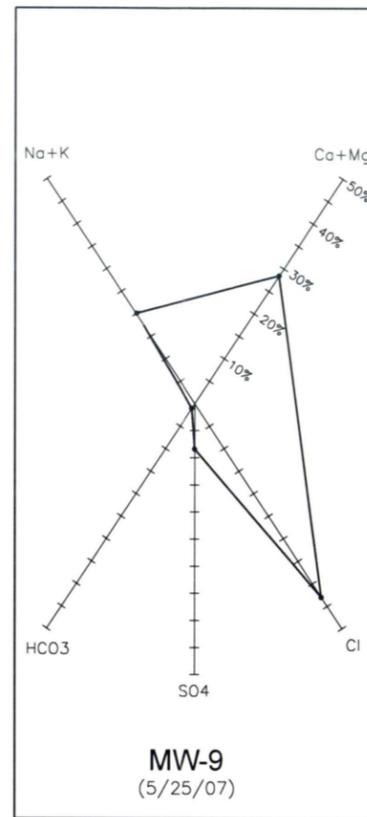
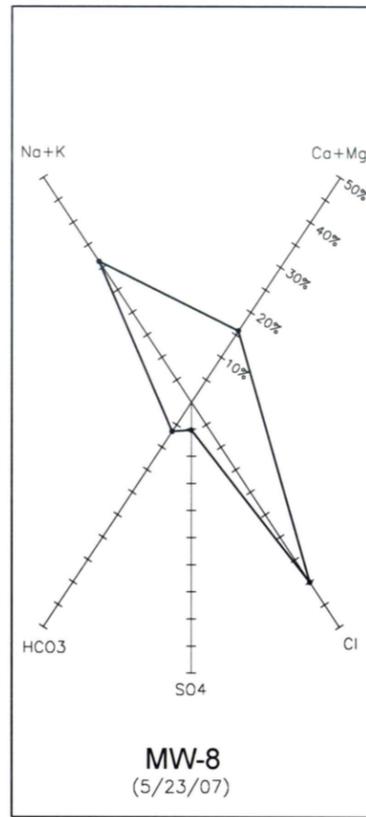
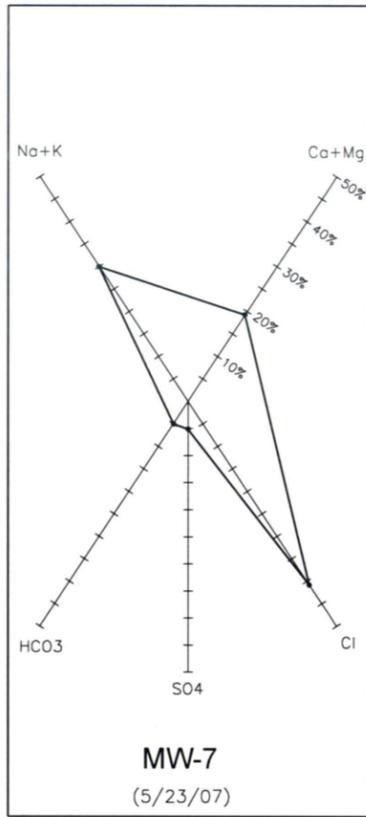
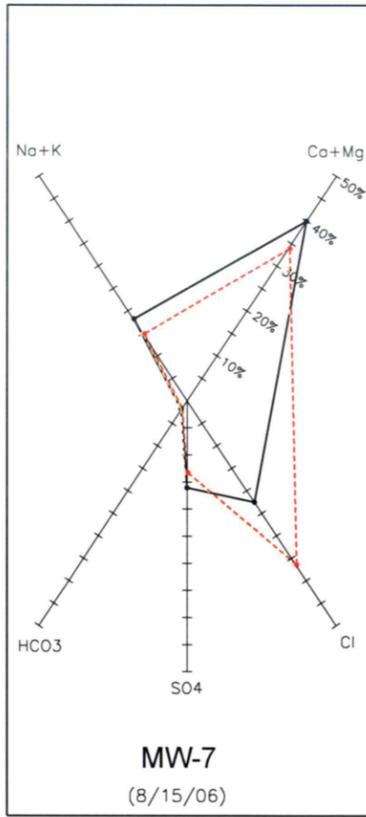
FIGURE 13: CROSS SECTION E-E'



— RADIAL PLOT BASED ON EPA METHOD 300.0 CHLORIDE DATA
 - - - RADIAL PLOT BASED ON STANDARD METHOD 4500B CHLORIDE DATA



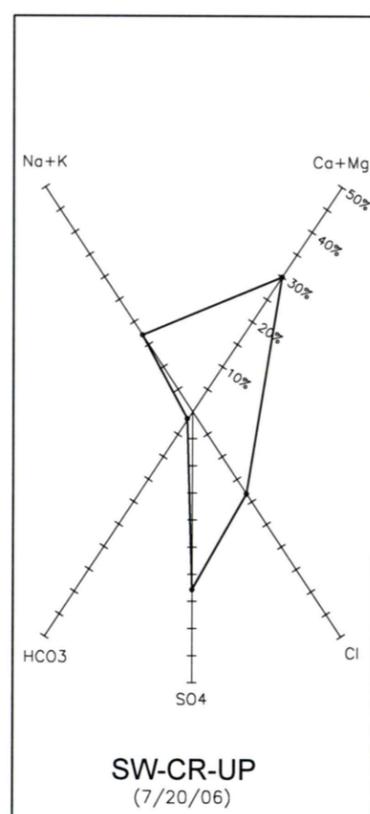
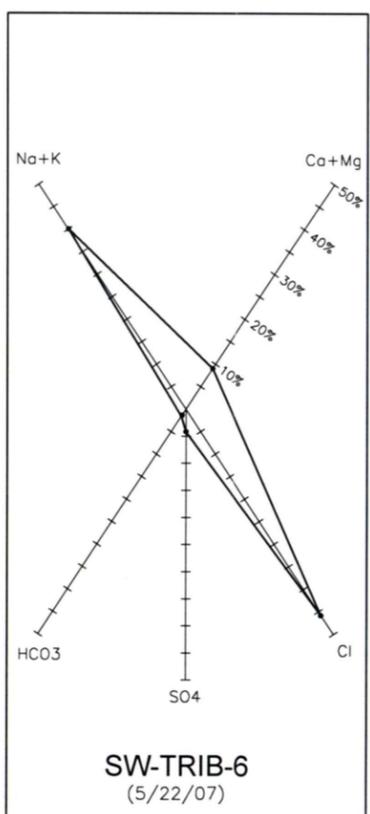
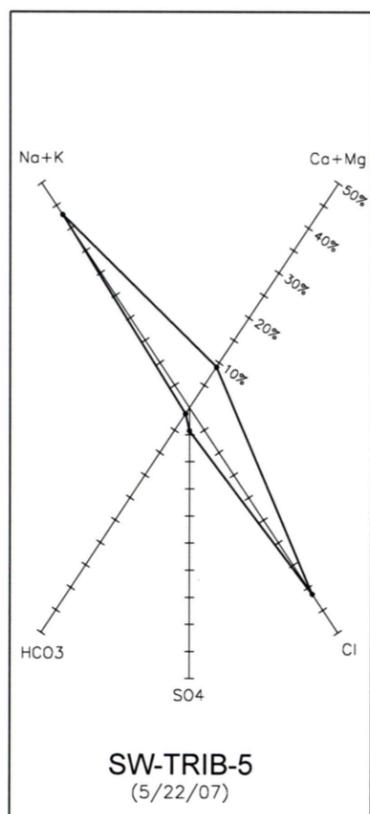
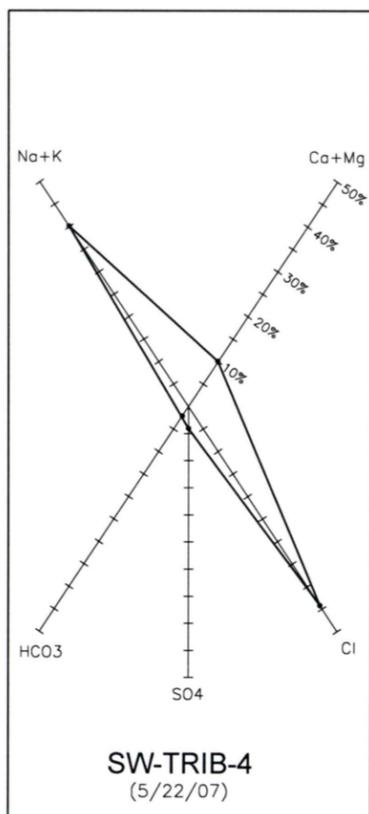
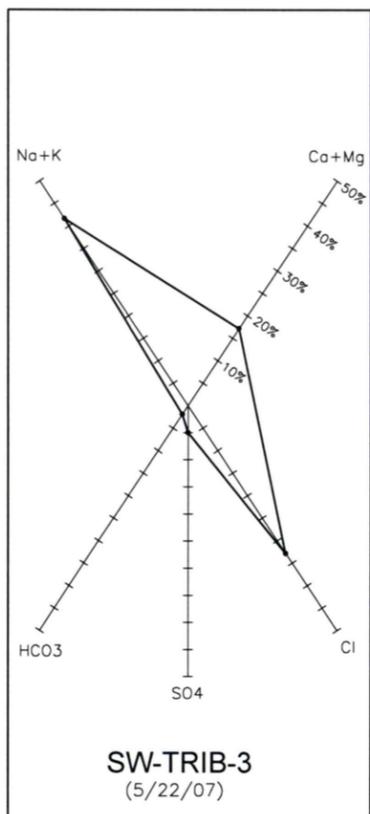
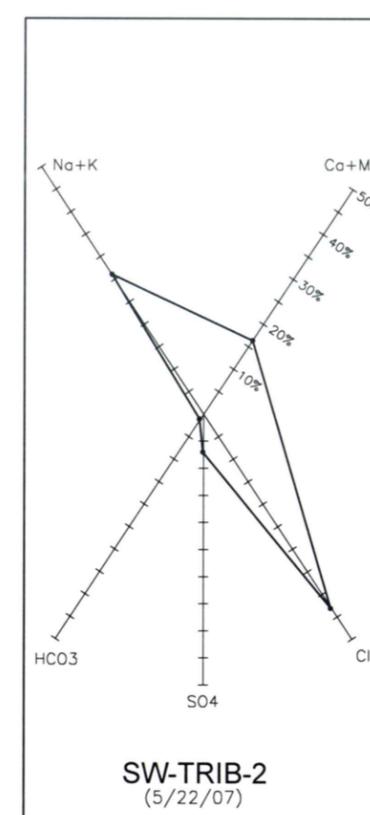
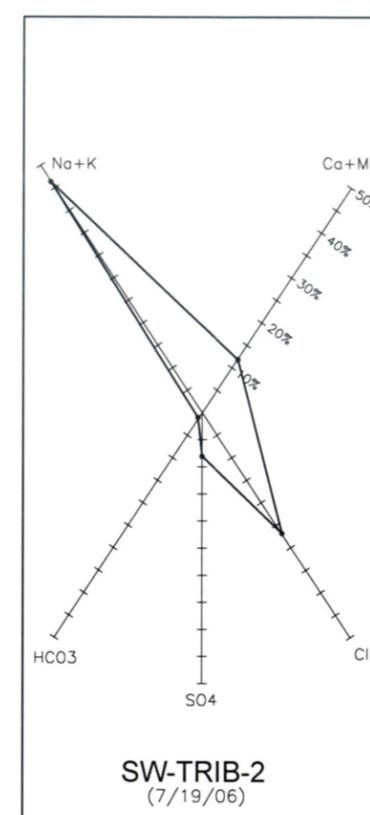
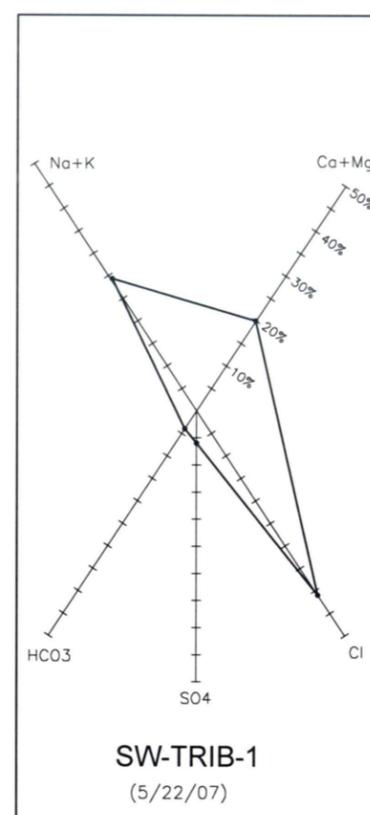
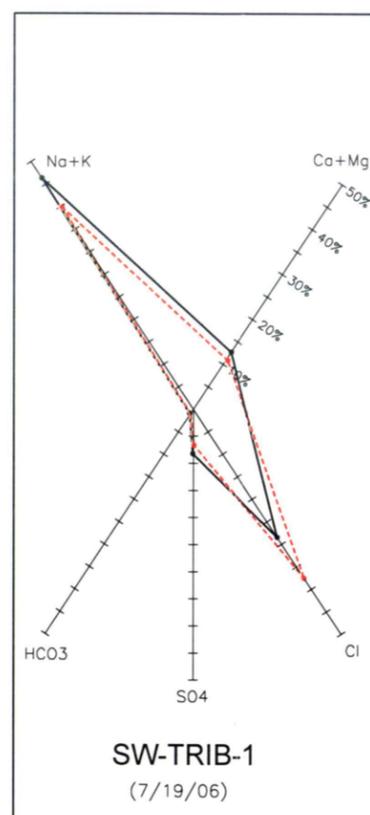
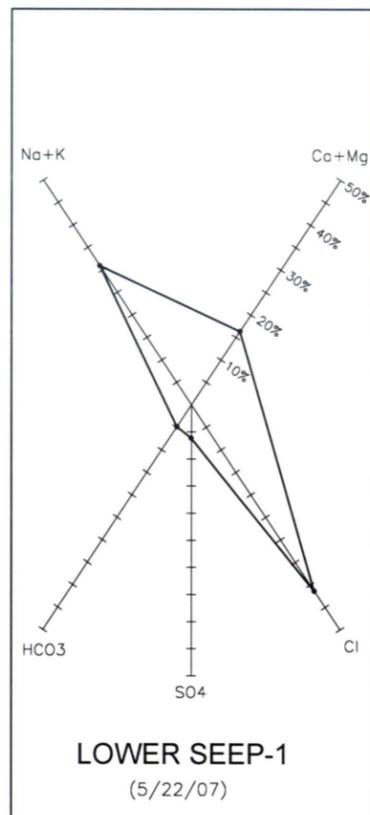
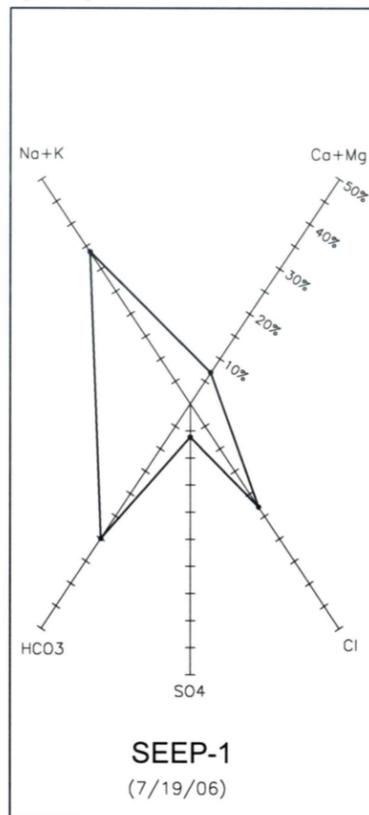
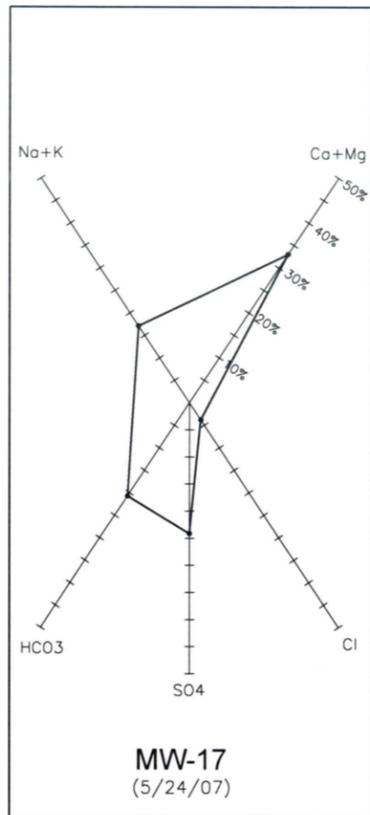
FIGURE 14A:
RADIAL PLOTS OF ANION/CATION DATA
BALLINGER SEEP
RUNNELS COUNTY, TEXAS
Terracon Project No: 94057272B



— RADIAL PLOT BASED ON EPA METHOD 300.0 CHLORIDE DATA
 - - - RADIAL PLOT BASED ON STANDARD METHOD 4500B CHLORIDE DATA

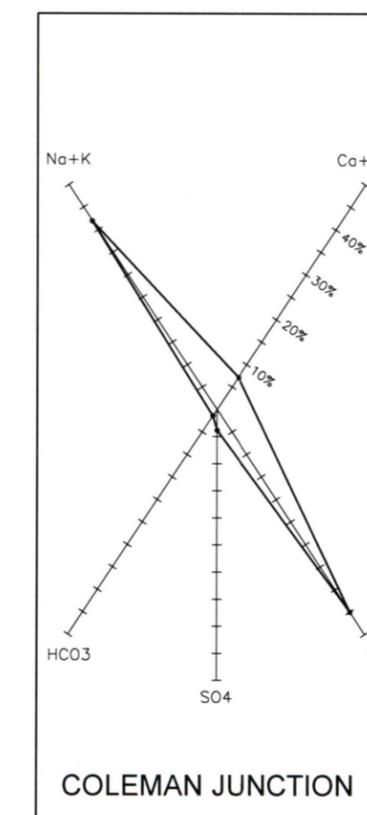
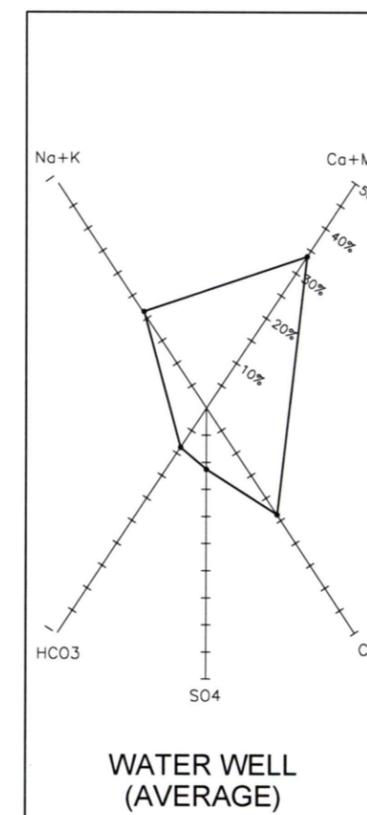
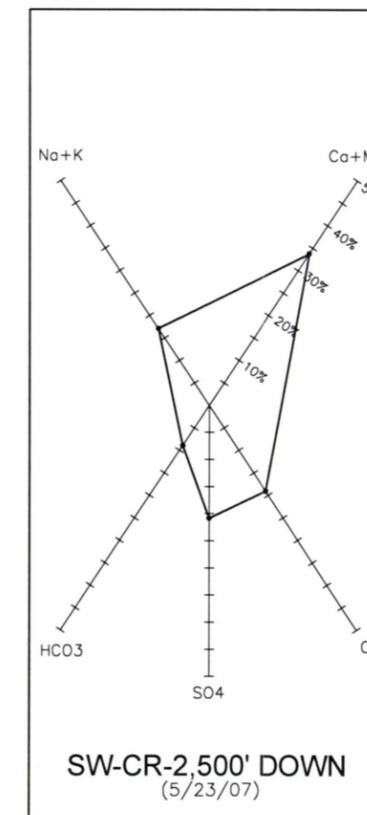
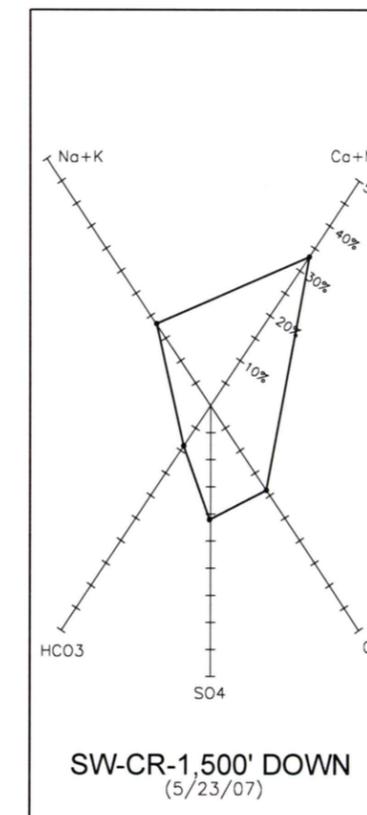
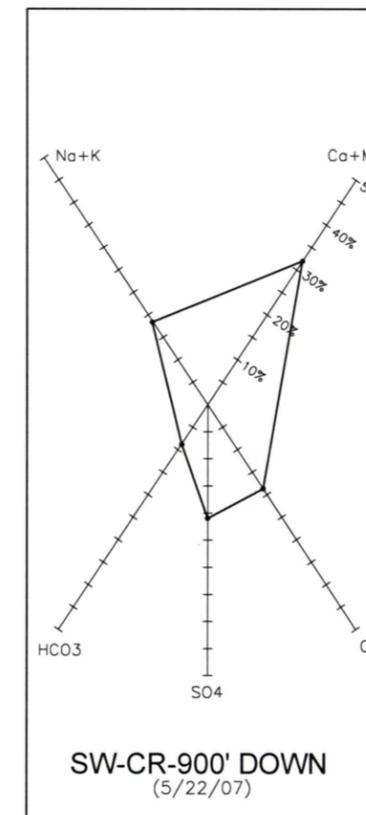
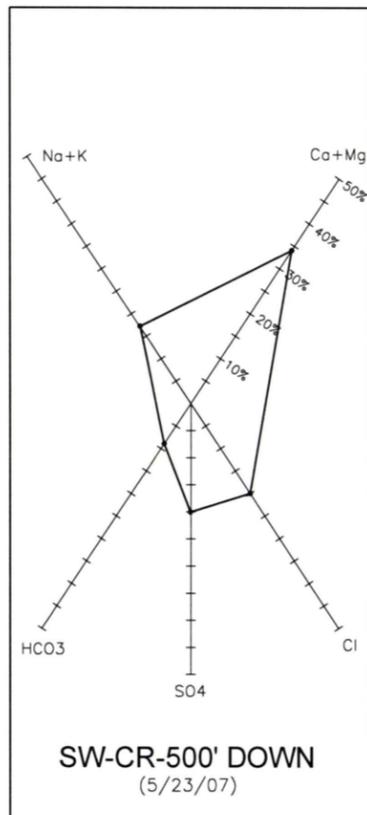
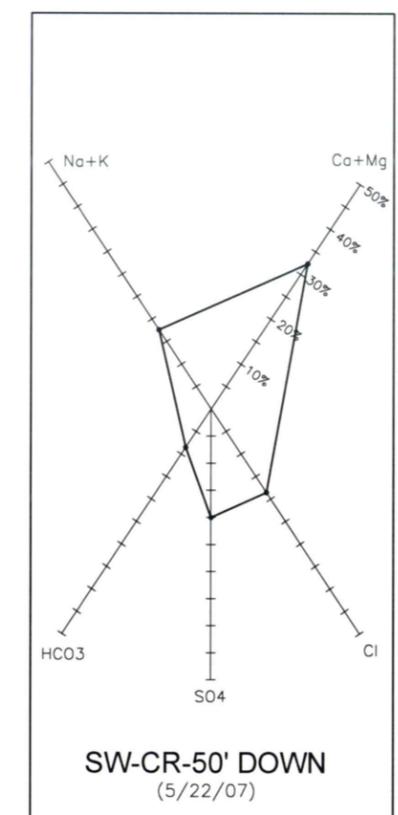
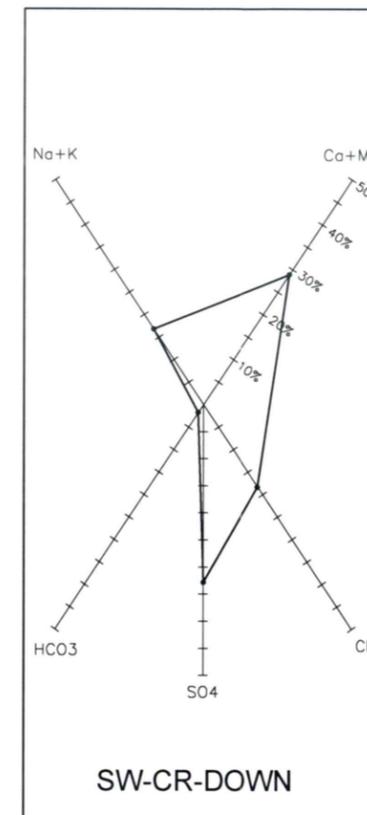
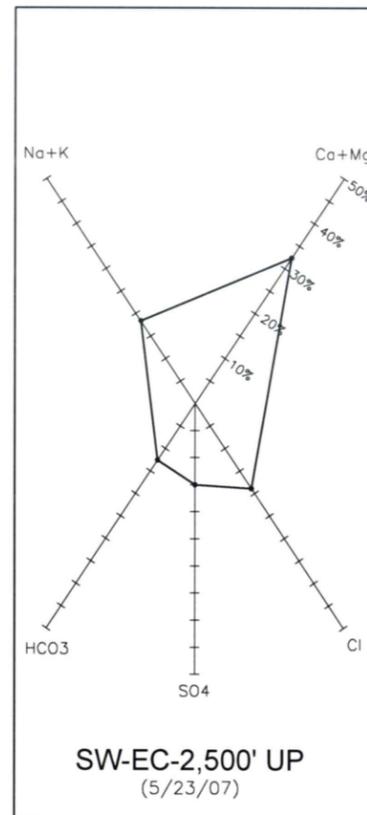
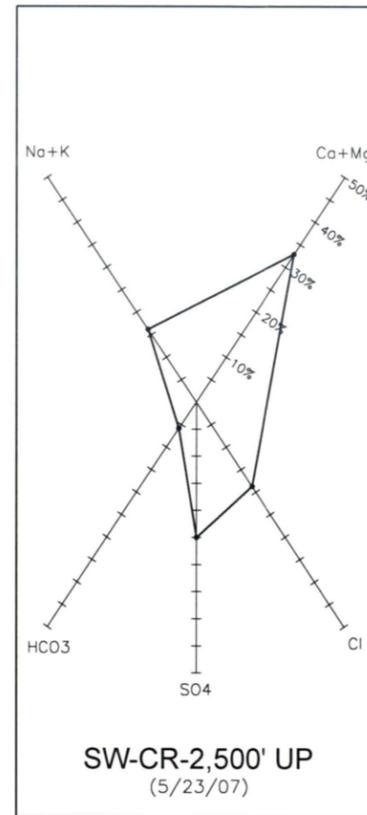
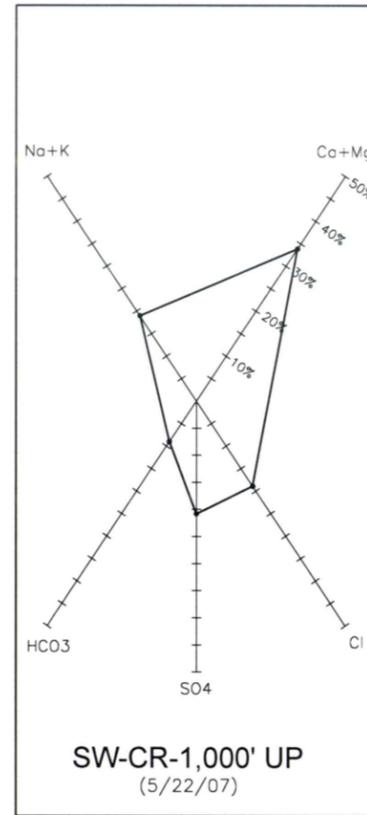
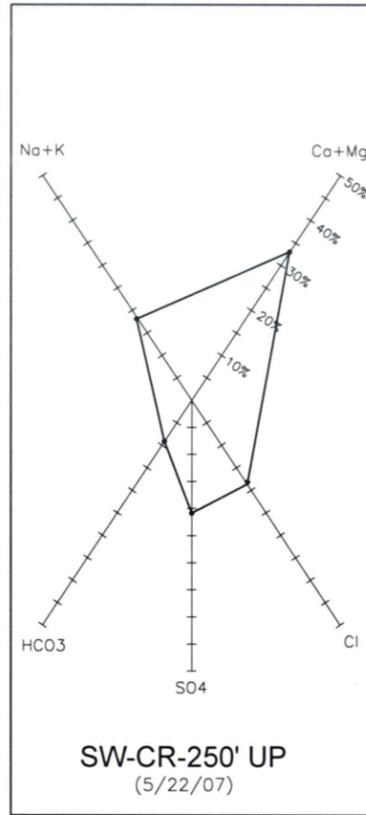
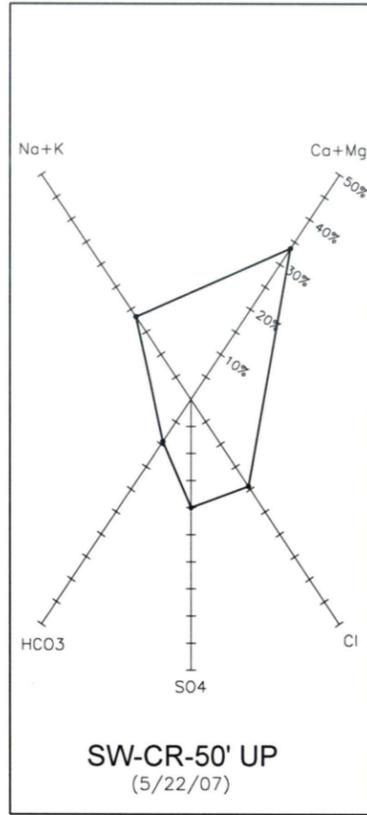


FIGURE 14B:
RADIAL PLOTS OF ANION/CATION DATA
BALLINGER SEEP
RUNNELS COUNTY, TEXAS
Terracon Project No: 94057272B

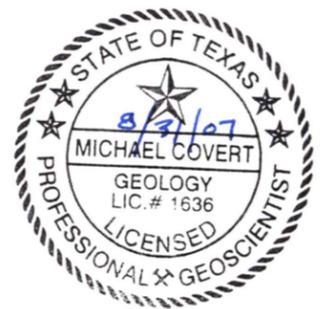


— RADIAL PLOT BASED ON EPA METHOD 300.0 CHLORIDE DATA
 - - - RADIAL PLOT BASED ON STANDARD METHOD 4500B CHLORIDE DATA

FIGURE 14C:
RADIAL PLOTS OF ANION/CATION DATA
BALLINGER SEEP
RUNNELS COUNTY, TEXAS
Terracon Project No: 94057272B



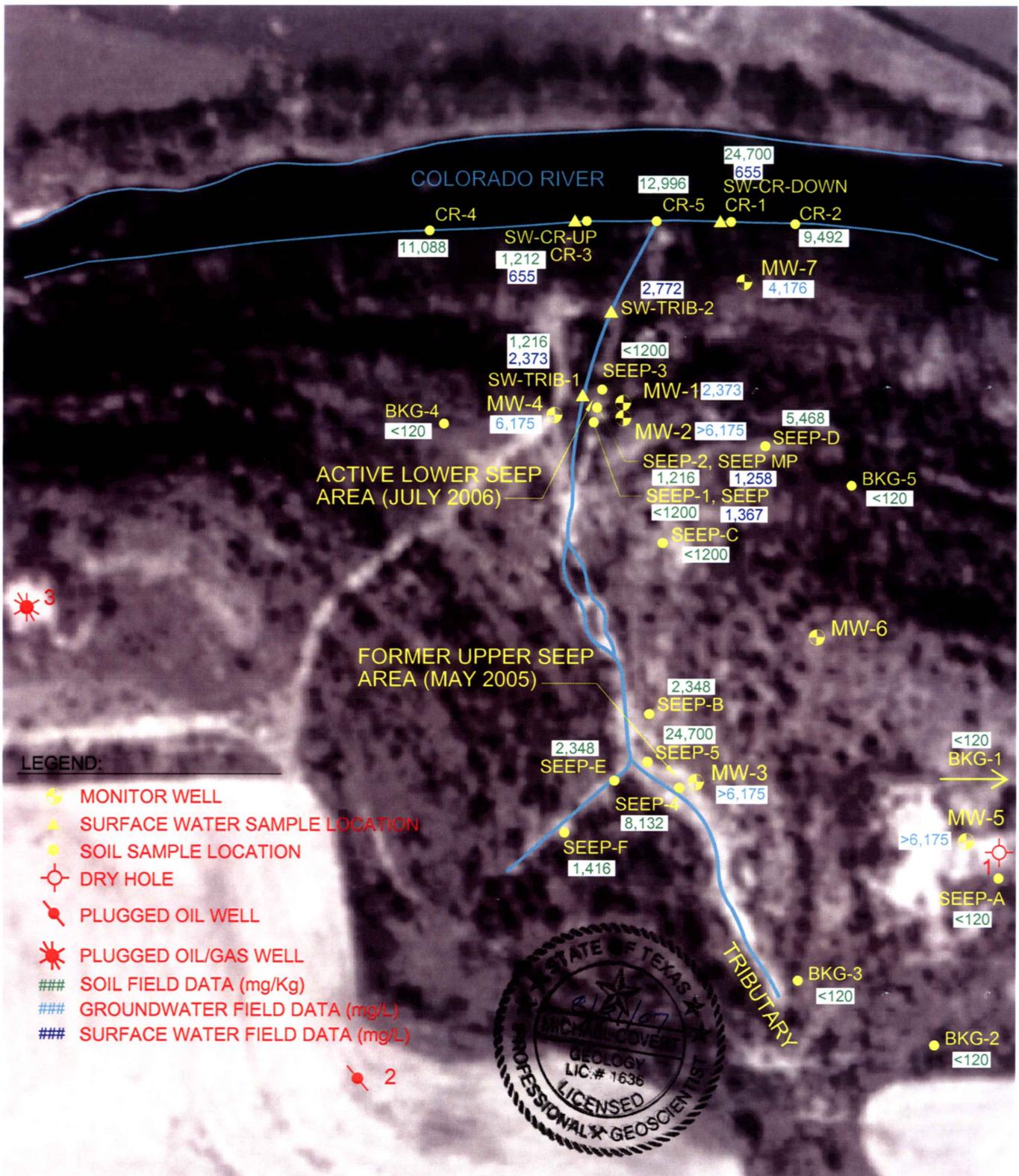
— RADIAL PLOT BASED ON EPA METHOD 300.0 CHLORIDE DATA
 - - - RADIAL PLOT BASED ON STANDARD METHOD 4500B CHLORIDE DATA



**FIGURE 14D:
 RADIAL PLOTS OF
 ANION/CATION DATA**

**BALLINGER SEEP
 RUNNELS COUNTY, TEXAS**

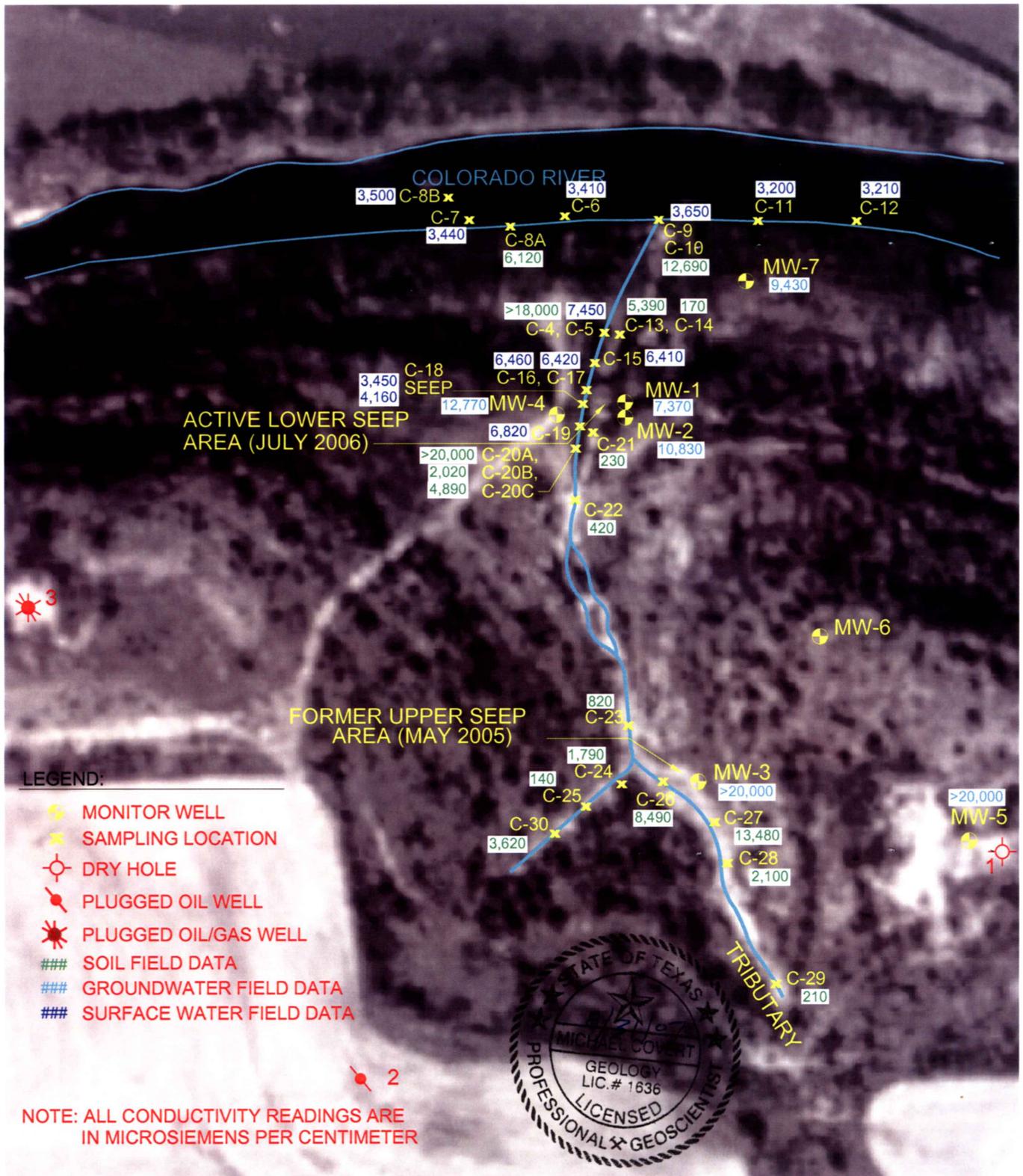
Date: 07/18/07 0:\HBC\Env\2005 ARCHIVE\94057272-creek.dwg Layout: creek



SOURCE: [HTTP://TERRASERVER.HOMEADVISOR.MSN.COM](http://TERRASERVER.HOMEADVISOR.MSN.COM), 1995 AERIAL PHOTOGRAPH.

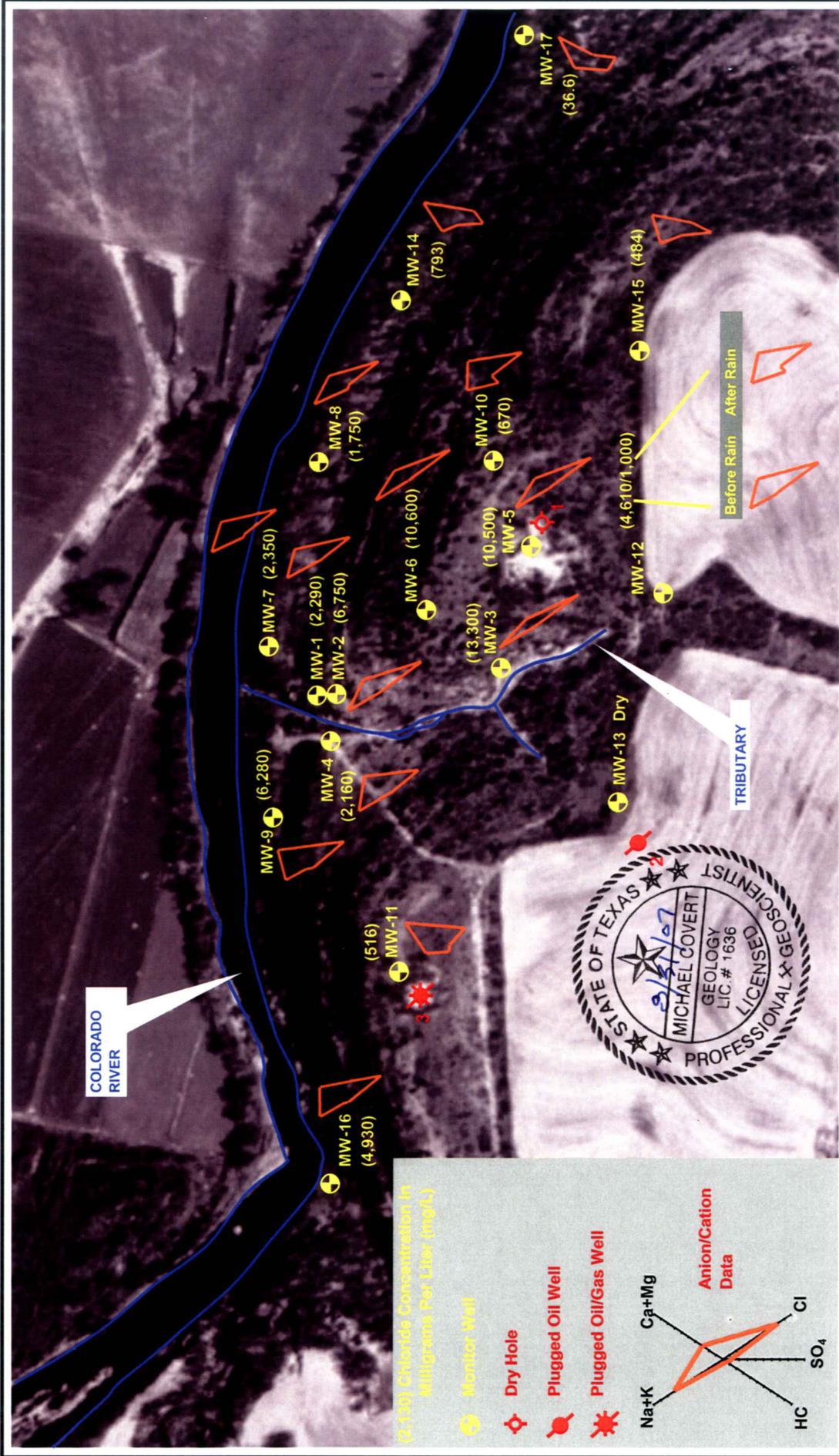
<p>THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.</p>	<p>0 75 150 FEET APPROXIMATE SCALE</p>	<p>BALLINGER SEEP RUNNELS COUNTY, TEXAS</p>
<p>Terracon Project No.: 94057272</p>		<p>FIGURE 15: FIELD SCREENING DATA - CHLORIDE (JULY-AUGUST 2006)</p>

Date: 07/18/07 0:\HBC\Env\2005 ARCHIVE\94057272-creek.dwg Layout: creek



SOURCE: [HTTP://TERRASERVER.HOMEADVISOR.MSN.COM](http://terraservert.homeadvisor.msn.com), 1995 AERIAL PHOTOGRAPH.

<p>THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.</p>	<p>0 75 150 FEET</p> <p>APPROXIMATE SCALE</p>	<p>BALLINGER SEEP RUNNELS COUNTY, TEXAS</p>
<p>Terracon Project No.: 94057272</p>		<p>FIGURE 16: FIELD SCREENING DATA - CONDUCTIVITY (AUGUST 2006)</p>



Source: www.terracon.com, 1995 Aerial Photograph



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

Terracon Project No. 94057272B

BALLINGER SEEP
RUNNELS COUNTY, TEXAS

FIGURE 17: ANION/CATION DATA FOR GROUNDWATER (MAY 2007)

Limited Site Investigation
Ballinger Seep
Ballinger, Runnels County, Texas
Project No. 94057272B
August 28, 2007



APPENDIX B

Boring Logs

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW-1
 TOTAL DEPTH: 25.0'
 SURFACE ELEVATION: 1621.4
 FIELD PERSONNEL: M. Majesko

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Air Rotary
 BORE HOLE DIAMETER: 6 7/8"
 SCREEN: Diam. 2" Length 20' Slot Size 0.010"
 CASING: Diam. 2" Length 5' Type PVC
 DATE DRILLED: 7-17-06

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	CHLORIDE	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0								LIMESTONE, yellowish-gray, hard, dry, no odor	0
5			<1200	12.7					5
10			<1200	7.7				- some moisture noted on rock core from 9'-9.5'	10
			<1200	11.5		11.0		SANDY SILTY CLAY, brown, medium stiff, slightly plastic, damp, no odor (1"-2" seam)	
						12.0	12.0		
15							15.0	LIMESTONE, medium bluish gray, hard, dry, no odor - 1.5 feet of sample recovery	15
			<1200	4.9				LIMESTONE, medium bluish gray, hard, dry, no odor	
20			<1200	1.8					20
25				0.0			25.0		25
								Bottom of boring at 25.0'	
30									30

REMARKS:
Core sampling from 0-25'



THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

MM-CHLORIDE 94057272.GPJ 11/10/06

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW-2
 TOTAL DEPTH: 50.0'
 SURFACE ELEVATION: 1621.6
 FIELD PERSONNEL: M. Majesko

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Air Rotary
 BORE HOLE DIAMETER: 6 7/8"
 SCREEN: Diam. 2" Length 25' Slot Size 0.010"
 CASING: Diam. 2" Length 25' Type PVC
 DATE DRILLED: 7-17-06

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	CHLORIDE	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0								LIMESTONE, yellowish gray, hard, dry, no odor	0
10							12.0	LIMESTONE, medium bluish gray, hard, dry, no odor - wet fracture approximately 15'-16'	10
			<1200	3.8		15.0			20
			<1200	2.7		16.0			
20							25.0	LIMESTONE and SHALE, medium bluish gray, hard, dry, no odor	20
			<1200	3.1					30
			<1200	1.2					
			<1200	2.3					
			<1200	1.9					40
40								Bottom of boring at 50.0'	40
			<1200	6.0					50
			<1200	2.2					
50							50.0		50
60									60

REMARKS:
 Core sampling from 10'-15'.



THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

MWM-CHLORIDE 94057272 GPJ 11/10/06

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW-3
 TOTAL DEPTH: 15.0'
 SURFACE ELEVATION: 1636.6
 FIELD PERSONNEL: M. Majesko

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Air Rotary
 BORE HOLE DIAMETER: 6 7/8"
 SCREEN: Diam. 2" Length 12.5' Slot Size 0.010"
 CASING: Diam. 2" Length 2.5' Type PVC
 DATE DRILLED: 7-18-06

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	CHLORIDE	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0								SILTY CLAY, dark yellowish orange, yellowish gray and light gray, soft, plastic, moist, no odor	0
2.4									2.4
3.2						4.0	4.0	LIMESTONE, medium bluish gray, hard, dry, no odor	5
5.7			1216			5.0			5
7.9			3212					- moist weathered zone at 6.5' (<1")	10
14.2			120						15
15.0							15.0	Bottom of boring at 15.0'	15
20									20
25									25
30									30

REMARKS:
 Hand auger 0-4', core sampling 4'-15'

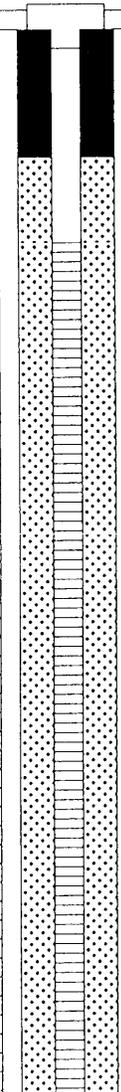


THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW-4
 TOTAL DEPTH: 25.0'
 SURFACE ELEVATION: 1621.1
 FIELD PERSONNEL: M. Majesko

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Air Rotary
 BORE HOLE DIAMETER: 6 7/8"
 SCREEN: Diam. 2" Length 20' Slot Size 0.010"
 CASING: Diam. 2" Length 5' Type PVC
 DATE DRILLED: 7-18-06

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	CHLORIDE	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0								LIMESTONE, yellowish gray, hard, dry, no odor	0
5			<120	1.9					5
10			<120	3.9				LIMESTONE, medium bluish gray, hard, dry, no odor	10
15			<120	5.5		12.0			15
20			172	5.0				Bottom of boring at 25.0'	20
25			<120	3.3		25.0			25
30									30

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.



SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW-5
 TOTAL DEPTH: 55.0'
 SURFACE ELEVATION: 1666.4
 FIELD PERSONNEL: M. Majesko

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Air Rotary
 BORE HOLE DIAMETER: 6 7/8"
 SCREEN: Diam. 2" Length 50' Slot Size 0.010"
 CASING: Diam. 2" Length 5' Type PVC
 DATE DRILLED: 7-18-06

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	CHLORIDE	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0								SILTY CLAY, yellowish gray, medium stiff, slightly plastic, damp, no odor	0
			1628	3.1		4.0	3.0	LIMESTONE, yellowish gray, hard, dry, no odor	
			1628	1.1		5.0		- dark yellowish orange clay seam (~2" thick) present at 4', 6', 11', 17', and 24', stiff, damp, non-plastic except at 6' which was slightly plastic	
			708	0.0					10
			1216	0.0		11.0			
						12.0			
			1180	1.0					20
							24.0	LIMESTONE, medium bluish gray, hard, dry, no odor	
			888	2.5				- shale seam (3" thick) at 26'	
			268	0.0				- shale seam (3" thick) at 31'	30
			<120	0.0				- shale seam (2" thick) at 36'	
									40
								- shale seam (2" thick) at 47'	
									50
			<120	0.0			55.0	- shale seam (2" thick) at 54'	
								Bottom of boring at 55.0'	60

REMARKS:

Core sampling from 0-55'

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

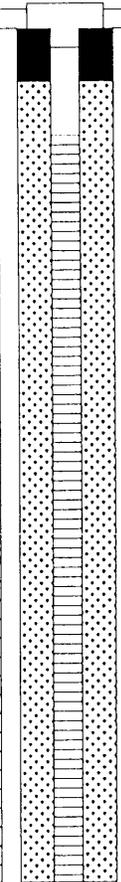


MWM-CHLORIDE 94057272.GPJ 11/10/05

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW-6
 TOTAL DEPTH: 40.0'
 SURFACE ELEVATION: 1659.3
 FIELD PERSONNEL: M. Majesko

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Air Rotary
 BORE HOLE DIAMETER: 6 7/8"
 SCREEN: Diam. 2" Length 35' Slot Size 0.010"
 CASING: Diam. 2" Length 5' Type PVC
 DATE DRILLED: 7-19-06

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	CHLORIDE	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0								LIMESTONE, yellowish gray, hard, dry, no odor	0
			<120	0.0					
			<120	1.6					
10			340	3.9					
			<120	2.6					
20			144	1.0		25.0			
			144	2.1			LIMESTONE, medium bluish gray, hard, dry, no odor - shale seams present in 25'-30' and 35'-40' intervals		
30			<120	1.2					
			<120	1.8		40.0			
40			Bottom of boring at 40.0'						40
50									50
60									60

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.



MML-CHLORIDE 94057272.GPJ 11/10/06

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW-7
 TOTAL DEPTH: 30.0'
 SURFACE ELEVATION: 1609.0
 FIELD PERSONNEL: M. Majesko

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Air Rotary/HSA
 BORE HOLE DIAMETER: 6 7/8"
 SCREEN: Diam. 2" Length 25' Slot Size 0.010"
 CASING: Diam. 2" Length 5' Type PVC
 DATE DRILLED: 7-20-06

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	CHLORIDE	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0									0
				7.5				SILTY SAND, red, very fine-grained, well sorted, damp, no odor	
				9.6					
				8.6					
				7.8					
5			<120	9.1					5
				7.6					
				7.7					
			<120	8.4					
				8.7					
10				8.8			10.0		10
				8.2				SILTY CLAYEY SAND, red, very fine-grained, moist, no odor	
				7.1					
				6.3					
			652	5.8			14.0	- silty sandy clay seam (1"-2"), moist from 13'-13.5'	
15				7.9				SAND, yellowish red, very fine-grained, well sorted, moist, with a few thin clay seams (<1/4")	15
				7.9					
				6.9					
			<120	7.1					
				8.4				- silty sand clay seam (3") at 18'	
20				8.3		20.0	20.0		20
				172	8.7	21.0	21.0	SILTY CLAYEY SAND, red, very fine-grained, very moist, no odor	
								LIMESTONE, medium bluish gray, hard, dry, no odor	
25									25
								- 2"-3" shale seams present at 26', 28' and 29'	
30			<120	3.5			30.0	Bottom of boring at 30.0'	30

REMARKS:

Core sampling from 20'-30'

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.



MWL-CHLORIDE 94057272 GPJ 11/10/05

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272B
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW-8
 TOTAL DEPTH: 30.0'
 SURFACE ELEVATION:
 FIELD PERSONNEL: Y. Morgan

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Hollow Stem Auger
 BORE HOLE DIAMETER: 8.25"
 SCREEN: Diam. 2" Length 15' Slot Size 0.010"
 CASING: Diam. 2" Length 15' Type PVC
 DATE DRILLED: 04-24-07

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0			0					<p>SILTY SAND, with sand seams, very fine-grained, moderate reddish orange, very slightly moist, no odor</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>35</p> <p>40</p> <p>- no recovery 12'-15' due to high sand content</p> <p>- moderate brown silty clay seam 16.2'-16.5'</p> <p>- very moist and increasingly sandy 16.5'-19'</p> <p>- fragment of 1" sub-rounded gravel at 17.5'</p> <p>- 1/2" moderate brown sandy clay seams from 17'-19'</p> <p>SAND, fine-grained, grayish orange, well sorted, very moist to wet, no odor</p> <p>LIMESTONE with occasional shale seams, medium bluish gray, hard, dry to slightly moist, no odor</p> <p>Bottom of boring at 30.0'</p>	0
5			0	504			5		
10			0	<120			10		
15			0	<120			15		
20			0	268		19.0	20		
			0	600		20.0			
25							25		
30			0	180		30.0	30		
35							35		
40							40		

REMARKS:

No sampling from 20'-29'. Sample from 29'-30' interval collected off augers.



THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

MWL-CHLORIDE 94057272B.GPJ CS5/1/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272B
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW- 9
 TOTAL DEPTH: 35.0'
 SURFACE ELEVATION:
 FIELD PERSONNEL: Y. Morgan

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Hollow Stem Auger
 BORE HOLE DIAMETER: 8.25"
 SCREEN: Diam. 2" Length 20' Slot Size 0.010"
 CASING: Diam. 2" Length 12' Type PVC
 DATE DRILLED: 04-24-07

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0			1.2					SILTY SAND with sand seams, very fine-grained, moderate reddish orange, slightly moist, no odor	0
			1.7						
			2.4	<128					
			1.2						
5			1.6						
			2.3						
			2.7	<128					7.0
			--						
			--						
			--						
10			--					LIMESTONE, yellowish gray, hard, dry, no odor	10
			0						
			0.6	496					
			1.3						
15			1.6						
			2.0						
			1.6						
			1.0						
			1.8						
			0.6						
20			2.4	704				SANDY CLAYEY SILT, greenish gray, dry with slightly moist seams, no odor	20
			2.4						
			1.9	544					23.0
			--						
			--						
			--						
			--						
			--						
			--						
			--						
25			--					LIMESTONE, yellowish gray, hard, dry, no odor	25
			--						
			--						
			--						
			--						
			--						
			--						
			--						
			--						
			--						
30			--	<128				LIMESTONE with occasional shale seams, medium bluish gray, hard, dry to slightly moist, no odor	30
			--						
			--						
			--						
			--						
			--						
			--						
			--						
			--						
			--						
35			0	<128				LIMESTONE with occasional shale seams, medium bluish gray, hard, dry to slightly moist, no odor	35
			--						
			--						
			--						
			--						
			--						
			--						
			--						
			--						
			--						
40								Bottom of boring at 35.0'	40

REMARKS:

No sampling from 23'-34'. Boring caved from 32'-35'. Collected sample at 34'-35' from bottom of augers.

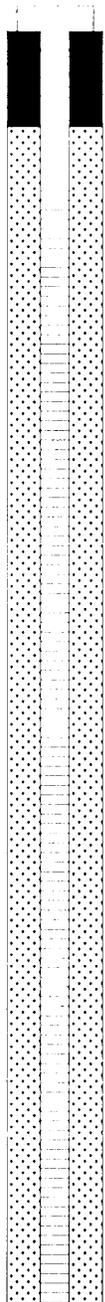


THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

MWL-CHLORIDE 94057272B.GPJ 05/11/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP PROJECT NUMBER: 94057272B CLIENT: Railroad Commission of Texas BORING / WELL NUMBER: MW-10 TOTAL DEPTH: 60.0' SURFACE ELEVATION: _____ FIELD PERSONNEL: Y. Morgan	DRILLING COMPANY: Universal Drilling DRILLER: K. Barge DRILLING METHOD: Air Rotary BORE HOLE DIAMETER: 7 7/8" SCREEN: Diam. 2" Length 55' Slot Size 0.010" CASING: Diam. 2" Length 5' Type PVC DATE DRILLED: 04-24-07
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DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0							1.0	SANDY SILTY CLAY, yellowish gray, slightly moist, no odor LIMESTONE, yellowish gray, hard, dry, no odor	0
5			2.0	<128				- moist, grayish yellow, weathered seam from 4'-7'	5
10			1.8	<128				- slightly moist, weathered seam from 10'-11'	10
15			0	374					15
20			0	1720					20
25			0	236			24.0	- slightly moist, weathered seam at interface LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor - shale seams are slightly moist - shale content decreasing with depth	25
30			0	264					30
35			0						35
40			0	<128					40

REMARKS:
 Intervals and descriptions are estimated due to drilling method with no core sampling. Chloride and PID samples collected at 5' intervals from cuttings.



THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

MWL-CHLORIDE 94057272B.GPJ 05/11/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP PROJECT NUMBER: 94057272B CLIENT: Railroad Commission of Texas BORING / WELL NUMBER: MW-10 TOTAL DEPTH: 60.0' SURFACE ELEVATION: FIELD PERSONNEL: Y. Morgan	DRILLING COMPANY: Universal Drilling DRILLER: K. Barge DRILLING METHOD: Air Rotary BORE HOLE DIAMETER: 7 7/8" SCREEN: Diam. 2" Length 55' Slot Size 0.010" CASING: Diam. 2" Length 5' Type PVC DATE DRILLED: 04-24-07
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DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
40		●●●●						LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor - shale seams are slightly moist - shale content decreasing with depth	40
45		●●●●	0				45		
50		●●●●	0	152			50		
55		●●●●	0				55		
60		●●●●	0	704		60.0		60	
							Bottom of boring at 60.0'	60	
65								65	
70								70	
75								75	
80								80	

REMARKS:
 Intervals and descriptions are estimated due to drilling method with no core sampling. Chloride and PID samples collected at 5' intervals from cuttings.

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.



MWL-CHLORIDE 94057272B GPJ 05/11/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP	DRILLING COMPANY: Universal Drilling
PROJECT NUMBER: 94057272B	DRILLER: K. Barge
CLIENT: Railroad Commission of Texas	DRILLING METHOD: Air Rotary
BORING / WELL NUMBER: MW-11	BORE HOLE DIAMETER: 7 7/8"
TOTAL DEPTH: 70.0'	SCREEN: Diam. 2" Length 55' Slot Size 0.010"
SURFACE ELEVATION:	CASING: Diam. 2" Length 15' Type PVC
FIELD PERSONNEL: Y. Morgan	DATE DRILLED: 04-25-07

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0	/ / / / /	█ █					1.0	LIMESTONE, yellowish gray, hard, dry, no odor SANDY SILTY CLAY, moderate yellowish brown grading to pale yellowish brown, slightly moist, no odor	0
5			0	<128			4.0	LIMESTONE, yellowish gray, hard, dry, no odor - moist, weathered, grayish yellow seam from 4'-6' - slightly moist seams from 6'-10'	5
10			0						10
15		● ● ● ● ●	0	<128				- slightly moist seams 15'-20'	15
20			0	<128					20
25		▨ ▨ ▨ ▨ ▨	0				24.0	- slightly moist, weathered seam at interface LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor - shale seams are slightly moist - high shale content 24'-35' and then decreasing with depth to 55'	25
30			1.5	<128					30
35			0						35
40			0	<128					40

REMARKS:
Intervals and descriptions are estimated due to drilling method with no core sampling. Chloride and PID samples collected at 5' intervals from cuttings



THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

MWL-CHLORIDE 94057272B.GPJ 05/11/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP PROJECT NUMBER: 94057272B CLIENT: Railroad Commission of Texas BORING / WELL NUMBER: MW-11 TOTAL DEPTH: 70.0' SURFACE ELEVATION: FIELD PERSONNEL: Y. Morgan	DRILLING COMPANY: Universal Drilling DRILLER: K. Barge DRILLING METHOD: Air Rotary BORE HOLE DIAMETER: 7 7/8" SCREEN: Diam. 2" Length 55' Slot Size 0.010" CASING: Diam. 2" Length 15' Type PVC DATE DRILLED: 04-25-07
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DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
40								LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor - shale seams are slightly moist - high shale content 24'-35' and then decreasing with depth to 55' - high shale content and slightly moist 55'-60' - moderate shale content and very slightly moist 60'-70' Bottom of boring at 70.0'	40
45			0				45		
50			0	<128			50		
55			0				55		
60			2.2	<128			60		
65			1.6				65		
70			0	<128			70.0	70	
75								75	
80								80	

REMARKS:
 Intervals and descriptions are estimated due to drilling method with no core sampling. Chloride and PID samples collected at 5' intervals from cuttings.

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.



MW-CHLORIDE 94057272B GPJ 05/11/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP PROJECT NUMBER: 94057272B CLIENT: Railroad Commission of Texas BORING / WELL NUMBER: MW-12 TOTAL DEPTH: 40.0' SURFACE ELEVATION: FIELD PERSONNEL: Y. Morgan	DRILLING COMPANY: Universal Drilling DRILLER: K. Barge DRILLING METHOD: Air Rotary BORE HOLE DIAMETER: 7 7/8" SCREEN: Diam. 2" Length 35' Slot Size 0.010" CASING: Diam. 2" Length 5' Type PVC DATE DRILLED: 04-23-07
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DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0	•••••	■ ■					2.0	SAND grading to SILTY SAND, very fine-grained, dark yellowish orange, slightly moist, no odor	0
5			0.0	<128				LIMESTONE, yellowish gray, hard, dry, no odor	5
10			2.4	236					10
15			1.6	592				- moist weathered seams 15'-23'	15
20			2.0	824					20
25			1.6	496			23.0	LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor - moist seams 23'-35'	25
30			1.7	<128				LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor - moist seams 23'-35'	30
35			1.9	1492					35
40			2.2	<128			40.0	Bottom of boring at 40.0'	40

REMARKS:
 Intervals and descriptions are estimated due to drilling method with no core sampling. Chloride and PID samples collected at 5' intervals from cuttings.



THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

MWL-CHLORIDE 94057272B.GPJ 05/17/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272B
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW-13
 TOTAL DEPTH: 70.0'
 SURFACE ELEVATION:
 FIELD PERSONNEL: Y. Morgan

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Air Rotary
 BORE HOLE DIAMETER: 7 7/8"
 SCREEN: Diam. 2" Length 55' Slot Size 0.010"
 CASING: Diam. 2" Length 15' Type PVC
 DATE DRILLED: 04-25-07

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0	•••••	█						SILTY SAND, very fine-grained, dark yellowish orange, damp, no odor	0
5		█	0.0	<128			3.0	LIMESTONE, yellowish gray, hard, dry, no odor - moist weathered seams throughout	5
10		█	1.1	<128					10
15		█	1.0	<128					15
20		█	0.9	592			23.0		20
25		█	3.3	264				LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor - moist shaley seams 23'-35'	25
30		█	1.4	<128				LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor - moist shaley seams 23'-35'	30
35		█	0.0	<128				- minimal shale content from 35'-57'	35
40		█	0.0	<128					40

REMARKS:

Intervals and descriptions are estimated due to drilling method with no core sampling. Chloride and PID samples collected at 5' intervals from cuttings. Advanced boring for MW-13 to 40' on 4-23-07. When boring remained dry on 4-25-07, re-entered & drilled to 70'.

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.



MWL-CHLORIDE 94057272B GPJ 05/11/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272B
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW-13
 TOTAL DEPTH: 70.0'
 SURFACE ELEVATION:
 FIELD PERSONNEL: Y. Morgan

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Air Rotary
 BORE HOLE DIAMETER: 7 7/8"
 SCREEN: Diam. 2" Length 55' Slot Size 0.010"
 CASING: Diam. 2" Length 15' Type PVC
 DATE DRILLED: 04-25-07

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
40								LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor - moist shaley seams 23'-35'	40
45			0						45
50			0	<128				- increased shale content 57'-65'	50
55			0						55
60			0	<128					60
65									65
70			0	<128			70.0	Bottom of boring at 70.0'	70
75									75
80									80

REMARKS:

Intervals and descriptions are estimated due to drilling method with no core sampling. Chloride and PID samples collected at 5' intervals from cuttings. Advanced boring for MW-13 to 40' on 4-23-07. When boring remained dry on 4-25-07, re-entered & drilled to 70'.

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.



MWL-CHLORIDE 94057272B.GPJ 05/11/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP	DRILLING COMPANY: Universal Drilling
PROJECT NUMBER: 94057272B	DRILLER: K. Barge
CLIENT: Railroad Commission of Texas	DRILLING METHOD: Hollow Stem Auger
BORING / WELL NUMBER: MW-14	BORE HOLE DIAMETER: 8.25"
TOTAL DEPTH: 30.0'	SCREEN: Diam. 2" Length 20' Slot Size 0.010"
SURFACE ELEVATION:	CASING: Diam. 2" Length 10' Type PVC
FIELD PERSONNEL: Y. Morgan	DATE DRILLED: 04-24-07

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0			0					SILTY SAND with sand seams, very fine-grained, moderate reddish orange, very slightly moist, no odor - moderate brown clayey silt seams from 1'-2'	0
5			0	<128					5
10			0	496				- cemented and increased silt from 8'-10'	10
			1.1	592				- moist 10'-11'	
			1.7	1036				- moist clayey seam 12'-13'	
			1.7					- increasingly sandy 13'-14.5'	
15			1.8	704				- moist clayey seam 14.5'-15'	15
			1.4					- increasingly sandy 15.5'-17'	
			1.4	300			17.0		
			--				18.0	LIMESTONE, yellowish gray, hard, dry, no odor	
			--					NO RECOVERY-observed limestone as below	
20			--				20.0		20
			1.8	236				LIMESTONE with occasional shale seams, medium bluish gray, hard, dry with slightly moist seams, no odor	
			2.0						
			2.1	<128					
			0						
25			--						25
			--						
			--						
			--						
30			0	128			30.0		30
								Bottom of boring at 30.0'	
35									35
40									40

REMARKS:
No sampling from 23'-29'. Collected sample at 29'-30' from bottom of auger.



THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

MWL-CHLORIDE 94057272B GPJ 05/11/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP PROJECT NUMBER: 94057272B CLIENT: Railroad Commission of Texas BORING / WELL NUMBER: MW-15 TOTAL DEPTH: 70.0' SURFACE ELEVATION: FIELD PERSONNEL: Y. Morgan	DRILLING COMPANY: Universal Drilling DRILLER: K. Barge DRILLING METHOD: Air Rotary BORE HOLE DIAMETER: 7 7/8" SCREEN: Diam. 2" Length 55' Slot Size 0.010" CASING: Diam. 2" Length 15' Type PVC DATE DRILLED: 04-23-07
---	--

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0	•••••							SILTY SAND, very fine-grained, dark yellowish orange, damp, no odor	0
5			1.8	<128			4.0	LIMESTONE with shale seams, yellowish gray, hard, dry, no odor - very moist weathered seams 5'-10'	5
10			4.5	152				- slightly moist weathered seams 10'-25'	10
15			0	<128					15
20			0	264					20
25			0	704					25
30			2.5	544			29.0	LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor - very slightly moist seams 30'-40'	30
35			1.1	<128					35
40			1.4	<128					40

REMARKS:

Intervals and descriptions are estimated due to drilling method with no core sampling. Chloride and PID samples collected at 5' intervals from cuttings.

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.



MWL CHLORIDE 94057272B GPJ_05/11/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP
 PROJECT NUMBER: 94057272B
 CLIENT: Railroad Commission of Texas
 BORING / WELL NUMBER: MW-15
 TOTAL DEPTH: 70.0'
 SURFACE ELEVATION:
 FIELD PERSONNEL: Y. Morgan

DRILLING COMPANY: Universal Drilling
 DRILLER: K. Barge
 DRILLING METHOD: Air Rotary
 BORE HOLE DIAMETER: 7 7/8"
 SCREEN: Diam. 2" Length 55' Slot Size 0.010"
 CASING: Diam. 2" Length 15' Type PVC
 DATE DRILLED: 04-23-07

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
40								LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor	40
45			0	<128					45
50			0	<128					50
55			0	<128				- grading to light bluish gray at 53'	55
60			0	264				- very slightly moist seams 60'-70'	60
65			0.8	412					65
70			0.0				70.0	Bottom of boring at 70.0'	70
75									75
80									80

REMARKS:

Intervals and descriptions are estimated due to drilling method with no core sampling. Chloride and PID samples collected at 5' intervals from cuttings.

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.



MWL-CHLORIDE 94057272B.GPJ 05/11/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP	DRILLING COMPANY: Universal Drilling
PROJECT NUMBER: 94057272B	DRILLER: K. Barge
CLIENT: Railroad Commission of Texas	DRILLING METHOD: Hollow Stem Auger
BORING / WELL NUMBER: MW-16	BORE HOLE DIAMETER: 8.25"
TOTAL DEPTH: 25.0'	SCREEN: Diam. 2" Length 20' Slot Size 0.010"
SURFACE ELEVATION:	CASING: Diam. 2" Length 4' Type PVC
FIELD PERSONNEL: Y. Morgan	DATE DRILLED: 04-26-07

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0			0					SILTY SAND, very fine-grained, moderate reddish orange, very slightly moist, no odor	0
5			0	<128			4.5	SAND, very fine-grained, grayish orange, slightly moist, no odor	5
10			0	1200			7.5	SANDY CLAYEY SILT, moderate reddish brown, moderate cementation, moist, no odor	10
15			0	412			9.5	SAND, very fine-grained, grayish orange, moist to wet, no odor	15
			0	1112				- 1/2" clay seam at 11.2'	
			0	1384				- silty sand seam from 12.5'-12.8'	
			0	1720				- grading to dark yellowish orange and very moist at 12.5'	
							15.5	- wet at 15'	15
							16.0	LIMESTONE, yellowish gray, hard, dry, no odor	
								LIMESTONE with shale seams, medium bluish gray, hard, dry with moist seams, no odor	20
25			0	<128			25.0	Bottom of boring at 25.0'	25
30									30
35									35
40									40

REMARKS:

No sampling from 16'-24'. Sample at 24'-25' was collected off bottom of auger. The 24'-25' interval caved while trying to set the well.



THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

MWL-CHLORIDE 94057272B GPJ 05/11/07

SOIL BORING / MONITORING WELL LOG

PROJECT: BALLINGER SEEP	DRILLING COMPANY: Universal Drilling
PROJECT NUMBER: 94057272B	DRILLER: K. Barge
CLIENT: Railroad Commission of Texas	DRILLING METHOD: Hollow Stem Auger
BORING / WELL NUMBER: MW-17	BORE HOLE DIAMETER: 8.25"
TOTAL DEPTH: 30.0'	SCREEN: Diam. 2" Length 20' Slot Size 0.010"
SURFACE ELEVATION:	CASING: Diam. 2" Length 10' Type PVC
FIELD PERSONNEL: Y. Morgan	DATE DRILLED: 04-27-07

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	CHLORIDE	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0			11					SILTY SAND with sand seams, very fine-grained, moderate reddish orange, slightly moist, no odor	0
0.3			0						
1.7			<128					- very high sand content 6'-10'	5
1.3									
1.4									
0.7			0						
0			0						
10			<128					- silt seam from 13'-13.3'	10
0									
0.4			0						
0			0						
0.7			<128					- very high sand content from 13.3'-15'	15
1.1			1.1			15.0			
1.1			208					SILTY CLAYEY SAND, moderate reddish orange, low to medium cementation, moist, no odor	
1.5									
1.0			<128			18.5			
1.7						19.5		SAND, very fine-grained, grayish orange, slightly moist, no odor	20
1.9									
2.5			<128			22.0		GRAVELLY SAND grading to SANDY GRAVEL, sub-rounded to angular gravel up to 3" diameter, very fine-grained to coarse sand, poorly sorted, moderate reddish orange, moist grading to wet, no odor	20
2.5									
1.8								LIMESTONE with shale seams, medium bluish gray, dry with moist seams, no odor	25
30			0			30.0		Bottom of boring at 30.0'	30
35									35
40									40

REMARKS:
No sampling from 23'-29'. Collected sample at 29'-30' from bottom of auger.

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.



MWL-CHLORIDE 94057272B GPJ 05/11/07

Attention Owner:
 Contact name, phone number,
 and address of the property

Texas Department of Licensing and Regulation

Water Well and Pump Installation Section
 P.O. Box 130117, Austin, Texas 78713-0117, 512-249-4470
 Fax: 512-249-4221

Driller must comply
 and file with the day after
 and owner within 60 days
 upon completion of the well

Email address: waterwell@license.state.tx.us Web address: www.license.state.tx.us

WELL REPORT

A. WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Railroad Commission of Texas 1701 N. Congress Ave Austin TX 78711

2) WELL LOCATION

Well No: MW-2 County: Runnels Physical Address: Hwy 83 south City: Bullinger

3) Type of Work: New Well Recondition Repair/modify Deepening
 4) Proposed Use (check): Municipal Industrial Domestic Irrigation Commercial/Industrial Fire fighting Test well Fire supply Stock Private supply Other: Yes No

5) Drilling Date: Started 7/17/06 Completed 7/17/06
 6) Drilling Method (check): Direct Air Rotary Mud Rotary Bored Air Hammer Cable Tool Lifted Hot Oil Steam Auger Reverse Circulation Other

Diameter of Hole		Drilling Method	
Depth	Size	Depth	Size
0'	6 7/8"	0'	50"

7) Borehole Completion: Open Hole Straight Wall Underreamed Gravel Packed Other
 Cased to formation from 50 ft to 23 ft Size 2 1/2" ID

From (ft)	To (ft)	Description and color of formation material	From (ft)	To (ft)	Material
0'	12'	Limestone, yellowish gray, hard, dry, no odor.	50'	25'	PVC Slotted
12'	25'	Limestone, medium bluish gray, hard, dry, no odor - wet fracture approx. 15'-16'	25'	0'	PVC Blank
25'	50'	Limestone and shale, medium bluish gray, dry, no odor.			

9) Annular Seal Data: (e.g., cement, bentonite, grout, etc.)
 from 23 ft to 2 ft # sacks & material 6 Bentonite
 from 2 ft to 0 ft # sacks & material 2 Concrete
 Method Used: Grout Performed By Keith Frazier
 Distance to property line: Method Verified

13) Plugged: Well plugged within 48 hours
 Casing left in well: Cement/Bentonite placed (yes/no)

From (ft)	To (ft)	From (ft)	To (ft)	# Sacks & Material used
				n/a

14) Type Pump: Turbine Other: n/a
 11) Water Level: Static level: Date: Artesian Flow: gpm: n/a

15) Water Test: Type test: Dip Bail Jetted Estimated: n/a
 Yield: gpm with: ft drawdown after:

Type	Depth	Type	Depth
	n/a		

16) Water Quality: Type of well: Depth of Strain: Water sampled (year/month):
 Did you find any petroleum or a substance which is not a reasonable component? Yes No If so, outline:
 Check One: Naturally poor quality ground water Petroleum or other hydrocarbon Other:
 I certify that after drilling, deepening, or otherwise altering the well, it is a new well, and suitable water or constituents were encountered and the landowner was notified that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Company & Individual's Name (type or print): Universal Drilling Services of Texas LLC Lic. No.: 4786-M
 Address: 3233 West 11th Street Suite 200 City: Houston State: TX Zip: 77008
 Signature: [Signature] Date: 8/21/06 Signature: [Signature]
 Licensed Driller/Pump Installer Date: Apprentice: Apprentice Reg. Number:

Texas Department of Licensing and Regulation

Attention: Owner
 1. Licensee's Name
 2. License No.

Business Address (include street, city, state, zip)
 3. Licensee's Business Address
 4. Licensee's Business Phone
 5. Licensee's Business Fax
 6. Licensee's Business E-mail
 7. Licensee's Business Website
 8. Licensee's Business Email Address
 9. Licensee's Business Website Address
 10. Licensee's Business Fax Address
 11. Licensee's Business E-mail Address
 12. Licensee's Business Website Address

This form is to be completed and filed with the Department of Licensing and Regulation within 60 days of the completion of the work.

WELL REPORT
 A. WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Name: Railroad Commission of Texas Address: 1701 N. Congress Ave City: Austin State: TX Zip: 78711

2) WELL LOCATION

Well #/Name: MW-3 Location: Rumrals Precinct: Heavy 83 South County: Ballinger

3) Type of Work
 New Well Existing Well
 Repair/Modify Drilling
 Proposed Use: Municipal Industrial Residential Commercial Domestic Other
 Public Supply Private Supply Other

6) Drilling Date: Started 7/18/06 Completed 7/18/06
 Diameter of Hole: 6 3/8 inches
 7) Drilling Method (check):
 Direct Reverse Mud Rotary
 Blast Air Hammer Cable Tool
 Jet Hydro-Vacuum Auger
 Reverse Circulation
 Other

From (ft)	To (ft)	Description and color of formation material
0'	4'	Silty clay, dark yellowish orange, yellowish gray and light gray, soft, plastic, moist, no odor
5'	15'	limestone, medium bluish gray, hard, dry, no odor - moist weathered zone @ 6.5' (41')

8) Borehole Completion: Open Hole Straight Wall Under-reamed Gravel Packed Other
 Gravel pack of material from 15 to 2.5 ft @ 20/40

Casing, Blank Pipe, and Well Screen Data

Depth (ft)	Size (in)	Material	Depth (ft)	Size (in)	Material
2	2	PK slotted	15	2.5	40
2	2	PVC Blank	2.5	0	40

9) Annular Seal Data: (see separate sheet)
 From 2.5 to 0 ft: Pack material 3/4 Bentonite
 From 1 to 0 ft: Pack material Concrete
 Method Used: Gravity Performed By: Keith Bierge
 Distance to septic tank or other concentrated contamination:
 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) _____
 10) Surface Completion: Standard Keyway work
 Surface Sleeve installed Surface Sleeve installed
 Pressure Adapter used Alternative Program used

14) Type Pump: Turbine Jet Submersible Centrifugal
 Other: n/a
 Depth to pump: _____ ft
 11) Water Level: Static level: _____ ft Date: _____
 Artesian flow: _____ gpm n/a

12) Packers: _____

Type	Depth	Type	Depth
<u>n/a</u>	<u>n/a</u>		

15) Water Test: Type test: Pump Baker Jetted Estimated n/a
 16) Water Quality: Type of water: _____ Depth of static water: _____
 Did you find iron, copper, nitrate, strontium, or barium in the water? Yes No
 Check One: Naturally poor quality ground water Hydrocarbon migration Other
 I certify that each drilling, deepening, or otherwise altering the well was described with satisfactory water or constituents was analyzed and the landowner was informed that such well must be completed or plugged in a certain manner as to avoid injury or pollution.

Company & Individual's Name (type or print): Universal Drilling Services of Texas L.L.C. Lic. No.: 4786-M
 Address: 3233 West 11th Street Suite 800 City: Austin State: TX Zip: 78748
 Signature: [Signature] Date: 8/21/06 Signature: _____
 Licensed Driller/Pump Installer _____ Date: _____ Apprentice _____
 APPROPRIATE TO WWW.DLR.TX.gov IPIR (Original) Landowner (copy) Driller/Pump Installer (copy)

Texas Department of Licensing and Regulation

Attention: Director
 1701 N. Congress Ave., Austin, TX 78711
 (512) 463-2000

Water Well Drilling Pump Installer Section
 1701 N. Congress Ave., Austin, TX 78711
 (512) 463-2000

The form must be completed and returned with the application to the Director within 60 days upon completion of the work.

E-mail address: waterwell@licensing.state.tx.us Web address: www.license.state.tx.us

WELL REPORT

A. WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Name: Commission of Texas Address: 1701 N. Congress Ave. Austin TX 78711

2) WELL LOCATION

Well No: mcw-4 Name: Runnels City or Village: Hwy 83 South County: Ballinger

3) Type of Work: New Well Reconditioning Repairment Deepening
 4) Proposed Use (check): Municipal Domestic Irrigation Industrial Geothermal Heat Exch. Dewatering Test Well
 Fire Suppl. Stock Private Suppl. Public Supply (state plan approved) Yes No

5) Drilling Date: Started 7/18/06 Completed 7/18/06 Diameter of Hole: 6 7/8" 0 2.5
 6) Drilling Method (check): Down the Hole Mud Rotary Hand Air Hammer Cable Tool
 Long Hot Oil Steam Auger Reverse Circulation Other

From (ft)	To (ft)	Description and color of formation material	8) Borehole Completion
0	12'	Limestone, yellowish gray, hard, dry, no odor.	<input type="checkbox"/> Open Hole <input type="checkbox"/> Straight Wall <input checked="" type="checkbox"/> Underreamed <input checked="" type="checkbox"/> Gravel Packed <input type="checkbox"/> Other
12'	25'	Limestone, medium bluish gray, hard, dry, no odor.	Gravel packed interval from <u>25</u> ft to <u>3</u> ft. Size <u>20/40</u>
			Casing, Blank Pipe, and Well Screen Data
Depth (ft)	Size (in)	Material	Depth (ft)
2	0	PVC slotted	25.5
2	0	PVC Blank	5.0

9) Annular Seal Data:
 From 3 ft to 0 ft #acks & material 1 Portland Concrete
 From 1 ft to 1 ft #acks & material 1 Concrete
 Method used Gravity Performer Keith Borge
 Distance to septic field or other unsaturated contamination
 Distance to Property Line Method
 Vented

13) Plugged Well plugged within 48 hours
 Casing bottomed out Casing bottom was placed in
 From (ft) To (ft) Size & Material

10) Surface Completion (if steel cased, leave blank)
 Surface Slat installed Surface Slab installed
 Tubing Adapter Used Alternative Procedure Used

14) Type Pump: Turbine Jet Submersible Churner
 Number: n/a
 Depth to pump level: ft

11) Water Level: Static Level: ft Date:
 Artesian Flow: gpm n/a
 12) Packers:
 Type: Depth: Type: Depth:

15) Water Test: Type test: Pump Flow Limited Extended n/a
 Yield: gpm water ft draw down other ft
 16) Water Quality: Type of water: Depth of static: ft
 Did you observe any unusual materials which are not measurable on the test? Yes No
 Check One: Small, porous, non-leaky type Hazardous material or other contamination (describe)
 I certify that while drilling, deepening, or otherwise altering the above described well, undesirable water or constituents were encountered and that I did not know or intend that such well must be completed in a proper manner as to avoid injury or pollution.

Company & Individual's Name (type or print): Universal Drilling Services of Texas LLC Lic. No: 4786-M
 Address: 3233 West 11th Street Suite 800 City: Houston State: TX Zip: 77008
 Signature: [Signature] Date: 8/21/06 Signature:
 Licensed Driller/Pump Installer Apprentice Apprentice Reg. Num.

Texas Department of Licensing and Regulation

Water Well Drilling Pump Installer Section

1701 N. Congress Ave., Austin, TX 78711-1000

Tel: 512-389-2200

E-mail address: waterwell@texas.gov Website: www.texas.gov

License must be completed and filed with this application before a well is drilled or installed within 60 days of permit/placement of the well.

WELL REPORT

A. WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Name: Railroad Commission of Texas Address: 1701 N. Congress Ave. City: Austin State: TX Zip: 78711

2) WELL LOCATION

Well ID: MW-5 County: Randall Address: High 83 South City: Bellinger

Type of Work: New Extension Repair Other

Proposed Use (check): Domestic Irrigation Industrial Fire Protection Other

Drilling Date: Started 7/19/06 Completed 7/19/06
 Diameter of Hole: 6 7/8 inches
 Drilling Method (check): Air Rotary Mud Rotary Other

From (ft)	To (ft)	Description and color of formation material
0'	3'	Silty Clay, yellowish gray medium stiff, slight plastic, damp, no odor.
3'	24'	Limestone, yellowish gray, hard, dry, no odor - dark yellowish orange clay seam (2" thick) present at 4', 6', 11', 17' + 24', stiff, damp, non-plastic except at 6' which has slight plastic.
24'	55'	Limestone, medium bluish gray, hard, dry, no odor - shale seam (3" thick) @ 20', shale seam (2" thick) @ 30', shale seam (2" thick) @ 47', shale seam (5" thick) @ 54'.

Borehole Completion: Gravel Packed Other

Depth (ft)	Type	Material	Depth (ft)	Depth (ft)
2	~	PVC Slotted	55.5	.010
2	~	PVC Blank	5	.40

Annular Seal Data:

From (ft)	To (ft)	Material
3	0	Bentonite
1	0	Concrete

Method Used: Gravity Porting Method: Keith-Boyer

Surface Completion: Surface Slab Installed Surface Slab Not Installed

Water Level: Static Level _____ ft. Date _____
 Artesian Flow: _____ gpm

Water Test:

Depth	Type	Depth
<u>N/A</u>		

Water Quality: No Nitrate Contaminant Nitrate Contaminant

Company & Individual's Name: Universal Drilling Services of Texas L.L.C. Lic. No.: 4786-M
 Address: 3233 West 11th Street Suite 200 City: Houston State: TX Zip: 77028
 Signature: [Signature] Date: 8/21/06 Signature: _____
 Licensed Driller/Pump Installer _____ Date: _____ Apprentice _____ Apprentice Reg. Number _____

Texas Department of Licensing and Regulation

Attention: Director
 1701 N. Congress Ave
 Austin, TX 78711

Water Department Licensing and Regulation
 1701 N. Congress Ave, Suite 800
 Houston, TX 77008
 Tel: 713-251-2222

This form and the accompanying instructions are provided to the applicant and licensee within 60 days of the date of the license.

E-mail address: waterwell@license.state.tx.us Web address: www.license.state.tx.us

WELL REPORT

A. WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Railroad Commission of Texas 1701 N. Congress Ave Austin

State TX

Zip 78711

2) WELL LOCATION

Well # MW-6
 Physical Name: Pannels Hwy 83 South
 City: Bellinger

3) Type of Work
 New Well Reconditioning
 Re-drill Plug/Seal
 4) Proposed Use (check all that apply) Domestic Commercial/Service Domestic
 Industrial Irrigation Livestock Recreational/Boat Dock Dr. Watering Irrigation
 Hot Springs Stock Public Supply Public Supply with plan approved Yes No

6) Drilling Date
 Started: 7/19/06
 Completed: 7/19/06
 Diameter of Hole: 6 7/8" 0" 40"
 7) Drilling Method (check all that apply)
 Direct Drive Power Mud Pump
 Road Air Hammer Cable Tool
 Turf Hollow Stem Auger
 Reverse Circulation
 Other

From (ft)	To (ft)	Description and color of formation material	8) Borehole Completion															
0'	25'	Limestone, yellowish gray, hard, dry, no odor.	<input type="checkbox"/> Open Hole <input type="checkbox"/> Straight Wall <input type="checkbox"/> Underreamed <input checked="" type="checkbox"/> Gravel Packed <input type="checkbox"/> Other Gravel pack material from 40' to 3' (p. size 20/40)															
25'	40'	Limestone, medium bluish gray, hard, dry, no odor - shale seams present in 25'-30' and 35'-40' intervals	Casing, Blank Pipe, and Well Screen Data															
			<table border="1"> <thead> <tr> <th>Depth (ft)</th> <th>Size (in)</th> <th>Steel, Plastic, or Other Material</th> <th>Setting (ft)</th> <th>Flow (gpm)</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>2</td> <td>PVC Slotted</td> <td>40.5</td> <td>100</td> </tr> <tr> <td>2</td> <td>2</td> <td>PVC Blank</td> <td>5.0</td> <td>40</td> </tr> </tbody> </table>	Depth (ft)	Size (in)	Steel, Plastic, or Other Material	Setting (ft)	Flow (gpm)	2	2	PVC Slotted	40.5	100	2	2	PVC Blank	5.0	40
Depth (ft)	Size (in)	Steel, Plastic, or Other Material	Setting (ft)	Flow (gpm)														
2	2	PVC Slotted	40.5	100														
2	2	PVC Blank	5.0	40														

9) Annular Seal Data: (see instructions on back of form)
 from 3' to 0' It #acks & material (Bentonite/Concrete)
 from 1' to 0' It #acks & material (Concrete)
 Method used Gravity Portland Cement
 Distance to septum field or other non-annular cementation
 Distance to Property Line
 Verified

13) Plugged Well plugged within 48 hours
 (sampled as well) (used to separate placed in well)
 from 0' to 0' From 0' to 0' Seal & Material used: n/a

10) Surface Completion (if steel cased, leave blank)
 Surface Slab Installed Surface Sleeve Installed
 Diskless Adapter Load Alternative Paving Load

11) Water Level
 Static level _____ ft Date _____
 Artesian Flow _____ gpm n/a

12) Packers:

Type	Depth	Type	Depth
	n/a		

15) Water Test
 Type of Test Pump Back Jetted Estimated n/a
 Yield _____ gpm/24 hr It drawdown rate _____ ft

16) Water Quality
 Depth of Sample _____ We are mineral analysis made Yes No
 Do you know of any particular strata which contain (or may contain) _____ Yes No (if yes, contain)
 Check One: No visible pollution in or near water table Pollution in or near water table
 No visible pollution in or near water table Pollution in or near water table
 I certify that only drilling equipment used in the well was clean and that no oil, mud, or other waste water or constituents was introduced into the well, and that it is intended that such well be used to complete operations in such a manner as to avoid injury or pollution.

Company & Individual's Name (type or print) Universal Drilling Services of Texas L.L.C. Lic. No. 4786-M
 Address 3233 West 11th Street Suite 800 Houston State TX Zip 77008
 Signature: [Signature] Date: 8/21/06 Signature: _____
 Licensed Driller/Pump Installer _____ Date _____ Apprentice _____ Apprentice Reg. Number _____

Texas Department of Licensing and Regulation

Attention: Owner
 1. This form must be completed and filed with the Department and returned within 60 days of well completion.

Water Well Drilling and Pump Installation
 2. This form must be completed and filed with the Department and returned within 60 days of well completion.

This form must be completed and filed with the Department and returned within 60 days of well completion.

Email address: waterwell@license.state.tx.us Web address: www.license.state.tx.us

WELL REPORT

A. WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Owner: Railroad Commission of Texas | Address: 1701 N Congress Ave. | City: Austin | State: TX | Zip: 78711

2) WELL LOCATION

Well Name: MCD-7 | County: Travis | Precinct: Travis 83 South | Section: Bullinger

3) Type of Work: Installation Repair/Modification Decommissioning
 4) Proposed Use: Domestic Commercial/Industrial Domestic Irrigation Agricultural Public Supply Other

5) Drilling Date: Started 7/20/06 Completed 7/20/06
 Diameter of Hole: 6 7/8" 0 30

6) Drilling Method (check): Direct Air Rotary Mud Rotary Level Air Hammer Cable Tool Final Hollow Stem Auger Reamer/Groutation Other

8) Borehole Completion: Open Hole Straight Wall Underreamed Gravel Packed Other
 Gravel packed derived from: 30 ft to 3 ft. S.S. 20/40

From (ft)	To (ft)	Description and color of formation material
0'	10'	Silty sand, red, very fine-grained well sorted, damp, no odor. Silty sand clay seam, soft, damp from 7'-7.5'
10'	14'	Silty clayey sand, red, very fine-grained, moist, no odor. Silty sand clay seam (1'-2'), moist from 13'-13.5'
14'	20'	Sand, yellowish red, very fine-grained well sorted, moist with a few thin clay seams (1-14") - Silty sand clay seam (3") at 15'

Depth (ft)	Size (in)	Material	Start (ft)	End (ft)	Notes
2	2	PVC slotted	30	5	0.10
2	2	PVC Blank	5	0	40

9) Annular Seal Data: Grout Cement Other
 From: 3 ft to 0 ft # sacks & material: Barbrite (Coccol)
 Method: Gravity Performance: Keith Page
 Distance to property line: 10 ft. Method: Vertical

13) Plugged: Well plugged with in 48 hours
 From (ft): n/a To (ft): n/a

10) Surface Completion: Surface Slab Installed Surface Sleeve Installed
 Pile-up Adapter Used Alternative Protection Used

14) Type Pump: Turbine Jet Surface pump Cylinder
 Distribution: n/a

11) Water Level: Static Level: n/a Day: n/a
 Artesian Flow: n/a gpm

15) Water Test: Type test: Pump Bailor Jetted Free surface n/a
 Yield: n/a gpm @ n/a ft drawdown at n/a ft

Layer	Depth	Type	Depth
	<u>n/a</u>		

16) Water Quality: Depth of start: n/a Water sampling analysis made? Yes No
 Did you encounter any materials which contain undesirable constituents? Yes No (Pesticides, Contaminants)
 Check One: Naturally occurring gas or volatile liquid Disposal from a well or other source Hazardous material waste contamination (inorganic) Other (describe):
 I certify that no casing, debris, or other material was placed in such a manner as to avoid injury or pollution.

Company & Individual's Name: Universal Drilling Services of Texas L.L.C. Lic. No.: 4786-M
 Address: 3233 West 11th Street Suite 800 City: Houston State: TX Zip: 77008
 Signature: [Signature] Date: 8/21/06 Signature: [Signature] Apprentice Reg. Number: [Blank]

STATE OF TEXAS WELL REPORT for Tracking #116898

Owner: Railroad Commission of Texas	Owner Well #: MW-8
Address: Oil&Gas Division PO Box 12967 Austin , TX 78711	Grid #: 42-17-2
Well Location: Hwy 83 South Ballinger , TX	Latitude: 31° 43' 43" N
Well County: Runnels	Longitude: 099° 55' 44" W
Elevation: No Data	GPS Brand Used: RHINO
Type of Work: New Well	Proposed Use: Monitor

Drilling Date: Started: **4/24/2007**
Completed: **4/24/2007**

Diameter of Hole: Diameter: **8.25 in From Surface To 30 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Gravel Packed From: **30 ft to 13 ft**
Completion: Gravel Pack Size: **20/40**

Annular Seal Data: 1st Interval: **From 13 ft to 2 ft with 6.5 Bentonite (#sacks and material)**
2nd Interval: **From 2 ft to 0 ft with 1 Concrete (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Gravity**
Cemented By: **Keith Barge**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Universal Drilling Services of Texas, LLC
3233 West 11th Street Suite 80
Houston , TX 77008**

Driller License Number: **4786**

Licensed Well Driller Signature: **Keith Barge**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking #116898) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description

0'-19'--**SILTY SAND, with sand seams, very fine-grained, moderate reddish orange, very slightly moist, no odor**

-no recovery 12'-15' due to high sand content

-moderate brown silty clay seam 16.2'-16.5'

-very moist and increasingly sandy 16.5-19'

-fragment of 1" sub-rounded gravel at 17.5'

-1/2" moderate brown sandy clay seams from 17'-19'

19'-20'--**SAND, fine-grained, graying orange, well sorted, very moist to wet, no odor**

20'-30'--**LIMETONE with occasional shale seams, medium bluish gray, hard, dry to slightly moist, no odor**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2"	N	PVC Slotted	30' to 15'
2"	N	PVC Blank	15' to 0'

STATE OF TEXAS WELL REPORT for Tracking #116902

Owner:	Railroad Commission of Texas	Owner Well #:	MW-9
Address:	Oil&Gas Division PO Box 12967 Austin , TX 78711	Grid #:	42-17-2
Well Location:	Hwy 83 South Ballinger , TX	Latitude:	31° 43' 43" N
Well County:	Runnels	Longitude:	099° 55' 44" W
Elevation:	No Data	GPS Brand Used:	RHINO
Type of Work:	New Well	Proposed Use:	Monitor

Drilling Date: Started: **4/24/2007**
Completed: **4/24/2007**

Diameter of Hole: Diameter: **8.25 in From Surface To 35 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Gravel Packed From: **32 ft to 10 ft**
Gravel Pack Size: **20/40**

Annular Seal Data: 1st Interval: **From 10 ft to 2 ft with 4.5 Bentonite (#sacks and material)**
2nd Interval: **From 2 ft to 0 ft with 1 Concrete (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Gravity**
Cemented By: **Keith Barge**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Universal Drilling Services of Texas, LLC**
3233 West 11th Street Suite 80
Houston , TX 77008

Driller License Number: **4786**

Licensed Well Driller Signature: **Keith Barge**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking #116902) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description

0'-7'--**SILTY SAND, with sand seams, very fine-grained, moderate reddish orange, very slightly moist, no odor**
-moist seam from 5'-7'

7'-11'--**LIMESTONE, yellowish gray, hard, dry, no odor**

11'-23'--**SANDY CLAYEY SILT, greenish gray, dry with slightly moist seams, no odor**
-slightly moist 12'-13'
-1/2" shaley clay seams from 15'-16'
-2 1/2" limestone fragment at 19.5'
-very moist with hard platy shale seams and oxidized partings from 20'-21'

23'-25'--**LIMESTONE, yellowish gray, hard, dry no odor**

25'-35'--**LIMESTONE, with occasional shale seams, medium bluish gray, hard, dry to slightly moist, no odor**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2"	N	PVC Slotted	32' to 12' .010
2"	N	PVC Blank	12' to 0' 40

STATE OF TEXAS WELL REPORT for Tracking #116907

Owner: Railroad Commission of Texas	Owner Well #: MW-10
Address: Oil&Gas Division PO Box 12967 Austin , TX 78711	Grid #: 42-17-2
Well Location: Hwy 83 South Ballinger , TX	Latitude: 31° 43' 43" N
Well County: Runnels	Longitude: 099° 55' 44" W
Elevation: No Data	GPS Brand Used: RHINO
Type of Work: New Well	Proposed Use: Monitor

Drilling Date: Started: **4/25/2007**
Completed: **4/25/2007**

Diameter of Hole: Diameter: **7 7/8 in From Surface To 60 ft**

Drilling Method: **Air Rotary**

Borehole Completion: Gravel Packed From: **60 ft to 3 ft**
Gravel Pack Size: **20/40**

Annular Seal Data: 1st Interval: **From 3 ft to 1 ft with 1 Bentonite (#sacks and material)**
2nd Interval: **From 1 ft to 0 ft with 1 Concrete (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Gravity**
Cemented By: **Keith Barge**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Universal Drilling Services of Texas, LLC**
3233 West 11th Street Suite 80
Houston , TX 77008

Driller License Number: **4786**

Licensed Well Driller Signature: **Keith Barge**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking #116907) on your written request.

Texas Department of Licensing & Regulation

P.O. Box 12157

Austin, TX 78711

(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0'-1'		-SANDY SILTY CLAY, yellowish gray, lightly moist, no odor.
1'-24'		-LIMESTONE, yellowish gray, hard, dry, no odor
		-moist grayish yellow, weathered seam from 4'-7'
		-slightly moist, weathered seam from 10'-11'
		-slightly moist, weathered seam at interface @24'
24'-40'		-LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor
		-shale seams are slightly moist @ 26'
		-shale content increasing with depth @ 27'
40'-60'		-LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor
		-shale seams are slightly moist @41'
		-shale content decreasing with depth @ 42'

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2"	N	PVC Slotted	60' to 5'
2"	N	PVC Blank	5' to 0' 40

STATE OF TEXAS WELL REPORT for Tracking #116912

Owner: Railroad Commission of Texas	Owner Well #: MW-11
Address: Oil&Gas Division PO Box 12967 Austin , TX 78711	Grid #: 42-17-2
Well Location: Hwy 83 South Ballinger , TX	Latitude: 31° 43' 43" N
Well County: Runnels	Longitude: 099° 55' 44" W
Elevation: No Data	GPS Brand Used: RHINO

Type of Work: New Well	Proposed Use: Monitor

Drilling Date: Started: **4/25/2007**
Completed: **4/25/2007**

Diameter of Hole: Diameter: **7 7/8 in From Surface To 70 ft**

Drilling Method: **Air Rotary**

Borehole Completion: Gravel Packed From: **70 ft to 13 ft**
Gravel Pack Size: **20/40**

Annular Seal Data: 1st Interval: **From 13 ft to 2 ft with 4 Bentonite (#sacks and material)**
2nd Interval: **From 2 ft to 0 ft with 1 Concrete (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Gravity**
Cemented By: **Keith Barge**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Universal Drilling Services of Texas, LLC**
3233 West 11th Street Suite 80
Houston , TX 77008

Driller License Number: **4786**

Licensed Well Driller Signature: **Keith Barge**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking #116912) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description

0'-1'--SANDY SILTY CLAY, yellowish gray, lightly moist, no odor.

1'-4'--LIMESTOME, yellowish gray, hard, dry, no odor

-moist, weathered grayish yellow seam from 4'-6'

-slightly moist, weathered seams from 6'-10'

-slightly moist seams 15'-20'

-slightly moist, weathered seam at interface

24'-70'--LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor

-shale seams are slightly moist @ 26'

-high shale content 24'-25' and then decreasing with depth to 55'

-high shale content and slightly moist 55'-60'

-moderate shale content and very slightly moist 60'-70'

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2"	N	PVC Slotted	70' to 15'
2"	N	PVC Blank	15' to 0'

STATE OF TEXAS WELL REPORT for Tracking #117000

Owner: Railroad Commission of Texas	Owner Well #: MW-12
Address: Oil&Gas Division PO Box 12967 Austin , TX 78711	Grid #: 42-17-2
Well Location: Hwy 83 south Ballinger , TX	Latitude: 31° 43' 43" N
Well County: Runnels	Longitude: 099° 55' 44" W
Elevation: No Data	GPS Brand Used: Rhino
Type of Work: New Well	Proposed Use: Monitor

Drilling Date: Started: **4/25/2007**
Completed: **4/25/2007**

Diameter of Hole: Diameter: **7 7/8 in From Surface To 40 ft**

Drilling Method: **Air Rotary**

Borehole Completion: Gravel Packed From: **40 ft to 3 ft**
Gravel Pack Size: **20/40**

Annular Seal Data: 1st Interval: **From 3 ft to 1 ft with 1 Bentonite (#sacks and material)**
2nd Interval: **From 1 ft to 0 ft with 1 Concrete (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Gravity**
Cemented By: **Keith Barge**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Universal Drilling Services of Texas, LLC
3233 W. 11th Street Suite 800
Houston , TX 77008**

Driller License Number: **4786**

Licensed Well Driller Signature: **Keith Barge**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0'-2'		SAND-grading to SILTY SAND, very fine-grained, dark yellowish orange, slightly moist, no odor
2'-23'		LIMESTONE, yellow gray, hard, dry, no odor
		-moist weathered seams 15'-23'
23'-40'		LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor
		-moist seams 23'-35'

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2 N		PVC Slotted	40' to 5' .010
2 N		PVC Blank	5' to 0 40

STATE OF TEXAS WELL REPORT for Tracking #117001

Owner: Railroad Commission of Texas	Owner Well #: MW-13
Address: Oil&Gas Division PO Box 12967 Austin , TX 78711	Grid #: 42-17-2
Well Location: Hwy 83 south Ballinger , TX	Latitude: 31° 43' 43" N
Well County: Runnels	Longitude: 099° 55' 44" W
Elevation: No Data	GPS Brand Used: Rhino
Type of Work: New Well	Proposed Use: Monitor

Drilling Date: Started: **4/25/2007**
Completed: **4/25/2007**

Diameter of Hole: Diameter: **7 7/8 in From Surface To 70 ft**

Drilling Method: **Air Rotary**

Borehole Completion: Gravel Packed From: **70 ft to 13 ft**
Gravel Pack Size: **20/40**

Annular Seal Data: 1st Interval: **From 13 ft to 2 ft with 4 Bentonite (#sacks and material)**
2nd Interval: **From 2 ft to 0 ft with 1 Concrete (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Gravity**
Cemented By: **Keith Barge**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Universal Drilling Services of Texas, LLC**
3233 W. 11th Street Suite 800
Houston , TX 77008

Driller License Number: **4786**

Licensed Well Driller Signature: **Keith Barge**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking #117001) on your written request.

Texas Department of Licensing & Regulation

P.O. Box 12157

Austin, TX 78711

(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0'-3'	--	SILTY SAND-very fine-grained, dark yellowish orange, damp, no odor
3'-23'	--	LIMESTONE, yellowish gray, hard, dry, no odor -moist weathered seams throughout
23'-70'	--	LIMESTONE with shale seams, medium bluish gray, hard, dry, no odor -moist shaley seams 23'-35' -minimal shale content from 35'-57' -increased shale content 57'-65'

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2 N PVC	Slotted	70' to 15'	.010
2 N PVC	Blank	15' to 0	40

STATE OF TEXAS WELL REPORT for Tracking #117005

Owner: Railroad Commission of Texas	Owner Well #: MW-14
Address: Oil&Gas Division PO Box 12967 Austin , TX 78711	Grid #: 42-17-2
Well Location: Hwy 83 south Ballinger , TX	Latitude: 31° 43' 43" N
Well County: Runnels	Longitude: 099° 55' 44" W
Elevation: No Data	GPS Brand Used: Rhino
Type of Work: New Well	Proposed Use: Monitor

Drilling Date: Started: **4/24/2007**
Completed: **4/24/2007**

Diameter of Hole: Diameter: **8.25 in From Surface To 30 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Gravel Packed From: **30 ft to 9 ft**
Gravel Pack Size: **20/40**

Annular Seal Data: 1st Interval: **From 9 ft to 2 ft with 4.5 Bentonite (#sacks and material)**
2nd Interval: **From 2 ft to 0 ft with 1 Concrete (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Gravity**
Cemented By: **Keith Barge**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Universal Drilling Services of Texas, LLC
3233 W. 11th Street Suite 800
Houston , TX 77008**

Driller License Number: **4786**

Licensed Well Driller Signature: **Keith Barge**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking #117005) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description

0'-17'--**SILTY SAND-with sand seams, very fine-grained, moderate reddish orange, very slightly moist, no odor**

-**moderate brown clayey silt seams from 1'-2'**

-**cemented and increased silt from 8'-10'**

-**moist 10'-11'**

-**moist clayey seam 12'-13'**

-**increasingly sandy 13'-14.5'**

-**moist clayey seam 14.5'-15'**

-**increasingly sandy 15.5'-17'**

17'-18'--**LIMESTONE, yellowish gray, hard, dry, no odor**

18'-20'--**NO RECOVERY-observed limestone as below**

20'-30'--**LIMESTONE with occasional shale seams, medium bluish gray, hard, dry with slightly moist seams, no odor**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2 N	PVC	Slotted	30' to 10' .010
2 N	PVC	Blank	10' to 0 40

STATE OF TEXAS WELL REPORT for Tracking #117010

Owner: Railroad Commission of Texas	Owner Well #: MW-15
Address: Oil&Gas Division PO Box 12967 Austin , TX 78711	Grid #: 42-17-2
Well Location: Hwy 83 south Ballinger , TX	Latitude: 31° 43' 43" N
Well County: Runnels	Longitude: 099° 55' 44" W
Elevation: No Data	GPS Brand Used: Rhino
Type of Work: New Well	Proposed Use: Monitor

Drilling Date: Started: **4/23/2007**
Completed: **4/23/2007**

Diameter of Hole: Diameter: **7 7/8 in From Surface To 70 ft**

Drilling Method: **Air Rotary**

Borehole Gravel Packed From: **70 ft to 15 ft**
Completion: Gravel Pack Size: **20/40**

Annular Seal Data: 1st Interval: **From 15 ft to 2 ft with 4 Bentonite (#sacks and material)**
2nd Interval: **From 2 ft to 0 ft with 1 Concrete (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Gravity**
Cemented By: **Keith Barge**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Universal Drilling Services of Texas, LLC
3233 W. 11th Street Suite 800
Houston , TX 77008**

Driller License Number: **4786**

Licensed Well Driller Signature: **Keith Barge**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0'-4'	--	SILTY SAND-very fine-grained, dark yellowish orange, damp, no odor
4'-29'	--	LIMESTONE with shale seams, yellowish gray, hard, dry, no odor
		-very moist weathered seams 5'-10'
		-slightly moist weathered seams 10'-25'
29'-70'	--	LIMESTONE, with shale seams, medium bluish gray, hard, dry, no odor
		-very slightly moist seams 30'-40'
		-grading to light bluish gray at 53'
		-very slightly moist seams 60'-70'

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2 N		PVC Slotted	70' to 15' .010
2 N		PVC Blank	15' to 0 40

STATE OF TEXAS WELL REPORT for Tracking #117015

Owner: Railroad Commission of Texas	Owner Well #: MW-16
Address: Oil&Gas Division PO Box 12967 Austin , TX 78711	Grid #: 42-17-2
Well Location: Hwy 83 south Ballinger , TX	Latitude: 31° 43' 43" N
Well County: Runnels	Longitude: 099° 55' 44" W
Elevation: No Data	GPS Brand Used: Rhino
Type of Work: New Well	Proposed Use: Monitor

Drilling Date: Started: **4/26/2007**
Completed: **4/26/2007**

Diameter of Hole: Diameter: **8.25 in From Surface To 24 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Gravel Packed From: **24 ft to 3 ft**
Completion: Gravel Pack Size: **20/40**

Annular Seal Data: 1st Interval: **From 3 ft to 1 ft with 1 Bentonite (#sacks and material)**
2nd Interval: **From 1 ft to 0 ft with 1 Concrete (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Gravity**
Cemented By: **Keith Barge**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

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3233 W. 11th Street Suite 800
Houston , TX 77008**

Driller License Number: **4786**

Licensed Well Driller Signature: **Keith Barge**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

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Please include the report's Tracking number (Tracking #117015) on your written request.

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P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

CASING, BLANK PIPE & WELL SCREEN DATA

From (ft) To (ft)	Description	Dia.	New/Used	Type	Setting From/To
0'-4.5'	--SILTY SAND-very fine-grained, moderate reddish orange, very slightly moist, no odor	2 N		PVC Slotted 24' to 4'	.010
4.5'-7.5'	--SAND, very fine-grained, grayish orange, moist to wet, no odor	2 N		PVC Blank 4' to 0	40
7.5'-9.5'	--SANDY CLAYEY SILT, moderate reddish brown, moderate cementation, moist, no odor				
9.5'-15.5'	--SAND, very fine-grained, grayish orange, moist to wet, no odor				
	-1/2" clay seam at 11.2'				
	-silty sand seam from 12.5'-12.8'				
	-grading to dark yellowish orange and very moist at 12.5'				
	-wet at 15'				
15.5'-16'	--LIMESTONE, yellowish gray, hard, dry, no odor				
16'-25'	--LIMESTONE with shale seams, medium bluish gray, hard, dry with moist seams, no odor				

STATE OF TEXAS WELL REPORT for Tracking #117021

Owner: Railroad Commission of Texas	Owner Well #: MW-17
Address: Oil&Gas Division PO Box 12967 Austin , TX 78711	Grid #: 42-17-2
Well Location: Hwy 83 south Ballinger , TX	Latitude: 31° 43' 43" N
Well County: Runnels	Longitude: 099° 55' 44" W
Elevation: No Data	GPS Brand Used: Rhino
Type of Work: New Well	Proposed Use: Monitor

Drilling Date: Started: **4/27/2007**
Completed: **4/27/2007**

Diameter of Hole: Diameter: **8.25 in From Surface To 30 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Gravel Packed From: **30 ft to 8 ft**
Completion: Gravel Pack Size: **20/40**

Annular Seal Data: 1st Interval: **From 8 ft to 2 ft with 4 Bentonite (#sacks and material)**
2nd Interval: **From 2 ft to 0 ft with 1 Concrete (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Gravity**
Cemented By: **Keith Barge**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Universal Drilling Services of Texas, LLC
3233 W. 11th Street Suite 800
Houston , TX 77008**

Driller License Number: **4786**

Licensed Well Driller Signature: **Keith Barge**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

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Texas Department of Licensing & Regulation

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DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description

0'-15'--**SILTY SAND with sand seams, very fine-grained, moderate reddish orange, slightly moist, no odor**
-very high sand content 6'-10'
-silt seam from 13'-13.3'
-very high sand content from 13.3'-15'

15'-18.5'--**SILTY CLAYEY SAND, moderate reddish orange, low to medium cementation, moist, no odor**

18.5'-19.5'--**SAND very fine-grained, grayish orange, slightly moist, no odor**

19.5'-22'--**GRAVELLY SAND grading to SANDY GRAVEL, sub-rounded to angular gravel up to 3" diameter, very fine-grained to course sand, poorly sorted, moderate reddish orange, moist grading to wet, no odor**

22'-30'--**LIMESTONE with shale seams, medium bluish gray, dry with moist seams, no odor**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2 N PVC	Slotted	30' to 10'	.010
2 N PVC	Blank	10' to 0'	40

APPENDIX C

Table 1 – Summary of Soil Data – BTEX/TPH/Chloride

Table 2 – Summary of Soil Field Data – Chloride

Table 3 – Summary of Groundwater Data – BTEX/TPH

Table 4 – Summary of Groundwater Data – Anions, Cations, TDS

Table 5 – Summary of Groundwater Field Data

**Table 6A – Summary of Groundwater Data – Calculation of %TDS
July-August 2006 (Chloride Method 300.0)**

**Table 6B – Summary of Groundwater Data – Calculation of %TDS
July-August 2006 (Chloride Method 4500B)**

**Table 6C – Summary of Groundwater Data – Calculation of %TDS
May 2007 (Chloride Method 300.0)**

Table 7 – Groundwater/Surface Water Elevation Data

Table 8 – Summary of Surface Water Data – BTEX/TPH

Table 9 – Summary of Surface Water Data – Anions, Cations, TDS

Table 10 – Summary of Surface Water Field Data – Chloride

**Table 11A – Summary of Surface Water Data – Calculation of %TDS
July 2006 (Chloride Method 300.0)**

**Table 11B – Summary of Surface Water Data – Calculation of %TDS
July 2006 (Chloride Method 4500B)**

**Table 11C – Summary of Surface Water Data – Calculation of %TDS
May 2007 (Chloride Method 300.0)**

Table 12 – Summary of Soil, Surface Water and Groundwater Field Data – Conductivity

Table 13 – Summary of TWDB Water Well Data – Anions, Cations, Conductivity, TDS

Table 14 – Oil and Gas Well Data

**Table 1
Summary of Soil Data - BTEX/TPH/Chloride**

Ballinger Seep Runnels County, Texas										
Sample	Depth (Feet)	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH (mg/kg)			Chloride (mg/kg)
							C ₆ -C ₁₂	>C ₁₂ -C ₂₈	>C ₂₈ -C ₃₅	
MW-1	11.0-12.0	7/17/2006	<0.0052	<0.0052	<0.0052	<0.0052	<20	<20	<20	992
MW-1 Dup	11.0-12.0	7/17/2006	<0.0048	<0.0048	<0.0048	<0.0048	<20	<20	<20	--
MW-2	15.0-16.0	7/17/2006	<0.0048	<0.0048	<0.0048	<0.0048	<20	<20	<20	1,030
MW-3	4.0-5.0	7/18/2006	<0.0048	<0.0048	<0.0048	<0.0048	<20	<20	<20	5,490
MW-5	4.0-5.0	7/18/2006	<0.0049	<0.0049	<0.0049	<0.0049	<20	<20	<20	2,200
	11.0	7/18/2006	<0.0048	<0.0048	<0.0048	<0.0048	<20	<20	<20	2,050
MW-7	20.0-21.0	7/20/2006	<0.0046	<0.0046	<0.0046	<0.0046	<20	<20	<20	730
TCEQ TRRP Tier 1 Residential Critical PCL 30-Acre Source Area Class 2 Groundwater			0.013	4.1	3.8	61	Carbon-Range Specific			NP
RRC Class 1 and Class 2 Residential Soil- to-Groundwater Protection Limits for Delineation and Remediation			0.026	8.2	7.6	120	10,000			NP

-- = Not Analyzed
NP = Not Provided

**Table 2
Summary of Soil Field Data - Chloride**

**Ballinger Seep
Runnels County, Texas**

Monitor Wells				Monitor Wells				Monitor Wells			
Sample	Date	Depth	Chloride (mg/kg)	Sample	Date	Depth	Chloride (mg/kg)	Sample	Date	Depth	Chloride (mg/kg)
MW-1	7/17/2006	2.0-3.0	<1200	MW-6	7/19/2006	0.0-5.0	<120	MW-10	4/24/2007	4.0-5.0	<128
	7/17/2006	8.0-9.0	<1200		7/19/2006	5.0-10.0	<120		4/24/2007	9.0-10.0	<128
	7/17/2006	11.0-12.0	<1200		7/19/2006	10.0-15.0	340		4/24/2007	14.0-15.0	374
	7/17/2006	15.0-16.0	<1200		7/19/2006	15.0-20.0	<120		4/24/2007	19.0-20.0	1,720
	7/17/2006	20.0-21.0	<1200		7/19/2006	20.0-25.0	144		4/24/2007	24.0-25.0	236
MW-2	7/17/2006	12.0-13.0	<1200	7/19/2006	25.0-30.0	144	4/24/2007	29.0-30.0	264		
	7/17/2006	15.0-16.0	<1200	7/19/2006	30.0-35.0	<120	4/24/2007	39.0-40.0	<128		
	7/17/2006	20.0-21.0	<1200	7/19/2006	35.0-40.0	<120	4/24/2007	49.0-50.0	152		
	7/17/2006	25.0-30.0	<1200	7/20/2006	4.0-5.0	<120	4/24/2007	59.0-60.0	704		
	7/17/2006	30.0-35.0	<1200	7/20/2006	7.0-8.0	<120	4/25/2007	4.0-5.0	<128		
MW-3	7/17/2006	35.0-40.0	<1200	7/20/2006	13.0-14.0	652	4/25/2007	14.0-15.0	<128		
	7/17/2006	40.0-45.0	<1200	7/20/2006	17.0-18.0	<120	4/25/2007	19.0-20.0	<128		
	7/17/2006	45.0-50.0	<1200	7/20/2006	20.0-21.0	172	4/25/2007	29.0-30.0	<128		
	7/18/2006	4.0-5.0	1,216	7/20/2006	28.0-29.0	<120	4/25/2007	39.0-40.0	<128		
	7/18/2006	6.0-7.0	3,212	4/24/2007	4.0-5.0	504	4/25/2007	49.0-50.0	<128		
MW-4	7/18/2006	11.0-12.0	120	4/24/2007	9.0-10.0	<120	4/25/2007	59.0-60.0	<128		
	7/18/2006	0.0-5.0	<120	4/24/2007	15.0-16.0	<120	4/25/2007	69.0-70.0	<128		
	7/18/2006	5.0-10.0	<120	4/24/2007	16.0-17.0	<120	4/23/2007	4.0-5.0	<128		
	7/18/2006	10.0-15.0	<120	4/24/2007	18.0-19.0	268	4/23/2007	9.0-10.0	236		
	7/18/2006	15.0-20.0	172	4/24/2007	19.0-20.0	600	4/23/2007	14.0-15.0	592		
MW-5	7/18/2006	20.0-25.0	<120	4/24/2007	29.0-30.0	180	4/23/2007	19.0-20.0	824		
	7/18/2006	2.0-3.0	1,628	4/24/2007	2.0-3.0	<128	4/23/2007	24.0-25.0	496		
	7/18/2006	4.0-5.0	1,628	4/24/2007	6.0-7.0	<128	4/23/2007	29.0-30.0	<128		
	7/18/2006	6.0-7.0	708	4/24/2007	12.0-13.0	496	4/23/2007	34.0-35.0	1,492		
	7/18/2006	11.0-12.0	1,216	4/24/2007	20.0-21.0	704	4/23/2007	39.0-40.0	<128		
MW-14	7/18/2006	17.0-18.0	1,180	4/24/2007	22.0-23.0	544	4/25/2007	4.0-5.0	<128		
	7/18/2006	24.0-25.0	888	4/24/2007	29.0-30.0	<128	4/25/2007	9.0-10.0	<128		
	7/18/2006	31.0-32.0	268	4/24/2007	34.0-35.0	<128	4/25/2007	14.0-15.0	<128		
	7/18/2006	36.0-37.0	<120	4/24/2007	34.0-35.0	<128	4/25/2007	19.0-20.0	592		
	7/18/2006	54.0-55.0	<120				4/25/2007	24.0-25.0	264		
MW-15							4/25/2007	29.0-30.0	<128		
							4/25/2007	29.0-30.0	<128		
							4/25/2007	34.0-35.0	<128		
							4/25/2007	39.0-40.0	<128		
							4/25/2007	69.0-70.0	<128		
MW-16							4/25/2007	69.0-70.0	<128		
							4/25/2007	69.0-70.0	<128		
							4/25/2007	69.0-70.0	<128		
							4/25/2007	69.0-70.0	<128		
							4/25/2007	69.0-70.0	<128		
MW-17							4/25/2007	69.0-70.0	<128		
							4/25/2007	69.0-70.0	<128		
							4/25/2007	69.0-70.0	<128		
							4/25/2007	69.0-70.0	<128		
							4/25/2007	69.0-70.0	<128		

Note that the field-screening for chloride in soil was performed utilizing Hach Quantab® strips. There are separate test strips for both high range and low range chloride values. The high range strips have a minimum value of <1,200 mg/kg and the low range strips have a minimum value of <120 mg/kg. Terracon initially used the high range strips and later switched to the low range strips based on the initial field screening data.

Table 2
Summary of Soil Field Data - Chloride

Ballinger Seep
Runnels County, Texas

Surface Seep Areas					Background					Tributary/Colorado River Seep Areas				
Sample	Date	Depth	Chloride (mg/kg)		Sample	Date	Depth	Chloride (mg/kg)		Sample	Date	Depth	Chloride (mg/kg)	
Seep-1	7/18/2006	Surface	<1200		BKG-1	7/21/2006	Surface	<120		CR-1	7/19/2006	Surface	24,700	
Seep-2	7/18/2006	Surface	1,216		BKG-2	7/21/2006	Surface	<120		CR-2	7/21/2006	Surface	9,492	
Seep-3	7/18/2006	Surface	<1200		BKG-3	7/21/2006	Surface	<120		CR-3	7/21/2006	Surface	1,212	
Seep-4	7/18/2006	Surface	8,132		BKG-4	8/15/2006	Surface	<120		CR-4	7/21/2006	Surface	11,088	
Seep-5	7/18/2006	Surface	24,700		BKG-5	8/15/2006	Surface	<120		CR-5	7/21/2006	Surface	12,996	
Seep-A	7/21/2006	Surface	<120											
Seep-B	7/21/2006	Surface	2,348											
Seep-C	7/21/2006	Surface	<1200											
Seep-D	7/21/2006	Surface	5,468											
Seep-E	7/21/2006	Surface	2,348											
Seep-F	7/21/2006	Surface	1,416											

**Table 3
Summary of Groundwater Data - BTEX/TPH**

Ballinger Seep Ballinger, Texas									
Sample	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	TPH (mg/L)			
						C ₆ -C ₁₂	>C ₁₂ -C ₂₈	>C ₂₈ -C ₃₅	C ₆ -C ₃₅
MW-1	7/19/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
MW-1 Dup	7/19/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
MW-2	7/20/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
MW-3	7/20/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
MW-4	7/20/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
MW-5	7/20/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
MW-7	8/15/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
Trip Blank	7/19/2006	<0.005	<0.005	<0.005	<0.005	--	--	--	--
Trip Blank	7/19/2006	<0.005	<0.005	<0.005	<0.005	--	--	--	--
Trip Blank	7/20/2006	<0.005	<0.005	<0.005	<0.005	--	--	--	--
Trip Blank	8/15/2006	<0.005	<0.005	<0.005	<0.005	--	--	--	--
Equipment Blank	7/19/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
TCEQ TRRP Tier 1 Residential Critical PCL 30-Acre Source Area Class 2 Groundwater		0.005	1.0	0.7	10	Carbon-Range Specific			
RRC Class 1 and Class 2 Impacted Groundwater Delineation and Remediation Limits		0.005	1.0	0.7	10	1.1			

-- = Not Analyzed

**Table 4
Summary of Groundwater Data - Anions, Cations, TDS**

Ballinger Seep
Ballinger, Texas

Sample	Date	Anions						Cations						Total Dissolved Solids (mg/L)
		Alkalinity, Carbonate (mg/L)	Alkalinity, Bicarbonate (mg/L)	Bromide (mg/L)	Chloride (Method 300.0) (mg/L)	Chloride (Method 4500B) ⁶ (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)		
MW-1	7/19/2006	<2	380	<2	1,550	2,140	<0.5	657	330	83	15	1,700	4,980	
MW-1 Dup	5/24/2007	<10	293	2.52	2,290	--	0.456-J	470	478	85.2	5.84	970	5,260	
MW-Dup	7/19/2006	<2	380	<2	1,530	--	2.6	657	330	82	14	1,700	4,790	
MW-2	5/24/2007	<10	291	2.59	2,260	--	0.467-J	473	466	86.6	5.59	944	4,850	
	7/20/2006	<2	310	<2	3,860	12,100	13	734	1,300	550	59	9,100	23,300	
	5/24/2007	<10	291	7.88	6,750	--	<0.1	736	936	257	14.2	2,960	13,100	
MW-3	7/20/2006	<2	150	<2	3,050	7,240	19	1,020	820	220	44	5,600	14,600	
	5/24/2007	<10	268	12.4	13,300	--	<0.1	1,250	957	229	22.3	6,370	23,500	
MW-4	7/20/2006	<2	190	<2	2,440	5,080	16	1,410	920	320	45	3,000	11,700	
	5/24/2007	<10	310	2.35	2,160	--	0.222-J	463	592	138	5.85	1,180	4,860	
MW-5	7/20/2006	<2	300	<2	5,920	23,000	1,900	554	1,200	510	240	21,000	38,900	
	5/25/2007	<10	246	13	10,500	--	1.15	839	1,040	455	27.3	4,890	17,000	
MW-6	5/25/2007	<10	280	14.3	10,600	--	6	785	1,360	303	25.6	4,840	20,300	
MW-7	8/15/2006	<2	290	<2	1,880	3,580	<0.5	1,840	1,000	530	19	990	54,600 (8,600) ⁶	
	5/23/2007	<10	449	2.78	2,350	--	0.26-J	404	427	124	5.82	1,100	5,180	
MW-8	5/23/2007	<10	482	2.03	1,750	--	0.672	301	271	69.2	2.97	917	3,940	
MW-9	5/25/2007	<10	213	7.21	6,280	--	<0.1	1,520	1,350	612	29.7	1,880	12,500	
MW-10	5/25/2007	<10	344	2.3	670	--	0.345-J	41.2	193	19.1	1.44	270	1,450	
MW-11	5/25/2007	<10	321	0.669-J	516	--	<0.1	229	258	69.6	6.31	157	1,480	
MW-12	5/22/2007	<10	293	6.18	4,610	--	0.79	376	662	271	11	1,810	9,090	
	5/25/2007	<10	397	3.42	1,000	--	1.74	91.7	223	62.9	3.79	483	2,100	
MW-14	5/23/2007	<10	227	0.798-J	793	--	<0.1	1,400	433	194	11.5	328	3,380	
MW-15	5/25/2007	<10	239	0.964-J	484	--	<0.1	1,280	234	146	8.04	375	2,690	
MW-16	5/24/2007	<10	179	5.32	4,930	--	<0.1	1,120	888	381	25.6	1,630	11,300	
MW-17	5/24/2007	<10	313	<0.3	36.6	--	0.876	272	80.3	47.1	1.32	93.8	740	
TCEQ TRRP Tier 1 Residential Critical PCL 30-Acre Source Area Class 2 Groundwater		NP	NP	NP	300 ^{1,2}	300 ^{1,3}	10	300 ^{1,3}	NP ¹	NP ¹	NP ¹	NP ¹	NP	
RRC Draft Guidance: Field Guide for the Assessment and Cleanup of Produced Water Releases		NP	NP	NP	300 ⁴	NP	NP	NP	NP	NP	NP	NP	NP	

Table 4
Summary of Groundwater Data - Anions, Cations, TDS

Ballinger Seep Ballinger, Texas													
Sample	Date	Anions					Cations				Total Dissolved Solids (mg/L)		
		Alkalinity, Carbonate (mg/L)	Alkalinity, Bicarbonate (mg/L)	Bromide (mg/L)	Chloride (Method 300.0) (mg/L)	Chloride (Method 4500B) ⁶ (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Magnesium (mg/L)		Potassium (mg/L)	Sodium (mg/L)
EPA National Primary Drinking Water Standards		NP	NP	NP	NP	NP	10	NP	NP	NP	NP	NP	NP
EPA National Secondary Drinking Water Standards ⁵		NP	NP	NP	250	250	NP	250	NP	NP	NP	NP	500

¹ The TCEQ states that these compounds are not necessarily considered to be of concern to human health; however, they may present aesthetic and/or ecological issues.

² The TCEQ states that chloride is not necessarily considered to be of concern to human health; however, the concentration of this compound should not be high enough to cause objectionable characteristics (e.g., taste, odor) or make a natural resource unfit for use. The TCEQ generally requires that drinking water not exceed a chloride concentration of 300 mg/L.

³ The TCEQ states that sulfate is not necessarily considered to be of concern to human health; however, the concentration of this compound should not be high enough to cause objectionable characteristics (e.g., taste, odor) or make a natural resource unfit for use. The TCEQ generally requires that drinking water not exceed a sulfate concentration of 300 mg/L.

⁴ The RRC draft guidance entitled Field Guide for the Assessment and Cleanup of Produced Water Releases, dated February 17, 2006, indicates that delineation of a produced water release should be to background or 300 mg/L chloride. However, no cleanup level is specified and it is indicated that releases to groundwater will be evaluated on a case by case basis.

⁵ EPA National Secondary Drinking Water Standards are recommended standards related to cosmetic and aesthetic effects and are non-enforceable guidelines.

⁶ Rerun analyses performed by A4 Scientific.

NP = Not Provided

-- = Not Analyzed

Table 5
Summary of Groundwater Field Data

Ballinger Seep Runnels County, Texas							
Sample	Date	Chloride ¹	pH ²	Conductivity ²	Temperature ²	Dissolved Oxygen ²	Oxidation-Reduction Potential ²
		(mg/L)		(uS/cm)	(°C)	(mg/L)	(mV)
MW-1	7/19/2006	--	6.68	7,088	23.96	0.96	49.9
	7/21/2006	2,373	--	--	--	--	--
	5/24/2007	--	6.75	6,855	19.95	1.44	10.6
MW-2	7/20/2006	--	6.76	29,983	24.09	4.25	106.9
	7/21/2006	>6,175	--	--	--	--	--
	5/24/2007	--	6.65	17,517	21.12	0.29	-51
MW-3	7/21/2006	>6,175	--	--	--	--	--
	5/24/2007	--	8.26	31,713	20.63	0.57	-64.4
MW-4	7/21/2006	6,175	--	--	--	--	--
	5/24/2007	--	6.71	7,043	20.28	0.93	-29.8
MW-5	7/21/2006	>6175	--	--	--	--	--
	5/25/2007	--	6.72	25,957	21.69	1.77	2.8
MW-6	5/25/2007	--	6.44	28,007	19.9	2.78	74.3
	5/30/2007	>6175	--	--	--	--	--
MW-7	8/15/2006	4,176	--	--	--	--	--
	5/23/2007	--	6.85	7,139	20.04	4.61	-83.4
MW-8	5/23/2007	--	7.02	5,544	19.62	4.08	7.8
	5/30/2007	2,772	--	--	--	--	--
MW-9	5/25/2007	--	6.62	14,671	19.05	0.37	-97.7
	5/30/2007	>6175	--	--	--	--	--
MW-10	5/25/2007	--	7.03	2,332	20.33	3.98	37.2
MW-11	5/25/2007	--	7.3	2,216	20.15	3.9	-18.2
	5/30/2007	969	--	--	--	--	--
MW-12	5/25/2007	--	7.02	4,772	21.26	2.49	17.3
	5/30/2007	3,524	--	--	--	--	--
MW-14	5/23/2007	--	6.92	4,112	20.91	3.88	11.7
	5/30/2007	1,483	--	--	--	--	--
MW-15	5/25/2007	--	7.33	3,682	21.65	2.96	-51.5
	5/30/2007	523	--	--	--	--	--
MW-16	5/24/2007	--	6.72	14,990	19.52	0.25	-56.7
	5/30/2007	>6175	--	--	--	--	--
MW-17	5/24/2007	--	7.18	1,051	19.39	4.33	19.9
	5/30/2007	32	--	--	--	--	--

¹ Chloride field data measured utilizing Hach Quantab® strips.

² Field parameter data measured utilizing a YSI 556 MPS Meter.

-- = Not Measured

Table 6A
Summary of Groundwater Data - Calculation of %TDS - July-August 2006 (Chloride Method 300.0)

Ballinger Seep Ballinger, Texas													
Sample	Date	Anions						Cations					Total Dissolved Solids (meq/L)
		Alkalinity, Carbonate (meq/L)	Alkalinity, Bicarbonate (meq/L)	Bromide (meq/L)	Chloride (Method 300.0) (meq/L)	Nitrate (meq/L)	Sulfate (meq/L)	Calcium (meq/L)	Magnesium (meq/L)	Potassium (meq/L)	Sodium (meq/L)		
MW-1	7/19/2006	0	6	0	44	0	14	16	7	0	74	161	
MW-1 - %TDS		0	4	0	27	0	8	10	4	0	46	--	
MW-1 Dup	7/19/2006	0	6	0	43	0	14	16	7	0	74	161	
MW-1 Dup - %TDS		0	4	0	27	0	8	10	4	0	46	--	
MW-2	7/20/2006	0	5	0	109	0	15	65	45	2	396	637	
MW-2 - %TDS		0	1	0	17	0	2	10	7	0	62	--	
MW-3	7/20/2006	0	2	0	86	0	21	41	18	1	244	414	
MW-3 - %TDS		0	1	0	21	0	5	10	4	0	59	--	
MW-4	7/20/2006	0	3	0	69	0	29	46	26	1	130	305	
MW-4 - %TDS		0	1	0	23	0	10	15	9	0	43	--	
MW-5	7/20/2006	0	5	0	167	31	12	60	42	6	913	1,236	
MW-5 - %TDS		0	0	0	14	2	1	5	3	0	74	--	
MW-7	8/15/2006	0	5	0	53	0	38	50	44	0	43	233	
MW-7 - %TDS		0	2	0	23	0	16	21	19	0	18	--	

Equivalent Weight 30.004 61.016 79.904 35.453 62.004 48.03 20.04 12.1525 39.098 22.9898

Milliequivalent Weight 0.033328889 0.016389144 0.012515 0.02820636 0.01612799 0.0208203 0.0499002 0.082287595 0.02557676 0.04349755

$$\text{meq/L} = \frac{\text{mg/L}}{\text{Equivalent Wt}}$$

$$\%TDS = \frac{\text{meq/L}}{\text{TDS}} \times 100$$

Table 6B
Summary of Groundwater Data - Calculation of %TDS - July-August 2006 (Chloride Method 4500B)

Ballinger Seep Ballinger, Texas												
Sample	Date	Anions					Cations					Total Dissolved Solids (meq/L)
		Alkalinity, Carbonate (meq/L)	Alkalinity, Bicarbonate (meq/L)	Bromide (meq/L)	Chloride (Method 4500B) (meq/L)	Nitrate (meq/L)	Sulfate (meq/L)	Calcium (meq/L)	Magnesium (meq/L)	Potassium (meq/L)	Sodium (meq/L)	
MW-1	7/19/2006	0	6	0	60	0	14	16	7	0	74	178
MW-1 - %TDS		0	3	0	34	0	8	9	4	0	42	--
MW-1 Dup	7/19/2006	0	6	0	0	0	14	16	7	0	74	117
MW-1 Dup - %TDS												--
MW-2	7/20/2006	0	5	0	341	0	15	65	45	2	396	869
MW-2 - %TDS		0	1	0	39	0	2	7	5	0	45	--
MW-3	7/20/2006	0	2	0	204	0	21	41	18	1	244	532
MW-3 - %TDS		0	0	0	38	0	4	8	3	0	46	--
MW-4	7/20/2006	0	3	0	143	0	29	46	26	1	130	380
MW-4 - %TDS		0	1	0	38	0	8	12	7	0	34	--
MW-5	7/20/2006	0	5	0	649	31	12	60	42	6	913	1,717
MW-5 - %TDS		0	0	0	38	2	1	3	2	0	53	--
MW-7	8/15/2006	0	5	0	101	0	38	50	44	0	43	281
MW-7 - %TDS		0	2	0	36	0	14	18	16	0	15	--

Equivalent Weight 30.004 61.016 79.904 35.453 62.004 48.03 20.04 12.1525 39.098 22.9898
 Milliequivalent Weight 0.033328889 0.016389144 0.012515 0.02820636 0.01612799 0.0208203 0.0499002 0.082287595 0.02557676 0.04349755

$$\text{meq/L} = \frac{\text{mg/L}}{\text{Equivalent Wt}}$$

$$\%TDS = \frac{\text{meq/L}}{\text{TDS}} \times 100$$

Table 6C
Summary of Groundwater Data - Calculation of %TDS - May 2007 (Chloride Method 300.0)

Ballinger Seep
 Ballinger, Texas

Sample	Date	Anions						Cations					Total Dissolved Solids (mg/L)
		Alkalinity, Carbonate (mg/L)	Alkalinity, Bicarbonate (mg/L)	Bromide (mg/L)	Chloride (Method 300.0) (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)		
MW-1	5/24/2007	0	5	0	65	0	10	24	7	0	42	152	
MW-1-%TDS		0	3	0	42	0	6	16	5	0	28		
MW-2	5/24/2007	0	5	0	190	0	15	47	21	0	129	408	
MW-2-%TDS		0	1	0	47	0	4	11	5	0	32		
MW-3	5/24/2007	0	4	0	375	0	26	48	19	1	277	750	
MW-3-%TDS		0	1	0	50	0	3	6	3	0	37		
MW-4	5/24/2007	0	5	0	61	0	10	30	11	0	51	168	
MW-4-%TDS		0	3	0	36	0	6	18	7	0	31		
MW-5	5/25/2007	0	4	0	296	0	17	52	37	1	213	621	
MW-5-%TDS		0	1	0	48	0	3	8	6	0	34		
MW-6	5/25/2007	0	5	0	299	0	16	68	25	1	211	624	
MW-6-%TDS		0	1	0	48	0	3	11	4	0	34		
MW-7	5/23/2007	0	7	0	66	0	8	21	10	0	48	162	
MW-7-%TDS		0	5	0	41	0	5	13	6	0	30		
MW-8	5/23/2007	0	8	0	49	0	6	14	6	0	40	123	
MW-8-%TDS		0	6	0	40	0	5	11	5	0	32		
MW-9	5/25/2007	0	3	0	177	0	32	67	50	1	82	413	
MW-9-%TDS		0	1	0	43	0	8	16	12	0	20		
MW-10	5/25/2007	0	6	0	19	0	1	10	2	0	12	48	
MW-10-%TDS		0	12	0	39	0	2	20	3	0	24		
MW-11	5/25/2007	0	5	0	15	0	5	13	6	0	7	50	
MW-11-%TDS		0	11	0	29	0	10	26	11	0	14		
MW-12	5/22/2007	0	5	0	130	0	8	33	22	0	79	277	
MW-12-%TDS		0	2	0	47	0	3	12	8	0	28		
MW-12	5/25/2007	0	7	0	28	0	2	11	5	0	21	74	
MW-12-%TDS		0	9	0	38	0	3	15	7	0	28		
MW-14	5/23/2007	0	4	0	22	0	29	22	16	0	14	107	
MW-14-%TDS		0	3	0	21	0	27	20	15	0	13		
MW-15	5/25/2007	0	4	0	14	0	27	12	12	0	16	84	
MW-15-%TDS		0	5	0	16	0	32	14	14	0	19		
MW-16	5/24/2007	0	3	0	139	0	23	44	31	1	71	313	
MW-16-%TDS		0	1	0	44	0	7	14	10	0	23		
MW-17	5/24/2007	0	5	0	1	0	6	4	4	0	4	24	
MW-17-%TDS		0	21	0	4	0	24	17	16	0	17		

Table 6C
Summary of Groundwater Data - Calculation of %TDS - May 2007 (Chloride Method 300.0)

		Ballinger Seep Ballinger, Texas									
Equivalent Weight		30.004	61.016	79.904	35.453	62.004	48.03	20.04	12.1525	39.098	22.9898
Milliequivalent Weight		0.03332889	0.016389144	0.012515	0.02820636	0.01612799	0.0208203	0.0499002	0.082287595	0.02557676	0.04349755

$$\text{meq/L} = \frac{\text{mg/L}}{\text{Equivalent Wt}}$$

$$\% \text{TDS} = \frac{\text{meq/L}}{\text{TDS}} \times 100$$

**TABLE 7
Groundwater/Surface Water Elevation Data**

Ballinger Seep Ballinger, Texas							
Monitor Well	Gauging Date	Total Depth	Ground Surface Elevation	Top of Casing Elevation	Depth to Groundwater	Water Column Thickness	Groundwater Elevation
MW-1	7/21/2006	25.24	1621.4	1620.88	9.54	15.70	1611.34
	8/15/2006				9.51	15.73	1611.37
	8/21/2006				9.69	15.55	1611.19
	4/23/2007				9.34	15.90	1611.54
	5/21/2007				8.09	17.15	1612.79
	5/24/2007				8.61	16.63	1612.27
	5/30/2007				7.93	17.31	1612.95
MW-2	7/21/2006	50.05	1621.6	1621.58	21.40	28.65	1600.18
	8/15/2006				18.71	31.34	1602.87
	8/21/2006				18.79	31.26	1602.79
	4/23/2007				18.18	31.87	1603.40
	5/21/2007				17.11	32.94	1604.47
	5/24/2007				17.42	32.63	1604.16
	5/30/2007				16.31	33.74	1605.27
MW-3	7/21/2006	14.92	1636.6	1636.28	14.33	0.59	1621.95
	8/15/2006				5.39	9.53	1630.89
	8/21/2006				7.13	7.79	1629.15
	4/23/2007				3.18	11.74	1633.10
	5/21/2007				2.06	12.86	1634.22
	5/24/2007				2.11	12.81	1634.17
	5/30/2007				2.82	12.10	1633.46
MW-4	7/21/2006	25.13	1621.1	1620.68	20.59	4.54	1600.09
	8/15/2006				10.59	14.54	1610.09
	8/21/2006				10.68	14.45	1610.00
	4/23/2007				10.54	14.59	1610.14
	5/21/2007				8.96	16.17	1611.72
	5/24/2007				9.39	15.74	1611.29
	5/30/2007				9.08	16.05	1611.60
MW-5	7/21/2006	55.11	1666.4	1665.96	52.50	2.61	1613.46
	8/15/2006				52.54	2.57	1613.42
	8/21/2006				52.62	2.49	1613.34
	4/23/2007				51.99	3.12	1613.97
	5/21/2007				49.33	5.78	1616.63
	5/25/2007				49.75	5.36	1616.21
	5/30/2007				49.44	5.67	1616.52
MW-6	7/21/2006	40.29	1659.3	1658.89	DRY		
	8/15/2006				DRY		
	8/21/2006				DRY		
	4/23/2007				DRY		
	5/21/2007				18.16	22.13	1640.73
	5/25/2007				18.58	21.71	1640.31
	5/30/2007				17.89	22.40	1641.00
MW-7	7/21/2006	30.23	1609.0	1608.62	DRY		
	8/15/2006				24.80	5.43	1583.82
	8/21/2006				27.45	2.78	1581.17
	4/23/2007				20.15	10.08	1588.47
	5/21/2007				17.11	13.12	1591.51
	5/23/2007				17.23	13.00	1591.39
	5/30/2007				17.58	12.65	1591.04

**TABLE 7
Groundwater/Surface Water Elevation Data**

Ballinger Seep Ballinger, Texas							
Monitor Well	Gauging Date	Total Depth	Ground Surface Elevation	Top of Casing Elevation	Depth to Groundwater	Water Column Thickness	Groundwater Elevation
MW-8	4/27/2007	29.65	1607.0	1606.5	DRY		
	5/21/2007				14.35	15.30	1592.2
	5/23/2007				14.45	15.20	1592.1
	5/30/2007				14.45	15.20	1592.1
MW-9	4/27/2007	31.57	1610.6	1610.3	29.42	2.15	1580.9
	5/21/2007				21.22	10.35	1589.1
	5/25/2007				21.56	10.01	1588.7
	5/30/2007				21.65	9.92	1588.7
MW-10	4/27/2007	59.78	1664.2	1664.0	DRY		
	5/21/2007				59.62	0.16	1604.4
	5/25/2007				46.99	12.79	1617.0
	5/30/2007				59.82	-0.04	1604.2
MW-11	4/27/2007	69.75	1664.7	1664.5	DRY		
	5/21/2007				45.70	24.05	1618.8
	5/25/2007				49.08	20.67	1615.4
	5/30/2007				57.29	12.46	1607.2
MW-12	4/27/2007	40.01	1664.4	1664.2	DRY		
	5/21/2007				38.51	1.50	1625.7
	5/25/2007				36.21	3.80	1628.0
	5/30/2007				38.47	1.54	1625.7
MW-13	4/27/2007	69.96	1664.7	1664.5	DRY		
	5/21/2007				DRY		
	5/25/2007				DRY		
	5/30/2007				DRY		
MW-14	4/27/2007	30.05	1605.8	1605.5	DRY		
	5/21/2007				23.39	6.66	1582.1
	5/23/2007				25.00	5.05	1580.5
	5/30/2007				18.70	11.35	1586.8
MW-15	4/27/2007	71.45	1671.8	1671.5	68.67	2.78	1602.8
	5/21/2007				67.01	4.44	1604.5
	5/25/2007				67.31	4.14	1604.2
	5/30/2007				67.35	4.10	1604.2
MW-16	4/27/2007	23.79	1601.6	1601.5	15.10	8.69	1586.4
	5/21/2007				13.25	10.54	1588.3
	5/24/2007				13.37	10.42	1588.1
	5/30/2007				13.42	10.37	1588.1
MW-17	4/27/2007	29.74	1606.2	1606.0	21.44	8.30	1584.6
	5/21/2007				17.20	12.54	1588.8
	5/24/2007				17.40	12.34	1588.6
	5/30/2007				17.42	12.32	1588.6
Tributary at Seep	8/21/2006	NA	NA	1610.1	2.14	NA	1608.0
	4/23/2007				1.95	NA	1608.2
	5/21/2007				1.95	NA	1608.2
	5/30/2007				1.90	NA	1608.2
Colorado River	8/21/2006	NA	NA	1585.5	0.38	NA	1585.1
	4/23/2007			1590.3	0.21	NA	1585.3
	5/30/2007			1590.3	4.43	NA	1585.8
Seep Monitor Point	4/23/2007	NA	NA	1611.9	2.80	NA	1609.1
	5/30/2007				2.34	NA	1609.5

Note: All data are in feet.

NA = Not Applicable

**Table 8
Summary of Surface Water Data - BTEX/TPH**

Ballinger Seep Ballinger, Texas									
Sample	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	TPH (mg/L)			
						C ₆ -C ₁₂	>C ₁₂ -C ₂₈	>C ₂₈ -C ₃₅	C ₆ -C ₃₅
Seep-1	7/19/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
SW-Trib-1	7/19/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
SW-Trib-2	7/19/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
SW-Trib-2 Dup	7/19/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
SW-CR-Down	7/20/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
SW-CR-Up	7/20/2006	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0
TCEQ TRRP Aquatic Life Acute Surface Water Risk-Based Exposure Limits (SWRBELs)		NP	8.7	6.54	4.02		NP		
TCEQ TRRP Aquatic Life Chronic Surface Water Risk-Based Exposure Limits (SWRBELs)		0.13	1.45	1.09	1.34		NP		
TCEQ TRRP Human Health Surface Water Risk-Based Exposure Limits (Freshwater Fish Criteria)		0.106	15	2.1	NP		NP		
TCEQ TRRP Human Health Surface Water Risk-Based Exposure Limits (Water and Freshwater Fish Criteria)		0.005	1.0	0.53	NP		NP		
TCEQ TRRP Ecological Benchmarks for Surface Water (RG-263)		0.13	1.45	1.09	1.34		NP		

NP = Not Provided

**Table 9
Summary of Surface Water Data - Anions, Cations, TDS**

**Ballinger Seep
Ballinger, Texas**

Sample	Date	Anions						Cations					Total Dissolved Solids (mg/L)
		Alkalinity, Carbonate (mg/L)	Alkalinity, Bicarbonate (mg/L)	Bromide (mg/L)	Chloride (Method 300.0) (mg/L)	Chloride (Method 4500B) ³ (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	
Seep-1/ Lower Seep-1	7/19/2006	<2	2,400	<2	1,060	--	<0.5	320	130	38	13	1,000	2,430
	5/22/2007	<10	308	1.44	1,620	--	<0.1	321	262	59.6	7.49	778	3,560
SW-Trib-1	7/19/2006	<2	110	<2	1,520	2,220	<0.5	599	250	81	15	1,800	7,410
	5/22/2007	<10	298	2.22	1,920	--	0.191-J	394	396	74.6	5.9	883	4,060
SW-Trib-2	7/19/2006	<2	140	<2	1,570	--	<0.5	621	260	88	17	1,900	4,840
	5/22/2007	<10	213	2.52	2,130	--	<0.1	482	317	77.4	7.48	1,000	4,660
SW-Trib-2 Dup	7/19/2006	<2	150	<2	1,580	--	<0.5	631	260	87	16	1,900	4,840
	5/22/2007	<10	223	2.96	2,370	--	0.175-J	507	466	130	11.1	1,950	5,410
SW-Trib-3	5/22/2007	<10	303	6.38	5,290	--	<0.1	604	494	117	19.2	3,140	10,200
SW-Trib-4	5/22/2007	<10	248	5.56	4,180	--	<0.1	548	355	97.6	17.2	2,760	8,820
SW-Trib-5	5/22/2007	<10	186	6.15	5,300	--	0.641	575	399	108	11.1	2,940	9,600
SW-Trib-6	5/22/2007	<2	140	<2	621	--	<0.5	1,570	370	140	9.1	380	3,590
SW-CR-Up/ SW-CR-50' Up	5/22/2007	<10	188	0.656-J	222	--	0.852	319	131	55.2	7.5	130	1,030
SW-CR-250' Up	5/22/2007	<10	189	0.636-J	228	--	0.854	331	128	56.5	6.66	127	1,000
SW-CR-1,000' Up	5/22/2007	<10	190	0.655-J	229	--	0.874	336	134	57.8	7.25	138	1,030
SW-CR-2,500' Up	5/23/2007	<10	206	0.809-J	351	--	1.57	629	223	79.9	8.19	191	1,610
SW-EC-2,500' Up	5/23/2007	<10	188	0.551-J	158	--	0.463-J	161	84.2	43.2	7.56	86.8	676
SW-CR-Down/ SW-CR-50' Down	7/20/2006	<2	140	<2	626	620	<0.5	1,560	350	140	10	380	2,580
SW-CR-500' Down	5/22/2007	<10	189	0.633-J	226	--	0.878	323	127	54.2	7.08	130	1,010
	5/23/2007	<10	194	0.639-J	240	--	0.866	355	143	59	7.84	132	1,100
SW-Dup	5/23/2007	<10	195	0.609-J	240	--	0.876	351	142	59.7	8.12	136	1,100
	5/22/2007	<10	189	0.611-J	218	--	0.835	346	128	55.9	7.12	135	1,030
SW-CR-1,500' Down	5/23/2007	<10	195	0.634-J	233	--	0.894	340	136	55.6	7.67	126	1,050
	5/23/2007	<10	195	0.627-J	234	--	0.879	340	138	57.2	7.89	127	1,050
TCEQ TRRP Aquatic Life Acute Surface Water Risk-Based Exposure Limits (SWRBELs)		NP	NP	NP	860		NP	NP	NP	19.41	NP	NP	NP
TCEQ TRRP Aquatic Life Chronic Surface Water Risk-Based Exposure Limits (SWRBELs)		NP	NP	NP	230		NP	NP	NP	3.235	NP	NP	NP
TCEQ TRRP Human Health Surface Water Risk-Based Exposure Limits (Freshwater Fish Criteria)		NP	NP	NP	NP		NP	NP	NP	NP	NP	NP	NP

**Table 9
Summary of Surface Water Data - Anions, Cations, TDS**

Ballinger Seep Ballinger, Texas														
Sample	Date	Anions						Cations				Total Dissolved Solids (mg/L)		
		Alkalinity, Carbonate (mg/L)	Alkalinity, Bicarbonate (mg/L)	Bromide (mg/L)	Chloride (Method 300.0) (mg/L)	Chloride (Method 4500B) ³ (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)		Sodium (mg/L)	
TCEQ TRRP Human Health Surface Water Risk-Based Exposure Limits (Water and Freshwater Fish Criteria)		NP	NP	NP	NP	NP	NP	10	NP	NP	NP	NP	NP	NP
TCEQ TRRP Ecological Benchmarks for Surface Water (RG-263)		NP	NP	NP	230			NP	NP	NP	3.23	NP	NP	NP
RRC Draft Guidance: Field Guide for the Assessment and Cleanup of Produced Water Releases		NP	NP	NP	300 ¹			NP	NP	NP	NP	NP	NP	NP
EPA National Primary Drinking Water Standards		NP	NP	NP	NP	NP		10	NP	NP	NP	NP	NP	NP
EPA National Secondary Drinking Water Standards ²		NP	NP	NP	250			NP	250	NP	NP	NP	NP	500

¹ The RRC draft guidance entitled Field Guide for the Assessment and Cleanup of Produced Water Releases, dated February 17, 2006, indicates that delineation of a produced water release should be to background or 300 mg/L chloride. However, no cleanup level is specified and it is indicated that releases to groundwater will be evaluated on a case by case basis.

² EPA National Secondary Drinking Water Standards are recommended standards related to cosmetic and aesthetic effects and are non-enforceable guidelines.

³ Rerun analyses performed by A4 Scientific.

NP = Not Provided

-- = Not Analyzed

Table 10
Summary of Surface Water Field Data - Chloride

Ballinger Seep Runnels County, Texas								
Seep			Tributary			Colorado River		
Sample	Date	Chloride (mg/L)	Sample	Date	Chloride (mg/L)	Sample	Date	Chloride (mg/L)
Seep	7/21/2006	1,367 ¹	SW-Trib-1	7/21/2006	2,373 ¹	SW-CR-Up	7/21/2006	655 ¹
Seep Monitor Point	7/21/2006	1,258 ¹	SW-Trib-2	7/21/2006	2,772 ¹	SW-CR-Down	7/21/2006	655 ¹
Upper Seep-1	4/27/2007	15,000 ²						
Upper Seep-2	4/27/2007	20,000 ²						
Upper Seep-3	4/27/2007	20,000 ²						

¹ Chloride field data measured utilizing Hach Quantab® strips.

² Chloride field data measured utilizing Hach high-range chloride test kit (Model CD-51).

Table 11A
Summary of Surface Water Data - Calculation of %TDS - July 2006 (Chloride Method 300.0)

Ballinger Seep Ballinger, Texas												
Sample	Date	Anions						Cations				Total Dissolved Solids (meq/L)
		Alkalinity, Carbonate (meq/L)	Alkalinity, Bicarbonate (meq/L)	Bromide (meq/L)	Chloride (Method 300.0) (meq/L)	Nitrate (meq/L)	Sulfate (meq/L)	Calcium (meq/L)	Magnesium (meq/L)	Potassium (meq/L)	Sodium (meq/L)	
Seep-1	7/19/2006	0	39	0	30	0	7	6	3	0	43	129
Seep-1 - %TDS		0	30	0	23	0	5	5	2	0	34	--
SW-Trib-1	7/19/2006	0	2	0	43	0	12	12	7	0	78	155
SW-Trib-1 - %TDS		0	1	0	28	0	8	8	4	0	51	--
SW-Trib-2	7/19/2006	0	2	0	44	0	13	13	7	0	83	163
SW-Trib-2 - %TDS		0	1	0	27	0	8	8	4	0	51	--
SW-Trib-2 Dup	7/19/2006	0	2	0	45	0	13	13	7	0	83	163
SW-Trib-2 Dup - %TDS		0	2	0	27	0	8	8	4	0	51	--
SW-CR-Down	7/20/2006	0	2	0	18	0	32	17	12	0	17	98
SW-CR-Down - %TDS		0	2	0	18	0	33	18	12	0	17	--
SW-CR-Up	7/20/2006	0	2	0	18	0	33	18	12	0	17	99
SW-CR-Up - %TDS		0	2	0	18	0	33	19	12	0	17	--

Equivalent Weight 30.004 61.016 79.904 35.453 62.004 48.03 20.04 12.1525 39.098 22.9898
 Milliequivalent Weight 0.033328889 0.016389144 0.012515 0.02820636 0.01612799 0.0208203 0.0499002 0.082287595 0.02557676 0.04349755

$$\text{meq/L} = \frac{\text{mg/L}}{\text{Equivalent Wt}}$$

$$\%TDS = \frac{\text{meq/L}}{\text{TDS}} \times 100$$

Table 11B
Summary of Surface Water Data - Calculation of %TDS - July 2006 (Chloride Method 4500B)

Ballinger Seep Ballinger, Texas												
Sample	Date	Anions						Cations				Total Dissolved Solids (meq/L)
		Alkalinity, Carbonate (meq/L)	Alkalinity, Bicarbonate (meq/L)	Bromide (meq/L)	Chloride (Method 4500B) (meq/L)	Nitrate (meq/L)	Sulfate (meq/L)	Calcium (meq/L)	Magnesium (meq/L)	Potassium (meq/L)	Sodium (meq/L)	
Seep-1	7/19/2006	0	39	0	0	0	7	6	3	0	43	99
Seep-1 - %TDS												
SW-Trib-1	7/19/2006	0	2	0	63	0	12	12	7	0	78	175
SW-Trib-1 - %TDS		0	1	0	36	0	7	7	4	0	45	--
SW-Trib-2	7/19/2006	0	2	0	0	0	13	13	7	0	83	119
SW-Trib-2 - %TDS												--
SW-Trib-2 Dup	7/19/2006	0	2	0	0	0	13	13	7	0	83	119
SW-Trib-2 Dup - %TDS												--
SW-CR-Down	7/20/2006	0	2	0	17	0	32	17	12	0	17	98
SW-CR-Down - %TDS		0	2	0	18	0	33	18	12	0	17	--
SW-CR-Up	7/20/2006	0	2	0	0	0	33	18	12	0	17	82
SW-CR-Up - %TDS												--

Equivalent Weight 30.004 61.016 79.904 35.453 62.004 48.03 20.04 12.1525 39.098 22.9898
 Milliequivalent Weight 0.033328889 0.016389144 0.012515 0.02820636 0.01612799 0.0208203 0.0499002 0.082287595 0.02557676 0.04349755

$$\text{meq/L} = \frac{\text{mg/L}}{\text{Equivalent Wt}}$$

$$\% \text{TDS} = \frac{\text{meq/L}}{\text{TDS}} \times 100$$

Table 11C
Summary of Surface Water Data - Calculation of %TDS - May 2007 (Chloride Method 300.0)

Sample	Date	Anions						Cations						Total Dissolved Solids (mg/L)
		Alkalinity, Carbonate (mg/L)	Alkalinity, Bicarbonate (mg/L)	Bromide (mg/L)	Chloride (Method 300.0) (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)			
Lower Seep-1	5/22/2007	0	5	0	46	0	7	13	5	0	34	109		
Lower Seep-1-%TDS		0	5	0	42	0	6	12	4	0	31			
SW-Trib-1	5/22/2007	0	5	0	54	0	8	20	6	0	38	132		
SW-Trib-1-%TDS		0	4	0	41	0	6	15	5	0	29			
SW-Trib-2	5/22/2007	0	3	0	60	0	10	16	6	0	43	140		
SW-Trib-2-%TDS		0	2	0	43	0	7	11	5	0	31			
SW-Trib-3	5/22/2007	0	4	0	67	0	11	23	11	0	85	200		
SW-Trib-3-%TDS		0	2	0	33	0	5	12	5	0	42			
SW-Trib-4	5/22/2007	0	5	0	149	0	13	25	10	0	137	338		
SW-Trib-4-%TDS		0	1	0	44	0	4	7	3	0	40			
SW-Trib-5	5/22/2007	0	4	0	118	0	11	18	8	0	120	280		
SW-Trib-5-%TDS		0	1	0	42	0	4	6	3	0	43			
SW-Trib-6	5/22/2007	0	3	0	149	0	12	20	9	0	128	322		
SW-Trib-6-%TDS		0	1	0	46	0	4	6	3	0	40			
SW-CR-50' Up	5/22/2007	0	3	0	6	0	7	7	5	0	6	33		
SW-CR-50' Up-%TDS		0	9	0	19	0	20	20	14	1	17			
SW-CR-250' Up	5/22/2007	0	3	0	6	0	7	6	5	0	6	33		
SW-CR-250' Up-%TDS		0	9	0	19	0	21	19	14	1	17			
SW-CR-1,000' Up	5/22/2007	0	3	0	6	0	7	7	5	0	6	34		
SW-CR-1,000' Up-%TDS		0	9	0	19	0	21	20	14	1	18			
SW-CR-2,500' Up	5/23/2007	0	3	0	10	0	13	11	7	0	8	53		
SW-CR-2,500' Up-%TDS		0	6	0	19	0	25	21	12	0	16			
SW-EC-2,500' Up	5/23/2007	0	3	0	4	0	3	4	4	0	4	23		
SW-EC-2,500' Up-%TDS		0	13	0	19	0	15	18	15	1	16			
SW-CR-50' Down	5/22/2007	0	3	0	6	0	7	6	4	0	6	33		
SW-CR-50' Down-%TDS		0	9	0	19	0	20	19	14	1	17			
SW-CR-500' Down	5/23/2007	0	3	0	7	0	7	7	5	0	6	35		
SW-CR-500' Down-%TDS		0	9	0	19	0	21	20	14	1	16			
SW-CR-900' Down	5/22/2007	0	3	0	6	0	7	6	5	0	6	34		
SW-CR-900' Down-%TDS		0	9	0	18	0	21	19	14	1	17			
SW-CR-1,500' Down	5/23/2007	0	3	0	7	0	7	7	5	0	5	34		
SW-CR-1,500' Down-%TDS		0	9	0	19	0	21	20	13	1	16			
SW-CR-2,500' Down	5/23/2007	0	3	0	7	0	7	7	5	0	6	34		
SW-CR-2,500' Down-%TDS		0	9	0	19	0	21	20	14	1	16			

**Table 11C
Summary of Surface Water Data - Calculation of %TDS - May 2007 (Chloride Method 300.0)**

Ballinger Seep
Ballinger, Texas

Equivalent Weight	30.004	61.016	79.904	35.453	62.004	48.03	20.04	12.1525	39.098	22.9898
Milliequivalent Weight	0.033328889	0.016389144	0.012515	0.02820636	0.01612799	0.0208203	0.0499002	0.082287595	0.02557676	0.04349755

$$\text{meq/L} = \frac{\text{mg/L}}{\text{Equivalent Wt}}$$

$$\%TDS = \frac{\text{meq/L}}{\text{TDS}} \times 100$$

Table 12
Summary of Soil, Surface Water and Groundwater Field Data - Conductivity

Ballinger Seep Runnels County, Texas					
Sample	Date	Description	Conductivity ($\mu\text{S/cm}$)		
			Soil/Sediment	Groundwater	Surface Water
MW-1	8/21/2006	groundwater from MW-1	--	7,370	--
MW-2	8/21/2006	groundwater from MW-2	--	10,830	--
MW-3	8/21/2006	groundwater from MW-3	--	>20,000	--
MW-4	8/21/2006	groundwater from MW-4	--	12,770	--
MW-5	8/21/2006	groundwater from MW-5	--	>20,000	--
MW-6	5/30/2007	groundwater from MW-6	--	>20,000	--
MW-7	8/21/2006	groundwater from MW-7	--	9,430	--
MW-8	5/30/2007	groundwater from MW-8	--	7,001	--
MW-9	5/30/2007	groundwater from MW-9	--	>20,000	--
MW-11	5/30/2007	groundwater from MW-11	--	2,860	--
MW-12	5/30/2007	groundwater from MW-12	--	11,310	--
MW-14	5/30/2007	groundwater from MW-14	--	6,470	--
MW-15	5/30/2007	groundwater from MW-15	--	4,660	--
MW-16	5/30/2007	groundwater from MW-16	--	>20,000	--
MW-17	5/30/2007	groundwater from MW-17	--	1,430	--
Seep	8/21/2006	water from seep	--	--	4,160
Ozarka Spring Water	8/21/2006	utilized for determination of conductivity in soil samples	--	--	45
C-1	8/21/2006	not used	--	--	--
C-2	8/21/2006	not used	--	--	--
C-3	8/21/2006	not used	--	--	--
C-4	8/21/2006	salty soil at location of SW-Trib-2	>18,000	--	--
C-5	8/21/2006	at location of SW-Trib-2	--	--	7,450
C-6	8/21/2006	Colorado River, 100 feet upstream of tributary	--	--	3,410
C-7	8/21/2006	Colorado River, 200 feet upstream of tributary	--	--	3,440
C-8A	8/21/2006	salty soil along Colorado River, 145 feet upstream of tributary	6,120	--	--
C-8B	8/21/2006	upstream sandbar in Colorado River	--	--	3,500
C-9	8/21/2006	Colorado River at tributary	--	--	3,650
C-10	8/21/2006	salty soil Colorado River at tributary	12,690	--	--
C-11	8/21/2006	Colorado River, 100 feet downstream of tributary	--	--	3,200
C-12	8/21/2006	Colorado River, 200 feet downstream of tributary	--	--	3,210
C-13	8/21/2006	2 feet above salt crystals at C-4	5,390	--	--
C-14	8/21/2006	6 feet above salt crystals at C-4, 5 feet from top of bank	170	--	--
C-15	8/21/2006	20 feet upstream of SW-Trib-2	--	--	6,410
C-16	8/21/2006	rock ledge in tributary near seep	--	--	6,460
C-17	8/21/2006	seep at rock ledge	--	--	6,420
C-18	8/21/2006	seep at seep monitoring point	--	--	3,450
C-19	8/21/2006	first seep expression in tributary	--	--	6,820
C-20A	8/21/2006	8 feet upstream of first seep expression (30 feet upstream of MW-2) beneath rock ledge - east bank	>20,000	--	--
C-20B	8/21/2006	8 feet upstream of first seep expression (30 feet upstream of MW-2) beneath rock ledge - middle	2,020	--	--
C-20C	8/21/2006	8 feet upstream of first seep expression (30 feet upstream of MW-2) beneath rock ledge - west bank	4,890	--	--
C-21	8/21/2006	east wall of tributary, above active seep	230	--	--
C-22	8/21/2006	sediment in tributary upstream of C-20	420	--	--
C-23	8/21/2006	sediment in tributary downstream of branch in tributary	820	--	--

Table 12
Summary of Soil, Surface Water and Groundwater Field Data - Conductivity

Ballinger Seep Runnels County, Texas					
Sample	Date	Description	Conductivity (uS/cm)		
			Soil/Sediment	Groundwater	Surface Water
C-24	8/21/2006	west branch of tributary, along bank	1,790	--	--
C-25	8/21/2006	sediment in west branch of tributary	140	--	--
C-26	8/21/2006	sediment in east branch of tributary near MW-3	8,490	--	--
C-27	8/21/2006	east wall of east branch of tributary upstream of MW-3	13,480	--	--
C-28	8/21/2006	east wall of east branch of tributary upstream of C-27	2,100	--	--
C-29	8/21/2006	east branch of tributary upstream of C-28, 50 feet north of fenceline	210	--	--
C-30	8/21/2006	west branch of tributary upstream of C-25	3,620	--	--

-- = Not Analyzed

**Table 13
Summary of Texas Water Development Board (TWDB) Water Well Data - Anions, Cations, Conductivity, TDS**

Ballinger Seep Ballinger, Texas																
TWDB Well No.	Well Depth	Elevation	Sample Date	Producing Formation	Anions					Cations				Conductivity (umho/cm)	Total Dissolved Solids (mg/L)	
					Alkalinity, Carbonate (mg/L)	Alkalinity, Bicarbonate (mg/L)	Bromide (mg/L)	Chloride (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)			Sodium (mg/L)
4209602	60	1699	6/19/1970	318LDRS	0	284	--	1,450	347	222	450	199	--	410	4,920	3,254
4209603	20	1722	7/17/1970	318LDRS	0	251	--	113	0.4	196	126	30	--	66	1,038	665
4209604	24	1692	6/19/1970	318LDRS	0	540	--	447	315	1,080	386	263	--	207	3,530	2,984
4210102	40	1796	7/9/1970	318LDRS	0	390	--	319	27	205	129	95	--	140	1,790	1,130
4217202	38	1631	7/22/1970	318LDRS	0	423	--	87	34	139	89	42	--	113	1,125	747
4217205	30	1647	7/9/1970	318LDRS	0	439	--	439	200	680	234	148	--	317	3,120	2,259
			7/10/1970	318LDRS	0	290	--	590	220	422	307	45	--	354	3,010	2,111
			2/10/1973	318LDRS	0	299	--	580	158	447	296	43	--	335	3,900	2,036
			11/13/1973	318LDRS	0	305	--	530	168	400	275	35	--	340	3,718	1,928
	135	1678	11/4/1974	318LDRS	0	311	--	463	108	325	244	28	--	275	3,150	1,626
			7/13/1978	318LDRS	0	320	--	443	106	355	247	33	--	288	3,150	1,659
			9/21/1982	318LDRS	0	304	--	422	117.8	370	230	28	--	289	3,129	1,638
4217711	30	1710	6/14/1970	318LDRS	0	234	--	690	284	458	252	134	--	348	3,380	2,299
4217712	45	1711	6/14/1970	318LDRS	0	287	--	750	378	331	193	159	--	399	3,460	2,374
4217714	90	1738	6/19/1970	318LDRS	0	210	--	410	336	249	236	67	--	193	2,340	1,618
4217715	65	1720	6/12/1970	318LDRS	0	259	--	1,290	1,365	690	670	226	--	580	6,130	4,969
			8/6/1985	318LDRS	0	261.15	--	--	--	--	--	--	--	--	--	--
4217804	21	1690	7/19/1970	318LDRS	0	298	--	486	240	286	188	83	--	291	2,620	1,751
4217805	60	1724	6/18/1970	318LDRS	0	298	--	298	290	279	174	36	--	284	2,140	1,528
4217806	32	1720	6/18/1970	318LDRS	0	287	--	202	357	184	187	30	--	202	1,870	1,325
4217807	70	1723	6/18/1970	318LDRS	0	232	--	115	520	139	176	29	--	162	1,710	1,277
4217808	29	1728	6/18/1970	318LDRS	0	368	--	335	456	101	182	89	--	198	2,280	1,564
4217902	12	1732	6/15/1970	318LDRS	0	201	--	163	419	113	211	18	--	129	1,670	1,170
4225107	55	1729	6/24/1970	318LDRS	0	338	--	620	405	245	266	111	--	302	3,170	2,138
4225109	30	1711	7/29/1970	318LDRS	0	389	--	510	200	416	165	80	--	413	2,930	2,004
4225110	25	1712	7/29/1970	318LDRS	0	253	--	379	243	241	190	48	--	250	2,270	1,500
4225202	60	1729	6/15/1970	318LDRS	0	250	--	610	312	237	336	27	--	265	2,900	1,935
4225403	50	1742	6/22/1970	318LDRS	0	282	--	458	420	256	210	91	--	270	2,670	1,864
4332311	70	1742	7/17/1970	318LDRS	0	229	--	740	820	330	476	81	--	357	4,050	2,948
4332601	60	1731	6/20/1970	318LDRS	0	174	--	840	250	253	333	86	--	297	3,330	2,172
4332602	73	1732	6/20/1970	318LDRS	0	337	--	481	344	493	276	87	--	328	3,010	2,205
Average					0	301		509	315	338	258	82		280	2,917	1,956
Concentration (meq/L)					0	5		14	5	7	13	7		12		63
%TDS					0	8		23	8	11	20	11		19		

**Table 13
Summary of Texas Water Development Board (TWDB) Water Well Data - Anions, Cations, Conductivity, TDS**

Ballinger Seep Ballinger, Texas																
TWDB Well No.	Well Depth	Elevation	Sample Date	Producing Formation	Anions					Cations				Total Dissolved Solids (mg/L)		
					Alkalinity, Carbonate (mg/L)	Alkalinity, Bicarbonate (mg/L)	Bromide (mg/L)	Chloride (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)		Sodium (mg/L)	
					--	861	--	36,524	--	4,676	2,033	942	--	22,000	--	65,080
					14			1030		97	101	78		957		2,278
					1			45		4	4	3		42		

Coleman Junction																
Concentration (meq/L)																
%TDS																

Equivalent Weight
Milliequivalent Weight

30.004 61.016 79.904 35.453 62.004 48.03 20.04 12.1525 39.098 22.9898
0.03332889 0.016389144 0.012515 0.028206 0.016128 0.02082 0.0499 0.0822876 0.0255768 0.0435

-- = Not Analyzed

$$\text{meq/L} = \frac{\text{mg/L}}{\text{Equivalent Wt}}$$

$$\%TDS = \frac{\text{meq/L}}{\text{TDS}} \times 100$$

**Table 14
Oil and Gas Well Data**

Ballinger Seep Runnels County, Texas															
Terracon ID No.	API No.	Well No.	District	County	Field Name	Field No.	Lease Name	Lease No.	Well Status	Spud Date	Completion Date	P&A Date	Total Depth (Feet)	Operator	Operator No.
1	399-03755	1	7C	Runnels	Wildcat	--	Willingham, C.H.	--	Dry Hole	6/8/1935	9/7/1935	8/28/1998	3500	M.H. Wolverton	21536
2	399-30238	3	7C	Runnels	Ballinger South (Capps Oil)	05315 550	Barr, Johnnie H.	6760	Plugged Oil	3/4/1973 9/4/1982	3/24/1973 9/28/1982	3/25/73 6/16/1987 8/11/1998 (re-plug)	3975 4100 3690	H&R Oils/Lone Star Producing H&R Oils, Inc.	341500
3	399-02543	1	7C	Runnels	Ballinger South (Capps Lime)	05315 500	Barr Gas Unit	18657	Plugged Oil/Gas	11/24/1956	12/20/1956	8/1/1966	4657	Pan American Petroleum Corp.	52010/637650
4	399-32642	4	7C	Runnels	Ballinger South (Capps Oil)	05315 550	Barr, Johnnie H.	6760	Dry Hole	12/5/1983	2/3/1983	11/16/1984	4225	H&R Oils, Inc.	341500
5	--	1	7C	Runnels	Wildcat	--	Barr, J. W.	--	Dry Hole	2/6/1964	2/24/1964	2/24/1964	4215	Humble Oil & Refining	52015
6	399-30219	1	7C	Runnels	Wildcat	--	Mays, Gene	--	Dry Hole	10/14/1972	10/24/1972	10/24/1972	3960	H&R Oils, Inc.	341500
7	399-31589	2A	7C	Runnels	Ballinger South (Capps Lime)	05315 500	Gottschalk, Otto	9687	Oil (Plugged)	1/17/1981	1/27/1981	8/22/1983	4150	H&R Oils, Inc.	341500
8	399-32102	1	7C	Runnels	Ballinger South (Capps Oil)	05315 550	City of Ballinger	9530	Plugged Oil	8/6/1981	8/16/1981	10/30/1986	4130	H&R Oils, Inc.	341500
9	399-31590	2	7C	Runnels	Ballinger South (Capps Oil)	05315 550	Barr, Johnnie H.	6760	Plugged Oil	2/14/1981	2/24/1981	6/8/1987	4200	H&R Oils, Inc.	341500
10	399-30292	1	7C	Runnels	Ballinger South (Capps Oil)	05315 550	Barr, Johnnie H.	6760	Plugged Oil	1/20/1974	2/5/1974	6/16/1987	4100	H&R Oils, Inc.	341500
11	399-32325	1	7C	Runnels	Ballinger (Cross Cut Sand)	05310 270	City of Ballinger	9376	Oil (Plugged)	12/16/1981	12/25/1981	2/15/1989	3960	Dennis & Broun	215526
12	399-33391	1	7C	Runnels	Ballinger West (Capps)	05318 250	City of Ballinger	11422	Plugged Oil	12/28/1984	1/4/1985	2/7/1991	3450	Dennis, L.W. & Associates, Inc. M-G Gas Company, Inc.	215625
13	399-30342	1	7C	Runnels	Ballinger South (Capps Oil)	05315 550	Murphy, H.S.	6653	Plugged Oil	3/10/1975	3/21/1975	8/24/1983	4160	H&R Oils, Inc.	341500
14	399-31257	1	7C	Runnels	Wildcat	00016 001	City of Ballinger	--	Dry Hole	9/15/1978	9/26/1978	2/22/79 4/24/80	3950	Loika, E.J.	506063
15	399-34542	2			Ballinger South (Capps Lime)	05315 500	Gordon	15663	--	--	--	--	--	Ladd Oil & Gas Corp.	--
	399-34483	1	7C	Runnels	Wildcat	--	Euhus	14493	Dry Hole	9/25/1997	10/2/1997	10/3/1997	3804	Ladd Oil & Gas Corp.	480951
	--	--			Ballinger South (Capps Lime)	05315 500	Euhus	--	--	--	2/10/2005	--	4000	Ladd Oil & Gas Corp.	480956
16	399-80636	1	7C	Runnels	Ballinger South (Capps Oil)	05315 550	Doose, Arthur	7147	Plugged Oil	4/7/1976	4/23/1976	6/8/1977	4150	H&R Oils, Inc.	341500
17		1	7C	Runnels	Wildcat	--	Stephens, Willie	--	Dry Hole	--	--	2/16/1951	2505	Wilcox	--
18	399-30341	1	7C	Runnels	Ballinger South (Capps Oil)	05315 550	Gottschalk, Otto	6623	Plugged Oil	7/13/1974	7/21/1974	8/18/1983	4100	H&R Oils, Inc.	341500
19	--	1	7C	Runnels	Ballinger South (Capps Lime)	05315 500	Gottschalk, Otto	--	Plugged Gas	3/22/1963	4/14/1963	12/20/1965	3930	Wade W. White	--

-- = Information not identified during records review.

Limited Site Investigation
Ballinger Seep
Ballinger, Runnels County, Texas
Project No. 94057272B
August 28, 2007



APPENDIX D

Laboratory Data Sheets



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380
(281)292-5277
FAX: (281)292-2481

August 15, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

REFERENCE:

Project.....: BALLINGER SEEP
Project Number.....: 94057272
Lab Episode Number.....: 7932
Date Received.....: 07/19/2006

Dear MAX MAJESKO:

Enclosed is the analytical Report for the project referenced above. The following sample(s) are included in the report.

MW-1 MW-1 DUP MW-2 MW-3

All the holding times were met for the tests performed on these samples. Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting A4 SCIENTIFIC for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,

Reddy Pakanati
Reddy Pakanati
Laboratory Manager

SAMPLE LOG-IN CHECKLIST/DISCREPANCY REPORT

EPISODE #: 7932 DATE/REC'D: 7/19/06 01300 TEMP & ID: 1) 6c # _____
TIME
 CLIENT NAME: Terracor 2) _____ # _____
 PROJECT NAME: Dallinger Seep 3) _____ # _____
 PROJECT NUMBER: 94057272 4) _____ # _____
 # _____ AQUEOUS, # 3 SOIL SAMPLES 5) _____ # _____
 COURIER/AIRBILL # Fedex 8553 8758 9056 6) _____ # 7/19/06

SAMPLE CONTAINER SEALS: present absent intact broken
 COOLER CUSTODY SEALS: present absent intact broken NAME & DATE: _____
 HOW MANY AND WHERE outside cooler

	YES	NO
Were samples screened for radioactivity?	X	
Chain-of-custody present?	X	
Custody documents: Sealed in a plastic bag?	X	
Signed and dated by field personnel	X	
Filled out properly in indelible ink?	X	
Signed and dated by log-in personnel?	X	
Container Condition: Each containers sealed in a separate plastic bag?	X	
Labels complete (ID, date, time, signature, preservative, etc.)?	X	
Labels agree with chain-of-custody?	X	
Received without leakage or breakage? If no, list:	X	
Correct quantity indicated on chain-of-custody?	X	
Sample Integrity: Correct containers used for the test indicated? If no, list:	X	
Correct preservatives added to the samples? If no, list:	X	
Sufficient sample amount sent for the tests indicated? If no, list:	X	
VOA vials filled completely? If no, list:	N	A
Aqueous volatiles samples preserved? If no, list:		

Discrepancy Report
 Discrepancies to be discussed with the client? _____
 Project Manager's recommendations? _____
 Who was notified? _____ By whom? _____
 Date: _____
 Client's comments: _____
 Corrective actions carried out? _____

COMMENTS: _____

For those short holding time and fast turn-around parameters, has a Rush Notification sheet been issued to the lab? _____

LOG-IN BY: J. Schaefer DATE: 7/19/06
 A4 Scientific, Inc.



Office Location Dallas

Project Manager Paul Mysjeko

Sampler's Name Paul Mysjeko

Laboratory: A-4 Scientific
 Address: The Woodlands, TX

Contact: Chad Roberts
 Phone: 381-242-2400

PO/SO #: _____

Sampler's Signature _____

Proj. No. 94057072 Project Name Academy 2007

Matrix	Date	Time	Identifying Marks of Sample(s)				No/Type of Containers			Lab Sample ID (Lab Use Only)										
			C	G	S	D	Dep	Dep	VOA		AVG	P/O								
S	7-17-06	1535	X					11	12											
S	7-17-06	1535	X					11	12											
S	7-17-06	1600	X					15	16											
S	7-18-06	1445	X					4	5											
S	7-18-06	1445	X					4	5											
S	7-18-06	1445	X					4	5											
W																				

Turn around time Normal 25% Rush 50% Rush 100% Rush

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
<u>[Signature]</u>	7-10-06	1845			

Matrix Container: WW - Wastewater VOA - 40 ml vial
 W - Water A/G - Amber / S - Soil / SD - Solid
 L - Liquid 250 ml - Glass wide mouth
 C - Charcoal tube P/O - Plastic or other
 O - Oil

Houston Office: 11555 Clay Road, Suite 100, Houston, Texas 77043 (713) 690-8989 Fax (713) 690-8787
 Dallas Office: 8901 Carpenter Freeway, Suite 100, Dallas, Texas 75247 (214) 630-1010 Fax (214) 630-7070
 Fort Worth Office: 2601 Gravel Drive, Fort Worth, Texas 76118 (817) 268-8600 Fax (817) 268-8602
 Austin Office: 5307 Industrial Oaks Blvd. # 160, Austin, Texas 78735 (512) 442-1122 Fax (512) 442-1181
 Midland Office: 24 Smith Rd. # 261, Midland, Texas 79705 (432) 684-9600 Fax (432) 684-9608

ANALYSIS REQUESTED: _____
 Lab use only Due Date: _____
 Temp. of coolers when received (C°): _____
 Page 1 of 1

NOTES: Handwritten notes regarding sample collection and analysis.

Cell # 214-517-7056



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: CR

Client Name: TERRACON CONSULTANTS, INC.

Client Project Name: BALLINGER SEEP

ClientProject #: 94057272

P.O. No.:

Courier/No.:

Lab Project ID: Q072006A

Date Logged: 07/20/06

Date Received: 07/19/06

Time Received: 13:00

Report Date: 07/20/2006 9:24:24

Send Report To:

MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS TX 75247

CASE	SDG	Lab Sample ID	Client Sample ID	No. Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
		7932.001	MW-1	1	SOIL	07/17/06	15:25	7932A	BTEX-8021 TPH1005	07/26/06	
		7932.002	MW-1 DUP	1	SOIL	07/17/06	15:25	7932A	BTEX-8021 TPH1005	07/26/06	
		7932.003	MW-2	1	SOIL	07/17/06	18:00	7932A	BTEX-8021 TPH1005	07/26/06	
		7932.004	MW-3	3	SOIL	07/18/06	14:45	7932A	BTEX-8021 TPH1005	07/26/06	MS/MSD

Instructions To Lab:

TRRP

TPH1006 POSSIBLE - PENDING TPH1005

Lab Approval

Client Approval



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: MW-1
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7932.001
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: TNRCC-1005
DATE SAMPLED	: 07/17/2006	DATE RECEIVED	: 07/19/2006
SAMPLE MATRIX	: SOIL	PRINTED ON	: 08/15/2006 15:12

% MOISTURE	:	ANALYST	: JL
DATE ANALYZED	: 07/22/06	DATE PREPPED	: 07/21/06
DILUTION	: 1	EXTRACT VOLUME	: 10 ML
INSTRUMENT FILE	: B13475	INSTRUMENT ID	: B-5890
SAMPLE SIZE	: 10 G	TIME ANALYZED	: 07:35

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
TPH- (>nC12-nC28)	20.0	MG/KG	ND	MG/KG	
TPH- (>nC28-nC35)	20.0	MG/KG	ND	MG/KG	
TPH- (nC6-nC12)	20.0	MG/KG	ND	MG/KG	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
1-Chlorooctane	50 MG/KG	70 - 130	95
o-Terphenyl	50 MG/KG	70 - 130	79



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Page 1 of 1

LABORATORY REPORT

TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-1 DUP
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7932.002
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/17/2006 DATE RECEIVED : 07/19/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:12

% MOISTURE : ANALYST : JL
DATE ANALYZED : 07/22/06 DATE PREPPED : 07/21/06
DILUTION : 1 EXTRACT VOLUME : 10 ML
INSTRUMENT FILE : B13476 INSTRUMENT ID : B-5890
SAMPLE SIZE : 10 G TIME ANALYZED : 08:23

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH- (>nC12-nC28)	20.0	MG/KG	ND	MG/KG
TPH- (>nC28-nC35)	20.0	MG/KG	ND	MG/KG
TPH- (nC6-nC12)	20.0	MG/KG	ND	MG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
1-Chlorooctane	50 MG/KG	70 - 130	103
o-Terphenyl	50 MG/KG	70 - 130	86



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LABORATORY REPORT

TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-2
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7932.003
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/17/2006 DATE RECEIVED : 07/19/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:12

% MOISTURE : ANALYST : JL
DATE ANALYZED : 07/22/06 DATE PREPPED : 07/21/06
DILUTION : 1 EXTRACT VOLUME : 10 ML
INSTRUMENT FILE : B13477 INSTRUMENT ID : B-5890
SAMPLE SIZE : 10 G TIME ANALYZED : 09:10

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
TPH- (>nC12-nC28)	20.0	MG/KG	ND	MG/KG	
TPH- (>nC28-nC35)	20.0	MG/KG	ND	MG/KG	
TPH- (nC6-nC12)	20.0	MG/KG	ND	MG/KG	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
1-Chlorooctane	50 MG/KG	70 - 130	89
o-Terphenyl	50 MG/KG	70 - 130	73



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LABORATORY REPORT

TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-3
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7932.004
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/18/2006 DATE RECEIVED : 07/19/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:12

% MOISTURE : ANALYST : JL
DATE ANALYZED : 07/22/06 DATE PREPPED : 07/21/06
DILUTION : 1 EXTRACT VOLUME : 10 ML
INSTRUMENT FILE : B13478 INSTRUMENT ID : B-5890
SAMPLE SIZE : 10 G TIME ANALYZED : 09:57

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH- (>nC12-nC28)	20.0	MG/KG	ND	MG/KG
TPH- (>nC28-nC35)	20.0	MG/KG	ND	MG/KG
TPH- (nC6-nC12)	20.0	MG/KG	ND	MG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
1-Chlorooctane	50 MG/KG	70 - 130	113
o-Terphenyl	50 MG/KG	70 - 130	92



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME :	CLIENT SAMPLE ID :	Prep Blank
PROJECT NAME :	LAB SAMPLE ID :	TPHB567
PROJECT NUMBER :	METHOD REFERENCE :	TNRCC-1005
DATE SAMPLED :	DATE RECEIVED :	
SAMPLE MATRIX :	PRINTED ON :	08/15/2006 15:12

% MOISTURE :	ANALYST :	JL
DATE ANALYZED :	DATE PREPPED :	07/21/06
DILUTION :	EXTRACT VOLUME :	10 ML
INSTRUMENT FILE :	INSTRUMENT ID :	B-5890
SAMPLE SIZE :	TIME ANALYZED :	10:30

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
TPH- (>nC12-nC28)	20.0	MG/KG	ND	MG/KG	
TPH- (>nC28-nC35)	20.0	MG/KG	ND	MG/KG	
TPH- (nC6-nC12)	20.0	MG/KG	ND	MG/KG	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
1-Chlorooctane	50 MG/KG	70 - 130	105
o-Terphenyl	50 MG/KG	70 - 130	91



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MS/MSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/19/2006
PRINTED ON : 08/15/2006 15:12

SAMPLE MATRIX : SOIL

METHOD REFERENCE : TNRCC-1005

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7932.004
CLIENT SAMPLE ID : MW-3
DATE ANALYZED : 07/22/1906
INSTRUMENT FILE : B13478

MS SAMPLE ID : 7932.004MS
CLIENT SAMPLE ID : MW-3MS1
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : B13469

MSD SAMPLE ID : 7932.004MSD
CLIENT SAMPLE ID : MW-3MSD1
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : B13470

PARAMETER	UNITS	MS		MSD			MS		MSD		RPD	QC LIMIT
		ADDED	SPIKE	SAMPL	MS	MSD	RECOVERY	RECOVERY	RPD	REC.		
				CONC.	CONC.	CONC.	(%)	(%)				
TPH- (>nC12-nC28)	MG/KG	100	100	0	83.0	91.8	83	92	10.3	30	75 - 125	
TPH- (nC6-nC12)	MG/KG	100	100	0	102	112	102	112	9.3	30	75 - 125	

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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LCS/LCSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 15:12

SAMPLE MATRIX : SOLID

METHOD REFERENCE : TNRC-1005

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : TPHL567

LCSD SAMPLE ID : TPHL567D

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/21/1906

DATE ANALYZED : 07/21/1906

INSTRUMENT FILE : B13463

INSTRUMENT FILE : B13464

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)			LIMIT	REC.
TPH-(>nC12-nC28)	MG/KG	250	250	264	307	106	123	14.8	30	75	125
TPH-(nC6-nC12)	MG/KG	250	250	237	235	95	94	1.1	30	75	125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT

BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-1
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7932.001
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/17/2006 DATE RECEIVED : 07/19/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:57

% MOISTURE : ANALYST : SP
DATE ANALYZED : 07/28/06 DILUTION : 1
INSTRUMENT ID : F-6890 SAMPLE WEIGHT : 4.8 g
TIME ANALYZED : 18:22

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.2	UG/KG	ND	UG/KG
Ethylbenzene	5.2	UG/KG	ND	UG/KG
Toluene	5.2	UG/KG	ND	UG/KG
Xylene (total)	5.2	UG/KG	ND	UG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	52.1 UG/KG	70 - 130	99



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-1 DUP
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7932.002
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/17/2006 DATE RECEIVED : 07/19/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:57

% MOISTURE : ANALYST : SP
DATE ANALYZED : 07/28/06 DILUTION : 1
INSTRUMENT ID : F-6890 SAMPLE WEIGHT : 5.2 g
TIME ANALYZED : 18:52

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	4.8	UG/KG	ND	UG/KG
Ethylbenzene	4.8	UG/KG	ND	UG/KG
Toluene	4.8	UG/KG	ND	UG/KG
Xylene (total)	4.8	UG/KG	ND	UG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	48.1 UG/KG	70 - 130	94



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The Woodlands, TX 77380

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LABORATORY REPORT

BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-2
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7932.003
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/17/2006 DATE RECEIVED : 07/19/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:57

% MOISTURE : ANALYST : SP
DATE ANALYZED : 07/28/06 DILUTION : 1
INSTRUMENT ID : F-6890 SAMPLE WEIGHT : 5.2 g
TIME ANALYZED : 19:22

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	4.8	UG/KG	ND	UG/KG
Ethylbenzene	4.8	UG/KG	ND	UG/KG
Toluene	4.8	UG/KG	ND	UG/KG
Xylene (total)	4.8	UG/KG	ND	UG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	48.1 UG/KG	70 - 130	100



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Page 1 of 1

LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-3
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7932.004
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/18/2006 DATE RECEIVED : 07/19/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:57

% MOISTURE : ANALYST : SP
DATE ANALYZED : 07/28/06 DILUTION : 1
INSTRUMENT ID : F-6890 SAMPLE WEIGHT : 5.23 g
TIME ANALYZED : 19:52

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	4.8	UG/KG	ND	UG/KG
Ethylbenzene	4.8	UG/KG	ND	UG/KG
Toluene	4.8	UG/KG	ND	UG/KG
Xylene (total)	4.8	UG/KG	ND	UG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	47.8 UG/KG	70 - 130	101



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LABORATORY REPORT

BTEX BY GC/PID

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : FVBLKL4
PROJECT NUMBER : METHOD REFERENCE : SW846-8021B
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : SOLID PRINTED ON : 08/15/2006 15:57

MOISTURE : ANALYST : SP
DATE ANALYZED : 07/28/06 DILUTION : 1
INSTRUMENT ID : F-6890 SAMPLE WEIGHT : 5 g
TIME ANALYZED : 15:40

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.0	UG/KG	ND	UG/KG
Ethylbenzene	5.0	UG/KG	ND	UG/KG
Toluene	5.0	UG/KG	ND	UG/KG
Xylene (total)	5.0	UG/KG	ND	UG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/KG	70 - 130	96



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MS/MSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/19/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 15:57
PROJECT NUMBER : 94057272

SAMPLE MATRIX : SOIL METHOD REFERENCE : SW846-8021B

SAMPLE MATRIX SPIKE DUPLICATE

SAMPLE ID : 7932.004 MS SAMPLE ID : 7932.004MS MSD SAMPLE ID : 7932.004MSD
CLIENT SAMPLE ID : MW-3 CLIENT SAMPLE ID : MW-3MS1 CLIENT SAMPLE ID : MW-3MSD1
DATE ANALYZED : 07/28/1906 DATE ANALYZED : 07/28/1906 DATE ANALYZED : 07/28/1906
INSTRUMENT FILE : F7091 INSTRUMENT FILE : F709C INSTRUMENT FILE : F7093

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	MS	MSD	RPD	QC LIMIT
		SPIKE	SPIKE		CONC.	CONC.	RECOVERY	RECOVERY		
		ADDED	ADDED	CONC.	CONC.	CONC.	(%)	(%)	REC.	REC.
Benzene	UG/KG	49	47	0	43	46	88	98	10.8	25 70 - 130
Ethylbenzene	UG/KG	49	47	0	41	46	84	98	15.4	25 70 - 130
Toluene	UG/KG	49	47	0	39	44	80	94	16.1	25 70 - 130
Xylene (total)	UG/KG	150	140	0	120	130	80	93	15.0	25 70 - 130

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits
Spike Recovery : 0 out of 8 outside limits



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LCS/LCSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 15:57

SAMPLE MATRIX : SOLID

METHOD REFERENCE : SW846-8011B

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : FVLCSL4

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/28/1906

DATE ANALYZED :

INSTRUMENT FILE : F7084

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
		VALUE	VALUE	VALUE	VALUE	(%)	(%)			
Benzene	UG/KG	50		56		112			25	70 - 130
Ethylbenzene	UG/KG	50		54		108			25	70 - 130
Toluene	UG/KG	50		50		100			25	70 - 130
Xylene (total)	UG/KG	150		170		113			25	70 - 130

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits

Spike Recovery : 0 out of 4 outside limits



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1544 Sawdust Road, Suite
The Woodlands, TX 77380
(281) 292-5277
(Fax) (281) 292-2481

END OF REPORT



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380
(281)292-5277
FAX: (281)292-2481

August 15, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

REFERENCE:

Project.....: BALLINGER SEEP
Project Number.....: 94057272
Lab Episode Number.....: 7940
Date Received.....: 07/20/2006

Dear MAX MAJESKO:

Enclosed is the analytical Report for the project referenced above. The following sample(s) are included in the report.

SEEP-1 SW-TRIB1 SW-TRIB2 SW-TRIB2 DUP
TRIP BLANK

All the holding times were met for the tests performed on these samples. Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting A4 SCIENTIFIC for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,


Reddy Pakanati
Laboratory Manager



www.a4scientific.com

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380
(281) 292-5277
(Fax): (281) 292-2481

ANALYTICAL REPORT

CLIENT PROJECT.....: BALLINGER SEEP
CLIENT PROJECT NUMBER....: 94057272

Prepared For:

TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

ATTENTION: MAX MAJESKO

Date: 08/15/2006

Signature

LAB EPISODE NUMBER: 7940
Date Received.....: 07/20/2006
Lab Project ID.....: Q072006A

Reddy Pakanati
Laboratory Manager
(281) 292-5277
pakanati@a4scientific.com

Terracon
 Consulting Engineers & Scientists

Office Location: Dallas

Laboratory: A-4, 2017-A
 Address: The Woodlands, TX

Contact: Chris Fisher
 Phone: 817 210 5077

Project Manager: Max Morige
 Sampler's Name: Yok Morgan

PO/ISO #: _____
 Sampler's Signature: _____

Matrix	Date	Time	Project Name			No/Type of Containers			VOA	AG 1 L	250 ml	PIO	Lab Sample ID (Lab Use Only)
			C	G	I	D	S	F					
W	7-17-06	1510	X					6	1		3		
W		1535	X					6	1		3		
W		1535	X					6	1		3		
W		1535	X					6	1		3		
W		1630	X					6	1		3		
W		1630	X					6	1		3		
W								1					

Identifying Marks of Sample(s):
 Spec 1
 SW-Tab 1
 SW-Tab 1 MS
 SW-Tab 1 MS
 SW-Tab 2
 SW-Tab 2 MP
 Trip Blank

Turn around time: Normal 25% Rush 50% Rush 100% Rush

Relinquished by (Signature): Yok Morgan Date: 7-17-06 Time: 1900
 Received by (Signature): _____ Date: _____ Time: _____

Relinquished by (Signature): _____ Date: _____ Time: _____
 Received by (Signature): _____ Date: _____ Time: _____

Relinquished by (Signature): _____ Date: _____ Time: _____
 Received by (Signature): _____ Date: _____ Time: _____

Relinquished by (Signature): _____ Date: _____ Time: _____
 Received by (Signature): _____ Date: _____ Time: _____

Notes: 4:30 AM hand time
sample: 1st SW-Tab 1 MS & SW-Tab 2
MSD are reactive solids & not in spec
duplicate, respectively
100L & 50L to be analyzed 1000
regarding - do not have table

Lab use only
 Due Date: _____

Temp. of coolers when received (C°):
 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Page _____ of _____

SL - sludge O - Oil

C - Charcoal tube P/O - Plastic or other

W - Water S - Soil SD - Solid
 A/G - Amber / Or Glass 1 Liter L - Liquid 250 ml - Glass wide mouth

A - Air Bag
 Fort Worth Office
 2601 Gravel Drive
 Fort Worth, Texas 76118
 (817) 268-8600 Fax (817) 268-8602

Dallas Office
 8901 Carpenter Freeway, Suite 100
 Dallas, Texas 75247
 (214) 630-1010 Fax (214) 630-7070

Houston Office
 11555 Clay Road, Suite 100
 Houston, Texas 77043
 (713) 690-8989 Fax (713) 690-8787

Midland Office
 24 Smith Rd., # 261
 Midland, Texas 79705
 (432) 684-9600 Fax (432) 684-9608

Call - 917 305 2400



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: CR

Client Name: TERRACON CONSULTANTS, INC.

Client Project Name: BALLINGER SEEP

Client Project #: 94057272

P.O. No.:

Courier/No.:

Lab Project ID: Q072006A

Date Logged: 07/20/06

Date Received: 07/20/06

Time Received: 10:05

Report Date: 07/21/2006 9:14:12

Send Report To..

MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS
TX 75247

Case	SDG	Lab	Sample ID	Client Sample ID	No. Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
7940.001	SEEP-1				10	WATER	07/19/06	15:10	7940A	ALKALINITY, BICARB310.1 ALKALINITY, CARB310.1 BROMIDE_300 BTEX-8021 CHLORIDE_300 CONDUCTIVITY_120.1 MET_TOTAL_6010B_CA MET_TOTAL_6010B_K MET_TOTAL_6010B_MG MET_TOTAL_6010B_NA NITRATE_300 SULFATE_300 TDS_160.1 TPH1005	07/27/06	
7940.002	SW-TRIB1				30	WATER	07/19/06	15:35	7940A	ALKALINITY, BICARB310.1 ALKALINITY, CARB310.1 BROMIDE_300 BTEX-8021 CHLORIDE_300 CONDUCTIVITY_120.1 MET_TOTAL_6010B_CA MET_TOTAL_6010B_K	07/27/06	MS/MSD

Lab Approval

Client Approval



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: CR

Client Name: TERRACON CONSULTANTS, INC.

Client Project Name: BALLINGER SEEP

Client Project #: 94057272

P.O. No.:

Courier/No.:

Lab Project ID: Q072006A

Date Logged: 07/20/06

Date Received: 07/20/06

Time Received: 10:05

Report Date: 07/21/2006 9:14:13

Send Report To..

MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS
TX 75247

CASE	SDG	Lab Sample ID	Client Sample ID	No. Sample Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
7940.003	SW-TRIB2			10	WATER	07/19/06	16:30	7940A	MET_TOTAL_6010B_MG MET_TOTAL_6010B_NA NITRATE_300 SULFATE_300 TDS_160.1 TPH1005	07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06	
7940.004	SW-TRIB2 DUP			10	WATER	07/19/06	16:30	7940A	ALCALINITY,BICARB310.1 ALKALINITY,CARB310.1 BROMIDE_300 BTEX-8021 CHLORIDE_300 CONDUCTIVITY_120.1 MET_TOTAL_6010B_CA MET_TOTAL_6010B_K MET_TOTAL_6010B_MG MET_TOTAL_6010B_NA NITRATE_300 SULFATE_300 TDS_160.1 TPH1005	07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06	

Lab Approval

Client Approval



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: CR

Client Name: TERRACON CONSULTANTS, INC.

Client Project Name: BALLINGER SEEP

Client Project #: 94057272

P.O. No.:

Courier/No.:

Lab Project ID: Q072006A

Date Logged: 07/20/06

Date Received: 07/20/06

Time Received: 10:05

Report Date: 07/21/2006 9:14:13

Send Report To..

MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS TX 75247

CASE	SDG	Lab Sample ID	Client Sample ID	No. Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
		7940.005	TRIP BLANK	1	WATER				BTEX-8021	07/27/06	
									BROMIDE_300	07/27/06	
									CHLORIDE_300	07/27/06	
									CONDUCTIVITY_120.1	07/27/06	
									MET_TOTAL_6010B_CA	07/27/06	
									MET_TOTAL_6010B_K	07/27/06	
									MET_TOTAL_6010B_MG	07/27/06	
									MET_TOTAL_6010B_NA	07/27/06	
									NITRATE_300	07/27/06	
									SULFATE_300	07/27/06	
									TDS_160.1	07/27/06	
									TPH1005	07/27/06	
									BTEX-8021	07/27/06	

Instructions To Lab:

TRRP
NITRATE = 48 HR HT
TPH1006 PENDING TPH1005 RESULTS

Lab Approval

Client Approval



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : SEEP-1
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7940.001
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/19/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 9:59

ANALYST : SP DATE ANALYZED : 07/24/06
DILUTION : 1 INSTRUMENT ID : F-6890
PURGE VOLUME : 5 mL TIME ANALYZED : 10:17

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	125



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : SW-TRIB1
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7940.002
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/19/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 9:59

ANALYST : SP DATE ANALYZED : 07/24/06
DILUTION : 1 INSTRUMENT ID : F-6890
PURGE VOLUME : 5 mL TIME ANALYZED : 10:46

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	89



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : SW-TRIB2
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7940.003
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/19/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 9:59

ANALYST : SP DATE ANALYZED : 07/24/06
DILUTION : 1 INSTRUMENT ID : F-6890
PURGE VOLUME : 5 mL TIME ANALYZED : 12:13

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.0	UG/L	ND	UG/L
Ethylbenzene	5.0	UG/L	ND	UG/L
Toluene	5.0	UG/L	ND	UG/L
Xylene (total)	5.0	UG/L	ND	UG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	116



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : SW-TRIB2 DUP
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7940.004
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/19/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 9:59

ANALYST : SP DATE ANALYZED : 07/24/06
DILUTION : 1 INSTRUMENT ID : F-6890
PURGE VOLUME : 5 mL TIME ANALYZED : 12:43

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
Benzene	5.0 UG/L	ND	UG/L
Ethylbenzene	5.0 UG/L	ND	UG/L
Toluene	5.0 UG/L	ND	UG/L
Xylene (total)	5.0 UG/L	ND	UG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	113



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: TRIP BLANK
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7940.005
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: SW846-8021B
DATE SAMPLED	:	DATE RECEIVED	: 07/20/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 9:59

ANALYST	: SP	DATE ANALYZED	: 07/24/06
DILUTION	: 1	INSTRUMENT ID	: F-6890
PURGE VOLUME	: 5 mL	TIME ANALYZED	: 13:14

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	125



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME :		CLIENT SAMPLE ID :	Prep Blank
PROJECT NAME :		LAB SAMPLE ID :	FVBLKL3
PROJECT NUMBER :		METHOD REFERENCE :	SW846-8021B
DATE SAMPLED :		DATE RECEIVED :	
SAMPLE MATRIX :	LIQUID	PRINTED ON :	08/15/2006 9:59

ANALYST :	SP	DATE ANALYZED :	07/24/06
DILUTION :	1	INSTRUMENT ID :	F-6890
PURGE VOLUME :	5 mL	TIME ANALYZED :	09:19

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a, a, a-Trifluorotoluene	50 UG/L	75 - 125	91



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MS/MSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/10/2006
PRINTED ON : 08/18/2006 9:59

SAMPLE MATRIX : WATER

METHOD REFERENCE : SW846-8.11B

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.002
CLIENT SAMPLE ID : SW-TR1B1
DATE ANALYZED : 07/14/1906
INSTRUMENT FILE : F7044

MS SAMPLE ID : 7940.002MS
CLIENT SAMPLE ID : SW-TR1B1MS1
DATE ANALYZED : 07/14/1906
INSTRUMENT FILE : F7045

MSD SAMPLE ID : 7940.002MSD
CLIENT SAMPLE ID : SW-TR1B1MSD1
DATE ANALYZED : 07/14/1906
INSTRUMENT FILE : F7046

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT
		SPIKE	SPIKE	SAMPL	MS	MSD	RECOVERY	RECOVERY			
		ADDED	ADDED	CONC.	CONC.	CONC.	(%)	(%)	RPD	LIMIT	REC.
Benzene	UG/L	50	50	0	45	49	90	98	8.5	25	75 - 125
Ethylbenzene	UG/L	50	50	0	47	52	94	104	10.1	25	75 - 125
Toluene	UG/L	50	50	0	46	60	92	120	16.4	25	75 - 125
Xylene (total)	UG/L	150	150	0	140	150	93	100	7.3	25	75 - 125

* Indicate values outside of QC limits

RPD : 1 out of 4 outside limits
Spike Recovery : 0 out of 8 outside limits



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LCS/LCSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 9:59

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : FVLCSL3
CLIENT SAMPLE ID :
DATE ANALYZED : 07/24/2006
INSTRUMENT FILE : F7042

METHOD REFERENCE : SW846-9011B
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		RPD	LIMIT
Benzene	UG/L	50		51		102			25	75 - 125
Ethylbenzene	UG/L	50		51		102			25	75 - 125
Toluene	UG/L	50		54		108			25	75 - 125
Xylene (total)	UG/L	150		140		93			25	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 4 outside limits



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : SEEP-1
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7940.001
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/19/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 8:20

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13436
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 17:11

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH- (>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH- (>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH- (nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	96
1-Chlorooctane	5 UG/L	70 - 130	122



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : SW-TRIB1
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7940.002
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/19/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 8:20

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13428
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 10:18

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH- (>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH- (>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH- (nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	102
1-Chlorooctane	5 UG/L	70 - 130	125



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: SW-TRIB2
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7940.003
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: TNRCC-1005
DATE SAMPLED	: 07/19/2006	DATE RECEIVED	: 07/20/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 8:20

ANALYST	: JL	DATE ANALYZED	: 07/15/06
DATE PREPPED	: 07/15/06	DILUTION	: 1
EXTRACT VOLUME	: 3 ML	INSTRUMENT FILE	: B13420
INSTRUMENT ID	: B-5890	SAMPLE VOLUME	: 30 ML
TIME ANALYZED	: 19:33		

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH- (>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH- (>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH- (nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	92
1-Chlorooctane	5 UG/L	70 - 130	118



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: SW-TRIB2 DUP
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7940.004
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: TNRCC-1005
DATE SAMPLED	: 07/19/2006	DATE RECEIVED	: 07/20/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 8:20

ANALYST	: JL	DATE ANALYZED	: 07/16/06
DATE PREPPED	: 07/15/06	DILUTION	: 1
EXTRACT VOLUME	: 3 ML	INSTRUMENT FILE	: B13454
INSTRUMENT ID	: B-5890	SAMPLE VOLUME	: 30 ML
TIME ANALYZED	: 07:04		

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
TPH-(>nC12-nC28)	5.0	MG/L	ND	MG/L	
TPH-(>nC28-nC35)	5.0	MG/L	ND	MG/L	
TPH-(nC6-nC12)	5.0	MG/L	ND	MG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	84
1-Chlorooctane	5 UG/L	70 - 130	93



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : TPHB565
PROJECT NUMBER : METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : LIQUID PRINTED ON : 08/15/2006 8:20

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13426
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 05:18

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH-(>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH-(>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH-(nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	96
1-Chlorooctane	5 UG/L	70 - 130	116



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MS/MSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/10/2006
 PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 4:20
 PROJECT NUMBER : 94087272

SAMPLE MATRIX : WATER METHOD REFERENCE : TNRC-1005
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
 SAMPLE ID : 7940.000 MS SAMPLE ID : 7940.000MS MSD SAMPLE ID : 7940.000MSD
 CLIENT SAMPLE ID : SW-TRIB1 CLIENT SAMPLE ID : SW-TRIB1MS1 CLIENT SAMPLE ID : SW-TRIB1MSD1
 DATE ANALYZED : 07/15/1906 DATE ANALYZED : 07/15/1906 DATE ANALYZED : 07/15/1906
 INSTRUMENT FILE : B13429 INSTRUMENT FILE : B13429 INSTRUMENT FILE : B13430

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT
		SPIKE	SPIKE	SAMPL	MS	MSD	RECOVERY	RECOVERY	RPD		
TPH-(nC12-nC29)	MG/L	10.0	10.0	0	9.93	8.16	99	82	18.8	30	75 - 125
TPH-(nC6-nC12)	MG/L	10.0	10.0	0	10.4	9.97	104	100	3.9	30	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
 Spike Recovery : 0 out of 4 outside limits



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LCS/LCSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 09/15/2006 8:20

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : TP18166
CLIENT SAMPLE ID :
DATE ANALYZED : 07/15/1906
INSTRUMENT FILE : B13383

METHOD REFERENCE : TNECC-1005
LAB CONTROL SAMPLE INDICATE
LCSD SAMPLE ID : UNPLIRED
CLIENT SAMPLE ID :
DATE ANALYZED : 07/15/1906
INSTRUMENT FILE : B13394

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE VALUE	TRUE VALUE	FOUND VALUE	FOUND VALUE	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
TPH-(nC10-nC28)	MG/L	33.3	33.3	28.6	29.8	86	89	3.4	30	75 - 125
TPH-(nC6-nC12)	MG/L	33.3	33.3	26.9	25.2	81	76	6.4	30	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 8:10

PARAMETER: Alkalinity, Carbonate (as CaCO3)

CLIENT SAMPLE ID	SEEP-1	SW-TRIB1	SW-TRIB2	SW-TRIB2 DUP
SAMPLE ID	7940.001	7940.002	7940.003	7940.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/19/2006	07/19/2006	07/19/2006	07/19/2006
DATE RECEIVED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
METHOD REFERENCE	EPA-310.1	EPA-310.1	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2	2	2
RESULTS	ND	ND	ND	ND
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
QC BATCH ID	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A
LCS ID	ALKCLCS0721A	ALKCLCS0721A	ALKCLCS0721A	ALKCLCS0721A
LCSD ID				
DUP ID				



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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 8:10

PARAMETER: Alkalinity, Carbonate (as CaCO3)

CLIENT SAMPLE ID	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	ALKCBLK0721A	ALKCLCS0721A
SAMPLE MATRIX		
DATE SAMPLED		
DATE RECEIVED		
METHOD REFERENCE	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2
RESULTS	ND	53
UNITS	MG/L	MG/L
QUALIFIER		
ANALYST	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06
DILUTION	1	1
QC BATCH ID	ALKCBLK0721A	ALKCBLK0721A
PRE-PREP BLANK ID		
PREP BLANK ID	ALKCBLK0721A	ALKCBLK0721A
LCS ID		
LCSD ID		
DUP ID		



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LCS/LCSD SUMMARY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 9:10

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : ALKCLCS0721A
CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE :

METHOD REFERENCE : EPA-810.1
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS
		TRUE VALUE	TRUE VALUE	FOUND VALUE	FOUND VALUE	RECOVERY (%)	RECOVERY (%)		
Alkalinity, Carbonate (as CaCO3)	MG/L	50		53		106			10 90 - 110

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 8:09

PARAMETER: Alkalinity, Bicarbonate (as CaCO₃)

CLIENT SAMPLE ID	SEEP-1	SW-TRIB1	SW-TRIB2	SW-TRIB2 DUP
SAMPLE ID	7940.001	7940.002	7940.003	7940.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/19/2006	07/19/2006	07/19/2006	07/19/2006
DATE RECEIVED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
METHOD REFERENCE	EPA-310.1	EPA-310.1	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2	2	2
RESULTS	2400	110	140	150
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
QC BATCH ID	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A
LCS ID	ALKBLCS0721A	ALKBLCS0721A	ALKBLCS0721A	ALKBLCS0721A
LCSD ID				
DUP ID				



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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 8:09

PARAMETER: Alkalinity, Bicarbonate (as CaCO3)

CLIENT SAMPLE ID	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	ALKBBLK0721A	ALKBLCS0721A
SAMPLE MATRIX		
DATE SAMPLED		
DATE RECEIVED		
METHOD REFERENCE	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2
RESULTS	ND	53
UNITS	MG/L	MG/L
QUALIFIER		
ANALYST	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06
DILUTION	1	1
QC BATCH ID	ALKBBLK0721A	ALKBBLK0721A
PRE-PREP BLANK ID		
PREP BLANK ID	ALKBBLK0721A	ALKBBLK0721A
LCS ID		
LCSD ID		
DUP ID		



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LCS/LCSD SUMMARY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 09/19/2006 9:09

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : EPA-810.1

LAB CONTROL SAMPLE :

LAB CONTROL SAMPLE DUPLICATE :

LCS SAMPLE ID : ALKBLCS0711A

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/11/2006

DATE ANALYZED :

INSTRUMENT FILE :

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		LIMIT	REC.
Alkalinity, Bicarbonate (as CaCO3	MG/L	50.0		53.0		106			20	90 - 110

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:33

PARAMETER: Conductivity

CLIENT SAMPLE ID	SEEP-1	SW-TRIB1	SW-TRIB2	SW-TRIB2 DUP
SAMPLE ID	7940.001	7940.002	7940.003	7940.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/19/2006	07/19/2006	07/19/2006	07/19/2006
DATE RECEIVED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
METHOD REFERENCE	EPA-120.1	EPA-120.1	EPA-120.1	EPA-120.1
QUANTITATION LIMIT	1	1	1	1
RESULTS	4300	7400	7700	7700
UNITS	UMHO/CM	UMHO/CM	UMHO/CM	UMHO/CM
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
TIME ANALYZED	16:00	16:00	16:00	16:00
QC BATCH ID	CONBLK0721A	CONBLK0721A	CONBLK0721A	CONBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	CONBLK0721A	CONBLK0721A	CONBLK0721A	CONBLK0721A
LCS ID	CONLCS0721A	CONLCS0721A	CONLCS0721A	CONLCS0721A
LCSD ID				
DUP ID				



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LABORATORY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:33

PARAMETER: Conductivity

CLIENT SAMPLE ID	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	CONBLK0721A	CONLCS0721A
SAMPLE MATRIX		
DATE SAMPLED		
DATE RECEIVED		
METHOD REFERENCE	EPA-120.1	EPA-120.1
QUANTITATION LIMIT	1	1
RESULTS	ND	973
UNITS	UMHO/CM	UMHO/CM
QUALIFIER		
ANALYST	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06
TIME ANALYZED	16:00	16:00
QC BATCH ID	CONBLK0721A	CONBLK0721A
PRE-PREP BLANK ID		
PREP BLANK ID	CONBLK0721A	CONBLK0721A
LCS ID		
LCSD ID		
DUP ID		



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LCS/LCSD SUMMARY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 7:57

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : EPA-100.1

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : CONLCS0721A

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/21/1906

DATE ANALYZED :

INSTRUMENT FILE :

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Conductivity	UMHO/	1000		973		97			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits

Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:27

PARAMETER: Total Dissolved Solids

CLIENT SAMPLE ID	SEEP-1	SW-TRIB1	SW-TRIB2	SW-TRIB2 DUP
SAMPLE ID	7940.001	7940.002	7940.003	7940.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/19/2006	07/19/2006	07/19/2006	07/19/2006
DATE RECEIVED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
METHOD REFERENCE	EPA-160.1	EPA-160.1	EPA-160.1	EPA-160.1
QUANTITATION LIMIT	5	5	5	5
RESULTS	2430	7410	4840	4840
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	LOH	LOH	LOH	LOH
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
QC BATCH ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
LCS ID	TDSLCS0721A	TDSLCS0721A	TDSLCS0721A	TDSLCS0721A
LCSD ID				
DUP ID	7940.001DUP1	7940.001DUP1	7940.001DUP1	7940.001DUP1



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LABORATORY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:27

PARAMETER: Total Dissolved Solids

CLIENT SAMPLE ID	SEEP-1DUP	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	7940.001DUP1	TDSBLK0721A	TDSLCS0721A
SAMPLE MATRIX	WATER		
DATE SAMPLED	07/19/2006		
DATE RECEIVED	07/20/2006		
METHOD REFERENCE	EPA-160.1	EPA-160.1	EPA-160.1
QUANTITATION LIMIT	5	5	5
RESULTS	2360	ND	272
UNITS	MG/L	MG/L	MG/L
QUALIFIER			
ANALYST	LOH	LOH	LOH
DATE ANALYZED	07/21/06	07/21/06	07/21/06
QC BATCH ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
PRE-PREP BLANK ID			
PREP BLANK ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
LCS ID	TDSLCS0721A		
LCSD ID			
DUP ID	7940.001DUP1		



**DUPLICATE SUMMARY REPORT
TOTAL DISSOLVED SOLIDS (TDS)**

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94097272

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006

SAMPLE MATRIX : WATER

METHGD REFERENCE : EPA-160.1

SAMPLE

SAMPLE DUPLICATE

SAMPLE ID :
CLIENT SAMPLE ID : SEEP-1
DATE ANALYZED : 07/21/1906
GC FILE ID :

DUP SAMPLE ID : 7940.001DUP1
CLIENT SAMPLE ID : SEEP-1DUP
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE :

COMPOUND	SAMPLE CONC.	DUP. CONC.	UNITS	RPD	RPD LIMITS
Total Dissolved Solids	2430	2360	MG/L	2.9	20

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits



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LCS/LCSD SUMMARY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME :
 PROJECT NAME :
 PROJECT NUMBER :

DATE RECEIVED :
 PRINTED ON : 08/15/2006 7:27

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
 LCS SAMPLE ID : TSLCS0701A
 CLIENT SAMPLE ID :
 DATE ANALYZED : 07/21/1906
 INSTRUMENT FILE :

METHOD REFERENCE : EPA-160.1
LAB CONTROL SAMPLE DUPLICATE
 LCSD SAMPLE ID :
 CLIENT SAMPLE ID :
 DATE ANALYZED :
 INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Total Dissolved Solids	MG/L	300		272		91			80	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
 Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:01

PARAMETER: Nitrate (as N)

CLIENT SAMPLE ID	SEEP-1	SW-TRIB1	SW-TRIB2	SW-TRIB2 DUP
SAMPLE ID	7940.001	7940.002	7940.003	7940.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/19/2006	07/19/2006	07/19/2006	07/19/2006
DATE RECEIVED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
METHOD REFERENCE	EPA-300	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5	0.5
RESULTS	ND	ND	ND	ND
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	BT	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	ICLCS0721A	ICLCS0721A
LCSD ID				
MS ID	7940.001MS	7940.001MS	7940.001MS	7940.001MS
MSD ID	7940.001MSD	7940.001MSD	7940.001MSD	7940.001MSD
DUP ID				



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LABORATORY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:01

PARAMETER: Nitrate (as N)

CLIENT SAMPLE ID PREP BLANK
SAMPLE ID ICBLK0721A
SAMPLE MATRIX
DATE SAMPLED
DATE RECEIVED

METHOD REFERENCE EPA-300
QUANTITATION LIMIT 0.5
RESULTS ND
UNITS MG/L
QUALIFIER

ANALYST BT
DATE ANALYZED 07/21/06
DILUTION 1
INSTRUMENT FILE ANIONS296
INSTRUMENT ID A-DX120

QC BATCH ID ICBLK0721A
PRE-PREP BLANK ID
PREP BLANK ID ICBLK0721A
LCS ID
LCSD ID
MS ID
MSD ID
DUP ID



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MS/MSD SUMMARY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
 PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 19:01
 PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : EPA-300
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
 SAMPLE ID : 7940.001 MS SAMPLE ID : 7940.001MS MSD SAMPLE ID : 7940.001MSD
 CLIENT SAMPLE ID : SEEP-1 CLIENT SAMPLE ID : SEEP-1MS CLIENT SAMPLE ID : SEEP-1MSD
 DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906
 INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL		MS	MSD	RPD	QC LIMIT
		SPIKE	SPIKE	MS	MSD	RECOVERY	RECOVERY		
		ADDED	ADDED	CONC.	CONC.	CONC.	(%)	(%)	REC.
Nitrate (as N)	MG/L	10	10	0	8.6	8.7	86	87	1.2 20 80-120

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
 Spike Recovery : 0 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/15/2006 18:01
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : 1CLCS0721A LCSD SAMPLE ID :
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906 DATE ANALYZED :
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Nitrate (as N)	MG/L	10		8.5		85			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:01

PARAMETER: Sulfate (as SO4)

CLIENT SAMPLE ID	SEEP-1	SW-TRIB1	SW-TRIB2	SW-TRIB2 DUP
SAMPLE ID	7940.001	7940.002	7940.003	7940.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/19/2006	07/19/2006	07/19/2006	07/19/2006
DATE RECEIVED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
METHOD REFERENCE	EPA-300	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5	0.5
RESULTS	320	599	621	631
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	BT	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	ICLCS0721A	ICLCS0721A
LCSD ID				
MS ID	7940.001MS	7940.001MS	7940.001MS	7940.001MS
MSD ID	7940.001MSD	7940.001MSD	7940.001MSD	7940.001MSD
DUP ID				



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LABORATORY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:01

PARAMETER: Sulfate (as SO4)

CLIENT SAMPLE ID PREP BLANK
SAMPLE ID ICBLK0721A
SAMPLE MATRIX
DATE SAMPLED
DATE RECEIVED

METHOD REFERENCE EPA-300
QUANTITATION LIMIT 0.5
RESULTS ND
UNITS MG/L
QUALIFIER

ANALYST BT
DATE ANALYZED 07/21/06
DILUTION 1
INSTRUMENT FILE ANIONS296
INSTRUMENT ID A-DX120

QC BATCH ID ICBLK0721A
PRE-PREP BLANK ID
PREP BLANK ID ICBLK0721A
LCS ID
LCSD ID
MS ID
MSD ID
DUP ID



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MS/MSD SUMMARY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006 18:01

SAMPLE MATRIX : WATER

METHOD REFERENCE : EPA-300

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.001
CLIENT SAMPLE ID : SEEP-1
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID : SEEP-1MS
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	MS	MSD	RPD	QC LIMIT	
		SPIKE	SPIKE		CONC.	CONC.	RECOVERY	RECOVERY			RPD
Sulfate (as SO4)	MG/L	10.0	10.0	300	260	264	0 *	-560 *	200.0 *	20	80 - 120

* Indicate values outside of QC limits

RPD : 1 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 18:01

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : EPA-300

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : ICLCS0721A

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/21/1906

DATE ANALYZED :

INSTRUMENT FILE : ANIONS296

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
		VALUE	VALUE	VALUE	VALUE	(%)	(%)			
Sulfate (as SO4)	MG/L	10.0		10.7		107			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:00

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID	SEEP-1	SW-TRIB1	SW-TRIB2	SW-TRIB2 DUP
SAMPLE ID	7940.001	7940.002	7940.003	7940.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/19/2006	07/19/2006	07/19/2006	07/19/2006
DATE RECEIVED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
METHOD REFERENCE	EPA-300	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5	0.5
RESULTS	1060	1520	1570	1580
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	BT	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	ICLCS0721A	ICLCS0721A
LCSD ID				
MS ID	7940.001MS	7940.001MS	7940.001MS	7940.001MS
MSD ID	7940.001MSD	7940.001MSD	7940.001MSD	7940.001MSD
DUP ID				



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LCS/LCSD SUMMARY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 18:00

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : ICLCS0721A
CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Chloride as Cl	MG/L	10.0		10.5		105			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:00

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID PREP BLANK
SAMPLE ID ICBLK0721A
SAMPLE MATRIX
DATE SAMPLED
DATE RECEIVED

METHOD REFERENCE EPA-300
QUANTITATION LIMIT 0.5
RESULTS ND
UNITS MG/L
QUALIFIER

ANALYST BT
DATE ANALYZED 07/21/06
DILUTION 1
INSTRUMENT FILE ANIONS296
INSTRUMENT ID A-DX120

QC BATCH ID ICBLK0721A
PRE-PREP BLANK ID
PREP BLANK ID ICBLK0721A
LCS ID
LCSD ID
MS ID
MSD ID
DUP ID



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MS/MSD SUMMARY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:00
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : EPA-300

<u>SAMPLE</u>	<u>MATRIX SPIKE</u>	<u>MATRIX SPIKE DUPLICATE</u>
SAMPLE ID : 7940.001	MS SAMPLE ID : 7940.001MS	MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1	CLIENT SAMPLE ID : SEEP-1MS	CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906	DATE ANALYZED : 07/21/1906	DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296	INSTRUMENT FILE : ANIONS296	INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL		MS	MSD	RPD	QC LIMIT		
		ADDED	ADDED	CONC.	CONC.	RECOVERY (%)	RECOVERY (%)			LIMIT	REC.
Chloride as Cl	MG/L	10.0	10.0	1060	957	900	0 *	-1600 *	200.0 *	20	80 - 120

* Indicate values outside of QC limits

RPD : 1 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



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LABORATORY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 17:59

PARAMETER: Bromide

	SEEP-1	SW-TRIB1	SW-TRIB2	SW-TRIB2 DUP
CLIENT SAMPLE ID	SEEP-1	SW-TRIB1	SW-TRIB2	SW-TRIB2 DUP
SAMPLE ID	7940.001	7940.002	7940.003	7940.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/19/2006	07/19/2006	07/19/2006	07/19/2006
DATE RECEIVED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
METHOD REFERENCE	EPA-300	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	2	2	2	2
RESULTS	ND	ND	ND	ND
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	BT	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	DX120	DX120	DX120	DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	ICLCS0721A	ICLCS0721A
LCSD ID				
MS ID	7940.001MS	7940.001MS	7940.001MS	7940.001MS
MSD ID	7940.001MSD	7940.001MSD	7940.001MSD	7940.001MSD
DUP ID				



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 17:59

PARAMETER: Bromide

CLIENT SAMPLE ID	PREP BLANK
SAMPLE ID	ICBLK0721A
SAMPLE MATRIX	
DATE SAMPLED	
DATE RECEIVED	
METHOD REFERENCE	EPA-300
QUANTITATION LIMIT	2
RESULTS	ND
UNITS	MG/L
QUALIFIER	
ANALYST	BT
DATE ANALYZED	07/21/06
DILUTION	1
INSTRUMENT FILE	ANIONS296
INSTRUMENT ID	DX120
QC BATCH ID	ICBLK0721A
PRE-PREP BLANK ID	
PREP BLANK ID	ICBLK0721A
LCS ID	
LCSD ID	
MS ID	
MSD ID	
DUP ID	



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The Woodlands, TX 77380

MS/MSD SUMMARY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/10/2006
PRINTED ON : 08/15/2006 17:59

SAMPLE MATRIX : WATER

METHOD REFERENCE : EPA-300

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.001
CLIENT SAMPLE ID : SEEP-1
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID : SEEP-1MS
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT	
		ADDED	ADDED	SAMPL	MS	MSD	RECOVERY	RECOVERY	RPD		LIMIT	REC.
Bromide	MG/L	10.0	10.0	0	11.1	11.6	111	116	4.4	20	80 - 120	

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
Spike Recovery : 0 out of 2 outside limits



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The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 17:59

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : ICLCS0721A
CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		LIMIT	REC.
Bromide	MG/L	10.0		8.60		88			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



The Woodlands, TX 77380
1544 Sawdust Road, Suite 505

LABORATORY REPORT
TOTAL METALS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: SEEP-1
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7940.001
PROJECT NUMBER	: 94057272	DATE RECEIVED	: 07/20/2006
DATE SAMPLED	: 07/19/2006	PRINTED ON	: 08/15/2006 18:46
SAMPLE MATRIX	: WATER	% MOISTURE	:

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	QUANTITATION LIMIT	RESULT	Q	ANALYST
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	130 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	38 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	13 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	1000 MG/L		BT



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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: SW-TRIB1
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7940.002
PROJECT NUMBER	: 94057272	DATE RECEIVED	: 07/20/2006
DATE SAMPLED	: 07/19/2006	PRINTED ON	: 08/15/2006 18:46
SAMPLE MATRIX	: WATER	% MOISTURE	:

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	QUANTITATION LIMIT	RESULT	Q	ANALYST
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	250 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	81 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	15 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	1800 MG/L		BT



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LABORATORY REPORT

TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : SW-TRIB2
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7940.003
PROJECT NUMBER : 94057272 DATE RECEIVED : 07/20/2006
DATE SAMPLED : 07/19/2006 PRINTED ON : 08/15/2006 18:46
SAMPLE MATRIX : WATER % MOISTURE :

ANALYTE	METHOD	DATE	DATE	DILU-	QUANTITATION	RESULT	Q	ANA-
		PREPARED	ANALYZED					
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	260 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	88 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	17 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	1900 MG/L		BT



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LABORATORY REPORT

TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : SW-TRIB2 DUP
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7940.004
PROJECT NUMBER : 94057272 DATE RECEIVED : 07/20/2006
DATE SAMPLED : 07/19/2006 PRINTED ON : 08/15/2006 18:46
SAMPLE MATRIX : WATER % MOISTURE :

ANALYTE	METHOD	DATE	DATE	DILU-	QUANTITATION	RESULT	Q	ANA-
		PREPARED	ANALYZED					
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	260 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	87 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	16 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	1900 MG/L		BT



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LABORATORY REPORT

TOTAL METALS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : ICPB671
PROJECT NUMBER : DATE RECEIVED :
DATE SAMPLED : PRINTED ON : 08/15/2006 18:46
SAMPLE MATRIX : LIQUID % MOISTURE :

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	QUANTITATION LIMIT	RESULT	Q	ANALYST
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	ND MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	ND MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	ND MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	ND MG/L		BT



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LCS/LCSD SUMMARY REPORT
TOTAL METALS

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 19:46

SAMPLE MATRIX : LIQUID

LAB CONTROL SAMPLE

LCS SAMPLE ID : 1CPLCS671
CLIENT SAMPLE ID :

LAB CONTROL SAMPLE DUPLICATE

LCSD SAMPLE ID : 1CPLCS671D
CLIENT SAMPLE ID :

COMPOUND	METHOD REFERENCE	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS
			TRUE VALUE	TRUE VALUE	FOUND VALUE	FOUND VALUE	RECOVERY (%)	RECOVERY (%)		
Calcium, Total	SW846-6010B	MG/L	20.0	20.0	20.0	20.3	100	102	2.0	30 80 - 120
Magnesium, Total	SW846-6010B	MG/L	20.0	20.0	20.0	20.4	100	102	2.0	30 80 - 120
Potassium, Total	SW846-6010B	MG/L	20.0	20.0	19.9	19.9	100	100	0.0	30 80 - 120
Sodium, Total	SW846-6010B	MG/L	20.0	20.0	22.6	21.8	113	109	3.6	30 80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits
Spike Recovery : 0 out of 8 outside limits



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MS/MSD SUMMARY REPORT

TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057292

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006 19:46

SAMPLE MATRIX : WATER

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.001
CLIENT SAMPLE ID: SEEP-1

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID: SEEP-1MS

MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID: SEEP-1MSD

COMPOUND	METHOD REFERENCE	UNITS	MS		SAMPL CONC.	MS CONC.	MSD CONC.	MS		RPD	QC LIMIT REC.
			SPIKE ADDED	SPIKE ADDED				RECOVER (%)	RECOVER (%)		
Calcium, Total	SW846-6010B	MG/L	20	20	130	150	150	100	100	0.0	0 75 - 125
Magnesium, Total	SW846-6010B	MG/L	20.0	20.0	38	56.6	57.0	93	95	2.1	30 75 - 125
Potassium, Total	SW846-6010B	MG/L	20	20	13	34	34	105	105	0.0	0 75 - 125
Sodium, Total	SW846-6010B	MG/L	20	20	1000	1000	1000	0	0	0.0	0 75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits

Spike Recovery : 2 out of 8 outside limits

A4Scientific

www.a4scientific.com

1544 Sawdust Road, Suite
The Woodlands, TX 77380
(281) 292-5277
(Fax) (281) 292-2481

**END
OF
REPORT**



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380
(281)292-5277
FAX: (281)292-2481

August 15, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

REFERENCE:

Project.....: BALLINGER SEEP
Project Number.....: 94057272
Lab Episode Number.....: 7941
Date Received.....: 07/20/2006

Dear MAX MAJESKO:

Enclosed is the analytical Report for the project referenced above. The following sample(s) are included in the report.

MW-5 (4-5) MW-5 (11) EQUIPMENT BLANK

All the holding times were met for the tests performed on these samples. Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting A4 SCIENTIFIC for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,

Reddy Pakanati
Laboratory Manager

SAMPLE LOG-IN CHECKLIST/DISCREPANCY REPORT

EPISODE #: 7941 DATE/REC'D: 7/20/06 @ 1005 TEMP & ID: 1) 4.5° # _____
 CLIENT NAME: _____ TIME: Terracon Dallas 2) _____ # _____
 PROJECT NAME: Dallinger seep 3) _____ # _____
 PROJECT NUMBER: 940 572 72 4) _____ # _____
 # 1 AQUEOUS, # 2 SOIL SAMPLES 5) _____ # _____
 COURIER/AIRBILL # Fedex 8573 53375032 6) _____ # _____

SAMPLE CONTAINER SEALS: present absent intact _____ broken _____
 COOLER CUSTODY SEALS: present absent intact _____ broken _____ NAME & DATE: 7/19/06 Y. Morgan
 HOW MANY AND WHERE: 1 on outside of cooler

	YES	NO
Were samples screened for radioactivity?	X	
Chain-of-custody present?	X	
Custody documents: Sealed in a plastic bag?	X	
Signed and dated by field personnel	X	
Filled out properly in indelible ink?	X	
Signed and dated by log-in personnel?	X	
Container Condition: Each containers sealed in a separate plastic bag?	X	
Labels complete (ID, date, time, signature, preservative, etc.)?	X	
Labels agree with chain-of-custody?		X
Received without leakage or breakage? If no, list: <u>Equipment blank</u>	X	
Correct quantity indicated on chain-of-custody?	X	
Sample Integrity: Correct containers used for the test indicated? If no, list:	X	
Correct preservatives added to the samples? If no, list:	X	
Sufficient sample amount sent for the tests indicated? If no, list:	X	
VOA vials filled completely? If no, list:	X	
Aqueous volatiles samples preserved? If no, list:	X	

Discrepancy Report
 Discrepancies to be discussed with the client? The Equipment Blank sample has 6 VOA bottles on the C-O-C but 2 were broken in shipping.
 Project Manager's recommendations? The lab can run the tests w/ the sample volume provided. Any further analysis may need more volume than is left.
 Who was notified? _____ By whom? CR
 Date: 7/20/06 York Morgan
 Client's comments: Please is
 Corrective actions carried out? Samples are run as they are w/ the volume provided.

COMMENTS: _____
 For those short holding time and fast turn-around parameters, has a Rush Notification sheet been issued to the lab? _____

LOG-IN BY: Chad Roberts DATE: 7/20/06
A4 Scientific, Inc.



Office Location Dallas

Laboratory: A-4
 Address: 7000 Katy, TX
 Contact: Clay Roberts
 Phone: 972.502.5077
 PO/SO #:

Project Manager Frank H. J. Ke

Sampler's Name Mark Morgan
Next Project Site
 Sampler's Signature [Signature]
 Date 7/17/06

Proj. No.	Matrix	Date	Time	C o m p	G i a b	Identifying Marks of Sample(s)	No/Type of Containers				PIO
							Depth	Depth	VOA	AG 1 L.	
<u>9405 D73</u>	<u>S</u>	<u>7-18-06</u>	<u>1615</u>	<u>X</u>	<u>X</u>	<u>MW-5</u>	<u>4</u>	<u>5</u>	<u>1</u>	<u>1</u>	
	<u>S</u>	<u>7-18-06</u>	<u>1630</u>	<u>X</u>	<u>X</u>	<u>MW-5</u>	<u>11</u>	<u>11</u>	<u>1</u>	<u>1</u>	
	<u>W</u>	<u>7-19-06</u>	<u>1245</u>	<u>X</u>	<u>X</u>	<u>Equipment Blank</u>			<u>6</u>		
						<u>None</u>					

ANALYSIS REQUESTED

Bitter Root
TPH (Leads)

Lab use only
 Due Date: _____
 Temp. of coolers when received (C°):
 1 _____ 2 _____ 3 _____ 4 _____ 5 _____
 Page 1 of 1

Lab Sample ID (Lab Use Only)

Turn around time	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> 25% Rush	<input type="checkbox"/> 50% Rush	<input type="checkbox"/> 100% Rush	NOTES:
Relinquished by (Signature)	<u>[Signature]</u>	Date: <u>7-17-06</u>	Time: <u>11:00</u>	Received by: (Signature)	Date: _____ Time: _____
Relinquished by (Signature)	<u>[Signature]</u>	Date: _____	Time: _____	Received by: (Signature)	Date: _____ Time: _____
Relinquished by (Signature)	<u>[Signature]</u>	Date: _____	Time: _____	Received by: (Signature)	Date: _____ Time: _____
Relinquished by (Signature)	<u>[Signature]</u>	Date: _____	Time: _____	Received by: (Signature)	Date: <u>7/18/06</u> Time: <u>10:05</u>

Matrix Container: WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag O - Oil
VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

Houston Office: 11555 Clay Road, Suite 100, Houston, Texas 77043, (713) 690-8989
 Dallas Office: 8901 Carpenter Freeway, Suite 100, Dallas, Texas 75247, (214) 630-1010
 Fort Worth Office: 2601 Gravel Drive, Fort Worth, Texas 76118, (817) 268-8600
 Austin Office: 5307 Industrial Oaks Blvd. # 160, Austin, Texas 78735, (512) 442-1122
 Midland Office: 24 Smith Rd., # 261, Midland, Texas 79705, (432) 684-9600



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: CR
Client Name: TERRACON CONSULTANTS, INC.
Client Project Name: BALLINGER SEEP
ClientProject #: 94057272
P.O. No.:
Courier/No.:

Lab Project ID: Q072006A
Date Logged: 07/20/06
Date Received: 07/20/06
Time Received: 10:05

Report Date: 07/21/2006 9:14:10
Send Report To:
MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS
TX 75247

CASE	SDG	Lab	Sample ID	Client Sample ID	No. Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
			7941.001	MW-5 (4-5)	1	SOIL	07/18/06	16:15	7941A	BTEX-8021 TPH1005	07/27/06	
			7941.002	MW-5 (11)	1	SOIL	07/18/06	16:30	7941A	BTEX-8021 TPH1005	07/27/06	
			7941.003	EQUIPMENT BLANK	4	WATER	07/19/06	12:45	7941A	BTEX-8021 TPH1005	07/27/06	

Instructions To Lab:
TRRP
TPH1006 PENDING TPH1005 RESULTS

Lab Approval

Client Approval



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The Woodlands, TX 77380

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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-5 (4-5)
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7941.001
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/18/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:12

% MOISTURE : ANALYST : JL
DATE ANALYZED : 07/16/06 DATE PREPPED : 07/14/06
DILUTION : 1 EXTRACT VOLUME : 10 ML
INSTRUMENT FILE : B13447 INSTRUMENT ID : B-5890
SAMPLE SIZE : 10 G TIME ANALYZED : 01:38

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH- (>nC12-nC28)	20.0	MG/KG	ND	MG/KG
TPH- (>nC28-nC35)	20.0	MG/KG	ND	MG/KG
TPH- (nC6-nC12)	20.0	MG/KG	ND	MG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
1-Chlorooctane	50 MG/KG	70 - 130	107
o-Terphenyl	50 MG/KG	70 - 130	91



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-5 (11)
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7941.002
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/18/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:12

% MOISTURE : ANALYST : JL
DATE ANALYZED : 07/16/06 DATE PREPPED : 07/14/06
DILUTION : 1 EXTRACT VOLUME : 10 ML
INSTRUMENT FILE : B13450 INSTRUMENT ID : B-5890
SAMPLE SIZE : 10 G TIME ANALYZED : 03:53

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH- (>nC12-nC28)	20.0	MG/KG	ND	MG/KG
TPH- (>nC28-nC35)	20.0	MG/KG	ND	MG/KG
TPH- (nC6-nC12)	20.0	MG/KG	ND	MG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
1-Chlorooctane	50 MG/KG	70 - 130	105
o-Terphenyl	50 MG/KG	70 - 130	88



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LABORATORY REPORT

TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: EQUIPMENT BLANK
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7941.003
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: TNRCC-1005
DATE SAMPLED	: 07/19/2006	DATE RECEIVED	: 07/20/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 15:12

ANALYST	: JL	DATE ANALYZED	: 07/16/06
DATE PREPPED	: 07/15/06	DILUTION	: 1
EXTRACT VOLUME	: 3 ML	INSTRUMENT FILE	: B13446
INSTRUMENT ID	: B-5890	SAMPLE VOLUME	: 30 ML
TIME ANALYZED	: 00:55		

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH- (>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH- (>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH- (nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	154
1-Chlorooctane	5 UG/L	70 - 130	172



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : TPHB565
PROJECT NUMBER : METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : LIQUID PRINTED ON : 08/15/2006 15:12

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13426
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 05:18

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH-(>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH-(>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH-(nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	96
1-Chlorooctane	5 UG/L	70 - 130	116



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : TPHB566
PROJECT NUMBER : METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : SOLID PRINTED ON : 08/15/2006 15:12

% MOISTURE : ANALYST : JL
DATE ANALYZED : 07/14/06 DATE PREPPED : 07/14/06
DILUTION : 1 EXTRACT VOLUME : 10 ML
INSTRUMENT FILE : B13405 INSTRUMENT ID : B-5890
SAMPLE SIZE : 10 G TIME ANALYZED : 08:05

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
TPH- (>nC12-nC28)	20.0 MG/KG	ND	MG/KG
TPH- (>nC28-nC35)	20.0 MG/KG	ND	MG/KG
TPH- (nC6-nC12)	20.0 MG/KG	ND	MG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
1-Chlorooctane	50 MG/KG	70 - 130	121
o-Terphenyl	50 MG/KG	70 - 130	96



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MS/MSD SUMMARY REPORT

TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 15:12
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : TNRC-1005
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7940.002 MS SAMPLE ID : 7940.002MSD MSD SAMPLE ID : 7940.002MSD
CLIENT SAMPLE ID : SW-TRIB1 CLIENT SAMPLE ID : SW-TRIB1MS1 CLIENT SAMPLE ID : SW-TRIB1MSD1
DATE ANALYZED : 07/15/1906 DATE ANALYZED : 07/15/1906 DATE ANALYZED : 07/15/1906
INSTRUMENT FILE : B13428 INSTRUMENT FILE : B13429 INSTRUMENT FILE : B13430

PARAMETER	UNITS	MS	MSD	MS			MSD		RPD	QC LIMIT	
		SPIKE	SPIKE	SAMPL	MS	MSD	RECOVERY	RECOVERY			
		ADDED	ADDED	CONC.	CONC.	CONC.	(%)	(%)	LIMIT	REC.	
TPH-(>nC12-nC28)	MG/L	10.0	10.0	0	9.93	8.16	99	82	18.8	30	75 - 125
TPH-(nC6-nC12)	MG/L	10.0	10.0	0	10.4	9.97	104	100	3.9	30	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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MS/MSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 15:12
PROJECT NUMBER : 94057272

SAMPLE MATRIX : SOIL METHOD REFERENCE : TNACC-1005
SAMPLE MATRIX SPIKE DPLICATE
SAMPLE ID : 7941.001 MS SAMPLE ID : 7941.001MS MSD SAMPLE ID : 7941.001MSD
CLIENT SAMPLE ID : MW-5 (4-5) CLIENT SAMPLE ID : MW-5 (4-5)MS1 CLIENT SAMPLE ID : MW-5 (4-5)MSD1
DATE ANALYZED : 07/16/1906 DATE ANALYZED : 07/14/1906 DATE ANALYZED : 07/14/1906
INSTRUMENT FILE : B13447 INSTRUMENT FILE : B13410 INSTRUMENT FILE : B13411

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	MS	MSD	RPD	QC LIMIT	
		SPIKE	SPIKE				RECOVERY	RECOVERY			REC.
TPH-(>nC12-nC28)	MG/KG	100	100	0	99.6	123	100	123	20.6	30	75 - 125
TPH-(nC6-nC12)	MG/KG	100	100	0	99.1	97.9	99	98	1.0	30	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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LCS/LCSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME :		DATE RECEIVED :	
PROJECT NAME :		PRINTED ON :	08/15/2006 15:10
PROJECT NUMBER :			
SAMPLE MATRIX :	LIQUID	METHOD REFERENCE :	TNRCC-1005
LAB CONTROL SAMPLE :		LAB CONTROL SAMPLE DUPLICATE :	
LCS SAMPLE ID :	TPHL505	LCSD SAMPLE ID :	TPHL55D
CLIENT SAMPLE ID :		CLIENT SAMPLE ID :	
DATE ANALYZED :	07/15/1906	DATE ANALYZED :	07/15/1906
INSTRUMENT FILE :	B13383	INSTRUMENT FILE :	B13384

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
TPH-(>nC12-nC28)	MG/L	33.3	33.3	28.6	29.8	86	89	3.4	30	75 - 125
TPH-(nC6-nC12)	MG/L	33.3	33.3	26.9	25.2	81	76	6.4	30	75 - 105

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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LCS/LCSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME :		DATE RECEIVED :	
PROJECT NAME :		PRINTED ON :	08/15/2006 15:13
PROJECT NUMBER :			
SAMPLE MATRIX :	SOLID	METHOD REFERENCE :	TNRCC-1005
LAB CONTROL SAMPLE :		LAB CONTROL SAMPLE DUPLICATE :	
LCS SAMPLE ID :	TPHLS06	LCSD SAMPLE ID :	TPHLS06D
CLIENT SAMPLE ID :		CLIENT SAMPLE ID :	
DATE ANALYZED :	07/14/1906	DATE ANALYZED :	07/14/1906
INSTRUMENT FILE :	B13406	INSTRUMENT FILE :	B13407

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		RPD	LIMIT
TPH-(>nC12-nC28)	MG/KG	250	250	313	250	125	100	22.2	30	75 - 125
TPH-(nC6-nC12)	MG/KG	250	250	247	246	99	98	1.0	30	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-5 (4-5)
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7941.001
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/18/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:48

% MOISTURE : ANALYST : SP
DATE ANALYZED : 07/28/06 DILUTION : 1
INSTRUMENT ID : F-6890 SAMPLE WEIGHT : 5.1 g
TIME ANALYZED : 16:40

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
Benzene	4.9 UG/KG	ND	UG/KG
Ethylbenzene	4.9 UG/KG	ND	UG/KG
Toluene	4.9 UG/KG	ND	UG/KG
Xylene (total)	4.9 UG/KG	ND	UG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	49 UG/KG	70 - 130	91



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LABORATORY REPORT
BTEX BY GC/PID

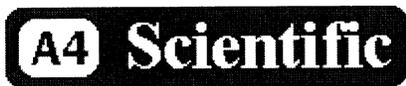
CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-5 (11)
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7941.002
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/18/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:48

% MOISTURE : ANALYST : SP
DATE ANALYZED : 07/28/06 DILUTION : 1
INSTRUMENT ID : F-6890 SAMPLE WEIGHT : 5.2 g
TIME ANALYZED : 17:22

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	4.8	UG/KG	ND	UG/KG
Ethylbenzene	4.8	UG/KG	ND	UG/KG
Toluene	4.8	UG/KG	ND	UG/KG
Xylene (total)	4.8	UG/KG	ND	UG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	48.1 UG/KG	70 - 130	107



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LABORATORY REPORT

BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : EQUIPMENT BLANK
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7941.003
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/19/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 15:48

ANALYST : SP DATE ANALYZED : 07/24/06
DILUTION : 1 INSTRUMENT ID : F-6890
PURGE VOLUME : 5 mL TIME ANALYZED : 13:45

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.0	UG/L	ND	UG/L
Ethylbenzene	5.0	UG/L	ND	UG/L
Toluene	5.0	UG/L	ND	UG/L
Xylene (total)	5.0	UG/L	ND	UG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	98



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : FVBLKL3
PROJECT NUMBER : METHOD REFERENCE : SW846-8021B
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : LIQUID PRINTED ON : 08/15/2006 15:48

ANALYST : SP DATE ANALYZED : 07/24/06
DILUTION : 1 INSTRUMENT ID : F-6890
PURGE VOLUME : 5 mL TIME ANALYZED : 09:19

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	91



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : FVBLKL4
PROJECT NUMBER : METHOD REFERENCE : SW846-8021B
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : SOLID PRINTED ON : 08/15/2006 15:48

% MOISTURE : ANALYST : SP
DATE ANALYZED : 07/28/06 DILUTION : 1
INSTRUMENT ID : F-6890 SAMPLE WEIGHT : 5 g
TIME ANALYZED : 15:40

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/KG	ND	UG/KG	
Ethylbenzene	5.0	UG/KG	ND	UG/KG	
Toluene	5.0	UG/KG	ND	UG/KG	
Xylene (total)	5.0	UG/KG	ND	UG/KG	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/KG	70 - 130	96



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MS/MSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/19/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 11:48
PROJECT NUMBER : 94057072

SAMPLE MATRIX : SOIL METHOD REFERENCE : SW846-8021B
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7932.004 MS SAMPLE ID : 7932.004MS MSD SAMPLE ID : 7932.004MSD
CLIENT SAMPLE ID : MW-3 CLIENT SAMPLE ID : MW-3MS1 CLIENT SAMPLE ID : MW-3MSD1
DATE ANALYZED : 07/28/1906 DATE ANALYZED : 07/28/1906 DATE ANALYZED : 07/28/1906
INSTRUMENT FILE : F7091 INSTRUMENT FILE : F7092 INSTRUMENT FILE : F7093

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	MS	MSD	RPD	QC LIMIT
		SPIKE	SPIKE		CONC.	CONC.	RECOVERY	RECOVERY		
Benzene	UG/KG	49	47	0	43	46	88	98	10.8	25 70 - 130
Ethylbenzene	UG/KG	49	47	0	41	46	84	98	15.4	25 70 - 130
Toluene	UG/KG	49	47	0	39	44	80	94	16.1	25 70 - 130
Xylene (total)	UG/KG	150	140	0	120	130	80	93	15.0	25 70 - 130

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits
Spike Recovery : 0 out of 8 outside limits



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MS/MSD SUMMARY REPORT

BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 15:48
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : SWS46-8011B

<u>SAMPLE</u>		<u>MATRIX SPIKE</u>		<u>MATRIX SPIKE DUPLICATE</u>
SAMPLE ID : 7940.002		MS SAMPLE ID : 7940.002MS		MSD SAMPLE ID : 7940.002MSD
CLIENT SAMPLE ID : SW-TR1B1		CLIENT SAMPLE ID : SW-TRIB1MS1		CLIENT SAMPLE ID : SW-TRIB1MSD1
DATE ANALYZED : 07/24/1906		DATE ANALYZED : 07/24/1906		DATE ANALYZED : 07/24/1906
INSTRUMENT FILE : F7044		INSTRUMENT FILE : F7045		INSTRUMENT FILE : F7046

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT	
		SPIKE	SPIKE	SAMPL	MS	MSD	RECOVERY	RECOVERY	RPD		LIMIT	REC.
Benzene	UG/L	50	50	0	45	49	90	98	8.5	25	75 - 125	
Ethylbenzene	UG/L	50	50	0	47	52	94	104	10.1	25	75 - 125	
Toluene	UG/L	50	50	0	46	60	92	120	26.4 *	25	75 - 125	
Xylene (total)	UG/L	150	150	0	140	150	93	100	7.3	25	75 - 125	

* Indicate values outside of QC limits

RPD : 1 out of 4 outside limits
Spike Recovery : 0 out of 8 outside limits



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LCS/LCSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/15/2006 15:48
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : SW946-8001B
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : FVLCSL3 LCSD SAMPLE ID :
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 07/24/1906 DATE ANALYZED :
INSTRUMENT FILE : F7042 INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Benzene	UG/L	50		51		102			25	75 - 125
Ethylbenzene	UG/L	50		51		102			25	75 - 125
Toluene	UG/L	50		54		108			25	75 - 125
Xylene (total)	UG/L	150		140		93			25	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 4 outside limits



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LCS/LCSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/15/2006 15:48
PROJECT NUMBER :

SAMPLE MATRIX : SOLID METHOD REFERENCE : SW846-8021B
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : FVLCSL4 LCSD SAMPLE ID :
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 07/28/2006 DATE ANALYZED :
INSTRUMENT FILE : F7084 INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
		VALUE	VALUE	VALUE	VALUE	(%)	(%)			
Benzene	UG/KG	50		56		112			25	70 - 130
Ethylbenzene	UG/KG	50		54		108			25	70 - 130
Toluene	UG/KG	50		50		100			25	70 - 130
Xylene (total)	UG/KG	150		170		113			25	70 - 130

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 4 outside limits



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(281) 292-5277
(Fax) (281) 292-2481

END OF REPORT



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The Woodlands, TX 77380
(281)292-5277
FAX: (281)292-2481

August 15, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

REFERENCE:

Project.....: BALLINGER SEEP
Project Number.....: 94057272
Lab Episode Number.....: 7942
Date Received.....: 07/20/2006

Dear MAX MAJESKO:

Enclosed is the analytical Report for the project referenced above. The following sample(s) are included in the report.

MW-1 MW-1 DUP TRIP BLANK

All the holding times were met for the tests performed on these samples. Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting A4 SCIENTIFIC for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,

Reddy Pakanati
Laboratory Manager



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The Woodlands, TX 77380
(281) 292-5277
(Fax): (281) 292-2481

ANALYTICAL REPORT

CLIENT PROJECT.....: BALLINGER SEEP
CLIENT PROJECT NUMBER....: 94057272

Prepared For:

TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

ATTENTION: MAX MAJESKO

Date: 08/15/2006

Reddy Pakanati

Signature

LAB EPISODE NUMBER: 7942
Date Received.....: 07/20/2006
Lab Project ID.....: Q072006A

Reddy Pakanati
Laboratory Manager
(281) 292-5277
pakanati@a4scientific.com

SAMPLE LOG-IN CHECKLIST/DISCREPANCY REPORT

EPISODE #: 7942 DATE/REC'D: 7/20/06 @ 1005 TEMP & ID: 1) 4.5° # _____
 CLIENT NAME: _____ TIME: Terracon - Dallas 2) _____ # _____
 PROJECT NAME: Ballinger Seep 3) _____ # _____
 PROJECT NUMBER: 946..57272 4) _____ # _____
 # 3 AQUEOUS, # _____ SOIL SAMPLES 5) _____ # _____
 COURIER/AIRBILL # Fedex 8573 5337 5832 6) _____ # _____

SAMPLE CONTAINER SEALS: present absent intact broken
 COOLER CUSTODY SEALS: present absent intact broken NAME & DATE: 7/19/06 Y. Morgan
 HOW MANY AND WHERE: 1 on outside of cooler

	YES	NO
Were samples screened for radioactivity?	X	
Chain-of-custody present?	X	
Custody documents: Sealed in a plastic bag?	X	
Signed and dated by field personnel	X	
Filled out properly in indelible ink?	X	
Signed and dated by log-in personnel?	X	
Container Condition: Each containers sealed in a separate plastic bag?	X	
Labels complete (ID, date, time, signature, preservative, etc.)?	X	
Labels agree with chain-of-custody?		X
Received without leakage or breakage? If no, list: <u>MW-1</u>	X	
Correct quantity indicated on chain-of-custody?	X	
Sample Integrity: Correct containers used for the test indicated? If no, list:	X	
Correct preservatives added to the samples? If no, list:	X	
Sufficient sample amount sent for the tests indicated? If no, list:	X	
VOA vials filled completely? If no, list:	X	
Aqueous volatiles samples preserved? If no, list:	X	

Discrepancy Report
 Discrepancies to be discussed with the client? 23 40ml VOC vials were intact out of 27 per the C-O-C.
 Project Manager's recommendations? The lab has plenty of sample for the current analyses but further analyses may require more volume than we have.
 Who was notified? _____ By whom? CR
 Date: 7/20/06 York Morgan
 Client's comments: Run as is.
 Corrective actions carried out? Samples are run as is.

COMMENTS:
 For those short holding time and fast turn-around parameters, has a Rush Notification sheet been issued to the lab? _____

LOG-IN BY: Chad Roberts DATE: 7/20/06
A4 Scientific, Inc.



Office Location Dallas

Project Manager Max Projezko

Sampler's Name Yarik Projezko Sampler's Signature [Signature]

Laboratory: A4 Scientific
 Address: The Woodlands, TX
 Contact: Chad Roberts
 Phone: 361-343-3073
 PO/SO #: 5777

Proj. No.	Date	Time	Project Name			No/Type of Containers					
			C	G	Identifying Marks of Sample(s)	Depth	Depth	VOA	A/G/L	P/O	
94057377					Bealage Seal						
W	7-19-06	1035	X		MW-1			9	21	6	
W		1110	X		MW-1 Dup			9	21	7	
W		1150	X		MW-1 MS			9	1	7	
W		1225	X		MW-1 MSD			9	1	7	
W					Tip Blank			1			

NFE

Turn around time	Normal	25% Rush	50% Rush	100% Rush
Relinquished by (Signature)	<u>[Signature]</u>	Date: <u>7-19-06</u>	Time: <u>10:00</u>	Received by: (Signature)
Relinquished by (Signature)	<u>[Signature]</u>	Date:	Time:	Received by: (Signature)
Relinquished by (Signature)		Date:	Time:	Received by: (Signature)
Relinquished by (Signature)		Date:	Time:	Received by: (Signature)

Matrix Container: WW - Wastewater VOA - 40 ml vial
 W - Water A/G - Amber / Or Glass 1 Liter
 S - Soil SD - Solid 250 ml - Plastic or other
 L - Liquid 250 ml - Glass wide mouth
 A - Air Bag
 C - Charcoal tube
 P/O - Plastic or other
 O - Oil
 SL - sludge

Notes: Sample in MW-1 MS & MW-1 Dup are the matrix spike & matrix spike duplicate, respective to MW-1 MS. Also show hold time as 10:00. Spike & MSD to be run based on lab results.

ANALYSIS REQUESTED

Lab use only
 Due Date: _____
 Temp. of coolers when received (C°):
 1 | 2 | 3 | 4 | 5
 Page 1 of 1

Lab Sample ID (Lab Use Only)	Analysis Requested
TTM (1005)	Grlex (80/100)
TTM (1006)	TTM (1005)
TTM (8010)	TTM (1005)
TTM (8011)	TTM (1005)
TTM (8012)	TTM (1005)
TTM (8013)	TTM (1005)
TTM (8014)	TTM (1005)
TTM (8015)	TTM (1005)
TTM (8016)	TTM (1005)
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TTM (8098)	TTM (1005)
TTM (8099)	TTM (1005)
TTM (8100)	TTM (1005)

Houston Office: 11555 Clay Road, Suite 100, Houston, Texas 77043 (713) 690-8989 Fax (713) 690-8787

Dallas Office: 8901 Carpenter Freeway, Suite 100, Dallas, Texas 75247 (214) 630-1010 Fax (214) 630-7070

Fort Worth Office: 2601 Gravel Drive, Fort Worth, Texas 76118 (817) 268-8600 Fax (817) 268-8602

Austin Office: 5307 Industrial Oaks Blvd. # 160, Austin, Texas 78735 (512) 442-1122 Fax (512) 442-1181

Midland Office: 24 Smith Rd. # 261, Midland, Texas 79705 (432) 684-9600 Fax (432) 684-9608



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: CR

Client Name: TERRACON CONSULTANTS, INC.

Client Project Name: BALLINGER SEEP

Client Project #: 94057272

P.O. No.:

Courier/No.:

Lab Project ID: Q072006A

Date Logged: 07/20/06

Date Received: 07/20/06

Time Received: 10:05

Report Date: 07/21/2006 9:14:06

Send Report To..

MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS TX 75247

CASE	SDG	Lab	Sample ID	Client Sample ID	No.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
			7942.001	MW-1	40	WATER	07/19/06	10:35	7942A	ALKALINITY, BICARB310.1 ALKALINITY, CARB310.1 BROMIDE_300 BTEX-8021 CHLORIDE_300 CONDUCTIVITY_120.1 MET_TOTAL_6010B_CA MET_TOTAL_6010B_K MET_TOTAL_6010B_MG MET_TOTAL_6010B_NA NITRATE_300 SULFATE_300 TDS_160.1 TPH1005	07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06	MS/MSD
			7942.002	MW-1 DUP	14	WATER	07/19/06	11:10	7942A	ALKALINITY, BICARB310.1 ALKALINITY, CARB310.1 BROMIDE_300 BTEX-8021 CHLORIDE_300 CONDUCTIVITY_120.1 MET_TOTAL_6010B_CA MET_TOTAL_6010B_K	07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06 07/27/06	

Lab Approval

Client Approval



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Report Date: 07/21/2006 9:14:06

Logged By: CR
Client Name: TERRACON CONSULTANTS, INC.
Client Project Name: BALLINGER SEEP
Client Project #: 94057272
P.O. No.:
Courier/No.:

Lab Project ID: Q072006A
Date Logged: 07/20/06
Date Received: 07/20/06
Time Received: 10:05

Send Report To..
MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS TX 75247

CASE	SDG	Lab	Sample ID	Client Sample ID	No. Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
		7942.003	TRIP BLANK		1	WATER			7942A			
										MET_TOTAL_6010B_MG	07/27/06	
										MET_TOTAL_6010B_NA	07/27/06	
										NITRATE_300	07/27/06	
										SULFATE_300	07/27/06	
										TDS_160.1	07/27/06	
										TPH1005	07/27/06	
										BTEX-8021	07/27/06	

Instructions To Lab:

TRRP
NITRATE = 48 HR HT
TPH1006 PENDING TPH1005 RESULTS

Lab Approval

Client Approval



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: MW-1
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7942.001
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: SW846-8021B
DATE SAMPLED	: 07/19/2006	DATE RECEIVED	: 07/20/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 9:59

ANALYST	: SP	DATE ANALYZED	: 07/24/06
DILUTION	: 1	INSTRUMENT ID	: F-6890
PURGE VOLUME	: 5 mL	TIME ANALYZED	: 14:15

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.0	UG/L	ND	UG/L
Ethylbenzene	5.0	UG/L	ND	UG/L
Toluene	5.0	UG/L	ND	UG/L
Xylene (total)	5.0	UG/L	ND	UG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	113



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: MW-1 DUP
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7942.002
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: SW846-8021B
DATE SAMPLED	: 07/19/2006	DATE RECEIVED	: 07/20/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 9:59

ANALYST	: SP	DATE ANALYZED	: 07/24/06
DILUTION	: 1	INSTRUMENT ID	: F-6890
PURGE VOLUME	: 5 mL	TIME ANALYZED	: 14:46

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
	5.0	UG/L	ND	UG/L	
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	121



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The Woodlands, TX 77380

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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: TRIP BLANK
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7942.003
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: SW846-8021B
DATE SAMPLED	:	DATE RECEIVED	: 07/20/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 9:59

ANALYST	: SP	DATE ANALYZED	: 07/24/06
DILUTION	: 1	INSTRUMENT ID	: F-6890
PURGE VOLUME	: 5 mL	TIME ANALYZED	: 15:16

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
	5.0	UG/L	ND	UG/L	
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	119



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME :		CLIENT SAMPLE ID :	Prep Blank
PROJECT NAME :		LAB SAMPLE ID :	FVBLKL3
PROJECT NUMBER :		METHOD REFERENCE :	SW846-8021B
DATE SAMPLED :		DATE RECEIVED :	
SAMPLE MATRIX :	LIQUID	PRINTED ON :	08/15/2006 9:59

ANALYST :	SP	DATE ANALYZED :	07/24/06
DILUTION :	1	INSTRUMENT ID :	F-6890
PURGE VOLUME :	5 mL	TIME ANALYZED :	09:19

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	91



1544 Sawdust Road, Suite 505
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MS/MSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/10/2006
PRINTED ON : 08/15/2006 9:59

SAMPLE MATRIX : WATER

METHOD REFERENCE : SWM46-8001B

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.002
CLIENT SAMPLE ID : SW-TRIB1
DATE ANALYZED : 07/24/2006
INSTRUMENT FILE : F7044

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID : SW-TRIB1MS1
DATE ANALYZED : 07/24/2006
INSTRUMENT FILE : F7045

MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SW-TRIB1MSD1
DATE ANALYZED : 07/24/2006
INSTRUMENT FILE : F7046

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT
		SPIKE	SPIKE	SAMPL	MS	MSD	RECOVERY	RECOVERY			
		ADDED	ADDED	CONC.	CONC.	CONC.	(%)	(%)	RPD	LIMIT	REC.
Benzene	UG/L	50	50	0	45	49	90	98	8.5	25	75 - 125
Ethylbenzene	UG/L	50	50	0	47	52	94	104	10.1	25	75 - 125
Toluene	UG/L	50	50	0	46	60	92	100	26.4 *	25	75 - 125
Xylene (total)	UG/L	150	150	0	140	150	93	100	7.3	25	75 - 125

* Indicate values outside of QC limits

RPD : 1 out of 4 outside limits
Spike Recovery : 0 out of 8 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 9:59

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMELE
LCS SAMPLE ID : FVLCPL3
CLIENT SAMPLE ID :
DATE ANALYZED : 07/14/1906
INSTRUMENT FILE : F7042

METHOD REFERENCE : SW846-8021B
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		RPD	LIMIT
Benzene	UG/L	50		51		102			25	75 - 125
Ethylbenzene	UG/L	50		51		102			25	75 - 125
Toluene	UG/L	50		54		108			25	75 - 125
Xylene (total)	UG/L	150		140		93			25	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 4 outside limits



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The Woodlands, TX 77380

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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: MW-1
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7942.001
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: TNRCC-1005
DATE SAMPLED	: 07/19/2006	DATE RECEIVED	: 07/20/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 8:18

ANALYST	: JL	DATE ANALYZED	: 07/16/06
DATE PREPPED	: 07/15/06	DILUTION	: 1
EXTRACT VOLUME	: 3 ML	INSTRUMENT FILE	: B13455
INSTRUMENT ID	: B-5890	SAMPLE VOLUME	: 30 ML
TIME ANALYZED	: 07:55		

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
TPH-(>nC12-nC28)	5.0 MG/L	ND MG/L	
TPH-(>nC28-nC35)	5.0 MG/L	ND MG/L	
TPH-(nC6-nC12)	5.0 MG/L	ND MG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	71
1-Chlorooctane	5 UG/L	70 - 130	79



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-1 DUP
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7942.002
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/19/2006 DATE RECEIVED : 07/20/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 8:18

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13435
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 16:18

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH-(>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH-(>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH-(nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	76
1-Chlorooctane	5 UG/L	70 - 130	91



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The Woodlands, TX 77380

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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : TPHB565
PROJECT NUMBER : METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : LIQUID PRINTED ON : 08/15/2006 8:19

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13426
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 05:18

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH-(>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH-(>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH-(nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	96
1-Chlorooctane	5 UG/L	70 - 130	116



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The Woodlands, TX 77380

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MS/MSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006 9:19

SAMPLE MATRIX : WATER

METHOD REFERENCE : TNECC-1005

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.000
CLIENT SAMPLE ID : SW-TR1B1
DATE ANALYZED : 07/15/2006
INSTRUMENT FILE : B13428

MS SAMPLE ID : 7940.000MS
CLIENT SAMPLE ID : SW-TR1B1MS1
DATE ANALYZED : 07/15/2006
INSTRUMENT FILE : B13429

MSD SAMPLE ID : 7940.000MSD
CLIENT SAMPLE ID : SW-TR1B1MSD1
DATE ANALYZED : 07/15/2006
INSTRUMENT FILE : B13430

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	MS	MSD	RPD	QC LIMIT	
		ADDED	ADDED		CONC.	CONC.	CONC.	RECOVERY		RECOVERY	LIMIT
TPH-(>nC12-nC28)	MG/L	10.0	10.0	0	9.93	8.16	99	82	18.8	30	75 - 125
TPH-(nC6-nC12)	MG/L	10.0	10.0	0	10.4	9.97	104	100	3.9	30	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Page 1 of 1

LCS/LCSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 09/15/2006 8:19

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : TNRC-1005

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : TPH1565

LCS SAMPLE ID : TPH1565F

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/15/1906

DATE ANALYZED : 07/15/1906

INSTRUMENT FILE : B13383

INSTRUMENT FILE : B13384

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
TPH-(nC12-nC28)	MG/L	33.3	33.3	28.6	29.8	86	89	3.4	30	75 - 125
TPH-(nC6-nC12)	MG/L	33.3	33.3	26.9	25.2	81	76	6.4	30	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP

PROJECT NUMBER : 94057272
PRINTED ON : 08/15/2006 8:10

PARAMETER: Alkalinity, Bicarbonate (as CaCO3)

CLIENT SAMPLE ID	MW-1	MW-1 DUP	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	7942.001	7942.002	ALKBBLK0721A	ALKBLCS0721A
SAMPLE MATRIX	WATER	WATER		
DATE SAMPLED	07/19/2006	07/19/2006		
DATE RECEIVED	07/20/2006	07/20/2006		
METHOD REFERENCE	EPA-310.1	EPA-310.1	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2	2	2
RESULTS	380	380	ND	53
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
QC BATCH ID	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A
LCS ID	ALKBLCS0721A	ALKBLCS0721A		
LCSD ID				
DUP ID				



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The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 8:10

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : EPA-310.1

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : ALKHLC0921A

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/21/1906

DATE ANALYZED :

INSTRUMENT FILE :

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Alkalinity, Bicarbonate (as CaCO3	MG/L	50.0		53.0		106			20	90 - 110

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 8:11

PARAMETER: Alkalinity, Carbonate (as CaCO3)

CLIENT SAMPLE ID	MW-1	MW-1 DUP	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	7942.001	7942.002	ALKCBLK0721A	ALKCLCS0721A
SAMPLE MATRIX	WATER	WATER		
DATE SAMPLED	07/19/2006	07/19/2006		
DATE RECEIVED	07/20/2006	07/20/2006		
METHOD REFERENCE	EPA-310.1	EPA-310.1	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2	2	2
RESULTS	ND	ND	ND	53
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
QC BATCH ID	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A
LCS ID	ALKCLCS0721A	ALKCLCS0721A		
LCSD ID				
DUP ID				



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LCS/LCSD SUMMARY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 8:11

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : EPA-810.1

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : ALKCLC0011A

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/11/2006

DATE ANALYZED :

INSTRUMENT FILE :

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Alkalinity, Carbonate (as CaCO3)	MG/L	50		53		106			20	90 - 110

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:32

PARAMETER: Conductivity

CLIENT SAMPLE ID	MW-1	MW-1 DUP	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	7942.001	7942.002	CONBLK0721A	CONLCS0721A
SAMPLE MATRIX	WATER	WATER		
DATE SAMPLED	07/19/2006	07/19/2006		
DATE RECEIVED	07/20/2006	07/20/2006		
METHOD REFERENCE	EPA-120.1	EPA-120.1	EPA-120.1	EPA-120.1
QUANTITATION LIMIT	1	1	1	1
RESULTS	7500	7300	ND	973
UNITS	UMHO/CM	UMHO/CM	UMHO/CM	UMHO/CM
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
TIME ANALYZED	16:00	16:00	16:00	16:00
QC BATCH ID	CONBLK0721A	CONBLK0721A	CONBLK0721A	CONBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	CONBLK0721A	CONBLK0721A	CONBLK0721A	CONBLK0721A
LCS ID	CONLCS0721A	CONLCS0721A		
LCSD ID				
DUP ID				



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LCS/LCSD SUMMARY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/15/2006 7:37
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : EPA-100.1
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : CONLCS0721A LCSD SAMPLE ID :
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906 DATE ANALYZED :
INSTRUMENT FILE : INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Conductivity	UMHO/	1000		973		97			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:29

PARAMETER: Total Dissolved Solids

CLIENT SAMPLE ID	MW-1	MW-1 DUP	SEEP-1DUP	PREP BLANK
SAMPLE ID	7942.001	7942.002	7940.001DUP1	TDSBLK0721A
SAMPLE MATRIX	WATER	WATER	WATER	
DATE SAMPLED	07/19/2006	07/19/2006	07/19/2006	
DATE RECEIVED	07/20/2006	07/20/2006	07/20/2006	
METHOD REFERENCE	EPA-160.1	EPA-160.1	EPA-160.1	EPA-160.1
QUANTITATION LIMIT	5	5	5	5
RESULTS	4980	4790	2360	ND
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	LOH	LOH	LOH	LOH
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
QC BATCH ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
LCS ID	TDSLCS0721A	TDSLCS0721A	TDSLCS0721A	
LCSD ID				
DUP ID	7940.001DUP1	7940.001DUP1	7940.001DUP1	



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LABORATORY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:29

PARAMETER: Total Dissolved Solids

CLIENT SAMPLE ID	LAB CONTROL SAMP
SAMPLE ID	TDSLCS0721A
SAMPLE MATRIX	
DATE SAMPLED	
DATE RECEIVED	
METHOD REFERENCE	EPA-160.1
QUANTITATION LIMIT	5
RESULTS	272
UNITS	MG/L
QUALIFIER	
ANALYST	LOH
DATE ANALYZED	07/21/06
QC BATCH ID	TDSBLK0721A
PRE-PREP BLANK ID	
PREP BLANK ID	TDSBLK0721A
LCS ID	
LCSD ID	
DUP ID	



DUPLICATE SUMMARY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057072

DATE RECEIVED : 07/10/1906
PRINTED ON : 08/15/1906

SAMPLE MATRIX : WATER

METHOD REFERENCE : EPA-160.1

SAMPLE

SAMPLE DUPLICATE

SAMPLE ID :
CLIENT SAMPLE ID : SEEP-1
DATE ANALYZED : 07/21/1906
GC FILE ID :

DUP SAMPLE ID : 7940.001DUP1
CLIENT SAMPLE ID : SEEP-1DUP
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE :

COMPOUND	SAMPLE CONC.	DUP. CONC.	UNITS	RPD	RPD LIMITS
Total Dissolved Solids	2430	2360	MG/L	2.9	20

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits



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LCS/LCSD SUMMARY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 7:39

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : TDSLCS0721A
CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE :

METHOD REFERENCE : EPA-160.1
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Total Dissolved Solids	MG/L	300		272		91			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:04

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID	MW-1	MW-1 DUP	PREP BLANK
SAMPLE ID	7942.001	7942.002	ICBLK0721A
SAMPLE MATRIX	WATER	WATER	
DATE SAMPLED	07/19/2006	07/19/2006	
DATE RECEIVED	07/20/2006	07/20/2006	
METHOD REFERENCE	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5
RESULTS	1550	1530	ND
UNITS	MG/L	MG/L	MG/L
QUALIFIER			
ANALYST	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID			
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	
LCSD ID			
MS ID	7940.001MS	7940.001MS	
MSD ID	7940.001MSD	7940.001MSD	
DUP ID			



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MS/MSD SUMMARY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006 18:04

SAMPLE MATRIX : WATER

METHOD REFERENCE : EPA-300

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.001
CLIENT SAMPLE ID : SEEP-1
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID : SEEP-1MS
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT	
		ADDED	SPIKE	ADDED	SPIKE	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Chloride as Cl	MG/L	10.0	10.0	1060	957	900	0 *	-1600 *	200.0 *	20	80 - 120	

* Indicate values outside of QC limits

RPD : 1 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/15/2006 19:04
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : ICLCS0721A LCSD SAMPLE ID :
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 07/31/1906 DATE ANALYZED :
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Chloride as Cl	MG/L	10.0		10.5		105			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:04

PARAMETER: Sulfate (as SO4)

CLIENT SAMPLE ID	MW-1	MW-1 DUP	PREP BLANK
SAMPLE ID	7942.001	7942.002	ICBLK0721A
SAMPLE MATRIX	WATER	WATER	
DATE SAMPLED	07/19/2006	07/19/2006	
DATE RECEIVED	07/20/2006	07/20/2006	
METHOD REFERENCE	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5
RESULTS	657	657	ND
UNITS	MG/L	MG/L	MG/L
QUALIFIER			
ANALYST	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID			
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	
LCSD ID			
MS ID	7940.001MS	7940.001MS	
MSD ID	7940.001MSD	7940.001MSD	
DUP ID			



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MS/MSD SUMMARY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:04
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : EPA-800
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7940.001 MS SAMPLE ID : 7940.001MS MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1 CLIENT SAMPLE ID : SEEP-1MS CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	RECOVERY	MSD	RPD	QC LIMIT
		SPIKE	SPIKE		CONC.	CONC.		RECOVERY		REC.
		ADDED	ADDED	CONC.	CONC.	CONC.	(%)	(%)	RPD	LIMIT
Sulfate (as SO4)	MG/L	10.0	10.0	320	260	264	0*	-560*	200.0*	20 80-120

* Indicate values outside of QC limits

RPD : 1 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 18:04

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : EPA-800

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : 1CLCS0721A

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/21/1906

DATE ANALYZED :

INSTRUMENT FILE : ANIONS296

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Sulfate (as SO4)	MG/L	10.0		10.7		107			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:04

PARAMETER: Bromide

CLIENT SAMPLE ID	MW-1	MW-1 DUP	PREP BLANK
SAMPLE ID	7942.001	7942.002	ICBLK0721A
SAMPLE MATRIX	WATER	WATER	
DATE SAMPLED	07/19/2006	07/19/2006	
DATE RECEIVED	07/20/2006	07/20/2006	
METHOD REFERENCE	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	2	2	2
RESULTS	ND	ND	ND
UNITS	MG/L	MG/L	MG/L
QUALIFIER			
ANALYST	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	DX120	DX120	DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID			
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	
LCSD ID			
MS ID	7940.001MS	7940.001MS	
MSD ID	7940.001MSD	7940.001MSD	
DUP ID			



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MS/MSD SUMMARY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006 19:04

SAMPLE MATRIX : WATER

METHOD REFERENCE : EPA-800

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.001
CLIENT SAMPLE ID : SEEP-1
DATE ANALYZED : 07/21/2006
INSTRUMENT FILE : ANIONS296

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID : SEEP-1MS
DATE ANALYZED : 07/21/2006
INSTRUMENT FILE : ANIONS296

MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/2006
INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL			MS	MSD	RPD	QC LIMIT
		ADDED	ADDED	CONC.	CONC.	CONC.	RECOVERY (%)	RECOVERY (%)		
Bromide	MG/L	10.0	10.0	0	11.1	11.6	111	116	4.4	20 80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
Spike Recovery : 0 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/18/2006 18:04

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : JCLCS0721A
CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Bromide	MG/L	10.0		8.80		88			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:04

PARAMETER: Nitrate (as N)

CLIENT SAMPLE ID	MW-1	MW-1 DUP	PREP BLANK
SAMPLE ID	7942.001	7942.002	ICBLK0721A
SAMPLE MATRIX	WATER	WATER	
DATE SAMPLED	07/19/2006	07/19/2006	
DATE RECEIVED	07/20/2006	07/20/2006	
METHOD REFERENCE	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5
RESULTS	ND	2.6	ND
UNITS	MG/L	MG/L	MG/L
QUALIFIER			
ANALYST	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID			
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	
LCSD ID			
MS ID	7940.001MS	7940.001MS	
MSD ID	7940.001MSD	7940.001MSD	
DUP ID			



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MS/MSD SUMMARY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/10/2006
PRINTED ON : 08/15/2006 18:04

SAMPLE MATRIX : WATER

METHOD REFERENCE : EPA-800

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.001
CLIENT SAMPLE ID : SEEP-1
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID : SEEP-1MS
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	RECOVERY	MSD	RPD	QC LIMIT	
		SPIKE	SPIKE		CONC.	CONC.		RECOVERY		RECOVERY	LIMIT
Nitrate (as N)	MG/L	10	10	0	8.6	8.7	86	87	1.2	20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
Spike Recovery : 0 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :
SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : ICLCS0701A
CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

DATE RECEIVED :
PRINTED ON : 08/15/2006 18:04
METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		LIMIT	REC.
Nitrate (as N)	MG/L	10		8.5		95			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: MW-1
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7942.001
PROJECT NUMBER	: 94057272	DATE RECEIVED	: 07/20/2006
DATE SAMPLED	: 07/19/2006	PRINTED ON	: 08/15/2006 18:35
SAMPLE MATRIX	: WATER	% MOISTURE	:

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	QUANTITATION LIMIT	RESULT	Q	ANALYST
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	330 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	83 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	15 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	1700 MG/L		BT



The Woodlands, TX 77380
 1544 Sawdust Road, Suite 505

LABORATORY REPORT

TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-1 DUP
 PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7942.002
 PROJECT NUMBER : 94057272 DATE RECEIVED : 07/20/2006
 DATE SAMPLED : 07/19/2006 PRINTED ON : 08/15/2006 18:35
 SAMPLE MATRIX : WATER % MOISTURE :

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	QUANTITATION LIMIT	RESULT	Q	ANALYST
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	330 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	82 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	14 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	1700 MG/L		BT



The Woodlands, TX 77380
1544 Sawdust Road, Suite 505

Page 1 of 1

LABORATORY REPORT

TOTAL METALS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : ICPB671
PROJECT NUMBER : DATE RECEIVED :
DATE SAMPLED : PRINTED ON : 08/15/2006 18:35
SAMPLE MATRIX : LIQUID % MOISTURE :

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	QUANTITATION LIMIT	RESULT	Q	ANA- LYST
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	ND MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	ND MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	ND MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	ND MG/L		BT



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The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT

TOTAL METALS

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 18:35

SAMPLE MATRIX : LIQUID

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : ICPLCS671

LCSD SAMPLE ID : ICPLCS671D

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

COMPOUND	METHOD REFERENCE	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
			TRUE VALUE	TRUE VALUE	FOUND VALUE	FOUND VALUE	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Calcium, Total	SW846-6010B	MG/L	20.0	20.0	20.0	20.3	100	102	2.0	30	80 - 120
Magnesium, Total	SW846-6010B	MG/L	20.0	20.0	20.0	20.4	100	102	2.0	30	80 - 120
Potassium, Total	SW846-6010B	MG/L	20.0	20.0	19.9	19.9	100	100	0.0	30	80 - 120
Sodium, Total	SW846-6010B	MG/L	20.0	20.0	22.6	21.8	113	109	3.6	30	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits

Spike Recovery : 0 out of 8 outside limits



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MS/MSD SUMMARY REPORT
TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006 18:35

SAMPLE MATRIX : WATER

SAMPLE

SAMPLE ID : 7940.001
CLIENT SAMPLE ID: SEEP-1

MATRIX SPIKE

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID: SEEP-1MS

MATRIX SPIKE DUPLICATE

MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID: SEEP-1MSD

COMPOUND	METHOD REFERENCE	MS		MSD		MS		MSD		RPD	QC LIMIT REC.	
		SPIKE UNITS	SPIKE ADDED	SAMPL CONC.	MSD CONC.	RECOVER (%)	RECOVER (%)	RPD LIMIT				
Calcium, Total	SW846-6010B	MG/L	20	20	130	150	150	100	100	0.0	0	75 - 125
Magnesium, Total	SW846-6010B	MG/L	20.0	20.0	38	56.6	57.0	93	95	2.1	30	75 - 125
Potassium, Total	SW846-6010B	MG/L	20	20	13	34	34	105	105	0.0	0	75 - 125
Sodium, Total	SW846-6010B	MG/L	20	20	1000	1000	1000	0	0	0.0	0	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits
Spike Recovery : 2 out of 8 outside limits

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(Fax) (281) 292-2481

**END
OF
REPORT**



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The Woodlands, TX 77380
(281)292-5277
FAX: (281)292-2481

August 15, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

REFERENCE:

Project.....: BALLINGER SEEP
Project Number.....: 94057272
Lab Episode Number.....: 7945
Date Received.....: 07/21/2006

Dear MAX MAJESKO:

Enclosed is the analytical Report for the project referenced above. The following sample(s) are included in the report.

MW-7 (20-21)

All the holding times were met for the tests performed on these samples. Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting A4 SCIENTIFIC for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,

Reddy Pakanati

Reddy Pakanati
Laboratory Manager



Office Location Dallas

Project Manager Max Mejstko

Sampler's Name Max Mejstko

Laboratory: All Scientific

Address: The Woodlands, TX

Contact: Chad Roberts

Phone: 281-292-5972

PO/SO #:

Sampler's Signature

Proj. No.	Date	Time	C o m p	G i b	Identifying Marks of Sample(s)	No/Type of Containers			
						5 gal	2 gal	1 L	250 ml
74057072					Ballinger Seep				

Matrix	Date	Time	Identifying Marks of Sample(s)	5 gal	2 gal	1 L	250 ml	Lab Sample ID (Lab Use Only)
S	7-20-06	0900	Mus-7	0	21		1	

Turn around time	Normal	25% Rush	50% Rush	100% Rush
Relinquished by (Signature)	<u>[Signature]</u>	Date: <u>7-20-06</u>	Time: <u>1830</u>	Received by: (Signature)
Relinquished by (Signature)	<u>[Signature]</u>	Date:	Time:	Received by: (Signature)
Relinquished by (Signature)	<u>[Signature]</u>	Date:	Time:	Received by: (Signature)
Relinquished by (Signature)	<u>[Signature]</u>	Date:	Time:	Received by: (Signature)

Matrix Container	W - Water	S - Soil	SD - Solid	L - Liquid	A - Air Bag	C - Charcoal tube	SL - sludge	O - Oil
11555 Clay Road, Suite 100 Houston, Texas 77043 (713) 690-8989 Fax (713) 690-8787	A/G - Amber / Or Glass 1 Liter	250 ml - Glass wide mouth	250 ml - Plastic or other					

Houston Office
 11555 Clay Road, Suite 100
 Houston, Texas 77043
 (713) 690-8989 Fax (713) 690-8787

Dallas Office
 8901 Carpenter Freeway, Suite 100
 Dallas, Texas 75247
 (214) 630-1010 Fax (214) 630-7070

Fort Worth Office
 2601 Gravel Drive
 Fort Worth, Texas 76118
 (817) 268-8600 Fax (817) 268-8602

Austin Office
 5307 Industrial Oaks Blvd. # 160
 Austin, Texas 78735
 (512) 442-1122 Fax (512) 442-1181

Midland Office
 24 Smith Rd. # 261
 Midland, Texas 79705
 (432) 684-9600 Fax (432) 684-9608

ANALYSIS REQUESTED
 BTEX (9016)
 TPH (605)

Lab use only
 Due Date: _____
 Temp. of coolers when received (C°):
 1 _____ 2 _____ 3 _____ 4 _____ 5 _____
 Page 1 of 1

call 817.308.409



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: CR

Client Name: TERRACON CONSULTANTS, INC.

Client Project Name: BALLINGER SEEP

Client Project #: 94057272

P.O. No.:

Courier/No.:

Lab Project ID: Q072006A

Date Logged: 07/21/06

Date Received: 07/21/06

Time Received: 12:30

Report Date: 07/21/2006 13:00:27

Send Report To..

MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS
TX 75247

CASE	SDG	Lab	Sample ID	Client Sample ID	No.	Sample	Date	Time	Chain Of	Tests Required	Date	Remarks
					Cont.	Matrix	Sampled	Sampled	Custody No.		Due	
		7945.001	MW-7 (20-21)		1	SOIL	07/20/06	09:00	7945A	BTEX-8021	07/28/06	
										TPH1005	07/28/06	

Instructions To Lab:

TRRP
TPH1006 PENDING TPH1005 RESULTS

Lab Approval

Client Approval



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Page 1 of 1

LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-7 (20-21)
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7945.001
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/20/2006 DATE RECEIVED : 07/21/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:13

% MOISTURE : ANALYST : JL
DATE ANALYZED : 07/16/06 DATE PREPPED : 07/14/06
DILUTION : 1 EXTRACT VOLUME : 10 ML
INSTRUMENT FILE : B13451 INSTRUMENT ID : B-5890
SAMPLE SIZE : 10 G TIME ANALYZED : 04:39

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
TPH- (>nC12-nC28)	20.0	MG/KG	ND	MG/KG	
TPH- (>nC28-nC35)	20.0	MG/KG	ND	MG/KG	
TPH- (nC6-nC12)	20.0	MG/KG	ND	MG/KG	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
1-Chlorooctane	50 MG/KG	70 - 130	103
o-Terphenyl	50 MG/KG	70 - 130	87



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Page 1 of 1

LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : TPHB566
PROJECT NUMBER : METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : SOLID PRINTED ON : 08/15/2006 15:13

% MOISTURE : ANALYST : JL
DATE ANALYZED : 07/14/06 DATE PREPPED : 07/14/06
DILUTION : 1 EXTRACT VOLUME : 10 ML
INSTRUMENT FILE : B13405 INSTRUMENT ID : B-5890
SAMPLE SIZE : 10 G TIME ANALYZED : 08:05

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH-(>nC12-nC28)	20.0	MG/KG	ND	MG/KG
TPH-(>nC28-nC35)	20.0	MG/KG	ND	MG/KG
TPH-(nC6-nC12)	20.0	MG/KG	ND	MG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
1-Chlorooctane	50 MG/KG	70 - 130	121
o-Terphenyl	50 MG/KG	70 - 130	96



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MS/MSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 15:13
PROJECT NUMBER : 94057272

SAMPLE MATRIX : SOIL METHOD REFERENCE : TNRCC-1005
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7941.001 MS SAMPLE ID : 7941.001MS MSD SAMPLE ID : 7941.001MSD
CLIENT SAMPLE ID : MW-5 (4-5) CLIENT SAMPLE ID : MW-5 (4-5)MS1 CLIENT SAMPLE ID : MW-5 (4-5)MSD1
DATE ANALYZED : 07/16/1906 DATE ANALYZED : 07/14/1906 DATE ANALYZED : 07/14/1906
INSTRUMENT FILE : B13447 INSTRUMENT FILE : B13410 INSTRUMENT FILE : B13411

PARAMETER	UNITS	MS	MSD	SAMPL		MS	MSD	RECOVERY		RPD	QC LIMIT	
		ADDED	ADDED	CONC.	CONC.	CONC.	CONC.	(%)	(%)	LIMIT	REC.	
TPH- (>nC12-nC28)	MG/KG	100	100	0	99.6	123	100	123	20.6	30	75 - 125	
TPH- (nC6-nC12)	MG/KG	100	100	0	99.1	97.9	99	98	1.0	30	75 - 125	

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/15/2006 15:13
PROJECT NUMBER :

SAMPLE MATRIX : SOLID METHOD REFERENCE : TNRCC-1005
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : TPHL566 LCSD SAMPLE ID : TPHL566D
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 07/14/1906 DATE ANALYZED : 07/14/1906
INSTRUMENT FILE : B13406 INSTRUMENT FILE : B13407

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
TPH- (>nC12-nC28)	MG/KG	250	250	313	250	125	100	22.2	30	75 - 125
TPH- (nC6-nC12)	MG/KG	250	250	247	246	99	98	1.0	30	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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The Woodlands, TX 77380

Page 1 of 1

LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-7 (20-21)
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7945.001
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/20/2006 DATE RECEIVED : 07/21/2006
SAMPLE MATRIX : SOIL PRINTED ON : 08/15/2006 15:57

% MOISTURE : ANALYST : SP
DATE ANALYZED : 07/28/06 DILUTION : 1
INSTRUMENT ID : F-6890 SAMPLE WEIGHT : 5.4 g
TIME ANALYZED : 17:52

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	4.6	UG/KG	ND	UG/KG
Ethylbenzene	4.6	UG/KG	ND	UG/KG
Toluene	4.6	UG/KG	ND	UG/KG
Xylene (total)	4.6	UG/KG	ND	UG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	46.3 UG/KG	70 - 130	97



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Page 1 of 1

LABORATORY REPORT

BTEX BY GC/PID

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : FVBLKL4
PROJECT NUMBER : METHOD REFERENCE : SW846-8021B
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : SOLID PRINTED ON : 08/15/2006 15:58

% MOISTURE : ANALYST : SP
DATE ANALYZED : 07/28/06 DILUTION : 1
INSTRUMENT ID : F-6890 SAMPLE WEIGHT : 5 g
TIME ANALYZED : 15:40

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.0	UG/KG	ND	UG/KG
Ethylbenzene	5.0	UG/KG	ND	UG/KG
Toluene	5.0	UG/KG	ND	UG/KG
Xylene (total)	5.0	UG/KG	ND	UG/KG

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/KG	70 - 130	96



MS/MSD SUMMARY REPORT

BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/19/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 15:58
PROJECT NUMBER : 94057272

SAMPLE MATRIX : SOIL METHOD REFERENCE : SW846-8021B

SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7932.004 MS SAMPLE ID : 7932.004MS MSD SAMPLE ID : 7932.004MSD
CLIENT SAMPLE ID : MW-3 CLIENT SAMPLE ID : MW-3MS1 CLIENT SAMPLE ID : MW-3MSD1
DATE ANALYZED : 07/28/1906 DATE ANALYZED : 07/28/1906 DATE ANALYZED : 07/28/1906
INSTRUMENT FILE : F7091 INSTRUMENT FILE : F7092 INSTRUMENT FILE : F7093

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT
		ADDED	ADDED	SAMPL	MS	MSD	RECOVERY	RECOVERY			
				CONC.	CONC.	CONC.	(%)	(%)		RPD	REC.
Benzene	UG/KG	49	47	0	43	46	88	98	10.8	25	70 - 130
Ethylbenzene	UG/KG	49	47	0	41	46	84	98	15.4	25	70 - 130
Toluene	UG/KG	49	47	0	39	44	80	94	16.1	25	70 - 130
Xylene (total)	UG/KG	150	140	0	120	130	80	93	15.0	25	70 - 130

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits
Spike Recovery : 0 out of 8 outside limits



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LCS/LCSD SUMMARY REPORT
BTEX BY GC/PID

```

CLIENT NAME      :
PROJECT NAME     :
PROJECT NUMBER   :
DATE RECEIVED    :
PRINTED ON       : 07/15/2006 15:58

SAMPLE MATRIX    : SOLID
METHOD REFERENCE : SW846-8031B
LAB CONTROL SAMPLE
LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID    : FVLCSL4
LCSD SAMPLE ID   :
CLIENT SAMPLE ID :
DATE ANALYZED    : 07/28/1906
DATE ANALYZED    :
INSTRUMENT FILE  : F7084
INSTRUMENT FILE  :
  
```

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE VALUE	TRUE VALUE	FOUND VALUE	FOUND VALUE	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Benzene	UG/KG	50		56		112			25	70 - 130
Ethylbenzene	UG/KG	50		54		108			25	70 - 130
Toluene	UG/KG	50		50		100			25	70 - 130
Xylene (total)	UG/KG	150		170		113			25	70 - 130

* Indicate values outside of QC limits

```

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 4 outside limits
  
```

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(Fax) (281) 292-2481

**END
OF
REPORT**



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(281)292-5277
FAX: (281)292-2481

August 15, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

REFERENCE:

Project.....: BALLINGER SEEP
Project Number.....: 94057272
Lab Episode Number.....: 7946
Date Received.....: 07/21/2006

Dear MAX MAJESKO:

Enclosed is the analytical Report for the project referenced above. The following sample(s) are included in the report.

- MW-2 MW-4 MW-5 MW-3
- TRIP BLANK

All the holding times were met for the tests performed on these samples. Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting A4 SCIENTIFIC for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,

Reddy Pakanati
Laboratory Manager



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The Woodlands, TX 77380
(281) 292-5277
(Fax) : (281) 292-2481

ANALYTICAL REPORT

CLIENT PROJECT.....: BALLINGER SEEP
CLIENT PROJECT NUMBER....: 94057272

Prepared For:

TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

ATTENTION: MAX MAJESKO

Date: 08/15/2006

Reddy Pakanati
Signature

LAB EPISODE NUMBER: 7946
Date Received.....: 07/21/2006
Lab Project ID.....: Q072006A

Reddy Pakanati
Laboratory Manager
(281) 292-5277
pakanati@a4scientific.com



Office Location Dallas

Project Manager Max Majesko

Sampler's Name Yock Morgan

Sampler's Signature Yock Morgan

Laboratory: A.Y. Scientific

Address: The Woodlands, TX

Contact: Chad Roberts

Phone: 281-292-5877

PO/ISO #:

Sampler's Signature

Proj. No. 94057272 Project Name Bullinger SLP

Matrix	Date	Time	Identifying Marks of Sample(s)			No/Type of Containers		
			C	G	D	VOA	AG	P/O
W	7-20-06	0835	X			6	1	3
W		1400	X			6	1	3
W		1445	X			6	1	3
W		1540	X			4		3
W						1		

NFE Yock M

Turn around time	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> 25% Rush	<input type="checkbox"/> 50% Rush	<input type="checkbox"/> 100% Rush
Relinquished by (Signature) <u>Yock Morgan</u>	Date: <u>7-20-06</u>	Time: <u>1930</u>	Received by: (Signature)	Date: _____ Time: _____
Relinquished by (Signature)	Date: _____	Time: _____	Received by: (Signature)	Date: _____ Time: _____
Relinquished by (Signature)	Date: _____	Time: _____	Received by: (Signature)	Date: _____ Time: _____
Relinquished by (Signature)	Date: _____	Time: _____	Received by: (Signature)	Date: <u>7/20/06</u> Time: <u>10:30</u>

ANALYSIS REQUESTED	Lab Sample ID (Lab Use Only)
BTEX (8018)	X
TPH (6005)	X
TPH (6006)	X
TPH (8310)	X
Chloride Sulfate Nitrate Bromide	X
Carbonate Bicarbonate	X
Sodium Phosphate Magnesium Calcium	X
Total Dissolved Solids	X
Ceclon (unit)	X

Lab use only
Due Date: _____

Temp. of coolers when received (C°):
1 2 3 4 5

Page 1 of 1

NOTES: 1006 & 8310 to be run later on-site
on 1005 results. Do not miss hold time.
Note short hold time on Nitrate

Matrix: WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag O - Oil
 Container: VOA - 40 ml vial A/G - Amber LGL Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

Houston Office: 11555 Clay Road, Suite 100, Houston, Texas 77043, (713) 690-8989 Fax (713) 690-8787

Dallas Office: 8901 Carpenter Freeway, Suite 100, Dallas, Texas 75247, (214) 630-1010 Fax (214) 630-7070

Fort Worth Office: 2601 Gravel Drive, Fort Worth, Texas 76118, (817) 268-8600 Fax (817) 268-8602

Austin Office: 5307 Industrial Oaks Blvd. # 160, Austin, Texas 78735, (512) 442-1122 Fax (512) 442-1181

Midland Office: 24 Smith Rd., # 261, Midland, Texas 79705, (432) 684-9600 Fax (432) 684-9608

Cell 971 308 0404



Sample Log-in Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: CR

Client Name: TERRACON CONSULTANTS, INC.

Client Project Name: BALLINGER SEEP

Client Project #: 94057272

P.O. No.:

Courier/No.:

Lab Project ID: Q072006A

Date Logged: 07/21/06

Date Received: 07/21/06

Time Received: 12:30

Report Date: 07/21/2006 13:00:24

Send Report To..

MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS TX 75247

CASE	SDG	Lab Sample ID	Client Sample ID	No. Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
7946.001	MW-2			10	WATER	07/20/06	08:35	7946A	ALKALINITY, BICARB310.1 ALKALINITY, CARB310.1 BROMIDE_300 BTEX-8021 CHLORIDE_300 CONDUCTIVITY_120.1 MET_TOTAL_6010B_CA MET_TOTAL_6010B_K MET_TOTAL_6010B_MG MET_TOTAL_6010B_NA NITRATE_300 SULFATE_300 TDS_160.1 TPH1005	07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06	
7946.002	MW-4			10	WATER	07/20/06	14:00	7946A	ALKALINITY, BICARB310.1 ALKALINITY, CARB310.1 BROMIDE_300 BTEX-8021 CHLORIDE_300 CONDUCTIVITY_120.1 MET_TOTAL_6010B_CA MET_TOTAL_6010B_K	07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06	

Lab Approval

Client Approval



Sample Log-In Report

1544 Sawdust Road, Suite 505
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Client Name: TERRACON CONSULTANTS, INC.

Client Project Name: BALLINGER SEEP

Client Project #: 94057272

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Lab Project ID: Q072006A

Date Logged: 07/21/06

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Send Report To..

MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS TX 75247

CASE	SDG	Lab	Sample ID	Client Sample ID	No.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
		7946.003	MW-5		10	WATER	07/20/06	14:45	7946A	MET_TOTAL_6010B_MG MET_TOTAL_6010B_NA NITRATE_300 SULFATE_300 TDS_160.1 TPH1005	07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06	
		7946.004	MW-3		7	WATER	07/20/06	15:40	7946A	ALKALINITY,BICARB310.1 ALKALINITY,CARB310.1 BROMIDE_300 BTEX-8021 CHLORIDE_300 CONDUCTIVITY_120.1 MET_TOTAL_6010B_CA MET_TOTAL_6010B_K MET_TOTAL_6010B_MG MET_TOTAL_6010B_NA NITRATE_300 SULFATE_300 TDS_160.1 TPH1005	07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06 07/28/06	

Lab Approval

Client Approval



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: CR
Client Name: TERRACON CONSULTANTS, INC.
Client Project Name: BALLINGER SEEP
ClientProject #: 94057272
P.O. No.:
Courier/No.:

Lab Project ID: Q072006A
Date Logged: 07/21/06
Date Received: 07/21/06
Time Received: 12:30

Report Date: 07/21/2006 13:00:24
Send Report To:
MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS
TX 75247

CASE	SDG	Lab Sample ID	Client Sample ID	No. Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
		7946.005	TRIP BLANK	1	WATER				BROMIDE_300	07/28/06	
									BTEX-8021	07/28/06	
									CHLORIDE_300	07/28/06	
									CONDUCTIVITY_120.1	07/28/06	
									MET_TOTAL_6010B_CA	07/28/06	
									MET_TOTAL_6010B_K	07/28/06	
									MET_TOTAL_6010B_MG	07/28/06	
									MET_TOTAL_6010B_NA	07/28/06	
									NITRATE_300	07/28/06	
									SULFATE_300	07/28/06	
									TDS_160.1	07/28/06	
									TPH1005	07/28/06	
									BTEX-8021	07/28/06	

Instructions To Lab:

TRRP
NITRATE = 48 HR HT
TPH1006 PENDING TPH1005 RESULTS

Lab Approval

Client Approval



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The Woodlands, TX 77380

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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-2
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7946.001
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/20/2006 DATE RECEIVED : 07/21/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 10:00

ANALYST : SP DATE ANALYZED : 07/24/06
DILUTION : 1 INSTRUMENT ID : F-6890
PURGE VOLUME : 5 mL TIME ANALYZED : 15:47

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.0	UG/L	ND	UG/L
Ethylbenzene	5.0	UG/L	ND	UG/L
Toluene	5.0	UG/L	ND	UG/L
Xylene (total)	5.0	UG/L	ND	UG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	125



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The Woodlands, TX 77380

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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-4
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7946.002
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 07/20/2006 DATE RECEIVED : 07/21/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 10:00

ANALYST : SP DATE ANALYZED : 07/24/06
DILUTION : 1 INSTRUMENT ID : F-6890
PURGE VOLUME : 5 mL TIME ANALYZED : 16:17

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.0	UG/L	ND	UG/L
Ethylbenzene	5.0	UG/L	ND	UG/L
Toluene	5.0	UG/L	ND	UG/L
Xylene (total)	5.0	UG/L	ND	UG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	92



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: MW-5
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7946.003
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: SW846-8021B
DATE SAMPLED	: 07/20/2006	DATE RECEIVED	: 07/21/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 10:00

ANALYST	: SP	DATE ANALYZED	: 07/24/06
DILUTION	: 1	INSTRUMENT ID	: F-6890
PURGE VOLUME	: 5 mL	TIME ANALYZED	: 16:47

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.0	UG/L	ND	UG/L
Ethylbenzene	5.0	UG/L	ND	UG/L
Toluene	5.0	UG/L	ND	UG/L
Xylene (total)	5.0	UG/L	ND	UG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	86



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: MW-3
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7946.004
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: SW846-8021B
DATE SAMPLED	: 07/20/2006	DATE RECEIVED	: 07/21/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 10:00

ANALYST	: SP	DATE ANALYZED	: 07/24/06
DILUTION	: 1	INSTRUMENT ID	: F-6890
PURGE VOLUME	: 5 mL	TIME ANALYZED	: 17:18

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	112



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : TRIP BLANK
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7946.005
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : DATE RECEIVED : 07/21/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 10:00

ANALYST : SP DATE ANALYZED : 07/24/06
DILUTION : 1 INSTRUMENT ID : F-6890
PURGE VOLUME : 5 mL TIME ANALYZED : 17:49

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	93



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : FVBLKL3
PROJECT NUMBER : METHOD REFERENCE : SW846-8021B
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : LIQUID PRINTED ON : 08/15/2006 10:00

ANALYST : SP DATE ANALYZED : 07/24/06
DILUTION : 1 INSTRUMENT ID : F-6890
PURGE VOLUME : 5 mL TIME ANALYZED : 09:19

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.0	UG/L	ND	UG/L
Ethylbenzene	5.0	UG/L	ND	UG/L
Toluene	5.0	UG/L	ND	UG/L
Xylene (total)	5.0	UG/L	ND	UG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	91



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MS/MSD SUMMARY REPORT

BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/18/2006 10:00

SAMPLE MATRIX : WATER

METHOD REFERENCE : SW846-9011B

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DILUCTION

SAMPLE ID : 7940.002
CLIENT SAMPLE ID : SW-TR181
DATE ANALYZED : 07/24/2006
INSTRUMENT FILE : F7044

MS SAMPLE ID : 7940.002MS
CLIENT SAMPLE ID : SW-TR181MS1
DATE ANALYZED : 07/24/2006
INSTRUMENT FILE : F7044

MSD SAMPLE ID : 7940.002MSD
CLIENT SAMPLE ID : SW-TR181MS1
DATE ANALYZED : 07/24/2006
INSTRUMENT FILE : F7044

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT	REC.
		ADDED	SPIKE	ADDED	SPIKE	CONC.	CONC.	RECOVERY (%)	RECOVERY (%)			
Benzene	UG/L	50	50	0	45	49	90	98	8.5	25	75 - 125	
Ethylbenzene	UG/L	50	50	0	47	52	94	104	10.1	25	75 - 125	
Toluene	UG/L	50	50	0	46	60	92	120	26.4 *	25	75 - 125	
Xylene (total)	UG/L	150	150	0	140	150	93	100	7.3	25	75 - 125	

* Indicate values outside of QC limits

RPD : 1 out of 4 outside limits
Spike Recovery : 0 out of 8 outside limits



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The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 10:30

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : FVLC2L3
CLIENT SAMPLE ID :
DATE ANALYZED : 07/14/2006
INSTRUMENT FILE : F7042

METHOD REFERENCE : SW846-8001B
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Benzene	UG/L	50		51		102			25	75 - 125
Ethylbenzene	UG/L	50		51		102			25	75 - 125
Toluene	UG/L	50		54		108			25	75 - 125
Xylene (total)	UG/L	150		140		93			25	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 4 outside limits



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The Woodlands, TX 77380

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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-2
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7946.001
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/20/2006 DATE RECEIVED : 07/21/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 8:20

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13439
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 19:32

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
TPH- (>nC12-nC28)	5.0	MG/L	ND	MG/L	
TPH- (>nC28-nC35)	5.0	MG/L	ND	MG/L	
TPH- (nC6-nC12)	5.0	MG/L	ND	MG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	209
1-Chlorooctane	5 UG/L	70 - 130	249



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-4
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7946.002
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/20/2006 DATE RECEIVED : 07/21/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 8:20

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13440
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 20:20

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH-(>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH-(>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH-(nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	86
1-Chlorooctane	5 UG/L	70 - 130	96



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-5
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7946.003
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/20/2006 DATE RECEIVED : 07/21/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 8:20

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13441
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 21:06

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
TPH-(>nC12-nC28)	5.0	MG/L	ND	MG/L	
TPH-(>nC28-nC35)	5.0	MG/L	ND	MG/L	
TPH-(nC6-nC12)	5.0	MG/L	ND	MG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	109
1-Chlorooctane	5 UG/L	70 - 130	128



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-3
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7946.004
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/20/2006 DATE RECEIVED : 07/21/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 8:20

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13442
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 21:51

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH-(>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH-(>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH-(nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	109
1-Chlorooctane	5 UG/L	70 - 130	117



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : TPHB565
PROJECT NUMBER : METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : LIQUID PRINTED ON : 08/15/2006 8:20

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13426
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 05:18

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH- (>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH- (>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH- (nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	96
1-Chlorooctane	5 UG/L	70 - 130	116



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MS/MSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/10/2006
PRINTED ON : 08/15/2006 8:20

SAMPLE MATRIX : WATER

METHOD REFERENCE : TNRCC-1005

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.002
CLIENT SAMPLE ID : SW-TRIB1
DATE ANALYZED : 07/15/1906
INSTRUMENT FILE : B13408

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID : SW-TRIB1MS1
DATE ANALYZED : 07/15/1906
INSTRUMENT FILE : B13429

MSD SAMPLE ID : 7940.003MSD
CLIENT SAMPLE ID : SW-TRIB1MSL1
DATE ANALYZED : 07/15/1906
INSTRUMENT FILE : B13430

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT
		ADDED	ADDED	SAMPL	CONC.	CONC.	RECOVERY	RECOVERY			
				CONC.	CONC.	CONC.	(%)	(%)		LIMIT	REC.
TPH-(>nC12-nC28)	MG/L	10.0	10.0	0	9.93	8.16	99	82	18.8	30	75 - 125
TPH-(nC6-nC12)	MG/L	10.0	10.0	0	10.4	9.97	104	100	3.9	30	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 8:10

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : TPHL56L
CLIENT SAMPLE ID :
DATE ANALYZED : 07/15/1900
INSTRUMENT FILE : B13383

METHOD REFERENCE : INRCC-1005
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID : TPHL56D
CLIENT SAMPLE ID :
DATE ANALYZED : 07/15/1900
INSTRUMENT FILE : B13384

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
TPH-(>nC12-nC28)	MG/L	33.3	33.3	28.6	29.8	86	89	3.4	30	75 - 125
TPH-(nC6-nC12)	MG/L	33.3	33.3	26.9	25.2	81	76	6.4	30	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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The Woodlands, TX 77380

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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 8:14

PARAMETER: Alkalinity, Carbonate (as CaCO3)

CLIENT SAMPLE ID	MW-2	MW-4	MW-5	MW-3
SAMPLE ID	7946.001	7946.002	7946.003	7946.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
DATE RECEIVED	07/21/2006	07/21/2006	07/21/2006	07/21/2006
METHOD REFERENCE	EPA-310.1	EPA-310.1	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2	2	2
RESULTS	ND	ND	ND	ND
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
QC BATCH ID	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A
LCS ID	ALKCLCS0721A	ALKCLCS0721A	ALKCLCS0721A	ALKCLCS0721A
LCSD ID				
DUP ID				



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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 8:14

PARAMETER: Alkalinity, Carbonate (as CaCO3)

CLIENT SAMPLE ID	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	ALKCBLK0721A	ALKCLCS0721A
SAMPLE MATRIX		
DATE SAMPLED		
DATE RECEIVED		
METHOD REFERENCE	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2
RESULTS	ND	53
UNITS	MG/L	MG/L
QUALIFIER		
ANALYST	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06
DILUTION	1	1
QC BATCH ID	ALKCBLK0721A	ALKCBLK0721A
PRE-PREP BLANK ID		
PREP BLANK ID	ALKCBLK0721A	ALKCBLK0721A
LCS ID		
LCSD ID		
DUP ID		



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LCS/LCSD SUMMARY REPORT
 ALKALINITY (TITRIMETRIC)

CLIENT NAME :
 PROJECT NAME :
 PROJECT NUMBER :

DATE RECEIVED :
 PRINTED ON : 06/15/2006 11:14

SAMPLE MATRIX : LIQUID
 LAB CONTROL SAMPLE
 LCS SAMPLE ID : ALECLCS0721A
 CLIENT SAMPLE ID :
 DATE ANALYZED : 07/21/1906
 INSTRUMENT FILE :

METHOD REFERENCE : EPA-810.1
 LAB CONTROL SAMPLE DUPLICATE
 LCSD SAMPLE ID :
 CLIENT SAMPLE II :
 DATE ANALYZED :
 INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RFD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Alkalinity, Carbonate (as CaCO3)	MG/L	50		53		106			20	90 - 110

* Indicate values outside of QC limits

RFD : 0 out of 0 outside limits
 Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 8:14

PARAMETER: Alkalinity, Bicarbonate (as CaCO3)

CLIENT SAMPLE ID	MW-2	MW-4	MW-5	MW-3
SAMPLE ID	7946.001	7946.002	7946.003	7946.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
DATE RECEIVED	07/21/2006	07/21/2006	07/21/2006	07/21/2006
METHOD REFERENCE	EPA-310.1	EPA-310.1	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2	2	2
RESULTS	310	190	300	150
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
QC BATCH ID	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A
LCS ID	ALKB LCS0721A	ALKB LCS0721A	ALKB LCS0721A	ALKB LCS0721A
LCSD ID				
DUP ID				



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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 8:15

PARAMETER: Alkalinity, Bicarbonate (as CaCO3)

CLIENT SAMPLE ID	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	ALKBBLK0721A	ALKBLCS0721A
SAMPLE MATRIX		
DATE SAMPLED		
DATE RECEIVED		
METHOD REFERENCE	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2
RESULTS	ND	53
UNITS	MG/L	MG/L
QUALIFIER		
ANALYST	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06
DILUTION	1	1
QC BATCH ID	ALKBBLK0721A	ALKBBLK0721A
PRE-PREP BLANK ID		
PREP BLANK ID	ALKBBLK0721A	ALKBBLK0721A
LCS ID		
LCSD ID		
DUP ID		



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LCS/LCSD SUMMARY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 8:15

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : ALKBLCS0721A
CLIENT SAMPLE ID :
DATE ANALYZED : 07/31/1906
INSTRUMENT FILE :

METHOD REFERENCE : EPA-810.1
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	RPD	QC LIMITS
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)			
Alkalinity, Bicarbonate (as CaCO3	MG/L	50.0		53.0		106			20	90 - 110

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:32

PARAMETER: Conductivity

CLIENT SAMPLE ID	MW-2	MW-4	MW-5	MW-3
SAMPLE ID	7946.001	7946.002	7946.003	7946.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
DATE RECEIVED	07/21/2006	07/21/2006	07/21/2006	07/21/2006
METHOD REFERENCE	EPA-120.1	EPA-120.1	EPA-120.1	EPA-120.1
QUANTITATION LIMIT	1	1	1	1
RESULTS	3200	15000	57000	2000
UNITS	UMHO/CM	UMHO/CM	UMHO/CM	UMHO/CM
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
TIME ANALYZED	16:00	16:00	16:00	16:00
QC BATCH ID	CONBLK0721A	CONBLK0721A	CONBLK0721A	CONBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	CONBLK0721A	CONBLK0721A	CONBLK0721A	CONBLK0721A
LCS ID	CONLCS0721A	CONLCS0721A	CONLCS0721A	CONLCS0721A
LCSD ID				
DUP ID				



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LABORATORY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:32

PARAMETER: Conductivity

CLIENT SAMPLE ID	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	CONBLK0721A	CONLCS0721A
SAMPLE MATRIX		
DATE SAMPLED		
DATE RECEIVED		
METHOD REFERENCE	EPA-120.1	EPA-120.1
QUANTITATION LIMIT	1	1
RESULTS	ND	973
UNITS	UMHO/CM	UMHO/CM
QUALIFIER		
ANALYST	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06
TIME ANALYZED	16:00	16:00
QC BATCH ID	CONBLK0721A	CONBLK0721A
PRE-PREP BLANK ID		
PREP BLANK ID	CONBLK0721A	CONBLK0721A
LCS ID		
LCSD ID		
DUP ID		



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LCS/LCSD SUMMARY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/15/2006 7:37
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : EPA-120.1
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : CONLCS0721A LCSD SAMPLE ID :
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906 DATE ANALYZED :
INSTRUMENT FILE : INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY	RPD	LIMIT REC.
Conductivity	UMHO/	1000		973		97		20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:29

PARAMETER: Total Dissolved Solids

CLIENT SAMPLE ID	MW-2	MW-4	MW-5	MW-3
SAMPLE ID	7946.001	7946.002	7946.003	7946.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
DATE RECEIVED	07/21/2006	07/21/2006	07/21/2006	07/21/2006
METHOD REFERENCE	EPA-160.1	EPA-160.1	EPA-160.1	EPA-160.1
QUANTITATION LIMIT	5	5	5	5
RESULTS	23300	11700	38900	14600
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	LOH	LOH	LOH	LOH
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
QC BATCH ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
LCS ID	TDSLCS0721A	TDSLCS0721A	TDSLCS0721A	TDSLCS0721A
LCSD ID				
DUP ID	7940.001DUP1	7940.001DUP1	7940.001DUP1	7940.001DUP1



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LABORATORY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:29

PARAMETER: Total Dissolved Solids

CLIENT SAMPLE ID	SEEP-1DUP	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	7940.001DUP1	TDSBLK0721A	TDSLCS0721A
SAMPLE MATRIX	WATER		
DATE SAMPLED	07/19/2006		
DATE RECEIVED	07/20/2006		
METHOD REFERENCE	EPA-160.1	EPA-160.1	EPA-160.1
QUANTITATION LIMIT	5	5	5
RESULTS	2360	ND	272
UNITS	MG/L	MG/L	MG/L
QUALIFIER			
ANALYST	LOH	LOH	LOH
DATE ANALYZED	07/21/06	07/21/06	07/21/06
QC BATCH ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
PRE-PREP BLANK ID			
PREP BLANK ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
LCS ID	TDSLCS0721A		
LCSD ID			
DUP ID	7940.001DUP1		



DUPLICATE SUMMARY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006

SAMPLE MATRIX : WATER

METHOD REFERENCE : EPA-160.1

SAMPLE

SAMPLE DUPLICATE

SAMPLE ID :
CLIENT SAMPLE ID : SEEP-1
DATE ANALYZED : 07/21/1906
GC FILE ID :

DUP SAMPLE ID : 7940.001DUP1
CLIENT SAMPLE ID : SEEP-1DUP
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE :

COMPOUND	SAMPLE CONC.	DUP. CONC.	UNITS	RPD	RPD LIMITS
Total Dissolved Solids	2430	2360	MG/L	2.9	20

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits



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LCS/LCSD SUMMARY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 7:29

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : EPA-160.1

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : TDSLCS0721A

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/21/1906

DATE ANALYZED :

INSTRUMENT FILE :

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Total Dissolved Solids	MG/L	300		272		91			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:08

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID	MW-2	MW-4	MW-5	MW-3
SAMPLE ID	7946.001	7946.002	7946.003	7946.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
DATE RECEIVED	07/21/2006	07/21/2006	07/21/2006	07/21/2006
METHOD REFERENCE	EPA-300	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5	0.5
RESULTS	3860	2440	5920	3050
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	BT	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	ICLCS0721A	ICLCS0721A
LCSD ID				
MS ID	7940.001MS	7940.001MS	7940.001MS	7940.001MS
MSD ID	7940.001MSD	7940.001MSD	7940.001MSD	7940.001MSD
DUP ID				



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LABORATORY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:08

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID PREP BLANK
SAMPLE ID ICBLK0721A
SAMPLE MATRIX
DATE SAMPLED
DATE RECEIVED

METHOD REFERENCE EPA-300
QUANTITATION LIMIT 0.5
RESULTS ND
UNITS MG/L
QUALIFIER

ANALYST BT
DATE ANALYZED 07/21/06
DILUTION 1
INSTRUMENT FILE ANIONS296
INSTRUMENT ID A-DX120

QC BATCH ID ICBLK0721A
PRE-PREP BLANK ID
PREP BLANK ID ICBLK0721A
LCS ID
LCSD ID
MS ID
MSD ID
DUP ID



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MS/MSD SUMMARY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:08
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : EPA-800
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7940.001 MS SAMPLE ID : 7940.001MS MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1 CLIENT SAMPLE ID : SEEP-1MS CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT
		SPIKE	SPIKE	SAMPL	MS	MSD	RECOVERY	RECOVERY	RPD		
		ADDED	ADDED	CONC.	CONC.	CONC.	(%)	(%)		LIMIT	
Chloride as Cl	MG/L	10.0	10.0	1060	957	900	0*	-1600*	200.0*	20	80 - 120

* Indicate values outside of QC limits

RPD : 1 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/15/2006 18:08
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : 1CLCS0701A LCSD SAMPLE ID :
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 07/11/1906 DATE ANALYZED :
INSTRUMENT FILE : ANIONS096 INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Chloride as Cl	MG/L	10.0		10.5		105			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:08

PARAMETER: Sulfate (as SO4)

CLIENT SAMPLE ID	MW-2	MW-4	MW-5	MW-3
SAMPLE ID	7946.001	7946.002	7946.003	7946.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
DATE RECEIVED	07/21/2006	07/21/2006	07/21/2006	07/21/2006
METHOD REFERENCE	EPA-300	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5	0.5
RESULTS	734	1410	554	1020
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	BT	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	ICLCS0721A	ICLCS0721A
LCSD ID				
MS ID	7940.001MS	7940.001MS	7940.001MS	7940.001MS
MSD ID	7940.001MSD	7940.001MSD	7940.001MSD	7940.001MSD
DUP ID				



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LABORATORY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:08

PARAMETER: Sulfate (as SO4)

CLIENT SAMPLE ID PREP BLANK
SAMPLE ID ICBLK0721A
SAMPLE MATRIX
DATE SAMPLED
DATE RECEIVED

METHOD REFERENCE EPA-300
QUANTITATION LIMIT 0.5
RESULTS ND
UNITS MG/L
QUALIFIER

ANALYST BT
DATE ANALYZED 07/21/06
DILUTION 1
INSTRUMENT FILE ANIONS296
INSTRUMENT ID A-DX120

QC BATCH ID ICBLK0721A
PRE-PREP BLANK ID
PREP BLANK ID ICBLK0721A
LCS ID
LCSD ID
MS ID
MSD ID
DUP ID



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LCS/LCSD SUMMARY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 09/15/2006 18:08
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : EPA-800
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : 1CLCS0721A LCSD SAMPLE ID :
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 07/31/1906 DATE ANALYZED :
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Sulfate (as SO4)	MG/L	10.0		10.7		107			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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MS/MSD SUMMARY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 09/15/2006 18:09
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : EPA-300
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7940.001 MS SAMPLE ID : 7940.001MS MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1 CLIENT SAMPLE ID : SEEP-1MS CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	MS	MSD	RPD	QC LIMIT	
		SPIKE	SPIKE		CONC.	CONC.	RECOVERY	RECOVERY			REC.
Sulfate (as SO4)	MG/L	10.0	10.0	320	260	264	0 *	-560 *	200.0 *	20	80 - 120

* Indicate values outside of QC limits

RPD : 1 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



1544 Sawdust Road, Suite 505
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LABORATORY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:08

PARAMETER: Bromide

CLIENT SAMPLE ID	MW-2	MW-4	MW-5	MW-3
SAMPLE ID	7946.001	7946.002	7946.003	7946.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
DATE RECEIVED	07/21/2006	07/21/2006	07/21/2006	07/21/2006
METHOD REFERENCE	EPA-300	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	2	2	2	2
RESULTS	ND	ND	ND	ND
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	BT	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	DX120	DX120	DX120	DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	ICLCS0721A	ICLCS0721A
LCSD ID				
MS ID	7940.001MS	7940.001MS	7940.001MS	7940.001MS
MSD ID	7940.001MSD	7940.001MSD	7940.001MSD	7940.001MSD
DUP ID				



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:08

PARAMETER: Bromide

CLIENT SAMPLE ID PREP BLANK
SAMPLE ID ICBLK0721A
SAMPLE MATRIX
DATE SAMPLED
DATE RECEIVED

METHOD REFERENCE EPA-300
QUANTITATION LIMIT 2
RESULTS ND
UNITS MG/L
QUALIFIER

ANALYST BT
DATE ANALYZED 07/21/06
DILUTION 1
INSTRUMENT FILE ANIONS296
INSTRUMENT ID DX120

QC BATCH ID ICBLK0721A
PRE-PREP BLANK ID
PREP BLANK ID ICBLK0721A
LCS ID
LCSD ID
MS ID
MSD ID
DUP ID



1544 Sawdust Road, Suite 505
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LCS/LCSD SUMMARY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 18:08

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : EPA-300

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : ICLCS0701A

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/21/1906

DATE ANALYZED :

INSTRUMENT FILE : ANIONS296

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		LIMIT	REC.
Bromide	MG/L	10.0		8.80		88			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

MS/MSD SUMMARY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006 18:08

SAMPLE MATRIX : WATER

METHOD REFERENCE : EPA-800

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.001
CLIENT SAMPLE ID : SEEP-1
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID : SEEP-1MS
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	MS			MSD		RPD	QC LIMIT
		SPIKE	SPIKE	SAMPL	MS	MSD	RECOVERY	RECOVERY		
		ADDED	ADDED	CONC.	CONC.	CONC.	(%)	(%)	RPD	REC.
Bromide	MG/L	10.0	10.0	0	11.1	11.6	111	116	4.4	20 90 - 120

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
Spike Recovery : 0 out of 2 outside limits



1544 Sawdust Road, Suite 505
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LABORATORY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:08

PARAMETER: Nitrate (as N)

CLIENT SAMPLE ID	MW-2	MW-4	MW-5	MW-3
SAMPLE ID	7946.001	7946.002	7946.003	7946.004
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/20/2006	07/20/2006	07/20/2006	07/20/2006
DATE RECEIVED	07/21/2006	07/21/2006	07/21/2006	07/21/2006
METHOD REFERENCE	EPA-300	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5	0.5
RESULTS	13	16	1900	19
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	BT	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	ICLCS0721A	ICLCS0721A
LCS ID				
MS ID	7940.001MS	7940.001MS	7940.001MS	7940.001MS
MSD ID	7940.001MSD	7940.001MSD	7940.001MSD	7940.001MSD
DUP ID				



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:08

PARAMETER: Nitrate (as N)

CLIENT SAMPLE ID PREP BLANK
SAMPLE ID ICBLK0721A
SAMPLE MATRIX
DATE SAMPLED
DATE RECEIVED

METHOD REFERENCE EPA-300
QUANTITATION LIMIT 0.5
RESULTS ND
UNITS MG/L
QUALIFIER

ANALYST BT
DATE ANALYZED 07/21/06
DILUTION 1
INSTRUMENT FILE ANIONS296
INSTRUMENT ID A-DX120

QC BATCH ID ICBLK0721A
PRE-PREP BLANK ID
PREP BLANK ID ICBLK0721A
LCS ID
LCSD ID
MS ID
MSD ID
DUP ID



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The Woodlands, TX 77380

MS/MSD SUMMARY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC.	DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP	PRINTED ON : 08/15/2006 16:08
PROJECT NUMBER : 94057272	
SAMPLE MATRIX : WATER	METHOD REFERENCE : EPA-300
<u>SAMPLE</u>	<u>MATRIX SPIKE</u>
SAMPLE ID : 7940.001	MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID : SEEP-1	MSD SAMPLE ID : 7940.001MSD
DATE ANALYZED : 07/21/1906	CLIENT SAMPLE ID : SEEP-1MSD
INSTRUMENT FILE : ANIONS296	DATE ANALYZED : 07/21/1906
	INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL		MS	MSD	RPD	QC LIMIT		
		ADDED	ADDED	CONC.	CONC.	RECOVERY (%)	RECOVERY (%)				
Nitrate (as N)	MG/L	10	10	0	8.6	8.7	86	87	1.2	20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
Spike Recovery : 0 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 18:08

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : ICLCS0721A
CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296

METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
		VALUE	VALUE	VALUE	VALUE	(%)	(%)			
Nitrate (as N)	MG/L	10		8.5		85			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



The Woodlands, TX 77380
1544 Sawdust Road, Suite 505

LABORATORY REPORT

TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-2
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7946.001
PROJECT NUMBER : 94057272 DATE RECEIVED : 07/21/2006
DATE SAMPLED : 07/20/2006 PRINTED ON : 08/15/2006 18:38
SAMPLE MATRIX : WATER % MOISTURE :

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	QUANTITATION LIMIT	RESULT	Q	ANALYST
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	1300 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	550 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	59 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	9100 MG/L		BT



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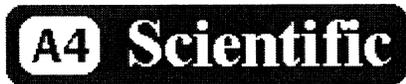
Page 1 of 1

LABORATORY REPORT

TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-4
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7946.002
PROJECT NUMBER : 94057272 DATE RECEIVED : 07/21/2006
DATE SAMPLED : 07/20/2006 PRINTED ON : 08/15/2006 18:38
SAMPLE MATRIX : WATER % MOISTURE :

ANALYTE	METHOD	DATE	DATE	DILU- TION	QUANTITATION	RESULT	Q	ANA- LYST
		PREPARED	ANALYZED		LIMIT			
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	920 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	320 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	45 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	3000 MG/L		BT



The Woodlands, TX 77380
1544 Sawdust Road, Suite 505

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: MW-5
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7946.003
PROJECT NUMBER	: 94057272	DATE RECEIVED	: 07/21/2006
DATE SAMPLED	: 07/20/2006	PRINTED ON	: 08/15/2006 18:38
SAMPLE MATRIX	: WATER	% MOISTURE	:

ANALYTE	METHOD	DATE	DATE	DILU- TION	QUANTITATION	RESULT	Q	ANA-
		PREPARED	ANALYZED		LIMIT			LYST
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	1200 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	510 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	240 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	21000 MG/L		BT



The Woodlands, TX 77380
1544 Sawdust Road, Suite 505

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-3
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7946.004
PROJECT NUMBER : 94057272 DATE RECEIVED : 07/21/2006
DATE SAMPLED : 07/20/2006 PRINTED ON : 08/15/2006 18:38
SAMPLE MATRIX : WATER % MOISTURE :

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	QUANTITATION LIMIT	RESULT	Q	ANALYST
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	820 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	220 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	44 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	5600 MG/L		BT



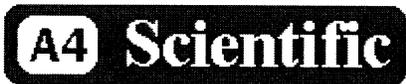
The Woodlands, TX 77380
1544 Sawdust Road, Suite 505

LABORATORY REPORT

TOTAL METALS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : ICPB671
PROJECT NUMBER : DATE RECEIVED :
DATE SAMPLED : PRINTED ON : 08/15/2006 18:38
SAMPLE MATRIX : LIQUID % MOISTURE :

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	QUANTITATION LIMIT	RESULT	Q	ANALYST
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	ND MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	ND MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	ND MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	ND MG/L		BT



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LCS/LCSD SUMMARY REPORT

TOTAL METALS

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 18:38

SAMPLE MATRIX : LIQUID

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : ICPLCS671

LCSD SAMPLE ID : ICPLCS671D

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

COMPOUND	METHOD REFERENCE	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
			TRUE VALUE	TRUE VALUE	FOUND VALUE	FOUND VALUE	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Calcium, Total	SW846-6010B	MG/L	20.0	20.0	20.0	20.3	100	102	2.0	30	80 - 120
Magnesium, Total	SW846-6010B	MG/L	20.0	20.0	20.0	20.4	100	102	2.0	30	80 - 120
Potassium, Total	SW846-6010B	MG/L	20.0	20.0	19.9	19.9	100	100	0.0	30	80 - 120
Sodium, Total	SW846-6010B	MG/L	20.0	20.0	22.6	21.8	113	109	3.6	30	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits

Spike Recovery : 0 out of 8 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

MS/MSD SUMMARY REPORT

TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006 18:38

SAMPLE MATRIX : WATER

SAMPLE

SAMPLE ID : 7940.001
CLIENT SAMPLE ID: SEEP-1

MATRIX SPIKE

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID: SEEP-1MS

MATRIX SPIKE DUPLICATE

MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID: SEEP-1MSD

COMPOUND	METHOD REFERENCE	UNITS	MS		SAMPL CONC.	MS CONC.	MSD CONC.	MS		RPD	MSD		QC LIMIT REC.
			SPIKE ADDED	SPIKE ADDED				RECOVER (%)	RECOVER (%)		RPD LIMIT	QC LIMIT REC.	
Calcium, Total	SW846-6010B	MG/L	20	20	130	150	150	100	100	0.0	0	75 - 125	
Magnesium, Total	SW846-6010B	MG/L	20.0	20.0	38	56.6	57.0	93	95	2.1	30	75 - 125	
Potassium, Total	SW846-6010B	MG/L	20	20	13	34	34	105	105	0.0	0	75 - 125	
Sodium, Total	SW846-6010B	MG/L	20	20	1000	1000	1000	0	0	0.0	0	75 - 125	

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits

Spike Recovery : 2 out of 8 outside limits

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The Woodlands, TX 77380
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(Fax) (281) 292-2481

**END
OF
REPORT**



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380
(281)292-5277
FAX: (281)292-2481

August 15, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

REFERENCE:

Project.....: BALLINGER SEEP
Project Number.....: 94057272
Lab Episode Number.....: 7947
Date Received.....: 07/21/2006

Dear MAX MAJESKO:

Enclosed is the analytical Report for the project referenced above. The following sample(s) are included in the report.

SW-CR-DOWN SW-CR-UP

All the holding times were met for the tests performed on these samples. Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting A4 SCIENTIFIC for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,

Reddy Pakanati
Laboratory Manager



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The Woodlands, TX 77380
(281) 292-5277
(Fax): (281) 292-2481

ANALYTICAL REPORT

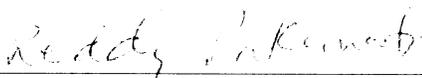
CLIENT PROJECT.....: BALLINGER SEEP
CLIENT PROJECT NUMBER....: 94057272

Prepared For:

TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

ATTENTION: MAX MAJESKO

Date: 08/15/2006



Signature

LAB EPISODE NUMBER: 7947
Date Received.....: 07/21/2006
Lab Project ID.....: Q072006A

Reddy Pakanati
Laboratory Manager
(281) 292-5277
pakanati@a4scientific.com

SAMPLE LOG-IN CHECKLIST/DISCREPANCY REPORT

EPISODE #: 7947 DATE/REC'D: 7/24/06 @ 1030 TEMP & ID: 1) 4.5⁰ # _____
 CLIENT NAME: _____ TIME: Terracon 2) _____ # _____
 PROJECT NAME: Ballinger Seep 3) _____ # _____
 PROJECT NUMBER: 940 57272 4) _____ # _____
 # 2 AQUEOUS, # _____ SOIL SAMPLES 5) _____ # _____
 COURIER/AIRBILL # FedEx 8573 5337 5021 6) _____ # _____

SAMPLE CONTAINER SEALS: present absent intact broken
 COOLER CUSTODY SEALS: present absent intact broken NAME & DATE: _____
 HOW MANY AND WHERE _____

	YES	NO
Were samples screened for radioactivity?	X	<input checked="" type="checkbox"/>
Chain-of-custody present?	X	
Custody documents: Sealed in a plastic bag?	X	
Signed and dated by field personnel	X	
Filled out properly in indelible ink?	X	
Signed and dated by log-in personnel?	X	
Container Condition: Each containers sealed in a separate plastic bag?	X	
Labels complete (ID, date, time, signature, preservative, etc.)?	X	
Labels agree with chain-of-custody?	X	
Received without leakage or breakage? If no, list:	X	
Correct quantity indicated on chain-of-custody?	X	
Sample Integrity: Correct containers used for the test indicated? If no, list:	X	
Correct preservatives added to the samples? If no, list:	X	
Sufficient sample amount sent for the tests indicated? If no, list:	X	
VOA vials filled completely? If no, list:	X	
Aqueous volatiles samples preserved? If no, list:	X	

Discrepancy Report
 Discrepancies to be discussed with the client? _____
 Project Manager's recommendations? _____
 Who was notified? _____ By whom? _____
 Date: _____
 Client's comments: _____
 Corrective actions carried out? _____

COMMENTS: All packing tape on separatory sample bags are intact.
 For those short holding time and fast turn-around parameters, has a Rush Notification sheet been issued to the lab? _____

LOG-IN BY: Chad Roberts DATE: 7/24/06



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: CR

Client Name: TERRACON CONSULTANTS, INC.

Client Project Name: BALLINGER SEEP

ClientProject #: 94057272

P.O. No.:

Courier/No.:

Lab Project ID: Q072006A

Date Logged: 07/21/06

Date Received: 07/21/06

Time Received: 12:30

Report Date: 07/21/2006 13:00:21

Send Report To:

MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS
TX 75247

CASE	SDG	Lab Sample ID	Client Sample ID	No. Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
		7947.001	SW-CR-DOWN	10	WATER	07/20/06	12:50	7947A	ALKALINITY, BICARB310.1 ALKALINITY, CARB310.1 BROMIDE_300 BTEX-8021 CHLORIDE_300 CONDUCTIVITY_120.1 MET_TOTAL_6010B_CA MET_TOTAL_6010B_K MET_TOTAL_6010B_MG MET_TOTAL_6010B_NA NITRATE_300 SULFATE_300 TDS_160.1 TPH1005	07/28/06	
		7947.002	SW-CR-UP	10	WATER	07/20/06	13:05	7947A	ALKALINITY, BICARB310.1 ALKALINITY, CARB310.1 BROMIDE_300 BTEX-8021 CHLORIDE_300 CONDUCTIVITY_120.1 MET_TOTAL_6010B_CA MET_TOTAL_6010B_K	07/28/06	

Lab Approval

Client Approval

PL301 000003



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: CR

Client Name: TERRACON CONSULTANTS, INC.

Client Project Name: BALLINGER SEEP

Client Project #: 94057272

P.O. No.:

Courier/No.:

Lab Project ID: Q072006A

Date Logged: 07/21/06

Date Received: 07/21/06

Time Received: 12:30

Report Date: 07/21/2006 13:00:21

Send Report To..

MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS
TX 75247

CASE	SDG	Lab	Sample ID	Client Sample ID	No. Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
										MET_TOTAL_6010B_MG	07/28/06	
										MET_TOTAL_6010B_NA	07/28/06	
										NITRATE_300	07/28/06	
										SULFATE_300	07/28/06	
										TDS_160.1	07/28/06	
										TPH1005	07/28/06	

Instructions To Lab:

TRRP
NITRATE = 48 HR HT
TPH1006 PENDING TPH1005 RESULTS

Lab Approval

Client Approval



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: SW-CR-DOWN
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7947.001
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: SW846-8021B
DATE SAMPLED	: 07/20/2006	DATE RECEIVED	: 07/21/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 10:00

ANALYST	: SP	DATE ANALYZED	: 07/24/06
DILUTION	: 1	INSTRUMENT ID	: F-6890
PURGE VOLUME	: 5 mL	TIME ANALYZED	: 18:20

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.0	UG/L	ND	UG/L
Ethylbenzene	5.0	UG/L	ND	UG/L
Toluene	5.0	UG/L	ND	UG/L
Xylene (total)	5.0	UG/L	ND	UG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	116



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: SW-CR-UP
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7947.002
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: SW846-8021B
DATE SAMPLED	: 07/20/2006	DATE RECEIVED	: 07/21/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 10:00

ANALYST	: SP	DATE ANALYZED	: 07/24/06
DILUTION	: 1	INSTRUMENT ID	: F-6890
PURGE VOLUME	: 5 mL	TIME ANALYZED	: 18:51

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	121



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME :		CLIENT SAMPLE ID :	Prep Blank
PROJECT NAME :		LAB SAMPLE ID :	FVBLKL3
PROJECT NUMBER :		METHOD REFERENCE :	SW846-8021B
DATE SAMPLED :		DATE RECEIVED :	
SAMPLE MATRIX :	LIQUID	PRINTED ON :	08/15/2006 10:00

ANALYST :	SP	DATE ANALYZED :	07/24/06
DILUTION :	1	INSTRUMENT ID :	F-6890
PURGE VOLUME :	5 mL	TIME ANALYZED :	09:19

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a, a, a-Trifluorotoluene	50 UG/L	75 - 125	91



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MS/MSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057170

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006 10:00

SAMPLE MATRIX : WATER

METHOD REFERENCE : SW846-80.1B

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.001

MS SAMPLE ID : 7940.00MS

MSD SAMPLE ID : 7940.00MSD

CLIENT SAMPLE ID : SW-TR1B1

CLIENT SAMPLE ID : SW-TR1B1MS1

CLIENT SAMPLE ID : SW-TR1B1MSD1

DATE ANALYZED : 07/24/2006

DATE ANALYZED : 07/24/2006

DATE ANALYZED : 07/24/2006

INSTRUMENT FILE : F7044

INSTRUMENT FILE : F7045

INSTRUMENT FILE : F7046

PARAMETER	UNITS	MS MSD		SAMPL	MS MSD		MS MSD		RPD	QC LIMIT	REC.
		ADDED	ADDED		CONC.	CONC.	RECOVERY (%)	RECOVERY (%)			
Benzene	UG/L	50	50	0	45	49	90	98	8.5	25	75 - 125
Ethylbenzene	UG/L	50	50	0	47	52	94	104	10.1	25	75 - 125
Toluene	UG/L	50	50	0	46	60	92	120	16.4 *	25	75 - 125
Xylene (total)	UG/L	150	150	0	140	150	93	100	7.3	25	75 - 125

* Indicate values outside of QC limits

RPD : 1 out of 4 outside limits
Spike Recovery : 0 out of 8 outside limits



1544 Sawdust Road, Suite 505
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LCS/LCSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 10:00

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : FVLC013
CLIENT SAMPLE ID :
DATE ANALYZED : 07/14/2006
INSTRUMENT FILE : F7042

METHOD REFERENCE : PW846-9021B
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Benzene	UG/L	50		51		102			25	75 - 125
Ethylbenzene	UG/L	50		51		102			25	75 - 125
Toluene	UG/L	50		54		108			25	75 - 125
Xylene (total)	UG/L	150		140		93			25	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 4 outside limits



1544 Sawdust Road, Suite 505
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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: SW-CR-DOWN
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7947.001
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: TNRCC-1005
DATE SAMPLED	: 07/20/2006	DATE RECEIVED	: 07/21/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/15/2006 8:21

ANALYST	: JL	DATE ANALYZED	: 07/15/06
DATE PREPPED	: 07/15/06	DILUTION	: 1
EXTRACT VOLUME	: 3 ML	INSTRUMENT FILE	: B13444
INSTRUMENT ID	: B-5890	SAMPLE VOLUME	: 30 ML
TIME ANALYZED	: 22:25		

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH-(>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH-(>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH-(nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	116
1-Chlorooctane	5 UG/L	70 - 130	113



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : SW-CR-UP
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7947.002
PROJECT NUMBER : 94057272 METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : 07/20/2006 DATE RECEIVED : 07/21/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/15/2006 8:21

ANALYST : JL DATE ANALYZED : 07/16/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13445
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 00:10

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
TPH- (>nC12-nC28)	5.0	MG/L	ND	MG/L	
TPH- (>nC28-nC35)	5.0	MG/L	ND	MG/L	
TPH- (nC6-nC12)	5.0	MG/L	ND	MG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS		%RECOVERY
o-Terphenyl	5 UG/L	70	130	112
1-Chlorooctane	5 UG/L	70	130	126



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : TPHB565
PROJECT NUMBER : METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : LIQUID PRINTED ON : 08/15/2006 8:21

ANALYST : JL DATE ANALYZED : 07/15/06
DATE PREPPED : 07/15/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13426
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 05:18

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
TPH- (>nC12-nC28)	5.0	MG/L	ND	MG/L
TPH- (>nC28-nC35)	5.0	MG/L	ND	MG/L
TPH- (nC6-nC12)	5.0	MG/L	ND	MG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	96
1-Chlorooctane	5 UG/L	70 - 130	116



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MS/MSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER FEEF PRINTED ON : 08/15/2006 8:01
PROJECT NUMBER : 94097272

SAMPLE MATRIX : WATER METHOD REFERENCE : TNRCC-1005
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7940.002 MS SAMPLE ID : 7940.002MS MSD SAMPLE ID : 7940.002MSD
CLIENT SAMPLE ID : SW-TRIB1 CLIENT SAMPLE ID : SW-TRIB1MS1 CLIENT SAMPLE ID : SW-TRIB1MSD1
DATE ANALYZED : 07/15/1906 DATE ANALYZED : 07/15/1906 DATE ANALYZED : 07/15/1906
INSTRUMENT FILE : B13428 INSTRUMENT FILE : B13429 INSTRUMENT FILE : B13430

PARAMETER	UNITS	MS SPIKE		MSD SPIKE		MS RECOVERY		MSD RECOVERY		RPD	QC LIMIT	QC LIMIT REC.
		ADDED	ADDED	SAMPL CONC.	MSD CONC.	(%)	(%)	RPD	RPD			
TPH-(>nC12-nC28)	MG/L	10.0	10.0	0	9.93	8.16	99	82	18.8	30	75 - 125	
TPH-(nC6-nC12)	MG/L	10.0	10.0	0	10.4	9.97	104	100	3.9	30	75 - 125	

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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LCS/LCSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 8:01

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : INRCC-1005

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE VERIFICATE

LCS SAMPLE ID : TPH1565

LCSD SAMPLE ID : TPH1565D

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/15/1906

DATE ANALYZED : 07/15/1906

INSTRUMENT FILE : B13383

INSTRUMENT FILE : B13384

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		
TPH-(>nC10-nC28)	MG/L	33.3	33.3	28.6	29.8	86	89	3.4	30 75 - 105
TPH-(nC6-nC12)	MG/L	33.3	33.3	26.9	25.2	81	76	6.4	30 75 - 105

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 8:15

PARAMETER: Alkalinity, Carbonate (as CaCO3)

CLIENT SAMPLE ID	SW-CR-DOWN	SW-CR-UP	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	7947.001	7947.002	ALKCBLK0721A	ALKCLCS0721A
SAMPLE MATRIX	WATER	WATER		
DATE SAMPLED	07/20/2006	07/20/2006		
DATE RECEIVED	07/21/2006	07/21/2006		
METHOD REFERENCE	EPA-310.1	EPA-310.1	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2	2	2
RESULTS	ND	ND	ND	53
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
QC BATCH ID	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A	ALKCBLK0721A
LCS ID	ALKCLCS0721A	ALKCLCS0721A		
LCSD ID				
DUP ID				



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LCS/LCSD SUMMARY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/15/2006 8:15
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : EPA-810.1
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : ALKCLCS0711A LCSD SAMPLE ID :
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906 DATE ANALYZED :
INSTRUMENT FILE : INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		
Alkalinity, Carbonate (as CaCO3)	MG/L	50		53		106		20	90 - 110

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 8:15

PARAMETER: Alkalinity, Bicarbonate (as CaCO3)

CLIENT SAMPLE ID	SW-CR-DOWN	SW-CR-UP	PREP BLANK	LAB CONTROL SAMPL
SAMPLE ID	7947.001	7947.002	ALKBBLK0721A	ALKBLCS0721A
SAMPLE MATRIX	WATER	WATER		
DATE SAMPLED	07/20/2006	07/20/2006		
DATE RECEIVED	07/21/2006	07/21/2006		
METHOD REFERENCE	EPA-310.1	EPA-310.1	EPA-310.1	EPA-310.1
QUANTITATION LIMIT	2	2	2	2
RESULTS	140	140	ND	53
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1	1
QC BATCH ID	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A	ALKBBLK0721A
LCS ID	ALKBLCS0721A	ALKBLCS0721A		
LCSD ID				
DUP ID				



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LCS/LCSD SUMMARY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 8:15

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : EPA-810.1

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : ALKBLC00721A

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/31/2006

DATE ANALYZED :

INSTRUMENT FILE :

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		
		VALUE	VALUE	VALUE	VALUE	(%)	(%)	RPD	REC.
Alkalinity, Bicarbonate (as CaCO3	MG/L	50.0		53.0		106		20	90 - 110

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:32

PARAMETER: Conductivity

CLIENT SAMPLE ID SAMPLE ID	SW-CR-DOWN 7947.001	SW-CR-UP 7947.002	PREP BLANK CONBLK0721A	LAB CONTROL SAMPL CONLCS0721A
SAMPLE MATRIX	WATER	WATER		
DATE SAMPLED	07/20/2006	07/20/2006		
DATE RECEIVED	07/21/2006	07/21/2006		
METHOD REFERENCE	EPA-120.1	EPA-120.1	EPA-120.1	EPA-120.1
QUANTITATION LIMIT	1	1	1	1
RESULTS	3700	3600	ND	973
UNITS	UMHO/CM	UMHO/CM	UMHO/CM	UMHO/CM
QUALIFIER				
ANALYST	EMT	EMT	EMT	EMT
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
TIME ANALYZED	16:00	16:00	16:00	16:00
QC BATCH ID	CONBLK0721A	CONBLK0721A	CONBLK0721A	CONBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	CONBLK0721A	CONBLK0721A	CONBLK0721A	CONBLK0721A
LCS ID	CONLCS0721A	CONLCS0721A		
LCSD ID				
DUP ID				



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LCS/LCSD SUMMARY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/15/2006 7:37
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : EPA-100.1
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : CONLCS0721A LCSD SAMPLE ID :
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/1906 DATE ANALYZED :
INSTRUMENT FILE : INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		LIMIT	REC.
Conductivity	UMHO/	1000		973		97			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:30

PARAMETER: Total Dissolved Solids

CLIENT SAMPLE ID	SW-CR-DOWN	SW-CR-UP	SEEP-1DUP	PREP BLANK
SAMPLE ID	7947.001	7947.002	7940.001DUP1	TDSBLK0721A
SAMPLE MATRIX	WATER	WATER	WATER	
DATE SAMPLED	07/20/2006	07/20/2006	07/19/2006	
DATE RECEIVED	07/21/2006	07/21/2006	07/20/2006	
METHOD REFERENCE	EPA-160.1	EPA-160.1	EPA-160.1	EPA-160.1
QUANTITATION LIMIT	5	5	5	5
RESULTS	2580	3590	2360	ND
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	LOH	LOH	LOH	LOH
DATE ANALYZED	07/21/06	07/21/06	07/21/06	07/21/06
QC BATCH ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
PRE-PREP BLANK ID				
PREP BLANK ID	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A	TDSBLK0721A
LCS ID	TDSLCS0721A	TDSLCS0721A	TDSLCS0721A	
LCSD ID				
DUP ID	7940.001DUP1	7940.001DUP1	7940.001DUP1	



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LABORATORY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 7:30

PARAMETER: Total Dissolved Solids

CLIENT SAMPLE ID	LAB CONTROL SAMP
SAMPLE ID	TDSLCS0721A
SAMPLE MATRIX	
DATE SAMPLED	
DATE RECEIVED	
METHOD REFERENCE	EPA-160.1
QUANTITATION LIMIT	5
RESULTS	272
UNITS	MG/L
QUALIFIER	
ANALYST	LOH
DATE ANALYZED	07/21/06
QC BATCH ID	TDSBLK0721A
PRE-PREP BLANK ID	
PREP BLANK ID	TDSBLK0721A
LCS ID	
LCSD ID	
DUP ID	



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DUPLICATE SUMMARY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94059272

DATE RECEIVED : 09/10/2006
PRINTED ON : 09/15/2006

SAMPLE MATRIX : WATER
SAMPLE ID :
CLIENT SAMPLE ID : SEEP-1
DATE ANALYZED : 07/21/2006
GC FILE ID :

METHOD REFERENCE : EPA-160.1
SAMPLE DUPLICATE
DUP SAMPLE ID : 7940.001DUP1
CLIENT SAMPLE ID : SEEP-1DUP
DATE ANALYZED : 07/21/2006
INSTRUMENT FILE :

COMPOUND	SAMPLE CONC.	DUP. CONC.	UNITS	RPD	RPD LIMITS
Total Dissolved Solids	2430	2360	MG/L	2.9	20

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits



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LCS/LCSD SUMMARY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 7:30

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : EPA-160.1

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : TDSLCS0721A

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/21/1996

DATE ANALYZED :

INSTRUMENT FILE :

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Total Dissolved Solids	MG/L	300		272		91		20	80	120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:11

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID	SW-CR-DOWN	SW-CR-UP	PREP BLANK
SAMPLE ID	7947.001	7947.002	ICBLK0721A
SAMPLE MATRIX	WATER	WATER	
DATE SAMPLED	07/20/2006	07/20/2006	
DATE RECEIVED	07/21/2006	07/21/2006	
METHOD REFERENCE	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5
RESULTS	626	621	ND
UNITS	MG/L	MG/L	MG/L
QUALIFIER			
ANALYST	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID			
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	
LCSD ID			
MS ID	7940.001MS	7940.001MS	
MSD ID	7940.001MSD	7940.001MSD	
DUP ID			



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MS/MSD SUMMARY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:11
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : EPA-300
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7940.001 MS SAMPLE ID : 7940.001MS MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1 CLIENT SAMPLE ID : SEEP-1MS CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	MS	MSD	RPD	QC LIMIT	
		SPIKE	SPIKE		CONC.	CONC.	RECOVERY	RECOVERY			REC.
Chloride as Cl	MG/L	10.0	10.0	1060	957	900	0 *	-1600 *	200.0 *	20	80 - 120

* Indicate values outside of QC limits

RPD : 1 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME :		DATE RECEIVED :	
PROJECT NAME :		PRINTED ON :	08/15/2006 18:11
PROJECT NUMBER :			
SAMPLE MATRIX :	LIQUID	METHOD REFERENCE :	EPA-300
LAB CONTROL SAMPLE :		LAB CONTROL SAMPLE DUPLICATE :	
LCS SAMPLE ID :	ICLCS0721A	LCSD SAMPLE ID :	
CLIENT SAMPLE ID :		CLIENT SAMPLE ID :	
DATE ANALYZED :	07/11/1906	DATE ANALYZED :	
INSTRUMENT FILE :	ANIONS196	INSTRUMENT FILE :	

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		
		VALUE	VALUE	VALUE	VALUE	(%)	(%)	RPD	REC. LIMIT
Chloride as Cl	MG/L	10.0		10.5		105			20 80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:12

PARAMETER: Nitrate (as N)

CLIENT SAMPLE ID	SW-CR-DOWN	SW-CR-UP	PREP BLANK
SAMPLE ID	7947.001	7947.002	ICBLK0721A
SAMPLE MATRIX	WATER	WATER	
DATE SAMPLED	07/20/2006	07/20/2006	
DATE RECEIVED	07/21/2006	07/21/2006	
METHOD REFERENCE	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5
RESULTS	ND	ND	ND
UNITS	MG/L	MG/L	MG/L
QUALIFIER			
ANALYST	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID			
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	
LCSD ID			
MS ID	7940.001MS	7940.001MS	
MSD ID	7940.001MSD	7940.001MSD	
DUP ID			



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MS/MSD SUMMARY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:11
PROJECT NUMBER : 94052172

SAMPLE MATRIX : WATER

METHOD REFERENCE : EPA-300

SAMPLE

MATRIX SPIKE

MATRIX SPIKE DUPLICATE

SAMPLE ID : 7940.001 MS SAMPLE ID : 7940.001MS MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1 CLIENT SAMPLE ID : SEEP-1MS CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS MSD		SAMPL	MS MSD		MS MSD		RPD	QC LIMIT	
		SPIKE	SPIKE		CONC.	CONC.	RECOVERY	RECOVERY		RPD	REC.
Nitrate (as N)	MG/L	10	10	0	9.6	8.7	96	87	1.2	20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
Spike Recovery : 0 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 18:12

SAMPLE MATRIX : LIQUID
LAB CONTROL SAMPLE
LCS SAMPLE ID : 1CLCS0721A
CLIENT SAMPLE ID :
DATE ANALYZED : 07/21/2006
INSTRUMENT FILE : ANIONS296

METHOD REFERENCE : EPA-800
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Nitrate (as N)	MG/L	10		8.5		85		20	80	120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:11

PARAMETER: Bromide

CLIENT SAMPLE ID	SW-CR-DOWN	SW-CR-UP	PREP BLANK
SAMPLE ID	7947.001	7947.002	ICBLK0721A
SAMPLE MATRIX	WATER	WATER	
DATE SAMPLED	07/20/2006	07/20/2006	
DATE RECEIVED	07/21/2006	07/21/2006	
METHOD REFERENCE	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	2	2	2
RESULTS	ND	ND	ND
UNITS	MG/L	MG/L	MG/L
QUALIFIER			
ANALYST	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	DX120	DX120	DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID			
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	
LCSD ID			
MS ID	7940.001MS	7940.001MS	
MSD ID	7940.001MSD	7940.001MSD	
DUP ID			



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MS/MSD SUMMARY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:11
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : EPA-300
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7940.001 MS SAMPLE ID : 7940.001MS MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID : SEEP-1 CLIENT SAMPLE ID : SEEP-1MS CLIENT SAMPLE ID : SEEP-1MSD
DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906 DATE ANALYZED : 07/21/1906
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS SPIKE		MSD			MS RECOVERY		MSD RECOVERY		RPD	QC LIMIT
		ADDED	ADDED	SAMPL CONC.	MS CONC.	MSD CONC.	(%)	(%)	RPD	REC.		
Bromide	MG/L	10.0	10.0	0	11.1	11.6	111	116	4.4	20	80 - 120	

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
Spike Recovery : 0 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 18:11

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : EPA-300

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : ICLCN0721A

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 07/21/1906

DATE ANALYZED :

INSTRUMENT FILE : ANIONS196

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Bromide	MG/L	10.0		8.80		88		20	80	120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 18:11

PARAMETER: Sulfate (as SO4)

CLIENT SAMPLE ID	SW-CR-DOWN	SW-CR-UP	PREP BLANK
SAMPLE ID	7947.001	7947.002	ICBLK0721A
SAMPLE MATRIX	WATER	WATER	
DATE SAMPLED	07/20/2006	07/20/2006	
DATE RECEIVED	07/21/2006	07/21/2006	
METHOD REFERENCE	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5	0.5
RESULTS	1560	1570	ND
UNITS	MG/L	MG/L	MG/L
QUALIFIER			
ANALYST	BT	BT	BT
DATE ANALYZED	07/21/06	07/21/06	07/21/06
DILUTION	1	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120	A-DX120
QC BATCH ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
PRE-PREP BLANK ID			
PREP BLANK ID	ICBLK0721A	ICBLK0721A	ICBLK0721A
LCS ID	ICLCS0721A	ICLCS0721A	
LCSD ID			
MS ID	7940.001MS	7940.001MS	
MSD ID	7940.001MSD	7940.001MSD	
DUP ID			



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LCS/LCSD SUMMARY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :
DATE RECEIVED :
PRINTED ON : 08/15/2006 18:11

SAMPLE MATRIX : LIQUID
METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE :
LAB CONTROL SAMPLE DUPLICATE :
LCS SAMPLE ID : 1GLCS0721A
LCS SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED : 07/31/1906
DATE ANALYZED :
INSTRUMENT FILE : ANIONS296
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Sulfate (as SO4)	MG/L	10.0		10.7		107		20	80	120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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The Woodlands, TX 77380

MS/MSD SUMMARY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 07/20/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/15/2006 19:11
PROJECT NUMBER : 94057072

SAMPLE MATRIX : WATER METHOD REFERENCE : EPA-300

<u>SAMPLE</u>		<u>MATRIX SPIKE</u>		<u>MATRIX SPIKE DUPLICATE</u>
SAMPLE ID : 7940.001	MS SAMPLE ID : 7940.001MS	MSD SAMPLE ID : 7940.001MSD	CLIENT SAMPLE ID : SEEP-1	CLIENT SAMPLE ID : SEEP-1MS
DATE ANALYZED : 07/21/1906	DATE ANALYZED : 07/21/1906	DATE ANALYZED : 07/21/1906	INSTRUMENT FILE : ANIONS196	INSTRUMENT FILE : ANIONS196

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT
		SPIKE	SAMPL	SPIKE	CONC.	RECOVERY	RECOVERY	RECOVERY	RECOVERY		
		ADDED	CONC.	ADDED	CONC.	(%)	(%)	(%)	(%)	LIMIT	REC.
Sulfate (as SO4)	MG/L	10.0	10.0	320	260	264	0 *	-560 *	200.0 *	20	80 - 120

* Indicate values outside of QC limits

RPD : 1 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



The Woodlands, TX 77380
1544 Sawdust Road, Suite 505

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : SW-CR-DOWN
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7947.001
PROJECT NUMBER : 94057272 DATE RECEIVED : 07/21/2006
DATE SAMPLED : 07/20/2006 PRINTED ON : 08/15/2006 18:39
SAMPLE MATRIX : WATER % MOISTURE :

ANALYTE	METHOD	DATE		DILU- TION	QUANTITATION LIMIT	RESULT	Q	ANA- LYST
		PREPARED	ANALYZED					
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	350 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	140 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	10 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	380 MG/L		BT



The Woodlands, TX 77380
1544 Sawdust Road, Suite 505

LABORATORY REPORT

TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : SW-CR-UP
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7947.002
PROJECT NUMBER : 94057272 DATE RECEIVED : 07/21/2006
DATE SAMPLED : 07/20/2006 PRINTED ON : 08/15/2006 18:39
SAMPLE MATRIX : WATER % MOISTURE :

ANALYTE	METHOD	DATE		DILU- TION	QUANTITATION LIMIT	RESULT	Q	ANA- LYST
		PREPARED	ANALYZED					
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	370 MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	140 MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	9.1 MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	380 MG/L		BT



The Woodlands, TX 77380
1544 Sawdust Road, Suite 505

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : ICPB671
PROJECT NUMBER : DATE RECEIVED :
DATE SAMPLED : PRINTED ON : 08/15/2006 18:39
SAMPLE MATRIX : LIQUID % MOISTURE :

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	QUANTITATION LIMIT	RESULT	Q	ANALYST
Calcium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	ND MG/L		BT
Magnesium, Total	SW846-6010B	08/10/06	08/14/06	1	1 MG/L	ND MG/L		BT
Potassium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	ND MG/L		BT
Sodium, Total	SW846-6010B	08/10/06	08/14/06	1	5 MG/L	ND MG/L		BT



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LCS/LCSD SUMMARY REPORT
TOTAL METALS

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 08/15/2006 18:39

SAMPLE MATRIX : LIQUID

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : ICPLCS671

LCSD SAMPLE ID : ICPLCS671D

CLIENT SAMPLE ID :

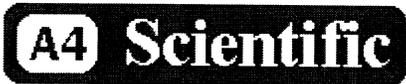
CLIENT SAMPLE ID :

COMPOUND	METHOD REFERENCE	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
			TRUE VALUE	TRUE VALUE	FOUND VALUE	FOUND VALUE	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Calcium, Total	SW846-6010B	MG/L	20.0	20.0	20.0	20.3	100	102	2.0	30	80 - 120
Magnesium, Total	SW846-6010B	MG/L	20.0	20.0	20.0	20.4	100	102	2.0	30	80 - 120
Potassium, Total	SW846-6010B	MG/L	20.0	20.0	19.9	19.9	100	100	0.0	30	80 - 120
Sodium, Total	SW846-6010B	MG/L	20.0	20.0	22.6	21.8	113	109	3.6	30	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits

Spike Recovery : 0 out of 8 outside limits



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MS/MSD SUMMARY REPORT
TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 07/20/2006
PRINTED ON : 08/15/2006 18:39

SAMPLE MATRIX : WATER

SAMPLE

SAMPLE ID : 7940.001
CLIENT SAMPLE ID: SEEP-1

MATRIX SPIKE

MS SAMPLE ID : 7940.001MS
CLIENT SAMPLE ID: SEEP-1MS

MATRIX SPIKE DUPLICATE

MSD SAMPLE ID : 7940.001MSD
CLIENT SAMPLE ID: SEEP-1MSD

COMPOUND	METHOD REFERENCE	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT
			SPIKE ADDED	SPIKE ADDED	SAMPL CONC.	MS CONC.	MSD CONC.	RECOVER (%)	RECOVER (%)	REC.		
Calcium, Total	SW846-6010B	MG/L	20	20	130	150	150	100	100	0.0	0	75 - 125
Magnesium, Total	SW846-6010B	MG/L	20.0	20.0	38	56.6	57.0	93	95	2.1	30	75 - 125
Potassium, Total	SW846-6010B	MG/L	20	20	13	34	34	105	105	0.0	0	75 - 125
Sodium, Total	SW846-6010B	MG/L	20	20	1000	1000	1000	0	0	0.0	0	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits

Spike Recovery : 2 out of 8 outside limits

A4 Scientific

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(281) 292-5277
(Fax) (281) 292-2481

**END
OF
REPORT**



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380
(281)292-5277
FAX: (281)292-2481

August 24, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

REFERENCE:

Project.....: BALLINGER SEEP
Project Number.....: 94057272
Lab Episode Number.....: 7963
Date Received.....: 08/17/2006

Dear MAX MAJESKO:

Enclosed is the analytical Report for the project referenced above. The following sample(s) are included in the report.

MW-7 TRIP BLANK

All the holding times were met for the tests performed on these samples. Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting A4 SCIENTIFIC for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,

Reddy Pakanati
Laboratory Manager



www.a4scientific.com

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The Woodlands, TX 77380
(281) 292-5277
(Fax): (281) 292-2481

ANALYTICAL REPORT

CLIENT PROJECT.....: BALLINGER SEEP
CLIENT PROJECT NUMBER....: 94057272

Prepared For:

TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

ATTENTION: MAX MAJESKO

Date: 08/24/2006

Signature

LAB EPISODE NUMBER: 7963
Date Received.....: 08/17/2006
Lab Project ID.....: Q072006A

Reddy Pakanati
Laboratory Manager
(281) 292-5277
pakanati@a4scientific.com



Office Location Dallas

Project Manager Max Mejstko

Sampler's Name Yolk Meyer

Sampler's Signature Yolk Meyer

Project Name Bullinger Surf

No/Type of Containers

Lab use only
Due Date:

Temp. of coolers when received (C°):

1 2 3 4 5

Page 1 of 1

Laboratory: A-4 Scienc, Inc

Address: The Woodlands, Tx

Contact: Rebb Parkerat.

Phone: 281.392.5277

PO/SO #:

Matrix	Date	Time	Identifying Marks of Sample(s)	No/Type of Containers		
				VOA	AG 1LL	P/O
W 81506	1500		Mu-7	4		3
W 81506	1500		Mu-7 MS	4		
W 81506	1500		Mu-7 MS	4		
W			Trip Blank	1		

Analysis Requested: BTX (Total), Chloride, Sulfate, Nitrate, Bromide, Selenium, Bicarbonate, Total Dissolve Solids, Conductivity

Lab Sample ID (Lab Use Only): 61, 62, 63, 64, 65

Turn around time: Normal 25% Rush 50% Rush 100% Rush

Relinquished by (Signature): Yolk Meyer Date: 3-16-06 Time: 1510

Relinquished by (Signature): Yolk Meyer Date: 3-16-06 Time: 1510

Relinquished by (Signature): Yolk Meyer Date: 3-16-06 Time: 1510

Relinquished by (Signature): Yolk Meyer Date: 3-16-06 Time: 1510

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Relinquished by (Signature): Yolk Meyer Date: 3-16-06 Time: 1510

Relinquished by (Signature): Yolk Meyer Date: 3-16-06 Time: 1510

Relinquished by (Signature): Yolk Meyer Date: 3-16-06 Time: 1510

NOTES: Note: Slight Held Time on 61-65!
MW (MS & MW (MS)) are for matrix
Strike & matrix Spike Discharge, respectively

Matrix Container: WW - Wastewater VOA - 40 ml vial
W - Water A/G - Amber / OT Glass 1 liter
S - Soil SD - Solid 250 ml - Glass wide mouth
L - Liquid 250 ml - Glass wide mouth
A - Air Bag
C - Charcoal tube
P/O - Plastic or other
O - Oil

Houston Office: 11555 Clay Road, Suite 100, Houston, Texas 77043, (713) 690-8989
Dallas Office: 8901 Carpenter Freeway, Suite 100, Dallas, Texas 75247, (214) 630-1010
Fort Worth Office: 2601 Gravel Drive, Fort Worth, Texas 76118, (817) 268-8600
Austin Office: 5307 Industrial Oaks Blvd. # 160, Austin, Texas 78735, (512) 442-1122
Midland Office: 24 Smith Rd., # 261, Midland, Texas 79705, (432) 684-9600



Sample Log-In Report

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Logged By: JS

Client Name: TERRACON CONSULTANTS, INC.

Client Project Name: BALLINGER SEEP

Client Project #: 94057272

P.O. No.:

Courier/No.:

Lab Project ID: Q072006A

Date Logged: 08/17/06

Date Received: 08/17/06

Time Received: 10:08

Report Date: 08/24/2006 21:25:51

Send Report To:

MAX MAJESKO
8901 CARPENTER FREEWAY
SUITE 100
DALLAS
TX 75247

CASE	SDG	Lab Sample ID	Client Sample ID	No. Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Tests Required	Date Due	Remarks
		7963.001	MW-7	15	WATER	08/15/06	15:00	7963A	ALKALINITY, BICARB310.1 ALKALINITY, CARB310.1 BROMIDE_300 BTEX-8021 CHLORIDE_300 CONDUCTIVITY_120.1 MET_TOTAL_6010B_CA MET_TOTAL_6010B_K MET_TOTAL_6010B_MG MET_TOTAL_6010B_NA NITRATE_300 SULFATE_300 TDS_160.1 TPH1005	08/24/06 08/24/06 08/24/06 08/24/06 08/24/06 08/24/06 08/24/06 08/24/06 08/24/06 08/24/06 08/24/06 08/24/06 08/24/06 08/24/06 08/24/06	MS/MSD
		7963.002	TRIP BLANK	1	WATER			7963A	BTEX-8021	08/24/06	

Instructions To Lab:

* SHORT HOLD TIME ON NITRATE

MW 7MS AND MSD ARE THE MATRIX SPIKE AND MATRIX SPIKE DUPLICAT RESPECTIVELY.

Lab Approval

Client Approval



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : MW-7
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7963.001
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : 08/15/2006 DATE RECEIVED : 08/17/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/24/2006 22:06

ANALYST : DP DATE ANALYZED : 08/17/06
DILUTION : 1 INSTRUMENT ID : E-5973
PURGE VOLUME : 5 mL TIME ANALYZED : 19:23

PARAMETER	QUANTITATION	LIMIT	RESULTS	QUALIFIER
Benzene	5.0	UG/L	ND	UG/L
Ethylbenzene	5.0	UG/L	ND	UG/L
Toluene	5.0	UG/L	ND	UG/L
Xylene (total)	5.0	UG/L	ND	UG/L

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	88



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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. CLIENT SAMPLE ID : TRIP BLANK
PROJECT NAME : BALLINGER SEEP LAB SAMPLE ID : 7963.002
PROJECT NUMBER : 94057272 METHOD REFERENCE : SW846-8021B
DATE SAMPLED : DATE RECEIVED : 08/17/2006
SAMPLE MATRIX : WATER PRINTED ON : 08/24/2006 22:06

ANALYST : DP DATE ANALYZED : 08/17/06
DILUTION : 1 INSTRUMENT ID : E-5973
PURGE VOLUME : 5 mL TIME ANALYZED : 19:00

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a, a, a-Trifluorotoluene	50 UG/L	75 - 125	85



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The Woodlands, TX 77380

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LABORATORY REPORT
BTEX BY GC/PID

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : EVBLK1A
PROJECT NUMBER : METHOD REFERENCE : SW846-8021B
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : LIQUID PRINTED ON : 08/24/2006 22:06

ANALYST : DP DATE ANALYZED : 08/17/06
DILUTION : 1 INSTRUMENT ID : E-5973
PURGE VOLUME : 5 mL TIME ANALYZED : 17:09

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
Benzene	5.0	UG/L	ND	UG/L	
Ethylbenzene	5.0	UG/L	ND	UG/L	
Toluene	5.0	UG/L	ND	UG/L	
Xylene (total)	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
a,a,a-Trifluorotoluene	50 UG/L	75 - 125	98



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

MS/MSD SUMMARY REPORT

BTEX BY GC/PID

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 08/17/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/24/2006 22:06
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : SW846-8021B

SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7963.001 MS SAMPLE ID : 7963.001MS MSD SAMPLE ID : 7963.001MSD
CLIENT SAMPLE ID : MW-7 CLIENT SAMPLE ID : MW-7MS1 CLIENT SAMPLE ID : MW-7MSD1
DATE ANALYZED : 08/17/06 DATE ANALYZED : 08/17/06 DATE ANALYZED : 08/17/06
INSTRUMENT FILE : E6645 INSTRUMENT FILE : E6646 INSTRUMENT FILE : E6647

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	MS	MSD	RPD	QC LIMIT
		SPIKE	SPIKE		CONC.	CONC.	RECOVERY	RECOVERY		
Benzene	UG/L	50	50	0	50	56	100	112	11.3	25 75 - 125
Ethylbenzene	UG/L	50	50	0	51	54	102	108	5.7	25 75 - 125
Toluene	UG/L	50	50	0	50	52	100	104	3.9	25 75 - 125
Xylene (total)	UG/L	150	150	0	150	160	100	107	6.8	25 75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits
Spike Recovery : 0 out of 8 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
BTEX BY GC/PID

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/24/2006 22:06
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : SW846-8021B

LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : EVLCS1A LCSD SAMPLE ID :

CLIENT SAMPLE ID : CLIENT SAMPLE ID :

DATE ANALYZED : 08/17/06 DATE ANALYZED :

INSTRUMENT FILE : E6642 INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Benzene	UG/L	50		49		98			25	75 - 125
Ethylbenzene	UG/L	50		48		96			25	75 - 125
Toluene	UG/L	50		50		100			25	75 - 125
Xylene (total)	UG/L	150		150		100			25	75 - 125

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits

Spike Recovery : 0 out of 4 outside limits



The Woodlands, TX 77380
1544 Sawdust Road, Suite 505

LABORATORY REPORT

TOTAL METALS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: MW-7
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7963.001
PROJECT NUMBER	: 94057272	DATE RECEIVED	: 08/17/2006
DATE SAMPLED	: 08/15/2006	PRINTED ON	: 08/24/2006 22:07
SAMPLE MATRIX	: WATER	% MOISTURE	:

ANALYTE	METHOD	DATE	DATE	DILU- TION	QUANTITATION	RESULT	Q	ANA- LYST
		PREPARED	ANALYZED		LIMIT			
Calcium, Total	SW846-6010B	08/18/06	08/18/06	1	1 MG/L	1000 MG/L		BT
Magnesium, Total	SW846-6010B	08/18/06	08/18/06	1	1 MG/L	530 MG/L		BT
Potassium, Total	SW846-6010B	08/18/06	08/18/06	1	5 MG/L	19 MG/L		BT
Sodium, Total	SW846-6010B	08/18/06	08/18/06	1	5 MG/L	990 MG/L		BT



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1544 Sawdust Road, Suite 505

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : ICPBLK673A
PROJECT NUMBER : DATE RECEIVED :
DATE SAMPLED : PRINTED ON : 08/24/2006 22:07
SAMPLE MATRIX : LIQUID % MOISTURE :

ANALYTE	METHOD	DATE		DILU- TION	QUANTITATION LIMIT	RESULT	Q	ANA- LYST
		PREPARED	ANALYZED					
Calcium, Total	SW846-6010B	08/18/06	08/18/06	1	1 MG/L	ND MG/L		BT
Magnesium, Total	SW846-6010B	08/18/06	08/18/06	1	1 MG/L	ND MG/L		BT
Potassium, Total	SW846-6010B	08/18/06	08/18/06	1	5 MG/L	ND MG/L		BT



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The Woodlands, TX 77380

MS/MSD SUMMARY REPORT

TOTAL METALS

CLIENT NAME : TERRACON CONSULTANTS, INC.
PROJECT NAME : BALLINGER SEEP
PROJECT NUMBER : 94057272

DATE RECEIVED : 08/17/2006
PRINTED ON : 08/24/2006 22:07

SAMPLE MATRIX : WATER

SAMPLE	MATRIX SPIKE	MATRIX SPIKE DUPLICATE
SAMPLE ID : 7963.001	MS SAMPLE ID : 7963.001MS	MSD SAMPLE ID : 7963.001MSD
CLIENT SAMPLE ID: MW-7	CLIENT SAMPLE ID: MW-7MS	CLIENT SAMPLE ID: MW-7MSD

COMPOUND	METHOD REFERENCE	UNITS	MS		SAMPL CONC.	MS CONC.	MSD CONC.	MS RECOVER		MSD RECOVER		RPD LIMIT	QC LIMIT REC.
			SPIKE ADDED	SPIKE ADDED				(%)	(%)	RPD	RPD		
Calcium, Total	SW846-6010B	MG/L	20	20	1000	1100	1100	500	500	0.0	0	75 - 125	
Magnesium, Total	SW846-6010B	MG/L	20.0	20.0	530	546	549	80	95	17.1	30	75 - 125	
Potassium, Total	SW846-6010B	MG/L	20	20	19	20	20	5	5	0.0	0	75 - 125	
Sodium, Total	SW846-6010B	MG/L	20	20	990	1000	990	50	0	200.0	0	75 - 125	

* Indicate values outside of QC limits

RPD : 1 out of 4 outside limits
Spike Recovery : 6 out of 8 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
TOTAL METALS

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/24/2006 22:07
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : ICPLCS673A

LCSD SAMPLE ID : ICPLCS673AD

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

COMPOUND	METHOD REFERENCE	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
			TRUE VALUE	TRUE VALUE	FOUND VALUE	FOUND VALUE	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
Calcium, Total	SW846-6010B	MG/L	20.0	20.0	13.2	13.8	66	69	4.4	30	80 - 120
Magnesium, Total	SW846-6010B	MG/L	20.0	20.0	12.7	13.3	64	67	4.6	30	80 - 120
Potassium, Total	SW846-6010B	MG/L	20.0	20.0	10.9	11.0	55	55	0.0	30	80 - 120
Sodium, Total	SW846-6010B	MG/L	20.0	20.0	12.6	13.1	63	66	4.7	30	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 4 outside limits

Spike Recovery : 8 out of 8 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/24/2006 22:44

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID	MW-7	PREP BLANK
SAMPLE ID	7963.001	ICBLK0817A
SAMPLE MATRIX	WATER	
DATE SAMPLED	08/15/2006	
DATE RECEIVED	08/17/2006	
METHOD REFERENCE	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5
RESULTS	1880	ND
UNITS	MG/L	MG/L
QUALIFIER		
ANALYST	BT	BT
DATE ANALYZED	08/17/06	08/17/06
DILUTION	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120
QC BATCH ID	ICBLK0817A	ICBLK0817A
PRE-PREP BLANK ID		
PREP BLANK ID	ICBLK0817A	ICBLK0817A
LCS ID	ICLSC0817A	
LCSD ID	ICLSC0817AD	
MS ID	7963.001MS	
MSD ID	7963.001MSD	
DUP ID		



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

MS/MSD SUMMARY REPORT

CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 08/17/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/24/2006 22:44
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : EPA-300
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7963.001 MS SAMPLE ID : 7963.001MS MSD SAMPLE ID : 7963.001MSD
CLIENT SAMPLE ID : MW-7 CLIENT SAMPLE ID : MW-7MS CLIENT SAMPLE ID : MW-7MSD
DATE ANALYZED : 08/17/06 DATE ANALYZED : 08/17/06 DATE ANALYZED : 08/17/06
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS		MSD		MS		MSD		RPD	QC LIMIT
		SPIKE	SPIKE	SAMPL	MS	MSD	RECOVERY	RECOVERY	RPD		
		ADDED	ADDED	CONC.	CONC.	CONC.	(%)	(%)		LIMIT	
Chloride as Cl	MG/L	10.0	10.0	1880	1870	1860	0 *	-200 *	200.0 *	20	80 - 120

* Indicate values outside of QC limits

RPD : 1 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

```

CLIENT NAME      :
PROJECT NAME     :
PROJECT NUMBER   :
DATE RECEIVED    :
PRINTED ON       : 08/24/2006   22:44

SAMPLE MATRIX    : LIQUID
METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE
LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID    : ICLSC0817A
LCSD SAMPLE ID   : ICLSC0817AD
CLIENT SAMPLE ID :
DATE ANALYZED    : 08/17/06
DATE ANALYZED    : 08/17/06
INSTRUMENT FILE  : ANIONS296
INSTRUMENT FILE  : ANIONS296
  
```

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Chloride as Cl	MG/L	10.0	10.0	10.4	9.20	104	92	12.2	20	80 - 120

* Indicate values outside of QC limits

```

RPD          : 0 out of 1 outside limits
Spike Recovery : 0 out of 2 outside limits
  
```



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/24/2006 22:44

PARAMETER: Sulfate (as SO4)

CLIENT SAMPLE ID	MW-7	PREP BLANK
SAMPLE ID	7963.001	ICBLK0817A
SAMPLE MATRIX	WATER	
DATE SAMPLED	08/15/2006	
DATE RECEIVED	08/17/2006	
METHOD REFERENCE	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5
RESULTS	1840	ND
UNITS	MG/L	MG/L
QUALIFIER		
ANALYST	BT	BT
DATE ANALYZED	08/17/06	08/17/06
DILUTION	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120
QC BATCH ID	ICBLK0817A	ICBLK0817A
PRE-PREP BLANK ID		
PREP BLANK ID	ICBLK0817A	ICBLK0817A
LCS ID	ICLCS0817A	
LCSD ID	ICLCS0817AD	
MS ID	7963.001MS	
MSD ID	7963.001MSD	
DUP ID		



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/24/2006 22:44
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : ICLCS0817A LCSD SAMPLE ID : ICLCS0817AD
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 08/17/06 DATE ANALYZED : 08/17/06
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Sulfate (as SO4)	MG/L	10.0	10.0	10.4	11.6	104	116	10.9	20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
Spike Recovery : 0 out of 2 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

MS/MSD SUMMARY REPORT
SULFATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC.	DATE RECEIVED : 08/17/2006
PROJECT NAME : BALLINGER SEEP	PRINTED ON : 08/24/2006 22:44
PROJECT NUMBER : 94057272	
SAMPLE MATRIX : WATER	METHOD REFERENCE : EPA-300
<u>SAMPLE</u>	<u>MATRIX SPIKE</u>
SAMPLE ID : 7963.001	MS SAMPLE ID : 7963.001MS
CLIENT SAMPLE ID : MW-7	MSD SAMPLE ID : 7963.001MSD
DATE ANALYZED : 08/17/06	CLIENT SAMPLE ID : MW-7MS
INSTRUMENT FILE : ANIONS296	DATE ANALYZED : 08/17/06
	MSD SAMPLE ID : MW-7MSD
	DATE ANALYZED : 08/17/06
	INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL			MS	MSD	RPD	QC LIMIT
		SPIKE	SPIKE	MS	MSD	MSD	RECOVERY	RECOVERY		
		ADDED	ADDED	CONC.	CONC.	CONC.	(%)	(%)	LIMIT	REC.
Sulfate (as SO4)	MG/L	10.0	10.0	1840	1840	1840	0 *	0 *	0.0	20 80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/24/2006 22:44

PARAMETER: Bromide

CLIENT SAMPLE ID	MW-7	PREP BLANK
SAMPLE ID	7963.001	ICBLK0817A
SAMPLE MATRIX	WATER	
DATE SAMPLED	08/15/2006	
DATE RECEIVED	08/17/2006	
METHOD REFERENCE	EPA-300	EPA-300
QUANTITATION LIMIT	2	2
RESULTS	ND	ND
UNITS	MG/L	MG/L
QUALIFIER		
ANALYST	BT	BT
DATE ANALYZED	08/17/06	08/17/06
DILUTION	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296
INSTRUMENT ID	A-DIONEX300	A-DIONEX300
QC BATCH ID	ICBLK0817A	ICBLK0817A
PRE-PREP BLANK ID		
PREP BLANK ID	ICBLK0817A	ICBLK0817A
LCS ID	ICLCS0817A	
LCSD ID	ICLCS0817AD	
MS ID	7963.001MS	
MSD ID	7963.001MSD	
DUP ID		



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

MS/MSD SUMMARY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC.	DATE RECEIVED : 08/17/2006
PROJECT NAME : BALLINGER SEEP	PRINTED ON : 08/24/2006 22:44
PROJECT NUMBER : 94057272	
SAMPLE MATRIX : WATER	METHOD REFERENCE : EPA-300
SAMPLE	MATRIX SPIKE
SAMPLE ID : 7963.001	MS SAMPLE ID : 7963.001MS
CLIENT SAMPLE ID : MW-7	MSD SAMPLE ID : 7963.001MSD
DATE ANALYZED : 08/17/06	CLIENT SAMPLE ID : MW-7MSD
INSTRUMENT FILE : ANIONS296	DATE ANALYZED : 08/17/06
	INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	MS	MSD	RPD	QC LIMIT	
		SPIKE	SPIKE		CONC.	CONC.	RECOVERY	RECOVERY			RPD
Bromide	MG/L	10.0	10.0	0	4.25	7.60	43 *	76 *	55.5 *	20	80 - 120

* Indicate values outside of QC limits

RPD : 1 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
BROMIDE BY ION CHROMATOGRAPHY

CLIENT NAME :		DATE RECEIVED :	
PROJECT NAME :		PRINTED ON :	08/24/2006 22:44
PROJECT NUMBER :			
SAMPLE MATRIX :	LIQUID	METHOD REFERENCE :	EPA-300
LAB CONTROL SAMPLE :		LAB CONTROL SAMPLE DUPLICATE :	
LCS SAMPLE ID :	1CLCS0817A	LCSD SAMPLE ID :	1CLCS0817AD
CLIENT SAMPLE ID :		CLIENT SAMPLE ID :	
DATE ANALYZED :	08/17/06	DATE ANALYZED :	08/17/06
INSTRUMENT FILE :	ANIONS296	INSTRUMENT FILE :	ANIONS296

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Bromide	MG/L	10.0	10.0	5.60	5.40	56 *	54 *	3.6	20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



1544 Sawdust Road, Suite 505
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LABORATORY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/24/2006 22:45

PARAMETER: Nitrate (as N)

CLIENT SAMPLE ID	MW-7	PREP BLANK
SAMPLE ID	7963.001	ICBLK0817A
SAMPLE MATRIX	WATER	
DATE SAMPLED	08/15/2006	
DATE RECEIVED	08/17/2006	
METHOD REFERENCE	EPA-300	EPA-300
QUANTITATION LIMIT	0.5	0.5
RESULTS	ND	ND
UNITS	MG/L	MG/L
QUALIFIER		
ANALYST	BT	BT
DATE ANALYZED	08/17/06	08/17/06
DILUTION	1	1
INSTRUMENT FILE	ANIONS296	ANIONS296
INSTRUMENT ID	A-DX120	A-DX120
QC BATCH ID	ICBLK0817A	ICBLK0817A
PRE-PREP BLANK ID		
PREP BLANK ID	ICBLK0817A	ICBLK0817A
LCS ID	ICLCS0817A	
LCSD ID	ICLCS0817AD	
MS ID	7963.001MS	
MSD ID	7963.001MSD	
DUP ID		



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MS/MSD SUMMARY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 08/17/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/24/2006 22:44
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : EPA-300
SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE
SAMPLE ID : 7963.001 MS SAMPLE ID : 7963.001MS MSD SAMPLE ID : 7963.001MSD
CLIENT SAMPLE ID : MW-7 CLIENT SAMPLE ID : MW-7MS CLIENT SAMPLE ID : MW-7MSD
DATE ANALYZED : 08/17/06 DATE ANALYZED : 08/17/06 DATE ANALYZED : 08/17/06
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	MS	MSD	SAMPL	MS	MSD	MS	MSD	RPD	QC LIMIT	
		SPIKE	SPIKE		CONC.	CONC.	CONC.	RECOVERY			RECOVERY
Nitrate (as N)	MG/L	10	10	0	0.27	0.44	3 *	4 *	28.6 *	20	80 - 120

* Indicate values outside of QC limits

RPD : 1 out of 1 outside limits
Spike Recovery : 2 out of 2 outside limits



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LCS/LCSD SUMMARY REPORT
NITRATE BY ION CHROMATOGRAPHY

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/24/2006 22:45
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : ICLCS0817A LCSD SAMPLE ID : ICLCS0817AD
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 08/17/06 DATE ANALYZED : 08/17/06
INSTRUMENT FILE : ANIONS296 INSTRUMENT FILE : ANIONS296

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD QC LIMITS		
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY	RPD	LIMIT	REC.
Nitrate (as N)	MG/L	10	10	10	8.7	100	87	13.9	20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 1 outside limits
Spike Recovery : 0 out of 2 outside limits



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LABORATORY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/24/2006 22:07

PARAMETER: Conductivity

CLIENT SAMPLE ID MW-7
SAMPLE ID 7963.001
SAMPLE MATRIX WATER
DATE SAMPLED 08/15/2006
DATE RECEIVED 08/17/2006

METHOD REFERENCE EPA-120.1
QUANTITATION LIMIT 1
RESULTS 110000
UNITS UMHO/CM
QUALIFIER

ANALYST EMT
DATE ANALYZED 08/18/06
TIME ANALYZED 09:40

QC BATCH ID CON0818A
PRE-PREP BLANK ID
PREP BLANK ID
LCS ID CON0818A
LCSD ID
DUP ID



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LCS/LCSD SUMMARY REPORT
SPECIFIC CONDUCTANCE

CLIENT NAME :		DATE RECEIVED :	
PROJECT NAME :		PRINTED ON :	08/24/2006 22:07
PROJECT NUMBER :			
SAMPLE MATRIX :	LIQUID	METHOD REFERENCE :	EPA-120.1
LAB CONTROL SAMPLE :		LAB CONTROL SAMPLE :	DUPLICATE
LCS SAMPLE ID :	CON0818A	LCS SAMPLE ID :	
CLIENT SAMPLE ID :		CLIENT SAMPLE ID :	
DATE ANALYZED :	08/18/06	DATE ANALYZED :	
INSTRUMENT FILE :		INSTRUMENT FILE :	

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
Conductivity	UMHO/	1000		994		99			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/24/2006 22:06

PARAMETER: Total Dissolved Solids

CLIENT SAMPLE ID	MW-7	PREP BLANK
SAMPLE ID	7963.001	TDSBLK0821A
SAMPLE MATRIX	WATER	
DATE SAMPLED	08/15/2006	
DATE RECEIVED	08/17/2006	
METHOD REFERENCE	EPA-160.1	EPA-160.1
QUANTITATION LIMIT	5	5
RESULTS	54600	ND
UNITS	MG/L	MG/L
QUALIFIER		
ANALYST	LOH	LOH
DATE ANALYZED	08/21/06	08/21/06
QC BATCH ID	TDSBLK0821A	TDSBLK0821A
PRE-PREP BLANK ID		
PREP BLANK ID	TDSBLK0821A	TDSBLK0821A
LCS ID	TDSLCS0821A	
LCSD ID		
DUP ID		



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LCS/LCSD SUMMARY REPORT
TOTAL DISSOLVED SOLIDS (TDS)

CLIENT NAME : DATE RECEIVED :
PROJECT NAME : PRINTED ON : 08/24/2006 22:06
PROJECT NUMBER :

SAMPLE MATRIX : LIQUID METHOD REFERENCE : EPA-160.1
LAB CONTROL SAMPLE LAB CONTROL SAMPLE DUPLICATE
LCS SAMPLE ID : TDSLCS0821A LCSD SAMPLE ID :
CLIENT SAMPLE ID : CLIENT SAMPLE ID :
DATE ANALYZED : 08/21/06 DATE ANALYZED :
INSTRUMENT FILE : INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
		VALUE	VALUE	VALUE	VALUE	(%)	(%)			
Total Dissolved Solids	MG/L	300		252		84			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/24/2006 22:07

PARAMETER: Alkalinity, Carbonate (as CaCO₃)

CLIENT SAMPLE ID MW-7
SAMPLE ID 7963.001
SAMPLE MATRIX WATER
DATE SAMPLED 08/15/2006
DATE RECEIVED 08/17/2006

METHOD REFERENCE EPA-310.1
QUANTITATION LIMIT 2
RESULTS ND
UNITS MG/L
QUALIFIER

ANALYST EMT
DATE ANALYZED 08/18/06
DILUTION 1

QC BATCH ID ALK0818A
PRE-PREP BLANK ID
PREP BLANK ID
LCS ID ALK0818A
LCSD ID
DUP ID



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LABORATORY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/24/2006 22:07

PARAMETER: Alkalinity, Bicarbonate (as CaCO3)

CLIENT SAMPLE ID MW-7
SAMPLE ID 7963.001
SAMPLE MATRIX WATER
DATE SAMPLED 08/15/2006
DATE RECEIVED 08/17/2006

METHOD REFERENCE EPA-310.1
QUANTITATION LIMIT 2
RESULTS 290
UNITS MG/L
QUALIFIER

ANALYST EMT
DATE ANALYZED 08/18/06
DILUTION 1

QC BATCH ID ALK0818A
PRE-PREP BLANK ID
PREP BLANK ID
LCS ID ALK0818A
LCSD ID
DUP ID



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LCS/LCSD SUMMARY REPORT
ALKALINITY (TITRIMETRIC)

CLIENT NAME :		DATE RECEIVED :	
PROJECT NAME :		PRINTED ON :	08/24/2006 22:56
PROJECT NUMBER :			
SAMPLE MATRIX :	LIQUID	METHOD REFERENCE :	EPA-310.1
LAB CONTROL SAMPLE :		LAB CONTROL SAMPLE DUPLICATE :	
LCS SAMPLE ID :	ALK0818A	LCSD SAMPLE ID :	
CLIENT SAMPLE ID :		CLIENT SAMPLE ID :	
DATE ANALYZED :	08/18/06	DATE ANALYZED :	
INSTRUMENT FILE :		INSTRUMENT FILE :	

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		
		VALUE	VALUE	VALUE	VALUE	(%)	(%)	RPD	REC.
Alkalinity, Bicarbonate (as CaCO3	MG/L	50.0		54.0		108		20	90 - 110

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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LABORATORY REPORT

TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME	: TERRACON CONSULTANTS, INC.	CLIENT SAMPLE ID	: MW-7
PROJECT NAME	: BALLINGER SEEP	LAB SAMPLE ID	: 7963.001
PROJECT NUMBER	: 94057272	METHOD REFERENCE	: TNRCC-1005
DATE SAMPLED	: 08/15/2006	DATE RECEIVED	: 08/17/2006
SAMPLE MATRIX	: WATER	PRINTED ON	: 08/25/2006 10:55

ANALYST	: JL	DATE ANALYZED	: 08/24/06
DATE PREPPED	: 08/21/06	DILUTION	: 1
EXTRACT VOLUME	: 3 ML	INSTRUMENT FILE	: B13505
INSTRUMENT ID	: B-5890	SAMPLE VOLUME	: 30 ML
TIME ANALYZED	: 13:49		

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
TPH-(>nC12-nC28)	5.0	MG/L	ND	MG/L	
TPH-(>nC28-nC35)	5.0	MG/L	ND	MG/L	
TPH-(nC6-nC12)	5.0	MG/L	ND	MG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	83
1-Chlorooctane	5 UG/L	70 - 130	98



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MS/MSD SUMMARY REPORT

TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : TERRACON CONSULTANTS, INC. DATE RECEIVED : 08/17/2006
PROJECT NAME : BALLINGER SEEP PRINTED ON : 08/25/2006 10:55
PROJECT NUMBER : 94057272

SAMPLE MATRIX : WATER METHOD REFERENCE : TNRCC-1005

SAMPLE MATRIX SPIKE MATRIX SPIKE DUPLICATE

SAMPLE ID : 7963.001 MS SAMPLE ID : 7963.001MS MSD SAMPLE ID : 7963.001MSD
CLIENT SAMPLE ID : MW-7 CLIENT SAMPLE ID : MW-7MS1 CLIENT SAMPLE ID : MW-7MSD1
DATE ANALYZED : 08/24/06 DATE ANALYZED : 08/24/06 DATE ANALYZED : 08/24/06
INSTRUMENT FILE : B13505 INSTRUMENT FILE : B13506 INSTRUMENT FILE : B13509

PARAMETER	UNITS	MS		MSD			MS		MSD		RPD	QC LIMIT
		SPIKE	SPIKE	SAMPL	MS	MSD	RECOVERY	RECOVERY	RPD	REC.		
		ADDED	ADDED	CONC.	CONC.	CONC.	(%)	(%)				
TPH- (>nC12-nC28)	MG/L	10.0	10.0	0	9.14	8.59	91	86	5.6	30	75 - 125	
TPH- (nC6-nC12)	MG/L	10.0	10.0	0	11.5	10.5	115	105	9.1	30	75 - 125	

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits



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LABORATORY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME : CLIENT SAMPLE ID : Prep Blank
PROJECT NAME : LAB SAMPLE ID : TPHB570
PROJECT NUMBER : METHOD REFERENCE : TNRCC-1005
DATE SAMPLED : DATE RECEIVED :
SAMPLE MATRIX : LIQUID PRINTED ON : 08/25/2006 10:55

ANALYST : JL DATE ANALYZED : 08/24/06
DATE PREPPED : 08/21/06 DILUTION : 1
EXTRACT VOLUME : 3 ML INSTRUMENT FILE : B13508
INSTRUMENT ID : B-5890 SAMPLE VOLUME : 30 ML
TIME ANALYZED : 16:08

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
TPH- (>nC12-nC28)	5.0	MG/L	ND	MG/L	
TPH- (>nC28-nC35)	5.0	MG/L	ND	MG/L	
TPH- (nC6-nC12)	5.0	MG/L	ND	MG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
o-Terphenyl	5 UG/L	70 - 130	76
1-Chlorooctane	5 UG/L	70 - 130	88



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LCS/LCSD SUMMARY REPORT
TOTAL PETROLEUM HYDROCARBONS

CLIENT NAME :		DATE RECEIVED :	
PROJECT NAME :		PRINTED ON :	08/25/2006 10:56
PROJECT NUMBER :			
SAMPLE MATRIX :	LIQUID	METHOD REFERENCE :	TNRCC-1005
LAB CONTROL SAMPLE :		LAB CONTROL SAMPLE DUPLICATE :	
LCS SAMPLE ID :	TPHL570	LCSD SAMPLE ID :	TPHL570D
CLIENT SAMPLE ID :		CLIENT SAMPLE ID :	
DATE ANALYZED :	08/24/06	DATE ANALYZED :	08/24/06
INSTRUMENT FILE :	B13503	INSTRUMENT FILE :	B13504

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY (%)	RECOVERY (%)		LIMIT	REC.
TPH-(>nC12-nC28)	MG/L	33.3	33.3	30.1	30.8	90	92	2.2	30	75-125
TPH-(nC6-nC12)	MG/L	33.3	33.3	27.4	36.6	82	110	29.2	30	75-125

* Indicate values outside of QC limits

RPD : 0 out of 2 outside limits
Spike Recovery : 0 out of 4 outside limits

**END
OF
REPORT**



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1544 Sawdust Road, Suite 505
The Woodlands, TX 77380
(281) 292-5277
FAX: (281) 292-2481

September 11, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

REFERENCE:

Project: BALLINGER SEEP
Project Number: 94057272
Lab Episode Number: 7932, 7941, and 7945
Date Received: 07/19/2006, 07/20/2006, and
07/21/2006

Dear MAX MAJESKO:

Enclosed is the analytical Report for the project referenced above.

This report consists of results for the chloride analysis that you requested.

Thank you for selecting A4 Scientific Inc for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,

Reddy Pakanati
Laboratory Manager

pakanati

From: "Majesko, David" <DMMajesko@terracon.com>
To: <pakanati@a4scientific.com>
Sent: August 24, 2006 11:56 AM
Subject: Ballinger Seep

Reddy

Assuming you still have these samples and there is sufficient sample volume for analysis, please analyze the following soil samples for chloride, standard turnaround.

MW-1, 11-12 (7932.001)
MW-2, 15-16 (7932.003)
MW-3, 4-5 (7932.004)
MW-5, 4-5 (7941.001)
MW-5, 11 (7941.002)
MW-7, 20-21 (7945.001)

I know that these are slightly out of holding time, but I would still like to go ahead and run them. Let me know if you will be able to analyze these samples.

Thanks

Max

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providing multiple related service lines to local, regional, and national clients.*

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(281) 292-5277
(Fax): (281) 292-2481

ANALYTICAL REPORT

CLIENT PROJECT.....: BALLINGER SEEP
CLIENT PROJECT NUMBER...: 94057272

Prepared For:

TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

ATTENTION: MAX MAJESKO

Date: 09/11/2006


Signature

LAB EPISODE NUMBER: 7932
Date Received.....: 07/19/2006
Lab Project ID.....: Q072006A

Reddy Pakanati
Laboratory Manager
(281) 292-5277
pakanati@a4scientific.com



Office Location Dallas

Project Manager Max Majesko

Sampler's Name Max Majesko
York Argon

Project Name Bullinger Seep

Project No. 94057272

Laboratory: A-4 Scientific

Address: The Woodlands, TX

Contact: Chad Roberts

Phone: 281-292-2481

PO/ISO #: _____

Sampler's Signature York Argon

Analyst Signature York Argon

Client Signature _____

Project No. _____

Project Name _____

Project Address _____

ANALYSIS REQUESTED

Lab use only
Due Date: _____

Temp. of coolers when received (C°):

1	2	3	4	5
---	---	---	---	---

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BTX (loc 18)
TPH (TX-1005)

Matrix	Date	Time	Identifying Marks of Sample(s)	VOA	AG 1L	250 ml	P/O	Lab Sample ID (Lab Use Only)
S	7-17-06	1525	MW-1	11	12			7932-01
S	7-17-06	1535	MW-1 Dup	11	12			02
S	7-17-06	1800	MW-2	15	16			03
S	7-18-06	1445	MW-3	4	5			04
S	7-18-06	1445	MW-3 MS	4	5			04
S	7-18-06	1445	MW-3 MSD	4	5			04
W			Trip Blank					N.U.

Turn around time Normal 25% Rush 50% Rush 100% Rush

Relinquished by (Signature) York Argon Date: 7-10-06 Time: 1845

Relinquished by (Signature) _____ Date: _____ Time: _____

Relinquished by (Signature) _____ Date: _____ Time: _____

Relinquished by (Signature) _____ Date: _____ Time: _____

Relinquished by (Signature) _____ Date: 7/19/06 Time: 1300

NOTES: MW-3 MS & MW-3 MSD use For Matrix spike + Redox spike & Nitrate, respectively.

Matrix Container

W - Water
AG - Amber/Of Glass 1 Liter
S - Soil
SD - Solid
L - Liquid
250 ml - Glass wide mouth

W - Wastewater
VOA - 40 ml vial

A - Air Bag
C - Charcoal tube
P/O - Plastic or other

O - Oil

Dallas Office
8901 Carpenter Freeway, Suite 100
Dallas, Texas 75247
(214) 630-1010 Fax (214) 630-7070

Fort Worth Office
2601 Gravel Drive
Fort Worth, Texas 76118
(817) 268-8600 Fax (817) 268-8602

Austin Office
5307 Industrial Oaks Blvd. # 160
Austin, Texas 78735
(512) 442-1122 Fax (512) 442-1181

Midland Office
24 Smith Rd., # 261
Midland, Texas 79705
(432) 684-9600 Fax (432) 684-9600



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LABORATORY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 09/11/2006 15:41

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID	MW-1	MW-2	MW-3	PREP BLANK
SAMPLE ID	7932.001	7932.003	7932.004	BLK0905A
SAMPLE MATRIX	SOIL	SOIL	SOIL	
DATE SAMPLED	07/17/2006	07/17/2006	07/18/2006	
DATE RECEIVED	07/19/2006	07/19/2006	07/19/2006	
METHOD REFERENCE	EPA-300	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	20	20	20	20
RESULTS	992	1030	5490	ND
UNITS	MG/KG	MG/KG	MG/KG	MG/KG
QUALIFIER				
% MOISTURE				
ANALYST	BT	BT	BT	BT
DATE ANALYZED	09/05/06	09/05/06	09/05/06	09/05/06
DATE PREPPED	09/04/06	09/04/06	09/04/06	09/04/06
DILUTION	1	1	1	1
EXTRACT VOLUME	100 ML	100 ML	100 ML	100 ML
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	DIONEX-120	DIONEX-120	DIONEX-120	DIONEX-120
PREP ANALYST	CL	CL	CL	CL
SAMPLE AMOUNT	10 G	10 G	10 G	10 G
QC BATCH ID	BLK0905A	BLK0905A	BLK0905A	BLK0905A
PRE-PREP BLANK ID				
PREP BLANK ID	BLK0905A	BLK0905A	BLK0905A	BLK0905A
LCS ID	LCS0905A	LCS0905A	LCS0905A	
LCSD ID				
MS ID				
MSD ID				
DUP ID				



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LCS/LCSD SUMMARY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 09/11/2006 15:52

SAMPLE MATRIX : SOLID
LAB CONTROL SAMPLE
LCS SAMPLE ID : LCS0905A
CLIENT SAMPLE ID :
DATE ANALYZED : 09/05/06
INSTRUMENT FILE : ANIONS296

METHOD REFERENCE : EPA-300
LAB CONTROL SAMPLE DUPLICATE
LCSD SAMPLE ID :
CLIENT SAMPLE ID :
DATE ANALYZED :
INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		LIMIT	REC.
		VALUE	VALUE	VALUE	VALUE	(%)	(%)			
Chloride as Cl	MG/KG	50.0		48.7		97			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



www.a4scientific.com

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380
(281) 292-5277
FAX: (281) 292-2481

September 11, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

REFERENCE:

Project: BALLINGER SEEP
Project Number: 94057272
Lab Episode Number: 7932, 7941, and 7945
Date Received: 07/19/2006, 07/20/2006, and
07/21/2006

Dear MAX MAJESKO:

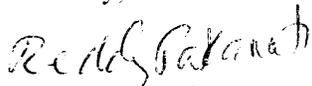
Enclosed is the analytical Report for the project referenced above.

This report consists of results for the chloride analysis that you requested.

Thank you for selecting A4 Scientific Inc for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,


Reddy Pakanati
Laboratory Manager

pakanati

From: "Majesko, David" <DMMajesko@terracon.com>
To: <pakanati@a4scientific.com>
Sent: August 24, 2006 11:56 AM
Subject: Ballinger Seep

Reddy

Assuming you still have these samples and there is sufficient sample volume for analysis, please analyze the following soil samples for chloride, standard turnaround.

MW-1, 11-12 (7932.001)
MW-2, 15-16 (7932.003)
MW-3, 4-5 (7932.004)
MW-5, 4-5 (7941.001)
MW-5, 11 (7941.002)
MW-7, 20-21 (7945.001)

I know that these are slightly out of holding time, but I would still like to go ahead and run them. Let me know if you will be able to analyze these samples.

Thanks

Max

*Terracon is a dynamic and growing consulting firm of engineers and scientists
providing multiple related service lines to local, regional, and national clients.*

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08/24/06



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(Fax): (281) 292-2481

ANALYTICAL REPORT

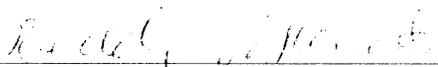
CLIENT PROJECT.....: BALLINGER SEEP
CLIENT PROJECT NUMBER...: 94057272

Prepared For:

TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

ATTENTION: MAX MAJESKO

Date: 09/11/2006



Signature

LAB EPISODE NUMBER: 7941
Date Received.....: 07/20/2006
Lab Project ID.....: Q072006A

Reddy Pakanati
Laboratory Manager
(281) 292-5277
pakanati@a4scientific.com



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Page 1 of 1

LABORATORY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 09/11/2006 15:41

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID	MW-5 (4-5)	MW-5 (11)	PREP BLANK
SAMPLE ID	7941.001	7941.002	BLK0905A
SAMPLE MATRIX	SOIL	SOIL	
DATE SAMPLED	07/18/2006	07/18/2006	
DATE RECEIVED	07/20/2006	07/20/2006	
METHOD REFERENCE	EPA-300	EPA-300	EPA-300
QUANTITATION LIMIT	20	20	20
RESULTS	2200	2050	ND
UNITS	MG/KG	MG/KG	MG/KG
QUALIFIER			
% MOISTURE			
ANALYST	BT	BT	BT
DATE ANALYZED	09/05/06	09/05/06	09/05/06
DATE PREPPED	09/04/06	09/04/06	09/04/06
DILUTION	1	1	1
EXTRACT VOLUME	100 ML	100 ML	100 ML
INSTRUMENT FILE	ANIONS296	ANIONS296	ANIONS296
INSTRUMENT ID	DIONEX-120	DIONEX-120	DIONEX-120
PREP ANALYST	CL	CL	CL
SAMPLE AMOUNT	10 G	10 G	10 G
QC BATCH ID	BLK0905A	BLK0905A	BLK0905A
PRE-PREP BLANK ID			
PREP BLANK ID	BLK0905A	BLK0905A	BLK0905A
LCS ID	LCS0905A	LCS0905A	
LCSD ID			
MS ID			
MSD ID			
DUP ID			



Office Location Dallas

Project Manager Frank Perjesko

Sampler's Name Frank Perjesko

Project Name Rock Mountain Mex Project

Project No. 9805 1072

Project Name Bellinger Seep

Sampler's Signature [Signature]

Laboratory: A-4

Address: The Woodlands, TX

Contact: Chad Roberts

Phone: 281.240.5077

PO/SO #:

No/Type of Containers

Identifying Marks of Sample(s)

VOA

A/G 1L

250 ml

P/O

Matrix

Date

Time

Com

Gr

ab

X

MW-5

4

5

1

X

MW-5

11

11

X

Equipment Blank

6

X

X

X

X

X

X

NEE

ANALYSIS REQUESTED
BTEX (both) (9)
TPH (loc 5)

Lab Sample ID (Lab Use Only)

001

002

003

Lab use only
Due Date: 7/9/1

Temp. of coolers
when received (C°):

1 2 3 4 5

Page 1 of 1

Turn around time Normal 25% Rush 50% Rush 100% Rush

Relinquished by (Signature) [Signature] Date: 7-11-06 Time: 1:00 Received by: (Signature) _____ Date: _____ Time: _____

Relinquished by (Signature) _____ Date: _____ Time: _____ Received by: (Signature) _____ Date: _____ Time: _____

Relinquished by (Signature) _____ Date: _____ Time: _____ Received by: (Signature) Chad Roberts Date: 7/20/06 Time: 10:05

Matrix Container WW - Wastewater VOA - 40 ml vial W - Water A/G - Amber / Or Glass 1 Liter S - Soil SD - Solid L - Liquid 250 ml - Glass wide mouth A - Air Bag C - Charcoal tube P/O - Plastic or other SL - sludge O - Oil

Houston Office
11555 Clay Road, Suite 100
Houston, Texas 77043
(713) 690-8989 Fax (713) 690-8787

Dallas Office
8901 Carpenter Freeway, Suite 100
Dallas, Texas 75247
(214) 630-1010 Fax (214) 630-7070

Fort Worth Office
2601 Gravel Drive
Fort Worth, Texas 76118
(817) 268-8600 Fax (817) 268-8602

Austin Office
5307 Industrial Oaks Blvd. # 160
Austin, Texas 78735
(512) 442-1122 Fax (512) 442-1181

Midland Office
24 Smith Rd. # 261
Midland, Texas 79705
(432) 684-9600 Fax (432) 684-9600



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT

CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME :	DATE RECEIVED :
PROJECT NAME :	PRINTED ON : 09/11/2006 15:52
PROJECT NUMBER :	

SAMPLE MATRIX : SOLID	METHOD REFERENCE : EPA-300
<u>LAB CONTROL SAMPLE</u>	<u>LAB CONTROL SAMPLE DUPLICATE</u>
LCS SAMPLE ID : LCS0905A	LCSD SAMPLE ID :
CLIENT SAMPLE ID :	CLIENT SAMPLE ID :
DATE ANALYZED : 09/05/06	DATE ANALYZED :
INSTRUMENT FILE : ANIONS296	INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY	RPD	QC LIMITS
		VALUE	VALUE	VALUE	VALUE	(%)	(%)	REC.	
Chloride as Cl	MG/KG	50.0		48.7		97			20 80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



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(281) 292-5277
FAX: (281) 292-2481

September 11, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

REFERENCE:

Project: BALLINGER SEEP
Project Number: 94057272
Lab Episode Number: 7932, 7941, and 7945
Date Received: 07/19/2006, 07/20/2006, and
07/21/2006

Dear MAX MAJESKO:

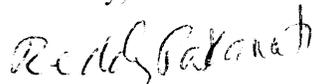
Enclosed is the analytical Report for the project referenced above.

This report consists of results for the chloride analysis that you requested.

Thank you for selecting A4 Scientific Inc for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,


Reddy Pakanati
Laboratory Manager

pakanati

From: "Majesko, David" <DMMajesko@terracon.com>
To: <pakanati@a4scientific.com>
Sent: August 24, 2006 11:56 AM
Subject: Ballinger Seep

Reddy

Assuming you still have these samples and there is sufficient sample volume for analysis, please analyze the following soil samples for chloride, standard turnaround.

- MW-1, 11-12 (7932.001)
- MW-2, 15-16 (7932.003)
- MW-3, 4-5 (7932.004)
- MW-5, 4-5 (7941.001)
- MW-5, 11 (7941.002)
- MW-7, 20-21 (7945.001)

I know that these are slightly out of holding time, but I would still like to go ahead and run them. Let me know if you will be able to analyze these samples.

Thanks

Max

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ANALYTICAL REPORT

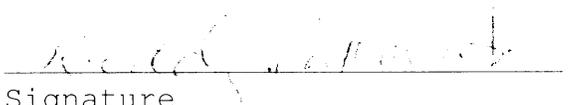
CLIENT PROJECT.....: BALLINGER SEEP
CLIENT PROJECT NUMBER....: 94057272

Prepared For:

TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY SUITE 100
DALLAS, TX 75247

ATTENTION: MAX MAJESKO

Date: 09/11/2006


Signature

LAB EPISODE NUMBER: 7945
Date Received.....: 07/21/2006
Lab Project ID.....: Q072006A



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Page 1 of 1

LABORATORY REPORT
CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 09/11/2006 15:36

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID	MW-7 (20-21)	PREP BLANK
SAMPLE ID	7945.001	BLK0905A
SAMPLE MATRIX	SOIL	
DATE SAMPLED	07/20/2006	
DATE RECEIVED	07/21/2006	
METHOD REFERENCE	EPA-300	EPA-300
QUANTITATION LIMIT	20	20
RESULTS	730	ND
UNITS	MG/KG	MG/KG
QUALIFIER		
% MOISTURE		
ANALYST	BT	BT
DATE ANALYZED	09/05/06	09/05/06
DATE PREPPED	09/04/06	09/04/06
DILUTION	1	1
EXTRACT VOLUME	100 ML	100 ML
INSTRUMENT FILE	ANIONS296	ANIONS296
INSTRUMENT ID	DIONEX-120	DIONEX-120
PREP ANALYST	CL	CL
SAMPLE AMOUNT	10 G	10 G
QC BATCH ID	BLK0905A	BLK0905A
PRE-PREP BLANK ID		
PREP BLANK ID	BLK0905A	BLK0905A
LCS ID	LCS0905A	
LCSD ID		
MS ID		
MSD ID		
DUP ID		



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT

CHLORIDE BY ION CHROMATOGRAPHY

CLIENT NAME :	DATE RECEIVED :
PROJECT NAME :	PRINTED ON : 09/11/2006 15:52
PROJECT NUMBER :	

SAMPLE MATRIX : SOLID	METHOD REFERENCE : EPA-300
<u>LAB CONTROL SAMPLE</u>	<u>LAB CONTROL SAMPLE DUPLICATE</u>
LCS SAMPLE ID : LCS0905A	LCSD SAMPLE ID :
CLIENT SAMPLE ID :	CLIENT SAMPLE ID :
DATE ANALYZED : 09/05/06	DATE ANALYZED :
INSTRUMENT FILE : ANIONS296	INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		RPD	LIMIT
		VALUE	VALUE	VALUE	VALUE	(%)	(%)			
Chloride as Cl	MG/KG	50.0		48.7		97			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits



June 11, 2007

Max Majesko
Terracon, Inc.
8901 Carpenter Fwy #100
Dallas, Texas 75247

TEL: (214) 630-1010
FAX (614) 630-7070

Order No.: 0705208

RE: Ballinger-RRC Project

Dear Max Majesko:

DHL Analytical received 13 sample(s) on 5/23/2007 for the analyses presented in the following report.

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

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

Sincerely,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification
Number: T104704211-06-TX

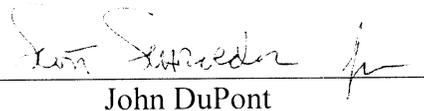
TABLE OF CONTENTS

This report for Terracon: Ballinger-RRC Project (DHL Work Order 0705208) contains the following information:

ITEM	Page
• Cover Page	1
• Table of Contents	2
• Original chain of custody, FedEx slip (if used), log-in checklist	3-6
• Laboratory Data Package Signature Page	7
• Laboratory Review Checklist	8-9
• Case Narrative	10-11
• Work Order Summary	12
• Preparation Dates Report	13-16
• Analytical Dates Report	17-21
• Sample Results	22-34
• QC Summary Report	35-52
• MQL Summary Report	53
• Total Number of Pages	53

June 11, 2007

Approved: _____


John DuPont

0705208

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL, GEOTECHNICAL AND CONSTRUCTION MATERIALS SERVICES



Office Location Dallas

Laboratory: DAL

Address:

Contact: John D. R. T

Phone: 714-388-8111

PO/SO #:

Project Manager Max Majorske

Sampler's Name Mark Hillier Signature Mark Hillier

ANALYSIS REQUESTED

Lab use only
Due Date:

Temp. of coolers when received (C°):

1 2 3 4 5

Page 1 of 2

Proj. No.	Matrix	Date	Time	Project Name		No/Type of Containers				Lab Sample ID (Lab Use Only)	
				Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1L	250 ml		P/O
01	W	7/24/07	1320	W-TRIB-4							
02	W	7/24/07	1340	SU-TRIB-5							
03	W	7/24/07	1320	SW-TRIB-6							
04	W	7/24/07	1340	SW-TRIB-1							
05	W	7/24/07	1340	SW-TRIB-2							
06	W	7/24/07	1420	SW-TRIB-3							
07	W	7/24/07	1420	Levee Seep 1							
08	W	7/24/07	1500	SW-CR-20							
09	W	7/24/07	1530	SW-CR-30							
10	W	7/24/07	1540	SW-CR-250							

Turn around time Normal 25% Rush 50% Rush 100% Rush

Relinquished by (Signature) John D. R. T Date: 7/24/07 Time: 1344 Received by (Signature) FX Date: 5-22-07 Time: 1514

Relinquished by (Signature) FX Date: 5-23-07 Time: 10:00 Received by (Signature) FX Date: 5-23-07 Time: 10:00

Relinquished by (Signature) Date: Time: Received by (Signature) Date: Time:

Relinquished by (Signature) Date: Time: Received by (Signature) Date: Time:

NOTES: 5.1°C Custody seal intact

Matrix Container: WW - Wastewater VOA - 40 ml vial

W - Water A/G - Amber / Or Glass 1 Liter S - Soil SD - Solid L - Liquid 250 ml - Glass wide mouth A - Air Bag Fort Worth Office 2601 Gravel Drive Fort Worth, Texas 76118 (817) 268-8600 Fax (817) 268-8602

C - Charcoal tube P/O - Plastic or other Austin Office 5307 Industrial Oaks Blvd. # 160 Austin, Texas 78735 (512) 442-1122 Fax (512) 442-1181

Midland Office 24 Smith Rd. # 261 Midland, Texas 79705 (432) 684-9600 Fax (432) 684-9608

8577 2377 4664



1 From

Date: 7/11/07
Sender's Name: [Redacted]
Phone: [Redacted]
Company: [Redacted]

2 Your Internal Billing Reference

Address: 8901 [Redacted]
City: [Redacted] State: [Redacted] ZIP: [Redacted]
Dept./Room/State/Room: [Redacted]

3 To

Recipient's Name: [Redacted]
Company: [Redacted]
Address: [Redacted]
City: [Redacted] State: [Redacted] ZIP: [Redacted]
Dept./Room/State/Room: [Redacted]

fedex.com 1.800.GoFedEx 1.800.463.3339

4a Express Package Service

FedEx Priority Overnight Next business afternoon. Saturday Delivery NOT available.
 FedEx Standard Overnight Next business day. Saturday Delivery NOT available.
 FedEx 2Day Second business day. Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
 FedEx Express Saver Third business day. Saturday Delivery NOT available.

Packages up to 150 lbs.

FedEx First Overnight Delivery to select locations. Saturday Delivery NOT available.

4b Express Freight Service

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

* To most locations

** To most locations

5 Packaging

FedEx Envelope*
 FedEx Pak* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Surety Pak.
 FedEx Box
 FedEx Tube
 Other

6 Special Handling

SATURDAY Delivery Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
 HOLD Weekday at FedEx Location Shipments will be delivered on Monday unless SATURDAY Delivery is selected.
 HOLD Saturday at FedEx Location Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods?

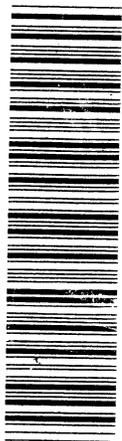
No
 Yes (As per attached Shipper's Declaration, not required)
 Dry Ice Dry Ice, 9 L IN 1845
 Cargo Aircraft Only

7 Payment

Sender (Account No. Inv. will be billed)
 Recipient
 Third Party
 Credit Card
 Cash/Check

Total Packages [Redacted] **Total Weight** [Redacted] **Total Declared Value*** \$ [Redacted] **Total Charges** \$ [Redacted]

* Declared value limit \$500



8577 2377 4664

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

8 NEW Residential Delivery Signature Options

No Signature Required Package may be left without signature for delivery.
 Direct Signature Anyone at recipient's address may sign for delivery.
 Indirect Signature If no one is available at recipient's address, anyone at address may sign for delivery.

520

Rev. Date 8/05/04 © 1994-2005 FedEx. PRINTED IN U.S.A. 53V

DATE: 7/11/07
SIGNATURE: [Handwritten Signature]

For more information on containers call 1-800-393-3900

15

3

DHL Analytical

Sample Receipt Checklist

Client Name Terracon, Inc.
Work Order Number 0705208

Date Received: 5/23/2007
Received by: DU

Checklist completed by: 
Signature

5.23.07
Date

Reviewed by _____
Initials Date

Carrier name: FedEx 1day

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping 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 

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

Client contacted Terracon Date contacted: 5.23.07 Person contacted Max Majesko
 Contacted by: Debbie U. Regarding: sample SW-CR-900' Down
 Comments: No T ON COC

Corrective Action Add to COC ; date & time of collection
5.22.07 16:45

Laboratory Data Package Signature Page

This data package consists of:

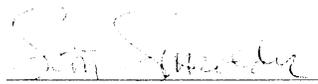
This signature page, the laboratory review checklist, and the following reportable data:

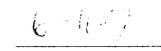
- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC 5.13
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if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

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

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

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


Signature


Date

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: <i>Ballinger RRC Project</i>	Date: <i>6/11/07</i>
Reviewer Name: Carlos Castro	Laboratory Work Order: <i>0705208</i>
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, including prep and cleanup steps?	✓				
		3) Were LCSs analyzed at the required frequency?	✓				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
		6) Was the LCSD RPD within QC limits (if applicable)?	✓				
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data					
		1) Were the project/method specified analytes included in the MS and MSD?	✓				
		2) Were MS/MSD analyzed at the appropriate frequency?	✓				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		✓			27-03
		4) Were MS/MSD RPDs within laboratory QC limits?		✓			27-04
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?	✓				21-01
		2) Were all necessary corrective actions performed for the reported data?	✓				
		3) Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
 2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
 3 NA = Not applicable.
 4 NR = Not Reviewed.
 5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: Ballinger RRC Project Date: 4/11/07
 Reviewer Name: Carlos Castro Laboratory Work Order: 0705208

# 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?		✓			S2-02
		3) Was the ICAL curve verified for each analyte?	✓				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	✓				
S3	O	Mass Spectral Tuning:					
		1) Was the appropriate compound for the method used for tuning?	✓				
		2) Were ion abundance data within the method-required QC limits?	✓				
S4	O	Internal Standards (IS):					
		1) Were IS area counts and retention times within the method-required QC limits?	✓				
S5	OI	Raw Data (NELAC section 1 appendix A glossary, and section 5.12)					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
		2) Were data associated with manual integrations flagged on the raw data?	✓				
S6	O	Dual Column Confirmation					
		1) Did dual column confirmation results meet the method-required QC?			✓		
S7	O	Tentatively Identified Compounds (TICs):					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
S8	I	Interference Check Sample (ICS) Results:					
		1) Were percent recoveries within method QC limits?	✓				
S9	I	Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		✓			S9-01
S10	OI	Method Detection Limit (MDL) Studies					
		1) Was a MDL study performed for each reported analyte?	✓				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
S11	OI	Proficiency Test Reports:					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				
S12	OI	Standards Documentation					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
S13	OI	Compound/Analyte Identification Procedures					
		1) Are the procedures for compound/analyte identification documented?	✓				
S14	OI	Demonstration of Analyst Competency (DOC)					
		1) Was DOC conducted consistent with NELAC Chapter 5C?	✓				
		2) Is documentation of the analyst's competency up-to-date and on file?	✓				
S15	OI	Verification/Validation Documentation for Methods (NELAC Chap 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
S16	OI	Laboratory Standard Operating Procedures (SOPs):					
		1) Are laboratory SOPs current and on file for each method performed?	✓				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
 2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
 3 NA = Not applicable.
 4 NR = Not Reviewed.
 5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Lab Order: 0705208

CASE NARRATIVE

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

Method SW6020 - Metals Analysis
Method E300 - Anions Analysis
Method E310.1 - Alkalinity Analysis
Method E120.1 - Specific Conductance
Method E160.1 - TDS Analysis

Exception Report R1-01

Samples were received and log-in performed on 5/23/07. A total of 13 samples were received. Sample SW-CR-900' Down was included in the cooler but not listed on the Chain-Of-Custody (COC). Added the sample to the COC as per the client. The samples arrived in good condition and were properly packaged.

Exception Report R7-03 & R7-04

For Anions analysis performed on 5/23/07, 5/25/07 and 6/7/07 the matrix spikes and matrix spike duplicate recoveries were out of control limits for some analytes. In addition, the matrix spike and matrix spike duplicate (5/23/07) had the RPD above control limits for Bromide. These are flagged accordingly in the QC summary report. The reference sample (5/23/07 0705208-11B) selected for the matrix spike and matrix spike duplicate was from this work order. The reference sample (5/23/07 0705169-15C) selected for the matrix spike and matrix spike duplicate was not from this work order. The reference sample (5/25/07) selected for the matrix spike and matrix spike duplicate was from this work order. The reference sample (6/7/07) selected for the matrix spike and matrix spike duplicate was not from this work order. The LCSs were within control limits for these analytes. No further corrective actions were required and no sample results were adversely affected.

For Metals analysis performed on 5/31/07 the matrix spike and matrix spike duplicate recoveries were out of control limits for some 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 required and no sample results were adversely affected.

Exception Report R10-01

For sample SW-TRIB-3 the mineral balance was significantly outside control limits. Each separate containers were analyzed separately and significant differences were found between the sample in the two containers.

Exception Report S2-02

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Lab Order: 0705208

CASE NARRATIVE

For Anions analysis performed on 5/24/07 CCV1 was slightly above control limits for Sulfate. This is flagged accordingly in the QC summary report. No further corrective actions were required and no sample results were adversely affected.

Exception Report S9-01

For Metals analysis performed on 5/31/07 the PDS recovery was above control limits for Sodium. This is flagged accordingly in the QC summary report. The serial dilution was within control limits for this analyte therefore no further corrective actions were taken.

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Lab Order: 0705208

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
0705208-01	SW-TRIB-4		05/22/07 12:20 PM	5/23/2007
0705208-02	SW-TRIB-5		05/22/07 12:40 PM	5/23/2007
0705208-03	SW-TRIB-6		05/22/07 01:00 PM	5/23/2007
0705208-04	SW-TRIB-1		05/22/07 01:20 PM	5/23/2007
0705208-05	SW-TRIB-2		05/22/07 01:40 PM	5/23/2007
0705208-06	SW-TRIB-3		05/22/07 02:00 PM	5/23/2007
0705208-07	Lower Seep-1		05/22/07 02:20 PM	5/23/2007
0705208-08	SW-CR-50' Down		05/22/07 03:00 PM	5/23/2007
0705208-09	SW-CR-50' Up		05/22/07 03:30 PM	5/23/2007
0705208-10	SW-CR-250' Up		05/22/07 03:40 PM	5/23/2007
0705208-11	SW-CR-1,000' Up		05/22/07 04:15 PM	5/23/2007
0705208-12	MW-12		05/22/07 10:20 AM	5/23/2007
0705208-13	SW-CR-900' Down		05/22/07 04:45 PM	5/23/2007

PREP DATES REPORT

Lab Order: 0705208
 Client: Terracon, Inc.
 Project: Ballinger-RRC Project

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0705208-01A	SW-TRIB-4	05/22/07 12:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-TRIB-4	05/22/07 12:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-TRIB-4	05/22/07 12:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-01B	SW-TRIB-4	05/22/07 12:20 PM	Aqueous	E310.1	Alkalinity	05/29/07 09:17 AM	R31858
	SW-TRIB-4	05/22/07 12:20 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-TRIB-4	05/22/07 12:20 PM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818
	SW-TRIB-4	05/22/07 12:20 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-TRIB-4	05/22/07 12:20 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
	SW-TRIB-4	05/22/07 12:20 PM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07
0705208-02A	SW-TRIB-5	05/22/07 12:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-TRIB-5	05/22/07 12:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-02B	SW-TRIB-5	05/22/07 12:40 PM	Aqueous	E310.1	Alkalinity	05/29/07 09:29 AM	R31858
	SW-TRIB-5	05/22/07 12:40 PM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818
	SW-TRIB-5	05/22/07 12:40 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-TRIB-5	05/22/07 12:40 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-TRIB-5	05/22/07 12:40 PM	Aqueous	E300	Anions by IC method - Water	06/07/07	R32040
	SW-TRIB-5	05/22/07 12:40 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
	SW-TRIB-5	05/22/07 12:40 PM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07
0705208-03A	SW-TRIB-6	05/22/07 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-TRIB-6	05/22/07 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-03B	SW-TRIB-6	05/22/07 01:00 PM	Aqueous	E310.1	Alkalinity	05/29/07 09:34 AM	R31858
	SW-TRIB-6	05/22/07 01:00 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-TRIB-6	05/22/07 01:00 PM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818
	SW-TRIB-6	05/22/07 01:00 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-TRIB-6	05/22/07 01:00 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
	SW-TRIB-6	05/22/07 01:00 PM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07
0705208-04A	SW-TRIB-1	05/22/07 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-TRIB-1	05/22/07 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029

Lab Order: 0705208
Client: Terracon, Inc.
Project: Ballinger-RRC Project

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0705208-04B	SW-TRIB-1	05/22/07 01:20 PM	Aqueous	E310.1	Alkalinity	05/29/07 09:41 AM	R31858
	SW-TRIB-1	05/22/07 01:20 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-TRIB-1	05/22/07 01:20 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-TRIB-1	05/22/07 01:20 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
	SW-TRIB-1	05/22/07 01:20 PM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07
0705208-05A	SW-TRIB-2	05/22/07 01:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-TRIB-2	05/22/07 01:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-05B	SW-TRIB-2	05/22/07 01:40 PM	Aqueous	E310.1	Alkalinity	05/29/07 09:46 AM	R31858
	SW-TRIB-2	05/22/07 01:40 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-TRIB-2	05/22/07 01:40 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-TRIB-2	05/22/07 01:40 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
	SW-TRIB-2	05/22/07 01:40 PM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07
0705208-06A	SW-TRIB-3	05/22/07 02:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-TRIB-3	05/22/07 02:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-TRIB-3	05/22/07 02:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-TRIB-3	05/22/07 02:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-06B	SW-TRIB-3	05/22/07 02:00 PM	Aqueous	E310.1	Alkalinity	05/29/07 09:51 AM	R31858
	SW-TRIB-3	05/22/07 02:00 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-TRIB-3	05/22/07 02:00 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-TRIB-3	05/22/07 02:00 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-TRIB-3	05/22/07 02:00 PM	Aqueous	E300	Anions by IC method - Water	06/07/07	R32040
	SW-TRIB-3	05/22/07 02:00 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
	SW-TRIB-3	05/22/07 02:00 PM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07
0705208-07A	Lower Seep-1	05/22/07 02:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	Lower Seep-1	05/22/07 02:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-07B	Lower Seep-1	05/22/07 02:20 PM	Aqueous	E310.1	Alkalinity	05/29/07 10:04 AM	R31858
	Lower Seep-1	05/22/07 02:20 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	Lower Seep-1	05/22/07 02:20 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835

Lab Order: 0705208
 Client: Terracon, Inc.
 Project: Ballinger-RRC Project

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0705208-07B	Lower Seep-1	05/22/07 02:20 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
	Lower Seep-1	05/22/07 02:20 PM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07
0705208-08A	SW-CR-50' Down	05/22/07 03:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-CR-50' Down	05/22/07 03:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-CR-50' Down	05/22/07 03:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-08B	SW-CR-50' Down	05/22/07 03:00 PM	Aqueous	E310.1	Alkalinity	05/29/07 10:09 AM	R31858
	SW-CR-50' Down	05/22/07 03:00 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-CR-50' Down	05/22/07 03:00 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-CR-50' Down	05/22/07 03:00 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-CR-50' Down	05/22/07 03:00 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
0705208-09A	SW-CR-50' Down	05/22/07 03:00 PM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07
	SW-CR-50' Up	05/22/07 03:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-CR-50' Up	05/22/07 03:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-09B	SW-CR-50' Up	05/22/07 03:30 PM	Aqueous	E310.1	Alkalinity	05/29/07 10:13 AM	R31858
	SW-CR-50' Up	05/22/07 03:30 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-CR-50' Up	05/22/07 03:30 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-CR-50' Up	05/22/07 03:30 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-CR-50' Up	05/22/07 03:30 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
0705208-10A	SW-CR-50' Up	05/22/07 03:30 PM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07
	SW-CR-250' Up	05/22/07 03:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-CR-250' Up	05/22/07 03:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-10B	SW-CR-250' Up	05/22/07 03:40 PM	Aqueous	E310.1	Alkalinity	05/29/07 10:17 AM	R31858
	SW-CR-250' Up	05/22/07 03:40 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-CR-250' Up	05/22/07 03:40 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-CR-250' Up	05/22/07 03:40 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-CR-250' Up	05/22/07 03:40 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
0705208-11A	SW-CR-1,000' Up	05/22/07 04:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029

Lab Order: 0705208
 Client: Terracon, Inc.
 Project: Ballinger-RRC Project

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0705208-11A	SW-CR-1,000' Up	05/22/07 04:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-11B	SW-CR-1,000' Up	05/22/07 04:15 PM	Aqueous	E310.1	Alkalinity	05/29/07 10:22 AM	R31858
	SW-CR-1,000' Up	05/22/07 04:15 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-CR-1,000' Up	05/22/07 04:15 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-CR-1,000' Up	05/22/07 04:15 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-CR-1,000' Up	05/22/07 04:15 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
	SW-CR-1,000' Up	05/22/07 04:15 PM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07
0705208-12A	MW-12	05/22/07 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	MW-12	05/22/07 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	MW-12	05/22/07 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-12B	MW-12	05/22/07 10:20 AM	Aqueous	E310.1	Alkalinity	05/29/07 10:29 AM	R31858
	MW-12	05/22/07 10:20 AM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	MW-12	05/22/07 10:20 AM	Aqueous	E300	Anions by IC method - Water	06/07/07	R32040
	MW-12	05/22/07 10:20 AM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	MW-12	05/22/07 10:20 AM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	MW-12	05/22/07 10:20 AM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
	MW-12	05/22/07 10:20 AM	Aqueous	E120.1	Specific Conductance	06/07/07	CONDW-06/07/07
	MW-12	05/22/07 10:20 AM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07
0705208-13A	SW-CR-900' Down	05/22/07 04:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
	SW-CR-900' Down	05/22/07 04:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 09:07 AM	26029
0705208-13B	SW-CR-900' Down	05/22/07 04:45 PM	Aqueous	E310.1	Alkalinity	05/29/07 10:33 AM	R31858
	SW-CR-900' Down	05/22/07 04:45 PM	Aqueous	E300	Anions by IC method - Water	05/23/07	R31777
	SW-CR-900' Down	05/22/07 04:45 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31835
	SW-CR-900' Down	05/22/07 04:45 PM	Aqueous	E120.1	Specific Conductance	05/25/07	CONDW-05/25/07
	SW-CR-900' Down	05/22/07 04:45 PM	Aqueous	E160.1	Total Dissolved Solids	05/25/07	TDS_W-05/25/07

DHL Analytical

11-Jun-07

ANALYTICAL DATES REPORT

Lab Order: 0705208
Client: Terracon, Inc.
Project: Ballinger-RRC Project

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705208-01A	SW-TRIB-4	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 04:14 PM	ICP-MS_070531B
	SW-TRIB-4	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	500	05/31/07 06:14 PM	ICP-MS_070531B
	SW-TRIB-4	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	1	05/31/07 12:46 PM	ICP-MS_070531A
0705208-01B	SW-TRIB-4	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 09:17 AM	TITRATOR_070529 A
	SW-TRIB-4	Aqueous	E300	Anions by IC method - Water	R31835	200	05/25/07 11:01 AM	IC_070525A
	SW-TRIB-4	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 12:04 PM	IC2_070523A
	SW-TRIB-4	Aqueous	E300	Anions by IC method - Water	R31818	50	05/24/07 05:00 PM	IC2_070524B
	SW-TRIB-4	Aqueous	E120.1	Specific Conductance	CONDW-05/25/07	2	05/25/07 10:30 AM	WC_070525A
	SW-TRIB-4	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C
0705208-02A	SW-TRIB-5	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 04:34 PM	ICP-MS_070531B
	SW-TRIB-5	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	500	05/31/07 06:18 PM	ICP-MS_070531B
0705208-02B	SW-TRIB-5	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 09:29 AM	TITRATOR_070529 A
	SW-TRIB-5	Aqueous	E300	Anions by IC method - Water	R31835	200	05/25/07 11:48 AM	IC_070525A
	SW-TRIB-5	Aqueous	E300	Anions by IC method - Water	R31818	50	05/24/07 05:15 PM	IC2_070524B
	SW-TRIB-5	Aqueous	E300	Anions by IC method - Water	R32040	200	06/07/07 10:43 AM	IC_070607A
	SW-TRIB-5	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 12:19 PM	IC2_070523A
	SW-TRIB-5	Aqueous	E120.1	Specific Conductance	CONDW-05/25/07	2	05/25/07 10:30 AM	WC_070525A
	SW-TRIB-5	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C
0705208-03A	SW-TRIB-6	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 04:38 PM	ICP-MS_070531B
	SW-TRIB-6	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	500	05/31/07 06:22 PM	ICP-MS_070531B
0705208-03B	SW-TRIB-6	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 09:34 AM	TITRATOR_070529 A
	SW-TRIB-6	Aqueous	E300	Anions by IC method - Water	R31835	200	05/25/07 12:04 PM	IC_070525A
	SW-TRIB-6	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 12:33 PM	IC2_070523A
	SW-TRIB-6	Aqueous	E300	Anions by IC method - Water	R31818	50	05/24/07 05:29 PM	IC2_070524B
	SW-TRIB-6	Aqueous	E120.1	Specific Conductance	CONDW-05/25/07	2	05/25/07 10:30 AM	WC_070525A
	SW-TRIB-6	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C

DHL Analytical

11-Jun-07

ANALYTICAL DATES REPORT

Lab Order: 0705208
Client: Terracon, Inc.
Project: Ballinger-RRC Project

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705208-04A	SW-TRIB-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 04:42 PM	ICP-MS_070531B
	SW-TRIB-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	10	05/31/07 06:26 PM	ICP-MS_070531B
0705208-04B	SW-TRIB-1	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 09:41 AM	TITRATOR_070529 A
	SW-TRIB-1	Aqueous	E300	Anions by IC method - Water	R31835	50	05/25/07 12:20 PM	IC_070525A
	SW-TRIB-1	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 12:48 PM	IC2_070523A
	SW-TRIB-1	Aqueous	E120.1	Specific Conductance	CONDW-05/25/0	1	05/25/07 10:30 AM	WC_070525A
	SW-TRIB-1	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C
0705208-05A	SW-TRIB-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 04:46 PM	ICP-MS_070531B
	SW-TRIB-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	10	05/31/07 06:30 PM	ICP-MS_070531B
0705208-05B	SW-TRIB-2	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 09:46 AM	TITRATOR_070529 A
	SW-TRIB-2	Aqueous	E300	Anions by IC method - Water	R31835	50	05/25/07 12:35 PM	IC_070525A
	SW-TRIB-2	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 01:03 PM	IC2_070523A
	SW-TRIB-2	Aqueous	E120.1	Specific Conductance	CONDW-05/25/0	1	05/25/07 10:30 AM	WC_070525A
	SW-TRIB-2	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C
0705208-06A	SW-TRIB-3	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	06/06/07 08:50 PM	ICP-MS2_070606A
	SW-TRIB-3	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	500	06/06/07 08:46 PM	ICP-MS2_070606A
	SW-TRIB-3	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 05:10 PM	ICP-MS_070531B
	SW-TRIB-3	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	500	05/31/07 06:34 PM	ICP-MS_070531B
0705208-06B	SW-TRIB-3	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 09:51 AM	TITRATOR_070529 A
	SW-TRIB-3	Aqueous	E300	Anions by IC method - Water	R31835	50	05/25/07 01:33 PM	IC_070525A
	SW-TRIB-3	Aqueous	E300	Anions by IC method - Water	R31835	200	05/25/07 01:49 PM	IC_070525A
	SW-TRIB-3	Aqueous	E300	Anions by IC method - Water	R32040	200	06/07/07 10:58 AM	IC_070607A
	SW-TRIB-3	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 02:19 PM	IC2_070523A
	SW-TRIB-3	Aqueous	E120.1	Specific Conductance	CONDW-05/25/0	1	05/25/07 10:30 AM	WC_070525A
	SW-TRIB-3	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C
0705208-07A	Lower Seep-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 05:14 PM	ICP-MS_070531B

Lab Order: 0705208
 Client: Terracon, Inc.
 Project: Ballinger-RRC Project

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705208-07A	Lower Seep-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	10	05/31/07 06:38 PM	ICP-MS_070531B
0705208-07B	Lower Seep-1	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 10:04 AM	TITRATOR_070529A
	Lower Seep-1	Aqueous	E300	Anions by IC method - Water	R31835	50	05/25/07 02:04 PM	IC_070525A
	Lower Seep-1	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 02:34 PM	IC2_070523A
	Lower Seep-1	Aqueous	E120.1	Specific Conductance	CONDW-05/25/07	1	05/25/07 10:30 AM	WC_070525A
	Lower Seep-1	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C
0705208-08A	SW-CR-50' Down	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 05:18 PM	ICP-MS_070531B
	SW-CR-50' Down	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	10	05/31/07 06:42 PM	ICP-MS_070531B
	SW-CR-50' Down	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	10	06/01/07 12:29 PM	ICP-MS_070601A
0705208-08B	SW-CR-50' Down	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 10:09 AM	TITRATOR_070529A
	SW-CR-50' Down	Aqueous	E300	Anions by IC method - Water	R31835	10	05/25/07 02:20 PM	IC_070525A
	SW-CR-50' Down	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 02:49 PM	IC2_070523A
	SW-CR-50' Down	Aqueous	E300	Anions by IC method - Water	R31777	10	05/23/07 05:53 PM	IC2_070523A
	SW-CR-50' Down	Aqueous	E120.1	Specific Conductance	CONDW-05/25/07	1	05/25/07 10:30 AM	WC_070525A
	SW-CR-50' Down	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C
0705208-09A	SW-CR-50' Up	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 05:22 PM	ICP-MS_070531B
	SW-CR-50' Up	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	10	05/31/07 06:46 PM	ICP-MS_070531B
0705208-09B	SW-CR-50' Up	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 10:13 AM	TITRATOR_070529A
	SW-CR-50' Up	Aqueous	E300	Anions by IC method - Water	R31835	10	05/25/07 02:36 PM	IC_070525A
	SW-CR-50' Up	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 03:03 PM	IC2_070523A
	SW-CR-50' Up	Aqueous	E300	Anions by IC method - Water	R31777	10	05/23/07 06:07 PM	IC2_070523A
	SW-CR-50' Up	Aqueous	E120.1	Specific Conductance	CONDW-05/25/07	1	05/25/07 10:30 AM	WC_070525A
	SW-CR-50' Up	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C
0705208-10A	SW-CR-250' Up	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 05:27 PM	ICP-MS_070531B
	SW-CR-250' Up	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	10	06/01/07 01:56 PM	ICP-MS_070601A

DHL Analytical

11-Jun-07

ANALYTICAL DATES REPORT

Lab Order: 0705208
Client: Terracon, Inc.
Project: Ballinger-RRC Project

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705208-10B	SW-CR-250' Up	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 10:17 AM	TITRATOR_070529 A
	SW-CR-250' Up	Aqueous	E300	Anions by IC method - Water	R31777	10	05/23/07 06:22 PM	IC2_070523A
	SW-CR-250' Up	Aqueous	E300	Anions by IC method - Water	R31835	10	05/25/07 02:51 PM	IC_070525A
	SW-CR-250' Up	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 03:18 PM	IC2_070523A
	SW-CR-250' Up	Aqueous	E120.1	Specific Conductance	CONDW-05/25/07	1	05/25/07 10:30 AM	WC_070525A
	SW-CR-250' Up	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C
0705208-11A	SW-CR-1,000' Up	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 05:31 PM	ICP-MS_070531B
	SW-CR-1,000' Up	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	10	05/31/07 07:10 PM	ICP-MS_070531B
0705208-11B	SW-CR-1,000' Up	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 10:22 AM	TITRATOR_070529 A
	SW-CR-1,000' Up	Aqueous	E300	Anions by IC method - Water	R31777	10	05/23/07 06:37 PM	IC2_070523A
	SW-CR-1,000' Up	Aqueous	E300	Anions by IC method - Water	R31835	10	05/25/07 03:39 PM	IC_070525A
	SW-CR-1,000' Up	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 03:32 PM	IC2_070523A
	SW-CR-1,000' Up	Aqueous	E120.1	Specific Conductance	CONDW-05/25/07	1	05/25/07 10:30 AM	WC_070525A
	SW-CR-1,000' Up	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C
0705208-12A	MW-12	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 05:35 PM	ICP-MS_070531B
	MW-12	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	10	05/31/07 07:14 PM	ICP-MS_070531B
	MW-12	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	500	06/01/07 12:33 PM	ICP-MS_070601A
0705208-12B	MW-12	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 10:29 AM	TITRATOR_070529 A
	MW-12	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 03:47 PM	IC2_070523A
	MW-12	Aqueous	E300	Anions by IC method - Water	R32040	200	06/07/07 11:14 AM	IC_070607A
	MW-12	Aqueous	E300	Anions by IC method - Water	R31835	50	05/25/07 03:54 PM	IC_070525A
	MW-12	Aqueous	E300	Anions by IC method - Water	R31835	100	05/25/07 04:28 PM	IC_070525A
	MW-12	Aqueous	E120.1	Specific Conductance	CONDW-05/25/07	1	05/25/07 10:30 AM	WC_070525A
	MW-12	Aqueous	E120.1	Specific Conductance	CONDW-06/07/07	2	06/07/07 10:00 AM	WC_070607A
	MW-12	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C
0705208-13A	SW-CR-900' Down	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	100	05/31/07 05:39 PM	ICP-MS_070531B

ANALYTICAL DATES REPORT

Lab Order: 0705208
 Client: Terracon, Inc.
 Project: Ballinger-RRC Project

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705208-13A	SW-CR-900' Down	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26029	10	05/31/07 07:18 PM	ICP-MS_070531B
0705208-13B	SW-CR-900' Down	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 10:33 AM	TITRATOR_070529 A
	SW-CR-900' Down	Aqueous	E300	Anions by IC method - Water	R31835	10	05/25/07 04:42 PM	IC_070525A
	SW-CR-900' Down	Aqueous	E300	Anions by IC method - Water	R31777	1	05/23/07 04:02 PM	IC2_070523A
	SW-CR-900' Down	Aqueous	E120.1	Specific Conductance	CONDW-05/25/0	1	05/25/07 10:30 AM	WC_070525A
	SW-CR-900' Down	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/25/07	1	05/25/07 11:00 AM	WC_070525C

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705208

Client Sample ID: SW-TRIB-4
 Lab ID: 0705208-01
 Collection Date: 05/22/07 12:20 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	494	10.0	10.0		mg/L	100	05/31/07 04:14 PM
Magnesium	117	10.0	10.0		mg/L	100	05/31/07 04:14 PM
Potassium	19.2	10.0	10.0		mg/L	100	05/31/07 04:14 PM
Sodium	3140	50.0	50.0		mg/L	500	05/31/07 06:14 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	6.38	0.300	1.00		mg/L	1	05/23/07 12:04 PM
Chloride	5290	60.0	200		mg/L	200	05/25/07 11:01 AM
Nitrate-N	ND	0.100	0.500		mg/L	1	05/23/07 12:04 PM
Sulfate	604	50.0	150		mg/L	50	05/24/07 05:00 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	303	10.0	20.0		mg/L	1	05/29/07 09:17 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:17 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:17 AM
Alkalinity, Total (As CaCO3)	303	10.0	20.0		mg/L	1	05/29/07 09:17 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	15600	20.0	20.0		µmhos/cm	2	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	10200	10.0	10.0		mg/L	1	05/25/07 11:00 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 MPLs 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: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705208

Client Sample ID: SW-TRIB-5
 Lab ID: 0705208-02
 Collection Date: 05/22/07 12:40 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	355	10.0	10.0		mg/L	100	05/31/07 04:34 PM
Magnesium	97.6	10.0	10.0		mg/L	100	05/31/07 04:34 PM
Potassium	17.2	10.0	10.0		mg/L	100	05/31/07 04:34 PM
Sodium	2760	50.0	50.0		mg/L	500	05/31/07 06:18 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	5.56	0.300	1.00		mg/L	1	05/23/07 12:19 PM
Chloride	4180	60.0	200		mg/L	200	06/07/07 10:43 AM
Nitrate-N	ND	0.100	0.500		mg/L	1	05/23/07 12:19 PM
Sulfate	548	50.0	150		mg/L	50	05/24/07 05:15 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	248	10.0	20.0		mg/L	1	05/29/07 09:29 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:29 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:29 AM
Alkalinity, Total (As CaCO3)	248	10.0	20.0		mg/L	1	05/29/07 09:29 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	13600	20.0	20.0		µmhos/cm	2	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	8820	10.0	10.0		mg/L	1	05/25/07 11:00 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705208

Client Sample ID: SW-TRIB-6
Lab ID: 0705208-03
Collection Date: 05/22/07 01:00 PM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	399	10.0	10.0		mg/L	100	05/31/07 04:38 PM
Magnesium	108	10.0	10.0		mg/L	100	05/31/07 04:38 PM
Potassium	11.1	10.0	10.0		mg/L	100	05/31/07 04:38 PM
Sodium	2940	50.0	50.0		mg/L	500	05/31/07 06:22 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	6.15	0.300	1.00		mg/L	1	05/23/07 12:33 PM
Chloride	5300	60.0	200		mg/L	200	05/25/07 12:04 PM
Nitrate-N	0.641	0.100	0.500		mg/L	1	05/23/07 12:33 PM
Sulfate	575	50.0	150		mg/L	50	05/24/07 05:29 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	186	10.0	20.0		mg/L	1	05/29/07 09:34 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:34 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:34 AM
Alkalinity, Total (As CaCO3)	186	10.0	20.0		mg/L	1	05/29/07 09:34 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	15300	20.0	20.0		µmhos/cm	2	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	9600	10.0	10.0		mg/L	1	05/25/07 11:00 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705208

Client Sample ID: SW-TRIB-1
 Lab ID: 0705208-04
 Collection Date: 05/22/07 01:20 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	396	10.0	10.0		mg/L	100	05/31/07 04:42 PM
Magnesium	74.6	10.0	10.0		mg/L	100	05/31/07 04:42 PM
Potassium	5.90	1.00	1.00		mg/L	10	05/31/07 06:26 PM
Sodium	883	10.0	10.0		mg/L	100	05/31/07 04:42 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	2.22	0.300	1.00		mg/L	1	05/23/07 12:48 PM
Chloride	1920	15.0	50.0		mg/L	50	05/25/07 12:20 PM
Nitrate-N	0.191	0.100	0.500	J	mg/L	1	05/23/07 12:48 PM
Sulfate	394	50.0	150		mg/L	50	05/25/07 12:20 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	298	10.0	20.0		mg/L	1	05/29/07 09:41 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:41 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:41 AM
Alkalinity, Total (As CaCO3)	298	10.0	20.0		mg/L	1	05/29/07 09:41 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	6660	10.0	10.0		µmhos/cm	1	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	4060	10.0	10.0		mg/L	1	05/25/07 11:00 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705208

Client Sample ID: SW-TRIB-2
 Lab ID: 0705208-05
 Collection Date: 05/22/07 01:40 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	317	10.0	10.0		mg/L	100	05/31/07 04:46 PM
Magnesium	77.4	10.0	10.0		mg/L	100	05/31/07 04:46 PM
Potassium	7.48	1.00	1.00		mg/L	10	05/31/07 06:30 PM
Sodium	1000	10.0	10.0		mg/L	100	05/31/07 04:46 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	2.52	0.300	1.00		mg/L	1	05/23/07 01:03 PM
Chloride	2130	15.0	50.0		mg/L	50	05/25/07 12:35 PM
Nitrate-N	ND	0.100	0.500		mg/L	1	05/23/07 01:03 PM
Sulfate	482	50.0	150		mg/L	50	05/25/07 12:35 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	213	10.0	20.0		mg/L	1	05/29/07 09:46 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:46 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:46 AM
Alkalinity, Total (As CaCO3)	213	10.0	20.0		mg/L	1	05/29/07 09:46 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	7140	10.0	10.0		µmhos/cm	1	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	4660	10.0	10.0		mg/L	1	05/25/07 11:00 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705208

Client Sample ID: SW-TRIB-3
 Lab ID: 0705208-06
 Collection Date: 05/22/07 02:00 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020			Analyst: SCS		
Calcium	466	10.0	10.0		mg/L	100	05/31/07 05:10 PM
Magnesium	130	10.0	10.0		mg/L	100	05/31/07 05:10 PM
Potassium	11.1	10.0	10.0		mg/L	100	05/31/07 05:10 PM
Sodium	1950	50.0	50.0		mg/L	500	05/31/07 06:34 PM
ANIONS BY IC METHOD - WATER		E300			Analyst: JBC		
Bromide	2.96	0.300	1.00		mg/L	1	05/23/07 02:19 PM
Chloride	2370	60.0	200		mg/L	200	06/07/07 10:58 AM
Nitrate-N	0.175	0.100	0.500	J	mg/L	1	05/23/07 02:19 PM
Sulfate	507	50.0	150		mg/L	50	05/25/07 01:33 PM
ALKALINITY		E310.1			Analyst: JBC		
Alkalinity, Bicarbonate (As CaCO3)	223	10.0	20.0		mg/L	1	05/29/07 09:51 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:51 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 09:51 AM
Alkalinity, Total (As CaCO3)	223	10.0	20.0		mg/L	1	05/29/07 09:51 AM
SPECIFIC CONDUCTANCE		E120.1			Analyst: JBC		
Specific Conductance	8250	10.0	10.0		µmhos/cm	1	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1			Analyst: JBC		
Total Dissolved Solids (Residue, Filterable)	5410	10.0	10.0		mg/L	1	05/25/07 11:00 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705208

Client Sample ID: Lower Seep-1
 Lab ID: 0705208-07
 Collection Date: 05/22/07 02:20 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	262	10.0	10.0		mg/L	100	05/31/07 05:14 PM
Magnesium	59.6	10.0	10.0		mg/L	100	05/31/07 05:14 PM
Potassium	7.49	1.00	1.00		mg/L	10	05/31/07 06:38 PM
Sodium	778	10.0	10.0		mg/L	100	05/31/07 05:14 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	1.44	0.300	1.00		mg/L	1	05/23/07 02:34 PM
Chloride	1620	15.0	50.0		mg/L	50	05/25/07 02:04 PM
Nitrate-N	ND	0.100	0.500		mg/L	1	05/23/07 02:34 PM
Sulfate	321	50.0	150		mg/L	50	05/25/07 02:04 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	308	10.0	20.0		mg/L	1	05/29/07 10:04 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:04 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:04 AM
Alkalinity, Total (As CaCO3)	308	10.0	20.0		mg/L	1	05/29/07 10:04 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	5580	10.0	10.0		µmhos/cm	1	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	3560	10.0	10.0		mg/L	1	05/25/07 11:00 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705208

Client Sample ID: SW-CR-50' Down
Lab ID: 0705208-08
Collection Date: 05/22/07 03:00 PM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	127	10.0	10.0		mg/L	100	05/31/07 05:18 PM
Magnesium	54.2	10.0	10.0		mg/L	100	05/31/07 05:18 PM
Potassium	7.08	1.00	1.00		mg/L	10	05/31/07 06:42 PM
Sodium	130	10.0	10.0		mg/L	100	05/31/07 05:18 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	0.633	0.300	1.00	J	mg/L	1	05/23/07 02:49 PM
Chloride	226	3.00	10.0		mg/L	10	05/23/07 05:53 PM
Nitrate-N	0.878	0.100	0.500		mg/L	1	05/23/07 02:49 PM
Sulfate	323	10.0	30.0		mg/L	10	05/23/07 05:53 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	189	10.0	20.0		mg/L	1	05/29/07 10:09 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:09 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:09 AM
Alkalinity, Total (As CaCO3)	189	10.0	20.0		mg/L	1	05/29/07 10:09 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	1520	10.0	10.0		µmhos/cm	1	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	1010	10.0	10.0		mg/L	1	05/25/07 11:00 AM

Qualifiers	ND - Not Detected at the SQL	S - Spike Recovery outside control limits
	J - Analyte detected between SQL and RL	C - Sample Result or QC discussed in Case Narrative
	B - Analyte detected in the associated Method Blank	RL - Reporting Limit (MQL adjusted for moisture and sample size)
	DF- Dilution Factor	SQL - Sample Quantitation Limit
	N - Parameter not NELAC certified	E - TPH pattern not Gas or Diesel Range Pattern

See Final Page of Report for MQLs and MDLs

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705208

Client Sample ID: SW-CR-50' Up
Lab ID: 0705208-09
Collection Date: 05/22/07 03:30 PM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020			Analyst: SCS		
Calcium	131	10.0	10.0		mg/L	100	05/31/07 05:22 PM
Magnesium	55.2	10.0	10.0		mg/L	100	05/31/07 05:22 PM
Potassium	7.50	1.00	1.00		mg/L	10	05/31/07 06:46 PM
Sodium	130	10.0	10.0		mg/L	100	05/31/07 05:22 PM
ANIONS BY IC METHOD - WATER		E300			Analyst: JBC		
Bromide	0.656	0.300	1.00	J	mg/L	1	05/23/07 03:03 PM
Chloride	222	3.00	10.0		mg/L	10	05/23/07 06:07 PM
Nitrate-N	0.852	0.100	0.500		mg/L	1	05/23/07 03:03 PM
Sulfate	319	10.0	30.0		mg/L	10	05/23/07 06:07 PM
ALKALINITY		E310.1			Analyst: JBC		
Alkalinity, Bicarbonate (As CaCO3)	188	10.0	20.0		mg/L	1	05/29/07 10:13 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:13 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:13 AM
Alkalinity, Total (As CaCO3)	188	10.0	20.0		mg/L	1	05/29/07 10:13 AM
SPECIFIC CONDUCTANCE		E120.1			Analyst: JBC		
Specific Conductance	1520	10.0	10.0		µmhos/cm	1	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1			Analyst: JBC		
Total Dissolved Solids (Residue, Filterable)	1030	10.0	10.0		mg/L	1	05/25/07 11:00 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705208

Client Sample ID: SW-CR-250' Up
Lab ID: 0705208-10
Collection Date: 05/22/07 03:40 PM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020			Analyst: SCS		
Calcium	128	10.0	10.0		mg/L	100	05/31/07 05:27 PM
Magnesium	56.5	10.0	10.0		mg/L	100	05/31/07 05:27 PM
Potassium	6.66	1.00	1.00		mg/L	10	06/01/07 01:56 PM
Sodium	127	10.0	10.0		mg/L	100	05/31/07 05:27 PM
ANIONS BY IC METHOD - WATER		E300			Analyst: JBC		
Bromide	0.636	0.300	1.00	J	mg/L	1	05/23/07 03:18 PM
Chloride	228	3.00	10.0		mg/L	10	05/23/07 06:22 PM
Nitrate-N	0.854	0.100	0.500		mg/L	1	05/23/07 03:18 PM
Sulfate	331	10.0	30.0		mg/L	10	05/23/07 06:22 PM
ALKALINITY		E310.1			Analyst: JBC		
Alkalinity, Bicarbonate (As CaCO3)	189	10.0	20.0		mg/L	1	05/29/07 10:17 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:17 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:17 AM
Alkalinity, Total (As CaCO3)	189	10.0	20.0		mg/L	1	05/29/07 10:17 AM
SPECIFIC CONDUCTANCE		E120.1			Analyst: JBC		
Specific Conductance	1500	10.0	10.0		µmhos/cm	1	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1			Analyst: JBC		
Total Dissolved Solids (Residue, Filterable)	1000	10.0	10.0		mg/L	1	05/25/07 11:00 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705208

Client Sample ID: SW-CR-1.000' Up
 Lab ID: 0705208-11
 Collection Date: 05/22/07 04:15 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020					Analyst: SCS
Calcium	134	10.0	10.0		mg/L	100	05/31/07 05:31 PM
Magnesium	57.8	10.0	10.0		mg/L	100	05/31/07 05:31 PM
Potassium	7.25	1.00	1.00		mg/L	10	05/31/07 07:10 PM
Sodium	138	10.0	10.0		mg/L	100	05/31/07 05:31 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Bromide	0.655	0.300	1.00	J	mg/L	1	05/23/07 03:32 PM
Chloride	229	3.00	10.0		mg/L	10	05/23/07 06:37 PM
Nitrate-N	0.874	0.100	0.500		mg/L	1	05/23/07 03:32 PM
Sulfate	336	10.0	30.0		mg/L	10	05/23/07 06:37 PM
ALKALINITY		E310.1					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO3)	190	10.0	20.0		mg/L	1	05/29/07 10:22 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:22 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:22 AM
Alkalinity, Total (As CaCO3)	190	10.0	20.0		mg/L	1	05/29/07 10:22 AM
SPECIFIC CONDUCTANCE		E120.1					Analyst: JBC
Specific Conductance	1520	10.0	10.0		µmhos/cm	1	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1					Analyst: JBC
Total Dissolved Solids (Residue, Filterable)	1030	10.0	10.0		mg/L	1	05/25/07 11:00 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705208

Client Sample ID: MW-12
Lab ID: 0705208-12
Collection Date: 05/22/07 10:20 AM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	662	10.0	10.0		mg/L	100	05/31/07 05:35 PM
Magnesium	271	10.0	10.0		mg/L	100	05/31/07 05:35 PM
Potassium	11.0	10.0	10.0		mg/L	100	05/31/07 05:35 PM
Sodium	1810	50.0	50.0		mg/L	500	06/01/07 12:33 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	6.18	0.300	1.00		mg/L	1	05/23/07 03:47 PM
Chloride	4610	60.0	200		mg/L	200	06/07/07 11:14 AM
Nitrate-N	0.790	0.100	0.500		mg/L	1	05/23/07 03:47 PM
Sulfate	376	50.0	150		mg/L	50	05/25/07 03:54 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	293	10.0	20.0		mg/L	1	05/29/07 10:29 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:29 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:29 AM
Alkalinity, Total (As CaCO3)	293	10.0	20.0		mg/L	1	05/29/07 10:29 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	14000	20.0	20.0		µmhos/cm	2	06/07/07 10:00 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	9090	10.0	10.0		mg/L	1	05/25/07 11:00 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705208

Client Sample ID: SW-CR-900' Down
 Lab ID: 0705208-13
 Collection Date: 05/22/07 04:45 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020					Analyst: SCS
Calcium	128	10.0	10.0		mg/L	100	05/31/07 05:39 PM
Magnesium	55.9	10.0	10.0		mg/L	100	05/31/07 05:39 PM
Potassium	7.12	1.00	1.00		mg/L	10	05/31/07 07:18 PM
Sodium	135	10.0	10.0		mg/L	100	05/31/07 05:39 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Bromide	0.611	0.300	1.00	J	mg/L	1	05/23/07 04:02 PM
Chloride	218	3.00	10.0		mg/L	10	05/25/07 04:42 PM
Nitrate-N	0.835	0.100	0.500		mg/L	1	05/23/07 04:02 PM
Sulfate	346	10.0	30.0		mg/L	10	05/25/07 04:42 PM
ALKALINITY		E310.1					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO3)	189	10.0	20.0		mg/L	1	05/29/07 10:33 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:33 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:33 AM
Alkalinity, Total (As CaCO3)	189	10.0	20.0		mg/L	1	05/29/07 10:33 AM
SPECIFIC CONDUCTANCE		E120.1					Analyst: JBC
Specific Conductance	1500	10.0	10.0		µmhos/cm	1	05/25/07 10:30 AM
TOTAL DISSOLVED SOLIDS		E160.1					Analyst: JBC
Total Dissolved Solids (Residue, Filterable)	1030	10.0	10.0		mg/L	1	05/25/07 11:00 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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT**RunID: ICP-MS_070531A**

Sample ID	MB-26029	Batch ID:	26029	TestNo:	SW6020	Units:	mg/L		
SampType:	MBLK	Run ID:	ICP-MS_070531A	Analysis Date:	5/31/2007 12:02:00 P	Prep Date:	5/25/2007		
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit	%RPD RPDLimit	Qual

Calcium	ND	0.100							
Magnesium	ND	0.100							
Potassium	ND	0.100							
Sodium	ND	0.100							

Sample ID	LCS-26029	Batch ID:	26029	TestNo:	SW6020	Units:	mg/L		
SampType:	LCS	Run ID:	ICP-MS_070531A	Analysis Date:	5/31/2007 12:18:00 P	Prep Date:	5/25/2007		
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit	%RPD RPDLimit	Qual

Calcium	5.18	0.100	5.00	0	104	80	120		
Magnesium	5.10	0.100	5.00	0	102	80	120		
Potassium	5.14	0.100	5.00	0	103	80	120		
Sodium	5.49	0.100	5.00	0	110	80	120		

Sample ID	LCSD-26029	Batch ID:	26029	TestNo:	SW6020	Units:	mg/L		
SampType:	LCSD	Run ID:	ICP-MS_070531A	Analysis Date:	5/31/2007 12:22:00 P	Prep Date:	5/25/2007		
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit	%RPD RPDLimit	Qual

Calcium	5.17	0.100	5.00	0	103	80	120	0.135	15
Magnesium	4.61	0.100	5.00	0	92.2	80	120	10.2	15
Potassium	5.07	0.100	5.00	0	101	80	120	1.51	15
Sodium	4.98	0.100	5.00	0	99.5	80	120	9.78	15

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070531A

Sample ID	ICV1-070531	Batch ID:	R31907	TestNo:	SW6020	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS_070531A	Analysis Date:	5/31/2007 11:50:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.45	0.100	2.50	0	97.8	90	110			
Magnesium	2.32	0.100	2.50	0	92.8	90	110			
Potassium	2.47	0.100	2.50	0	98.7	90	110			
Sodium	2.27	0.100	2.50	0	90.7	90	110			

Sample ID	CCV1-070531	Batch ID:	R31907	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070531A	Analysis Date:	5/31/2007 12:30:00 P	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.14	0.100	5.00	0	103	90	110			
Magnesium	5.12	0.100	5.00	0	102	90	110			
Potassium	5.08	0.100	5.00	0	102	90	110			
Sodium	5.32	0.100	5.00	0	106	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070531B

Sample ID	0705208-01A SD	Batch ID:	26029	TestNo:	SW6020	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS_070531B	Analysis Date:	5/31/2007 4:18:00 PM	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	518	50.0	0	494				4.80	10	
Magnesium	129	50.0	0	117				10.1	10	
Potassium	0	50.0	0	19.2				0	10	
Sodium	2930	50.0	0	2890				1.24	10	

Sample ID	0705208-01A MS	Batch ID:	26029	TestNo:	SW6020	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS_070531B	Analysis Date:	5/31/2007 4:22:00 PM	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	480	10.0	5.00	494	-290	80	120			S
Magnesium	130	10.0	5.00	117	258	80	120			S
Potassium	24.0	10.0	5.00	19.2	95.0	80	120			
Sodium	3050	10.0	5.00	2890	3160	80	120			S

Sample ID	0705208-01A MSD	Batch ID:	26029	TestNo:	SW6020	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS_070531B	Analysis Date:	5/31/2007 4:26:00 PM	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0	10.0	5.00	494	-9880	80	120	0	15	S
Magnesium	0	10.0	5.00	117	-2340	80	120	0	15	S
Potassium	0	10.0	5.00	19.2	-385	80	120	0	15	S
Sodium	0	10.0	5.00	2890	-57900	80	120	0	15	S

Sample ID	0705208-01A PDS	Batch ID:	26029	TestNo:	SW6020	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS_070531B	Analysis Date:	5/31/2007 4:30:00 PM	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	971	10.0	500	494	95.4	75	125			
Magnesium	659	10.0	500	117	108	75	125			
Potassium	530	10.0	500	19.2	102	75	125			
Sodium	3600	10.0	500	2890	140	75	125			S

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070531B

Sample ID	ICV1-070531	Batch ID:	R31928	TestNo:	SW6020	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS_070531B	Analysis Date:	5/31/2007 3:58:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.64	0.100	2.50	0	106	90	110			
Magnesium	2.64	0.100	2.50	0	106	90	110			
Potassium	2.60	0.100	2.50	0	104	90	110			
Sodium	2.64	0.100	2.50	0	106	90	110			

Sample ID	CCV1-070531	Batch ID:	R31928	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070531B	Analysis Date:	5/31/2007 4:58:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.97	0.100	5.00	0	99.4	90	110			
Magnesium	5.18	0.100	5.00	0	104	90	110			
Potassium	4.95	0.100	5.00	0	98.9	90	110			
Sodium	5.18	0.100	5.00	0	104	90	110			

Sample ID	CCV2-070531	Batch ID:	R31928	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070531B	Analysis Date:	5/31/2007 5:51:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.08	0.100	5.00	0	102	90	110			
Magnesium	5.43	0.100	5.00	0	109	90	110			
Potassium	5.10	0.100	5.00	0	102	90	110			
Sodium	5.49	0.100	5.00	0	110	90	110			

Sample ID	CCV3-070531	Batch ID:	R31928	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070531B	Analysis Date:	5/31/2007 6:54:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.33	0.100	5.00	0	107	90	110			
Sodium	5.41	0.100	5.00	0	108	90	110			

Sample ID	CCV4-070531	Batch ID:	R31928	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070531B	Analysis Date:	5/31/2007 7:30:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.29	0.100	5.00	0	106	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070601A

Sample ID	ICV1-070601	Batch ID:	R31935	TestNo:	SW6020	Units:	mg/L				
SampType:	ICV	Run ID:	ICP-MS_070601A	Analysis Date:	6/1/2007 12:13:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium		2.60	0.100	2.50	0	104	90	110			
Sodium		2.42	0.100	2.50	0	96.9	90	110			

Sample ID	CCV1-070601	Batch ID:	R31935	TestNo:	SW6020	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS_070601A	Analysis Date:	6/1/2007 1:06:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium		5.09	0.100	5.00	0	102	90	110			
Sodium		5.01	0.100	5.00	0	100	90	110			

Sample ID	CCV2-070601	Batch ID:	R31935	TestNo:	SW6020	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS_070601A	Analysis Date:	6/1/2007 2:04:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium		4.74	0.100	5.00	0	94.9	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC_070525A

Sample ID	ICV-070525	Batch ID:	R31835	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC_070525A	Analysis Date:	5/25/2007 9:37:11 AM	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	26.1	1.00	25.00	0	105	90	110			
Sulfate	81.2	3.00	75.00	0	108	90	110			

Sample ID	MB-070525	Batch ID:	R31835	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC_070525A	Analysis Date:	5/25/2007 10:12:37 A	Prep Date:	5/25/2007			
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-070525	Batch ID:	R31835	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC_070525A	Analysis Date:	5/25/2007 10:28:19 A	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.0	1.00	10.00	0	100	90	110			
Sulfate	32.8	3.00	30.00	0	109	90	110			

Sample ID	LCSD-070525	Batch ID:	R31835	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC_070525A	Analysis Date:	5/25/2007 10:43:17 A	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110	0.516	20	
Sulfate	33.0	3.00	30.00	0	110	90	110	0.733	20	

Sample ID	0705208-01B MS	Batch ID:	R31835	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC_070525A	Analysis Date:	5/25/2007 11:17:26 A	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5100	200	2000	5294	-9.80	90	110			S

Sample ID	0705208-01B MSD	Batch ID:	R31835	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC_070525A	Analysis Date:	5/25/2007 11:33:08 A	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5100	200	2000	5294	-9.55	90	110	0.0988	20	S

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC_070525A

Sample ID	CCV1-070525	Batch ID:	R31835	TestNo:	E300	Units:	mg/L				
SampType:	CCV	Run ID:	IC_070525A	Analysis Date:	5/25/2007 1:12:45 PM	Prep Date:	5/25/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride		9.70	1.00	10.00	0	97.0	90	110			
Sulfate		33.0	3.00	30.00	0	110	90	110			

Sample ID	0705208-08B MS	Batch ID:	R31835	TestNo:	E300	Units:	mg/L				
SampType:	MS	Run ID:	IC_070525A	Analysis Date:	5/25/2007 3:07:39 PM	Prep Date:	5/25/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate		544	30.0	300.0	349.5	65.0	90	110			S

Sample ID	0705208-08B MSD	Batch ID:	R31835	TestNo:	E300	Units:	mg/L				
SampType:	MSD	Run ID:	IC_070525A	Analysis Date:	5/25/2007 3:23:22 PM	Prep Date:	5/25/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate		548	30.0	300.0	349.5	66.2	90	110	0.673	20	S

Sample ID	CCV2-070525	Batch ID:	R31835	TestNo:	E300	Units:	mg/L				
SampType:	CCV	Run ID:	IC_070525A	Analysis Date:	5/25/2007 4:09:24 PM	Prep Date:	5/25/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride		9.64	1.00	10.00	0	96.4	90	110			
Sulfate		33.0	3.00	30.00	0	110	90	110			

Sample ID	CCV3-070525	Batch ID:	R31835	TestNo:	E300	Units:	mg/L				
SampType:	CCV	Run ID:	IC_070525A	Analysis Date:	5/25/2007 5:00:57 PM	Prep Date:	5/25/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride		10.0	1.00	10.00	0	100	90	110			
Sulfate		32.3	3.00	30.00	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 Detection Limit
N	Parameter not NELAC certified	ND	Not Detected at the Method Detection L
R	RPD outside accepted control limits	RL	Reporting Limit
S	Spike Recovery outside control limits	J	Analyte detected between SQL and RL

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC_070607A

Sample ID	ICV-070607	Batch ID:	R32040	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC_070607A	Analysis Date:	6/7/2007 9:19:45 AM	Prep Date:	6/7/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	22.6	1.00	25.00	0	90.4	90	110			

Sample ID	MB-070607	Batch ID:	R32040	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC_070607A	Analysis Date:	6/7/2007 9:43:20 AM	Prep Date:	6/7/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.00								

Sample ID	LCS-070607	Batch ID:	R32040	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC_070607A	Analysis Date:	6/7/2007 9:59:03 AM	Prep Date:	6/7/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.15	1.00	10.00	0	91.5	90	110			

Sample ID	LCSD-070607	Batch ID:	R32040	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC_070607A	Analysis Date:	6/7/2007 10:14:45 AM	Prep Date:	6/7/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.25	1.00	10.00	0	92.5	90	110	1.09	20	

Sample ID	CCV1-070607	Batch ID:	R32040	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC_070607A	Analysis Date:	6/7/2007 12:27:17 PM	Prep Date:	6/7/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.53	1.00	10.00	0	95.3	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070523A

Sample ID	ICV-070523	Batch ID:	R31777	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 10:07:12 A	Prep Date:	5/23/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	49.6	1.00	50.00	0	99.3	90	110			
Nitrate-N	12.5	0.500	12.50	0	100	90	110			

Sample ID	MB-070523	Batch ID:	R31777	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 10:42:29 A	Prep Date:	5/23/2007

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

Sample ID	LCS-070523	Batch ID:	R31777	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 10:57:10 A	Prep Date:	5/23/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.3	1.00	20.00	0	102	90	110			
Nitrate-N	5.14	0.500	5.000	0	103	90	110			

Sample ID	LCSD-070523	Batch ID:	R31777	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 11:11:50 A	Prep Date:	5/23/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.4	1.00	20.00	0	102	90	110	0.0486	20	
Nitrate-N	5.12	0.500	5.000	0	102	90	110	0.345	20	

Sample ID	0705208-04B MS	Batch ID:	R31777	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 1:17:49 PM	Prep Date:	5/23/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.1	1.00	20.00	2.223	89.6	90	110			
Nitrate-N	4.80	0.500	5.000	0.1906	92.1	90	110			

Sample ID	0705208-04B MSD	Batch ID:	R31777	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 1:32:29 PM	Prep Date:	5/23/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	28.3	1.00	20.00	2.223	130	90	110	33.5	20	SR
Nitrate-N	5.83	0.500	5.000	0.1906	113	90	110	19.5	20	S

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070523A

Sample ID	CCV1-070523	Batch ID:	R31777	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 2:01:50 PM	Prep Date:	5/23/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.3	1.00	20.00	0	102	90	110			
Nitrate-N	5.11	0.500	5.000	0	102	90	110			

Sample ID	0705208-11B MS	Batch ID:	R31777	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 4:20:19 PM	Prep Date:	5/23/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.0	1.00	20.00	0.6552	91.5	90	110			
Nitrate-N	5.29	0.500	5.000	0.8745	88.2	90	110			S

Sample ID	0705208-11B MSD	Batch ID:	R31777	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 4:34:59 PM	Prep Date:	5/23/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.1	1.00	20.00	0.6552	92.3	90	110	0.797	20	
Nitrate-N	5.32	0.500	5.000	0.8745	88.8	90	110	0.564	20	S

Sample ID	CCV2-070523	Batch ID:	R31777	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 4:49:39 PM	Prep Date:	5/23/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.3	1.00	20.00	0	101	90	110			
Chloride	10.2	1.00	10.00	0	102	90	110			
Nitrate-N	5.10	0.500	5.000	0	102	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Sample ID	0705169-15C MS	Batch ID:	R31777	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 5:23:51 PM	Prep Date:	5/23/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	92.7	5.00	50.00	75.19	35.0	90	110			S
Sulfate	247	15.0	150.0	150.9	64.4	90	110			S

Sample ID	0705169-15C MSD	Batch ID:	R31777	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 5:38:32 PM	Prep Date:	5/23/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	92.9	5.00	50.00	75.19	35.3	90	110	0.206	20	S
Sulfate	247	15.0	150.0	150.9	64.0	90	110	0.205	20	S

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

CLIENT: Terracon, Inc.
Work Order: 0705208
Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070523A

Sample ID	CCV3-070523	Batch ID:	R31777	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_070523A	Analysis Date:	5/23/2007 6:51:54 PM	Prep Date:	5/23/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.2	1.00	10.00	0	102	90	110			
Sulfate	31.4	3.00	30.00	0	105	90	110			

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070524B

Sample ID	ICV-070524	Batch ID:	R31818	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC2_070524B	Analysis Date:	5/24/2007 9:26:33 AM	Prep Date:	5/24/2007
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit %RPD RPDLimit Qual

Sulfate	79.9	3.00	75.00	0	106	90	110
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Sample ID	CCV1-070524	Batch ID:	R31818	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_070524B	Analysis Date:	5/24/2007 12:52:24 P	Prep Date:	5/24/2007
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit %RPD RPDLimit Qual

Sulfate	33.5	3.00	30.00	0	112	90	110	S
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Sample ID	MB-070524	Batch ID:	R31818	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC2_070524B	Analysis Date:	5/24/2007 1:09:27 PM	Prep Date:	5/24/2007
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit %RPD RPDLimit Qual

Sulfate	ND	3.00					
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Sample ID	LCS-070524	Batch ID:	R31818	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC2_070524B	Analysis Date:	5/24/2007 1:24:08 PM	Prep Date:	5/24/2007
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit %RPD RPDLimit Qual

Sulfate	31.5	3.00	30.00	0	105	90	110
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Sample ID	LCSD-070524	Batch ID:	R31818	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC2_070524B	Analysis Date:	5/24/2007 1:38:48 PM	Prep Date:	5/24/2007
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit %RPD RPDLimit Qual

Sulfate	31.5	3.00	30.00	0	105	90	110	0.196	20
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Sample ID	CCV2-070524	Batch ID:	R31818	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_070524B	Analysis Date:	5/24/2007 3:44:05 PM	Prep Date:	5/24/2007
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit %RPD RPDLimit Qual

Sulfate	31.7	3.00	30.00	0	106	90	110
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Sample ID	CCV3-070524	Batch ID:	R31818	TestNo:	E300	Units:	mg/L
SampType:	CCV	Run ID:	IC2_070524B	Analysis Date:	5/24/2007 6:28:36 PM	Prep Date:	5/24/2007
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit %RPD RPDLimit Qual

Sulfate	31.7	3.00	30.00	0	106	90	110
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Qualifiers: B Analyte detected in the associated Method Blank DF Dilution Factor
 J Analyte detected between MDL and RL MDL Method Detection Limit
 N Parameter not NELAC certified ND Not Detected at the Method Detection L
 R RPD outside accepted control limits RL Reporting Limit
 S Spike Recovery outside control limits J Analyte detected between SQL and RL

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070524B

Sample ID 0705208-01B MS	Batch ID: R31818	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_070524B	Analysis Date: 5/24/2007 6:43:17 PM	Prep Date: 5/24/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	1910	150	1500	362.6	103	90	110			

Sample ID 0705208-01B MSD	Batch ID: R31818	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_070524B	Analysis Date: 5/24/2007 6:57:57 PM	Prep Date: 5/24/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	1920	150	1500	362.6	104	90	110	0.110	20	

Sample ID CCV4-070524	Batch ID: R31818	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070524B	Analysis Date: 5/24/2007 7:12:38 PM	Prep Date: 5/24/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	31.5	3.00	30.00	0	105	90	110			

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070529A

Sample ID	ICV-070529	Batch ID:	R31858	TestNo:	E310.1	Units:	mg/L			
SampType:	ICV	Run ID:	TITRATOR_070529A	Analysis Date:	5/29/2007 8:26:00 AM	Prep Date:	5/29/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	9.12	20.0	0							
Alkalinity, Carbonate (As CaCO3)	92.2	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	101	20.0	100.0	0	101	98	102			

Sample ID	LCS-070529	Batch ID:	R31858	TestNo:	E310.1	Units:	mg/L			
SampType:	LCS	Run ID:	TITRATOR_070529A	Analysis Date:	5/29/2007 8:44:00 AM	Prep Date:	5/29/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	53.4	20.0	50.00	0	107	74	129			

Sample ID	0705208-01B DUP	Batch ID:	R31858	TestNo:	E310.1	Units:	mg/L			
SampType:	DUP	Run ID:	TITRATOR_070529A	Analysis Date:	5/29/2007 9:24:00 AM	Prep Date:	5/29/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	302	20.0	0	303.2				0.369	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	302	20.0	0	303.2				0.369	20	

Sample ID	CCV1-070529	Batch ID:	R31858	TestNo:	E310.1	Units:	mg/L			
SampType:	CCV	Run ID:	TITRATOR_070529A	Analysis Date:	5/29/2007 9:57:00 AM	Prep Date:	5/29/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	10.1	20.0	0							
Alkalinity, Carbonate (As CaCO3)	92.3	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	102	20.0	100.0	0	102	90	110			

Sample ID	CCV2-070529	Batch ID:	R31858	TestNo:	E310.1	Units:	mg/L			
SampType:	CCV	Run ID:	TITRATOR_070529A	Analysis Date:	5/29/2007 10:55:00 A	Prep Date:	5/29/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	13.0	20.0	0							
Alkalinity, Carbonate (As CaCO3)	90.9	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	104	20.0	100.0	0	104	90	110			

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

CLIENT: Terracon, Inc.
Work Order: 0705208
Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070529A

Sample ID	0705228-05B DUP	Batch ID:	R31858	TestNo:	E310.1	Units:	mg/L
SampType:	DUP	Run ID:	TITRATOR_070529A	Analysis Date:	5/29/2007	Prep Date:	5/29/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	194	20.0	0	194.4				0.164	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	194	20.0	0	194.4				0.164	20	

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: WC_070525A

Sample ID ICV-070524	Batch ID: CONDW-05/25/07	TestNo: E120.1	Units: µm hos/cm							
SampType: ICV	Run ID: WC_070525A	Analysis Date: 5/25/2007 10:30:00 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Specific Conductance 12900 10.0 12880 0 99.8 95 105

Sample ID MBLK-070524	Batch ID: CONDW-05/25/07	TestNo: E120.1	Units: µm hos/cm							
SampType: MBLK	Run ID: WC_070525A	Analysis Date: 5/25/2007 10:30:00 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Specific Conductance ND 10.0

Sample ID LCS-070524	Batch ID: CONDW-05/25/07	TestNo: E120.1	Units: µm hos/cm							
SampType: LCS	Run ID: WC_070525A	Analysis Date: 5/25/2007 10:30:00 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Specific Conductance 1380 10.0 1413 0 97.6 95 105

Sample ID 0705208-01B DUP	Batch ID: CONDW-05/25/07	TestNo: E120.1	Units: µm hos/cm							
SampType: DUP	Run ID: WC_070525A	Analysis Date: 5/25/2007 10:30:00 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Specific Conductance 15800 20.0 0 15620 0.892 2

Sample ID CCV1-070524	Batch ID: CONDW-05/25/07	TestNo: E120.1	Units: µm hos/cm							
SampType: CCV	Run ID: WC_070525A	Analysis Date: 5/25/2007 10:30:00 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Specific Conductance 12800 10.0 12880 0 99.2 95 105

Sample ID 0705208-13B DUP	Batch ID: CONDW-05/25/07	TestNo: E120.1	Units: µm hos/cm							
SampType: DUP	Run ID: WC_070525A	Analysis Date: 5/25/2007 10:30:00 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Specific Conductance 1510 10.0 0 1504 0.464 2

Sample ID CCV2-070524	Batch ID: CONDW-05/25/07	TestNo: E120.1	Units: µm hos/cm							
SampType: CCV	Run ID: WC_070525A	Analysis Date: 5/25/2007 10:30:00 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Specific Conductance 12600 10.0 12880 0 97.8 95 105

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: WC_070525C

Sample ID: MB-070525	Batch ID: TDS_W-05/25/07	TestNo: E160.1	Units: mg/L							
SampType: MBLK	Run ID: WC_070525C	Analysis Date: 5/25/2007 11:00:00 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera										
	ND	10.0								

Sample ID: LCS-070525	Batch ID: TDS_W-05/25/07	TestNo: E160.1	Units: mg/L							
SampType: LCS	Run ID: WC_070525C	Analysis Date: 5/25/2007 11:00:00 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera										
	766	10.0	745.6	0	103	70	126			

Sample ID: 0705208-01B DUP	Batch ID: TDS_W-05/25/07	TestNo: E160.1	Units: mg/L							
SampType: DUP	Run ID: WC_070525C	Analysis Date: 5/25/2007 11:00:00 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera										
	9840	10.0	0	10180				3.40	5	

Sample ID: 0705208-13B DUP	Batch ID: TDS_W-05/25/07	TestNo: E160.1	Units: mg/L							
SampType: DUP	Run ID: WC_070525C	Analysis Date: 5/25/2007 11:00:00 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera										
	1030	10.0	0	1031				0.291	5	

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705208
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: WC_070607A

Sample ID	ICV-070607	Batch ID:	CONDW-06/07/07	TestNo:	E120.1	Units:	µmhos/cm			
SampType:	ICV	Run ID:	WC_070607A	Analysis Date:	6/7/2007 10:00:00 AM	Prep Date:	6/7/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12900	10.0	12880	0	99.9	95	105			

Sample ID	MBLK-070607	Batch ID:	CONDW-06/07/07	TestNo:	E120.1	Units:	µmhos/cm			
SampType:	MBLK	Run ID:	WC_070607A	Analysis Date:	6/7/2007 10:00:00 AM	Prep Date:	6/7/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	ND	10.0								

Sample ID	LCS-070607	Batch ID:	CONDW-06/07/07	TestNo:	E120.1	Units:	µmhos/cm			
SampType:	LCS	Run ID:	WC_070607A	Analysis Date:	6/7/2007 10:00:00 AM	Prep Date:	6/7/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	1380	10.0	1413	0	97.5	95	105			

Sample ID	0705208-12B DUP	Batch ID:	CONDW-06/07/07	TestNo:	E120.1	Units:	µmhos/cm			
SampType:	DUP	Run ID:	WC_070607A	Analysis Date:	6/7/2007 10:00:00 AM	Prep Date:	6/7/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	14100	20.0	0	14020				0.356	2	

Sample ID	CCV-070607	Batch ID:	CONDW-06/07/07	TestNo:	E120.1	Units:	µmhos/cm			
SampType:	CCV	Run ID:	WC_070607A	Analysis Date:	6/7/2007 10:00:00 AM	Prep Date:	6/7/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12800	10.0	12880	0	99.1	95	105			

Qualifiers: B Analyte detected in the associated Method Blank J Analyte detected between MDL and RL N Parameter not NELAC certified R RPD outside accepted control limits S Spike Recovery outside control limits	DF Dilution Factor MDL Method Detection Limit ND Not Detected at the Method Detection L RL Reporting Limit J Analyte detected between SQL and RL	Page 18 of 18
---	--	---------------

June 05, 2007

Max Majesko
Terracon, Inc.
8901 Carpenter Fwy #100
Dallas, Texas 75247

TEL: (214) 630-1010

FAX (614) 630-7070

Order No.: 0705228

RE: Ballinger-RRC Project

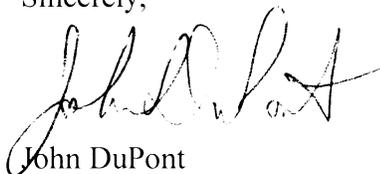
Dear Max Majesko:

DHL Analytical received 9 sample(s) on 5/24/2007 for the analyses presented in the following report.

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

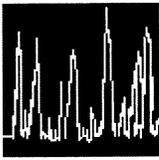
If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,



John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-06-TX



Remit to: P.O. 5023
Round Rock, TX 78683-5023

Invoice Information

PO Number:

Invoice TO: Terracon, Inc.
Attn: Accts Payable-Jacque R.
8901 Carpenter Fwy #100

Dallas, Texas 75247

Phone: (214) 630-1010

Invoice No:	20533
--------------------	--------------

Invoice Date: 05-Jun-07
Payment Due Date: 05-Jul-07
Payment Terms: Net 30 Days
DHL Work Order: 0705228

Project Information

Project Name: Ballinger-RRC Project
Project No: 94057272B
Reported To: Max Majesko
Date Received: 5/24/2007

Item	T.A.T - Remarks	Qty	List Price	Test Total
Alkalinity	Normal	9	\$15.00	\$135.00
Anions by IC method - Water	Normal-4 anions	9	\$60.00	\$540.00
Specific Conductance	Normal	9	\$15.00	\$135.00
Total Dissolved Solids	Normal	9	\$15.00	\$135.00
Trace Metals - Water by ICP-MS	Normal-4 metals	9	\$60.00	\$540.00

Subtotal: \$1,485.00
Misc Charges: \$0.00

INVOICE Total:	\$1,485.00
-----------------------	-------------------

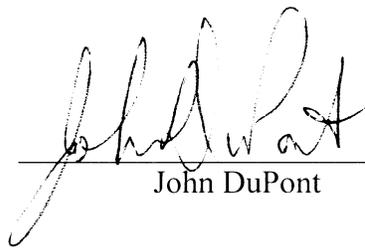
TABLE OF CONTENTS

This report for Terracon: Ballinger-RRC Project (DHL Work Order 0705228) contains the following information:

ITEM	Page
• Cover Page	1
• Table of Contents	2
• Original chain of custody, FedEx slip (if used), log-in checklist	3-5
• Laboratory Data Package Signature Page	6
• Laboratory Review Checklist	7-8
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• Work Order Summary	10
• Preparation Dates Report	11-13
• Analytical Dates Report	14-16
• Sample Results	17-25
• QC Summary Report	26-42
• MQL Summary Report	43
• Total Number of Pages	43

June 5, 2007

Approved: _____



John DuPont

10705228

ENVIRONMENTAL, GEOTECHNICAL AND CONSTRUCTION MATERIALS SERVICES

CHAIN OF CUSTODY RECORD



Office Location Dallas

Laboratory: DHL
Address: Round Rock, TX
Contact: _____
Phone: _____

Project Manager Max Mujahid PO/ISO #:

Sampler's Name Mark Hallier Sampler's Signature Mark Hallier

Proj. No. 2407772B Project Name Bellway No/Type of Containers

Matrix	Date	Time	Comp	G	a	b	Identifying Marks of Sample(s)	Depth	Depth	Depth	No/Type of Containers			
											VOA	A/G	250 ml	P/O
W	7/23/08	10:40					9W-CR-1500				1	1		
W	"	01:27					9W-CR-2500				1	1		
W	"	10:26					9W-CR-2700				1	1		
W	"	10:40					9W-EC-2700				1	1		
W	"	11:00					9W-CR-900				1	1		
W	"	11:12					MW-B				1	1		
W	"	11:16					MW-14				1	1		
W	"	10:10					MW-7				1	1		
W	"	10:40					9W-DIP				1	1		
W	"	10:40					9W-CR-500				2	2	RR	

Turn around time Normal 25% Rush 50% Rush 100% Rush

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
<u>Mark Hallier</u>	7/23/08	10:40	<u>FedEx</u>	5-23-08	18:10
<u>FedEx</u>	5-24-08	9:00	<u>Mark Hallier</u>	5-24-08	9:00
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: 5.3°C #57
Custody seal intact

Matrix Container: WW - Wastewater VOA - 40 ml vial
 W - Water A/G - Amber / Or Glass 1 Liter
 S - Soil SD - Solid 250 ml - Glass wide mouth
 L - Liquid 250 ml - Glass wide mouth
 A - Air Bag
 C - Charcoal tube P/O - Plastic or other
 SL - sludge O - Oil

Houston Office: 11555 Clay Road, Suite 100, Houston, Texas 77043 (713) 690-8989 Fax (713) 690-8787
 Dallas Office: 8901 Carpenter Freeway, Suite 100, Dallas, Texas 75247 (214) 630-1010 Fax (214) 630-7070
 Fort Worth Office: 2601 Gravel Drive, Fort Worth, Texas 76118 (817) 268-8600 Fax (817) 268-8602
 Austin Office: 5307 Industrial Oaks Blvd. # 160, Austin, Texas 78735 (512) 442-1122 Fax (512) 442-1181
 Midland Office: 24 Smith Rd., # 261, Midland, Texas 79705 (432) 684-9600 Fax (432) 684-9608

01 02 03 04 05 06 07 08 09 05

8577 2377 4653

0200

FedEx Retrieval Copy

1 From **Sender's FedEx Account Number** 5/23/07 17345951

Sender's Name Mark Hillier Phone 214 630-1018

Company Terraces

Address 8901 Carpenter Fwy #100

City Dallas State TX ZIP 75247

2 Your Internal Billing Reference 94057272B

3 To **Recipient's Name** DHL Analytical

Address 2308 Double Creek Dr.

City Round Rock State TX ZIP 78664

Phone 512 388 8212

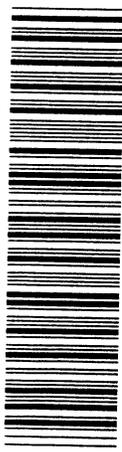
Weight 4.5 lbs **Dimensions** 12x12x12

Declared Value \$100 **Insurance** \$100

Signature Mark Hillier

Date 5/23/07

53



8577 2377 4653

CUSTODY SEAL

DATE

5/23/07

SIGNATURE

Mark Hillier

4a Express Package Service

FedEx Priority Overnight 5
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 2Day 20
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx Standard Overnight 6
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx Express Saver
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 2Day Freight 83
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 3Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 2Day Freight 83
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 3Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 4Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 5Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 6Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 7Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 8Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 9Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 10Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 11Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 12Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 13Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 14Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 15Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 16Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 17Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 18Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

4b Express Freight Service

FedEx 10Day Freight 8
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 15Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 20Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 25Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 30Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 35Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 40Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 45Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 50Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 55Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 60Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 65Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 70Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 75Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 80Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 85Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 90Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 95Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 100Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 105Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 110Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 115Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 120Day Freight
Shipments will be delivered on Monday unless SATURDAY Delivery is selected.

5 Packaging

FedEx Envelope 2

FedEx Pak 3

FedEx Box 4

FedEx Tube 5

Other 6

6 Special Handling

SATURDAY Delivery 1

HOLD Weekday at FedEx Location 31

HOLD Saturday at FedEx Location 31

Include FedEx's address in Section 3

Does this shipment contain dangerous goods?

No 4

Yes 5

Yes, Restricted 6

Yes, Special Handling 7

Yes, Special Handling and Restricted 8

Yes, Special Handling, Restricted, and Dry Ice 9

Yes, Special Handling, Restricted, and Dry Ice (UN 1845) 10

Yes, Special Handling, Restricted, and Dry Ice (UN 1845) - Cargo Aircraft Only 11

Yes, Special Handling, Restricted, and Dry Ice (UN 1845) - Cargo Aircraft Only (UN 1845) 12

Yes, Special Handling, Restricted, and Dry Ice (UN 1845) - Cargo Aircraft Only (UN 1845) - UN 1845 13

Yes, Special Handling, Restricted, and Dry Ice (UN 1845) - Cargo Aircraft Only (UN 1845) - UN 1845 14

Yes, Special Handling, Restricted, and Dry Ice (UN 1845) - Cargo Aircraft Only (UN 1845) - UN 1845 15

7 Payment

Standard A/C Bill To 1

Receipt 2

Third Party 3

Credit Card 4

Cash Check 5

Other 6

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

Enter FedEx Acct. No. of Credit Card No. below.

8 NEW Residential/Delivery Signature Options

No Signature Required 10

Direct Signature Available 34

Indirect Signature Available 34

Signature Required 34

9 Total Packages

Total Packages 1

10 Total Charges

Total Charges 520

Sample Receipt Checklist

Client Name Terracon, Inc.

Date Received: 5/24/2007

Work Order Number 0705228

Received by: DU

Checklist completed by: *[Signature]*
Signature

5/24/07
Date

Reviewed by: _____
Initials Date

Carrier name: FedEx 1day

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping 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 *[Signature]*

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:

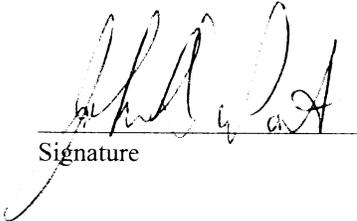
This signature page, the laboratory review checklist, and the following reportable data:

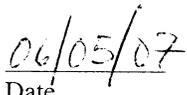
- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC 5.13
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if 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 my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

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


Signature


Date

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: <i>Ballinger - RRC Project</i>		Date: <i>6/5/07</i>					
Reviewer Name: Laura Flowers		Laboratory Work Order: <i>0705228</i>					
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?	✓				
		2) Were all departures from standard conditions described in an exception report?	✓				R1-01
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, including prep and cleanup steps?	✓				
		3) Were LCSs analyzed at the required frequency?	✓				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
		6) Was the LCSD RPD within QC limits (if applicable)?	✓				
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data					
		1) Were the project/method specified analytes included in the MS and MSD?	✓				
		2) Were MS/MSD analyzed at the appropriate frequency?	✓				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		✓			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?	✓				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
 2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
 3 NA = Not applicable.
 4 NR = Not Reviewed.
 5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: Ballinger - RRC Project

Date: 6/5/07

Reviewer Name: Laura Flowers

Laboratory Work Order: 0705228

# 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?		✓			S2-02
		3) Was the ICAL curve verified for each analyte?	✓				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	✓				
S3	O	Mass Spectral Tuning:					
		1) Was the appropriate compound for the method used for tuning?	✓				
		2) Were ion abundance data within the method-required QC limits?	✓				
S4	O	Internal Standards (IS):					
		1) Were IS area counts and retention times within the method-required QC limits?	✓				
S5	OI	Raw Data (NELAC section 1 appendix A glossary, and section 5.12)					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
		2) Were data associated with manual integrations flagged on the raw data?	✓				
S6	O	Dual Column Confirmation					
		1) Did dual column confirmation results meet the method-required QC?			✓		
S7	O	Tentatively Identified Compounds (TICs):					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
S8	I	Interference Check Sample (ICS) Results:					
		1) Were percent recoveries within method QC limits?	✓				
S9	I	Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		✓			S9-01
S10	OI	Method Detection Limit (MDL) Studies					
		1) Was a MDL study performed for each reported analyte?	✓				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
S11	OI	Proficiency Test Reports:					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				
S12	OI	Standards Documentation					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
S13	OI	Compound/Analyte Identification Procedures					
		1) Are the procedures for compound/analyte identification documented?	✓				
S14	OI	Demonstration of Analyst Competency (DOC)					
		1) Was DOC conducted consistent with NELAC Chapter 5C?	✓				
		2) Is documentation of the analyst's competency up-to-date and on file?	✓				
S15	OI	Verification/Validation Documentation for Methods (NELAC Chap 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
S16	OI	Laboratory Standard Operating Procedures (SOPs):					
		1) Are laboratory SOPs current and on file for each method performed?	✓				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
 2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
 3 NA = Not applicable.
 4 NR = Not Reviewed.
 5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Lab Order: 0705228

CASE NARRATIVE

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

Method SW6020 - Metals Analysis
Method E300 - Anions Analysis
Method E310.1 - Alkalinity
Method E120.1 - Specific Conductance
Method E160.1 - Total Dissolved Solids

Exception Report R1-01

The samples were received and log-in performed on 5/24/07. A total of 9 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Metals analysis, the recoveries of the matrix spike (0705228-05A MS) and matrix spike duplicate (0705228-05A MSD) were out of control limits for Calcium, Magnesium, Potassium, and/or Sodium. These are 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 these analytes. No further corrective actions were taken.

Exception Report S2-02

For Anions analysis, the recovery of the CCV1 (CCV1-070524) was slightly above control limits for Sulfate. This is flagged accordingly in the QC summary report. Only the QC samples (MB, LCS, and LCSD) were reporting Sulfate from this CCV and these were all within control limits. No further corrective actions were taken.

Exception Report S9-01

For Metals analysis, the RPD of the serial dilution (0705228-05A SD) was above control limits for Calcium and Potassium. These are flagged accordingly in the QC summary report. The post digestion spike was within control limits for these analytes. No further corrective actions were taken.

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Lab Order: 0705228

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
0705228-01	SW-CR-1500' Down		05/23/07 08:40 AM	5/24/2007
0705228-02	SW-CR-2500' Down		05/23/07 09:25 AM	5/24/2007
0705228-03	SW-CR-2500' Up		05/23/07 10:20 AM	5/24/2007
0705228-04	SW-EC-2500' Up		05/23/07 10:40 AM	5/24/2007
0705228-05	SW-CR-500' Down		05/23/07 04:40 PM	5/24/2007
0705228-06	MW-8		05/23/07 02:10 PM	5/24/2007
0705228-07	MW-14		05/23/07 03:10 PM	5/24/2007
0705228-08	MW-7		05/23/07 04:10 PM	5/24/2007
0705228-09	SW-DUP		05/23/07 04:40 PM	5/24/2007

Lab Order: 0705228
Client: Terracon, Inc.
Project: Ballinger-RRC Project

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0705228-01A	SW-CR-1500' Down	05/23/07 08:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
0705228-01B	SW-CR-1500' Down	05/23/07 08:40 AM	Aqueous	E310.1	Alkalinity	05/29/07 10:38 AM	R31858
	SW-CR-1500' Down	05/23/07 08:40 AM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818
	SW-CR-1500' Down	05/23/07 08:40 AM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	SW-CR-1500' Down	05/23/07 08:40 AM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
0705228-02A	SW-CR-1500' Down	05/23/07 08:40 AM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705228-02B	SW-CR-2500' Down	05/23/07 09:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
	SW-CR-2500' Down	05/23/07 09:25 AM	Aqueous	E310.1	Alkalinity	05/29/07 10:43 AM	R31858
	SW-CR-2500' Down	05/23/07 09:25 AM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818
	SW-CR-2500' Down	05/23/07 09:25 AM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	SW-CR-2500' Down	05/23/07 09:25 AM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
0705228-03A	SW-CR-2500' Down	05/23/07 09:25 AM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705228-03B	SW-CR-2500' Up	05/23/07 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
	SW-CR-2500' Up	05/23/07 10:20 AM	Aqueous	E310.1	Alkalinity	05/29/07 10:49 AM	R31858
	SW-CR-2500' Up	05/23/07 10:20 AM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	SW-CR-2500' Up	05/23/07 10:20 AM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818
	SW-CR-2500' Up	05/23/07 10:20 AM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
0705228-04A	SW-EC-2500' Up	05/23/07 10:20 AM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705228-04B	SW-EC-2500' Up	05/23/07 10:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
	SW-EC-2500' Up	05/23/07 10:40 AM	Aqueous	E310.1	Alkalinity	05/29/07 11:04 AM	R31858
	SW-EC-2500' Up	05/23/07 10:40 AM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818
	SW-EC-2500' Up	05/23/07 10:40 AM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	SW-EC-2500' Up	05/23/07 10:40 AM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
0705228-05A	SW-EC-2500' Up	05/23/07 10:40 AM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705228-05B	SW-CR-500' Down	05/23/07 04:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
	SW-CR-500' Down	05/23/07 04:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
	SW-CR-500' Down	05/23/07 04:40 PM	Aqueous	E310.1	Alkalinity	05/29/07 11:08 AM	R31858
	SW-CR-500' Down	05/23/07 04:40 PM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818

Lab Order: 0705228
Client: Terracon, Inc.
Project: Ballinger-RRC Project

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0705228-05B	SW-CR-500' Down	05/23/07 04:40 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	SW-CR-500' Down	05/23/07 04:40 PM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
	SW-CR-500' Down	05/23/07 04:40 PM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705228-06A	MW-8	05/23/07 02:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
	MW-8	05/23/07 02:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
	MW-8	05/23/07 02:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
0705228-06B	MW-8	05/23/07 02:10 PM	Aqueous	E310.1	Alkalinity	05/31/07 12:37 PM	R31911
	MW-8	05/23/07 02:10 PM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818
	MW-8	05/23/07 02:10 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-8	05/23/07 02:10 PM	Aqueous	E300	Anions by IC method - Water	05/27/07	R31851
	MW-8	05/23/07 02:10 PM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
0705228-07A	MW-14	05/23/07 02:10 PM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705228-07B	MW-14	05/23/07 03:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
	MW-14	05/23/07 03:10 PM	Aqueous	E310.1	Alkalinity	05/31/07 12:42 PM	R31911
	MW-14	05/23/07 03:10 PM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818
	MW-14	05/23/07 03:10 PM	Aqueous	E300	Anions by IC method - Water	05/27/07	R31851
	MW-14	05/23/07 03:10 PM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
0705228-08A	MW-7	05/23/07 03:10 PM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705228-08B	MW-7	05/23/07 04:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
	MW-7	05/23/07 04:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
	MW-7	05/23/07 04:10 PM	Aqueous	E310.1	Alkalinity	05/31/07 12:52 PM	R31911
	MW-7	05/23/07 04:10 PM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818
	MW-7	05/23/07 04:10 PM	Aqueous	E300	Anions by IC method - Water	05/27/07	R31851
	MW-7	05/23/07 04:10 PM	Aqueous	E300	Anions by IC method - Water	05/27/07	R31851
	MW-7	05/23/07 04:10 PM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
0705228-09A	SW-DUP	05/23/07 04:10 PM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705228-09B	SW-DUP	05/23/07 04:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/25/07 11:25 AM	26032
	SW-DUP	05/23/07 04:40 PM	Aqueous	E310.1	Alkalinity	05/31/07 12:57 PM	R31911

Lab Order: 0705228
Client: Terracon, Inc.
Project: Ballinger-RRC Project

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0705228-09B	SW-DUP	05/23/07 04:40 PM	Aqueous	E300	Anions by IC method - Water	05/24/07	R31818
	SW-DUP	05/23/07 04:40 PM	Aqueous	E300	Anions by IC method - Water	05/27/07	R31851
	SW-DUP	05/23/07 04:40 PM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
	SW-DUP	05/23/07 04:40 PM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07

Lab Order: 0705228
Client: Terracon, Inc.
Project: Ballinger-RRC Project

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705228-01A	SW-CR-1500' Down	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	50	05/31/07 05:38 PM	ICP-MS2_070531A
0705228-01B	SW-CR-1500' Down	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 10:38 AM	TITRATOR_070529A
	SW-CR-1500' Down	Aqueous	E300	Anions by IC method - Water	R31818	1	05/24/07 01:54 PM	IC2_070524B
	SW-CR-1500' Down	Aqueous	E300	Anions by IC method - Water	R31851	10	05/26/07 09:54 PM	IC2_070526A
	SW-CR-1500' Down	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	1	05/30/07 12:00 PM	WC_070530A
0705228-02A	SW-CR-1500' Down	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705228-02B	SW-CR-2500' Down	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	50	05/31/07 05:43 PM	ICP-MS2_070531A
	SW-CR-2500' Down	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 10:43 AM	TITRATOR_070529A
	SW-CR-2500' Down	Aqueous	E300	Anions by IC method - Water	R31818	1	05/24/07 02:09 PM	IC2_070524B
	SW-CR-2500' Down	Aqueous	E300	Anions by IC method - Water	R31851	10	05/26/07 10:24 PM	IC2_070526A
	SW-CR-2500' Down	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	1	05/30/07 12:00 PM	WC_070530A
0705228-03A	SW-CR-2500' Up	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705228-03B	SW-CR-2500' Up	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	50	05/31/07 05:47 PM	ICP-MS2_070531A
	SW-CR-2500' Up	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 10:49 AM	TITRATOR_070529A
	SW-CR-2500' Up	Aqueous	E300	Anions by IC method - Water	R31818	1	05/24/07 02:24 PM	IC2_070524B
	SW-CR-2500' Up	Aqueous	E300	Anions by IC method - Water	R31851	20	05/26/07 10:38 PM	IC2_070526A
	SW-CR-2500' Up	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	1	05/30/07 12:00 PM	WC_070530A
0705228-04A	SW-CR-2500' Up	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705228-04B	SW-EC-2500' Up	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	50	05/31/07 05:52 PM	ICP-MS2_070531A
	SW-EC-2500' Up	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 11:04 AM	TITRATOR_070529A
	SW-EC-2500' Up	Aqueous	E300	Anions by IC method - Water	R31818	1	05/24/07 02:38 PM	IC2_070524B
	SW-EC-2500' Up	Aqueous	E300	Anions by IC method - Water	R31851	10	05/26/07 10:53 PM	IC2_070526A
	SW-EC-2500' Up	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	1	05/30/07 12:00 PM	WC_070530A
0705228-05A	SW-CR-500' Down	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	50	05/31/07 03:24 PM	ICP-MS2_070531A
	SW-CR-500' Down	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705228-05B	SW-CR-500' Down	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	50	05/31/07 05:56 PM	ICP-MS2_070531A
	SW-CR-500' Down	Aqueous	E310.1	Alkalinity	R31858	1	05/29/07 11:08 AM	TITRATOR_070529A
	SW-CR-500' Down	Aqueous	E300	Anions by IC method - Water	R31818	1	05/24/07 02:53 PM	IC2_070524B

Lab Order: 0705228
Client: Terracon, Inc.
Project: Ballinger-RRC Project

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705228-05B	SW-CR-500' Down	Aqueous	E300	Anions by IC method - Water	R31851	10	05/26/07 11:08 PM	IC2_070526A
	SW-CR-500' Down	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	1	05/30/07 12:00 PM	WC_070530A
	SW-CR-500' Down	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705228-06A	MW-8	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	50	05/31/07 06:37 PM	ICP-MS2_070531A
	MW-8	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	250	05/31/07 06:55 PM	ICP-MS2_070531A
	MW-8	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	10	05/31/07 06:59 PM	ICP-MS2_070531A
0705228-06B	MW-8	Aqueous	E310.1	Alkalinity	R31911	1	05/31/07 12:37 PM	TITRATOR_070531A
	MW-8	Aqueous	E300	Anions by IC method - Water	R31818	1	05/24/07 04:01 PM	IC2_070524B
	MW-8	Aqueous	E300	Anions by IC method - Water	R31851	50	05/26/07 11:52 PM	IC2_070526A
	MW-8	Aqueous	E300	Anions by IC method - Water	R31851	200	05/27/07 12:06 AM	IC2_070526A
	MW-8	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	1	05/30/07 12:00 PM	WC_070530A
	MW-8	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705228-07A	MW-14	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	50	05/31/07 06:43 PM	ICP-MS2_070531A
0705228-07B	MW-14	Aqueous	E310.1	Alkalinity	R31911	1	05/31/07 12:42 PM	TITRATOR_070531A
	MW-14	Aqueous	E300	Anions by IC method - Water	R31818	1	05/24/07 04:16 PM	IC2_070524B
	MW-14	Aqueous	E300	Anions by IC method - Water	R31851	100	05/27/07 12:21 AM	IC2_070526A
	MW-14	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	1	05/30/07 12:00 PM	WC_070530A
	MW-14	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705228-08A	MW-7	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	250	05/31/07 08:59 PM	ICP-MS2_070531A
	MW-7	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	50	05/31/07 06:47 PM	ICP-MS2_070531A
0705228-08B	MW-7	Aqueous	E310.1	Alkalinity	R31911	1	05/31/07 12:52 PM	TITRATOR_070531A
	MW-7	Aqueous	E300	Anions by IC method - Water	R31818	1	05/24/07 04:31 PM	IC2_070524B
	MW-7	Aqueous	E300	Anions by IC method - Water	R31851	100	05/27/07 12:36 AM	IC2_070526A
	MW-7	Aqueous	E300	Anions by IC method - Water	R31851	500	05/27/07 01:05 AM	IC2_070526A
	MW-7	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	1	05/30/07 12:00 PM	WC_070530A
	MW-7	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705228-09A	SW-DUP	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26032	50	05/31/07 06:51 PM	ICP-MS2_070531A
0705228-09B	SW-DUP	Aqueous	E310.1	Alkalinity	R31911	1	05/31/07 12:57 PM	TITRATOR_070531A

Lab Order: 0705228
Client: Terracon, Inc.
Project: Ballinger-RRC Project

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705228-09B	SW-DUP	Aqueous	E300	Anions by IC method - Water	R31818	1	05/24/07 04:45 PM	IC2_070524B
	SW-DUP	Aqueous	E300	Anions by IC method - Water	R31851	10	05/27/07 01:20 AM	IC2_070526A
	SW-DUP	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	1	05/30/07 12:00 PM	WC_070530A
	SW-DUP	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C

DHL Analytical

Date: 05-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705228

Client Sample ID: SW-CR-1500' Down
 Lab ID: 0705228-01
 Collection Date: 05/23/07 08:40 AM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	136	5.00	5.00		mg/L	50	05/31/07 05:38 PM
Magnesium	55.6	5.00	5.00		mg/L	50	05/31/07 05:38 PM
Potassium	7.67	5.00	5.00		mg/L	50	05/31/07 05:38 PM
Sodium	126	5.00	5.00		mg/L	50	05/31/07 05:38 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	0.634	0.300	1.00	J	mg/L	1	05/24/07 01:54 PM
Chloride	233	3.00	10.0		mg/L	10	05/26/07 09:54 PM
Nitrate-N	0.894	0.100	0.500		mg/L	1	05/24/07 01:54 PM
Sulfate	340	10.0	30.0		mg/L	10	05/26/07 09:54 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	195	10.0	20.0		mg/L	1	05/29/07 10:38 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:38 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:38 AM
Alkalinity, Total (As CaCO3)	195	10.0	20.0		mg/L	1	05/29/07 10:38 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	1610	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	1050	10.0	10.0		mg/L	1	05/31/07 08:15 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

DHL Analytical

Date: 05-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705228

Client Sample ID: SW-CR-2500' Down
 Lab ID: 0705228-02
 Collection Date: 05/23/07 09:25 AM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	138	5.00	5.00		mg/L	50	05/31/07 05:43 PM
Magnesium	57.2	5.00	5.00		mg/L	50	05/31/07 05:43 PM
Potassium	7.89	5.00	5.00		mg/L	50	05/31/07 05:43 PM
Sodium	127	5.00	5.00		mg/L	50	05/31/07 05:43 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	0.627	0.300	1.00	J	mg/L	1	05/24/07 02:09 PM
Chloride	234	3.00	10.0		mg/L	10	05/26/07 10:24 PM
Nitrate-N	0.879	0.100	0.500		mg/L	1	05/24/07 02:09 PM
Sulfate	340	10.0	30.0		mg/L	10	05/26/07 10:24 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	195	10.0	20.0		mg/L	1	05/29/07 10:43 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:43 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:43 AM
Alkalinity, Total (As CaCO3)	195	10.0	20.0		mg/L	1	05/29/07 10:43 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	1610	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	1050	10.0	10.0		mg/L	1	05/31/07 08:15 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

DHL Analytical

Date: 05-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705228

Client Sample ID: SW-CR-2500' Up
 Lab ID: 0705228-03
 Collection Date: 05/23/07 10:20 AM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	223	5.00	5.00		mg/L	50	05/31/07 05:47 PM
Magnesium	79.9	5.00	5.00		mg/L	50	05/31/07 05:47 PM
Potassium	8.19	5.00	5.00		mg/L	50	05/31/07 05:47 PM
Sodium	191	5.00	5.00		mg/L	50	05/31/07 05:47 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	0.809	0.300	1.00	J	mg/L	1	05/24/07 02:24 PM
Chloride	351	6.00	20.0		mg/L	20	05/26/07 10:38 PM
Nitrate-N	1.57	0.100	0.500		mg/L	1	05/24/07 02:24 PM
Sulfate	629	20.0	60.0		mg/L	20	05/26/07 10:38 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	206	10.0	20.0		mg/L	1	05/29/07 10:49 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:49 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 10:49 AM
Alkalinity, Total (As CaCO3)	206	10.0	20.0		mg/L	1	05/29/07 10:49 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	2350	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	1610	10.0	10.0		mg/L	1	05/31/07 08:15 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

DHL Analytical

Date: 05-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705228

Client Sample ID: SW-EC-2500' Up
Lab ID: 0705228-04
Collection Date: 05/23/07 10:40 AM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	84.2	5.00	5.00		mg/L	50	05/31/07 05:52 PM
Magnesium	43.2	5.00	5.00		mg/L	50	05/31/07 05:52 PM
Potassium	7.56	5.00	5.00		mg/L	50	05/31/07 05:52 PM
Sodium	86.8	5.00	5.00		mg/L	50	05/31/07 05:52 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	0.551	0.300	1.00	J	mg/L	1	05/24/07 02:38 PM
Chloride	158	3.00	10.0		mg/L	10	05/26/07 10:53 PM
Nitrate-N	0.463	0.100	0.500	J	mg/L	1	05/24/07 02:38 PM
Sulfate	161	10.0	30.0		mg/L	10	05/26/07 10:53 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	188	10.0	20.0		mg/L	1	05/29/07 11:04 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 11:04 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 11:04 AM
Alkalinity, Total (As CaCO3)	188	10.0	20.0		mg/L	1	05/29/07 11:04 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	1100	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	676	10.0	10.0		mg/L	1	05/31/07 08:15 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

DHL Analytical

Date: 05-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705228

Client Sample ID: SW-CR-500' Down
 Lab ID: 0705228-05
 Collection Date: 05/23/07 04:40 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	143	5.00	5.00		mg/L	50	05/31/07 05:56 PM
Magnesium	59.0	5.00	5.00		mg/L	50	05/31/07 05:56 PM
Potassium	7.84	5.00	5.00		mg/L	50	05/31/07 05:56 PM
Sodium	132	5.00	5.00		mg/L	50	05/31/07 05:56 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	0.639	0.300	1.00	J	mg/L	1	05/24/07 02:53 PM
Chloride	240	3.00	10.0		mg/L	10	05/26/07 11:08 PM
Nitrate-N	0.866	0.100	0.500		mg/L	1	05/24/07 02:53 PM
Sulfate	355	10.0	30.0		mg/L	10	05/26/07 11:08 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	194	10.0	20.0		mg/L	1	05/29/07 11:08 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 11:08 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/29/07 11:08 AM
Alkalinity, Total (As CaCO3)	194	10.0	20.0		mg/L	1	05/29/07 11:08 AM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	1660	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	1100	10.0	10.0		mg/L	1	05/31/07 08:15 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

DHL Analytical

Date: 05-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705228

Client Sample ID: MW-8
 Lab ID: 0705228-06
 Collection Date: 05/23/07 02:10 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	271	5.00	5.00		mg/L	50	05/31/07 06:37 PM
Magnesium	69.2	5.00	5.00		mg/L	50	05/31/07 06:37 PM
Potassium	2.97	1.00	1.00		mg/L	10	05/31/07 06:59 PM
Sodium	917	25.0	25.0		mg/L	250	05/31/07 06:55 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	2.03	0.300	1.00		mg/L	1	05/24/07 04:01 PM
Chloride	1750	15.0	50.0		mg/L	50	05/26/07 11:52 PM
Nitrate-N	0.672	0.100	0.500		mg/L	1	05/24/07 04:01 PM
Sulfate	301	50.0	150		mg/L	50	05/26/07 11:52 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	482	10.0	20.0		mg/L	1	05/31/07 12:37 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 12:37 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 12:37 PM
Alkalinity, Total (As CaCO3)	482	10.0	20.0		mg/L	1	05/31/07 12:37 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	6190	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	3940	10.0	10.0		mg/L	1	05/31/07 08:15 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

DHL Analytical

Date: 05-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705228

Client Sample ID: MW-14
Lab ID: 0705228-07
Collection Date: 05/23/07 03:10 PM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	433	5.00	5.00		mg/L	50	05/31/07 06:43 PM
Magnesium	194	5.00	5.00		mg/L	50	05/31/07 06:43 PM
Potassium	11.5	5.00	5.00		mg/L	50	05/31/07 06:43 PM
Sodium	328	5.00	5.00		mg/L	50	05/31/07 06:43 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	0.798	0.300	1.00	J	mg/L	1	05/24/07 04:16 PM
Chloride	793	30.0	100		mg/L	100	05/27/07 12:21 AM
Nitrate-N	ND	0.100	0.500		mg/L	1	05/24/07 04:16 PM
Sulfate	1400	100	300		mg/L	100	05/27/07 12:21 AM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	227	10.0	20.0		mg/L	1	05/31/07 12:42 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 12:42 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 12:42 PM
Alkalinity, Total (As CaCO3)	227	10.0	20.0		mg/L	1	05/31/07 12:42 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	4440	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	3380	10.0	10.0		mg/L	1	05/31/07 08:15 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 MQs 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: 05-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705228

Client Sample ID: MW-7
 Lab ID: 0705228-08
 Collection Date: 05/23/07 04:10 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	427	5.00	5.00		mg/L	50	05/31/07 06:47 PM
Magnesium	124	5.00	5.00		mg/L	50	05/31/07 06:47 PM
Potassium	5.82	5.00	5.00		mg/L	50	05/31/07 06:47 PM
Sodium	1100	25.0	25.0		mg/L	250	05/31/07 08:59 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	2.78	0.300	1.00		mg/L	1	05/24/07 04:31 PM
Chloride	2350	30.0	100		mg/L	100	05/27/07 12:36 AM
Nitrate-N	0.260	0.100	0.500	J	mg/L	1	05/24/07 04:31 PM
Sulfate	404	100	300		mg/L	100	05/27/07 12:36 AM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	449	10.0	20.0		mg/L	1	05/31/07 12:52 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 12:52 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 12:52 PM
Alkalinity, Total (As CaCO3)	449	10.0	20.0		mg/L	1	05/31/07 12:52 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	7860	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	5180	10.0	10.0		mg/L	1	05/31/07 08:15 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

DHL Analytical

Date: 05-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705228

Client Sample ID: SW-DUP
 Lab ID: 0705228-09
 Collection Date: 05/23/07 04:40 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020					Analyst: SCS
Calcium	142	5.00	5.00		mg/L	50	05/31/07 06:51 PM
Magnesium	59.7	5.00	5.00		mg/L	50	05/31/07 06:51 PM
Potassium	8.12	5.00	5.00		mg/L	50	05/31/07 06:51 PM
Sodium	136	5.00	5.00		mg/L	50	05/31/07 06:51 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Bromide	0.609	0.300	1.00	J	mg/L	1	05/24/07 04:45 PM
Chloride	240	3.00	10.0		mg/L	10	05/27/07 01:20 AM
Nitrate-N	0.876	0.100	0.500		mg/L	1	05/24/07 04:45 PM
Sulfate	351	10.0	30.0		mg/L	10	05/27/07 01:20 AM
ALKALINITY		E310.1					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO3)	195	10.0	20.0		mg/L	1	05/31/07 12:57 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 12:57 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 12:57 PM
Alkalinity, Total (As CaCO3)	195	10.0	20.0		mg/L	1	05/31/07 12:57 PM
SPECIFIC CONDUCTANCE		E120.1					Analyst: JBC
Specific Conductance	1660	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1					Analyst: JBC
Total Dissolved Solids (Residue, Filterable)	1100	10.0	10.0		mg/L	1	05/31/07 08:15 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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_070531A

Sample ID: MB-26032	Batch ID: 26032	TestNo: SW6020	Units: mg/L							
SampType: MBLK	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 3:12:00 PM	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	0.100								
Magnesium	ND	0.100								
Potassium	ND	0.100								
Sodium	ND	0.100								

Sample ID: LCS-26032	Batch ID: 26032	TestNo: SW6020	Units: mg/L							
SampType: LCS	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 3:32:00 PM	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.27	0.100	5.00	0	105	80	120			
Magnesium	5.25	0.100	5.00	0	105	80	120			
Potassium	5.47	0.100	5.00	0	109	80	120			
Sodium	5.21	0.100	5.00	0	104	80	120			

Sample ID: LCS-26032	Batch ID: 26032	TestNo: SW6020	Units: mg/L							
SampType: LCS	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 3:36:00 PM	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.35	0.100	5.00	0	107	80	120	1.47	15	
Magnesium	5.32	0.100	5.00	0	106	80	120	1.40	15	
Potassium	5.52	0.100	5.00	0	110	80	120	0.801	15	
Sodium	5.28	0.100	5.00	0	106	80	120	1.32	15	

Sample ID: 0705228-05A SD	Batch ID: 26032	TestNo: SW6020	Units: mg/L							
SampType: SD	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 6:20:00 PM	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	160	25.0	0	143				11.8	10	R
Magnesium	64.1	25.0	0	59.0				8.29	10	
Potassium	9.34	25.0	0	7.84				17.4	10	R
Sodium	145	25.0	0	132				9.38	10	

Sample ID: 0705228-05A MS	Batch ID: 26032	TestNo: SW6020	Units: mg/L							
SampType: MS	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 6:24:00 PM	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	154	5.00	5.00	143	221	80	120			S
Magnesium	65.6	5.00	5.00	59.0	133	80	120			S

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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_070531A

Sample ID: 0705228-05A MS	Batch ID: 26032	TestNo: SW6020	Units: mg/L							
SampType: MS	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 6:24:00 PM	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	13.9	5.00	5.00	7.84	122	80	120			S
Sodium	142	5.00	5.00	132	193	80	120			S

Sample ID: 0705228-05A MSD	Batch ID: 26032	TestNo: SW6020	Units: mg/L							
SampType: MSD	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 6:28:00 PM	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	144	5.00	5.00	143	23.0	80	120	6.66	15	S
Magnesium	64.6	5.00	5.00	59.0	112	80	120	1.61	15	
Potassium	13.5	5.00	5.00	7.84	113	80	120	3.35	15	
Sodium	139	5.00	5.00	132	145	80	120	1.71	15	S

Sample ID: 0705228-05A PDS	Batch ID: 26032	TestNo: SW6020	Units: mg/L							
SampType: PDS	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 6:34:00 PM	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	409	5.00	250	143	107	75	125			
Magnesium	331	5.00	250	59.0	109	75	125			
Potassium	298	5.00	250	7.84	116	75	125			
Sodium	417	5.00	250	132	114	75	125			

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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_070531A

Sample ID: ICV1-070531	Batch ID: R31926	TestNo: SW6020	Units: mg/L
SampType: ICV	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 12:24:00 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.63	0.100	2.50	0	105	90	110			
Magnesium	2.64	0.100	2.50	0	106	90	110			
Potassium	2.66	0.100	2.50	0	106	90	110			
Sodium	2.64	0.100	2.50	0	106	90	110			

Sample ID: CCV1-070531	Batch ID: R31926	TestNo: SW6020	Units: mg/L
SampType: CCV	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 3:59:00 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.33	0.100	5.00	0	107	90	110			
Magnesium	5.21	0.100	5.00	0	104	90	110			
Potassium	5.47	0.100	5.00	0	109	90	110			
Sodium	5.15	0.100	5.00	0	103	90	110			

Sample ID: CCV2-070531	Batch ID: R31926	TestNo: SW6020	Units: mg/L
SampType: CCV	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 5:03:00 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.25	0.100	5.00	0	105	90	110			
Magnesium	5.09	0.100	5.00	0	102	90	110			
Potassium	5.44	0.100	5.00	0	109	90	110			
Sodium	5.01	0.100	5.00	0	100	90	110			

Sample ID: CCV3-070531	Batch ID: R31926	TestNo: SW6020	Units: mg/L
SampType: CCV	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 6:04:00 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.35	0.100	5.00	0	107	90	110			
Magnesium	5.20	0.100	5.00	0	104	90	110			
Potassium	5.44	0.100	5.00	0	109	90	110			
Sodium	5.16	0.100	5.00	0	103	90	110			

Sample ID: CCV4-070531	Batch ID: R31926	TestNo: SW6020	Units: mg/L
SampType: CCV	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 7:08:00 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.34	0.100	5.00	0	107	90	110			
Magnesium	5.21	0.100	5.00	0	104	90	110			
Potassium	5.43	0.100	5.00	0	109	90	110			
Sodium	5.08	0.100	5.00	0	102	90	110			

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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_070531A

Sample ID: CCV5-070531	Batch ID: R31926	TestNo: SW6020	Units: mg/L							
SampType: CCV	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 8:10:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.32	0.100	5.00	0	106	90	110			
Magnesium	5.25	0.100	5.00	0	105	90	110			
Potassium	5.51	0.100	5.00	0	110	90	110			
Sodium	5.20	0.100	5.00	0	104	90	110			

Sample ID: CCV6-070531	Batch ID: R31926	TestNo: SW6020	Units: mg/L							
SampType: CCV	Run ID: ICP-MS2_070531A	Analysis Date: 5/31/2007 9:07:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.34	0.100	5.00	0	107	90	110			
Magnesium	5.25	0.100	5.00	0	105	90	110			
Potassium	5.47	0.100	5.00	0	109	90	110			
Sodium	5.15	0.100	5.00	0	103	90	110			

Qualifiers: B Analyte detected in the associated Method Blank J Analyte detected between MDL and RL N Parameter not NELAC certified R RPD outside accepted control limits S Spike Recovery outside control limits	DF Dilution Factor MDL Method Detection Limit ND Not Detected at the Method Detection Limi RL Reporting Limit
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CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070524B

Sample ID: ICV-070524	Batch ID: R31818	TestNo: E300	Units: mg/L
SampType: ICV	Run ID: IC2_070524B	Analysis Date: 5/24/2007 9:26:33 AM	Prep Date: 5/24/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	50.7	1.00	50.00	0	101	90	110			
Chloride	25.0	1.00	25.00	0	99.9	90	110			
Nitrate-N	12.9	0.500	12.50	0	103	90	110			
Sulfate	79.9	3.00	75.00	0	106	90	110			

Sample ID: CCV1-070524	Batch ID: R31818	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC2_070524B	Analysis Date: 5/24/2007 12:52:24 PM	Prep Date: 5/24/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	21.4	1.00	20.00	0	107	90	110			
Chloride	10.6	1.00	10.00	0	106	90	110			
Nitrate-N	5.44	0.500	5.000	0	109	90	110			
Sulfate	33.5	3.00	30.00	0	112	90	110			S

Sample ID: MB-070524	Batch ID: R31818	TestNo: E300	Units: mg/L
SampType: MBLK	Run ID: IC2_070524B	Analysis Date: 5/24/2007 1:09:27 PM	Prep Date: 5/24/2007

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

Sample ID: LCS-070524	Batch ID: R31818	TestNo: E300	Units: mg/L
SampType: LCS	Run ID: IC2_070524B	Analysis Date: 5/24/2007 1:24:08 PM	Prep Date: 5/24/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.1	1.00	20.00	0	101	90	110			
Chloride	10.0	1.00	10.00	0	100	90	110			
Nitrate-N	5.12	0.500	5.000	0	102	90	110			
Sulfate	31.5	3.00	30.00	0	105	90	110			

Sample ID: LCS-070524	Batch ID: R31818	TestNo: E300	Units: mg/L
SampType: LCS	Run ID: IC2_070524B	Analysis Date: 5/24/2007 1:38:48 PM	Prep Date: 5/24/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.1	1.00	20.00	0	101	90	110	0.146	20	
Chloride	10.0	1.00	10.00	0	100	90	110	0.0998	20	
Nitrate-N	5.12	0.500	5.000	0	102	90	110	0.0273	20	
Sulfate	31.5	3.00	30.00	0	105	90	110	0.196	20	

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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070524B

Sample ID: 0705228-05B MS	Batch ID: R31818	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_070524B	Analysis Date: 5/24/2007 3:14:45 PM	Prep Date: 5/24/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	18.6	1.00	20.00	0.3835	91.1	90	110			
Nitrate-N	5.27	0.500	5.000	0.5198	95.0	90	110			

Sample ID: 0705228-05B MSD	Batch ID: R31818	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_070524B	Analysis Date: 5/24/2007 3:29:25 PM	Prep Date: 5/24/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	18.6	1.00	20.00	0.3835	93.0	90	110	0.118	20	
Nitrate-N	5.26	0.500	5.000	0.5198	105	90	110	0.179	20	

Sample ID: CCV2-070524	Batch ID: R31818	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070524B	Analysis Date: 5/24/2007 3:44:05 PM	Prep Date: 5/24/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			
Chloride	10.1	1.00	10.00	0	101	90	110			
Nitrate-N	5.12	0.500	5.000	0	102	90	110			
Sulfate	31.7	3.00	30.00	0	106	90	110			

Sample ID: CCV3-070524	Batch ID: R31818	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070524B	Analysis Date: 5/24/2007 6:28:36 PM	Prep Date: 5/24/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			
Nitrate-N	5.14	0.500	5.000	0	103	90	110			
Sulfate	31.7	3.00	30.00	0	106	90	110			

Sample ID: 0705208-01B MS	Batch ID: R31818	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_070524B	Analysis Date: 5/24/2007 6:43:17 PM	Prep Date: 5/24/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	1910	150	1500	362.6	103	90	110			

Sample ID: 0705208-01B MSD	Batch ID: R31818	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_070524B	Analysis Date: 5/24/2007 6:57:57 PM	Prep Date: 5/24/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	1920	150	1500	362.6	104	90	110	0.110	20	

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

CLIENT: Terracon, Inc.
Work Order: 0705228
Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070524B

Sample ID: CCV4-070524	Batch ID: R31818	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070524B	Analysis Date: 5/24/2007 7:12:38 PM	Prep Date: 5/24/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	31.5	3.00	30.00	0	105	90	110			

Qualifiers:
 B Analyte detected in the associated Method Blank
 J Analyte detected between MDL and RL
 N Parameter not NELAC certified
 R RPD outside accepted control limits
 S Spike Recovery outside control limits

DF Dilution Factor
 MDL Method Detection Limit
 ND Not Detected at the Method Detection Limi
 RL Reporting Limit

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070526A

Sample ID: ICV-070526	Batch ID: R31851	TestNo: E300	Units: mg/L
SampType: ICV	Run ID: IC2_070526A	Analysis Date: 5/26/2007 2:05:08 PM	Prep Date: 5/26/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	51.0	1.00	50.00	0	102	90	110			
Chloride	25.2	1.00	25.00	0	101	90	110			
Nitrate-N	12.9	0.500	12.50	0	104	90	110			
Sulfate	79.0	3.00	75.00	0	105	90	110			

Sample ID: LCS-070526	Batch ID: R31851	TestNo: E300	Units: mg/L
SampType: LCS	Run ID: IC2_070526A	Analysis Date: 5/26/2007 2:19:47 PM	Prep Date: 5/26/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.1	1.00	20.00	0	100	90	110			
Chloride	10.1	1.00	10.00	0	101	90	110			
Nitrate-N	5.08	0.500	5.000	0	102	90	110			
Sulfate	31.3	3.00	30.00	0	104	90	110			

Sample ID: LCSD-070526	Batch ID: R31851	TestNo: E300	Units: mg/L
SampType: LCSD	Run ID: IC2_070526A	Analysis Date: 5/26/2007 2:34:28 PM	Prep Date: 5/26/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.1	1.00	20.00	0	101	90	110	0.0866	20	
Chloride	10.0	1.00	10.00	0	100	90	110	0.530	20	
Nitrate-N	5.08	0.500	5.000	0	102	90	110	0.0315	20	
Sulfate	31.3	3.00	30.00	0	104	90	110	0.170	20	

Sample ID: MB-070526	Batch ID: R31851	TestNo: E300	Units: mg/L
SampType: MBLK	Run ID: IC2_070526A	Analysis Date: 5/26/2007 2:49:08 PM	Prep Date: 5/26/2007

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

Sample ID: 0705261-01BMS	Batch ID: R31851	TestNo: E300	Units: mg/L
SampType: MS	Run ID: IC2_070526A	Analysis Date: 5/26/2007 4:02:31 PM	Prep Date: 5/26/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.2	1.00	20.00	0.4013	93.9	90	110			
Nitrate-N	4.80	0.500	5.000	0	96.0	90	110			

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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070526A

Sample ID: 0705261-01BMSD	Batch ID: R31851	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_070526A	Analysis Date: 5/26/2007 4:17:11 PM	Prep Date: 5/26/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	18.9	1.00	20.00	0.4013	92.5	90	110	1.48	20	
Nitrate-N	4.72	0.500	5.000	0	94.5	90	110	1.65	20	

Sample ID: CCV1-070526	Batch ID: R31851	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070526A	Analysis Date: 5/26/2007 4:46:32 PM	Prep Date: 5/26/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			
Chloride	10.1	1.00	10.00	0	101	90	110			
Nitrate-N	5.09	0.500	5.000	0	102	90	110			
Sulfate	31.5	3.00	30.00	0	105	90	110			

Sample ID: CCV2-070526	Batch ID: R31851	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070526A	Analysis Date: 5/26/2007 7:27:55 PM	Prep Date: 5/26/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.3	1.00	20.00	0	102	90	110			
Chloride	10.3	1.00	10.00	0	103	90	110			
Nitrate-N	5.13	0.500	5.000	0	103	90	110			
Sulfate	31.8	3.00	30.00	0	106	90	110			

Sample ID: 0705261-01BMS	Batch ID: R31851	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_070526A	Analysis Date: 5/26/2007 9:25:18 PM	Prep Date: 5/26/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	505	20.0	200.0	309.5	97.7	90	110			
Sulfate	773	60.0	600.0	137.5	106	90	110			

Sample ID: 0705261-01BMSD	Batch ID: R31851	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_070526A	Analysis Date: 5/26/2007 9:39:58 PM	Prep Date: 5/26/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	500	20.0	200.0	309.5	95.2	90	110	1.02	20	
Sulfate	769	60.0	600.0	137.5	105	90	110	0.477	20	

Sample ID: CCV3-070526	Batch ID: R31851	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070526A	Analysis Date: 5/26/2007 10:09:19 PM	Prep Date: 5/26/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			

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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070526A

Sample ID: CCV3-070526	Batch ID: R31851	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC2_070526A	Analysis Date: 5/26/2007 10:09:19 PM	Prep Date: 5/26/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Nitrate-N	5.11	0.500	5.000	0	102	90	110			
Sulfate	31.7	3.00	30.00	0	106	90	110			

Sample ID: 0705228-05BMS	Batch ID: R31851	TestNo: E300	Units: mg/L
SampType: MS	Run ID: IC2_070526A	Analysis Date: 5/26/2007 11:22:41 PM	Prep Date: 5/26/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	245	10.0	100.0	144.2	101	90	110			
Sulfate	541	30.0	300.0	212.9	109	90	110			

Sample ID: 0705228-05BMSD	Batch ID: R31851	TestNo: E300	Units: mg/L
SampType: MSD	Run ID: IC2_070526A	Analysis Date: 5/26/2007 11:37:22 PM	Prep Date: 5/26/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	237	10.0	100.0	144.2	92.6	90	110	3.61	20	
Sulfate	523	30.0	300.0	212.9	103	90	110	3.45	20	

Sample ID: CCV4-070526	Batch ID: R31851	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC2_070526A	Analysis Date: 5/27/2007 12:50:44 AM	Prep Date: 5/27/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			
Chloride	10.1	1.00	10.00	0	101	90	110			
Nitrate-N	5.12	0.500	5.000	0	102	90	110			
Sulfate	31.5	3.00	30.00	0	105	90	110			

Sample ID: CCV5-070526	Batch ID: R31851	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC2_070526A	Analysis Date: 5/27/2007 2:18:47 AM	Prep Date: 5/27/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	31.6	3.00	30.00	0	105	90	110			

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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070529A

Sample ID: ICV-070529	Batch ID: R31858	TestNo: E310.1	Units: mg/L							
SampType: ICV	Run ID: TITRATOR_070529A	Analysis Date: 5/29/2007 8:26:00 AM	Prep Date: 5/29/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	9.12	20.0	0							
Alkalinity, Carbonate (As CaCO3)	92.2	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	101	20.0	100.0	0	101	98	102			

Sample ID: LCS-070529	Batch ID: R31858	TestNo: E310.1	Units: mg/L							
SampType: LCS	Run ID: TITRATOR_070529A	Analysis Date: 5/29/2007 8:44:00 AM	Prep Date: 5/29/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	53.4	20.0	50.00	0	107	74	129			
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Sample ID: 0705208-01B DUP	Batch ID: R31858	TestNo: E310.1	Units: mg/L							
SampType: DUP	Run ID: TITRATOR_070529A	Analysis Date: 5/29/2007 9:24:00 AM	Prep Date: 5/29/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	302	20.0	0	303.2				0.369	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	302	20.0	0	303.2				0.369	20	

Sample ID: CCV1-070529	Batch ID: R31858	TestNo: E310.1	Units: mg/L							
SampType: CCV	Run ID: TITRATOR_070529A	Analysis Date: 5/29/2007 9:57:00 AM	Prep Date: 5/29/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	10.1	20.0	0							
Alkalinity, Carbonate (As CaCO3)	92.3	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	102	20.0	100.0	0	102	90	110			

Sample ID: CCV2-070529	Batch ID: R31858	TestNo: E310.1	Units: mg/L							
SampType: CCV	Run ID: TITRATOR_070529A	Analysis Date: 5/29/2007 10:55:00 AM	Prep Date: 5/29/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	13.0	20.0	0							
Alkalinity, Carbonate (As CaCO3)	90.9	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	104	20.0	100.0	0	104	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070529A

Sample ID: CCV3-070529	Batch ID: R31858	TestNo: E310.1	Units: mg/L							
SampType: CCV	Run ID: TITRATOR_070529A	Analysis Date: 5/29/2007 11:18:00 AM	Prep Date: 5/29/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	15.7	20.0	0							
Alkalinity, Carbonate (As CaCO3)	88.3	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	104	20.0	100.0	0	104	90	110			

Sample ID: 0705228-05B DUP	Batch ID: R31858	TestNo: E310.1	Units: mg/L							
SampType: DUP	Run ID: TITRATOR_070529A	Analysis Date: 5/29/2007	Prep Date: 5/29/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	194	20.0	0	194.4				0.164	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	194	20.0	0	194.4				0.164	20	

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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070531A

Sample ID: ICV-070531	Batch ID: R31911	TestNo: E310.1	Units: mg/L							
SampType: ICV	Run ID: TITRATOR_070531A	Analysis Date: 5/31/2007 9:40:00 AM	Prep Date: 5/31/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	10.1	20.0	0							
Alkalinity, Carbonate (As CaCO3)	90.6	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	101	20.0	100.0	0	101	98	102			

Sample ID: LCS-070531	Batch ID: R31911	TestNo: E310.1	Units: mg/L							
SampType: LCS	Run ID: TITRATOR_070531A	Analysis Date: 5/31/2007 9:44:00 AM	Prep Date: 5/31/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	53.0	20.0	50.00	0	106	74	129			

Sample ID: 0705255-01C DUP	Batch ID: R31911	TestNo: E310.1	Units: mg/L							
SampType: DUP	Run ID: TITRATOR_070531A	Analysis Date: 5/31/2007 10:20:00 AM	Prep Date: 5/31/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	775	20.0	0	776.8				0.291	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	775	20.0	0	776.8				0.291	20	

Sample ID: CCV1-070531	Batch ID: R31911	TestNo: E310.1	Units: mg/L							
SampType: CCV	Run ID: TITRATOR_070531A	Analysis Date: 5/31/2007 11:36:00 AM	Prep Date: 5/31/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	17.0	20.0	0							
Alkalinity, Carbonate (As CaCO3)	86.6	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	104	20.0	100.0	0	104	90	110			

Sample ID: CCV2-070531	Batch ID: R31911	TestNo: E310.1	Units: mg/L							
SampType: CCV	Run ID: TITRATOR_070531A	Analysis Date: 5/31/2007 1:03:00 PM	Prep Date: 5/31/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	21.8	20.0	0							
Alkalinity, Carbonate (As CaCO3)	81.4	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	103	20.0	100.0	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 Detection Limit
N Parameter not NELAC certified	ND Not Detected at the Method Detection Limi
R RPD outside accepted control limits	RL Reporting Limit
S Spike Recovery outside control limits	

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070531A

Sample ID: 0705242-03B DUP	Batch ID: R31911	TestNo: E310.1	Units: mg/L							
SampType: DUP	Run ID: TITRATOR_070531A	Analysis Date: 5/31/2007 1:31:00 PM	Prep Date: 5/31/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	292	20.0	0	292.5				0.230	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	292	20.0	0	292.5				0.230	20	

Sample ID: CCV3-070531	Batch ID: R31911	TestNo: E310.1	Units: mg/L							
SampType: CCV	Run ID: TITRATOR_070531A	Analysis Date: 5/31/2007 1:36:00 PM	Prep Date: 5/31/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	13.6	20.0	0							
Alkalinity, Carbonate (As CaCO3)	90.2	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	104	20.0	100.0	0	104	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: WC_070530A

Sample ID: ICV-070530	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µmhos/cm							
SampType: ICV	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 PM	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12900	10.0	12880	0	100	95	105			

Sample ID: MBLK-070530	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µmhos/cm							
SampType: MBLK	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 PM	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	ND	10.0								

Sample ID: LCS-070530	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µmhos/cm							
SampType: LCS	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 PM	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	1400	10.0	1413	0	99.2	95	105			

Sample ID: 0705228-05B DUP	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µmhos/cm							
SampType: DUP	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 PM	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	1670	10.0	0	1663				0.360	2	

Sample ID: CCV1-070530	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µmhos/cm							
SampType: CCV	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 PM	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12800	10.0	12880	0	99.6	95	105			

Sample ID: CCV2-070530	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µmhos/cm							
SampType: CCV	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 PM	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12700	10.0	12880	0	98.9	95	105			

Sample ID: 0705242-07B DUP	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µmhos/cm							
SampType: DUP	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 PM	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	7670	10.0	0	7610				0.785	2	

Qualifiers:

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

CLIENT: Terracon, Inc.
Work Order: 0705228
Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: WC_070530A

Sample ID: CCV3-070530	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µmhos/cm							
SampType: CCV	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 PM	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12700	10.0	12880	0	98.5	95	105			

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

CLIENT: Terracon, Inc.
 Work Order: 0705228
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: WC_070530C

Sample ID: MB-070530	Batch ID: TDS_W-05/30/07	TestNo: E160.1	Units: mg/L
SampType: MBLK	Run ID: WC_070530C	Analysis Date: 5/31/2007 8:15:00 AM	Prep Date: 5/30/2007
Analyte	Result	RL	SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	ND	10.0	

Sample ID: LCS-070530	Batch ID: TDS_W-05/30/07	TestNo: E160.1	Units: mg/L
SampType: LCS	Run ID: WC_070530C	Analysis Date: 5/31/2007 8:15:00 AM	Prep Date: 5/30/2007
Analyte	Result	RL	SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	746	10.0	745.6 0 100 70 126

Sample ID: 0705228-05B DUP	Batch ID: TDS_W-05/30/07	TestNo: E160.1	Units: mg/L
SampType: DUP	Run ID: WC_070530C	Analysis Date: 5/31/2007 8:15:00 AM	Prep Date: 5/30/2007
Analyte	Result	RL	SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	1110	10.0	0 1096 1.54 5

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

CLIENT: Terracon, Inc.
Work Order: 0705228
Project: Ballinger-RRC Project

MQL SUMMARY REPORT

TestNo: E300	MDL	MQL
Analyte	mg/L	mg/L
Bromide	0.300	1.00
Chloride	0.300	1.00
Nitrate-N	0.100	0.500
Sulfate	1.00	3.00

TestNo: SW6020	MDL	MQL
Analyte	mg/L	mg/L
Calcium	0.100	0.100
Magnesium	0.100	0.100
Potassium	0.100	0.100
Sodium	0.100	0.100

TestNo: E120.1	MDL	MQL
Analyte	µmhos/cm	µmhos/cm
Specific Conductance	10.0	10.0

TestNo: E160.1	MDL	MQL
Analyte	mg/L	mg/L
Total Dissolved Solids (Residue, Filt	10.0	10.0

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



June 11, 2007

Max Majesko
Terracon, Inc.
8901 Carpenter Fwy #100
Dallas, Texas 75247

TEL: (214) 630-1010
FAX (614) 630-7070

Order No.: 0705242

RE: Ballinger-RRC Project

Dear Max Majesko:

DHL Analytical received 7 sample(s) on 5/25/2007 for the analyses presented in the following report.

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

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

Sincerely,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-06-TX

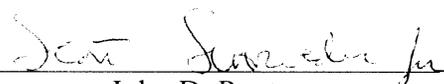


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June 11, 2007

Approved: 
John DuPont



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Second business day, Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
3 FedEx Express Saver
Third business day, Saturday Delivery NOT available.
4b Express Freight Service
7 FedEx 1Day Freight*
Next business day, Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
8 FedEx 2Day Freight
Second business day, Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
9 FedEx 3Day Freight
Third business day, Saturday Delivery NOT available.
10 FedEx First Overnight
Earliest next business morning delivery to select locations, Saturday Delivery NOT available.
11 Packages up to 150 lbs.
12 Packages over 150 lbs.
13 FedEx Standard Overnight
Next business afternoon, Saturday Delivery NOT available.
14 FedEx Standard Overnight
Next business afternoon, Saturday Delivery NOT available.
15 FedEx Express Saver
Third business day, Saturday Delivery NOT available.
16 FedEx 1Day Freight*
Next business day, Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
17 FedEx 2Day Freight
Second business day, Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
18 FedEx 3Day Freight
Third business day, Saturday Delivery NOT available.
19 FedEx First Overnight
Earliest next business morning delivery to select locations, Saturday Delivery NOT available.
20 Packages up to 150 lbs.
21 Packages over 150 lbs.
22 FedEx Standard Overnight
Next business afternoon, Saturday Delivery NOT available.
23 FedEx Standard Overnight
Next business afternoon, Saturday Delivery NOT available.
24 FedEx Express Saver
Third business day, Saturday Delivery NOT available.
25 FedEx 1Day Freight*
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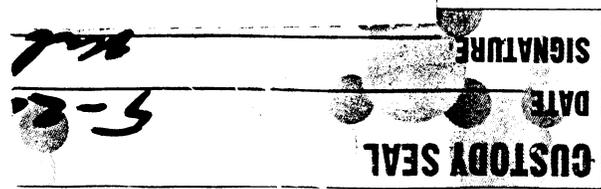
5 Packaging
1 FedEx Pak*
Includes FedEx Pak, and FedEx Smart Pak.
2 FedEx Envelope*
3 FedEx Box
4 FedEx Tube
5 Other
* The actual value may vary.
** To meet locations.

6 Special Handling
1 SATURDAY Delivery
Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx 2Day Freight, or FedEx 3Day Freight.
2 HOLD Weekday at FedEx Location
Not available for FedEx First Overnight.
3 HOLD Saturday at FedEx Location
Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.
4 Fragile
5 Dry Ice
Dry ice, 3 ON 185
6 Cargo Aircraft Only
Obtain Receipt, Acc't No.
7 Payment Bill to:
1 Sender
2 Recipient
3 Third Party
4 Credit Card
5 Cash/Check
6 Obtain Receipt, Acc't No.
7 Enter FedEx Acct. No. or Credit Card No. below.

Does this shipment contain dangerous goods?
1 No
2 Yes
3 Yes, attached
4 Yes, Declaration not required
5 Yes, Declaration not required
6 Dry Ice
Dry ice, 3 ON 185
7 Cargo Aircraft Only
Obtain Receipt, Acc't No.

8 NEW Residential Delivery Signature Options
1 No Signature
2 Direct Signature
3 Indirect Signature
4 Signature Required
5 Signature Required
6 Signature Required
7 Signature Required
8 Signature Required
9 Signature Required
10 Signature Required
11 Signature Required
12 Signature Required
13 Signature Required
14 Signature Required
15 Signature Required
16 Signature Required
17 Signature Required
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89 Signature Required
90 Signature Required
91 Signature Required
92 Signature Required
93 Signature Required
94 Signature Required
95 Signature Required
96 Signature Required
97 Signature Required
98 Signature Required
99 Signature Required
100 Signature Required

Total Packages 1
Total Weight 3.7
Total Charges
Credit Card Auth
520
Rev. Date 8/06/06
8595 5036 7456



Sample Receipt Checklist

Client Name Terracon, Inc.

Date Received: 5/25/2007

Work Order Number 0705242

Received by: DEW

Checklist completed by: *Ryan Wells*
Signature

5/25/07
Date

Reviewed by: _____
Initials Date

Carrier name: FedEx 1day

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping 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 *TTC*

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action

Laboratory Data Package Signature Page

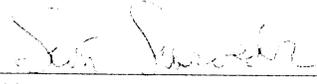
This data package consists of:

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

- R1 Field chain-of-custody documentation;
 - R2 Sample identification cross-reference;
 - R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC 5.13
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
 - R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
 - R5 Test reports/summary forms for blank samples;
 - R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
 - R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
 - R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
 - R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
 - R10 Other problems or anomalies.
- The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

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

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


Signature


Date

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: <i>Ballinger - RRC Project</i>	Date: <i>6/11/07</i>
Reviewer Name: <i>Carlos Castro</i>	Laboratory Work Order: <i>0705242</i>
Prep Batch Number(s): See Prep Dates Report	Run Batch: See Analytical Dates Report

# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	Chain-of-Custody (C-O-C)					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt? 2) Were all departures from standard conditions described in an exception report?	✓			✓	R1-01
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, including prep and cleanup steps?	✓				
		3) Were LCSs analyzed at the required frequency?	✓				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs? 6) Was the LCSD RPD within QC limits (if applicable)?	✓				
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data					
		1) Were the project/method specified analytes included in the MS and MSD?	✓				
		2) Were MS/MSD analyzed at the appropriate frequency?	✓				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits? 4) Were MS/MSD RPDs within laboratory QC limits?	✓	✓			R7-03
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?	✓				R10-01
		2) Were all necessary corrective actions performed for the reported data? 3) Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

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

3 NA = Not applicable.

4 NR = Not Reviewed.

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

DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: Ballinger - RRC Project

Date: 6/11/07

Reviewer Name: Carlos Castro

Laboratory Work Order: 0705242

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

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

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

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Lab Order: 0705242

CASE NARRATIVE

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

Method SW6020 - Metals Analysis
Method E300 - Anions Analysis
Method E310.1 - Alkalinity Analysis
Method E120.1 - Specific Conductance
Method E160.1 - TDS Analysis

Exception Report R1-01

Samples were received and log-in performed on 5/25/07. A total of 7 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R7-03 & R7-04

For Anions analysis performed on 5/25/07, 6/1/07 and 6/7/07 the matrix spikes and matrix spike duplicate recoveries were out of control limits for a few analytes. These are flagged accordingly in the QC summary report. The reference sample (5/23/07 0705208-11B) selected for the matrix spike and matrix spike duplicate was from this work order. The reference sample (5/25/07) selected for the matrix spike and matrix spike duplicate was from this work order. The reference sample (6/1/07) selected for the matrix spike and matrix spike duplicate was not from this work order. The reference sample (6/7/07) selected for the matrix spike and matrix spike duplicate was not from this work order. The LCSs were within control limits for these analytes. No further corrective actions were required and no sample results were adversely affected.

For Metals analysis performed on 6/4/07 the matrix spike 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 spike and matrix spike duplicate was not from this work order. The LCS was within control limits for these analytes. No further corrective actions were required and no sample results were adversely affected.

Exception Report R10-01

For sample MW-4 the mineral balance was significantly outside control limits. Each separate containers were analyzed separately and significant differences were found between the sample in the two containers.

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Lab Order: 0705242

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
0705242-01	MW-17		05/24/07 08:45 AM	5/25/2007
0705242-02	MW-16		05/24/07 10:05 AM	5/25/2007
0705242-03	MW-1		05/24/07 12:00 PM	5/25/2007
0705242-04	MW-2		05/24/07 12:55 PM	5/25/2007
0705242-05	MW-3		05/24/07 11:10 AM	5/25/2007
0705242-06	MW-4		05/24/07 01:55 PM	5/25/2007
0705242-07	MW-DUP		05/24/07 12:00 PM	5/25/2007

Lab Order: 0705242
 Client: Terracon, Inc.
 Project: Ballinger-RRR Project

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0705242-01A	MW-17	05/24/07 08:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-17	05/24/07 08:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705242-01B	MW-17	05/24/07 08:45 AM	Aqueous	E310.1	Alkalinity	05/31/07 01:13 PM	R31911
	MW-17	05/24/07 08:45 AM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31854
	MW-17	05/24/07 08:45 AM	Aqueous	E300	Anions by IC method - Water	06/01/07	R31931
	MW-17	05/24/07 08:45 AM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
	MW-17	05/24/07 08:45 AM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705242-02A	MW-16	05/24/07 10:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-16	05/24/07 10:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705242-02B	MW-16	05/24/07 10:05 AM	Aqueous	E310.1	Alkalinity	05/31/07 01:17 PM	R31911
	MW-16	05/24/07 10:05 AM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31854
	MW-16	05/24/07 10:05 AM	Aqueous	E300	Anions by IC method - Water	06/01/07	R31931
	MW-16	05/24/07 10:05 AM	Aqueous	E300	Anions by IC method - Water	06/01/07	R31931
	MW-16	05/24/07 10:05 AM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
	MW-16	05/24/07 10:05 AM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705242-03A	MW-1	05/24/07 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-1	05/24/07 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705242-03B	MW-1	05/24/07 12:00 PM	Aqueous	E310.1	Alkalinity	05/31/07 01:24 PM	R31911
	MW-1	05/24/07 12:00 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31854
	MW-1	05/24/07 12:00 PM	Aqueous	E300	Anions by IC method - Water	06/01/07	R31931
	MW-1	05/24/07 12:00 PM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
	MW-1	05/24/07 12:00 PM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705242-04A	MW-2	05/24/07 12:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-2	05/24/07 12:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705242-04B	MW-2	05/24/07 12:55 PM	Aqueous	E310.1	Alkalinity	06/01/07 01:43 PM	R31947
	MW-2	05/24/07 12:55 PM	Aqueous	E300	Anions by IC method - Water	06/01/07	R31931
	MW-2	05/24/07 12:55 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31854
	MW-2	05/24/07 12:55 PM	Aqueous	E300	Anions by IC method - Water	06/01/07	R31931

Lab Order: 0705242
Client: Terracon, Inc.
Project: Ballinger-RRC Project

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0705242-04B	MW-2	05/24/07 12:55 PM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
	MW-2	05/24/07 12:55 PM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
0705242-05A	MW-3	05/24/07 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-3	05/24/07 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705242-05B	MW-3	05/24/07 11:10 AM	Aqueous	E310.1	Alkalinity	06/01/07 01:49 PM	R31947
	MW-3	05/24/07 11:10 AM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31854
	MW-3	05/24/07 11:10 AM	Aqueous	E300	Anions by IC method - Water	06/01/07	R31931
	MW-3	05/24/07 11:10 AM	Aqueous	E300	Anions by IC method - Water	06/01/07	R31931
	MW-3	05/24/07 11:10 AM	Aqueous	E300	Anions by IC method - Water	06/04/07	R31963
	MW-3	05/24/07 11:10 AM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
0705242-06A	MW-3	05/24/07 11:10 AM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
	MW-4	05/24/07 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705242-06B	MW-4	05/24/07 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-4	05/24/07 01:55 PM	Aqueous	E310.1	Alkalinity	06/01/07 01:57 PM	R31947
	MW-4	05/24/07 01:55 PM	Aqueous	E300	Anions by IC method - Water	06/01/07	R31931
	MW-4	05/24/07 01:55 PM	Aqueous	E300	Anions by IC method - Water	06/07/07	R32040
	MW-4	05/24/07 01:55 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31854
	MW-4	05/24/07 01:55 PM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
0705242-07A	MW-4	05/24/07 01:55 PM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07
	MW-DUP	05/24/07 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-DUP	05/24/07 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705242-07B	MW-DUP	05/24/07 12:00 PM	Aqueous	E310.1	Alkalinity	06/01/07 02:05 PM	R31947
	MW-DUP	05/24/07 12:00 PM	Aqueous	E300	Anions by IC method - Water	05/25/07	R31854
	MW-DUP	05/24/07 12:00 PM	Aqueous	E300	Anions by IC method - Water	06/01/07	R31931
	MW-DUP	05/24/07 12:00 PM	Aqueous	E120.1	Specific Conductance	05/30/07	CONDW-05/30/07
	MW-DUP	05/24/07 12:00 PM	Aqueous	E160.1	Total Dissolved Solids	05/30/07 12:45 PM	TDS_W-05/30/07

Lab Order: 0705242
 Client: Terracon, Inc.
 Project: Ballinger-RRR Project

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705242-01A	MW-17	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	1	06/05/07 01:58 PM	ICP-MS_070605A
	MW-17	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 06:55 PM	ICP-MS_070604A
0705242-01B	MW-17	Aqueous	E310.1	Alkalinity	R31911	1	05/31/07 01:13 PM	TITRATOR_070531A
	MW-17	Aqueous	E300	Anions by IC method - Water	R31854	1	05/25/07 03:09 PM	IC2_070525A
	MW-17	Aqueous	E300	Anions by IC method - Water	R31931	10	06/01/07 01:24 PM	IC2_070601A
	MW-17	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	1	05/30/07 12:00 PM	WC_070530A
	MW-17	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705242-02A	MW-16	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 06:59 PM	ICP-MS_070604A
	MW-16	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	250	06/05/07 12:53 PM	ICP-MS_070605A
0705242-02B	MW-16	Aqueous	E310.1	Alkalinity	R31911	1	05/31/07 01:17 PM	TITRATOR_070531A
	MW-16	Aqueous	E300	Anions by IC method - Water	R31931	100	06/01/07 03:04 PM	IC2_070601A
	MW-16	Aqueous	E300	Anions by IC method - Water	R31854	1	05/25/07 03:23 PM	IC2_070525A
	MW-16	Aqueous	E300	Anions by IC method - Water	R31931	50	06/01/07 01:39 PM	IC2_070601A
	MW-16	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	2	05/30/07 12:00 PM	WC_070530A
	MW-16	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705242-03A	MW-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 07:43 PM	ICP-MS_070604A
	MW-1	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	250	06/05/07 12:57 PM	ICP-MS_070605A
0705242-03B	MW-1	Aqueous	E310.1	Alkalinity	R31911	1	05/31/07 01:24 PM	TITRATOR_070531A
	MW-1	Aqueous	E300	Anions by IC method - Water	R31854	1	05/25/07 03:38 PM	IC2_070525A
	MW-1	Aqueous	E300	Anions by IC method - Water	R31931	50	06/01/07 01:53 PM	IC2_070601A
	MW-1	Aqueous	E120.1	Specific Conductance	CONDW-05/30/07	1	05/30/07 12:00 PM	WC_070530A
	MW-1	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705242-04A	MW-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 07:47 PM	ICP-MS_070604A
	MW-2	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	1000	06/05/07 01:02 PM	ICP-MS_070605A
0705242-04B	MW-2	Aqueous	E310.1	Alkalinity	R31947	1	06/01/07 01:43 PM	TITRATOR_070601A

Lab Order: 0705242
Client: Terracon, Inc.
Project: Ballinger-RRC Project

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705242-04B	MW-2	Aqueous	E300	Anions by IC method - Water	R31931	100	06/01/07 02:08 PM	IC2_070601A
	MW-2	Aqueous	E300	Anions by IC method - Water	R31931	200	06/01/07 03:33 PM	IC2_070601A
	MW-2	Aqueous	E300	Anions by IC method - Water	R31854	1	05/25/07 03:52 PM	IC2_070525A
	MW-2	Aqueous	E120.1	Specific Conductance	CONDW-05/30/0	2	05/30/07 12:00 PM	WC_070530A
	MW-2	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705242-05A	MW-3	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 07:52 PM	ICP-MS_070604A
	MW-3	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	1000	06/05/07 01:06 PM	ICP-MS_070605A
0705242-05B	MW-3	Aqueous	E310.1	Alkalinity	R31947	1	06/01/07 01:49 PM	TITRATOR_070601A
	MW-3	Aqueous	E300	Anions by IC method - Water	R31854	1	05/25/07 04:26 PM	IC2_070525A
	MW-3	Aqueous	E300	Anions by IC method - Water	R31931	50	06/01/07 02:23 PM	IC2_070601A
	MW-3	Aqueous	E300	Anions by IC method - Water	R31931	500	06/01/07 03:48 PM	IC2_070601A
	MW-3	Aqueous	E300	Anions by IC method - Water	R31963	10	06/04/07 05:41 PM	IC2_070604A
	MW-3	Aqueous	E120.1	Specific Conductance	CONDW-05/30/0	5	05/30/07 12:00 PM	WC_070530A
	MW-3	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705242-06A	MW-4	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 07:56 PM	ICP-MS_070604A
	MW-4	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	250	06/05/07 01:10 PM	ICP-MS_070605A
0705242-06B	MW-4	Aqueous	E310.1	Alkalinity	R31947	1	06/01/07 01:57 PM	TITRATOR_070601A
	MW-4	Aqueous	E300	Anions by IC method - Water	R32040	200	06/07/07 11:58 AM	IC_070607A
	MW-4	Aqueous	E300	Anions by IC method - Water	R31854	1	05/25/07 04:40 PM	IC2_070525A
	MW-4	Aqueous	E300	Anions by IC method - Water	R31931	50	06/01/07 02:37 PM	IC2_070601A
	MW-4	Aqueous	E120.1	Specific Conductance	CONDW-05/30/0	1	05/30/07 12:00 PM	WC_070530A
	MW-4	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C
0705242-07A	MW-DU1P	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 08:00 PM	ICP-MS_070604A
	MW-DU1P	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	250	06/05/07 01:14 PM	ICP-MS_070605A
0705242-07B	MW-DU1P	Aqueous	E310.1	Alkalinity	R31947	1	06/01/07 02:05 PM	TITRATOR_070601A
	MW-DU1P	Aqueous	E300	Anions by IC method - Water	R31854	1	05/25/07 04:55 PM	IC2_070525A

ANALYTICAL DATES REPORT

Lab Order: 0705242
Client: Terracon, Inc.
Project: Ballinger-RRC Project

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705242-07B	MW-DUP	Aqueous	E300	Anions by IC method - Water	R31931	50	06/01/07 03:19 PM	IC2_070601A
	MW-DUP	Aqueous	E120.1	Specific Conductance	CONDW-05/30/0	1	05/30/07 12:00 PM	WC_070530A
	MW-DUP	Aqueous	E160.1	Total Dissolved Solids	TDS_W-05/30/07	1	05/31/07 08:15 AM	WC_070530C

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705242

Client Sample ID: MW-17
 Lab ID: 0705242-01
 Collection Date: 05/24/07 08:45 AM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	80.3	5.00	5.00		mg/L	50	06/04/07 06:55 PM
Magnesium	47.1	5.00	5.00		mg/L	50	06/04/07 06:55 PM
Potassium	1.32	0.100	0.100		mg/L	1	06/05/07 01:58 PM
Sodium	93.8	5.00	5.00		mg/L	50	06/04/07 06:55 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	ND	0.300	1.00		mg/L	1	05/25/07 03:09 PM
Chloride	36.6	3.00	10.0		mg/L	10	06/01/07 01:24 PM
Nitrate-N	0.876	0.100	0.500		mg/L	1	05/25/07 03:09 PM
Sulfate	272	10.0	30.0		mg/L	10	06/01/07 01:24 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	313	10.0	20.0		mg/L	1	05/31/07 01:13 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 01:13 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 01:13 PM
Alkalinity, Total (As CaCO3)	313	10.0	20.0		mg/L	1	05/31/07 01:13 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	1130	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	740	10.0	10.0		mg/L	1	05/31/07 08:15 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705242

Client Sample ID: MW-16
Lab ID: 0705242-02
Collection Date: 05/24/07 10:05 AM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	888	25.0	25.0		mg/L	250	06/05/07 12:53 PM
Magnesium	381	5.00	5.00		mg/L	50	06/04/07 06:59 PM
Potassium	25.6	5.00	5.00		mg/L	50	06/04/07 06:59 PM
Sodium	1630	25.0	25.0		mg/L	250	06/05/07 12:53 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	5.32	0.300	1.00		mg/L	1	05/25/07 03:23 PM
Chloride	4930	30.0	100		mg/L	100	06/01/07 03:04 PM
Nitrate-N	ND	0.100	0.500		mg/L	1	05/25/07 03:23 PM
Sulfate	1120	50.0	150		mg/L	50	06/01/07 01:39 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	179	10.0	20.0		mg/L	1	05/31/07 01:17 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 01:17 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 01:17 PM
Alkalinity, Total (As CaCO3)	179	10.0	20.0		mg/L	1	05/31/07 01:17 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	14800	20.0	20.0		µmhos/cm	2	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	11300	10.0	10.0		mg/L	1	05/31/07 08:15 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705242

Client Sample ID: MW-1
 Lab ID: 0705242-03
 Collection Date: 05/24/07 12:00 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	478	5.00	5.00		mg/L	50	06/04/07 07:43 PM
Magnesium	85.2	5.00	5.00		mg/L	50	06/04/07 07:43 PM
Potassium	5.84	5.00	5.00		mg/L	50	06/04/07 07:43 PM
Sodium	970	25.0	25.0		mg/L	250	06/05/07 12:57 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	2.52	0.300	1.00		mg/L	1	05/25/07 03:38 PM
Chloride	2290	15.0	50.0		mg/L	50	06/01/07 01:53 PM
Nitrate-N	0.456	0.100	0.500	J	mg/L	1	05/25/07 03:38 PM
Sulfate	470	50.0	150		mg/L	50	06/01/07 01:53 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	293	10.0	20.0		mg/L	1	05/31/07 01:24 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 01:24 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	05/31/07 01:24 PM
Alkalinity, Total (As CaCO3)	293	10.0	20.0		mg/L	1	05/31/07 01:24 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	7650	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	5260	10.0	10.0		mg/L	1	05/31/07 08:15 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

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705242

Client Sample ID: MW-2
Lab ID: 0705242-04
Collection Date: 05/24/07 12:55 PM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	936	100	100		mg/L	1000	06/05/07 01:02 PM
Magnesium	257	5.00	5.00		mg/L	50	06/04/07 07:47 PM
Potassium	14.2	5.00	5.00		mg/L	50	06/04/07 07:47 PM
Sodium	2960	100	100		mg/L	1000	06/05/07 01:02 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	7.88	0.300	1.00		mg/L	1	05/25/07 03:52 PM
Chloride	6750	60.0	200		mg/L	200	06/01/07 03:33 PM
Nitrate-N	ND	0.100	0.500		mg/L	1	05/25/07 03:52 PM
Sulfate	736	100	300		mg/L	100	06/01/07 02:08 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	291	10.0	20.0		mg/L	1	06/01/07 01:43 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 01:43 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 01:43 PM
Alkalinity, Total (As CaCO3)	291	10.0	20.0		mg/L	1	06/01/07 01:43 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	19000	20.0	20.0		µmhos/cm	2	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	13100	10.0	10.0		mg/L	1	05/31/07 08:15 AM

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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705242

Client Sample ID: MW-3
Lab ID: 0705242-05
Collection Date: 05/24/07 11:10 AM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER							
		SW6020					Analyst: SCS
Calcium	957	100	100		mg/L	1000	06/05/07 01:06 PM
Magnesium	229	5.00	5.00		mg/L	50	06/04/07 07:52 PM
Potassium	22.3	5.00	5.00		mg/L	50	06/04/07 07:52 PM
Sodium	6370	100	100		mg/L	1000	06/05/07 01:06 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Bromide	12.4	3.00	10.0		mg/L	10	06/04/07 05:41 PM
Chloride	13300	150	500		mg/L	500	06/01/07 03:48 PM
Nitrate-N	ND	0.100	0.500		mg/L	1	05/25/07 04:26 PM
Sulfate	1250	50.0	150		mg/L	50	06/01/07 02:23 PM
ALKALINITY							
		E310.1					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO3)	268	10.0	20.0		mg/L	1	06/01/07 01:49 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 01:49 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 01:49 PM
Alkalinity, Total (As CaCO3)	268	10.0	20.0		mg/L	1	06/01/07 01:49 PM
SPECIFIC CONDUCTANCE							
		E120.1					Analyst: JBC
Specific Conductance	35000	50.0	50.0		µmhos/cm	5	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS							
		E160.1					Analyst: JBC
Total Dissolved Solids (Residue, Filterable)	23500	10.0	10.0		mg/L	1	05/31/07 08:15 AM

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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705242

Client Sample ID: MW-4
 Lab ID: 0705242-06
 Collection Date: 05/24/07 01:55 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	592	25.0	25.0		mg/L	250	06/05/07 01:10 PM
Magnesium	138	5.00	5.00		mg/L	50	06/04/07 07:56 PM
Potassium	5.85	5.00	5.00		mg/L	50	06/04/07 07:56 PM
Sodium	1180	25.0	25.0		mg/L	250	06/05/07 01:10 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	2.35	0.300	1.00		mg/L	1	05/25/07 04:40 PM
Chloride	2130	60.0	200		mg/L	200	06/07/07 11:58 AM
Chloride	2160	15.0	50.0		mg/L	50	06/01/07 02:37 PM
Nitrate-N	0.222	0.100	0.500	J	mg/L	1	05/25/07 04:40 PM
Sulfate	463	50.0	150		mg/L	50	06/01/07 02:37 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	310	10.0	20.0		mg/L	1	06/01/07 01:57 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 01:57 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 01:57 PM
Alkalinity, Total (As CaCO3)	310	10.0	20.0		mg/L	1	06/01/07 01:57 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	7340	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	4860	10.0	10.0		mg/L	1	05/31/07 08:15 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705242

Client Sample ID: MW-DUP
Lab ID: 0705242-07
Collection Date: 05/24/07 12:00 PM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	466	5.00	5.00		mg/L	50	06/04/07 08:00 PM
Magnesium	86.6	5.00	5.00		mg/L	50	06/04/07 08:00 PM
Potassium	5.59	5.00	5.00		mg/L	50	06/04/07 08:00 PM
Sodium	944	25.0	25.0		mg/L	250	06/05/07 01:14 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Bromide	2.59	0.300	1.00		mg/L	1	05/25/07 04:55 PM
Chloride	2260	15.0	50.0		mg/L	50	06/01/07 03:19 PM
Nitrate-N	0.467	0.100	0.500	J	mg/L	1	05/25/07 04:55 PM
Sulfate	473	50.0	150		mg/L	50	06/01/07 03:19 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	291	10.0	20.0		mg/L	1	06/01/07 02:05 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:05 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:05 PM
Alkalinity, Total (As CaCO3)	291	10.0	20.0		mg/L	1	06/01/07 02:05 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	7610	10.0	10.0		µmhos/cm	1	05/30/07 12:00 PM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	4850	10.0	10.0		mg/L	1	05/31/07 08:15 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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070604A

Sample ID	MB-26080	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	MBLK	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 6:42:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	0.100								
Magnesium	ND	0.100								
Potassium	ND	0.100								
Sodium	ND	0.100								

Sample ID	LCS-26080	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	LCS	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 6:46:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.92	0.100	5.00	0	98.3	80	120			
Magnesium	5.00	0.100	5.00	0	100	80	120			
Potassium	4.77	0.100	5.00	0	95.4	80	120			
Sodium	5.04	0.100	5.00	0	101	80	120			

Sample ID	LCSD-26080	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 6:50:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.05	0.100	5.00	0	101	80	120	2.59	15	
Magnesium	4.88	0.100	5.00	0	97.6	80	120	2.49	15	
Potassium	4.74	0.100	5.00	0	94.9	80	120	0.588	15	
Sodium	4.93	0.100	5.00	0	98.5	80	120	2.33	15	

Sample ID	0705261-01A SD	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 7:07:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	252	25.0	0	258				2.33	10	
Magnesium	74.3	25.0	0	69.6				6.43	10	
Sodium	161	25.0	0	157				2.68	10	

Sample ID	0705261-01A MS	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 7:11:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	255	5.00	5.00	258	-56.0	80	120			S
Magnesium	72.6	5.00	5.00	69.6	60.0	80	120			S
Sodium	163	5.00	5.00	157	108	80	120			

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070604A

Sample ID	0705261-01A MSD	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L
SampType:	MSD	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 7:15:00 PM	Prep Date:	5/31/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	254	5.00	5.00	258	-71.0	80	120	0.294	15	S
Magnesium	73.5	5.00	5.00	69.6	77.0	80	120	1.16	15	S
Sodium	161	5.00	5.00	157	67.0	80	120	1.27	15	S

Sample ID	0705261-01A PDS	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L
SampType:	PDS	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 7:19:00 PM	Prep Date:	5/31/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	492	5.00	250	258	93.7	75	125			
Magnesium	315	5.00	250	69.6	98.0	75	125			
Sodium	399	5.00	250	157	96.9	75	125			

Sample ID	0705261-01A SD	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L
SampType:	SD	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 9:50:00 PM	Prep Date:	5/31/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	6.20	0.500	0	6.31				1.71	10	

Sample ID	0705261-01A MS	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L
SampType:	MS	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 9:54:00 PM	Prep Date:	5/31/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	10.9	0.100	5.00	6.31	92.4	80	120			

Sample ID	0705261-01A MSD	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L
SampType:	MSD	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 9:58:00 PM	Prep Date:	5/31/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	11.0	0.100	5.00	6.31	94.2	80	120	0.820	15	

Sample ID	0705261-01A PDS	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L
SampType:	PDS	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 10:02:00 PM	Prep Date:	5/31/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	10.6	0.100	5.00	6.31	85.4	75	125			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070604A

Sample ID	ICV2-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 2:38:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.56	0.100	2.50	0	102	90	110			
Magnesium	2.58	0.100	2.50	0	103	90	110			
Potassium	2.53	0.100	2.50	0	101	90	110			
Sodium	2.60	0.100	2.50	0	104	90	110			

Sample ID	CCV6-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 6:27:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.74	0.100	5.00	0	94.8	90	110			
Magnesium	4.85	0.100	5.00	0	97.1	90	110			
Potassium	4.73	0.100	5.00	0	94.6	90	110			
Sodium	5.12	0.100	5.00	0	102	90	110			

Sample ID	CCV7-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 7:31:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.09	0.100	5.00	0	102	90	110			
Magnesium	5.28	0.100	5.00	0	106	90	110			
Potassium	5.07	0.100	5.00	0	101	90	110			
Sodium	5.36	0.100	5.00	0	107	90	110			

Sample ID	CCV8-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 8:33:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.14	0.100	5.00	0	103	90	110			
Magnesium	5.25	0.100	5.00	0	105	90	110			
Potassium	5.08	0.100	5.00	0	102	90	110			

Sample ID	CCV9-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 9:34:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.03	0.100	5.00	0	101	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070604A

Sample ID	CCV10-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 10:18:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.14	0.100	5.00	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 Detection Limit
N Parameter not NELAC certified	ND Not Detected at the Method Detection L
R RPD outside accepted control limits	RL Reporting Limit
S Spike Recovery outside control limits	J Analyte detected between SQL and RL

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070605A

Sample ID	ICV1-070605	Batch ID:	R32000	TestNo:	SW6020	Units:	mg/L
SampType:	ICV	Run ID:	ICP-MS_070605A	Analysis Date:	6/5/2007 12:38:00 PM	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.60	0.100	2.50	0	104	90	110			
Potassium	2.55	0.100	2.50	0	102	90	110			
Sodium	2.62	0.100	2.50	0	105	90	110			

Sample ID	CCV1-070605	Batch ID:	R32000	TestNo:	SW6020	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS_070605A	Analysis Date:	6/5/2007 1:42:00 PM	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.17	0.100	5.00	0	103	90	110			
Potassium	5.18	0.100	5.00	0	104	90	110			
Sodium	5.16	0.100	5.00	0	103	90	110			

Sample ID	CCV2-070605	Batch ID:	R32000	TestNo:	SW6020	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS_070605A	Analysis Date:	6/5/2007 2:18:00 PM	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.07	0.100	5.00	0	101	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC_070607A

Sample ID	ICV-070607	Batch ID:	R32040	TestNo:	E300	Units:	mg/L				
SampType:	ICV	Run ID:	IC_070607A	Analysis Date:	6/7/2007 9:19:45 AM	Prep Date:	6/7/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride		22.6	1.00	25.00	0	90.4	90	110			

Sample ID	MB-070607	Batch ID:	R32040	TestNo:	E300	Units:	mg/L				
SampType:	MBLK	Run ID:	IC_070607A	Analysis Date:	6/7/2007 9:43:20 AM	Prep Date:	6/7/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.00								

Sample ID	LCS-070607	Batch ID:	R32040	TestNo:	E300	Units:	mg/L				
SampType:	LCS	Run ID:	IC_070607A	Analysis Date:	6/7/2007 9:59:03 AM	Prep Date:	6/7/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride		9.15	1.00	10.00	0	91.5	90	110			

Sample ID	LCSD-070607	Batch ID:	R32040	TestNo:	E300	Units:	mg/L				
SampType:	LCSD	Run ID:	IC_070607A	Analysis Date:	6/7/2007 10:14:45 AM	Prep Date:	6/7/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride		9.25	1.00	10.00	0	92.5	90	110	1.09	20	

Sample ID	CCV1-070607	Batch ID:	R32040	TestNo:	E300	Units:	mg/L				
SampType:	CCV	Run ID:	IC_070607A	Analysis Date:	6/7/2007 12:27:17 PM	Prep Date:	6/7/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride		9.53	1.00	10.00	0	95.3	90	110			

Sample ID	0706048-01E MS	Batch ID:	R32040	TestNo:	E300	Units:	mg/L				
SampType:	MS	Run ID:	IC_070607A	Analysis Date:	6/7/2007 5:20:27 PM	Prep Date:	6/7/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Nitrate-N		4.86	0.500	5.000	0.4843	87.6	90	110			S

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070525A

Sample ID ICV-070525	Batch ID: R31854	TestNo: E300	Units: mg/L							
SampType: ICV	Run ID: IC2_070525A	Analysis Date: 5/25/2007 9:36:41 AM	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	51.2	1.00	50.00	0	102	90	110			
Nitrate-N	13.0	0.500	12.50	0	104	90	110			

Sample ID MB-070525	Batch ID: R31854	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC2_070525A	Analysis Date: 5/25/2007 10:11:54 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	1.00								
Nitrate-N	ND	0.500								

Sample ID LCS-070525	Batch ID: R31854	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC2_070525A	Analysis Date: 5/25/2007 10:26:35 A	Prep Date: 5/25/2007							
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	5.08	0.500	5.000	0	102	90	110			

Sample ID LCSD-070525	Batch ID: R31854	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC2_070525A	Analysis Date: 5/25/2007 10:41:15 A	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.0	1.00	20.00	0	99.9	90	110	0.474	20	
Nitrate-N	5.08	0.500	5.000	0	102	90	110	0.0157	20	

Sample ID CCV1-070525	Batch ID: R31854	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070525A	Analysis Date: 5/25/2007 1:24:31 PM	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.3	1.00	20.00	0	101	90	110			
Nitrate-N	5.14	0.500	5.000	0	103	90	110			

Sample ID CCV2-070525	Batch ID: R31854	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070525A	Analysis Date: 5/25/2007 4:07:22 PM	Prep Date: 5/25/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.1	1.00	20.00	0	101	90	110			
Nitrate-N	5.08	0.500	5.000	0	102	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070525A

Sample ID	0705242-07B MS	Batch ID:	R31854	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC2_070525A	Analysis Date:	5/25/2007 5:10:05 PM	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	28.8	1.00	20.00	1.553	136	90	110			S
Nitrate-N	6.26	0.500	5.000	0.2803	120	90	110			S

Sample ID	0705242-07B MSD	Batch ID:	R31854	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC2_070525A	Analysis Date:	5/25/2007 5:24:45 PM	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	29.0	1.00	20.00	1.553	137	90	110	0.659	20	S
Nitrate-N	6.25	0.500	5.000	0.2803	119	90	110	0.174	20	S

Sample ID	CCV3-070525	Batch ID:	R31854	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_070525A	Analysis Date:	5/25/2007 5:54:06 PM	Prep Date:	5/25/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			
Nitrate-N	5.11	0.500	5.000	0	102	90	110			

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070601A

Sample ID ICV-070601	Batch ID: R31931	TestNo: E300	Units: mg/L
SampType: ICV	Run ID: IC2_070601A	Analysis Date: 6/1/2007 9:30:53 AM	Prep Date: 6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.6	1.00	25.00	0	103	90	110			
Sulfate	80.2	3.00	75.00	0	107	90	110			

Sample ID MB-070601	Batch ID: R31931	TestNo: E300	Units: mg/L
SampType: MBLK	Run ID: IC2_070601A	Analysis Date: 6/1/2007 9:52:11 AM	Prep Date: 6/1/2007

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-070601	Batch ID: R31931	TestNo: E300	Units: mg/L
SampType: LCS	Run ID: IC2_070601A	Analysis Date: 6/1/2007 10:06:51 AM	Prep Date: 6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.2	1.00	10.00	0	102	90	110			
Sulfate	31.8	3.00	30.00	0	106	90	110			

Sample ID LCSD-070601	Batch ID: R31931	TestNo: E300	Units: mg/L
SampType: LCSD	Run ID: IC2_070601A	Analysis Date: 6/1/2007 10:21:32 AM	Prep Date: 6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110	0.220	20	
Sulfate	31.7	3.00	30.00	0	106	90	110	0.276	20	

Sample ID CCV1-070601	Batch ID: R31931	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC2_070601A	Analysis Date: 6/1/2007 1:06:03 PM	Prep Date: 6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.4	1.00	10.00	0	104	90	110			
Sulfate	32.1	3.00	30.00	0	107	90	110			

Sample ID CCV2-070601	Batch ID: R31931	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC2_070601A	Analysis Date: 6/1/2007 4:03:12 PM	Prep Date: 6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	31.4	3.00	30.00	0	105	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070601A

Sample ID	0705288-03C MS	Batch ID:	R31931	TestNo:	E300	Units:	mg/L				
SampType:	MS	Run ID:	IC2_070601A	Analysis Date:	6/1/2007 5:05:04 PM	Prep Date:	6/1/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride		226	10.0	100.0	124.6	102	90	110			
Sulfate		652	30.0	300.0	335.1	106	90	110			

Sample ID	0705288-03C MSD	Batch ID:	R31931	TestNo:	E300	Units:	mg/L				
SampType:	MSD	Run ID:	IC2_070601A	Analysis Date:	6/1/2007 5:19:45 PM	Prep Date:	6/1/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride		223	10.0	100.0	124.6	98.5	90	110	1.47	20	
Sulfate		653	30.0	300.0	335.1	106	90	110	0.131	20	

Sample ID	CCV3-070601	Batch ID:	R31931	TestNo:	E300	Units:	mg/L				
SampType:	CCV	Run ID:	IC2_070601A	Analysis Date:	6/1/2007 5:34:25 PM	Prep Date:	6/1/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride		10.1	1.00	10.00	0	101	90	110			
Sulfate		31.5	3.00	30.00	0	105	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070604A

Sample ID ICV-070604	Batch ID: R31963	TestNo: E300	Units: mg/L							
SampType: ICV	Run ID: IC2_070604A	Analysis Date: 6/4/2007 9:32:23 AM	Prep Date: 6/4/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	51.1	1.00	50.00	0	102	90	110			

Sample ID MB-070604	Batch ID: R31963	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC2_070604A	Analysis Date: 6/4/2007 9:49:28 AM	Prep Date: 6/4/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	1.00								

Sample ID LCS-070604	Batch ID: R31963	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC2_070604A	Analysis Date: 6/4/2007 10:04:08 AM	Prep Date: 6/4/2007							
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			

Sample ID LCSD-070604	Batch ID: R31963	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC2_070604A	Analysis Date: 6/4/2007 10:18:49 AM	Prep Date: 6/4/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.0	1.00	20.00	0	100	90	110	0.124	20	

Sample ID CCV1-070604	Batch ID: R31963	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070604A	Analysis Date: 6/4/2007 12:30:40 PM	Prep Date: 6/4/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.4	1.00	20.00	0	102	90	110			

Sample ID CCV3-070604	Batch ID: R31963	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070604A	Analysis Date: 6/4/2007 5:23:18 PM	Prep Date: 6/4/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.6	1.00	20.00	0	103	90	110			

Sample ID CCV4-070604	Batch ID: R31963	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070604A	Analysis Date: 6/4/2007 5:55:48 PM	Prep Date: 6/4/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.7	1.00	20.00	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 Detection Limit
N	Parameter not NELAC certified	ND	Not Detected at the Method Detection L
R	RPD outside accepted control limits	RL	Reporting Limit
S	Spike Recovery outside control limits	J	Analyte detected between SQL and RL

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070531A

Sample ID	ICV-070531	Batch ID:	R31911	TestNo:	E310.1	Units:	mg/L			
SampType:	ICV	Run ID:	TITRATOR_070531A	Analysis Date:	5/31/2007 9:40:00 AM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	10.1	20.0	0							
Alkalinity, Carbonate (As CaCO3)	90.6	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	101	20.0	100.0	0	101	98	102			

Sample ID	LCS-070531	Batch ID:	R31911	TestNo:	E310.1	Units:	mg/L			
SampType:	LCS	Run ID:	TITRATOR_070531A	Analysis Date:	5/31/2007 9:44:00 AM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	53.0	20.0	50.00	0	106	74	129			

Sample ID	0705255-01C DUP	Batch ID:	R31911	TestNo:	E310.1	Units:	mg/L			
SampType:	DUP	Run ID:	TITRATOR_070531A	Analysis Date:	5/31/2007 10:20:00 A	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	775	20.0	0	776.8				0.291	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	775	20.0	0	776.8				0.291	20	

Sample ID	CCV1-070531	Batch ID:	R31911	TestNo:	E310.1	Units:	mg/L			
SampType:	CCV	Run ID:	TITRATOR_070531A	Analysis Date:	5/31/2007 11:36:00 A	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	17.0	20.0	0							
Alkalinity, Carbonate (As CaCO3)	86.6	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	104	20.0	100.0	0	104	90	110			

Sample ID	CCV2-070531	Batch ID:	R31911	TestNo:	E310.1	Units:	mg/L			
SampType:	CCV	Run ID:	TITRATOR_070531A	Analysis Date:	5/31/2007 1:03:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	21.8	20.0	0							
Alkalinity, Carbonate (As CaCO3)	81.4	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	103	20.0	100.0	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 Detection Limit
N	Parameter not NELAC certified	ND	Not Detected at the Method Detection L
R	RPD outside accepted control limits	RL	Reporting Limit
S	Spike Recovery outside control limits	J	Analyte detected between SQL and RL

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070531A

Sample ID	0705242-03B DUP	Batch ID:	R31911	TestNo:	E310.1	Units:	mg/L
SampType:	DUP	Run ID:	TITRATOR_070531A	Analysis Date:	5/31/2007 1:31:00 PM	Prep Date:	5/31/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	292	20.0	0	292.5				0.230	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	292	20.0	0	292.5				0.230	20	

Sample ID	CCV3-070531	Batch ID:	R31911	TestNo:	E310.1	Units:	mg/L
SampType:	CCV	Run ID:	TITRATOR_070531A	Analysis Date:	5/31/2007 1:36:00 PM	Prep Date:	5/31/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	13.6	20.0	0							
Alkalinity, Carbonate (As CaCO3)	90.2	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	104	20.0	100.0	0	104	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070601A

Sample ID	ICV-070601	Batch ID:	R31947	TestNo:	E310.1	Units:	mg/L
SampType:	ICV	Run ID:	TITRATOR_070601A	Analysis Date:	6/1/2007 1:01:00 PM	Prep Date:	6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	10.5	20.0	0							
Alkalinity, Carbonate (As CaCO3)	90.6	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	101	20.0	100.0	0	101	98	102			

Sample ID	LCS-070601	Batch ID:	R31947	TestNo:	E310.1	Units:	mg/L
SampType:	LCS	Run ID:	TITRATOR_070601A	Analysis Date:	6/1/2007 1:05:00 PM	Prep Date:	6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	53.3	20.0	50.00	0	107	74	129			

Sample ID	0705261-01B DUP	Batch ID:	R31947	TestNo:	E310.1	Units:	mg/L
SampType:	DUP	Run ID:	TITRATOR_070601A	Analysis Date:	6/1/2007 2:18:00 PM	Prep Date:	6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	321	20.0	0	320.9				0.0968	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	321	20.0	0	320.9				0.0968	20	

Sample ID	CCV1-070601	Batch ID:	R31947	TestNo:	E310.1	Units:	mg/L
SampType:	CCV	Run ID:	TITRATOR_070601A	Analysis Date:	6/1/2007 2:43:00 PM	Prep Date:	6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	15.9	20.0	0							
Alkalinity, Carbonate (As CaCO3)	86.2	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	102	20.0	100.0	0	102	90	110			

Sample ID	0705270-04D DUP	Batch ID:	R31947	TestNo:	E310.1	Units:	mg/L
SampType:	DUP	Run ID:	TITRATOR_070601A	Analysis Date:	6/1/2007 3:23:00 PM	Prep Date:	6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	66.2	20.0	0	66.43				0.393	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	66.2	20.0	0	66.43				0.393	20	

Qualifiers:

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

CLIENT: Terracon, Inc.
Work Order: 0705242
Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070601A

Sample ID CCV2-070601	Batch ID: R31947	TestNo: E310.1	Units: mg/L
SampType: CCV	Run ID: TITRATOR_070601A	Analysis Date: 6/1/2007 3:29:00 PM	Prep Date: 6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	11.4	20.0	0							
Alkalinity, Carbonate (As CaCO3)	92.5	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	104	20.0	100.0	0	104	90	110			

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: WC_070530A

Sample ID ICV-070530	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µm hos/cm							
SampType: ICV	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 P	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12900	10.0	12880	0	100	95	105			

Sample ID MBLK-070530	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µm hos/cm							
SampType: MBLK	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 P	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	ND	10.0								

Sample ID LCS-070530	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µm hos/cm							
SampType: LCS	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 P	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	1400	10.0	1413	0	99.2	95	105			

Sample ID 0705228-05B DUP	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µm hos/cm							
SampType: DUP	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 P	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	1670	10.0	0	1663				0.360	2	

Sample ID CCV1-070530	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µm hos/cm							
SampType: CCV	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 P	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12800	10.0	12880	0	99.6	95	105			

Sample ID CCV2-070530	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µm hos/cm							
SampType: CCV	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 P	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12700	10.0	12880	0	98.9	95	105			

Sample ID 0705242-07B DUP	Batch ID: CONDW-05/30/07	TestNo: E120.1	Units: µm hos/cm							
SampType: DUP	Run ID: WC_070530A	Analysis Date: 5/30/2007 12:00:00 P	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	7670	10.0	0	7610				0.785	2	

Qualifiers:

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

CLIENT: Terracon, Inc.
Work Order: 0705242
Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: WC_070530A

Sample ID	CCV3-070530	Batch ID:	CONDW-05/30/07	TestNo:	E120.1	Units:	µmhos/cm			
SampType:	CCV	Run ID:	WC_070530A	Analysis Date:	5/30/2007 12:00:00 P	Prep Date:	5/30/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12700	10.0	12880	0	98.5	95	105			

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: WC_070530C

Sample ID	MB-070530	Batch ID:	TDS_W-05/30/07	TestNo:	E160.1	Units:	mg/L
SampType:	MBLK	Run ID:	WC_070530C	Analysis Date:	5/31/2007 8:15:00 AM	Prep Date:	5/30/2007
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit %RPD RPDlimit Qual
Total Dissolved Solids (Residue, Filtera		ND	10.0				

Sample ID	LCS-070530	Batch ID:	TDS_W-05/30/07	TestNo:	E160.1	Units:	mg/L
SampType:	LCS	Run ID:	WC_070530C	Analysis Date:	5/31/2007 8:15:00 AM	Prep Date:	5/30/2007
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit %RPD RPDlimit Qual
Total Dissolved Solids (Residue, Filtera		746	10.0	745.6	0	100	70 126

Sample ID	0705228-05B DUP	Batch ID:	TDS_W-05/30/07	TestNo:	E160.1	Units:	mg/L
SampType:	DUP	Run ID:	WC_070530C	Analysis Date:	5/31/2007 8:15:00 AM	Prep Date:	5/30/2007
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit HighLimit %RPD RPDlimit Qual
Total Dissolved Solids (Residue, Filtera		1110	10.0	0	1096		1.54 5

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705242
 Project: Ballinger-RRC Project

SQL SUMMARY REPORT

TestNo: E300	MDL	SQL
Analyte	mg/L	mg/L
Bromide	0.300	1.00
Chloride	0.300	1.00
Nitrate-N	0.100	0.500
Sulfate	1.00	3.00

TestNo: SW6020	MDL	SQL
Analyte	mg/L	mg/L
Calcium	0.100	0.100
Magnesium	0.100	0.100
Potassium	0.100	0.100
Sodium	0.100	0.100

TestNo: E120.1	MDL	SQL
Analyte	$\mu\text{mhos/cm}$	$\mu\text{mhos/cm}$
Specific Conductance	10.0	10.0

TestNo: E160.1	MDL	SQL
Analyte	mg/L	mg/L
Total Dissolved Solids (Residue, Filt	10.0	10.0

June 11, 2007

Max Majesko
Terracon, Inc.
8901 Carpenter Fwy #100
Dallas, Texas 75247

TEL: (214) 630-1010
FAX (614) 630-7070

Order No.: 0705261

RE: Ballinger-RRC Project

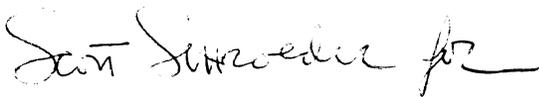
Dear Max Majesko:

DHL Analytical received 7 sample(s) on 5/26/2007 for the analyses presented in the following report.

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

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

Sincerely,



John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-06-TX

TABLE OF CONTENTS

This report for Terracon: Ballinger-RRC Project (DHL Work Order 0705261) contains the following information:

ITEM	Page
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• Laboratory Data Package Signature Page	6
• Laboratory Review Checklist	7-8
• Case Narrative	9
• Work Order Summary	10
• Preparation Dates Report	11-12
• Analytical Dates Report	13-15
• Sample Results	16-22
• QC Summary Report	23-37
• MQL Summary Report	38
• Total Number of Pages	38

June 11, 2007

Approved:


John DuPont

FedEx US Airbill
Express

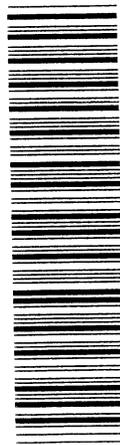
FedEx
Tracking
Number

8577 2377 4712

1 From
Date: 11/11/05
Sender's Name: [Handwritten]
Phone: 208-330-1010
Company: [Handwritten]
Address: [Handwritten]
City: [Handwritten] State: [Handwritten] ZIP: [Handwritten]
Dept./Floor/State/Room: [Handwritten]

2 Your Internal Billing Reference
[Handwritten]

3 To
Recipient's Name: [Handwritten]
Phone: [Handwritten]
Company: [Handwritten]
Recipient's Address: [Handwritten]
We cannot deliver to PO boxes or PO ZIP codes.
Address: [Handwritten]
To request a package be held at a specific FedEx location, print FedEx address here.
City: [Handwritten] State: [Handwritten] ZIP: [Handwritten]
Dept./Floor/State/Room: [Handwritten]



8577 2377 4712



Form ID No. 0200

4a Express Package Service
 FedEx Priority Overnight (Near business morning - Friday, Monday unless SATURDAY Delivery is selected.)
 FedEx Standard Overnight (Earliest next business morning delivery to select locations. * Saturday Delivery NOT available.)
 FedEx Express Saver (Third business day - Saturday Delivery NOT available. Minimum charge: One pound rate.)
 FedEx 2Day (Thursday - Saturday Delivery NOT available.)
 FedEx 2Day Freight (Second business day - Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.)
 FedEx 3Day Freight (Third business day - Saturday Delivery NOT available.)
 FedEx 3Day Freight (Third business day - Saturday Delivery NOT available.)
 FedEx Envelope * (FedEx Pak, FedEx Small Pak, FedEx Tube Pak, and FedEx Sturdy Pak)
 FedEx Tube * (Declared value limit \$500)
 FedEx Box *
 FedEx Other *
6 Special Handling
 SATURDAY Delivery (Not available for Overnight, FedEx First Overnight, Saver, or FedEx 3Day Freight.)
 HOLD Saturday at FedEx Location (Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.)
 HOLD Saturday at FedEx Location (Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.)
 NO (As per attached Shipper's Declaration not required.)
 Yes (Shipper's Declaration required.)
 Dry Ice (Dry Ice 3 UN 1845)
 Cargo Aircraft Only
7 Payment Bill to: Recipient Third Party Credit Card Cash/Check
 Sender's Acct. No. (Section 1 will be billed.)
Total Packages [Handwritten] **Total Weight** \$ [Handwritten] **Total Declared Value** \$ [Handwritten] **Total Charges** Credit Card Auth. [Handwritten]

8 NEW Residential Delivery Signature Options (If you require a signature, check Direct or Indirect.)
 No Signature Required (Anyone at recipient's address may sign for delivery. Fee applies.)
 Direct Signature (Anyone at recipient's address may sign for delivery. Fee applies.)
 Indirect Signature (If no one is available at recipient's address, signature may be obtained at a neighboring address. Fee applies.)
Rev. Date 6/25/04 Form # 1582B-1 © 1994-2005 FedEx - PRINTED IN U.S.A. SR1

Sample Receipt Checklist

Client Name Terracon, Inc.

Date Received: 5/26/2007

Work Order Number 0705261

Received by: DEW

Checklist completed by: 
Signature

5.29.07
Date

Reviewed by _____
Initials Date

Carrier name: FedEx 1day

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping 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? *yes* Checked by *DEW*

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

Client contacted Date contacted: Person contacted

Contacted by: Regarding:

Comments: *Sample - 03A [MW-15] acidified with Nitric acid lot #2745 at login*

Corrective Action

Laboratory Data Package Signature Page

This data package consists of:

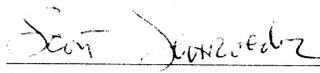
This signature page, the laboratory review checklist, and the following reportable data:

- 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 my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

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


Signature

6-11-7
Date

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: Ballinger RRC Project Date: 6/11/07

Reviewer Name: Carlos Castro Laboratory Work Order: 0705261

Prep Batch Number(s): See Prep Dates Report Run Batch: See Analytical Dates Report

# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	Chain-of-Custody (C-O-C)					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				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, including prep and cleanup steps?	✓				
		3) Were LCSs analyzed at the required frequency?	✓				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
		6) Was the LCSD RPD within QC limits (if applicable)?	✓				
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data					
		1) Were the project/method specified analytes included in the MS and MSD?	✓				
		2) Were MS/MSD analyzed at the appropriate frequency?	✓				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		✓			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?	✓				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
 2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
 3 NA = Not applicable.
 4 NR = Not Reviewed.
 5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: Bellingham - RRC Project

Date: 6/11/07

Reviewer Name: Carlos Castro

Laboratory Work Order: 0705261

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

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

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

3 NA = Not applicable.

4 NR = Not Reviewed.

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

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Lab Order: 0705261

CASE NARRATIVE

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

Method SW6020 - Metals Analysis
Method E300 - Anions Analysis
Method E310.1 - Alkalinity Analysis
Method E120.1 - Specific Conductance
Method E160.1 - TDS Analysis

Exception Report R1-01

Samples were received and log-in performed on 5/26/07. A total of 7 samples were received. Nitric acid was added to the metals fraction for sample MW-15 upon arrival at DHL Analytical. The samples arrived in good condition and were properly packaged.

Exception Report R7-03 & R7-04

For Metals analysis performed on 6/4/07 the matrix spike and matrix spike duplicate recoveries were out of control limits for a few analytes. These are 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 these analytes. No further corrective actions were required and no sample results were adversely affected.

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Lab Order: 0705261

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
0705261-01	MW-11		05/25/07 12:50 PM	5/26/2007
0705261-02	MW-10		05/25/07 01:20 PM	5/26/2007
0705261-03	MW-15		05/25/07 02:10 PM	5/26/2007
0705261-04	MW-5		05/25/07 01:35 PM	5/26/2007
0705261-05	MW-6		05/25/07 08:30 AM	5/26/2007
0705261-06	MW-12		05/25/07 01:50 PM	5/26/2007
0705261-07	MW-9		05/25/07 09:55 AM	5/26/2007

Lab Order: 0705261
Client: Teracon, Inc.
Project: Ballinger-RRC Project

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0705261-01A	MW-11	05/25/07 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-11	05/25/07 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705261-01B	MW-11	05/25/07 12:50 PM	Aqueous	E310.1	Alkalinity	06/01/07 02:11 PM	R31947
	MW-11	05/25/07 12:50 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-11	05/25/07 12:50 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-11	05/25/07 12:50 PM	Aqueous	E120.1	Specific Conductance	06/01/07	CONDW-06/01/07
	MW-11	05/25/07 12:50 PM	Aqueous	E160.1	Total Dissolved Solids	06/01/07 09:50 AM	TDS_W-06/01/07
0705261-02A	MW-10	05/25/07 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-10	05/25/07 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705261-02B	MW-10	05/25/07 01:20 PM	Aqueous	E310.1	Alkalinity	06/01/07 02:26 PM	R31947
	MW-10	05/25/07 01:20 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-10	05/25/07 01:20 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-10	05/25/07 01:20 PM	Aqueous	E120.1	Specific Conductance	06/01/07	CONDW-06/01/07
	MW-10	05/25/07 01:20 PM	Aqueous	E160.1	Total Dissolved Solids	06/01/07 09:50 AM	TDS_W-06/01/07
0705261-03A	MW-15	05/25/07 02:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705261-03B	MW-15	05/25/07 02:10 PM	Aqueous	E310.1	Alkalinity	06/01/07 02:31 PM	R31947
	MW-15	05/25/07 02:10 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-15	05/25/07 02:10 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-15	05/25/07 02:10 PM	Aqueous	E120.1	Specific Conductance	06/01/07	CONDW-06/01/07
	MW-15	05/25/07 02:10 PM	Aqueous	E160.1	Total Dissolved Solids	06/01/07 09:50 AM	TDS_W-06/01/07
0705261-04A	MW-5	05/25/07 01:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-5	05/25/07 01:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705261-04B	MW-5	05/25/07 01:35 PM	Aqueous	E310.1	Alkalinity	06/01/07 02:37 PM	R31947
	MW-5	05/25/07 01:35 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-5	05/25/07 01:35 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-5	05/25/07 01:35 PM	Aqueous	E300	Anions by IC method - Water	05/27/07	R31851
	MW-5	05/25/07 01:35 PM	Aqueous	E120.1	Specific Conductance	06/01/07	CONDW-06/01/07
	MW-5	05/25/07 01:35 PM	Aqueous	E160.1	Total Dissolved Solids	06/01/07 09:50 AM	TDS_W-06/01/07

PREP DATES REPORT

Lab Order: 0705261
 Client: Terracon, Inc.
 Project: Ballinger-RRC Project

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0705261-05A	MW-6	05/25/07 08:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-6	05/25/07 08:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705261-05B	MW-6	05/25/07 08:30 AM	Aqueous	E310.1	Alkalinity	06/01/07 02:51 PM	R31947
	MW-6	05/25/07 08:30 AM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-6	05/25/07 08:30 AM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-6	05/25/07 08:30 AM	Aqueous	E300	Anions by IC method - Water	05/27/07	R31851
	MW-6	05/25/07 08:30 AM	Aqueous	E300	Anions by IC method - Water	05/30/07	R31892A
	MW-6	05/25/07 08:30 AM	Aqueous	E300	Anions by IC method - Water	06/07/07	R32040
	MW-6	05/25/07 08:30 AM	Aqueous	E120.1	Specific Conductance	06/01/07	CONDW-06/01/07
0705261-06A	MW-12	05/25/07 08:30 AM	Aqueous	E160.1	Total Dissolved Solids	06/01/07 09:50 AM	TDS_W-06/01/07
	MW-12	05/25/07 01:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-12	05/25/07 01:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-12	05/25/07 01:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705261-06B	MW-12	05/25/07 01:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-12	05/25/07 01:50 PM	Aqueous	E310.1	Alkalinity	06/01/07 03:00 PM	R31947
	MW-12	05/25/07 01:50 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-12	05/25/07 01:50 PM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-12	05/25/07 01:50 PM	Aqueous	E120.1	Specific Conductance	06/01/07	CONDW-06/01/07
	MW-12	05/25/07 01:50 PM	Aqueous	E160.1	Total Dissolved Solids	06/01/07 09:50 AM	TDS_W-06/01/07
0705261-07A	MW-9	05/25/07 09:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
	MW-9	05/25/07 09:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/07 08:12 AM	26080
0705261-07B	MW-9	05/25/07 09:55 AM	Aqueous	E310.1	Alkalinity	06/01/07 03:06 PM	R31947
	MW-9	05/25/07 09:55 AM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-9	05/25/07 09:55 AM	Aqueous	E300	Anions by IC method - Water	05/26/07	R31851
	MW-9	05/25/07 09:55 AM	Aqueous	E120.1	Specific Conductance	06/01/07	CONDW-06/01/07
	MW-9	05/25/07 09:55 AM	Aqueous	E160.1	Total Dissolved Solids	06/01/07 09:50 AM	TDS_W-06/01/07

Lab Order: 0705261
Client: Terracon, Inc.
Project: Ballinger-RRC Project

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705261-01A	MW-11	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	1	06/04/07 09:46 PM	ICP-MS_070604A
	MW-11	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 07:03 PM	ICP-MS_070604A
0705261-01B	MW-11	Aqueous	E310.1	Alkalinity	R31947	1	06/01/07 02:11 PM	TITRATOR_070601A
	MW-11	Aqueous	E300	Anions by IC method - Water	R31851	1	05/26/07 03:47 PM	IC2_070526A
	MW-11	Aqueous	E300	Anions by IC method - Water	R31851	20	05/26/07 07:42 PM	IC2_070526A
	MW-11	Aqueous	E120.1	Specific Conductance	CONDW-06/01/07	1	06/01/07 09:50 AM	WC_070601A
	MW-11	Aqueous	E160.1	Total Dissolved Solids	TDS_W-06/01/07	1	06/04/07 08:15 AM	WC_070601B
0705261-02A	MW-10	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 08:04 PM	ICP-MS_070604A
	MW-10	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	1	06/05/07 02:02 PM	ICP-MS_070605A
0705261-02B	MW-10	Aqueous	E310.1	Alkalinity	R31947	1	06/01/07 02:26 PM	TITRATOR_070601A
	MW-10	Aqueous	E300	Anions by IC method - Water	R31851	1	05/26/07 04:31 PM	IC2_070526A
	MW-10	Aqueous	E300	Anions by IC method - Water	R31851	50	05/26/07 07:57 PM	IC2_070526A
	MW-10	Aqueous	E120.1	Specific Conductance	CONDW-06/01/07	1	06/01/07 09:50 AM	WC_070601A
	MW-10	Aqueous	E160.1	Total Dissolved Solids	TDS_W-06/01/07	1	06/04/07 08:15 AM	WC_070601B
0705261-03A	MW-15	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 08:08 PM	ICP-MS_070604A
0705261-03B	MW-15	Aqueous	E310.1	Alkalinity	R31947	1	06/01/07 02:31 PM	TITRATOR_070601A
	MW-15	Aqueous	E300	Anions by IC method - Water	R31851	1	05/26/07 05:01 PM	IC2_070526A
	MW-15	Aqueous	E300	Anions by IC method - Water	R31851	50	05/26/07 08:11 PM	IC2_070526A
	MW-15	Aqueous	E120.1	Specific Conductance	CONDW-06/01/07	1	06/01/07 09:50 AM	WC_070601A
	MW-15	Aqueous	E160.1	Total Dissolved Solids	TDS_W-06/01/07	1	06/04/07 08:15 AM	WC_070601B
0705261-04A	MW-5	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	1000	06/04/07 08:12 PM	ICP-MS_070604A
	MW-5	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	1	06/05/07 01:18 PM	ICP-MS_070605A
0705261-04B	MW-5	Aqueous	E310.1	Alkalinity	R31947	1	06/01/07 02:37 PM	TITRATOR_070601A
	MW-5	Aqueous	E300	Anions by IC method - Water	R31851	1	05/26/07 05:15 PM	IC2_070526A
	MW-5	Aqueous	E300	Anions by IC method - Water	R31851	500	05/26/07 08:26 PM	IC2_070526A

Lab Order: 0705261
 Client: Terracon, Inc.
 Project: Ballinger-RRC Project

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705261-04B	MW-5	Aqueous	E300	Anions by IC method - Water	R31851	50	05/27/07 01:34 AM	IC2_070526A
	MW-5	Aqueous	E120.1	Specific Conductance	CONDW-06/01/0	2	06/01/07 09:50 AM	WC_070601A
	MW-5	Aqueous	E160.1	Total Dissolved Solids	TDS_W-06/01/07	1	06/04/07 08:15 AM	WC_070601B
0705261-05A	MW-6	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 08:17 PM	ICP-MS_070604A
	MW-6	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	1000	06/05/07 01:22 PM	ICP-MS_070605A
0705261-05B	MW-6	Aqueous	E310.1	Alkalinity	R31947	1	06/01/07 02:51 PM	TITRATOR_070601A
	MW-6	Aqueous	E300	Anions by IC method - Water	R32040	500	06/07/07 11:30 AM	IC_070607A
	MW-6	Aqueous	E300	Anions by IC method - Water	R31851	1	05/26/07 05:30 PM	IC2_070526A
	MW-6	Aqueous	E300	Anions by IC method - Water	R31851	500	05/26/07 08:41 PM	IC2_070526A
	MW-6	Aqueous	E300	Anions by IC method - Water	R31851	50	05/27/07 01:49 AM	IC2_070526A
	MW-6	Aqueous	E300	Anions by IC method - Water	R31892A	2	05/30/07 03:48 PM	IC2_070530A
	MW-6	Aqueous	E120.1	Specific Conductance	CONDW-06/01/0	5	06/01/07 09:50 AM	WC_070601A
0705261-06A	MW-6	Aqueous	E160.1	Total Dissolved Solids	TDS_W-06/01/07	1	06/04/07 08:15 AM	WC_070601B
	MW-12	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	1000	06/05/07 01:26 PM	ICP-MS_070605A
	MW-12	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	1	06/05/07 02:06 PM	ICP-MS_070605A
	MW-12	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 08:21 PM	ICP-MS_070604A
	MW-12	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	100	06/05/07 03:35 PM	ICP-MS_070605A
0705261-06B	MW-12	Aqueous	E310.1	Alkalinity	R31947	1	06/01/07 03:00 PM	TITRATOR_070601A
	MW-12	Aqueous	E300	Anions by IC method - Water	R31851	1	05/26/07 05:45 PM	IC2_070526A
	MW-12	Aqueous	E300	Anions by IC method - Water	R31851	50	05/26/07 08:55 PM	IC2_070526A
	MW-12	Aqueous	E120.1	Specific Conductance	CONDW-06/01/0	1	06/01/07 09:50 AM	WC_070601A
	MW-12	Aqueous	E160.1	Total Dissolved Solids	TDS_W-06/01/07	1	06/04/07 08:15 AM	WC_070601B
0705261-07A	MW-9	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	50	06/04/07 08:45 PM	ICP-MS_070604A
	MW-9	Aqueous	SW6020	Trace Metals: ICP-MS - Water	26080	1000	06/05/07 01:30 PM	ICP-MS_070605A
0705261-07B	MW-9	Aqueous	E310.1	Alkalinity	R31947	1	06/01/07 03:06 PM	TITRATOR_070601A
	MW-9	Aqueous	E300	Anions by IC method - Water	R31851	1	05/26/07 05:59 PM	IC2_070526A

ANALYTICAL DATES REPORT

Lab Order: 0705261
Client: Terracon, Inc.
Project: Ballinger-RRR Project

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0705261-07B	MW-9	Aqueous	E300	Anions by IC method - Water	R31851	200	05/26/07 09:10 PM	IC2_070526A
	MW-9	Aqueous	E120.1	Specific Conductance	CONDW-06/01/0	2	06/01/07 09:50 AM	WC_070601A
	MW-9	Aqueous	E160.1	Total Dissolved Solids	TDS_W-06/01/07	1	06/04/07 08:15 AM	WC_070601B

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705261

Client Sample ID: MW-11
 Lab ID: 0705261-01
 Collection Date: 05/25/07 12:50 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	258	5.00	5.00		mg/L	50	06/04/07 07:03 PM
Magnesium	69.6	5.00	5.00		mg/L	50	06/04/07 07:03 PM
Potassium	6.31	0.100	0.100		mg/L	1	06/04/07 09:46 PM
Sodium	157	5.00	5.00		mg/L	50	06/04/07 07:03 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: DEW			
Bromide	0.669	0.300	1.00	J	mg/L	1	05/26/07 03:47 PM
Chloride	516	6.00	20.0		mg/L	20	05/26/07 07:42 PM
Nitrate-N	ND	0.100	0.500		mg/L	1	05/26/07 03:47 PM
Sulfate	229	20.0	60.0		mg/L	20	05/26/07 07:42 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	321	10.0	20.0		mg/L	1	06/01/07 02:11 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:11 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:11 PM
Alkalinity, Total (As CaCO3)	321	10.0	20.0		mg/L	1	06/01/07 02:11 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	2380	10.0	10.0		µmhos/cm	1	06/01/07 09:50 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	1480	10.0	10.0		mg/L	1	06/04/07 08:15 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705261

Client Sample ID: MW-10
 Lab ID: 0705261-02
 Collection Date: 05/25/07 01:20 PM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	193	5.00	5.00		mg/L	50	06/04/07 08:04 PM
Magnesium	19.1	5.00	5.00		mg/L	50	06/04/07 08:04 PM
Potassium	1.44	0.100	0.100		mg/L	1	06/05/07 02:02 PM
Sodium	270	5.00	5.00		mg/L	50	06/04/07 08:04 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: DEW			
Bromide	2.30	0.300	1.00		mg/L	1	05/26/07 04:31 PM
Chloride	670	15.0	50.0		mg/L	50	05/26/07 07:57 PM
Nitrate-N	0.345	0.100	0.500	J	mg/L	1	05/26/07 04:31 PM
Sulfate	41.2	1.00	3.00		mg/L	1	05/26/07 04:31 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	344	10.0	20.0		mg/L	1	06/01/07 02:26 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:26 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:26 PM
Alkalinity, Total (As CaCO3)	344	10.0	20.0		mg/L	1	06/01/07 02:26 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	2400	10.0	10.0		µmhos/cm	1	06/01/07 09:50 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	1450	10.0	10.0		mg/L	1	06/04/07 08:15 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705261

Client Sample ID: MW-15
Lab ID: 0705261-03
Collection Date: 05/25/07 02:10 PM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020					Analyst: SCS
Calcium	234	5.00	5.00		mg/L	50	06/04/07 08:08 PM
Magnesium	146	5.00	5.00		mg/L	50	06/04/07 08:08 PM
Potassium	8.04	5.00	5.00		mg/L	50	06/04/07 08:08 PM
Sodium	375	5.00	5.00		mg/L	50	06/04/07 08:08 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: DEW
Bromide	0.964	0.300	1.00	J	mg/L	1	05/26/07 05:01 PM
Chloride	484	15.0	50.0		mg/L	50	05/26/07 08:11 PM
Nitrate-N	ND	0.100	0.500		mg/L	1	05/26/07 05:01 PM
Sulfate	1280	50.0	150		mg/L	50	05/26/07 08:11 PM
ALKALINITY		E310.1					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO3)	239	10.0	20.0		mg/L	1	06/01/07 02:31 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:31 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:31 PM
Alkalinity, Total (As CaCO3)	239	10.0	20.0		mg/L	1	06/01/07 02:31 PM
SPECIFIC CONDUCTANCE		E120.1					Analyst: JBC
Specific Conductance	3490	10.0	10.0		µmhos/cm	1	06/01/07 09:50 AM
TOTAL DISSOLVED SOLIDS		E160.1					Analyst: JBC
Total Dissolved Solids (Residue, Filterable)	2690	10.0	10.0		mg/L	1	06/04/07 08:15 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 MQs 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: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705261

Client Sample ID: MW-5
Lab ID: 0705261-04
Collection Date: 05/25/07 01:35 PM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	1040	100	100		mg/L	1000	06/05/07 01:18 PM
Magnesium	455	5.00	5.00		mg/L	50	06/04/07 08:12 PM
Potassium	27.3	5.00	5.00		mg/L	50	06/04/07 08:12 PM
Sodium	4890	100	100		mg/L	1000	06/05/07 01:18 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: DEW			
Bromide	13.0	0.300	1.00		mg/L	1	05/26/07 05:15 PM
Chloride	10500	150	500		mg/L	500	05/26/07 08:26 PM
Nitrate-N	1.15	0.100	0.500		mg/L	1	05/26/07 05:15 PM
Sulfate	839	50.0	150		mg/L	50	05/27/07 01:34 AM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	246	10.0	20.0		mg/L	1	06/01/07 02:37 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:37 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:37 PM
Alkalinity, Total (As CaCO3)	246	10.0	20.0		mg/L	1	06/01/07 02:37 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	25400	20.0	20.0		µmhos/cm	2	06/01/07 09:50 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	17000	10.0	10.0		mg/L	1	06/04/07 08:15 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 MPLs 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: 11-Jun-07

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705261

Client Sample ID: MW-6
Lab ID: 0705261-05
Collection Date: 05/25/07 08:30 AM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020			Analyst: SCS		
Calcium	1360	100	100		mg/L	1000	06/05/07 01:22 PM
Magnesium	303	5.00	5.00		mg/L	50	06/04/07 08:17 PM
Potassium	25.6	5.00	5.00		mg/L	50	06/04/07 08:17 PM
Sodium	4840	100	100		mg/L	1000	06/05/07 01:22 PM
ANIONS BY IC METHOD - WATER		E300			Analyst: DEW		
Bromide	14.3	0.600	2.00		mg/L	2	05/30/07 03:48 PM
Chloride	10600	150	500		mg/L	500	06/07/07 11:30 AM
Nitrate-N	6.00	0.100	0.500		mg/L	1	05/26/07 05:30 PM
Sulfate	785	50.0	150		mg/L	50	05/27/07 01:49 AM
ALKALINITY		E310.1			Analyst: JBC		
Alkalinity, Bicarbonate (As CaCO3)	280	10.0	20.0		mg/L	1	06/01/07 02:51 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:51 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 02:51 PM
Alkalinity, Total (As CaCO3)	280	10.0	20.0		mg/L	1	06/01/07 02:51 PM
SPECIFIC CONDUCTANCE		E120.1			Analyst: JBC		
Specific Conductance	29300	50.0	50.0		µmhos/cm	5	06/01/07 09:50 AM
TOTAL DISSOLVED SOLIDS		E160.1			Analyst: JBC		
Total Dissolved Solids (Residue, Filterable)	20300	10.0	10.0		mg/L	1	06/04/07 08:15 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

CLIENT: Terracon, Inc.
Project: Ballinger-RRC Project
Project No: 94057272B
Lab Order: 0705261

Client Sample ID: MW-12
Lab ID: 0705261-06
Collection Date: 05/25/07 01:50 PM
Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	223	10.0	10.0		mg/L	100	06/05/07 03:35 PM
Magnesium	62.9	10.0	10.0		mg/L	100	06/05/07 03:35 PM
Potassium	3.79	0.100	0.100		mg/L	1	06/05/07 02:06 PM
Sodium	483	10.0	10.0		mg/L	100	06/05/07 03:35 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: DEW			
Bromide	3.42	0.300	1.00		mg/L	1	05/26/07 05:45 PM
Chloride	1000	15.0	50.0		mg/L	50	05/26/07 08:55 PM
Nitrate-N	1.74	0.100	0.500		mg/L	1	05/26/07 05:45 PM
Sulfate	91.7	1.00	3.00		mg/L	1	05/26/07 05:45 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	397	10.0	20.0		mg/L	1	06/01/07 03:00 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 03:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 03:00 PM
Alkalinity, Total (As CaCO3)	397	10.0	20.0		mg/L	1	06/01/07 03:00 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	3450	10.0	10.0		µmhos/cm	1	06/01/07 09:50 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	2100	10.0	10.0		mg/L	1	06/04/07 08:15 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

DHL Analytical

Date: 11-Jun-07

CLIENT: Terracon, Inc.
 Project: Ballinger-RRC Project
 Project No: 94057272B
 Lab Order: 0705261

Client Sample ID: MW-9
 Lab ID: 0705261-07
 Collection Date: 05/25/07 09:55 AM
 Matrix: AQUEOUS

Analyses	Result	SQL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020		Analyst: SCS			
Calcium	1350	100	100		mg/L	1000	06/05/07 01:30 PM
Magnesium	612	100	100		mg/L	1000	06/05/07 01:30 PM
Potassium	29.7	5.00	5.00		mg/L	50	06/04/07 08:45 PM
Sodium	1880	100	100		mg/L	1000	06/05/07 01:30 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: DEW			
Bromide	7.21	0.300	1.00		mg/L	1	05/26/07 05:59 PM
Chloride	6280	60.0	200		mg/L	200	05/26/07 09:10 PM
Nitrate-N	ND	0.100	0.500		mg/L	1	05/26/07 05:59 PM
Sulfate	1520	200	600		mg/L	200	05/26/07 09:10 PM
ALKALINITY		E310.1		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO3)	213	10.0	20.0		mg/L	1	06/01/07 03:06 PM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 03:06 PM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	06/01/07 03:06 PM
Alkalinity, Total (As CaCO3)	213	10.0	20.0		mg/L	1	06/01/07 03:06 PM
SPECIFIC CONDUCTANCE		E120.1		Analyst: JBC			
Specific Conductance	17300	20.0	20.0		µmhos/cm	2	06/01/07 09:50 AM
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: JBC			
Total Dissolved Solids (Residue, Filterable)	12500	10.0	10.0		mg/L	1	06/04/07 08:15 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 MPLs 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: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070604A

Sample ID	MB-26080	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	MBLK	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 6:42:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	0.100								
Magnesium	ND	0.100								
Potassium	ND	0.100								
Sodium	ND	0.100								

Sample ID	LCS-26080	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	LCS	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 6:46:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.92	0.100	5.00	0	98.3	80	120			
Magnesium	5.00	0.100	5.00	0	100	80	120			
Potassium	4.77	0.100	5.00	0	95.4	80	120			
Sodium	5.04	0.100	5.00	0	101	80	120			

Sample ID	LCSD-26080	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 6:50:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.05	0.100	5.00	0	101	80	120	2.59	15	
Magnesium	4.88	0.100	5.00	0	97.6	80	120	2.49	15	
Potassium	4.74	0.100	5.00	0	94.9	80	120	0.588	15	
Sodium	4.93	0.100	5.00	0	98.5	80	120	2.33	15	

Sample ID	0705261-01A SD	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 7:07:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	252	25.0	0	258				2.33	10	
Magnesium	74.3	25.0	0	69.6				6.43	10	
Sodium	161	25.0	0	157				2.68	10	

Sample ID	0705261-01A MS	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 7:11:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	255	5.00	5.00	258	-56.0	80	120			S
Magnesium	72.6	5.00	5.00	69.6	60.0	80	120			S
Sodium	163	5.00	5.00	157	108	80	120			

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

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070604A

Sample ID	0705261-01A MSD	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 7:15:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	254	5.00	5.00	258	-71.0	80	120	0.294	15	S
Magnesium	73.5	5.00	5.00	69.6	77.0	80	120	1.16	15	S
Sodium	161	5.00	5.00	157	67.0	80	120	1.27	15	S

Sample ID	0705261-01A PDS	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 7:19:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	492	5.00	250	258	93.7	75	125			
Magnesium	315	5.00	250	69.6	98.0	75	125			
Sodium	399	5.00	250	157	96.9	75	125			

Sample ID	0705261-01A SD	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 9:50:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	6.20	0.500	0	6.31				1.71	10	

Sample ID	0705261-01A MS	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 9:54:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	10.9	0.100	5.00	6.31	92.4	80	120			

Sample ID	0705261-01A MSD	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 9:58:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	11.0	0.100	5.00	6.31	94.2	80	120	0.820	15	

Sample ID	0705261-01A PDS	Batch ID:	26080	TestNo:	SW6020	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 10:02:00 PM	Prep Date:	5/31/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	10.6	0.100	5.00	6.31	85.4	75	125			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070604A

Sample ID	ICV2-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 2:38:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.56	0.100	2.50	0	102	90	110			
Magnesium	2.58	0.100	2.50	0	103	90	110			
Potassium	2.53	0.100	2.50	0	101	90	110			
Sodium	2.60	0.100	2.50	0	104	90	110			

Sample ID	CCV6-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 6:27:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.74	0.100	5.00	0	94.8	90	110			
Magnesium	4.85	0.100	5.00	0	97.1	90	110			
Potassium	4.73	0.100	5.00	0	94.6	90	110			
Sodium	5.12	0.100	5.00	0	102	90	110			

Sample ID	CCV7-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 7:31:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.09	0.100	5.00	0	102	90	110			
Magnesium	5.28	0.100	5.00	0	106	90	110			
Potassium	5.07	0.100	5.00	0	101	90	110			
Sodium	5.36	0.100	5.00	0	107	90	110			

Sample ID	CCV8-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 8:33:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.14	0.100	5.00	0	103	90	110			
Magnesium	5.25	0.100	5.00	0	105	90	110			
Potassium	5.08	0.100	5.00	0	102	90	110			
Sodium	5.35	0.100	5.00	0	107	90	110			

Sample ID	CCV9-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 9:34:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.03	0.100	5.00	0	101	90	110			

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

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070604A

Sample ID	CCV10-070604	Batch ID:	R31971	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070604A	Analysis Date:	6/4/2007 10:18:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.14	0.100	5.00	0	103	90	110			

Qualifiers:	B Analyte detected in the associated Method Blank J Analyte detected between MDL and RL N Parameter not NELAC certified R RPD outside accepted control limits S Spike Recovery outside control limits	DF Dilution Factor MDL Method Detection Limit ND Not Detected at the Method Detection L RL Reporting Limit J Analyte detected between SQL and RL
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CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS_070605A

Sample ID	ICV1-070605	Batch ID:	R32000	TestNo:	SW6020	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS_070605A	Analysis Date:	6/5/2007 12:38:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.60	0.100	2.50	0	104	90	110			
Magnesium	2.53	0.100	2.50	0	101	90	110			
Potassium	2.55	0.100	2.50	0	102	90	110			
Sodium	2.62	0.100	2.50	0	105	90	110			

Sample ID	CCV1-070605	Batch ID:	R32000	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070605A	Analysis Date:	6/5/2007 1:42:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.17	0.100	5.00	0	103	90	110			
Magnesium	5.19	0.100	5.00	0	104	90	110			
Potassium	5.18	0.100	5.00	0	104	90	110			
Sodium	5.16	0.100	5.00	0	103	90	110			

Sample ID	CCV2-070605	Batch ID:	R32000	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070605A	Analysis Date:	6/5/2007 2:18:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.16	0.100	5.00	0	103	90	110			
Magnesium	5.25	0.100	5.00	0	105	90	110			
Potassium	5.07	0.100	5.00	0	101	90	110			
Sodium	5.47	0.100	5.00	0	109	90	110			

Sample ID	CCV3-070605	Batch ID:	R32000	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS_070605A	Analysis Date:	6/5/2007 3:44:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.66	0.100	5.00	0	93.2	90	110			
Magnesium	4.79	0.100	5.00	0	95.8	90	110			
Sodium	4.85	0.100	5.00	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 Detection Limit
N	Parameter not NELAC certified	ND	Not Detected at the Method Detection L
R	RPD outside accepted control limits	RL	Reporting Limit
S	Spike Recovery outside control limits	J	Analyte detected between SQL and RL

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC_070607A

Sample ID ICV-070607	Batch ID: R32040	TestNo: E300	Units: mg/L							
SampType: ICV	Run ID: IC_070607A	Analysis Date: 6/7/2007 9:19:45 AM	Prep Date: 6/7/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	22.6	1.00	25.00	0	90.4	90	110			

Sample ID MB-070607	Batch ID: R32040	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC_070607A	Analysis Date: 6/7/2007 9:43:20 AM	Prep Date: 6/7/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.00								

Sample ID LCS-070607	Batch ID: R32040	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC_070607A	Analysis Date: 6/7/2007 9:59:03 AM	Prep Date: 6/7/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.15	1.00	10.00	0	91.5	90	110			

Sample ID LCSD-070607	Batch ID: R32040	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC_070607A	Analysis Date: 6/7/2007 10:14:45 AM	Prep Date: 6/7/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.25	1.00	10.00	0	92.5	90	110	1.09	20	

Sample ID CCV1-070607	Batch ID: R32040	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC_070607A	Analysis Date: 6/7/2007 12:27:17 PM	Prep Date: 6/7/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.53	1.00	10.00	0	95.3	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070526A

Sample ID	ICV-070526	Batch ID:	R31851	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 2:05:08 PM	Prep Date:	5/26/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	51.0	1.00	50.00	0	102	90	110			
Chloride	25.2	1.00	25.00	0	101	90	110			
Nitrate-N	12.9	0.500	12.50	0	104	90	110			
Sulfate	79.0	3.00	75.00	0	105	90	110			

Sample ID	LCS-070526	Batch ID:	R31851	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 2:19:47 PM	Prep Date:	5/26/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.1	1.00	20.00	0	100	90	110			
Chloride	10.1	1.00	10.00	0	101	90	110			
Nitrate-N	5.08	0.500	5.000	0	102	90	110			
Sulfate	31.3	3.00	30.00	0	104	90	110			

Sample ID	LCSD-070526	Batch ID:	R31851	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 2:34:28 PM	Prep Date:	5/26/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.1	1.00	20.00	0	101	90	110	0.0866	20	
Chloride	10.0	1.00	10.00	0	100	90	110	0.530	20	
Nitrate-N	5.08	0.500	5.000	0	102	90	110	0.0315	20	
Sulfate	31.3	3.00	30.00	0	104	90	110	0.170	20	

Sample ID	MB-070526	Batch ID:	R31851	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 2:49:08 PM	Prep Date:	5/26/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	1.00								
Chloride	ND	1.00								
Nitrate-N	ND	0.500								
Sulfate	ND	3.00								

Sample ID	0705261-01BMS	Batch ID:	R31851	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 4:02:31 PM	Prep Date:	5/26/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.2	1.00	20.00	0.4013	93.9	90	110			
Nitrate-N	4.80	0.500	5.000	0	96.0	90	110			

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

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070526A

Sample ID	0705261-01BMSD	Batch ID:	R31851	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 4:17:11 PM	Prep Date:	5/26/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	18.9	1.00	20.00	0.4013	92.5	90	110	1.48	20	
Nitrate-N	4.72	0.500	5.000	0	94.5	90	110	1.65	20	

Sample ID	CCV1-070526	Batch ID:	R31851	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 4:46:32 PM	Prep Date:	5/26/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.2	1.00	20.00	0	101	90	110			
Chloride	10.1	1.00	10.00	0	101	90	110			
Nitrate-N	5.09	0.500	5.000	0	102	90	110			
Sulfate	31.5	3.00	30.00	0	105	90	110			

Sample ID	CCV2-070526	Batch ID:	R31851	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 7:27:55 PM	Prep Date:	5/26/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.3	1.00	20.00	0	102	90	110			
Chloride	10.3	1.00	10.00	0	103	90	110			
Nitrate-N	5.13	0.500	5.000	0	103	90	110			
Sulfate	31.8	3.00	30.00	0	106	90	110			

Sample ID	0705261-01BMS	Batch ID:	R31851	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 9:25:18 PM	Prep Date:	5/26/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	505	20.0	200.0	309.5	97.7	90	110			
Sulfate	773	60.0	600.0	137.5	106	90	110			

Sample ID	0705261-01BMSD	Batch ID:	R31851	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 9:39:58 PM	Prep Date:	5/26/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	500	20.0	200.0	309.5	95.2	90	110	1.02	20	
Sulfate	769	60.0	600.0	137.5	105	90	110	0.477	20	

Sample ID	CCV3-070526	Batch ID:	R31851	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 10:09:19 P	Prep Date:	5/26/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070526A

Sample ID	CCV3-070526	Batch ID:	R31851	TestNo:	E300	Units:	mg/L				
SampType:	CCV	Run ID:	IC2_070526A	Analysis Date:	5/26/2007 10:09:19 P	Prep Date:	5/26/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate		31.7	3.00	30.00	0	106	90	110			

Sample ID	CCV4-070526	Batch ID:	R31851	TestNo:	E300	Units:	mg/L				
SampType:	CCV	Run ID:	IC2_070526A	Analysis Date:	5/27/2007 12:50:44 A	Prep Date:	5/27/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate		31.5	3.00	30.00	0	105	90	110			

Sample ID	CCV5-070526	Batch ID:	R31851	TestNo:	E300	Units:	mg/L				
SampType:	CCV	Run ID:	IC2_070526A	Analysis Date:	5/27/2007 2:18:47 AM	Prep Date:	5/27/2007				
Analyte		Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Sulfate		31.6	3.00	30.00	0	105	90	110			

Qualifiers: B Analyte detected in the associated Method Blank J Analyte detected between MDL and RL N Parameter not NELAC certified R RPD outside accepted control limits S Spike Recovery outside control limits	DF Dilution Factor MDL Method Detection Limit ND Not Detected at the Method Detection L RL Reporting Limit J Analyte detected between SQL and RL
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CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070530A

Sample ID ICV-070530	Batch ID: R31892	TestNo: E300	Units: mg/L							
SampType: ICV	Run ID: IC2_070530A	Analysis Date: 5/30/2007 9:27:04 AM	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	49.0	1.00	50.00	0	98.0	90	110			

Sample ID CCV1-070530	Batch ID: R31892	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070530A	Analysis Date: 5/30/2007 12:08:27 P	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.3	1.00	20.00	0	102	90	110			

Sample ID CCV2-070530	Batch ID: R31892	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070530A	Analysis Date: 5/30/2007 2:35:11 PM	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.3	1.00	20.00	0	102	90	110			

Sample ID CCV3-070530	Batch ID: R31892	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_070530A	Analysis Date: 5/30/2007 5:30:10 PM	Prep Date: 5/30/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.5	1.00	20.00	0	102	90	110			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_070530A

Sample ID	LCS-070530A	Batch ID:	R31892A	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC2_070530A	Analysis Date:	5/30/2007 9:41:44 AM	Prep Date:	5/30/2007

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

Sample ID	LCSD-070530A	Batch ID:	R31892A	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC2_070530A	Analysis Date:	5/30/2007 9:56:24 AM	Prep Date:	5/30/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.3	1.00	20.00	0	102	90	110	0.333	20	

Sample ID	MB-070530A	Batch ID:	R31892A	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC2_070530A	Analysis Date:	5/30/2007 10:11:05 A	Prep Date:	5/30/2007

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

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070601A

Sample ID	ICV-070601	Batch ID:	R31947	TestNo:	E310.1	Units:	mg/L
SampType:	ICV	Run ID:	TITRATOR_070601A	Analysis Date:	6/1/2007 1:01:00 PM	Prep Date:	6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	10.5	20.0	0							
Alkalinity, Carbonate (As CaCO3)	90.6	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	101	20.0	100.0	0	101	98	102			

Sample ID	LCS-070601	Batch ID:	R31947	TestNo:	E310.1	Units:	mg/L
SampType:	LCS	Run ID:	TITRATOR_070601A	Analysis Date:	6/1/2007 1:05:00 PM	Prep Date:	6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	53.3	20.0	50.00	0	107	74	129			

Sample ID	0705261-01B DUP	Batch ID:	R31947	TestNo:	E310.1	Units:	mg/L
SampType:	DUP	Run ID:	TITRATOR_070601A	Analysis Date:	6/1/2007 2:18:00 PM	Prep Date:	6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	321	20.0	0	320.9				0.0968	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	321	20.0	0	320.9				0.0968	20	

Sample ID	CCV1-070601	Batch ID:	R31947	TestNo:	E310.1	Units:	mg/L
SampType:	CCV	Run ID:	TITRATOR_070601A	Analysis Date:	6/1/2007 2:43:00 PM	Prep Date:	6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	15.9	20.0	0							
Alkalinity, Carbonate (As CaCO3)	86.2	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	102	20.0	100.0	0	102	90	110			

Sample ID	0705270-04D DUP	Batch ID:	R31947	TestNo:	E310.1	Units:	mg/L
SampType:	DUP	Run ID:	TITRATOR_070601A	Analysis Date:	6/1/2007 3:23:00 PM	Prep Date:	6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	66.2	20.0	0	66.43				0.393	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	66.2	20.0	0	66.43				0.393	20	

Qualifiers:

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

CLIENT: Terracon, Inc.
Work Order: 0705261
Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_070601A

Sample ID	CCV2-070601	Batch ID:	R31947	TestNo:	E310.1	Units:	mg/L			
SampType:	CCV	Run ID:	TITRATOR_070601A	Analysis Date:	6/1/2007 3:29:00 PM	Prep Date:	6/1/2007			
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	11.4	20.0	0							
Alkalinity, Carbonate (As CaCO3)	92.5	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	104	20.0	100.0	0	104	90	110			

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

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: WC_070601A

Sample ID ICV-070601	Batch ID: CONDW-06/01/07	TestNo: E120.1	Units: µmhos/cm							
SampType: ICV	Run ID: WC_070601A	Analysis Date: 6/1/2007 9:50:00 AM	Prep Date: 6/1/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12800	10.0	12880	0	99.7	95	105			

Sample ID MBLK-070601	Batch ID: CONDW-06/01/07	TestNo: E120.1	Units: µmhos/cm							
SampType: MBLK	Run ID: WC_070601A	Analysis Date: 6/1/2007 9:50:00 AM	Prep Date: 6/1/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	ND	10.0								

Sample ID LCS-070601	Batch ID: CONDW-06/01/07	TestNo: E120.1	Units: µmhos/cm							
SampType: LCS	Run ID: WC_070601A	Analysis Date: 6/1/2007 9:50:00 AM	Prep Date: 6/1/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	1360	10.0	1413	0	96.0	95	105			

Sample ID 0705261-01B DUP	Batch ID: CONDW-06/01/07	TestNo: E120.1	Units: µmhos/cm							
SampType: DUP	Run ID: WC_070601A	Analysis Date: 6/1/2007 9:50:00 AM	Prep Date: 6/1/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	2390	10.0	0	2380				0.419	2	

Sample ID CCV1-070601	Batch ID: CONDW-06/01/07	TestNo: E120.1	Units: µmhos/cm							
SampType: CCV	Run ID: WC_070601A	Analysis Date: 6/1/2007 9:50:00 AM	Prep Date: 6/1/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12700	10.0	12880	0	98.8	95	105			

Sample ID 0705270-04D DUP	Batch ID: CONDW-06/01/07	TestNo: E120.1	Units: µmhos/cm							
SampType: DUP	Run ID: WC_070601A	Analysis Date: 6/1/2007 9:50:00 AM	Prep Date: 6/1/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	426	10.0	0	427.0				0.234	2	

Sample ID CCV2-070601	Batch ID: CONDW-06/01/07	TestNo: E120.1	Units: µmhos/cm							
SampType: CCV	Run ID: WC_070601A	Analysis Date: 6/1/2007 9:50:00 AM	Prep Date: 6/1/2007							
Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Specific Conductance	12600	10.0	12880	0	98.1	95	105			

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

ANALYTICAL QC SUMMARY REPORT

RunID: WC_070601B

Sample ID MB-070601	Batch ID: TDS_W-06/01/07	TestNo: E160.1	Units: mg/L
SampType: MBLK	Run ID: WC_070601B	Analysis Date: 6/4/2007 8:15:00 AM	Prep Date: 6/1/2007

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

Sample ID LCS-070601	Batch ID: TDS_W-06/01/07	TestNo: E160.1	Units: mg/L
SampType: LCS	Run ID: WC_070601B	Analysis Date: 6/4/2007 8:15:00 AM	Prep Date: 6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	726	10.0	745.6	0	97.4	70	126			

Sample ID 0705261-01B DUP	Batch ID: TDS_W-06/01/07	TestNo: E160.1	Units: mg/L
SampType: DUP	Run ID: WC_070601B	Analysis Date: 6/4/2007 8:15:00 AM	Prep Date: 6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1400	10.0	0	1477				5.00	5	

Sample ID 0705288-03C DUP	Batch ID: TDS_W-06/01/07	TestNo: E160.1	Units: mg/L
SampType: DUP	Run ID: WC_070601B	Analysis Date: 6/4/2007 8:15:00 AM	Prep Date: 6/1/2007

Analyte	Result	RL	SPK value	Ref Val	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1460	10.0	0	1454				0.206	5	

Qualifiers:

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

CLIENT: Terracon, Inc.
 Work Order: 0705261
 Project: Ballinger-RRC Project

MQL SUMMARY REPORT

TestNo: E300	MDL	MQL
Analyte	mg/L	mg/L
Bromide	0.300	1.00
Chloride	0.300	1.00
Nitrate-N	0.100	0.500
Sulfate	1.00	3.00

TestNo: SW6020	MDL	MQL
Analyte	mg/L	mg/L
Calcium	0.100	0.100
Magnesium	0.100	0.100
Potassium	0.100	0.100
Sodium	0.100	0.100

TestNo: E120.1	MDL	MQL
Analyte	$\mu\text{mhos/cm}$	$\mu\text{mhos/cm}$
Specific Conductance	10.0	10.0

TestNo: E160.1	MDL	MQL
Analyte	mg/L	mg/L
Total Dissolved Solids (Residue, Filt	10.0	10.0

CLIENT: Terracon, Inc.
Work Order: 0705208
Project: Ballinger-RRC Project

MQL SUMMARY REPORT

TestNo: E300	MDL	MQL
Analyte	mg/L	mg/L
Bromide	0.300	1.00
Chloride	0.300	1.00
Nitrate-N	0.100	0.500
Sulfate	1.00	3.00

TestNo: SW6020	MDL	MQL
Analyte	mg/L	mg/L
Calcium	0.100	0.100
Magnesium	0.100	0.100
Potassium	0.100	0.100
Sodium	0.100	0.100

TestNo: E120.1	MDL	MQL
Analyte	µmhos/cm	µmhos/cm
Specific Conductance	10.0	10.0

TestNo: E160.1	MDL	MQL
Analyte	mg/L	mg/L
Total Dissolved Solids (Residue, Filt	10.0	10.0

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

Limited Site Investigation
Ballinger Seep
Ballinger, Runnels County, Texas
Project No. 94057272B
August 28, 2007



APPENDIX E

Calculation of Seep Quantity Slug Test Data

Determination of Quantity of Upper Seep Ballinger Seep Ballinger, Runnels County, Texas

Groundwater Seepage Velocity

$$V = \frac{Ki}{n}$$

V = seepage velocity (groundwater)
 K = hydraulic conductivity
 i = hydraulic gradient
 n = effective porosity

Monitor Well	Test Date	Slug Test	Hydraulic Conductivity (centimeters/second)	Well Yield (gallons/day)
MW-3	4-26-07	Rising Head	1.4xE-6	3
MW-3	4-26-07	Falling Head	1.3xE-5	14
Arithmetic Mean			7.2xE-6	8.5

K = 7.2xE-6 cm/sec x 86,400 sec/day x 0.03281 feet/cm = 0.02 feet/day
 i = 0.0449 ft/ft
 n = 0.03 – 0.09 (estimated range)

$$V = \frac{Ki}{n}$$

$$V = \frac{Ki}{n}$$

$$V = \frac{0.02 \text{ feet/day} \times 0.0449}{0.09}$$

$$V = \frac{0.02 \text{ feet/day} \times 0.0449}{0.03}$$

$$V = \frac{0.000898 \text{ feet/day}}{0.09}$$

$$V = \frac{0.000898 \text{ feet/day}}{0.03}$$

$$V = 0.01 \text{ feet/day}$$

$$V = 0.03 \text{ feet/day}$$

Seep Quantity

Estimated Seep Size: Length = 100 feet
 Width = X feet/day
 Height = 4.0 feet

$$Q = 100 \text{ feet} \times 0.01 \text{ feet/day} \times 4.0 \text{ feet}$$

$$Q = 100 \text{ feet} \times 0.03 \text{ feet/day} \times 4.0 \text{ feet}$$

$$Q = 4 \text{ ft}^3/\text{day} \times 7.48 \text{ gallons/ft}^3$$

$$Q = 12 \text{ ft}^3/\text{day} \times 7.48 \text{ gallons/ft}^3$$

$$Q = 30 \text{ gallons/day} \times 0.4 \text{ (porosity of clay)}$$

$$Q = 90 \text{ gallons/day} \times 0.4 \text{ (porosity of clay)}$$

$$\text{Quantity of Seep} = 12 \text{ gallons/day}$$

$$\text{Quantity of Seep} = 36 \text{ gallons/day}$$

Determination of Quantity of Lower Seep Ballinger Seep Ballinger, Runnels County, Texas

Groundwater Seepage Velocity

$$V = \frac{Ki}{n}$$

V = seepage velocity (groundwater)
 K = hydraulic conductivity
 i = hydraulic gradient
 n = effective porosity

Monitor Well	Test Date	Slug Test	Hydraulic Conductivity (centimeters/second)	Well Yield (gallons/day)
MW-1	7-21-06	Rising Head	1.9xE-4	300
MW-1	7-21-06	Falling Head	4.8xE-4	600
		Arithmetic Mean	3.35xE-4	450

K = 3.35xE-4 cm/sec x 86,400 sec/day x 0.03281 feet/cm = 0.95 feet/day
 i = 0.0449 ft/ft
 n = 0.03 – 0.09 (estimated range)

$$V = \frac{Ki}{n}$$

$$V = \frac{0.95 \text{ feet/day} \times 0.0449}{0.09}$$

$$V = \frac{0.042655 \text{ feet/day}}{0.09}$$

$$V = 0.47 \text{ feet/day}$$

$$V = \frac{Ki}{n}$$

$$V = \frac{0.95 \text{ feet/day} \times 0.0449}{0.03}$$

$$V = \frac{0.042655 \text{ feet/day}}{0.03}$$

$$V = 1.42 \text{ feet/day}$$

Seep Quantity

Estimated Seep Size: Length = 100 feet
 Width = X feet/day
 Height = 0.25 feet

$$Q = 100 \text{ feet} \times 0.47 \text{ feet/day} \times 0.25 \text{ feet}$$

$$Q = 11.75 \text{ ft}^3/\text{day} \times 7.48 \text{ gallons/ft}^3$$

$$Q = 88 \text{ gallons/day} \times 0.4 \text{ (porosity of clay)}$$

$$\text{Quantity of Seep} = 35 \text{ gallons/day}$$

$$Q = 100 \text{ feet} \times 1.42 \text{ feet/day} \times 0.25 \text{ feet}$$

$$Q = 35.5 \text{ ft}^3/\text{day} \times 7.48 \text{ gallons/ft}^3$$

$$Q = 266 \text{ gallons/day} \times 0.4 \text{ (porosity of clay)}$$

$$\text{Quantity of Seep} = 106 \text{ gallons/day}$$

**RISING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-1**

Site Name: Ballinger Seep
Site Address: Runnels County, Texas

Terracon Project No: 94057272
Test Date: July 21, 2006
Conducted by: York Morgan
Analyzed by: Max Majesko
Analysis Method: Bouwer and Rice

Well Data:

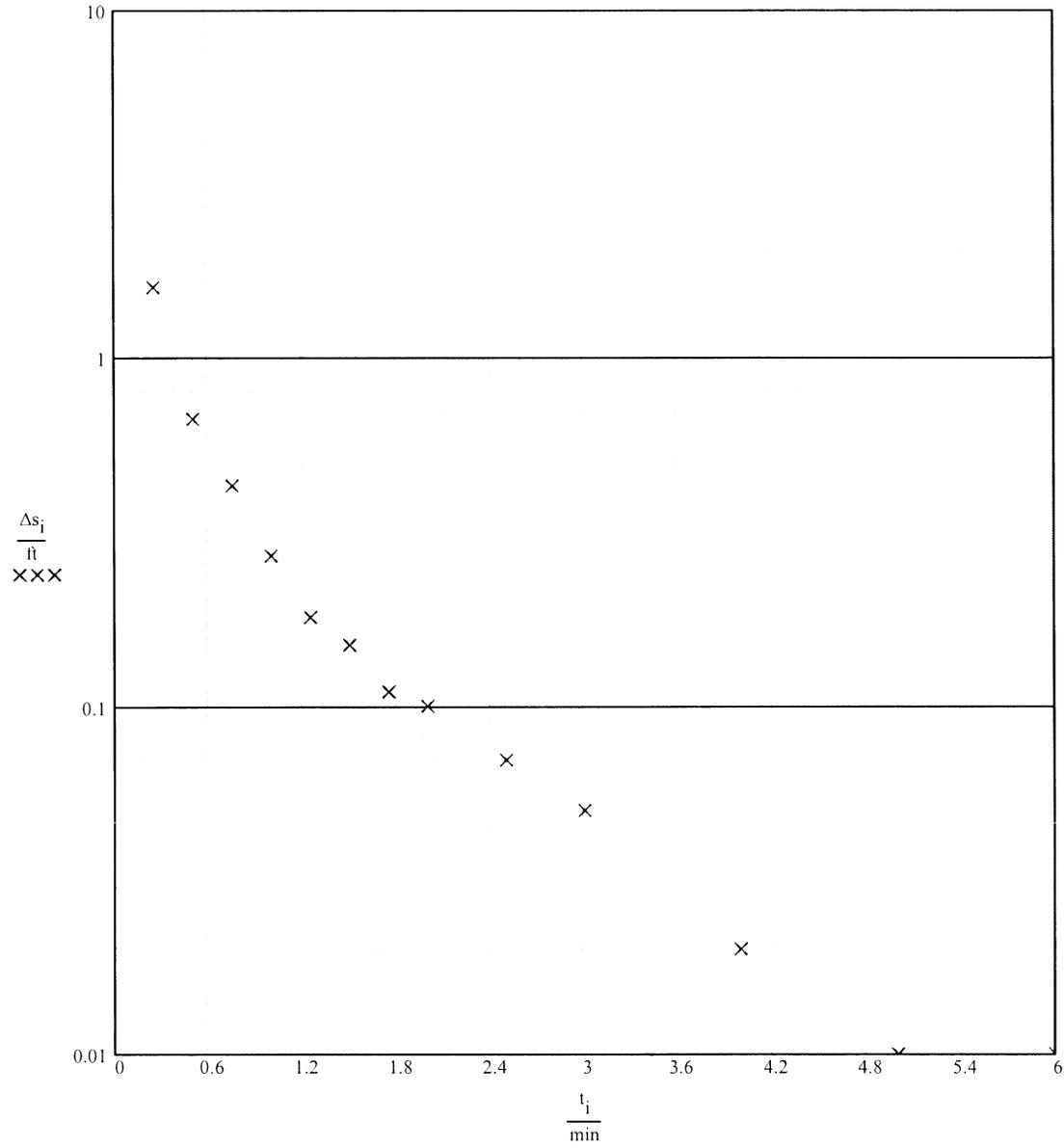
td := 25.24 ft Total depth of well
ts := 5.24 ft Depth to top of screen
sw := 9.54 ft Depth to static water level
rw := 0.286 ft Well radius
rc := 0.083 ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 13$	$t_i :=$	$s_i :=$	$\Delta s_i := s_i - sw$	$\frac{\Delta s_i}{ft} =$
	0.25 min	11.14 ft		1.600
	0.50 min	10.21 ft		0.670
	0.75 min	9.97 ft		0.430
	1.00 min	9.81 ft		0.270
	1.25 min	9.72 ft		0.180
	1.50 min	9.69 ft		0.150
	1.75 min	9.65 ft		0.110
	2.00 min	9.64 ft		0.100
	2.50 min	9.61 ft		0.100
	3.00 min	9.59 ft		0.070
	4.00 min	9.56 ft		0.050
	5.00 min	9.55 ft		0.020
	6.00 min	9.55 ft		0.010
	7.00 min	9.54 ft		0.010
				0.000

t = time since slug removal
 s_i = fluid level at time t
 Δs_i = drawdown at time t

Ballinger Seep
 Terracon Project No. 94057272
 Page 2



yo := 1.35·ft

Intercept with y-axis

yt := 0.92·ft

Drawdown at time tt

tt := 3.0·min

Time at drawdown yt

Analysis:

Le := td - ts Le = 20.00·ft

Length of screened interval

Lw := td - sw Lw = 15.70·ft

Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.17 \text{ ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 0.17 \text{ ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 15.70 \text{ ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 54.90 \frac{\text{ft}}{\text{ft}}$$

$$C := 2.9 \quad \text{From graph, fully penetrating well (Bouwer and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 3.05 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_0}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 3.7 \cdot 10^{-4} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 1.9 \cdot 10^{-4} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

- $r := 0.286 \text{ ft}$ Radius of water well
- $S := 1 \cdot 10^{-1}$ Storage Coefficient for unconfined aquifer
- $b := L_w + 0 \text{ ft}$ Saturated thickness (if well not fully penetrating, add appropriate footage)
- $T := K \cdot b$ Transmissivity
- $t := 7 \text{ day}$ Pumping time
- $s := 0.2 \cdot b$ Drawdown in water well

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 3 \cdot 10^2 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

**FALLING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-1**

Site Name: Ballinger Seep
Site Address: Runnels County, Texas

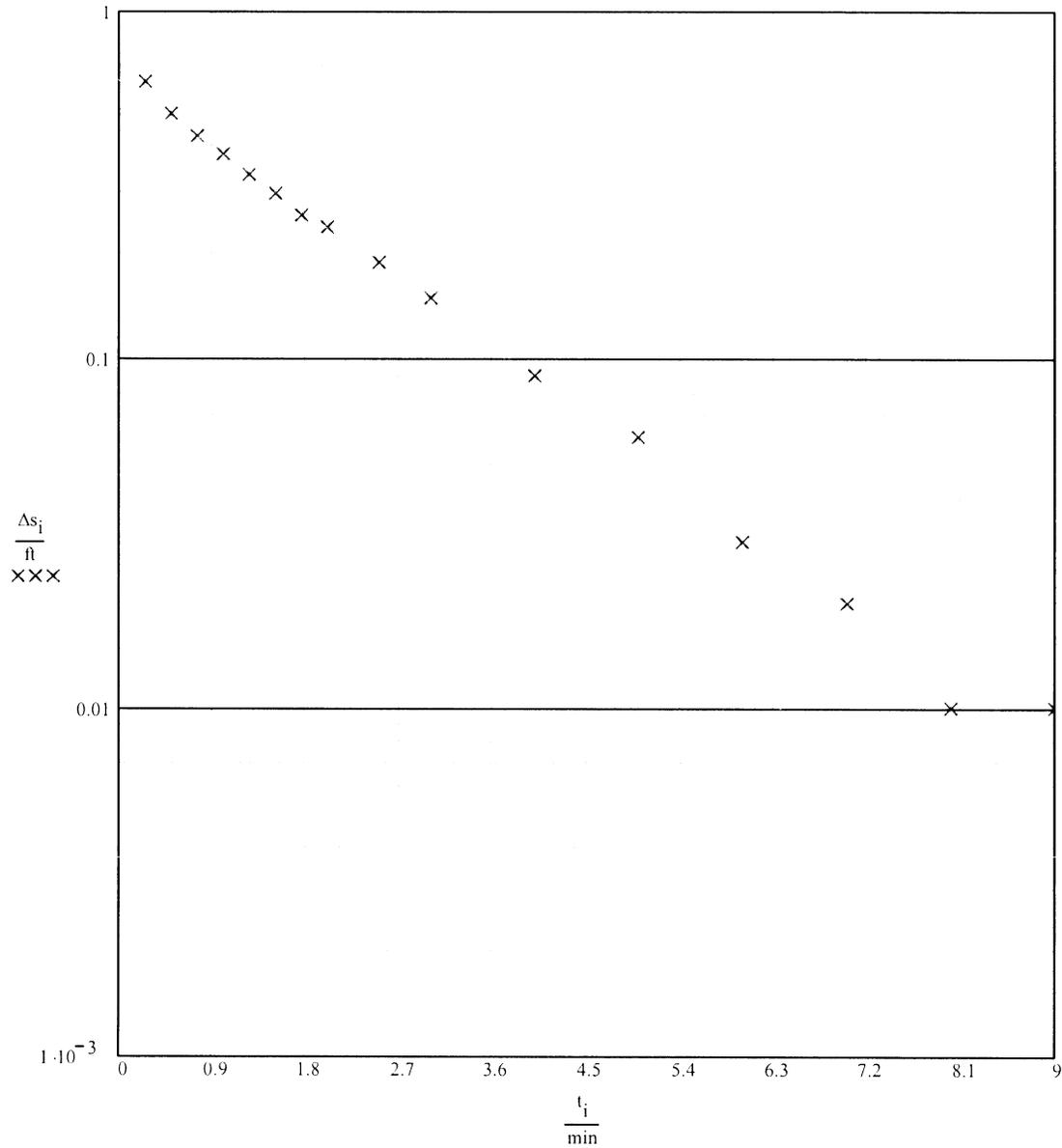
Terracon Project No: 94057272
Test Date: July 21, 2006
Conducted by: York Morgan
Analyzed by: Max Majesko
Analysis Method: Bouwer and Rice

Well Data:

td := 25.24·ft Total depth of well
ts := 5.24·ft Depth to top of screen
sw := 9.54·ft Depth to static water level
rw := 0.286·ft Well radius
rc := 0.083·ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 16$	$t_i :=$	$s_i :=$	$\Delta s_i := sw - s_i$	$\frac{\Delta s_i}{ft} =$	
	0.25·min	8.91·ft		0.630	
	0.50·min	9.03·ft		0.510	t = time since slug removal
	0.75·min	9.10·ft		0.440	
	1.00·min	9.15·ft		0.390	s_i = fluid level at time t
	1.25·min	9.20·ft		0.340	
	1.50·min	9.24·ft		0.300	Δs_i = drawdown
	1.75·min	9.28·ft		0.260	
	2.00·min	9.30·ft		0.240	
	2.50·min	9.35·ft		0.190	
	3.00·min	9.39·ft		0.150	
	4.00·min	9.45·ft		0.090	
	5.00·min	9.48·ft		0.060	
	6.00·min	9.51·ft		0.030	
	7.00·min	9.52·ft		0.020	
	8.00·min	9.53·ft			
	9.00·min	9.53·ft			
	10.00·min	9.54·ft			
				10.000·10 ⁻³	
				10.000·10 ⁻³	



yo := 0.64 · ft

Intercept with y-axis

yt := 0.032 · ft

Drawdown at time tt

tt := 9 · min

Time at drawdown yt

Analysis:

Le := td - ts Le = 20.000 · ft

Length of screened interval

Lw := td - sw Lw = 15.700 · ft

Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.171 \text{ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 0.171 \text{ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 15.700 \text{ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 54.895 \frac{\text{ft}}{\text{ft}}$$

$$C := 2.9 \quad \text{From graph, fully penetrating well (Bower and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 3.054 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_0}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 9.5 \cdot 10^{-4} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 4.8 \cdot 10^{-4} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

$$r := 0.286 \text{ft} \quad \text{Radius of water well}$$

$$S := 1 \cdot 10^{-1} \quad \text{Storage Coefficient for unconfined aquifer}$$

$$b := L_w + 0 \text{ft} \quad \text{Saturated thickness (if well not fully penetrating, add appropriate footage)}$$

$$T := K \cdot b \quad \text{Transmissivity}$$

$$t := 7 \text{day} \quad \text{Pumping time}$$

$$s := 0.2 \cdot b \quad \text{Drawdown in water well}$$

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 6 \cdot 10^2 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

**RISING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-2**

Site Name: Ballinger Seep
Site Address: Runnels County, Texas

Terracon Project No: 94057272
Test Date: July 21, 2006
Conducted by: York Morgan
Analyzed by: Max Majesko
Analysis Method: Bouwer and Rice

Well Data:

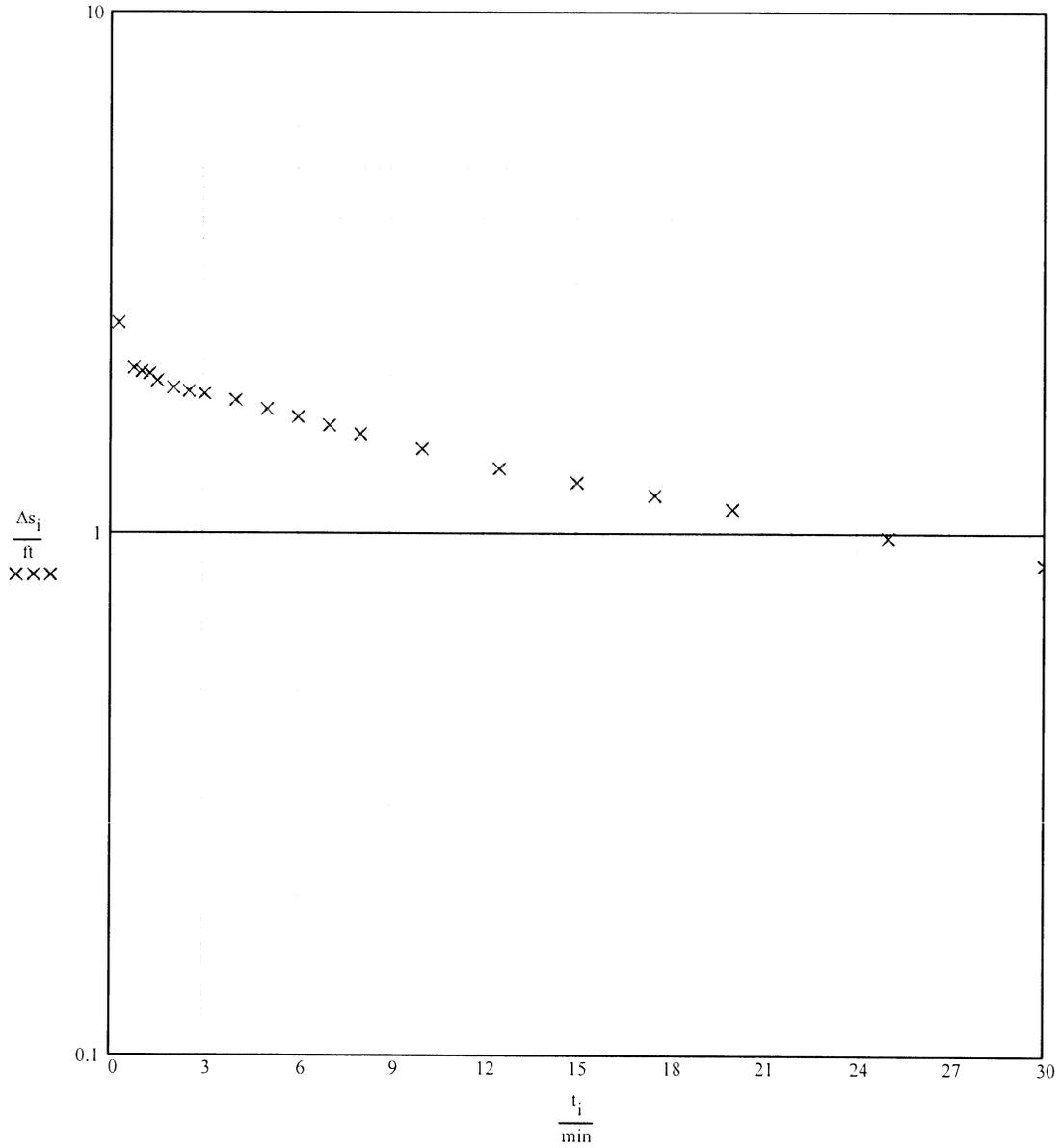
td := 50.05 ft Total depth of well
ts := 25.05·ft Depth to top of screen
sw := 21.33·ft Depth to static water level
rw := 0.286·ft Well radius
rc := 0.083·ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 19$	$t_i :=$	$s_i :=$	$\Delta s_i := s_i - sw$	$\frac{\Delta s_i}{ft} =$
	0.25·min	23.86·ft		2.530
	0.75·min	23.40·ft		2.070
	1.00·min	23.37·ft		2.040
	1.25·min	23.35·ft		2.020
	1.50·min	23.29·ft		1.960
	2.00·min	23.23·ft		1.900
	2.50·min	23.20·ft		1.870
	3.00·min	23.18·ft		1.850
	4.00·min	23.13·ft		1.800
	5.00·min	23.06·ft		1.730
	6.00·min	23.00·ft		1.670
	7.00·min	22.94·ft		1.610
	8.00·min	22.88·ft		1.550
	10.00·min	22.78·ft		1.450
	12.50·min	22.66·ft		1.330
	15.00·min	22.58·ft		1.250
	17.50·min	22.51·ft		
	20.00·min	22.44·ft		
	25.00·min	22.31·ft		
	30.00·min	22.20·ft		

t = time since slug removal
 s_i = fluid level at time t
 Δs_i = drawdown at time t

Ballinger Seep
 Terracon Project No. 94057272
 Page 2



yo := 2.0·ft
 yt := 0.78·ft
 tt := 30.0·min

Intercept with y-axis
 Drawdown at time tt
 Time at drawdown yt

Analysis:

Le := td - ts Le = 25.00·ft Length of screened interval
 Lw := td - sw Lw = 28.72·ft Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.17 \text{ ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 8.30 \cdot 10^{-2} \text{ ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 25.00 \text{ ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 87.41 \frac{\text{ft}}{\text{ft}}$$

$$C := 3.9 \quad \text{From graph, fully penetrating well (Bouwer and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 3.53 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_0}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 1.5 \cdot 10^{-5} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 7.8 \cdot 10^{-6} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

- $r := 0.286 \text{ ft}$ Radius of water well
- $S := 1 \cdot 10^{-1}$ Storage Coefficient for unconfined aquifer
- $b := L_w + 0 \text{ ft}$ Saturated thickness (if well not fully penetrating, add appropriate footage)
- $T := K \cdot b$ Transmissivity
- $t := 7 \text{ day}$ Pumping time
- $s := 0.2 \cdot b$ Drawdown in water well

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 48 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

FALLING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-2

Site Name: Ballinger Seep
 Site Address: Runnels County, Texas

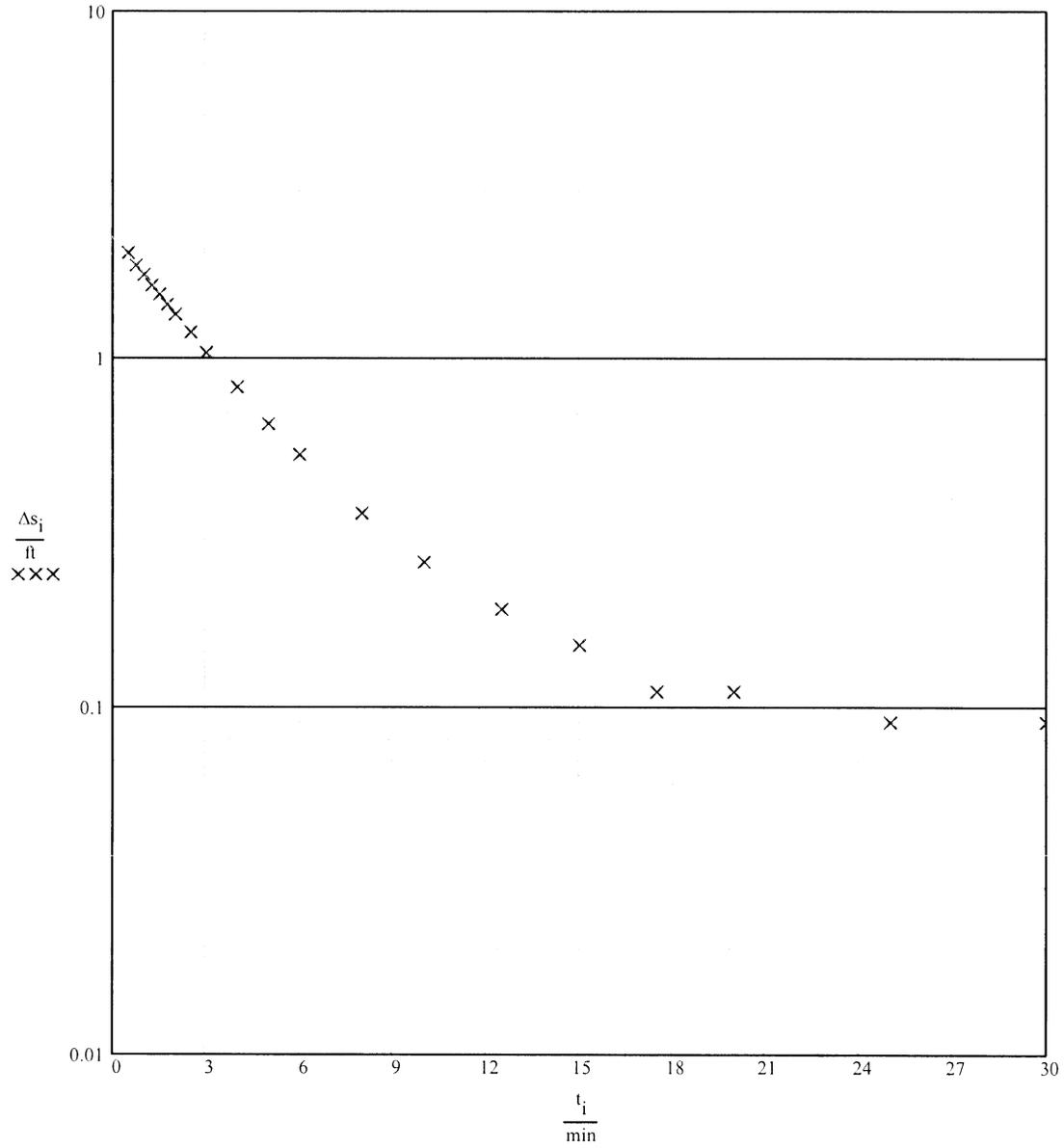
Terracon Project No: 94057272
 Test Date: July 21, 2006
 Conducted by: York Morgan
 Analyzed by: Max Majesko
 Analysis Method: Bouwer and Rice

Well Data:

td := 50.05·ft Total depth of well
 ts := 25.05·ft Depth to top of screen
 sw := 21.40·ft Depth to static water level
 rw := 0.286·ft Well radius
 rc := 0.083·ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 19$	$t_i :=$	$s_i :=$	$\Delta s_i := sw - s_i$	$\frac{\Delta s_i}{ft} =$	
	0.50·min	19.39·ft		2.010	
	0.75·min	19.55·ft		1.850	t = time since slug removal
	1.00·min	19.66·ft		1.740	
	1.25·min	19.78·ft		1.620	s_i = fluid level at time t
	1.50·min	19.87·ft		1.530	
	1.75·min	19.97·ft		1.430	Δs_i = drawdown
	2.00·min	20.06·ft		1.340	
	2.50·min	20.21·ft		1.190	
	3.00·min	20.36·ft		1.040	
	4.00·min	20.57·ft		0.830	
	5.00·min	20.75·ft		0.650	
	6.00·min	20.87·ft		0.530	
	8.00·min	21.04·ft		0.360	
	10.00·min	21.14·ft		0.260	
	12.50·min	21.21·ft		0.190	
	15.00·min	21.25·ft		0.150	
	17.50·min	21.29·ft			
	20.00·min	21.29·ft			
	25.00·min	21.31·ft			
	30.00·min	21.31·ft			



yo := 1.2·ft
 yt := 0.46·ft
 tt := 15·min

Intercept with y-axis
 Drawdown at time tt
 Time at drawdown yt

Analysis:

Le := td - ts Le = 25.000·ft
 Lw := td - sw Lw = 28.650·ft

Length of screened interval
 Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.171 \cdot \text{ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 0.083 \cdot \text{ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 25.000 \cdot \text{ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 87.413 \frac{\text{ft}}{\text{ft}}$$

$$C := 3.9 \quad \text{From graph, fully penetrating well (Bouwer and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 3.529 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_0}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 3.1 \cdot 10^{-5} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 1.6 \cdot 10^{-5} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

$$r := 0.286 \cdot \text{ft} \quad \text{Radius of water well}$$

$$S := 1 \cdot 10^{-1} \quad \text{Storage Coefficient for unconfined aquifer}$$

$$b := L_w + 0 \cdot \text{ft} \quad \text{Saturated thickness (if well not fully penetrating, add appropriate footage)}$$

$$T := K \cdot b \quad \text{Transmissivity}$$

$$t := 7 \cdot \text{day} \quad \text{Pumping time}$$

$$s := 0.2 \cdot b \quad \text{Drawdown in water well}$$

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 89 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

**RIISING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-3**

Site Name: Ballinger Seep
Site Address: Runnels County, Texas

Terracon Project No: 94057272B
Test Date: April 26, 2007
Conducted by: York Morgan
Analyzed by: Max Majesko
Analysis Method: Bouwer and Rice

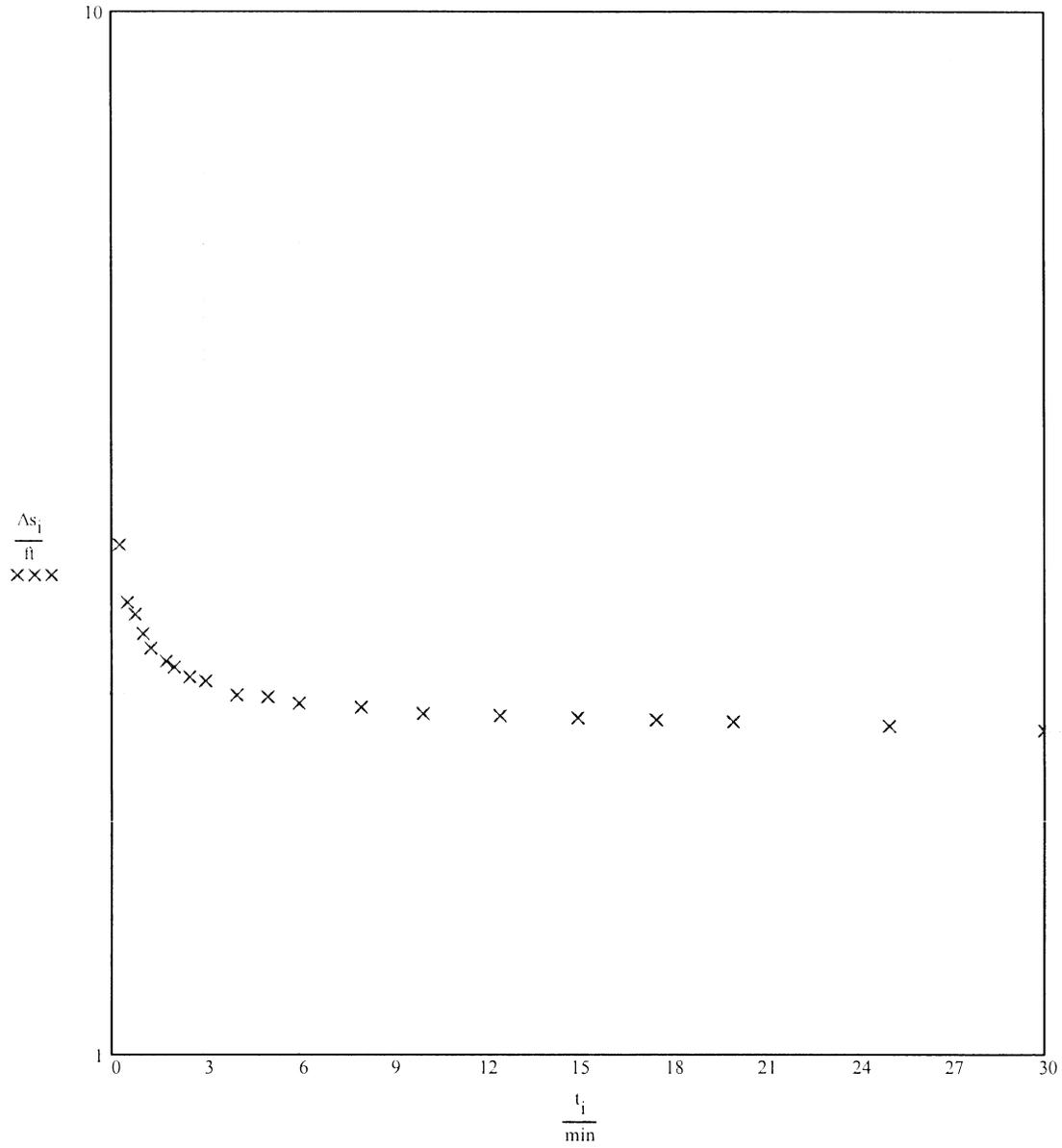
Well Data:

td := 14.92 ft Total depth of well
ts := 2.5-ft Depth to top of screen
sw := 1.58-ft Depth to static water level
rw := 0.286-ft Well radius
rc := 0.083-ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 19$	$t_i :=$	$s_i :=$	$\Delta s_i := s_i - sw$	$\frac{\Delta s_i}{ft} =$
	0.25-min	4.66-ft		3.080
	0.50-min	4.29-ft		2.710
	0.75-min	4.22-ft		2.640
	1.00-min	4.11-ft		2.530
	1.25-min	4.03-ft		2.450
	1.75-min	3.96-ft		2.380
	2.00-min	3.93-ft		2.350
	2.50-min	3.88-ft		2.300
	3.00-min	3.86-ft		2.280
	4.00-min	3.79-ft		2.210
	5.00-min	3.78-ft		2.200
	6.00-min	3.75-ft		2.170
	8.00-min	3.73-ft		2.150
	10.00-min	3.70-ft		2.120
	12.50-min	3.69-ft		2.110
	15.00-min	3.68-ft		2.100
	17.50-min	3.67-ft		
	20.00-min	3.66-ft		
	25.00-min	3.64-ft		
	30.00-min	3.62-ft		

t = time since slug removal
 s_i = fluid level at time t
 Δs_i = drawdown at time t



yo := 2.25 · ft
 yt := 2.03 · ft
 tt := 30.0 · min

Intercept with y-axis
 Drawdown at time tt
 Time at drawdown yt

Analysis:

Le := td - ts Le = 12.42 · ft Length of screened interval
 Lw := td - sw Lw = 13.34 · ft Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.17 \text{ ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 8.30 \cdot 10^{-2} \text{ ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 12.42 \text{ ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 43.43 \frac{\text{ft}}{\text{ft}}$$

$$C := 2.3 \quad \text{From graph, fully penetrating well (Bouwer and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 2.95 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_0}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 2.8 \cdot 10^{-6} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 1.4 \cdot 10^{-6} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

- $r := 0.286 \text{ ft}$ Radius of water well
- $S := 1 \cdot 10^{-1}$ Storage Coefficient for unconfined aquifer
- $b := L_w + 0 \text{ ft}$ Saturated thickness (if well not fully penetrating, add appropriate footage)
- $T := K \cdot b$ Transmissivity
- $t := 7 \text{ day}$ Pumping time
- $s := 0.2 \cdot b$ Drawdown in water well

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 3 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

**FALLING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-3**

Site Name: Ballinger Seep
Site Address: Runnels County, Texas

Terracon Project No: 94057272B
Test Date: April 26, 2007
Conducted by: York Morgan
Analyzed by: Max Majesko
Analysis Method: Bouwer and Rice

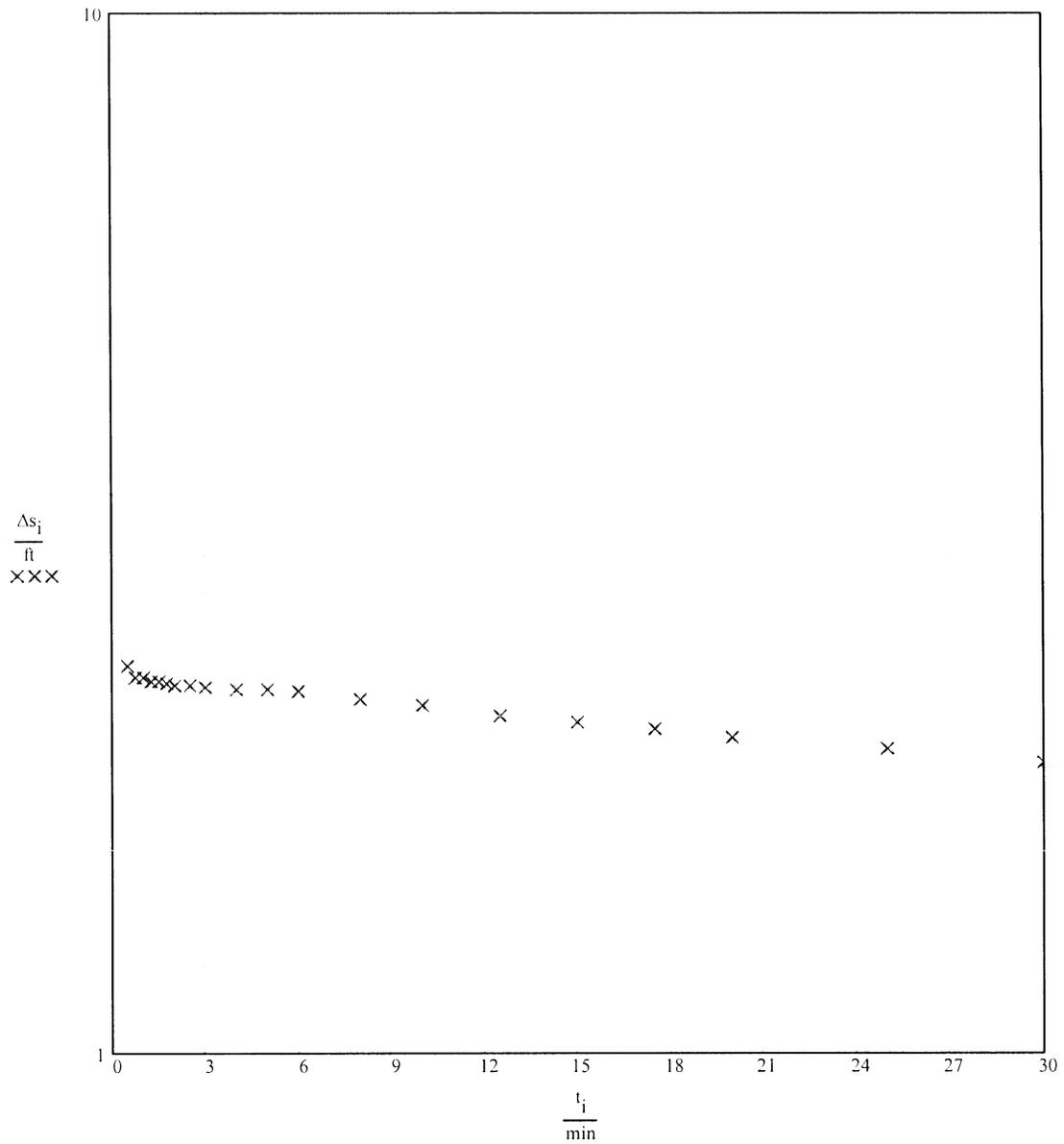
Well Data:

td := 14.92-ft Total depth of well
ts := 2.5-ft Depth to top of screen
sw := 3.20-ft Depth to static water level
rw := 0.286-ft Well radius
rc := 0.083-ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 19$	$t_i :=$	$s_i :=$	$\Delta s_i := sw - s_i$	$\frac{\Delta s_i}{ft} =$
	0.50 · min	0.84 · ft		2.360
	0.75 · min	0.90 · ft		2.300
	1.00 · min	0.90 · ft		2.300
	1.25 · min	0.92 · ft		2.280
	1.50 · min	0.92 · ft		2.280
	1.75 · min	0.93 · ft		2.270
	2.00 · min	0.94 · ft		2.260
	2.50 · min	0.94 · ft		2.260
	3.00 · min	0.95 · ft		2.250
	4.00 · min	0.96 · ft		2.240
	5.00 · min	0.96 · ft		2.240
	6.00 · min	0.97 · ft		2.230
	8.00 · min	1.01 · ft		2.190
	10.00 · min	1.04 · ft		2.160
	12.50 · min	1.09 · ft		2.110
	15.00 · min	1.12 · ft		2.080
	17.50 · min	1.15 · ft		
	20.00 · min	1.19 · ft		
	25.00 · min	1.24 · ft		
	30.00 · min	1.30 · ft		

t = time since slug removal
 s_i = fluid level at time t
 Δs_i = drawdown



yo := 2.35-ft

Intercept with y-axis

yt := 1.9-ft

Drawdown at time tt

tt := 30-min

Time at drawdown yt

Analysis:

Le := td - ts Le = 12.420-ft

Length of screened interval

Lw := td - sw Lw = 11.720-ft

Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.171 \text{ ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 0.171 \text{ ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 11.720 \text{ ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 40.979 \frac{\text{ft}}{\text{ft}}$$

$$C := 2.2 \quad \text{From graph, fully penetrating well (Bouwer and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 2.858 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_0}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 2.5 \cdot 10^{-5} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 1.3 \cdot 10^{-5} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

$$r := 0.286 \text{ ft} \quad \text{Radius of water well}$$

$$S := 1 \cdot 10^{-1} \quad \text{Storage Coefficient for unconfined aquifer}$$

$$b := L_w + 0 \text{ ft} \quad \text{Saturated thickness (if well not fully penetrating, add appropriate footage)}$$

$$T := K \cdot b \quad \text{Transmissivity}$$

$$t := 7 \text{ day} \quad \text{Pumping time}$$

$$s := 0.2 \cdot b \quad \text{Drawdown in water well}$$

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 14 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

**RIISING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-4**

Site Name: Ballinger Seep
Site Address: Runnels County, Texas

Terracon Project No: 94057272
Test Date: August 15, 2006
Conducted by: York Morgan
Analyzed by: Max Majesko
Analysis Method: Bouwer and Rice

Well Data:

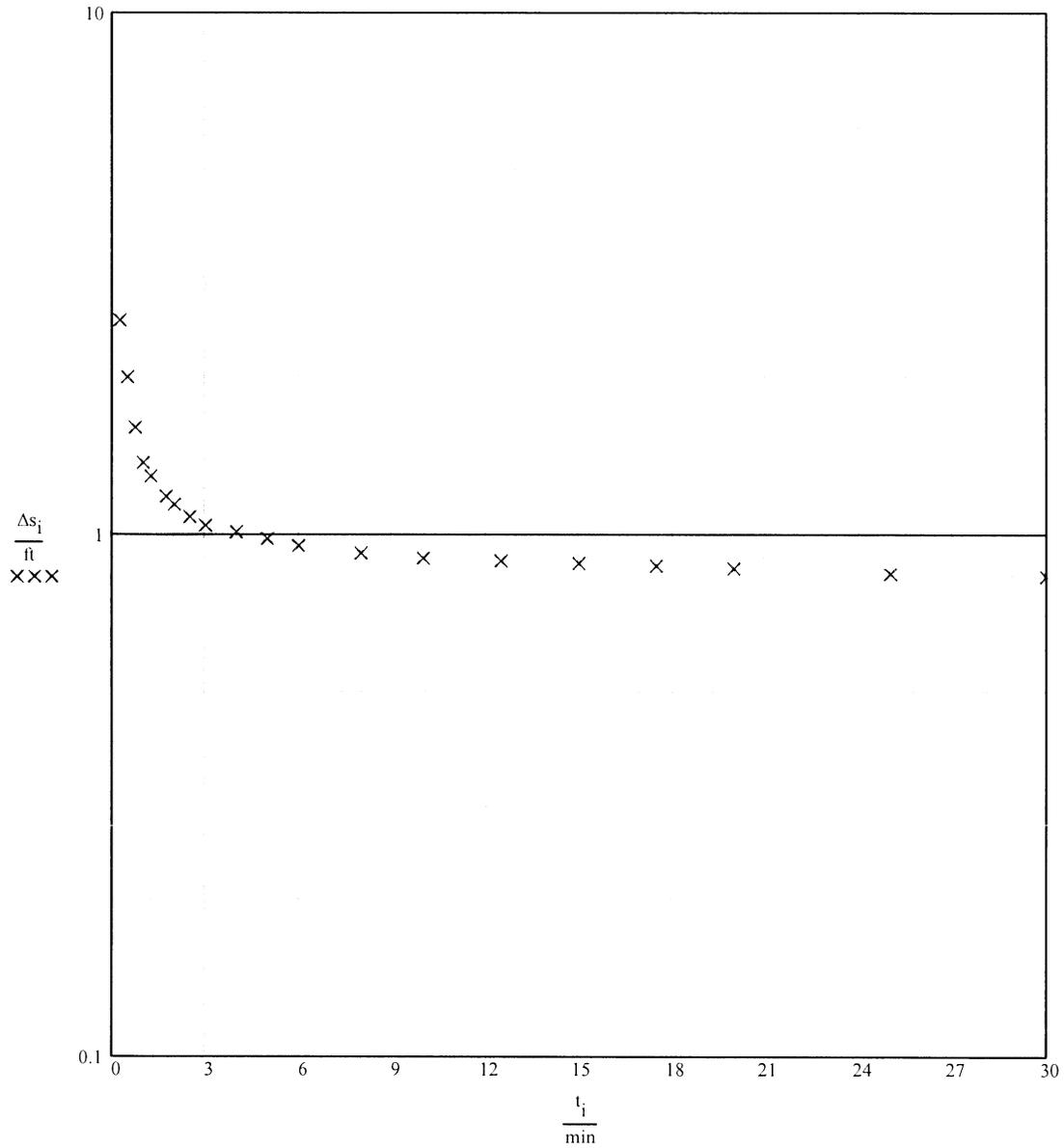
td := 25.13 ft Total depth of well
ts := 5.13 ft Depth to top of screen
sw := 10.11 ft Depth to static water level
rw := 0.286 ft Well radius
rc := 0.083 ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 19$	$t_i :=$	$s_i :=$	$\Delta s_i := s_i - sw$	$\frac{\Delta s_i}{ft} =$
	0.25 min	12.68 ft		2.570
	0.50 min	12.11 ft		2.000
	0.75 min	11.71 ft		1.600
	1.00 min	11.48 ft		1.370
	1.25 min	11.40 ft		1.290
	1.75 min	11.29 ft		1.180
	2.00 min	11.25 ft		1.140
	2.50 min	11.19 ft		1.080
	3.00 min	11.15 ft		1.040
	4.00 min	11.12 ft		1.010
	5.00 min	11.09 ft		0.980
	6.00 min	11.06 ft		0.950
	8.00 min	11.03 ft		0.920
	10.00 min	11.01 ft		0.900
	12.50 min	11.00 ft		0.890
	15.00 min	10.99 ft		0.890
	17.50 min	10.98 ft		0.880
	20.00 min	10.97 ft		
	25.00 min	10.95 ft		
	30.00 min	10.94 ft		

t = time since slug removal
 s_i = fluid level at time t
 Δs_i = drawdown at time t

Ballinger Seep
 Terracon Project No. 94057272
 Page 2



yo := 1.0·ft
 yt := 0.82·ft
 tt := 18.0·min

Intercept with y-axis
 Drawdown at time tt
 Time at drawdown yt

Analysis:

Le := td - ts Le = 20.00·ft
 Lw := td - sw Lw = 15.02·ft

Length of screened interval
 Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.17 \text{ ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 0.17 \text{ ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 15.02 \text{ ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 52.52 \frac{\text{ft}}{\text{ft}}$$

$$C := 2.8 \quad \text{From graph, fully penetrating well (Bouwer and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 3.02 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_0}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 3.3 \cdot 10^{-5} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 1.7 \cdot 10^{-5} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

- $r := 0.286 \text{ ft}$ Radius of water well
- $S := 1 \cdot 10^{-1}$ Storage Coefficient for unconfined aquifer
- $b := L_w + 0 \text{ ft}$ Saturated thickness (if well not fully penetrating, add appropriate footage)
- $T := K \cdot b$ Transmissivity
- $t := 7 \text{ day}$ Pumping time
- $s := 0.2 \cdot b$ Drawdown in water well

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 28 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

**FALLING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-4**

Site Name: Ballinger Seep
Site Address: Runnels County, Texas

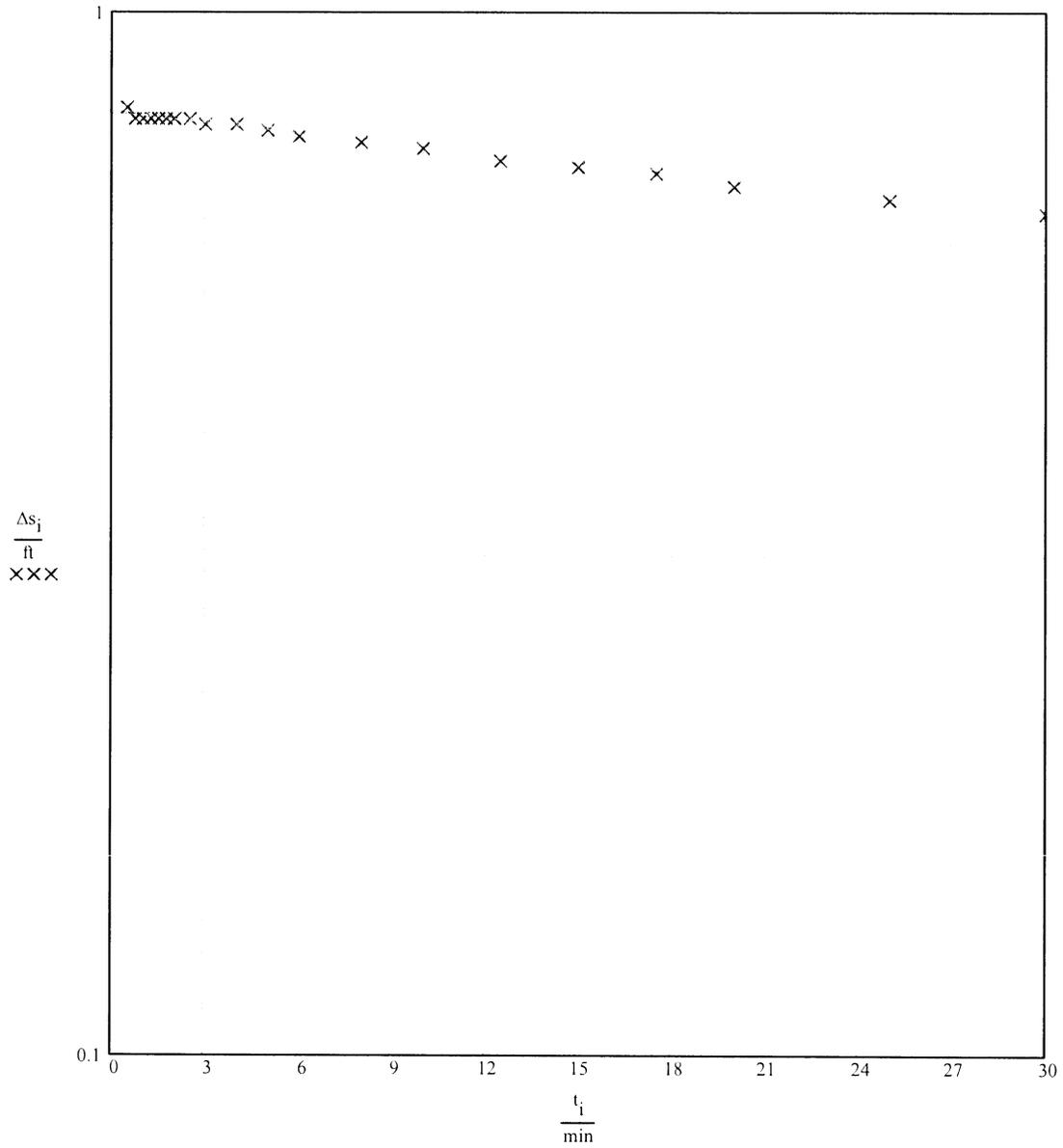
Terracon Project No: 94057272
Test Date: August 15, 2006
Conducted by: York Morgan
Analyzed by: Max Majesko
Analysis Method: Bouwer and Rice

Well Data:

td := 25.13·ft Total depth of well
ts := 5.13·ft Depth to top of screen
sw := 10.67·ft Depth to static water level
rw := 0.286·ft Well radius
rc := 0.083·ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 19$	$t_i :=$	$s_i :=$	$\Delta s_i := sw - s_i$	$\frac{\Delta s_i}{t_i} =$ ft	
	0.50·min	9.86·ft		0.810	
	0.75·min	9.88·ft		0.790	t = time since slug removal
	1.00·min	9.88·ft		0.790	
	1.25·min	9.88·ft		0.790	s_i = fluid level at time t
	1.50·min	9.88·ft		0.790	
	1.75·min	9.88·ft		0.790	Δs_i = drawdown
	2.00·min	9.88·ft		0.790	
	2.50·min	9.88·ft		0.790	
	3.00·min	9.89·ft		0.790	
	4.00·min	9.89·ft		0.780	
	5.00·min	9.90·ft		0.780	
	6.00·min	9.91·ft		0.770	
	8.00·min	9.92·ft		0.760	
	10.00·min	9.93·ft		0.750	
	12.50·min	9.95·ft		0.740	
	15.00·min	9.96·ft		0.720	
	17.50·min	9.97·ft		0.710	
	20.00·min	9.99·ft			
	25.00·min	10.01·ft			
	30.00·min	10.03·ft			



yo := 0.8·ft

Intercept with y-axis

yt := 0.63·ft

Drawdown at time tt

tt := 30·min

Time at drawdown yt

Analysis:

Le := td - ts Le = 20.000·ft

Length of screened interval

Lw := td - sw Lw = 14.460·ft

Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.171 \text{ ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 0.171 \text{ ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 14.460 \text{ ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 50.559 \frac{\text{ft}}{\text{ft}}$$

$$C := 2.8 \quad \text{From graph, fully penetrating well (Bouwer and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 2.978 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_0}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 2.4 \cdot 10^{-5} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 1.2 \cdot 10^{-5} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

$$r := 0.286 \text{ ft} \quad \text{Radius of water well}$$

$$S := 1 \cdot 10^{-1} \quad \text{Storage Coefficient for unconfined aquifer}$$

$$b := L_w + 0 \text{ ft} \quad \text{Saturated thickness (if well not fully penetrating, add appropriate footage)}$$

$$T := K \cdot b \quad \text{Transmissivity}$$

$$t := 7 \text{ day} \quad \text{Pumping time}$$

$$s := 0.2 \cdot b \quad \text{Drawdown in water well}$$

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 20 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

**RISING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-7**

Site Name: Ballinger Seep
Site Address: Runnels County, Texas

Terracon Project No: 94057272B
Test Date: May 30, 2007
Conducted by: York Morgan
Analyzed by: Max Majesko
Analysis Method: Bouwer and Rice

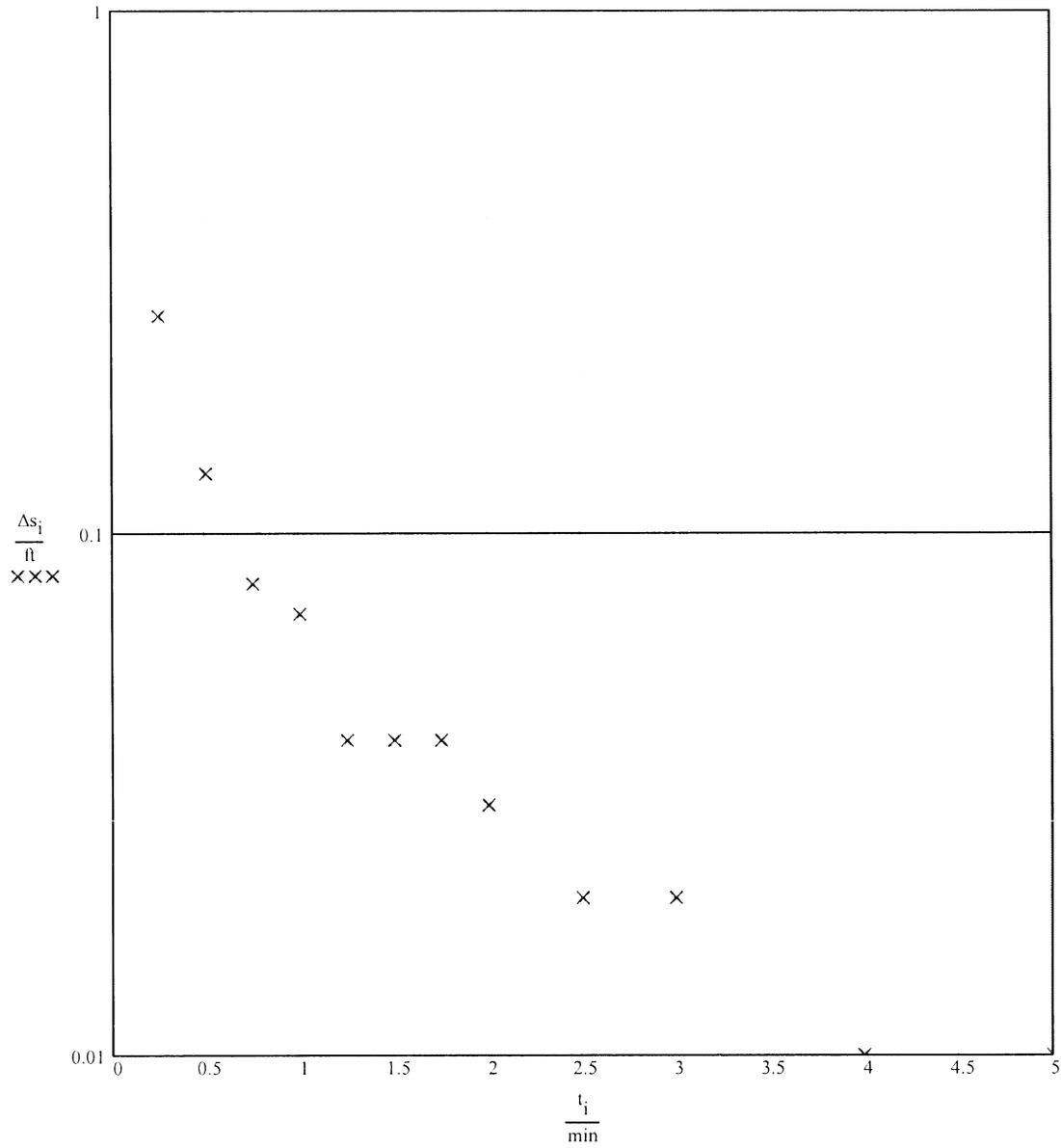
Well Data:

td := 30.23 ft Total depth of well
ts := 5.0 ft Depth to top of screen
sw := 17.58 ft Depth to static water level
rw := 0.286 ft Well radius
rc := 0.083 ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 13$	$t_i :=$	$s_i :=$	$\Delta s_i := s_i - sw$	$\frac{\Delta s_i}{ft} =$
	0.25 min	17.84 ft		0.260
	0.50 min	17.71 ft		0.130
	0.75 min	17.66 ft		0.080
	1.00 min	17.65 ft		0.070
	1.25 min	17.62 ft		0.040
	1.50 min	17.62 ft		0.040
	1.75 min	17.62 ft		0.040
	2.00 min	17.61 ft		0.040
	2.50 min	17.60 ft		0.030
	3.00 min	17.60 ft		0.020
	4.00 min	17.59 ft		0.020
	5.00 min	17.59 ft		0.010
	6.00 min	17.58 ft		0.010
	7.00 min	17.58 ft		0.000
				0.000

t = time since slug removal
 s_i = fluid level at time t
 Δs_i = drawdown at time t



yo := 0.22 · ft

Intercept with y-axis

yt := 0.02 · ft

Drawdown at time tt

tt := 2.5 · min

Time at drawdown yt

Analysis:

Le := td - ts Le = 25.23 · ft

Length of screened interval

Lw := td - sw Lw = 12.65 · ft

Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.17 \text{ ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 0.17 \text{ ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 12.65 \text{ ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 44.23 \frac{\text{ft}}{\text{ft}}$$

$$C := 2.3 \quad \text{From graph, fully penetrating well (Bower and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 2.92 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_o}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 3.3 \cdot 10^{-3} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 1.7 \cdot 10^{-3} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

- $r := 0.286 \text{ ft}$ Radius of water well
- $S := 1 \cdot 10^{-1}$ Storage Coefficient for unconfined aquifer
- $b := L_w + 0 \text{ ft}$ Saturated thickness (if well not fully penetrating, add appropriate footage)
- $T := K \cdot b$ Transmissivity
- $t := 7 \text{ day}$ Pumping time
- $s := 0.2 \cdot b$ Drawdown in water well

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 1 \cdot 10^3 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

**FALLING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-7**

Site Name: Ballinger Seep
Site Address: Runnels County, Texas

Terracon Project No: 94057272B
Test Date: May 30, 2007
Conducted by: York Morgan
Analyzed by: Max Majesko
Analysis Method: Bouwer and Rice

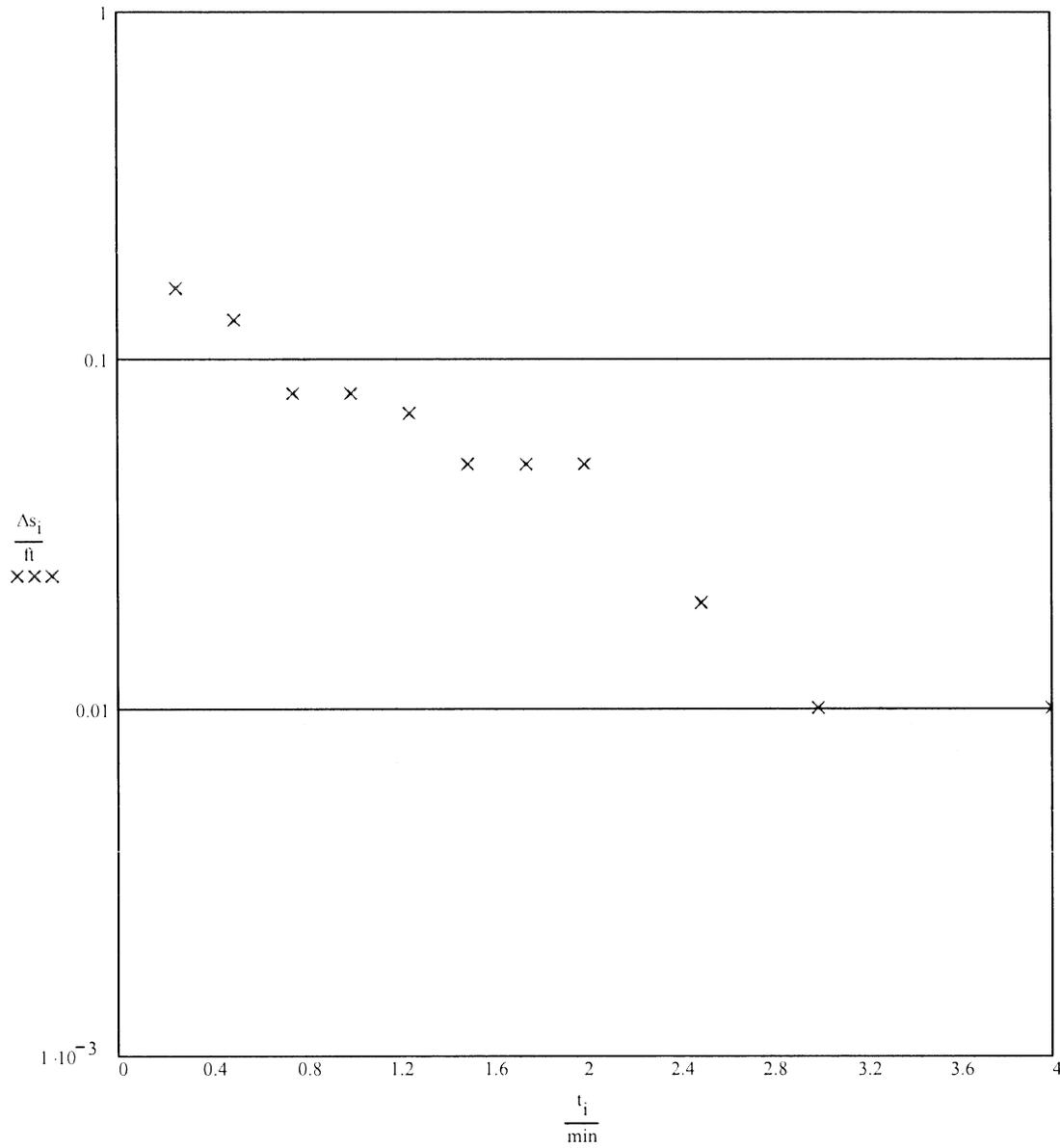
Well Data:

td := 30.23·ft Total depth of well
ts := 5.0·ft Depth to top of screen
sw := 17.58·ft Depth to static water level
rw := 0.286·ft Well radius
rc := 0.083·ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 12$	$t_i :=$	$s_i :=$	$\Delta s_i := sw - s_i$	$\frac{\Delta s_i}{ft} =$
	0.25·min	17.42·ft		0.160
	0.50·min	17.45·ft		0.130
	0.75·min	17.50·ft		0.080
	1.00·min	17.50·ft		0.080
	1.25·min	17.51·ft		0.070
	1.50·min	17.53·ft		0.050
	1.75·min	17.53·ft		0.050
	2.00·min	17.53·ft		0.050
	2.50·min	17.56·ft		0.020
	3.00·min	17.57·ft		10.000·10 ⁻³
	4.00·min	17.57·ft		10.000·10 ⁻³
	5.00·min	17.58·ft		0.000
	6.00·min	17.58·ft		0.000

t = time since slug removal
s_i = fluid level at time t
 Δs_i = drawdown



yo := 0.2·ft

Intercept with y-axis

yt := 0.055·ft

Drawdown at time tt

tt := 4·min

Time at drawdown yt

Analysis:

Lc := td - ts Lc = 25.230·ft

Length of screened interval

Lw := td - sw Lw = 12.650·ft

Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.171 \text{ ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 0.171 \text{ ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 12.650 \text{ ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 44.231 \frac{\text{ft}}{\text{ft}}$$

$$C := 2.3 \quad \text{From graph, fully penetrating well (Bouwer and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 2.922 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_0}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 1.1 \cdot 10^{-3} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 5.6 \cdot 10^{-4} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

$$r := 0.286 \text{ ft} \quad \text{Radius of water well}$$

$$S := 1 \cdot 10^{-1} \quad \text{Storage Coefficient for unconfined aquifer}$$

$$b := L_w + 0 \text{ ft} \quad \text{Saturated thickness (if well not fully penetrating, add appropriate footage)}$$

$$T := K \cdot b \quad \text{Transmissivity}$$

$$t := 7 \text{ day} \quad \text{Pumping time}$$

$$s := 0.2 \cdot b \quad \text{Drawdown in water well}$$

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 4 \cdot 10^2 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

**RISING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-9**

Site Name: Ballinger Seep
Site Address: Runnels County, Texas

Terracon Project No: 94057272B
Test Date: May 30, 2007
Conducted by: York Morgan
Analyzed by: Max Majesko
Analysis Method: Bouwer and Rice

Well Data:

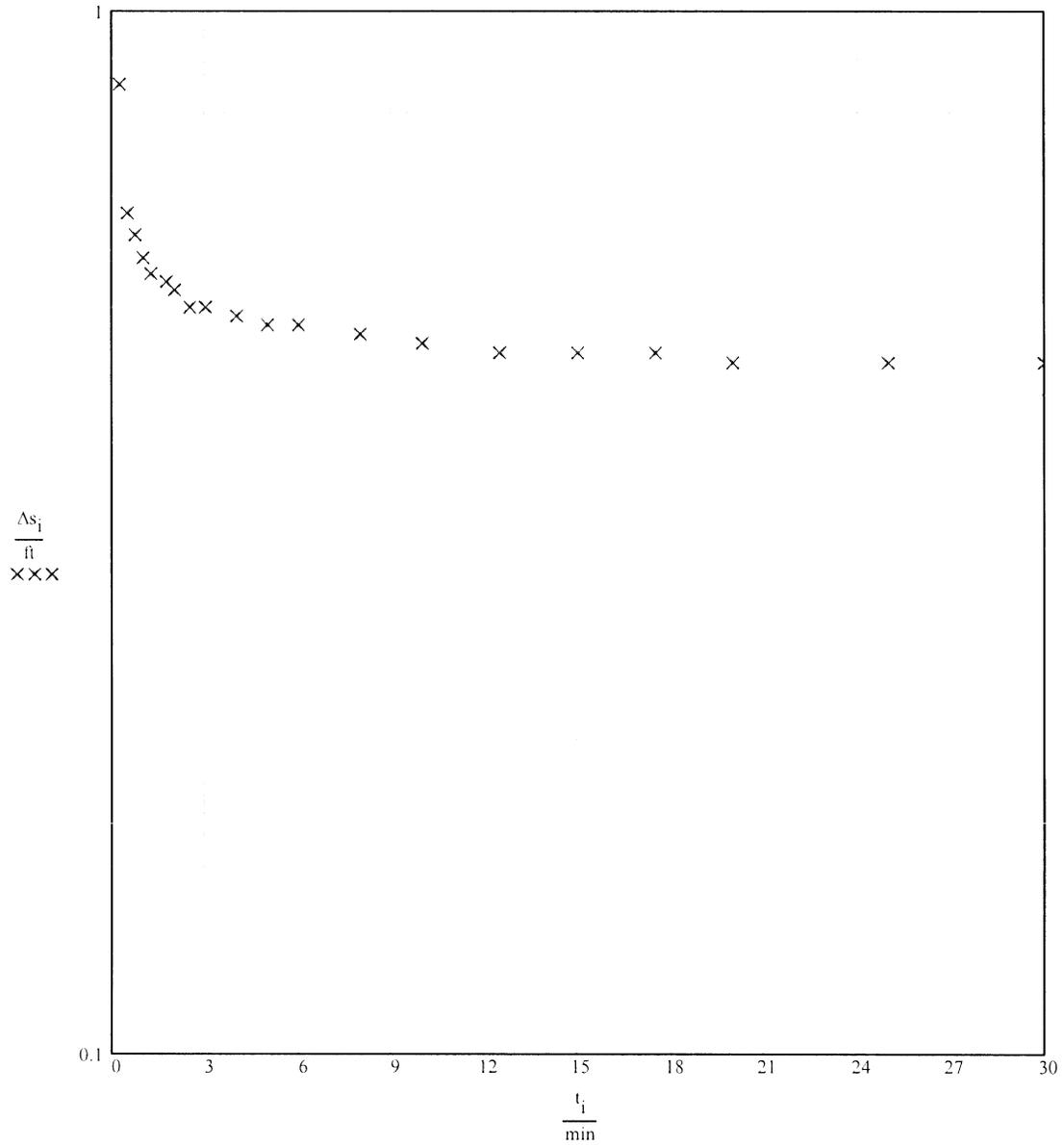
td := 31.57 ft Total depth of well
ts := 12.0 ft Depth to top of screen
sw := 21.28 ft Depth to static water level
rw := 0.344 ft Well radius
rc := 0.083 ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 19$	$t_i :=$	$s_i :=$	$\Delta s_i := s_i - sw$	$\frac{\Delta s_i}{ft} =$
	0.25 min	22.13 ft		0.850
	0.50 min	21.92 ft		0.640
	0.75 min	21.89 ft		0.610
	1.00 min	21.86 ft		0.580
	1.25 min	21.84 ft		0.560
	1.75 min	21.83 ft		0.550
	2.00 min	21.82 ft		0.540
	2.50 min	21.80 ft		0.540
	3.00 min	21.80 ft		0.520
	4.00 min	21.79 ft		0.520
	5.00 min	21.78 ft		0.510
	6.00 min	21.78 ft		0.500
	8.00 min	21.77 ft		0.500
	10.00 min	21.76 ft		0.490
	12.50 min	21.75 ft		0.480
	15.00 min	21.75 ft		0.470
	17.50 min	21.75 ft		0.470
	20.00 min	21.74 ft		0.470
	25.00 min	21.74 ft		
	30.00 min	21.74 ft		

t = time since slug removal
 s_i = fluid level at time t
 Δs_i = drawdown at time t

Ballinger Seep
 Terracon Project No. 94057272B
 Page 2



yo := 0.52 · ft
 yt := 0.44 · ft
 tt := 30.0 · min

Intercept with y-axis
 Drawdown at time tt
 Time at drawdown yt

Analysis:

Le := td - ts Le = 19.57 · ft
 Lw := td - sw Lw = 10.29 · ft

Length of screened interval
 Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.20 \cdot \text{ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 0.20 \cdot \text{ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 10.29 \cdot \text{ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 29.91 \frac{\text{ft}}{\text{ft}}$$

$$C := 1.8 \quad \text{From graph, fully penetrating well (Bouwer and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 2.61 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_0}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 2.8 \cdot 10^{-5} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 1.4 \cdot 10^{-5} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

- $r := 0.286 \cdot \text{ft}$ Radius of water well
- $S := 1 \cdot 10^{-1}$ Storage Coefficient for unconfined aquifer
- $b := L_w + 0 \cdot \text{ft}$ Saturated thickness (if well not fully penetrating, add appropriate footage)
- $T := K \cdot b$ Transmissivity
- $t := 7 \cdot \text{day}$ Pumping time
- $s := 0.2 \cdot b$ Drawdown in water well

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 12 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

**RISING HEAD SLUG TEST ANALYSIS
MONITOR WELL MW-14**

Site Name: Ballinger Seep
Site Address: Runnels County, Texas

Terracon Project No: 94057272B
Test Date: May 30, 2007
Conducted by: York Morgan
Analyzed by: Max Majesko
Analysis Method: Bouwer and Rice

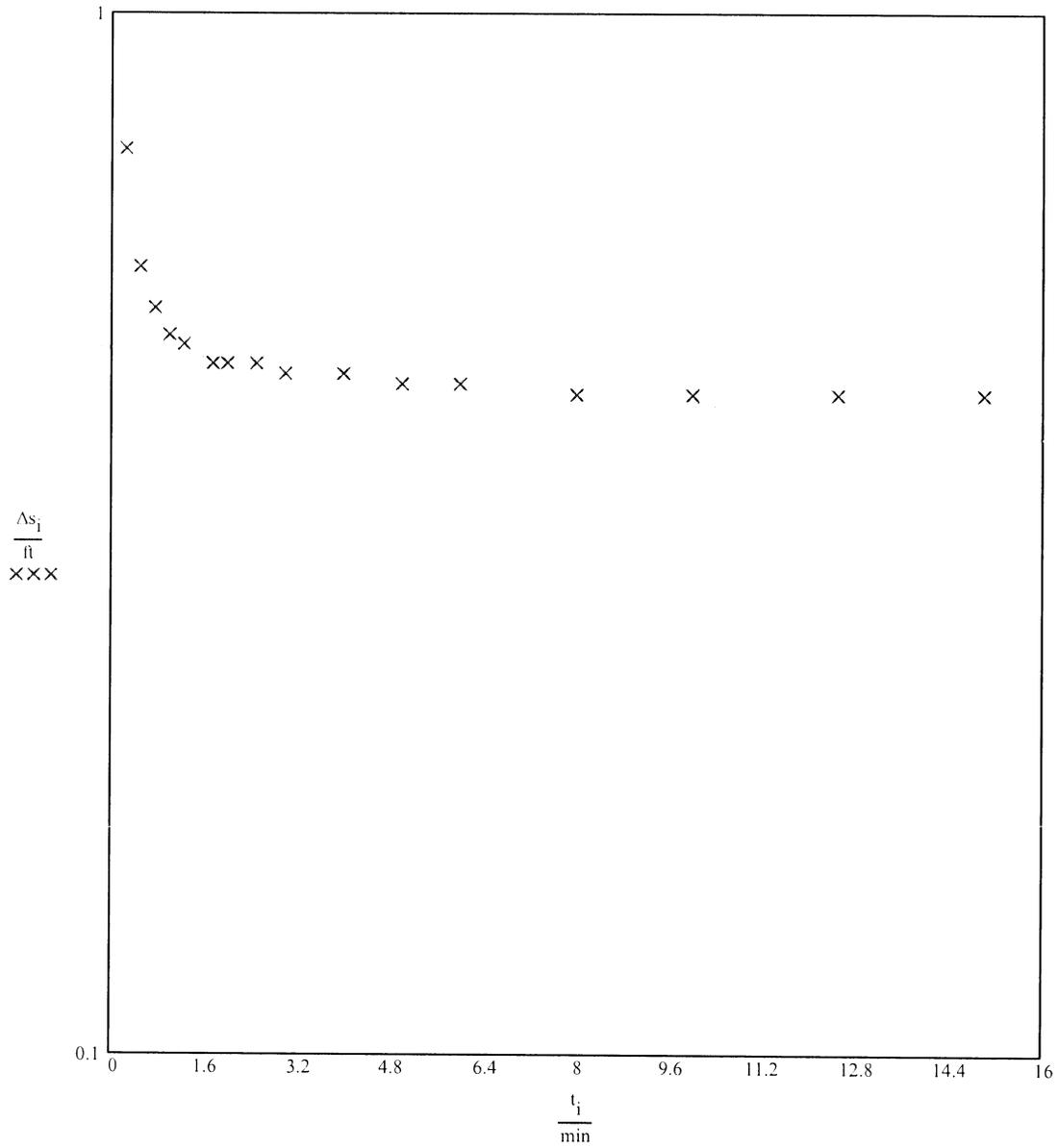
Well Data:

td := 30.05 ft Total depth of well
ts := 10.0 ft Depth to top of screen
sw := 18.37 ft Depth to static water level
rw := 0.344 ft Well radius
rc := 0.083 ft Casing radius
 ϕ := 0.30 Porosity of sand pack (approximate)

Time-Drawdown Data:

$i := 0, 1.. 19$	$t_i :=$	$s_i :=$	$\Delta s_i := s_i - sw$	$\frac{\Delta s_i}{ft} =$
	0.25 min	19.11 ft		0.740
	0.50 min	18.94 ft		0.570
	0.75 min	18.89 ft		0.520
	1.00 min	18.86 ft		0.490
	1.25 min	18.85 ft		0.480
	1.75 min	18.83 ft		0.460
	2.00 min	18.83 ft		0.460
	2.50 min	18.83 ft		0.460
	3.00 min	18.82 ft		0.460
	4.00 min	18.82 ft		0.450
	5.00 min	18.81 ft		0.450
	6.00 min	18.81 ft		0.440
	8.00 min	18.80 ft		0.440
	10.00 min	18.80 ft		0.430
	12.50 min	18.80 ft		0.430
	15.00 min	18.80 ft		0.430
	17.50 min	17.79 ft		0.430
	20.00 min	17.78 ft		0.430
	25.00 min	17.77 ft		0.430
	30.00 min	17.78 ft		0.430

t = time since slug removal
 s_i = fluid level at time t
 Δs_i = drawdown at time t



$y_0 := 0.48 \cdot \text{ft}$
 $y_t := 0.39 \cdot \text{ft}$
 $t_t := 16.0 \cdot \text{min}$

Intercept with y-axis
 Drawdown at time t_t
 Time at drawdown y_t

Analysis:

$L_e := t_d - t_s$ $L_e = 20.05 \cdot \text{ft}$ Length of screened interval
 $L_w := t_d - s_w$ $L_w = 11.68 \cdot \text{ft}$ Length of water column in well

$$r_e := \sqrt{(r_w^2 - r_c^2) \cdot \phi + r_c^2} \quad r_e = 0.20 \text{ ft} \quad \text{Effective radius of screened interval}$$

$$r_e := \text{if}(L_e < L_w, r_c, r_e) \quad r_e = 0.20 \text{ ft} \quad \text{Select the casing radius if static water level is above the top of the screen, otherwise select the effective radius of the screened interval}$$

$$L_e := \text{if}(L_e > L_w, L_w, L_e) \quad L_e = 11.68 \text{ ft} \quad \text{Redefine } L_e \text{ as saturated screen length if water level is below top of screen}$$

$$\frac{L_e}{r_w} = 33.95 \frac{\text{ft}}{\text{ft}}$$

$$C := 2.0 \quad \text{From graph, fully penetrating well (Bouwer and Rice)}$$

$$LRe := \frac{1}{\left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]} \quad LRe = 2.70 \quad \text{Value for } \ln(L_e/r_w)$$

$$K := \frac{r_e^2 \cdot LRe \cdot \ln\left(\frac{y_0}{y_t}\right)}{2 \cdot L_e \cdot t} \quad K = 6.0 \cdot 10^{-5} \frac{\text{ft}}{\text{min}} \quad \text{Hydraulic Conductivity}$$

$$K = 3.1 \cdot 10^{-5} \frac{\text{cm}}{\text{sec}}$$

Evaluation of Well Yield:

(TCEQ RG-366/TRRP-8, Groundwater Classification, dated March 2003)

- $r := 0.286 \text{ ft}$ Radius of water well
- $S := 1 \cdot 10^{-1}$ Storage Coefficient for unconfined aquifer
- $b := L_w + 0 \text{ ft}$ Saturated thickness (if well not fully penetrating, add appropriate footage)
- $T := K \cdot b$ Transmissivity
- $t := 7 \text{ day}$ Pumping time
- $s := 0.2 \cdot b$ Drawdown in water well

$$Q := \frac{s \cdot 4 \cdot \pi \cdot T}{2.3 \cdot \log\left(\frac{2.25 \cdot T \cdot t}{r^2 \cdot S}\right)} \quad Q = 29 \frac{\text{gal}}{\text{day}} \quad \text{Cooper-Jacob Equation (rearranged to solve for well yield, Q)}$$

Limited Site Investigation
Ballinger Seep
Ballinger, Runnels County, Texas
Project No. 94057272B
August 28, 2007



APPENDIX F

Data Usability Summary

Table 1
Soil, Groundwater and Surface Water Qualified Analytical Data
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Date	Field Identification	Laboratory Identification	Media	Data Usability Qualifier	Analyte	Data Issues
7/17/2006	MW-1 (11-12)	7932.001	Soil	JL	Chloride	holding time exceeded
7/17/2006	MW-1 Dup (11-12)	7932.002	Soil	--	--	--
7/17/2006	MW-2 (15-16)	7932.003	Soil	JL	Chloride	holding time exceeded
7/18/2006	MW-3 (4-5)	7932.004	Soil	JL	Chloride	holding time exceeded
7/19/2006	Seep-1	7940.001	Surface Water	JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
				UJ	Bromide	LCS and MS/MSD % recoveries are outside the QC limits
				UJL	Nitrate	LCS and MS/MSD % recoveries are outside the QC limits
7/19/2006	SW-Trib-1	7940.002	Surface Water	JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
		7940.002-R		UJ	Bromide	LCS and MS/MSD % recoveries are outside the QC limits
				UJL	Nitrate	LCS and MS/MSD % recoveries are outside the QC limits
7/19/2006	SW-Trib-2	7940.003	Surface Water	JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
				UJ	Bromide	LCS and MS/MSD % recoveries are outside the QC limits
				UJL	Nitrate	LCS and MS/MSD % recoveries are outside the QC limits
7/19/2006	SW-Trib-2 Dup	7940.004	Surface Water	JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
				UJ	Bromide	LCS and MS/MSD % recoveries are outside the QC limits
				UJL	Nitrate	LCS and MS/MSD % recoveries are outside the QC limits
7/19/2006	Trip Blank	7940.005	Water	--	--	--
7/18/2006	MW-5 (4-5)	7941.001	Soil	JL	Chloride	holding time exceeded
7/18/2006	MW-5 (11)	7941.002	Soil	JL	Chloride	holding time exceeded
7/19/2006	Equipment Blank	7941.003	Water	UJH	TPH	surrogate recoveries are outside the QC limits
				JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
				UJ	Bromide	LCS and MS/MSD % recoveries are outside the QC limits
				UJL	Nitrate	LCS and MS/MSD % recoveries are outside the QC limits
7/19/2006	MW-1	7942.001	Groundwater	JL	Chloride	holding time exceeded
		7942.001-R		JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
				UJ	Bromide	LCS and MS/MSD % recoveries are outside the QC limits
				JL	Nitrate	LCS and MS/MSD % recoveries are outside the QC limits
7/19/2006	MW-1 Dup	7942.002	Groundwater	JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
				UJ	Bromide	LCS and MS/MSD % recoveries are outside the QC limits
				JL	Nitrate	LCS and MS/MSD % recoveries are outside the QC limits

Table 1
Soil, Groundwater and Surface Water Qualified Analytical Data
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Date	Field Identification	Laboratory Identification	Media	Data Usability Qualifier	Analyte	Data Issues
7/19/2006	Trip Blank	7942.003	Water	--	--	--
7/20/2006	MW-7 (20-21)	7945.001	Soil	JL	Chloride	holding time exceeded
7/20/2006	MW-2	7946.001	Groundwater	UJ	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
				UJ	Bromide	LCS and MS/MSD % recoveries are outside the QC limits
		UJH		Nitrate	LCS and MS/MSD % recoveries are outside the QC limits	
		JL		TPH	surrogate recoveries are outside the QC limits	
7/20/2006	MW-4	7946.001-R	Groundwater	JL	Chloride	holding time exceeded
				JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
		UJ		Bromide	LCS and MS/MSD % recoveries are outside the QC limits	
		JL		Nitrate	LCS and MS/MSD % recoveries are outside the QC limits	
7/20/2006	MW-5	7946.002-R	Groundwater	JL	Chloride	holding time exceeded
				JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
		UJ		Bromide	LCS and MS/MSD % recoveries are outside the QC limits	
		JL		Nitrate	LCS and MS/MSD % recoveries are outside the QC limits	
7/20/2006	MW-3	7946.003-R	Groundwater	JL	Chloride	holding time exceeded
				JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
		UJ		Bromide	LCS and MS/MSD % recoveries are outside the QC limits	
		JL		Nitrate	LCS and MS/MSD % recoveries are outside the QC limits	
7/20/2006	Trip Blank	7946.004	Water	UJ	Bromide	LCS and MS/MSD % recoveries are outside the QC limits
				JL	Nitrate	LCS and MS/MSD % recoveries are outside the QC limits
		UJL		Chloride	holding time exceeded	
		JL		Chloride	holding time exceeded	
7/20/2006	SW-CR-Down	7946.005	Surface Water	--	--	--
				JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
		UJ		Bromide	LCS and MS/MSD % recoveries are outside the QC limits	
		UJL		Nitrate	LCS and MS/MSD % recoveries are outside the QC limits	
7/20/2006	SW-CR-Up	7947.001-R	Surface Water	JL	Chloride	holding time exceeded
				JL	Chloride, Sodium, Sulfate	MS/MSD % recoveries are outside the QC limits
		UJ		Bromide	LCS and MS/MSD % recoveries are outside the QC limits	
		UJL		Nitrate	LCS and MS/MSD % recoveries are outside the QC limits	

Table 1
Soil, Groundwater and Surface Water Qualified Analytical Data
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Date	Field Identification	Laboratory Identification	Media	Data Usability Qualifier	Analyte	Data Issues
8/15/2006	MW-7	7963.001	Groundwater	JL	Chloride	MS/MSD % recoveries are outside the QC limits
				UJL	Bromide	LCS and MS/MSD % recoveries are outside the QC limits
				UJL	Nitrate	LCS and MS/MSD % recoveries are outside the QC limits
				J	Calcium	LCS/LCSD and MS/MSD % recoveries are outside the QC limits
				J	Sulfate	LCSD and MS/MSD % recoveries are outside the QC limits
				JL	Magnesium	LCS/LCSD % recoveries are outside the QC limits
8/15/2006	Trip Blank	7963.001-R 7963.002	Water	JL	Potassium, Sodium	LCS/LCSD and MS/MSD % recoveries are outside the QC limits
				--	Chloride	holding time exceeded
5/22/2007	SW-Trib-4	0705208-01	Surface Water	--	Calcium, Magnesium, Chloride, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sulfate	MS/MSD % recoveries are outside the QC limits CCV was slightly above control limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits
				--	Calcium, Magnesium, Chloride, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sulfate	MS/MSD % recoveries are outside the QC limits CCV was slightly above control limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits
5/22/2007	SW-Trib-5	0705208-02	Surface Water	--	Calcium, Magnesium, Chloride, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sulfate	MS/MSD % recoveries are outside the QC limits CCV was slightly above control limits
5/22/2007	SW-Trib-6	0705208-03	Surface Water	--	Calcium, Magnesium, Chloride, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sulfate	MS/MSD % recoveries are outside the QC limits CCV was slightly above control limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits
				--	Calcium, Magnesium, Chloride, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits

Table 1
Soil, Groundwater and Surface Water Qualified Analytical Data
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Date	Field Identification	Laboratory Identification	Media	Data Usability Qualifier	Analyte	Data Issues
5/22/2007	SW-Trib-1	0705208-04	Surface Water	--	Calcium, Magnesium, Chloride, Sulfate, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits
5/22/2007	SW-Trib-2	0705208-05	Surface Water	--	Calcium, Magnesium, Chloride, Sulfate, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits
5/22/2007	SW-Trib-3	0705208-06	Surface Water	--	Calcium, Magnesium, Chloride, Sulfate, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits
5/22/2007	Lower Seep-1	0705208-07	Surface Water	--	Anions/Cations	Mineral balance was significantly outside of control limits
				--	Calcium, Magnesium, Chloride, Sulfate, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
5/22/2007	SW-CR-50' Down	0705208-08	Surface Water	--	Calcium, Magnesium, Chloride, Sulfate, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits

Table 1
Soil, Groundwater and Surface Water Qualified Analytical Data
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Date	Field Identification	Laboratory Identification	Media	Data Usability Qualifier	Analyte	Data Issues
5/22/2007	SW-CR-50' Up	0705208-09	Surface Water	--	Calcium, Magnesium, Chloride, Sulfate, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits
5/22/2007	SW-CR-250' Up	0705208-10	Surface Water	--	Calcium, Magnesium, Chloride, Sulfate, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits
5/22/2007	SW-CR-1,000' Up	0705208-11	Surface Water	--	Calcium, Magnesium, Chloride, Sulfate, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits
5/22/2007	MW-12	0705208-12	Groundwater	--	Calcium, Magnesium, Sodium, Chloride, Sulfate, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits
				--		
5/22/2007	SW-CR-900' Down	0705208-13	Surface Water	--	Calcium, Magnesium, Chloride, Sulfate, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
				--	Sodium	MS/MSD % recoveries are outside the QC limits PDS recovery was above control limits
				--	Potassium	MSD % recoveries are outside the QC limits
				--	Bromide	RPD for MS/MSD outside QC limits
5/23/2007	SW-CR-1,500' Down	0705228-01	Surface Water	--	Calcium	MS/MSD % recoveries are outside the QC limits RPD of serial dilution was above control limits
				--	Magnesium	MS % recoveries are outside the QC limits
				--	Potassium	MS % recoveries are outside the QC limits RPD of serial dilution was above control limits
				--	Sodium	MSD % recoveries are outside the QC limits

Table 1
Soil, Groundwater and Surface Water Qualified Analytical Data
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Date	Field Identification	Laboratory Identification	Media	Data Usability Qualifier	Analyte	Data Issues
5/23/2007	MW-14	0705228-07	Groundwater	--	Calcium	MS/MSD % recoveries are outside the QC limits RPD of serial dilution was above control limits
					Magnesium	MS % recoveries are outside the QC limits
					Potassium	MS % recoveries are outside the QC limits RPD of serial dilution was above control limits
					Sodium	MSD % recoveries are outside the QC limits
5/23/2007	MW-7	0705228-08	Groundwater	--	Calcium	MS/MSD % recoveries are outside the QC limits RPD of serial dilution was above control limits
					Magnesium	MS % recoveries are outside the QC limits
					Potassium	MS % recoveries are outside the QC limits RPD of serial dilution was above control limits
					Sodium	MSD % recoveries are outside the QC limits
5/23/2007	SW-Dup	0705228-09	Surface Water	--	Calcium	MS/MSD % recoveries are outside the QC limits RPD of serial dilution was above control limits
					Magnesium	MS % recoveries are outside the QC limits
					Potassium	MS % recoveries are outside the QC limits RPD of serial dilution was above control limits
					Sodium	MSD % recoveries are outside the QC limits
5/24/2007	MW-17	0705242-01	Groundwater	--	Calcium, Magnesium, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
					Sodium	MSD % recoveries are outside the QC limits
5/24/2007	MW-16	0705242-02	Groundwater	--	Calcium, Magnesium, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
					Sodium	MSD % recoveries are outside the QC limits
5/24/2007	MW-1	0705242-03	Groundwater	--	Calcium, Magnesium, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
					Sodium	MSD % recoveries are outside the QC limits
5/24/2007	MW-2	0705242-04	Groundwater	--	Calcium, Magnesium, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
					Sodium	MSD % recoveries are outside the QC limits
5/24/2007	MW-3	0705242-05	Groundwater	--	Calcium, Magnesium, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
					Sodium	MSD % recoveries are outside the QC limits
5/24/2007	MW-4	0705242-06	Groundwater	--	Calcium, Magnesium, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
					Sodium	MSD % recoveries are outside the QC limits
					Anions/Cations	Mineral balance was significantly outside of control limits

Table 1
Soil, Groundwater and Surface Water Qualified Analytical Data
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Date	Field Identification	Laboratory Identification	Media	Data Usability Qualifier	Analyte	Data Issues
5/24/2007	MW-Dup	0705242-07	Groundwater	--	Calcium, Magnesium, Nitrate, Bromide	MS/MSD % recoveries are outside the QC limits
5/25/2007	MW-11	0705261-01	Groundwater	--	Sodium	MSD % recoveries are outside the QC limits
5/25/2007	MW-10	0705261-02	Groundwater	--	Calcium, Magnesium	MS/MSD % recoveries are outside the QC limits
5/25/2007	MW-15	0705261-03	Groundwater	--	Sodium	MSD % recoveries are outside the QC limits
5/25/2007	MW-5	0705261-04	Groundwater	--	Calcium, Magnesium	MS/MSD % recoveries are outside the QC limits
5/25/2007	MW-6	0705261-05	Groundwater	--	Calcium, Magnesium	MS/MSD % recoveries are outside the QC limits
5/25/2007	MW-12	0705261-06	Groundwater	--	Sodium	MSD % recoveries are outside the QC limits
5/25/2007	MW-9	0705261-07	Groundwater	--	Calcium, Magnesium	MS/MSD % recoveries are outside the QC limits
				--	Sodium	MSD % recoveries are outside the QC limits

-- Not Applicable

R = Chloride Re-Run Analysis

Data Usability Qualifiers

U - Not detected: Analysis for the analyte was performed, but the analyte was not detected above the level of the associated value. The associated value is the SQL.

J - Estimated: The analyte was detected and identified. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ - Not detected, SQL is estimated: The analyte was not detected above the reported SQL. The numerical value of the SQL is estimated and may be inaccurate.

H - Bias in sample result likely to be high.

L - Bias in sample result likely to be low.

Table 2
Soil, Groundwater and Surface Water Sample Field Precision
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Date	Field Identification	Laboratory Identification	Media	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD*	Qualified
7/17/2006	MW-1 Dup (11-12)	7932.002	Soil	Benzene	<0.0052	<0.0048	0	A
				Toluene	<0.0052	<0.0048	0	A
				Ethylbenzene	<0.0052	<0.0048	0	A
				Total Xylenes	<0.0052	<0.0048	0	A
7/19/2006	MW-1 Dup	7942.002	Groundwater	TPH	<20	<20	0	A
				Benzene	<0.005	<0.005	0	A
				Toluene	<0.005	<0.005	0	A
				Ethylbenzene	<0.005	<0.005	0	A
				Total Xylenes	<0.005	<0.005	0	A
				TPH	<5.0	<5.0	0	A
				Carbonate	<2	<2	0	A
				Bicarbonate	380	380	0	A
				Bromide	<2	<2	0	A
				Chloride	1550	1530	1	A
				Nitrate	<0.5	2.6	135	J
				Sulfate	657	657	0	A
				Calcium	330	330	0	A
				Magnesium	83	82	1	A
Potassium	15	14	7	A				
Sodium	1700	1700	0	A				
Conductivity	7500	7300	3	A				
Total Dissolved Solids	4980	4790	4	A				

Table 2
Soil, Groundwater and Surface Water Sample Field Precision
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Date	Field Identification	Laboratory Identification	Media	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD*	Qualified
7/19/2006	SW-Trib-2 Dup	7940.004	Surface Water	Benzene	<0.005	<0.005	0	A
				Toluene	<0.005	<0.005	0	A
				Ethylbenzene	<0.005	<0.005	0	A
				Total Xylenes	<0.005	<0.005	0	A
				TPH	<5.0	<5.0	0	A
				Carbonate	<2	<2	0	A
				Bicarbonate	140	150	7	A
				Bromide	<2	<2	0	A
				Chloride	1570	1580	1	A
				Nitrate	<0.5	<0.5	0	A
7/19/2006	SW-Trib-2 Dup	7940.004	Surface Water	Sulfate	621	631	2	A
				Calcium	260	260	0	A
				Magnesium	88	87	1	A
				Potassium	17	16	6	A
				Sodium	1900	1900	0	A
				Conductivity	7700	7700	0	A
				Total Dissolved Solids	4840	4840	0	A

Table 2
Soil, Groundwater and Surface Water Sample Field Precision
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Date	Field Identification	Laboratory Identification	Media	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD*	Qualified
5/23/2007	SW-Dup (SW-CR-500' Down)	0705228-09	Surface Water	Carbonate	<10	<10	0	A
				Bicarbonate	194	195	1	A
				Bromide	0.639	0.609	5	A
				Chloride	240	240	0	A
				Nitrate	0.866	0.876	1	A
				Sulfate	355	351	1	A
				Calcium	143	142	1	A
				Magnesium	59	59.7	1	A
				Potassium	7.84	8.12	4	A
				Sodium	132	136	3	A
				Conductivity	1660	1660	0	A
				Total Dissolved Solids	1100	1100	0	A
				Carbonate	<10	<10	0	A
				Bicarbonate	293	291	1	A
5/24/2007	MW-Dup (MW-1)	0705242-07	Groundwater	Bromide	2.52	2.59	3	A
				Chloride	2290	2260	1	A
				Nitrate	0.456	0.467	2	A
				Sulfate	470	473	1	A
				Calcium	478	466	3	A
				Magnesium	85.2	86.6	2	A
				Potassium	5.84	5.59	4	A
				Sodium	970	944	3	A
				Conductivity	7650	7610	1	A
				Total Dissolved Solids	5260	4850	8	A

* RPD = ((SR - DR)x200)/((SR + DR))

Data Usability Qualifiers

- A - Acceptable Data
- ND - Not Detected at quantitation limits stated in analytical report.
- NA - Not Applicable
- J - Estimated data due to inability to meet QC criteria.

Data Review Checklist - 7932

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A 4 Scientific Laboratory Work Order No.: 7932		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) Chloride (EPA 300.0)		Matrix: Soil	
Samples: 7932.001 (MW-1 (11-12)) 7932.002 (MW-1 Dup (11-12)) 7932.003 (MW-2 (15-16)) 7932.004 (MW-3 (4-5))					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?		X	Holding time was not met for chloride. Analysis for chloride in soil was not part of the scope of work. However, Terracon elected to run soil samples for chloride for the purpose of evaluating field screening data for chloride.	
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?	X			
5	Do reported detection limits (or reporting limits) agree with the project specifications?	X			
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					
7	Were initial and continuing instrument calibration analyses performed? And reported?	X		As stated in the QAPP, the laboratory was not required to report all calibration results. For the purpose of data validation, it was assumed that the laboratory performed the method-specified calibration analyses.	
8	For each analytical batch, are results provided for a method blank?	X			
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for BTEX and chloride.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?		X	MS/MSD results were not provided for chloride.	

Data Review Checklist - 7932

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A 4 Scientific Laboratory Work Order No.: 7932		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) Chloride (EPA 300.0)		Matrix: Soil	
Samples: 7932.001 (MW-1 (11-12)) 7932.002 (MW-1 Dup (11-12)) 7932.003 (MW-2 (15-16)) 7932.004 (MW-3 (4-5))					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method. A duplicate soil sample was included with this data set.	
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?	X			
QC Results					
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X			
14	Are LCS/LCSD recoveries and RPDs within limits?		X	TPH C12-C28 (soil) - LCS % recoveries within lab limits but > than QAPP limits	
15	Are MS/MSD recoveries and RPDs within limits?	X			
16	Are surrogate recoveries within limits (organic analytes only)?	X			
Other Data Quality-Related Issues					
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X			
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	X			
19	No other potential data quality issues were identified. If this is not true, describe issues.	X		Refer to Table 1 for qualified analytical data.	

CAR = Corrective Action Report

LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Data Review Checklist - 7940
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A 4 Scientific Laboratory Work Order No.: 7940		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 7940.001 (Seep-1) 7940.002 (SW-Trib-1) 7940.003 (SW-Trib-2) 7940.004 (SW-Trib-2-Dup) 7940.005 (Trip Blank)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?	X			
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?	X			
5	Do reported detection limits (or reporting limits) agree with the project specifications?		X	Reporting limits for Bromide and TPH were above the limits specified in the QAPP.	
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					
7	Were initial and continuing instrument calibration analyses performed? And reported?	X		As stated in the QAPP, the laboratory was not required to report all calibration results. For the purpose of data validation, it was assumed that the laboratory performed the method-specified calibration analyses.	
8	For each analytical batch, are results provided for a method blank?	X			
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for BTEX, TDS, carbonate, bicarbonate, chloride, sulfate, bromide, nitrate, and conductivity.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?	X		MS/MSD pairs were provided in accordance with Table A7.1 of the QAPP.	

Data Review Checklist - 7940

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A 4 Scientific Laboratory Work Order No.: 7940		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method. A duplicate surface water sample was included with this data set.	
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?	X			
QC Results					
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X			
14	Are LCS/LCSD recoveries and RPDs within limits?		X	<u>bromide</u> - LCS % recoveries within lab limits but < than QAPP limits <u>nitrate</u> - LCS % recoveries within lab limits but < than QAPP limits	
15	Are MS/MSD recoveries and RPDs within limits?		X	<u>toluene</u> - RPD > limits <u>chloride</u> - MS/MSD % recoveries < limits <u>chloride</u> - RPD > limits <u>sulfate</u> - MS/MSD % recoveries < limits <u>sulfate</u> - RPD > limits <u>bromide</u> - MS/MSD % recoveries within lab limits but > than QAPP limits <u>nitrate</u> - MS/MSD % recoveries within lab limits but < than QAPP limits <u>sodium</u> - MS/MSD % recoveries < limits	
16	Are surrogate recoveries within limits (organic analytes only)?	X			
Other Data Quality-Related Issues					
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X			

Data Review Checklist - 7940

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006
A 4 Scientific Laboratory Work Order No.: 7940		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water
Samples: 7940.001 (Seep-1) 7940.002 (SW-Trib-1) 7940.003 (SW-Trib-2) 7940.004 (SW-Trib-2-Dup) 7940.005 (Trip Blank)				
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	X		
19	No other potential data quality issues were identified. If this is not true, describe issues.	X		Refer to Table 1 for qualified analytical data.

CAR = Corrective Action Report

LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Data Review Checklist - 7941
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7941		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) Chloride (EPA 300.0)		Matrix: Soil, Water	
Samples: 7941.001 (MW-5 (4-5)) 7941.002 (MW-5 (11)) 7941.003 (Equipment Blank)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?		X	Holding time was not met for chloride. Analysis for chloride in soil was not part of the scope of work. However, Terracon elected to run soil samples for chloride for the purpose of evaluating field screening data for chloride.	
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?	X			
5	Do reported detection limits (or reporting limits) agree with the project specifications?		X	Reporting limits for TPH (water) were above the limits specified in the QAPP.	
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					
7	Were initial and continuing instrument calibration analyses performed? And reported?	X		As stated in the QAPP, the laboratory was not required to report all calibration results. For the purpose of data validation, it was assumed that the laboratory performed the method-specified calibration analyses.	
8	For each analytical batch, are results provided for a method blank?	X			
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for BTEX and chloride.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?		X	MS/MSD results were not provided for chloride.	

Data Review Checklist - 7941
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7941		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) Chloride (EPA 300.0)		Matrix: Soil, Water	
Samples: 7941.001 (MW-5 (4-5)) 7941.002 (MW-5 (11)) 7941.003 (Equipment Blank)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method. However, field duplicates were not included with this data set.	
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?	X			
QC Results					
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X			
14	Are LCS/LCSD recoveries and RPDs within limits?		X	TPH C12-C28 (soil) - LCS % recoveries within lab limits but > than QAPP limits	
15	Are MS/MSD recoveries and RPDs within limits?		X	toluene - RPD > limits	
16	Are surrogate recoveries within limits (organic analytes only)?		X	TPH (water) - > limits	
Other Data Quality-Related Issues					
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X			
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	X			
19	No other potential data quality issues were identified. If this is not true, describe issues.	X		Refer to Table 1 for qualified analytical data.	

CAR = Corrective Action Report
LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate
MS/MSD = Matrix Spike/Matrix Spike Duplicate
QAPP = Quality Assurance Project Plan
RPD = Relative Percent Difference

Data Review Checklist - 7942

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7942		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 7942.001 (MW-1) 7942.002 (MW-1 Dup) 7942.003 (Trip Blank)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?	X			
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?	X			
5	Do reported detection limits (or reporting limits) agree with the project specifications?		X	Reporting limits for Bromide and TPH were above the limits specified in the QAPP.	
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					
7	Were initial and continuing instrument calibration analyses performed? And reported?	X		As stated in the QAPP, the laboratory was not required to report all calibration results. For the purpose of data validation, it was assumed that the laboratory performed the method-specified calibration analyses.	
8	For each analytical batch, are results provided for a method blank?	X			
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for BTEX, TDS, carbonate, bicarbonate, chloride, sulfate, bromide, nitrate, and conductivity.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?	X		MS/MSD pairs were provided in accordance with Table A7.1 of the QAPP.	

Data Review Checklist - 7942

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7942		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 7942.001 (MW-1) 7942.002 (MW-1 Dup) 7942.003 (Trip Blank)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method. A duplicate groundwater sample was included with this data set.	
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?	X			
QC Results					
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X			
14	Are LCS/LCSD recoveries and RPDs within limits?		X	bromide - LCS % recoveries within lab limits but < than QAPP limits nitrate - LCS % recoveries within lab limits but < than QAPP limits	
15	Are MS/MSD recoveries and RPDs within limits?		X	toluene - RPD > limits chloride - MS/MSD % recoveries < limits chloride - RPD > limits sulfate - MS/MSD % recoveries < limits sulfate - RPD > limits bromide - MS/MSD % recoveries within lab limits but > than QAPP limits nitrate - MS/MSD % recoveries within lab limits but < than QAPP limits sodium - MS/MSD % recoveries < limits	
16	Are surrogate recoveries within limits (organic analytes only)?	X			
Other Data Quality-Related Issues					
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X			
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	X			

Data Review Checklist - 7942

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006
A4 Scientific Laboratory Work Order No.: 7942		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water
Samples: 7942.001 (MW-1) 7942.002 (MW-1 Dup) 7942.003 (Trip Blank)				
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
19	No other potential data quality issues were identified. If this is not true, describe issues.	X		Refer to Table 1 for qualified analytical data.

CAR = Corrective Action Report

LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Data Review Checklist - 7945

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7945		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005)		Matrix: Soil	
Samples: 7945.001 (MW-7 (20-21))					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?		X	Holding time was not met for chloride. Analysis for chloride in soil was not part of the scope of work. However, Terracon elected to run soil samples for chloride for the purpose of evaluating field screening data for chloride.	
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?	X			
5	Do reported detection limits (or reporting limits) agree with the project specifications?	X			
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					
7	Were initial and continuing instrument calibration analyses performed? And reported?	X		As stated in the QAPP, the laboratory was not required to report all calibration results. For the purpose of data validation, it was assumed that the laboratory performed the method-specified calibration analyses.	
8	For each analytical batch, are results provided for a method blank?	X			
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for BTEX and chloride.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?		X	MS/MSD results were not provided for chloride.	

Data Review Checklist - 7945

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7945		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005)		Matrix: Soil	
Samples: 7945.001 (MW-7 (20-21))					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method. However, field duplicates were not included with this data set.	
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?	X			
QC Results					
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X			
14	Are LCS/LCSD recoveries and RPDs within limits?		X	TPH C12-C28 (soil) - LCS % recoveries within lab limits but > than QAPP limits	
15	Are MS/MSD recoveries and RPDs within limits?	X			
16	Are surrogate recoveries within limits (organic analytes only)?	X			
Other Data Quality-Related Issues					
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X			
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	X			
19	No other potential data quality issues were identified. If this is not true, describe issues.	X		Refer to Table 1 for qualified analytical data.	

CAR = Corrective Action Report

LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Data Review Checklist - 7946

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7946		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 7946.001 (MW-2) 7946.002 (MW-4) 7946.003 (MW-5) 7946.004 (MW-3) 7946.005 (Trip Blank)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?	X			
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?	X			
5	Do reported detection limits (or reporting limits) agree with the project specifications?		X	Reporting limits for Bromide and TPH were above the limits specified in the QAPP.	
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					
7	Were initial and continuing instrument calibration analyses performed? And reported?	X		As stated in the QAPP, the laboratory was not required to report all calibration results. For the purpose of data validation, it was assumed that the laboratory performed the method-specified calibration analyses.	
8	For each analytical batch, are results provided for a method blank?	X			
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for BTEX, TDS, carbonate, bicarbonate, chloride, sulfate, bromide, nitrate, and conductivity.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?	X		MS/MSD pairs were provided in accordance with Table A7.1 of the QAPP.	

Data Review Checklist - 7946

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006
A4 Scientific Laboratory Work Order No.: 7946		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water
Samples: 7946.001 (MW-2) 7946.002 (MW-4) 7946.003 (MW-5) 7946.004 (MW-3) 7946.005 (Trip Blank)				
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method. However, field duplicates were not included with this data set.
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?	X		
QC Results				
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X		
14	Are LCS/LCSD recoveries and RPDs within limits?		X	<u>bromide</u> - LCS % recoveries within lab limits but < than QAPP limits <u>nitrate</u> - LCS % recoveries within lab limits but < than QAPP limits
15	Are MS/MSD recoveries and RPDs within limits?		X	<u>toluene</u> - RPD > limits <u>chloride</u> - MS/MSD % recoveries < limits <u>chloride</u> - RPD > limits <u>sulfate</u> - MS/MSD % recoveries < limits <u>sulfate</u> - RPD > limits <u>bromide</u> - MS/MSD % recoveries within lab limits but > than QAPP limits <u>nitrate</u> - MS/MSD % recoveries within lab limits but < than QAPP limits <u>sodium</u> - MS/MSD % recoveries < limits
16	Are surrogate recoveries within limits (organic analytes only)?		X	TPH (MW-2) - > limits
Other Data Quality-Related Issues				
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X		

Data Review Checklist - 7946
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7946		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 7946.001 (MW-2) 7946.002 (MW-4) 7946.003 (MW-5) 7946.004 (MW-3) 7946.005 (Trip Blank)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	X			
19	No other potential data quality issues were identified. If this is not true, describe issues.	X		Refer to Table 1 for qualified analytical data.	

CAR = Corrective Action Report
LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate
MS/MSD = Matrix Spike/Matrix Spike Duplicate
QAPP = Quality Assurance Project Plan
RPD = Relative Percent Difference

Data Review Checklist - 7947

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7947		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 7947.001 (SW-CR-Down) 7947.002 (SW-CR-Up)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?	X			
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?	X			
5	Do reported detection limits (or reporting limits) agree with the project specifications?		X	Reporting limits for Bromide and TPH were above the limits specified in the QAPP.	
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					
7	Were initial and continuing instrument calibration analyses performed? And reported?	X		As stated in the QAPP, the laboratory was not required to report all calibration results. For the purpose of data validation, it was assumed that the laboratory performed the method-specified calibration analyses.	
8	For each analytical batch, are results provided for a method blank?	X			
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for BTEX, TDS, carbonate, bicarbonate, chloride, nitrate, bromide, sulfate and conductivity.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?	X		MS/MSD pairs were provided in accordance with Table A7.1 of the QAPP.	

Data Review Checklist - 7947

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7947		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 7947.001 (SW-CR-Down) 7947.002 (SW-CR-Up)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method. However, field duplicates were not included with this data set.	
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?	X			
QC Results					
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X			
14	Are LCS/LCSD recoveries and RPDs within limits?		X	nitrate - LCS % recoveries within lab limits but < than QAPP limits bromide - LCS % recoveries within lab limits but < than QAPP limits	
15	Are MS/MSD recoveries and RPDs within limits?		X	toluene - RPD > limits chloride - MS/MSD % recoveries < limits chloride - RPD > limits nitrate - MS/MSD % recoveries within lab limits but < than QAPP limits bromide - MS/MSD % recoveries within lab limits but > than QAPP limits sulfate - MS/MSD % recoveries < limits sulfate - RPD > limits sodium - MS/MSD % recoveries < limits	
16	Are surrogate recoveries within limits (organic analytes only)?	X			
Other Data Quality-Related Issues					
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X			
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	X			

Data Review Checklist - 7947

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006
A4 Scientific Laboratory Work Order No.: 7947		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water
Samples: 7947.001 (SW-CR-Down) 7947.002 (SW-CR-Up)				
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
19	No other potential data quality issues were identified. If this is not true, describe issues.	X		Refer to Table 1 for qualified analytical data.

CAR = Corrective Action Report

LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Data Review Checklist - 7963

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7963		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 7963.001 (MW-7) 7963.002 (Trip Blank)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?	X			
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?	X			
5	Do reported detection limits (or reporting limits) agree with the project specifications?		X	Reporting limits for Bromide and TPH were above the limits specified in the QAPP.	
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					
7	Were initial and continuing instrument calibration analyses performed? And reported?	X		As stated in the QAPP, the laboratory was not required to report all calibration results. For the purpose of data validation, it was assumed that the laboratory performed the method-specified calibration analyses.	
8	For each analytical batch, are results provided for a method blank?		X	Blank results were not provided for carbonate, bicarbonate, sodium and conductivity.	
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for BTEX, TDS, carbonate, bicarbonate and conductivity.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?	X		MS/MSD pairs were provided in accordance with Table A7.1 of the QAPP.	

Data Review Checklist - 7963

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006	
A4 Scientific Laboratory Work Order No.: 7963		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 7963.001 (MW-7) 7963.002 (Trip Blank)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method. However, field duplicates were not included with this data set.	
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?	X			
QC Results					
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X			
14	Are LCS/LCSD recoveries and RPDs within limits?		X	<u>bromide, calcium, magnesium, potassium, sodium</u> - LCS/LCSD % recoveries < than limits <u>sulfate</u> - LCSD % recoveries within lab limits but > than QAPP limits <u>nitrate</u> - LCSD % recoveries within lab limits but < than QAPP limits	
15	Are MS/MSD recoveries and RPDs within limits?		X	<u>calcium</u> - MS/MSD % recoveries > limits <u>potassium</u> - MS/MSD % recoveries < limits <u>sodium</u> - MS/MSD % recoveries < limits <u>sodium</u> - RPD > limits <u>chloride</u> - MS/MSD % recoveries < limits <u>chloride</u> - RPD > limits <u>sulfate</u> - MS/MSD % recoveries < limits <u>bromide</u> - MS/MSD % recoveries < limits <u>bromide</u> - RPD > limits <u>nitrate</u> - MS/MSD % recoveries < limits <u>nitrate</u> - RPD > limits	
16	Are surrogate recoveries within limits (organic analytes only)?	X			
Other Data Quality-Related Issues					
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X			

Data Review Checklist - 7963

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: November 8, 2006
A4 Scientific Laboratory Work Order No.: 7963		Analytical Method(s): BTEX (EPA 8021B) TPH (TCEQ TX1005) TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6010B) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water
Samples: 7963.001 (MW-7) 7963.002 (Trip Blank)				
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	X		
19	No other potential data quality issues were identified. If this is not true, describe issues.	X		Refer to Table 1 for qualified analytical data.

CAR = Corrective Action Report

LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Data Review Checklist - Chloride Rerun Analysis

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: December 20,2006	
A 4 Scientific Laboratory Work Order Nos.: 7940, 7942, 7946, 7947, 7963		Analytical Method(s): Chloride (SM 4500B)		Matrix: Water	
Samples: 7940.002 (SW-Trib-1) 7942.001 (MW-1) 7946.001 (MW-2) 7946.002 (MW-4) 7946.003 (MW-5) 7946.004 (MW-3) 7947.001 (SW-CR-Down) 7963.001 (MW-7)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?		X	Holding time was met for the initial chloride analysis but was not met for the re-run analysis. Based on analysis of anion/cation results for the site, Terracon requested re-running select groundwater and surface water samples for chloride for comparison purposes.	
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?		X	EPA Method 300.0 was utilized for the initial chloride analysis as specified in the QAPP. However, the re-run analysis was performed utilizing Standard Method 4500B after initial attempts re-running the samples utilizing EPA Method 300.0 indicated inconsistent results.	
5	Do reported detection limits (or reporting limits) agree with the project specifications?	X			
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					

Data Review Checklist - Chloride Rerun Analysis

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: December 20,2006	
A 4 Scientific Laboratory Work Order Nos.: 7940, 7942, 7946, 7947, 7963		Analytical Method(s): Chloride (SM 4500B)		Matrix: Water	
Samples: 7940.002 (SW-Trib-1) 7942.001 (MW-1) 7946.001 (MW-2) 7946.002 (MW-4) 7946.003 (MW-5) 7946.004 (MW-3) 7947.001 (SW-CR-Down) 7963.001 (MW-7)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
7	Were initial and continuing instrument calibration analyses performed? And reported?	X		As stated in the QAPP, the laboratory was not required to report all calibration results. For the purpose of data validation, it was assumed that the laboratory performed the method-specified calibration analyses.	
8	For each analytical batch, are results provided for a method blank?	X			
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for chloride.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?		X	MS/MSD results were not provided for the re-run analysis.	
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method.	
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?			Not Applicable	
QC Results					
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X			
14	Are LCS/LCSD recoveries and RPDs within limits?	X			
15	Are MS/MSD recoveries and RPDs within limits?			No MS/MSD results provided.	

Data Review Checklist - Chloride Rerun Analysis

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: December 20,2006	
A 4 Scientific Laboratory Work Order Nos.: 7940, 7942, 7946, 7947, 7963		Analytical Method(s): Chloride (SM 4500B)		Matrix: Water	
Samples: 7940.002 (SW-Trib-1) 7942.001 (MW-1) 7946.001 (MW-2) 7946.002 (MW-4) 7946.003 (MW-5) 7946.004 (MW-3) 7947.001 (SW-CR-Down) 7963.001 (MW-7)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
16	Are surrogate recoveries within limits (organic analytes only)?	<input type="checkbox"/>	<input type="checkbox"/>	Not Applicable	
Other Data Quality-Related Issues					
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
19	No other potential data quality issues were identified. If this is not true, describe issues.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Refer to Table 1 for qualified analytical data.	

CAR = Corrective Action Report

LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Data Review Checklist - 0705208

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272B

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: July 18, 2007	
DHL Analytical Order No.: 0705208		Analytical Method(s): TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6020) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 0705208-01 (SW-Trib-4) 0705208-02 (SW-Trib-5) 0705208-03 (SW-Trib-6) 0705208-04 (SW-Trib-1) 0705208-05 (SW-Trib-2) 0705208-06 (SW-Trib-3) 0705208-07 (Lower Seep-1) 0705208-08 (SW-CR-50' Down) 0705208-09 (SW-CR-50' Up) 0705208-10 (SW-CR-250' Up) 0705208-11 (SW-CR-1,000' Up) 0705208-12 (MW-12) 0705208-13 (SW-CR-900' Down)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?	X			
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?	X			
5	Do reported detection limits (or reporting limits) agree with the project specifications?	X			
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					
7	Were initial and continuing instrument calibration analyses performed? And reported?	X			
8	For each analytical batch, are results provided for a method blank?		X	Method blank results were not provided for alkalinity.	
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for TDS, alkalinity and conductivity.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?		X	MS/MSD results were not provided for TDS, alkalinity and conductivity. MS/MSD samples not required for TDS and alkalinity per the QAPP. MS/MSD pairs were provided for every 20 field samples analyzed.	

Data Review Checklist - 0705208

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272B

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: July 18, 2007
DHL Analytical Order No.: 0705208		Analytical Method(s): TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6020) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water
Samples: 0705208-01 (SW-Trib-4) 0705208-02 (SW-Trib-5) 0705208-03 (SW-Trib-6) 0705208-04 (SW-Trib-1) 0705208-05 (SW-Trib-2) 0705208-06 (SW-Trib-3) 0705208-07 (Lower Seep-1) 0705208-08 (SW-CR-50' Down) 0705208-09 (SW-CR-50' Up) 0705208-10 (SW-CR-250' Up) 0705208-11 (SW-CR-1,000' Up) 0705208-12 (MW-12) 0705208-13 (SW-CR-900' Down)				
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method.
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?		X	No organic analyses were performed.
QC Results				
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X		
14	Are LCS/LCSD recoveries and RPDs within limits?	X		
15	Are MS/MSD recoveries and RPDs within limits?		X	calcium - MS/MSD % recoveries outside limits magnesium - MS/MSD % recoveries outside limits potassium - MSD % recoveries outside limits sodium - MS/MSD % recoveries outside limits chloride - MS/MSD % recoveries outside limits sulfate - MS/MSD % recoveries outside limits nitrate - MS/MSD % recoveries outside limits bromide - MS/MSD % recoveries outside limits bromide - RPD outside limits
16	Are surrogate recoveries within limits (organic analytes only)?		X	No organic analyses were performed.
Other Data Quality-Related Issues				
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X		

Data Review Checklist - 0705208

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272B

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: July 18, 2007
DHL Analytical Order No.: 0705208		Analytical Method(s): TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6020) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water
Samples: 0705208-01 (SW-Trib-4) 0705208-02 (SW-Trib-5) 0705208-03 (SW-Trib-6) 0705208-04 (SW-Trib-1) 0705208-05 (SW-Trib-2) 0705208-06 (SW-Trib-3) 0705208-07 (Lower Seep-1) 0705208-08 (SW-CR-50' Down) 0705208-09 (SW-CR-50' Up) 0705208-10 (SW-CR-250' Up) 0705208-11 (SW-CR-1,000' Up) 0705208-12 (MW-12) 0705208-13 (SW-CR-900' Down)				
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.		X	Analyst noted that the mineral balance was significantly outside of control limits and significant differences were found between the sample containers for sample 0705208-06 (SW-Trib-3). The mineral balance is off by 19% which is above acceptable limits based on Terracon's conversations with several laboratories. These sample results were relatively consistent with those of other nearby samples (SW-Trib-1 and SW-Trib 2) and are not anticipated to have an adverse impact on this project.
19	No other potential data quality issues were identified. If this is not true, describe issues.		X	Continuing calibration verification (CCV) was slightly above control limits for sulfate analysis performed on 5/24/07. Post digestion spike (PDS) recovery was above control limits for sodium analysis performed on 5/31/07. Refer to Table 1 for qualified analytical data.

CAR = Corrective Action Report

LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Data Review Checklist - 0705228

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272B

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: July 18, 2007	
DHL Analytical Order No.: 0705228		Analytical Method(s): TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6020) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 0705228-01 (SW-CR-1,500' Down) 0705228-02 (SW-CR-2,500' Down) 0705228-03 (SW-CR-2,500' Up) 0705228-04 (SW-EC-2,500' Up) 0705228-05 (SW-CR-500' Down) 0705228-06 (MW-8) 0705228-07 (MW-14) 0705228-08 (MW-7) 0705228-09 (SW-Dup)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?	X			
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?	X			
5	Do reported detection limits (or reporting limits) agree with the project specifications?	X			
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					
7	Were initial and continuing instrument calibration analyses performed? And reported?	X			
8	For each analytical batch, are results provided for a method blank?		X	Method blank results were not provided for alkalinity.	
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for TDS, alkalinity and conductivity.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?		X	MS/MSD results were not provided for TDS, alkalinity and conductivity. MS/MSD samples not required for TDS and alkalinity per the QAPP. MS/MSD pairs were provided for every 20 field samples analyzed.	
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method.	

Data Review Checklist - 0705228

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272B

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: July 18, 2007
DHL Analytical Order No.: 0705228		Analytical Method(s): TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6020) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water
Samples: 0705228-01 (SW-CR-1,500' Down) 0705228-02 (SW-CR-2,500' Down) 0705228-03 (SW-CR-2,500' Up) 0705228-04 (SW-EC-2,500' Up) 0705228-05 (SW-CR-500' Down) 0705228-06 (MW-8) 0705228-07 (MW-14) 0705228-08 (MW-7) 0705228-09 (SW-Dup)				
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?		X	No organic analyses were performed.
QC Results				
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X		
14	Are LCS/LCSD recoveries and RPDs within limits?	X		
15	Are MS/MSD recoveries and RPDs within limits?		X	calcium - MS/MSD % recoveries outside limits magnesium - MS % recoveries outside limits potassium - MS % recoveries outside limits sodium - MSD % recoveries outside limits
16	Are surrogate recoveries within limits (organic analytes only)?		X	No organic analyses were performed.
Other Data Quality-Related Issues				
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X		
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	X		
19	No other potential data quality issues were identified. If this is not true, describe issues.		X	Continuing calibration verification (CCV) was slightly above control limits for sulfate. Only QC samples MB, LCS and LCSD were reporting sulfate from this CCV and these were within control limits. RPD of serial dilution was above control limits for calcium and potassium. Refer to Table 1 for qualified analytical data.

CAR = Corrective Action Report

LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Data Review Checklist - 0705242

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272B

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: July 18, 2007	
DHL Analytical Order No.: 0705242		Analytical Method(s): TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6020) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 0705242-01 (MW-17) 0705242-02 (MW-16) 0705242-03 (MW-1) 0705242-04 (MW-2) 0705242-05 (MW-3) 0705242-06 (MW-4) 0705242-07 (MW-Dup)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
Sample Preservation and Integrity					
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?	X			
2	Were holding times met?	X			
Data Completeness					
3	Are results reported for all target analytes, with no additional analytes?	X			
4	Was the requested analytical method followed?	X			
5	Do reported detection limits (or reporting limits) agree with the project specifications?	X			
6	Are results reported for all samples submitted for analysis?	X			
Calibration and QC Sample Frequency					
7	Were initial and continuing instrument calibration analyses performed? And reported?	X			
8	For each analytical batch, are results provided for a method blank?		X	Method blank results were not provided for alkalinity.	
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for TDS, alkalinity and conductivity.	
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?		X	MS/MSD results were not provided for TDS, alkalinity and conductivity. MS/MSD samples not required for TDS and alkalinity per the QAPP. MS/MSD pairs were provided for every 20 field samples analyzed.	
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method.	
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?		X	No organic analyses were performed.	
QC Results					

Data Review Checklist - 0705242

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272B

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: July 18, 2007	
DHL Analytical Order No.: 0705242		Analytical Method(s): TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6020) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water	
Samples: 0705242-01 (MW-17) 0705242-02 (MW-16) 0705242-03 (MW-1) 0705242-04 (MW-2) 0705242-05 (MW-3) 0705242-06 (MW-4) 0705242-07 (MW-Dup)					
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)	
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X			
14	Are LCS/LCSD recoveries and RPDs within limits?	X			
15	Are MS/MSD recoveries and RPDs within limits?		X	<u>calcium</u> - MS/MSD % recoveries outside limits <u>magnesium</u> - MS/MSD % recoveries outside limits <u>sodium</u> - MSD % recoveries outside limits <u>nitrate</u> - MS/MSD % recoveries outside limits <u>bromide</u> - MS/MSD % recoveries outside limits	
16	Are surrogate recoveries within limits (organic analytes only)?		X	No organic analyses were performed.	
Other Data Quality-Related Issues					
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X			
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.		X	Analyst noted that the mineral balance was significantly outside of control limits and significant differences were found between the sample containers for sample 0705242-06 (MW-4). The mineral balance is off by 10% which is within acceptable limits based on Terracon's conversations with several laboratories.	
19	No other potential data quality issues were identified. If this is not true, describe issues.	X		Refer to Table 1 for qualified analytical data.	

CAR = Corrective Action Report

LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Data Review Checklist - 0705261

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272B

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: July 18, 2007
DHL Analytical Order No.: 0705261		Analytical Method(s): TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6020) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water
Samples: 0705261-01 (MW-11) 0705261-02 (MW-10) 0705261-03 (MW-15) 0705261-04 (MW-5) 0705261-05 (MW-6) 0705261-06 (MW-12) 0705261-07 (MW-9)				
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
Sample Preservation and Integrity				
1	Did samples arrive at the laboratory appropriately preserved (e.g., 4°C, correct acid added to sample)?		X	Sample 0705261-03 (MW-15) was acidified with nitric acid at login.
2	Were holding times met?	X		
Data Completeness				
3	Are results reported for all target analytes, with no additional analytes?	X		
4	Was the requested analytical method followed?	X		
5	Do reported detection limits (or reporting limits) agree with the project specifications?	X		
6	Are results reported for all samples submitted for analysis?	X		
Calibration and QC Sample Frequency				
7	Were initial and continuing instrument calibration analyses performed? And reported?	X		
8	For each analytical batch, are results provided for a method blank?		X	Method blank results were not provided for alkalinity.
9	For each analytical batch, are results provided for an LCS/LCSD pair?		X	LCSD results were not provided for TDS, alkalinity and conductivity.
10	For each analytical/preparation batch, are results provided for an MS/MSD pair? Alternately, are results for MS/MSD pairs provided for every 20 field samples analyzed?		X	MS/MSD results were not provided for TDS, alkalinity and conductivity. MS/MSD samples not required for TDS and alkalinity per the QAPP. MS/MSD pairs were provided for every 20 field samples analyzed.
11	Are field duplicate results provided at the project-specified (QAPP) frequency?	X		Field duplicate samples for this project were collected at the frequency of one duplicate sample per 20 investigative samples per matrix per analytical method.
12	Organic Analyses Only: For each sample (field and QC), are surrogate spike results provided?		X	No organic analyses were performed.
QC Results				

Data Review Checklist - 0705261

Ballinger Seep

Ballinger, Runnels County, Texas

Terracon Project No. 94057272B

Client/Project: RRC/Ballinger Seep		Reviewer: Terracon/Max Majesko		Review Date: July 18, 2007
DHL Analytical Order No.: 0705261		Analytical Method(s): TDS (EPA 160.1) Sodium, Potassium, Magnesium, Calcium (EPA 6020) Chloride, Sulfate, Nitrate, Bromide (EPA 300.0) Carbonate/Bicarbonate Alkalinity (EPA 310.1) Conductivity (EPA 120.1)		Matrix: Water
Samples: 0705261-01 (MW-11) 0705261-02 (MW-10) 0705261-03 (MW-15) 0705261-04 (MW-5) 0705261-05 (MW-6) 0705261-06 (MW-12) 0705261-07 (MW-9)				
#	Review Item or Question	Yes	No	Comments (List Exceptions, Explanations, etc.)
13	Do method blank results show no detectable concentrations of target analytes (i.e., results = ND)?	X		
14	Are LCS/LCSD recoveries and RPDs within limits?	X		
15	Are MS/MSD recoveries and RPDs within limits?		X	<u>calcium</u> - MS/MSD % recoveries outside limits <u>magnesium</u> - MS/MSD % recoveries outside limits <u>sodium</u> - MSD % recoveries outside limits
16	Are surrogate recoveries within limits (organic analytes only)?		X	No organic analyses were performed.
Other Data Quality-Related Issues				
17	The laboratory did not issue any CARs. If this is not true (a CAR was issued), describe impact on sample results.	X		
18	The analyst did not describe any analytical anomalies. If this is not true, describe potential impact to sample results.	X		
19	No other potential data quality issues were identified. If this is not true, describe issues.	X		Refer to Table 1 for qualified analytical data.

CAR = Corrective Action Report

LCS/LCSD - Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD = Matrix Spike/Matrix Spike Duplicate

QAPP = Quality Assurance Project Plan

RPD = Relative Percent Difference

Limited Site Investigation
Ballinger Seep
Ballinger, Runnels County, Texas
Project No. 94057272B
August 28, 2007



APPENDIX G

Field Notes

①

7-17-86 Sunny 102°F

0800 ARRIVED ON-SITE, YOKO MURAKI
 WE TURNED APPROX 90 DEGREES
 BUT AGAIN FLOWED BY THE
 VANDERBILT MOUNTAINS BY RAZER
 JSM STRIPES (PROBABLY
 ALSO PRESENT)

0815 TOM JESS AT JSM
 STOPPED TO LOOK AT JESS +
 A WENT TO A TYPICAL BRUSH
 LOCATIONS

1000 BEGAN CLIMBING PATHWAY TO
 FIRST LOCATOR WITH ROTARY
 CRUISE AT 1011

1145 BEGAN DESCENDING **MW-1**
 STARTED WITH THE JESS
 TO ASK SO THAT WE CAN USE
 A BETTER SAMPLE

1235 Equipment reconfigured - Ready to start
 MW-1 w/ air coring

1450 BEGAN ASCENDING

1445 TOP OF 10' OF GNEISS IN
 THE LOCATOR - A RESISTIBLE
 STOP ZONE WAS ENCOUNTERED AT
 9.5' - A TIGHT CLAY LAYER
 (2-3") WAS ENCOUNTERED - THE
 NOW ABOVE THE CLAY LAYER

②

HAD SOME PROBLEMS IN THE OVERCAST
 NO OTHER PORTIONS OF THE GNEISS
 OBSERVABLE MOISTURE - THERE WAS
 INSUFFICIENT PROXIMITY OF JESS TO
 GROUND A SAMPLE FOR BTEX - HOWEVER
 WE WERE ABLE TO FLY SWEEPER FOR
 CHEMICALS - RESULT < 1,000 M/L -
 THROUGHOUT DOES NOT APPEAR TO BE
 THE SEEP - CHEMICALS TO CLAY
 CHEMICALS FROM 11-12', CHEMICALS
 CIRCUMSTANCES FROM 11-12' -
 1525 CONTINUED SAMPLE MW-1 1112' -
 ALSO CONTINUED IMPROVE SAMPLE
 FROM SAME INTERVAL

1620 FINISHED MW-1 - SEE 20' OF
 SUCCESSION - NOTE THAT WITH IS
 MAKING WATER

1700 - STOP **MW-2** APPROX 10' AWAY FROM
 MW-1. USE NO SAMPLING TUBES FOR
 UPPER 10' - ONLY COLLECTED @ 10-15'
 COLLECT ONE SAMPLE FROM 10-15'
 GIVE TO PORN ALCOHOL IN THIS
 INTERVAL OF MW-1 - WE STOPPED
 POINT MEASUREMENT FOR THIS SAMPLE

1800 JSM STRIPES BY FOR PORN
 30 METERS

7-18-06

0700 - Arrive on-site, 0710 Drills on-site
 0755 - collect 'Seep 1' surface soil sample
 From seep area ~ 25' directly down-gradient of MW-2, along creek bed
 0800 - collect 'Seep 2' surface soil sample
 from seep area ~ 25' directly down-gradient & slightly downstream from MW-1 - beside creek
 0805 - collect 'Seep 3' surface soil sample
 from seep area ~ 35' down gradient & down stream of MW-1 - beside creek

- seep 1 = < 1000 mg/kg
 seep 2 = 1,016 mg/kg
 seep 3 = < 1,000 mg/kg
 - MW-1 DTW = 9.58', purge 30 gallons

from MW-1 using bailer & whole pump out, 1 fluid relatively free of fine-grained sediment.
 collect sample from MW-1 for field test
 at chloride = ~~8,784~~ 3,196 (mg/l); TD of MW-1 = 25.24'
 - MW-2 DTW = 22.10', purge 27 gallons
 w/ bailer & whole pump until dig 10 consecutive pulls w/ ~~1~~ ≤ 1" in bailer
 TD = 50.05', chloride field test = > 6,175 mg/L

1800

common sample from 15-16' -
 between basement and rock
 sample from core between upper
 member & base of fracture
 near that was with - IT
 reported that the upper core
 of uranium is present at this
 location
 finished borehole MW-2 TO
 a depth of 50 feet -
 the interval from 50-25
 feet w/ top of sand at
 25 feet
 LEASE WITH

✓
 7/19/06

2000

(5)

0730 - INSPIRING FROM
 POINTS HORIZONS IN THE
 AREA OF THE BURRY - A
 3/4 HAMMER-
 WHEN UP TO BORE A
 THE SUMP AREA BY
 APPROXIMATELY TWO
 FEET OF
 IT INCH CLOTTER WHEN
 WAS INTRODUCED INTO
 THE BORE HORIZONTAL
 A 5' BLANK SECTION OF
 PVC PIPE WAS TIED INTO
 THE JACKING PIPE. A
 BUCKER WAS THEN
 THE END OF THE
 TO LOWER WATER FROM
 IN AN EFFORT TO
 THE MEASUREMENT OF
 THE SUMP

1020 STANLEY BRADMAN MW-3
 1045 CANON JAIN JENSEN TO
 1110 WORK IN ANOTHER
 CONCRETE PIPE 100.5
 BRADMAN MW-3 TO 15'
 JEN 12.5' OF JUNCTION
 TO TOP OF SURFACE
 BRADMAN MW-3

(6)

1300 STANLEY MW-4
 Collect "Seep-4" & "Seep-5" surface soil
 Samples from back New MW-3
 Seep-4 = 8,132 mg/kg Chloride
 Seep-5 = 24,700 mg/kg Cl
 1430 FINISH MW-4 TO 25', JEN
 20' OF SURFACE
 1545 STOP WORKING MW-5
 WORKING WITH
 2000 FINISH WORKING MW-5 TO 55'
 WITH NEARBY NEW MW-4
 WITH TOMORROW
 LEAVE SITE

Yours truly
 9/18/06

⑦

7-19-06

Sunny 100°

0700 - Arrive on site 0710 Drillers on site
 - Drilled completion well @ MW-5, using dozer to clear area for MW-6.
 0800 0970 TO WATON FROM TOC
 MW-1 9.57
 MW-2 PRESSURE W/ 32.0
 MW-3 14.85
 MW-4 0.04
 0830 - CHECK JERRY MATHS FORMS
 NO SURTJ
 WATON
 SMP-1 - 14 CWS H2O ^{EMPTY & START} PUMP
 SMP-2 - TRACE (JEN W/ 0.05)
 SMP-3 - TRACE (JEN W/ 0.05)
 SMP-4 - 0.04
 0845-0915 Calibrate VSI unit # 05E2343AA
 (centered unit from Geotech)
 Calibrate Conductivity w/ 1413 $\mu S/cm$
 Standard

Calibrate pH - 2 point 4.00 & 7.00
 Calibrate OFF @ 30°C to 212 mV
 Calibrate DO w/ barometric pressure 799.3 mV
 0940 - Start pushing MW-1 w/ Peri-pump in preparation for sampling - see VSI Sampling Sheet for well-specific data

⑧

- Collect "MW-1" @ 1035
 - Collect "MW-1 Dup" @ 1110 (duplicate)
 - Collect "MW-1 MS" @ 1150 (Mexico spike)
 - Collect "MW-1 MSB" @ 1225 (Mexico spike dup)
 - Peri pump ran continuously (except for one 3 minute stoppage @ 1115 to change battery) @ 200 ml/min.
 Very slight draw down during sampling of MW-1. For all 4 samples collected:
 BTEX, TPA-1005 & 1006, AHA, Chloride, Sulfate, Nitrate, Bromide, Carbonate, Bicarbonate, Sodium, Potassium, Magnesium, Calcium, TDS, & conductivity.
 Finished all sampling @ MW-1 @ 1244
 - 1245 - Collected Equipment Blank off auger w/ distilled water after drillers
 - Collected decon.
 - Collected Surface Soil Sample "CK-1"
 From sediment adjacent to Colorado River walkway for Chloride field test = $> 24,700 \mu Cl$
 - Start Drilling MW-6 @ 1410
 1510 - Collected water sample "seep.1" directly down gradient from MW-1 & MW-2 adjacent to creek. Sampled water seep. from bank - sediment interference possible

1535 "SW-Trib 1" surface water sample from tributary directly downstream of MW-1 + MW-2.
 SW-Trib 1 - MS + SW-Trib 2-MSD @ same location @ 1535
 collect "SW-Trib 2" + "SW-Trib 2a" from tributary downstream of SW-Trib 1 location - surface water samples
 finish setting MW-6. Drills setting up @ MW-7 for drilling tomorrow.
 1745 - Y. Noy - off-site w/ samples to FedEx facility in San Angelo
 1800 - All personnel off-site

~~Yore~~
 7-19-06
 7-19-06

7-20-06 Sunny 99°
 0700 - Arrive on-site
 Calibrate VSI - conductivity to 1413 $\mu S/cm$
 pH - 2 point - 4.0 + 7.0
 off @ 28°C to 214 μV
 Do w/ barometer pressure = 720.7 mmHg
 Gauge MW 2 - DTW = 21.58
 0740 - Start drilling MW-7 w/ hollow stem augers
 0801 - Start piling MW-2
 0835 - Sample MW-2 for Same Parameter as MW-1
 0905 - Sampling of MW-2 complete
 0910 - Calibrate OVA 588 w/ low spin gas to 101.0 pPR
 0930 - 14.40' DTW, 14.92' TD @ MW-3
 0940 - Collect w/ 4 lines w/ riprap w/ 1 dry
 0955 - 22.04' DTW @ MW-4, purge 1 liter out w/ perilling
 DTW = 22.70'; developed by bailing
 1.5 gallons until dry. TD = 25.13'
 1040 - 52.84' = DTW @ MW-5
 Chloride field test on water from MW-4 = 6,175 mg/L Cl
 1105 - collected 1-liter from MW-5 w/

bailer & then developed it by bailing dry. Collected sample for field chloride screening = $> 6,175$ mg/L (maximum reading on test strip) @ MW-5

TA = $\frac{50.09}{55.11}$
40.09
55.11
MW-4 = 70 @ MW-6 -

well is dry
- Driller finished w/ MW-7. Preparing to demo dozer & equipment

1215 - Driller off-site
1230 - Went adjacent down to 2.5' @ seep adjacent to main & inst. 2" screen w/ sand pack

1250 - Collect surface water sample at confluence w/ distrib. of Colorado River. Sample Collected 10' ~~at~~ off bank, in river

1305 - Collect surface water sample @ SW - CR - up 50' upstream of confluence - 10' off bank in river

1345 - MW-4 STU = 23.75
1400 - sample MW-4 w/ bailer due to low water volume

1440 - DTW = 53.13' @ MW-5
1445 - Sample MW-5 w/ bailer due to lack of water & depth

1530 - MW-3 DTW = 14.53' @ use persipung to collect partial sample
@ 1540 - 4 boxes & 2-250ml @ 1-250ml @ 1600 - Field chloride test on

GW from MW-3 = $> 6,175$ mg/L (9.8 on strip)
@ 0900 earlier today M. Mujersko collected soil sample MW-7 (00-20) during installation of MW-7

1610 - Field chloride test MW-2 = $7,6175$ mg/L (9.8 on strip)

1645 - Field test on water from MW-1 = 2373 mg/L chloride

1730 - Leave site to take samples to test
1800 - M. Mujersko off-site

~~MFE log~~
7-20-06

13

7-16-06

- 0800 Arrive on-site
- MW-7 - Still dry
- MW-6 - Still dry
- 0900 - Complete Slug tests on MW-1
- 1005 - Complete Slug test (existing hole)
- MW-4

1010 - MW-X doing pump tests on seep - temp well (3.5' deep)

Note: Slug & Pump test data recorded on Slug Test Field data forms

- 1045 - Complete fishy test on MW-4
- Chloride field test on MW-4
- groundwater = 6,175 mg/L (same as previous test)

- Chloride field tests on Tib 1 & Tib 2
- = 6.4 on Tib 1 = 2,772 mg/L
- Chloride field test on Tib 1 (upstream)
- = 6.0 = 2,373 mg/L

Chloride field tests: water:

Seep = ~~1,258~~ mg/L 1,367 mg/L

CF-upstream = 655 mg/L

CF-downstream = 655 mg/L

Seep monitoring point = 1,058

1300 - Finish fishy & falling head Slug tests on MW-2

14

1340 - Complete pump test & Seep Monitoring Point

- Gauge each well during day - today & record levels on Water Level Form

1430 - 4hr off-site

GPS LOCATIONS & ELEVATIONS

WATERWAY WEA / N31°43.698/W99°55.705/1667

MW-6 / N31°43.734/W99°55.747/1662

MW-5 / N31°43.700/W99°55.709/1666

SEEP A / N31°43.682/W99°55.703/1670

MW-3 / N31°43.706/W99°55.770/1683

SEEP B / N31°43.724/W99°55.778/1643

SEEP C / N31°43.749/W99°55.782/1645

SEEP D / N31°43.765/W99°55.764/1641

MW-7 / N31°43.794/W99°55.754/1623

MW-1 / N31°43.773/W99°55.780/1643

MW-2 / N31°43.771/W99°55.783/1643

MW-4 / N31°43.769/W99°55.799/1643

2" seep monitoring point / N31°43.778/W99°55.789/1635

BOW STREAM TRANSBURY SW sample

N31°43.792/W99°55.786/1615

TRANSBURY AT COMMANO MOUND / CA-5

N31°43.810/W99°55.773/1611

UPSTATION TROUGH SW SAMPLE

N31°43.777/W99°55.785/1618

CA-1 / N31°43.807/W99°55.764/1610

CA-SW-200H / N31°43.811/W99°55.764/1610

CA-2 / N31°43.811/W99°55.764/1605

CA-3 / SW UPSTATION / N31°43.810/W99°55.785

SEAP-1 / N31°43.775/W99°55.794

SEAP-2 / N31°43.782/W99°55.803

SEAP-3 / N31°43.782/W99°55.791

SEAP-4 / N31°43.706/W99°55.772

SEAP-5 / N31°43.709/W99°55.778

BK6-1 / N31°43.678/W99°55.666/1671

BK6-2 / N31°43.670/W99°55.703/1670

BK6-3 / N31°43.671/W99°55.746/1666

WHW NO. 2 (PCA 246 WHW) ON DT74

PUMP / N31°43.659/W99°55.836/1667

CNCRAPAC ESEWY SCHEDULE

SORTL DATA

SEAP A <120

SEAP B 2348

SEAP C <1200

SEAP D 5468

SEAP E 2348

SEAP F 1416

CA-3 SEAP E

TRANSBURY

CONTRACTORS

SEAP

CA-2 9492

CA-3 1212

CA-4 11,088

CA-5 12,996

BK6-1 <120

BK6-2 <120

BK6-3 <120

7/21/06

(17)

8-15-06

0900 YOUNG MAN AND MAX MASUKU
ARRIVE ON-SITE & OPEN
AW OF THE MONITOR VEH
SITE APPEARS TO HAVE HAD SOME
HAZARDOUS MATERIAL VISIT
MUST VERIFY < 1" BASED ON
OBSERVATIONS OF LOCATION
WHEREAS OF MONITOR IN AREA
THAT WERE CLEARLY BURNED MW
INSTRUMENTATION
BURN GAMES MONITOR WIND,
YOUNG BURN BURNING MW-7
1030 MW-7 CHANGE = 4176 ppm -
FIELD TEST
1045 BURN SW RETURN MW-4
1300 Complete listing of falling shing
test & MW-4 white mud
measures distance between wells
& key site features
1337 - Discontinue shing test @ MW-3
after 30 minutes due to irregular
readings (water level)
1440 - Complete 30-minute bail down
test on MW-3

(18)

1500 D/W @ MW Z = 28.87

This not recovered from drilling in
dry during development.
Sample MW-7, MW-7 MS &
MW-7 MS @ 1500
For MW-7 collected 4 VOA's & 3 plastic
for MW-7 MS & MW-7 MSD
collected only 4 VOA's each
due to lack of water in well
- Find & gang on-site creek well -
TD = 23.19', Dry
Investigate other potential wells, structures
& tributaries

SITE MEASUREMENTS

SEAP 405 WEST 100' CONC > TRAP 18'
SEAP 405 EAST 100' CONC > WARE AT MW-3
MW-3 TO INTERSECTING TRIBUTARY - 65'
SEAP E NORTH 33' > TRAP WABIN 210'
SEAP E SOUTH 53'
SEAP F SOUTH 38'
SEAP B 50' x 10'
SEAP C 75' x 15'
SEAP D 30' x 10'
MW-7 → COMMON AGUE (CA) 90'
MW-7 → TRAP 120'

CR → SW-TAIL-2 123'
 CR → BEGINNING OF SECTION 252'
 CR → MW-1 + SECTION MP 217'
 CR → SW-TAIL-1 190'
 CR NORTH BANK AT CR-1
 CR SOUTH BANK
 CR MARKER
 MW-1 → MW-4 90'
 WOLVHORN WEN → MW-5 55'
 MW-5 → MW-6 285'
 WATER WEN - EAST OF JATE
 NEAR CR & A TRAILWAY
 WJ of JATE
 TB = 23.19 N 21° S TACKON
 WEN IS DAM
 N 31° 43.665
 W 99° 55.378
 BRG-4 N 31° 43.768
 W 99° 55.819
 DRG-5 N 31° 43.764
 W 99° 55.735

8/15/06

8-21-06
 0900 ARRIVE ON-SITE - MEET w/ SURVEYORS & WORK SITE w/ SURVEYORS TO SHOW THEM LOCATION WEN LOCATIONS ETC.
 1000 OPEN AVE MONTION WEN TO AVOID THEM TO EQUIVALENTS
 1030 BASIC COMMUNISM COMMUNITY DATA FOR JPL, GW & SW SEE FIELD DATA SHEETS
 1410 GAME MONITOR WEN - SEE FIELD DATA SHEETS
 1515 MEET w/ SURVEYORS TO SHOW THEM PROVISIONAL SURVEY POINTS

8/24/06

(21)

4.23.07

- 0755 Arrive on-site, off load rental dozer, 1 1/2 reefer w/ J. Morgan, M. Pujesko & 3 other drill crew from Universal
- Set up to start @ MW-12 calibrate OVR - 580B.
- M. Pujesko scouting drilling locations & gauging existing wells
- MW-12 stop @ 40' - would leave open to wait for water
- 1140 - Start MW-13
- 1400 Finish MW-13 - equipment jam caused > 30 minute delay.
- Completing chloride tests while waiting. ~1300 Brian w/ RRC on-site
- 1430 Find path to Aug-9 for dozer. Universal offer to clear path while dozer does MW-13
- 1450 - Start MW-9
- 1605 - representative for owner on-site was unaware that we would be here. Said owner is out of town.
- OKing w/ us being here.
- 1715 Finish drilling MW-15

(22)

4.23.07

- Walk Site w/ M. Pujesko while drillers set well
- 1800 - Drillers off site
- 1905 - Leave site w/ M. Pujesko
- 2105 - Completing chloride tests in room for MW-15
- 2225 - Finish chloride tests

Good Day 4.23.07

(23)

4-24-07

- 0750 Arrive on site w/ drillers calibrate WPA
- 0830 Start MW-9 while dozer operator clears pathway to MW-8 + MW-14
- 1030 - Finishing MW-9
- MW-13 boring (was left open yesterday) is 100% dry
- MW-12 boring (was left open yesterday) is dry - water level ^{is} 13' wet limestone on bottom of it
- MW-15 dry - 100% MW-8
- 1230 Finish drilling MW-8
- 1310 Starting MW-14 - Doppler shows tornado water for Ballinger & band of showers in area. Thunder nearby. Not overhead
- 1430 - Finish MW-14. wheel off location for MW-10
- ~~2185~~ ²¹⁸⁵ ~~start~~ ^{start} NW of MW-5 & 340' E-SE of MW-6
- Dozer clearing path to MW-10
- moved location of MW-10

(24)

4-24-07

- Close to MW-5 then instead on map due to slope.
- 1540 - Starting MW-10
- 1740 - Finish drilling MW-10.
- Leave 4:40 - drill bit in hole w/ cover over hole to minimize rain coming in
- Drill final lands nearby into area.
- MW-12, 13 - & 15 dry
- 1800 - Leave site w/ drillers
- 2200 - 2330 - Chloride tests in metal room

gone by

4.25-07

- 1340 - Finish installing Boring
- 1405 - ~~Start~~ Boring for MW-13
- Still dry - Re-enter w/ air rotary bit to drill to 70'
- 1540 - Finish installing MW-13 to 70'
- Recheck MW-12 & it extracts has no water on by very wet mud e bottom
- MW-15 69.35' = DTW 71.45' = TD
- 1715 Collected sample w/ bailer & filtered it. Inside reading = 200 ms/L w/ low range for water west of MW-9 along river after drillers leave site e ~ 1745. They bail pits for MW-15 & MW-10 before leaving & set screen well e MW-12.
- Checked MW-10 - dry
- Mark location for additional east well along river - w/ 600' east of MW-14 close to river
- 2010 - Leave site

Yok Mozoya

4.25-07

- 0750 - Arrive on-site
- 69.55' = DTW e MW-15 - water in well - Shallow
- MW-12 - has water & mud e bottom
- MW-13 - 100% dry
- Drillers setting well e MW-10 while I locate pit to MW-11 & check for water in wells.
- Driller reports moisture (not water) on pipe in MW-10
- MW-9 - dry
- MW-8 - dry e 0930
- MW-14 - dry e 0935
- Callibrate OVR e 1015
- 1035 Start drilling MW-11
- 1245 Finish drilling MW-11 to 70'. Before setting well, drillers stop to receive delivery of sand & gravel
- I order more low range charcoal strips from Hack For. Next day delivery to MW-12

(27)

4-26-07

Sunny 11.85°

- 0755 - Arrive on-site
- MW-12 - dry
- MW-13 - dry
- MW-10 - dry
- MW-11 - dry
- MW-9 MW-30/41
- 0830 Correlat underdeveloped samples
- For Chloride test
- MW-8 - dry
- MW-14 - dry
- instructions on conductivity meter
- Not in box - cleaned
- Dist. water reading 1570 $\mu S/cm$
- w/ 1413 $\mu S/cm$ standard solution
- MW-9 sample has 415 $\mu S/cm$ w/ high range
- and 430 $\mu S/cm$ w/ low range test strip
- For Chloride
- Has reading of 4000 $\mu S/cm$ -
- adjusted to ~~3618~~ 3863 $\mu S/cm$ for
- instrument
- 1000 - sily test e MW-3
- doing chloride tests during sily
- upper seep 2 collected 4-23-07
- by M. Magjesko

(28)

4-26-07

- Upper seep 2 = > 6000 $\mu S/cm$
- First test w/ expanded high range
- NaOH test kit Model CA-51
- is inconclusive - (yellow solution, brown precipitate)
- 2nd & 3rd tests - yield same results -
- appears to be 15,000 $\mu S/cm$
- Conductivity is above range of meter
- but solution w/ 1/2 distilled water =
- 18,750 $\mu S/cm$
- 1010 Correlat missing / factory head
- Sily test on MW-3
- Note sily test is actively
- flowing across MW-3
- 1030 - 1300 off-site for
- distilled water to P/Lu chloride
- strips that arrived via FedEx
- e Motel.
- 1310 Correlat sily test e MW-5
- due to leak of water in column
- 1335 Bail down desk on MW-5 started
- 1430 - Drills on-site from a different
- project in Odessa
- moving path to MW-16
- 1508 start bail down test e

4-27-07

- 0650 - Arrive on site
- continue bail-down test e MWS & seed monitoring point
- 0725 - drillers on-site - setting up e MWS-17 to drill
- 0825 - Calibrate OVA. Start drilling MWS-17
- MWS-17 boring caved when augers removed - drillers could not set well through augers at first due to rock in auger. Had to re-enter hole w/ ply in auger & keep plying out of casing MWS-17
- 1100 - Finish MWS-17
- 1130 - Drillers off-site
- 1200 - Complete Field Chloride tests on MWS-17 soils
- MWS-15 DTW = 68.67' chloride sample for field chloride analysis. Developed well until dry using 50l (swage repeatedly w/ new series and purge until dry or returning free of fine-grained sediment). Purged 20.5 gallons until dry Chloride reading = 250 mg/L. Field conductivity = 2900 μ S/cm
- MWS-8 - Dry

4-26-07

- Seed monitor point while 2 drillers set well pads & 1 uses dzer to get to MWS-16 location
- 1600 - Finish dozing paths to MWS-16. Start dozing path to MWS-17 e 1635 OVA
- 1700 Calibrate OVA
- & Finish clearing path to MWS-17
- Have operator back to MWS-16 w/ hollow stem
- 1725 - Start MWS-16 w/ hollow stem
- 1630 - Drillers setting well & pad e MWS-16
- ~~permanently~~ checking MWS-5 & Seed monitor point DTW's
- for bail-down test
- Drillers complete pads e all wells installed so far while I bail-down 2 locations
- 2040 - Leave site w/ drillers

John B

31

MW-14 - Dry
 MW-9 DTW = 29.42'
 1700 - collected sample for field analysis - Dried well using SEP with dry - Pumped 1.5 gallons of water - chloride test w/ low range = 7607 mg/L - Chloride w/ high range = 883 mg/L
 Conductivity = 5,020 μ S/cm
 MW-11 - Dry
 MW-16 - DTW = 15.10'
 TD = 23.79'

Used bulbs to purge 8 gallons of white developing MW-16. Stuffed Swags / Pumping 20.5' after 710 consecutive ports w/ 20.5'.
 Chloride field test = 2373 mg/L
 Field Conductivity = 7,600 μ S/cm;
 MW-13 - Dry, TD = 69.96'
 MW-12 - Dry, TD = 40.01'
 MW-10 - Dry, TD = 59.78'
 - complete bail down test MW-5
 MW-17 DTW = 21.44'

TD = 29.74' mg/L
 chloride field test = 587 μ S/cm
 conductivity = 3,780 μ S/cm

32

- Collected turbid sample during development of MW-17 + Special IT - chloride field test = 354 mg/L
 - using boiler + white pump
 - but purged well dry > 12 times. water was very turbid due to difficulty setting well in sand, gravel + limestone. Developed for 1.5 hours. May require additional work next time out.
 - replaced well cap on MW-4.
 - All new wells have new lock on cap 5
 - Completed bail down test on SEP monitor point.
 - 1815 - leave site - shot drive back to Dallas

GOE

33

5-21-07

0715 on site opening wells 17, 15, 12, 13, 11, 4, 1, 2, 3, surface soil saturated in vicinity of MW-3

8, 14, 7, 9, 16, 5, 10, 6
1130 off site for lunch

1215 on site gaging wells

- MW 17 - 17.20 MW 8 - 14.35
- MW 15 - 67.01' MW 14 - 23.39
- MW 12 - 38.51 MW 7 - 17.11
- MW 13 - Dry MW 9 - 21.22
- MW 11 - 45.70 MW 16 - 13.25
- MW 4 - 8.96 MW 5 - 49.33
- MW 2 - 17.11 MW 10 - 59.62
- MW 1 - 8.09 MW 6 - 18.16
- MW 3 - 2.06

1430 Finished gaging wells
Tri'g @ seep monitor pt. (white rock) 1.95'
seep monitor point water at surface

1510 Developing MW-8, 20 gal removed
1550 Developing MW-14, 6 gal removed

6" remains in well, water = turbid dk. gr
1715 MW-6 developed, 5-gal removed
in 15 minutes & OTW = 25.05' water

Clear from start of development
1725 Developing MW-12, well almost dry, no water
1730 off site due to thunder storm MW-14

34

5-22-07

0800 on site developing MW-11
5 gallons removed, water relatively clear from beginning of dev't.
0900 coordinating sampling containers w/ lab. Method container MW03
6020 (1) 500ml pres.

300 > (1) 250ml unpres.
310 > (1) 500ml unpres.
120.1 > (1) 500ml unpres.
168.1

0950 Attempt sample MW-10 - First draw due to limited water volume in well
lab revised samples to (1) 500ml unpres. and one 250-ml preserved.

MW-10 DTW = 58.71 w/ TDC @ 59.90
no recovery in 60 min
Inefficient water to sample

1020 Sampling MW-12 - First draw
metals container - clear
unpreserved sample - turbid

Developing MW-12, 0.5 gal removed - dry
1100 off site for lunch

1145 on site scouting surface water
sample locations
1240 1300
Sampling SW-tri-10-4, ... -5 1/2 ... -6
adjacent to MW-3.

-4 collected ~ 50' up stream from MW-3. -5 collected adjacent to MW-3. -6 collected ~ 100' downstream from MW-3

(35)

5-22-07 cont.

1315 Sampling SW-Trib-1, ... 2, ... 3 and lower Scep-1

Crow's Foot (K) mounded in paint spot on rock at SW-Trib-1 at the elevation where depth to water is measured.

SW-Trib-3 is located approx. half way from SW-Trib-2 and the river.

1430 Sampling CR near Trib SW-CR-50. Down, SW-CR-50 up, SW-CR-250 up

1615 Collecting SW-CR-1000' up sample collected with bailer from bank. SW-CR-900' Down collected ~1650

1700 off site to deliver samples to Fed Ex in San Angelo
1830 Drop off samples @ Fed Ex
1930 Arrive @ hotel

~~NFE MA RR~~

(36)

5-23-07

0800 onsite collecting SW-CR-1,500' Down a flowing seep ~1" dia noted ~50' upstream of MW-17 at the water line of CR off site for add'l ice on site

0915 collecting SW-CR-2500' Down at location where power line crosses the river. Sample collected with bailer thrown from top of bank.

1000 At CR collecting SW-CR-2500' up and SW-EC-2500' up w/bailer from power line

1140 collecting SW-CR-500' Down YSI

1200 Calibrating MW-8 low flow

1300 Sampling MW-8 sample

1410 collect MW-8 sample AT MW-14. PTW = 25.00

1430 Purge water clean, low flow/pump

1510 sample MW-14

1530 setting up @ MW-7

1610 sample MW-7

1640 1L sampling SW-CR-500' down with duplicate, MS & MSF

1700 leaving into deliver samples

1810 Drop off samples @ Fed Ex

1915 Arrive at hotel.

~~NFE~~

(37)

5-24-07

0800 on site setting up @ MW-17
 0845 collect MW-17 sample, low flow w/ Peri pump.
 0915 setting up to low flow sample w/ Peri Pump @ MW-16
 1005 collect MW-16 sample
 1030 setting up @ MW-3 low flow with Peri pump
 1110 collecting MW-3
 1130 setting up @ MW-1 ~~to MW-2~~
 1200 collect MW-1 and MW-DUP
 1225 Purging MW-2 w/ Peri pump & YSI
 light rain full - intermittent
 1255 collecting MW-2
 1315 Purging MW-4 w/ Peri pump + YSI
 Thunderstorms approaching
 1355 lightning in vicinity, sample by MW-24
 1400 OFF SITE Heavy Rain & lightning
 1445 on site rain continues
 1600 off site
 1650 Taking 9 samples to FedEx
 1800 Drop off samples
 1900 Arrive at hotel - rain stops

~~MWH~~

(38)

5-25-07

-0730 on site w/ Max Mojesho cloudy and drizzling w/ rain
 0800 Purging MW-6 w/ Peri pump & YSI. Max purging MW-15 w/ bailer
 0830 collect MW-6
 0915 Max purging MW-10 (now having 10' of water) and MW-5 with bailers
 MWH purging MW-9 w/ Peri pump & YSI
 0955 sample MW-9
 1115 Purging MW-11 w/ bailer
 DTW = 49.09
 1250 sample MW-11 w/ bailer
 1320 sample MW-10 w/ bailer
 1335 sample MW-5 w/ bailer
 1360 sample MW-12
 1410 sample MW-15
 1430 off site depart for Hurst
 1900 Deliver samples to FedEx in Hurst, TX.

~~MWH~~

39

Sunny
41-85° 90°

5-30-07

- 0735 - Arrive on-site. Begin opening well caps on each well to allow water levels to stabilize before gauging
- Install T-post approx. 10' w/ stream of confluence of creek w/ river. T-post is about 2' from river bank / sediment deposit.
- Found nearate washer diamondback on bank within 10' of T-post
- 0900 - Finish opening all well caps
- MW-13 still ~~bone-dry~~ bone-dry - No Sampling
- 1010 - Surveys on site w/ F-350 & trailer w/ off-road vehicle (ATV)
- 1130 - First showing survey location to Swadlow's.
- 1300 - Complete sling high e MW-7 while gauging other wells in area
- 1430 - Finish sling test e MW-14
- ~1800 - Surveyors off site after surveying all new wells + T-post & seep monitor point. I walked closely

40

- with surveyors on several locations
- 1900 - Finish sling test e MW-9
- 1949 - Leave site - driving back to Dallas

Joe Perry

WATER LEVEL AND PRODUCT THICKNESS FORM

Sheet 1 of 1
 HBC/Terracon Job No. 94057372
 Description Bullinger Seep
 Date: 7-20-06
 By: y. moza

Sampling Point

Total Depth (ft)

Field Chertide (mg/L)

Well	TOC Elevation	Time	Product Level	Water Level (ft)	Product Thickness	Corrected Elevation	Comments
MW-1			25.24	9.54	2,373		
MW-2			50.05	21.40	76,175 (9.8 on strip)		
MW-3			14.92	14.33	76,175 (9.2 on strip)		
MW-4			25.13	20.59	6,175		
MW-5		55.11	56.10	52.50	76,175 (10.0 on strip)		
MW-6		40.29	41.09	Dry	—		
MW-7			30.23	Dry	—		
Seep			N/A	N/A	1,258 1,367		
SW Trib-1			↓	↓	2,373		
SW Trib-2			↓	↓	2,772		
W-CK up			↓	↓	655		
SW-CK down			↓	↓	655		
SEEP MONITOR POINT			N/A	↓	1,258		

SW Trib-1
 SW Trib-2
 W-CK up
 SW-CK down
 SEEP MONITOR POINT

MAX MAJ 6 300
4/23/07

TABLE 7
Groundwater/Surface Water Elevation Data

Ballinger Seep Ballinger, Texas							
Monitor Well	Gauging Date	Total Depth	Ground Surface Elevation	Top of Casing Elevation	Depth to Groundwater	Water Column Thickness	Groundwater Elevation
MW-1	7/21/2006	25.24	1621.4	1620.88	9.54	15.70	1611.34
	8/15/2006				9.51	15.73	1611.37
	8/21/2006				9.69	15.55	1611.19
	4/23/07				9.34		
MW-2	7/21/2006	50.05	1621.6	1621.58	21.40	28.65	1600.18
	8/15/2006				18.71	31.34	1602.87
	8/21/2006				18.79	31.26	1602.79
	4/23/07				18.18		
MW-3	7/21/2006	14.92	1636.6	1636.28	14.33	0.59	1621.95
	8/15/2006				5.39	9.53	1630.89
	8/21/2006				7.13	7.79	1629.15
	4/23/07				3.18		
MW-4	7/21/2006	25.13	1621.1	1620.68	20.59	4.54	1600.09
	8/15/2006				10.59	14.54	1610.09
	8/21/2006				10.68	14.45	1610.00
	4/23/07				10.54		
MW-5	7/21/2006	55.11	1666.4	1665.96	52.50	2.61	1613.46
	8/15/2006				52.54	2.57	1613.42
	8/21/2006				52.62	2.49	1613.34
	4/23/07				51.99		
MW-6	7/21/2006	40.29	1659.3	1658.89	DRY		
	8/15/2006				DRY		
	8/21/2006				DRY		
	4/23/07				0.64		
MW-7	7/21/2006	30.23	1609.0	1608.62	DRY		
	8/15/2006				24.80	5.43	1583.82
	8/21/2006				27.45	2.78	1581.17
	4/23/07				20.15		
Tributary at Seep	8/21/2006	NA	NA	1610.1	2.14	NA	1607.96
	4/23/07				1.95		
Colorado River	8/21/2006	NA	NA	1585.5	0.38	NA	1585.12
					2.5"		

Note: All data are in feet.
NA = Not Applicable

MW-4 MAY NEED NEW CAP

SEEP MONITOR POINT 4/23/07

2.80

check 12
5, 15, 13, 10
2, 6, 11 bladder

TABLE 7
Groundwater/Surface Water Elevation Data

Ballinger Seep Ballinger, Texas									
Monitor Well	Gauging Date	Total Depth	Ground Surface Elevation	Top of Casing Elevation	Depth to Groundwater	Water Column Thickness	Groundwater Elevation	NOTES	
MW-1	7/21/2006				9.54	15.70	1611.34	low flow with peri pump	
	8/15/2006	25.24	1621.4	1620.88	9.51	15.73	1611.37		
	8/21/2006				9.69	15.55	1611.19		
	4/23/2007				9.34	15.90	1611.54		
	5/21/07 5/24/07				8.07 8.61				
MW-2	7/21/2006				21.40	28.65	1600.18	low flow with peri pump	
	8/15/2006	50.05	1621.6	1621.58	18.71	31.34	1602.87		
	8/21/2006				18.79	31.26	1602.79		
	4/23/2007				18.18	31.87	1603.40		
	5/21/07 5/24/07				17.11 17.42				
MW-3	7/21/2006				14.33	0.59	1621.95	low flow with peri pump	
	8/15/2006	14.92	1636.6	1636.28	5.39	9.53	1630.89		
	8/21/2006				7.13	7.79	1629.15		
	4/23/2007				3.18	11.74	1633.10		
	5/21/07 5/24/07				2.06 2.11				
MW-4	7/21/2006				20.59	4.54	1600.09	low flow with peri pump	
	8/15/2006	25.13	1621.1	1620.68	10.59	14.54	1610.09		
	8/21/2006				10.68	14.45	1610.00		
	4/23/2007				10.54	14.59	1610.14		
	5/21/07 5/24/07				8.96 9.37				
MW-5	7/21/2006				52.50	2.61	1613.46	bailer (<5' water column)/bladder pump (>5' water column)	
	8/15/2006	55.11	1666.4	1665.96	52.54	2.57	1613.42		
	8/21/2006				52.62	2.49	1613.34		
	4/23/2007				51.99	3.12	1613.97		
	5/21/07 5/24/07				49.33 49.75				

found 2.5 GA - bladder

TABLE 7
Groundwater/Surface Water Elevation Data

Ballinger Seep
Ballinger, Texas

Monitor Well	Gauging Date	Total Depth	Ground Surface Elevation	Top of Casing Elevation	Depth to Groundwater	Water Column Thickness	Groundwater Elevation	NOTES
MW-6	7/21/2006	40.29	1659.3	1658.89		DRY		probably still dry
	8/15/2006					DRY		Peri Pump
	8/21/2006					DRY		
	4/23/2007					DRY		
	5/21/07				18.16			
5/25/07	18.78							
MW-7	7/21/2006	30.23	1609.0	1608.62		DRY		low flow with peri pump
	8/15/2006				24.80	5.43	1583.82	
	8/21/2006				27.45	2.78	1581.17	
	4/23/2007				20.15	10.08	1588.47	
	5/21/07				17.11			
5/23/07	17.33							
MW-8	4/27/2007	29.65			Dry		unknown (need to develop)	
	5/21/07				14.35			
	5/23/07				14.45			
MW-9	4/27/2007	31.57			29.42		bailer (<5' water column)/low flow with peri pump (>5' water column)	
	5/21/07				21.22			
	5/25/07				21.76			
MW-10	4/27/2007	59.78			Dry		unknown (need to develop)	
	5/21/07				52.62			
	5/25/07				46.99		unknown (need to develop)	
MW-11	4/27/2007	69.75			Dry		unknown (need to develop)	
	5/21/07				45.70		Blacler Pump	
	5/25/07				49.03			
MW-12	4/27/2007	40.01			Dry		unknown (need to develop)	
	5/21/07				38.71		5/21 Bailer	
	5/25/07				36.21		5/25 Pump 2.5' bails / Bailer (low sample)	
MW-13	4/27/2007	69.96			Dry		unknown (need to develop)	
	5/21/07				Dry			
PR4	5/25/07							

TABLE 7
Groundwater/Surface Water Elevation Data

Ballinger Seep
Ballinger, Texas

Monitor Well	Gauging Date	Total Depth	Ground Surface Elevation	Top of Casing Elevation	Depth to Groundwater	Water Column Thickness	Groundwater Elevation	NOTES
MW-14	4/27/2007	30.05			Dry			bailer (<5' water column)/low flow with peri pump (>5' water column)
	5/21/07				23.37			
	5/23/07				25.00			
MW-15	4/27/2007	71.45			68.67			bailer (<5' water column)/bladder pump (>5' water column) 1.0000 to 1.5 6.15 / Bladder pump
	5/21/07				67.01			
	5/25/07				67.31			
MW-16	4/27/2007	23.79			15.10			low flow with peri pump
	5/21/07				13.25			
	5/24/07				13.37			
MW-17	4/27/2007	29.74			21.44			low flow with peri pump
	5/21/07				17.20			
	5/24/07				17.40			
Tributary at Seep	8/21/2006	NA	NA	1610.1	2.14	NA	1607.96	
	4/23/2007				1.95	NA	1608.15	
Colorado River	8/21/2006	NA	NA	1585.5	0.38	NA	1585.12	
	4/23/2007	NA	NA		0.21	NA	1585.29	
Seep Monitor Point	4/23/2007	NA	NA		2.80	NA	NA	

Note: All data are in feet.
NA = Not Applicable

WATER LEVEL AND PRODUCT THICKNESS FORM

Sheet 1 of 1
 Terracon Job No. 94057272B
 Date: 5.30.07
 By: y. Merg

Description Ballinger Seep
 Field Chloride (MS/cm)
 Field Conductivity (MS/cm)

Well	TOC (ft) Elevation	Total Depth	Expanded Time History Chloride (mg/L)	Product Level	Water Level (ft)	Product Thickness	Corrected Elevation	Comments
MW-1	NA	NA			7.93			
MW-2	↓	↓			16.31			
MW-3	↓	↓			9.82			Water in vault - no apparent leak into well
MW-4	↓	↓			9.08			
MW-5	↓	↓			49.44			
MW-6	>6,175	>20,000	10,000		17.89			Water in vault below TOC ~ 1"
MW-7	NA	NA			17.58			
MW-8	2,770	7,001			14.45			
MW-9	>6,175	>20,000	10,000		21.65			
MW-10	NA	NA			59.82			Not enough water to sample
MW-11	969	2,860			57.29			
MW-12	3,524	11,310			38.47			
MW-13	NA	NA			Dry			
MW-14	1,483	6,470			18.70			
MW-15	523	4,660			67.35			
MW-16	>6,175	>20,000	10,000		13.42			
MW-17	32	1,430			17.42			
Seep Point	NA	NA			2.34			* GS → TOC = 2.17'
T. post	↓	↓			4.43			* GS → TOC = 5.27'
Creek Rock	↓	↓			1.90			

* Survey elevation is from ground surface. Must add casing height (= GS → TOC) to surveyed elevation to get TOC elevation. "GS → TOC" measurements include the distance survey rod sank into mud.

FIELD SAMPLING SHEET - Low Flow GW Sampling "YSI"

Date 7-19-06
 Weather Sunny
 Sampler Y. Rejz

YSI Unit No. Rental Unit
05E2343AA

Site: Bellinger
 JOB# 9457272

Sample Location I.D.	Depth to Water (feet)	Time (military)	Groundwater Quality - Field Measurements				Collected - Additional Information & Lab Analysis					
			Temp (°C)	EC (µS/cm)	DO ₂ (mg/l)	pH	ORP (mv)	Tubing Depth (ft)	TOC Elevation (ft)	Total Well Depth (ft)	Well Volume	Purge Volume (gallons)
AW-1	9.52	0945	23.92	6697	2.21	6.68	78.5	17.0	25.24	1035	0945	(Water Column (Ft) * Gal/Ft) * (volume removed) preserved 250 ml flush 1100, 2 1-liter amber, 3 preserved 250 ml flush 4 1-liter, 3 preserved 250 ml flush
	9.53	0950	23.92	6702	1.75	6.71	74.1					
		0955	23.70	6768	1.62	6.72	67.6					
		1000	23.82	6909	1.27	6.70	63.0					
	9.64	1005	23.94	6971	1.55	6.70	60.6					
		1010	23.87	6988	1.90	6.71	58.0					
		1015	23.68	6996	1.70	6.70	55.6					
		1020	23.47	6977	1.09	6.69	57.6					
		1025	23.54	7019	1.03	6.68	53.3					
		9.65	1030	23.96	7088	0.96	6.68	48.9				
	9.65	1104	End of sampling	MW-1	MW-1	Dup.						
		1110	Start sampling	MW-1	MW-1	MS						
	9.68	1150	Start sampling	MW-1	MW-1	MS						
	9.68	1205	Start sampling	MW-1	MW-1	MS						
	9.66	1241	Final sampling	MW-1	MW-1	MS						
Groundwater Quality - Comparison Ranges - (MNA - AFCEE)			>20°C (1 pt)	<50 mV (1 pt)	<0.5 mg/l (3 pts)	5<pH<9 (0 pts)	**	Remarks: Total of 6 gallons purged in addition to sample volumes				
0-5 (poor), 6-14 (limited), 15-20 (adequate), 20+ (strong)			<-100 mV (2pts)	>5 mg/l (-3 pts)	5>pH>9 (-2 pts)							

Comments: purging at rate of 200 ml/min due to quick well recovery & significant sample volumes
 9 1/2", 2 amber, 2 preserved 250 ml
 1110
 MW-1 MS

Flow interrupted for 3 minutes due to low battery on pump - corrected
 Tubing Depth (ft) to truck kittle, ↓ Log Start Time reset flow to 200 ml/min
 (Water Column (Ft) * Gal/Ft) * (volume removed)
 Parameters to be analyzed:
 Comments: → 9 1/2", 1 amber, 2 preserved 250 ml
 → 9 1/2", 1 amber, 2 preserved 250 ml
 → 9 1/2", 1 amber, 2 preserved 250 ml
 2 preserved 250 ml
 1105
 MW-1 MS

Kt-07/01/01

Equip ment Unit C 1245 off work

** For Comparison Purposes only

FIELD SAMPLING SHEET - Low Flow GW Sampling "YSI"

Date: 7-20-06 Site: Ballinger Seep
 Weather: Sunny, 95° and rising YSI Unit No.: Aerial Unit
 Sampler: G. May

JOB # 94059272

Sample Location I.D.	Depth to Water (feet)	Time (military)	Groundwater Quality - Field Measurements				Collected - Additional Information & Lab Analysis				
			Temp (°C)	EC (µS/cm)	DO ₂ (mg/l)	pH	ORP (mv)	Tubing Depth (ft)	TOC Elevation (ft)	Log Start Time	Well Volume (gallons)
A.W.7	21.58	0801	22.60	29.60	5.14	6.67	162.4	359	0801	50.25	
	22.33	0806	22.65	25.96	4.75	6.74	144.7			0.75	
	22.89	0811	22.96	24.28	4.41	6.75	125.1			0.825	
	22.82	0816	23.23	29.43	4.34	6.75	109.9				
		0821	23.31	25.67	4.44	6.75	122.2				
	22.96	0826	24.00	21.88	4.37	6.76	113.5				
	23.27	0831	24.09	29.83	4.25	6.76	106.9				
	23.14	0905	Final sampling								

Parameters to be analyzed: _____
 Preserved? _____
 Comments: [1" I.D. = 0.041 gal/ft, 2" = 0.163 gal/ft, 4" = 0.653 gal/ft, 6" = 1.47 gal/ft]
 0802 - Retrieval pump speed to reduce draw down - rate of ~85 ml/min
 0807 - Retrieval pump speed to lowest possible setting - ~70 ml/min
 6100 - 1 amber, 0 in reserve / 250 ml, 1 reserved 250 ml.

Sample Location I.D.	Depth to Water (feet)	Time (military)	Groundwater Quality - Field Measurements				Collected - Additional Information & Lab Analysis			
			Temp (°C)	EC (µS/cm)	DO ₂ (mg/l)	pH	ORP (mv)	Tubing Depth (ft)	TOC Elevation (ft)	Log Start Time

Parameters to be analyzed: _____
 Preserved? _____
 Comments: [1" I.D. = 0.041 gal/ft, 2" = 0.163 gal/ft, 4" = 0.653 gal/ft, 6" = 1.47 gal/ft]

Groundwater Quality - Comparison Ranges - (MNA - AFCEE)
 0-5 (poor), 6-14 (limited), 15-20 (adequate), 20+ (strong)
 Remarks: _____
 ** For Comparison Purposes only
 Kt-07/01/01

FIELD SAMPLING SHEET - Low Flow GW Sampling "YSI"

Date 5-23-07

Weather pt. cloudy

Sampler M. Hillier

YSI Unit No. AD

Site: Ball's for Seep

JOB # 94057272 B

Sample Location I.D.	Depth to Water (feet)	Time (military)	Groundwater Quality - Field Measurements				Collected - Additional Information & Lab Analysis	
			Temp (°C)	EC (µS/cm)	DO ₂ (mg/l)	pH	ORP (mv)	Tubing Depth (ft)
MW-8	13.45	21.11	4998	13.15	6.67	99.0	23'	
	13.50	19.75	5313	4.84	6.92	21.8	30	
	13.55	19.66	5400	4.93	6.97	7.3	19 gal	(Water Column (Ft) * Gal/Ft) * (volume removed)
	14.00	19.64	5461	4.26	6.98	5.7	14.10	
	14.05	19.55	5574	4.13	7.02	8.3		Parameters to be analyzed: TDS, Cond., Alkal., Anion, Cation
	14.10	19.62	5544	4.08	7.02	7.8		Preserved? [1" I.D. = 0.041 gal/ft, 2" = 0.163 gal/ft, 4" = 0.653 gal/ft, 6" = 1.47 gal/ft]
mw-1425.00	14.45	21.18	4213	4.51	6.98	3.8	2.8	
	14.50	21.28	4204	4.38	6.93	8.2	30	
	14.55	21.01	4187	4.02	6.94	5.4	19 gal	(Water Column (Ft) * Gal/Ft) * (volume removed)
	15.00	21.06	4159	3.89	6.93	8.2	15.10	
	15.05	20.93	4127	4.14	6.93	11.5		Parameters to be analyzed:
	15.10	20.91	4112	3.88	6.92	11.7		Preserved? [1" I.D. = 0.041 gal/ft, 2" = 0.163 gal/ft, 4" = 0.653 gal/ft, 6" = 1.47 gal/ft]
Groundwater Quality - Comparison Ranges - (MNA - AFCEE) 0-5 (poor), 6-14 (limited), 15-20 (adequate), 20+ (strong)	>20°C (1 pt)	<50 mV (1 pt)	<0.5 mg/l (3 pts)	5 < pH < 9 (0 pts)	**	Remarks:		

Kt-07/01/01

** For Comparison Purposes only

10%

FIELD SAMPLING SHEET - Low Flow GW Sampling "YSI"

Date 5/24/07

Weather Cloudy

Sampler M. H. H. ev

Site: Bulling ev

JOB # 94057272.B

YSI Unit No. A17

Sample Location I.D.	Depth to Water (feet)	Time (military)	Groundwater Quality - Field Measurements				Collected - Additional Information & Lab Analysis							
			Temp (°C)	EC (µS/cm)	DO ₂ (mg/l)	pH	ORP (mv)	Tubing Depth (ft)	TOC Elevation (ft)	Total Well Depth (ft)	Well Volume	Purge Volume (gallons)	Sample Time	Log Start Time
MW-3	2.11	1050	20.68	31880	0.71	6.74	0.4			6.5'				
		1057	20.68	31780	0.31	6.72	-23.0							
		1100	20.77	31754	0.35	7.06	-35.7							
		1105	20.72	31614	0.59	8.28	-62.9							
		1110	20.63	31713	0.57	8.26	-64.4							
MW-1	8.61	1145	19.92	71226	2.56	7.08	32.0							
		1150	19.99	6896	1.50	6.81	15.1							
		1155	20.02	6889	1.47	6.78	10.9							
		1200	19.95	6855	1.44	6.75	10.6							
Groundwater Quality - Comparison Ranges - (MNA - AFCEE)			>20°C (1 pt)	<50 mV (1 pt)	<0.5 mg/l (3 pts)	5 < pH < 9 (0 pts)	**	Remarks:						
0-5 (poor), 6-14 (limited), 15-20 (adequate), 20+ (strong)			<100 mV (2pts)	>5 mg/l (-3 pts)	5 > pH > 9 (-2 pts)		Parameters to be analyzed: Preserved? Comments: <i>MW - DUP collected from MW-1</i>							

FIELD SAMPLING SHEET - Low Flow GW Sampling "YSI"

Date 5/24/07

Weather Cloudy

Sampler M. H. Ullrich

YSI Unit No. AD

Site: See Log

JOB # 9405727213

Sample Location I.D.	Depth to Water (feet)	Time (military)	Groundwater Quality - Field Measurements				Collected - Additional Information & Lab Analysis					
			Temp (°C)	EC (µS/cm)	DO ₂ (mg/l)	pH	ORP (mv)	Tubing Depth (ft)	TOC Elevation (ft)	Total Well Depth (ft)	Well Volume	Purge Volume (gallons)
HW-2	17.42	1230	20.78	17422	3.30	6.70	-9.6	34'	50	1.3	1255	
		1235	20.80	17443	0.61	6.66	-22.9					
		1240	20.86	17465	0.36	6.65	-35.0					
		1245	20.99	17487	0.31	6.65	-42.4					
		1250	21.03	17505	0.31	6.65	-48.3					
		1255	21.12	17517	0.29	6.65	-51.0					
[1" I.D. = 0.041 gal/ft, 2" = 0.163 gal/ft, 4" = 0.653 gal/ft, 6" = 1.47 gal/ft]												
MW-4	9.39	1320	20.94	9297	1.98	6.70	-18.1	17'	25	1355		
		1325	21.04	9018	0.37	6.67	-40.0					
		1330	20.93	8197	0.44	6.69	-49.4					
		1335	20.68	7701	0.71	6.70	-42.2					
		1340	20.56	7464	0.82	6.70	-43.4					
		1345	20.37	7208	0.87	6.70	-35.5					
1350	20.35	7086	0.90	6.71	-31.2							
1355	20.28	7043	0.93	6.71	-29.8							
[1" I.D. = 0.041 gal/ft, 2" = 0.163 gal/ft, 4" = 0.653 gal/ft, 6" = 1.47 gal/ft]												
Groundwater Quality - Comparison Ranges - (MNA - AFCEE)			>20°C (1 pt)	<50 mV (1 pt)	<0.5 mg/l (3 pts)	5<pH<9 (0 pts)	**	Remarks:				
0-5 (poor), 6-14 (limited), 15-20 (adequate), 20+ (strong)			<100 mV (2pts)	>5 mg/l (-3 pts)	5>pH>9 (-2 pts)							

** For Comparison Purposes only

FIELD SAMPLING SHEET - Low Flow GW Sampling "YSI"

Date 5-25-07

Weather CLOUDY

Sampler M. H. White

Site: Buckley

JOB # _____

YSI Unit No. A17

Sample Location I.D.	Depth to Water (feet)	Time (military)	Groundwater Quality - Field Measurements				Collected - Additional Information & Lab Analysis		
			Temp (°C)	EC (µS/cm)	DO ₂ (mg/l)	pH	ORP (mv)	Tubing Depth (ft)	Log Start Time
AW-11		1253	20.15	2216	3.9	7.30	-18.2		
AW-10			20.33	23.32	3.98	7.03	37.2		
Groundwater Quality - Comparison Ranges - (MNA - AFCEE) 0-5 (poor), 6-14 (limited), 15-20 (adequate), 20+ (strong)			>20°C (1 pt)	<50 mV (1 pt) <-100 mV (2pts)	<0.5 mg/l (3 pts) >5 mg/l (-3 pts)	5<pH<9 (0 pts) 5>pH>9 (-2 pts)	**	Remarks:	

Parameters to be analyzed: [1" I.D. = 0.041 gal/ft, 2" = 0.163 gal/ft, 4" = 0.653 gal/ft, 6" = 1.47 gal/ft]

Parameters to be analyzed: [1" I.D. = 0.041 gal/ft, 2" = 0.163 gal/ft, 4" = 0.653 gal/ft, 6" = 1.47 gal/ft]

** For Comparison Purposes only

FIELD SAMPLING SHEET - Low Flow GW Sampling "YSI"

Site: Bealings ca
JOB # _____

Date: 5-29-07

YSI Unit No. AD

Weather _____
Sampler M. K. Howe

Sample Location I.D.	Depth to Water (feet)	Time (military)	Groundwater Quality - Field Measurements				Collected - Additional Information & Lab Analysis	
			Temp (°C)	EC (µS/cm)	DO ₂ (mg/l)	pH	ORP (mv)	
ww-5		1340	21.69	25957	1.77	6.72	2.8	
ww-12		1350	21.26	4772	2.49	7.02	17.3	
Groundwater Quality - Comparison Ranges- (MNA - AFCEE)								
0-5 (poor), 6-14 (limited), 15-20 (adequate), 20+ (strong)								
Remarks:								

** For Comparison Purposes only

FIELD SAMPLING SHEET - Low Flow GW Sampling "YSI"

Date 5-29-07

Weather cloudy

Sampler M. H. Lee

Site: Ballyvaughan

JOB # 98057272B

YSI Unit No. AD

Sample Location I.D.	Depth to Water (feet)	Time (military)	Groundwater Quality - Field Measurements				Collected - Additional Information & Lab Analysis	
			Temp (°C)	EC (µS/cm)	DO ₂ (mg/l)	pH		ORP (mv)
AW-15		1410	21.05	3682	2.96	7.33	-51.5	Tubing Depth (ft) _____ TOC Elevation (ft) _____ Total Well Depth (ft) _____ Well Volume _____ (Water Column (Ft) * Gal/Ft) * (volume removed) Purge Volume (gallons) _____ Sample Time _____ Parameters to be analyzed: _____ Preserved? _____ [1" I.D. = 0.041 gal/ft, 2" = 0.163 gal/ft, 4" = 0.653 gal/ft, 6" = 1.47 gal/ft] Comments: _____
							Tubing Depth (ft) _____ TOC Elevation (ft) _____ Total Well Depth (ft) _____ Well Volume _____ (Water Column (Ft) * Gal/Ft) * (volume removed) Purge Volume (gallons) _____ Sample Time _____ Parameters to be analyzed: _____ Preserved? _____ [1" I.D. = 0.041 gal/ft, 2" = 0.163 gal/ft, 4" = 0.653 gal/ft, 6" = 1.47 gal/ft] Comments: _____	
Groundwater Quality - Comparison Ranges - (MNA - AFCEE) 0-5 (poor), 6-14 (limited), 15-20 (adequate), 20+ (strong)							Remarks: _____	

** For Comparison Purposes only

Slug Test Field Data Form

RESING NAME + FAULTING HEAD

Date: 7/21/06

Technician: MAX MASUKO/YUKA MORIWA

Well Number: MW-1

Top of Screen: 20.24

Borehole Size: 6 7/8

Bottom of Screen: 25.24

Casing Size: 2"

Total Depth of Well: 25.24

Test Method: Instantaneous removal of water using bailer.

Analysis Method: Bouwer and Rice

Static Fluid Level: 9.54

0900

Time (min)	Fluid Level (feet)		Time (min)	Fluid Level (feet)	
	FH	AH		FH	AH
0.25	8.91	11.14	8.00	9.53	
0.50	9.03	10.21	9.00	9.53	
0.75	9.10	9.97	10.00	9.54	
1.00	9.15	9.81	12.50		
1.25	9.20	9.72	15.00		
1.50	9.24	9.69	17.50		
1.75	9.28	9.65	20.00		
2.00	9.30	9.64	25.00		
2.50	9.35	9.61	30.00		
3.00	9.39	9.59	40.00		
4.00	9.45	9.56	50.00		
5.00	9.48	9.55	60.00		
6.00	9.51	9.55			
7.00	9.52	9.54			

0708

Slug Test Field Data Form

Rising Head & Falling Head

Date: 7/21/06

Technician: V. Morgan & M. Regesto

Well Number: Aw 2

Top of Screen: 25.05

Borehole Size: 6 7/8

Bottom of Screen: 50.05

Casing Size: 2'

Total Depth of Well: 50.05

Test Method: Instantaneous removal of water using bailer.

Analysis Method: Bouwer and Rice

Static Fluid Level: 21.40

Time (min)	Fluid Level (feet) FH	RH	Time (min)	Fluid Level (feet) FH	RH
0.25	19.18	23.86	8.00	21.04	22.88
0.50	19.39	23.70 ^{missed}	9.00	21.10	22.82
0.75	19.55	23.40 ^{missed}	10.00	21.14	22.78
1.00	19.66	23.37 ^{missed}	12.50	(1120) 21.21	22.66
1.25	19.78	23.35	15.00	21.25	22.58
1.50	19.87	23.29	17.50	21.29	22.51
1.75	19.97	missed	20.00	21.29	22.44
2.00	20.06	23.23	25.00	21.31	22.31
2.50	20.21	23.20	30.00	21.31	22.20
3.00	20.36	23.18	40.00	21.32	22.01
4.00	20.57	23.13	50.00	21.32	21.86
5.00	20.75	23.06	60.00	21.33	21.75
6.00	20.87	23.00	missed		
7:00	20.98	22.94			

Slug Test Field Data Form

Date: 4.26.07

Technician: V. Morgan

Well Number: MW-3

Top of Screen: ~29.5'

Borehole Size: 6 7/8

Bottom of Screen: ~15

Casing Size: 2"

Total Depth of Well: ~15

Test Method: Instantaneous removal of water using bailer. *Falling / Rising*

Analysis Method: Bouwer and Rice

Static Fluid Level: ~~3.13'~~ 3.20'

Time (min:sec)	Fluid Level (feet)	<i>Rising</i>
0:15	0.91	4.66
0:30	0.84	4.27
0:45	0.90	4.22
1:00	0.90	4.11
1:15	0.92	4.03
1:30	0.92	3.99
1:45	0.93	3.96
2:00	0.94	3.93
2:30	0.94	3.88
3:00	0.95	3.86
4:00	0.96	3.79
5:00	0.96	3.73
6:00	0.97	3.75

Time (min:sec)	Fluid Level (feet)	<i>Rising</i>
7:00	0.99	3.73
8:00	1.01	3.73
9:00	1.02	3.72
10:00	1.04	3.70
12:30	1.09	3.69
15:00	1.12	3.68
17:30	1.15	3.67
20:00	1.19	3.66
25:00	1.24	3.64
30:00	1.30	3.62
40:00	1.40	3.60
50:00	1.49	3.58 end
60:00	1.58	

Slug Test Field Data Form

Date: 8-15-06 Technician: V. Mofsin & M. Majeeqs

Well Number: MW-4 Top of Screen:

Borehole Size: Bottom of Screen:

Casing Size: Total Depth of Well:

Test Method: Instantaneous removal of water using bailer.

Analysis Method: Bouwer and Rice

Static Fluid Level: 10.67 / 10.11
Falling Rising

Time (min)	Fluid Level (feet)		Time (min)	Fluid Level (feet)	
	Falling	Rising		Falling	Rising
0.25	9.84	12.68	8.00	9.92	11.03
0.50	9.86	12.11	9.00	9.93	11.02
0.75	9.88	11.71	10.00	9.93	11.01
(1050) 1.00	9.88	11.48	12.50	9.95	11.00
1.25	9.88	11.40	15.00	9.96	10.99
1.50	9.88	-	17.50	9.97	10.98
1.75	9.88	11.29	20.00	9.99	10.97
2.00	9.88	11.25 (1153)	25.00	10.01	10.95
2.50	9.88	11.19	30.00	10.03	10.94
3.00	9.89	11.15	40.00	10.07	10.92
4.00	9.89	11.12	50.00	10.09	10.91
5.00	9.90	11.09	60.00	10.11	10.89
6.00	9.91	11.06			
7.00	9.92	11.05			

4-26-07

Joe Meyer

PROJECT: Bellinger
PROJECT NO.: 94057272

Terracon
Consulting Engineers & Scientists

MW-5 Well Yield by Cycle Discharge (Bail-down test)

Static water level = 52.13'
Bailed until dry
DTW = 54.67' @ 1335
53.19' @ 1535
52.86' @ 1650
52.67' @ 1840
52.56' @ 1950

TA = 55.14
1 gallon + 30 oz = 1.23 gallons
Recovery Time = 1950 - 1335 = 6 hr 15 min
T₁ = 6.25 hrs
Bailed until dry even though not quite recovery - getting back soon → recovers to 211'

52.13' static level
- 54.67' dry WL
= -2.54' = 100% recovery
x 0.90
= -2.286' = 90%
+ 54.67
52.38' = 90% static water level

DTW = 54.68' @ 2000 after bail-down = 0.98 gallon (83% Recovery)
53.39' @ 0700 (4-27-07) = 90% Recovery
54.68' @ 0711 after bail-down = 1 gallon 12 oz = 1.09 gallons
2000 → 0700 = 11 hrs = T₂
52.41' @ 1544 (4-27-07) = 90% Recovery

V₁ = 1.23 gallons
T₁ = 6.25 hrs

1544 - 0711 = 8 hrs + 33 minutes
T₃ = 8.55 hrs

V₂ = 0.98 gallon
T₂ = 11.0 hrs
V₃ = 1.09 gallons
T₃ = 8.55 hrs

MW-5
$$\frac{1.23 + 0.98 + 1.09}{6.25 + 11.0 + 8.55} = \frac{3.30 \text{ gals}}{25.8 \text{ hrs}} \times 24 \text{ hrs/day} = \underline{\underline{3.07 \text{ gpd}}}$$

Slug Test Field Data Form

Date: 5.30.07

Technician: U Morgan

Well Number: MW 7

Top of Screen: ~ 5' BGS

Borehole Size: 6 7/8"

Bottom of Screen: ~ 30' BGS

Casing Size: 2"

Total Depth of Well: ~ 30'

Test Method: Instantaneous removal of water using bailer.

Analysis Method: Bouwer and Rice

Static Fluid Level: 17.58 for falling & rising

Time (min:sec)	Fluid Level (feet)		Time (min:sec)	Fluid Level (feet)	
	Falling	Rising		Falling	Rising
0:15	17.42 17.42	17.84	7:00		17.58
0:30	17.45	17.71	8:00		
0:45	17.50	17.66	9:00		
1:00	17.50	17.65	10:00		
1:15	17.51	17.62	12:30		
1:30	17.53	17.62	15:00		
1:45	17.53	17.62	17:30		
2:00	17.53	17.61	20:00		
2:30	17.56	17.60	25:00		
3:00	17.57	17.60	30:00		
4:00	17.57	17.59	40:00		
5:00	17.58	17.59	50:00		
6:00	17.58	17.58	60:00		

Slug Test Field Data Form

Date: 4/24/07 Technician: J. Morgan

Well Number: MW 9 Top of Screen: 12

Borehole Size: 8.25" Bottom of Screen: 32

Casing Size: 2" Total Depth of Well: 32'

Test Method: Instantaneous removal of water using bailer.

Analysis Method: Bower and Rice

Static Fluid Level: 21.65 for Falling / 21.28 for rising

Time (min:sec)	Fluid Level (feet)		Time (min:sec)	Fluid Level (feet)	
	Falling	Rising		Falling	Rising
0:15	21.28	22.13	7:00	21.27	21.77
0:30	21.31	21.92	8:00	21.27	21.77
0:45	21.31	21.89	9:00	21.27	21.76
1:00	21.32	21.86	10:00	21.27	21.76
1:15	21.33	21.84	12:30	21.26	21.75
1:30	21.33	21.84	15:00	21.26	21.75
1:45	21.33	21.83	17:30	21.26	21.75
2:00	21.30	21.82	20:00	21.26	21.74
2:30	21.29	21.80	25:00	21.24	21.74
3:00	21.28	21.80	30:00	21.24	21.74
4:00	21.28	21.79	40:00	21.30	21.73
5:00	21.28	21.78	50:00	21.28	
6:00	21.27	21.78	60:00		

Slug Test Field Data Form

Date: 4.24.07

Technician: V. Morgan

Well Number: MW-14

Top of Screen: 10' BGS

Borehole Size: 8.25"

Bottom of Screen: 30' BGS

Casing Size: 2"

Total Depth of Well: 30

Test Method: Instantaneous removal of water using bailer.

Analysis Method: Bouwer and Rice

Static Fluid Level: 18.70' for Falling test / 18.32' for Rising test

Time (min:sec)	Fluid Level (feet)		Time (min:sec)	Fluid Level (feet)	
	Falling	Rising		Falling	Rising
0:15	18.74	19.11	7:00	18.37	18.80
0:30	18.37	18.94	8:00	18.37	18.80
0:45	18.38	18.89	9:00	18.37	18.80
1:00	18.38	18.86	10:00	18.37	18.80
1:15	18.38	18.85	12:30	18.37	18.80
1:30	18.38	18.84	15:00	18.37	18.80
1:45	18.38	18.83	17:30	18.37	17.79
2:00	18.38	18.83	20:00	18.37	17.78
2:30	18.38	18.83	25:00		17.77
3:00	18.38	18.82	30:00		17.78
4:00	18.38	18.82	40:00		
5:00	18.37	18.81	50:00		
6:00	18.37	18.81	60:00		

MW-14 → 17 = 619.42'
 The distance can get distances between each well

PROJECT: BALUSMAN JEEP
PROJECT NO.: 94057272



CONDUCTIVITY READINGS (MS/CM)

C-1	ORANDA SPRING WATER	45	MW-1	7,370
C-2	ORANDA SPRING WATER	45	MW-2	10,830
C-3	JEEP	4,160	MW-3	720,000
C-4	SALTY SOIL AT SW-TAB-2	718,000	MW-4	12,770
C-5	SW AT SW-TAB-2	3,450	MW-5	720,000
C-6	CR - 100' UPSTREAM OF TAB -	3,410	MW-7	9,430
C-7	CR - 200' UPSTREAM OF TAB -	3,440	JEEP	4,160
C-8	SALTY SOIL ALONG CR - 145' UPSTREAM OF TAB	6,120		
	UPSTREAM JARBAN IN CR - SW	3,500		
C-9	CR AT TAB - SW ^{SW}	3,650		
C-10	CR AT TAB - SALTY SOIL	12,690		
C-11	CR - 100' DOWNSTREAM OF TAB	3,200		
C-12	CR - 200' DOWNSTREAM OF TAB	3,210		
C-13	2' ABOVE SAND WYTALE AT C-4 (SOIL)	5,390		
C-14	6' ABOVE SAND WYTALE AT C-4, 5' FROM TOP OF BANK (SOIL)	170		
C-15	20' UPSTREAM OF SW-TAB-2 - SW	6,410		
C-16	ROCK WYTALE IN TAB NEAR JEEP - SW	6,460		
C-17	JEEP AT ROCK WYTALE - SW	6,420		
C-18	JEEP AT JEEP MAINTENANCE POINT (SW)	3,450		
C-19	FIRST JEEP EXPANSION IN TAB (SW)	6,820		
C-20	8' UPSTREAM OF FIRST JEEP EXPANSION BENEATH ROCK WYTALE - BANK SETTLEMENT			
	WEST BANK	720,000		
	MIDDLE	2,020		
	EAST BANK	4,870		

Limited Site Investigation
Ballinger Seep
Ballinger, Runnels County, Texas
Project No. 94057272B
August 28, 2007

Terracon

APPENDIX H

Photographs

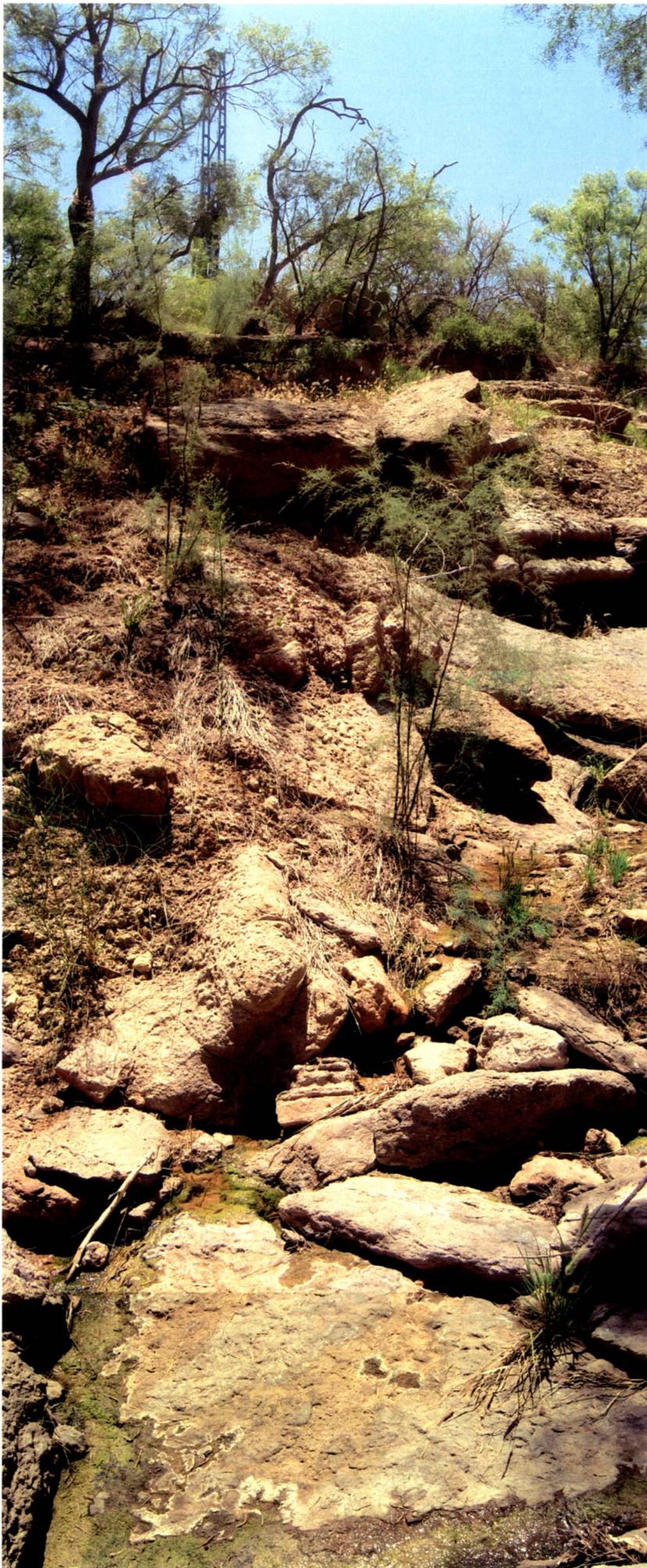


Photo 1 View to the east (from the tributary) of the installation of monitor well MW-1 located approximately 225 feet upstream of the Colorado River.
(photo date: 7/17/06)

Photo Page 1
Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Terracon



Photo 2 View to the east of the installation of monitor well MW-1 adjacent to the lower seep area located in the tributary approximately 225 feet upstream of the Colorado River. (photo date: 7/17/06)

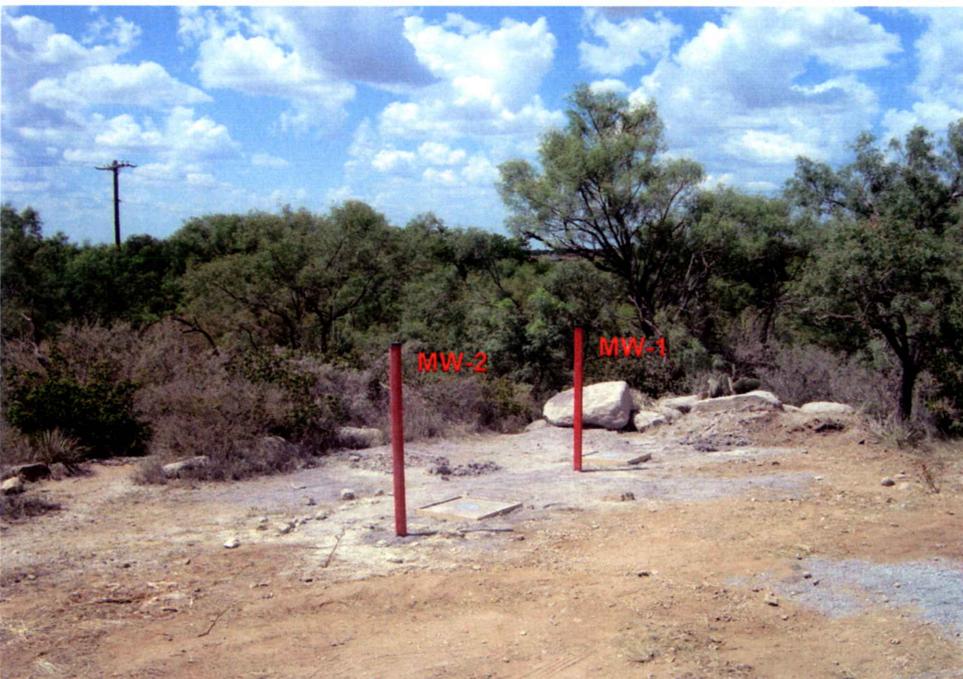


Photo 3 View to the northwest of monitor wells MW-1 and MW-2 following completion. (photo date: 7/18/06)



Photo 4 View to the east of the installation of monitor well MW-3 adjacent to the former upper seep area located in the tributary approximately 600 feet upstream of the Colorado River. (photo date: 7/18/06)



Photo 5 View to the west of the installation of monitor well MW-4 located on the opposite (west) side of the tributary from the lower seep located approximately 225 feet upstream of the Colorado River. (photo date: 7/18/06)

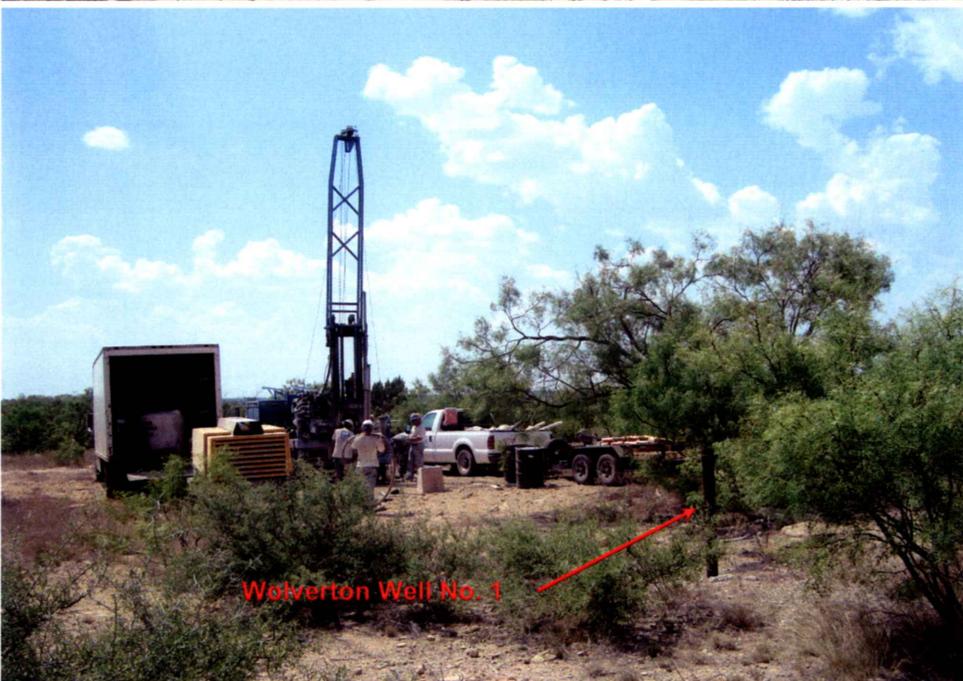


Photo 6 View to the northwest of the installation of monitor well MW-5 located adjacent and down-gradient of the Wolverton Well No. 1. (photo date: 7/18/06)



Photo 7 View of the rock cores from monitor well MW-5 (with indicated depth intervals) which shows the typical lithology encountered at the site. (photo date: 7/19/06)

Photo Page 3
 Ballinger Seep
 Ballinger, Runnels County, Texas
 Terracon Project No. 94057272



Photo 8 View to the west of the installation of monitor well MW-7 located up-gradient of the Colorado River. (photo date: 7/20/06)

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Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272





Photo 9 View of the lithology present at the location of monitor well MW-7 (with indicated depth intervals) located along the Colorado River. (photo date: 7/20/06)



Photo 10 View to the south of the lower seep area located in the tributary approximately 225 feet upstream of the Colorado River. (photo date: 7/16/06)



Photo 11 View of the lower seep area located in the tributary approximately 225 feet upstream of the Colorado River. (photo date: 7/16/06)

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Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272



Photo 12 May 25, 2005 view to the north of the upper seep area located in the tributary approximately 600 feet upstream of the Colorado River. (photo date: 5/25/05)



Photo 13 July 16, 2006 view to the south of the upper seep area indicating this area to be dry. (photo date: 7/16/06)



Photo 14 July 16, 2006 view to the south of the upper seep area indicating this area to be dry. (photo date: 7/16/06)

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Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272

Terracon



Photo 15 View of salt crystals located along the east bank of the tributary adjacent to the location of surface water sample SW-Trib-2 approximately 100 feet upstream of the Colorado River. (photo date: 8/21/06)



Photo 16 Typical view of former seep areas located between the Wolverton Well No. 1 and tributary. (photo date: 7/20/06)



Photo 17 View of former seep area located in the western branch of the tributary, west of monitor well MW-3. (photo date: 7/21/06)

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Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272



Photo 18 View of the Colorado River (from downstream of its confluence with the tributary) looking west (upstream). Note the lack of vegetation along the southern bank of the river (seep side). (photo date: 7/20/06)

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Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272





Photo 19 April 23, 2007 view to the south of the upper seep indicating it to be active at the surface near monitor well MW-3. (photo date: 4/23/07)



Photo 20 April 23, 2007 view to the south of the upper seep discharging into the tributary near monitor well MW-3. (photo date: 4/23/07)



Photo 21 April 23, 2007 view to the north of the upper seep discharging into the tributary near monitor well MW-3. (photo date: 4/23/07)

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Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272B

Terracon



Photo 22 April 23, 2007 view to the north of the tributary flowing into the Colorado River. (photo date: 4/23/07)



Photo 23 View to the northeast of the installation of monitor well MW-10 located northeast of MW-5. (photo date: 4/24/07)



Photo 24 View to the northeast of the installation of monitor well MW-11 located adjacent to another potential source area (Pan American Petroleum Corp. Well No. 1) at the site. (photo date: 4/25/07)

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Ballinger Seep
Ballinger, Runnels County, Texas
Terracon Project No. 94057272B

Terracon

Limited Site Investigation
Ballinger Seep
Ballinger, Runnels County, Texas
Project No. 94057272B
August 28, 2007



APPENDIX I

References

References

Field Guide for the Assessment and Cleanup of Produced Water Releases, Draft, Railroad Commission of Texas, dated February 17, 2006.

Geologic Atlas of Texas, Brownwood Sheet, Bureau of Economic Geology, The University of Texas at Austin, dated 1976.

Identification of Sources of Ground-Water Salinization Using Geochemical Techniques, EPA/600/2-91/064, Robert S. Kerr Environmental Research Laboratory, U.S. EPA, dated December 1991.

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Soil Survey of Runnels County, Texas, U.S. Department of Agriculture, Soil Conservation Service, dated March 1970.

Study and Interpretation of the Chemical Characteristics of Natural Water, U.S. Geological Survey Water Supply Paper 2254, dated 1985.

A Survey of the Subsurface Saline Water of Texas, Volume 2, Chemical Analyses of Saline Water, Report 157, Texas Water Development Board, dated September 1972.

Limited Site Investigation
Ballinger Seep
Ballinger, Runnels County, Texas
Project No. 94057272B
August 28, 2007



APPENDIX J

Chloride Re-Run Analysis



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380
Phone: (281) 292-5277
Fax: (281) 292-2481

December 1, 2006

Max Majesko
Terracon Consultants, Inc.
8901 Carpenter Freeway, Suite 100
Dallas, TX 75247

Re: BALLINGER SEEP Project

Dear Mr. Majesko,

Per your request, we reviewed the laboratory data for the above project regarding the Anions and Cations not balancing. We did not find any apparent analytical error. We noticed that the samples had high concentration of Chloride and needed large dilutions for analysis by Ion Chromatography. The calibration range for Chloride was 2-50mg/L and the samples had in excess of several thousand mg/L. We are of the opinion that these large dilutions may have effected accurate determination of Chloride concentrations in the samples resulting the Anions and Cations not balancing out.

Please call me at 281-292-5277 if you have any questions or need additional information.

Sincerely,

A handwritten signature in cursive script that reads "Reddy Pakanati".

Reddy Pakanati
Laboratory Manager



www.a4scientific.com

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380
(281) 292-5277
FAX: (281) 292-2481

December 15, 2006

MAX MAJESKO
TERRACON CONSULTANTS, INC.
8901 CARPENTER FREEWAY, SUITE 100
DALLAS, TX 75247

REFERENCE:

Project: BALLINGER SEEP
Project Number : 94057272

Dear MAX MAJESKO:

Enclosed is the analytical report for the additional analysis for the project referenced above.
The following sample(s) are included in this report:

- | | | | |
|-----------------------------------|-------------------------------|-------------------------------------|-------------------------------|
| <input type="checkbox"/> SW-TRIB1 | <input type="checkbox"/> MW-1 | <input type="checkbox"/> MW-2 | <input type="checkbox"/> MW-4 |
| <input type="checkbox"/> MW-5 | <input type="checkbox"/> MW-3 | <input type="checkbox"/> SW-CR-DOWN | <input type="checkbox"/> MW-7 |

Thank you for selecting A4 Scientific Inc for your laboratory needs on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,

Reddy Pakanati
Laboratory Manager



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Page 1 of 3

LABORATORY REPORT
CHLORIDE (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 12/15/2006 16:40

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID	SW-TRIB1	MW-1	MW-2	MW-4
SAMPLE ID	7940.002	7942.001	7946.001	7946.002
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/19/2006	07/19/2006	07/20/2006	07/20/2006
DATE RECEIVED	07/20/2006	07/20/2006	07/21/2006	07/21/2006
METHOD REFERENCE	SM4500B	SM4500B	SM4500B	SM4500B
QUANTITATION LIMIT	200	200	200	200
RESULTS	2220	2140	12100	5080
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	BT	BT	BT	BT
DATE ANALYZED	12/12/06	12/12/06	12/12/06	12/12/06
DILUTION	20	20	20	20
QC BATCH ID	BLK099	BLK099	BLK099	BLK099
PRE-PREP BLANK ID				
PREP BLANK ID	BLK099	BLK099	BLK099	BLK099
LCS ID	LCS099	LCS099	LCS099	LCS099
LCSD ID				
MS ID				
MSD ID				
DUP ID				



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The Woodlands, TX 77380

LABORATORY REPORT
CHLORIDE (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 12/15/2006 16:40

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID	MW-5	MW-3	SW-CR-DOWN	MW-7
SAMPLE ID	7946.003	7946.004	7947.001	7963.001
SAMPLE MATRIX	WATER	WATER	WATER	WATER
DATE SAMPLED	07/20/2006	07/20/2006	07/20/2006	08/15/2006
DATE RECEIVED	07/21/2006	07/21/2006	07/21/2006	08/17/2006
METHOD REFERENCE	SM4500B	SM4500B	SM4500B	SM4500B
QUANTITATION LIMIT	200	200	200	200
RESULTS	23000	7240	620	3580
UNITS	MG/L	MG/L	MG/L	MG/L
QUALIFIER				
ANALYST	BT	BT	BT	BT
DATE ANALYZED	12/12/06	12/12/06	12/12/06	12/12/06
DILUTION	20	20	20	20
QC BATCH ID	BLK099	BLK099	BLK099	BLK099
PRE-PREP BLANK ID				
PREP BLANK ID	BLK099	BLK099	BLK099	BLK099
LCS ID	LCS099	LCS099	LCS099	LCS099
LCSD ID				
MS ID				
MSD ID				
DUP ID				



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

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LABORATORY REPORT
CHLORIDE (TITRIMETRIC)

CLIENT NAME : TERRACON CONSULTANTS, INC. PROJECT NUMBER : 94057272
PROJECT NAME : BALLINGER SEEP PRINTED ON : 12/15/2006 16:40

PARAMETER: Chloride as Cl

CLIENT SAMPLE ID	PREP BLANK
SAMPLE ID	BLK099
SAMPLE MATRIX	
DATE SAMPLED	
DATE RECEIVED	
METHOD REFERENCE	SM4500B
QUANTITATION LIMIT	10
RESULTS	ND
UNITS	MG/L
QUALIFIER	
ANALYST	BT
DATE ANALYZED	12/12/06
DILUTION	1
QC BATCH ID	BLK099
PRE-PREP BLANK ID	
PREP BLANK ID	BLK099
LCS ID	
LCSD ID	
MS ID	
MSD ID	
DUP ID	



1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

LCS/LCSD SUMMARY REPORT
CHLORIDE (TITRIMETRIC)

CLIENT NAME :
PROJECT NAME :
PROJECT NUMBER :

DATE RECEIVED :
PRINTED ON : 12/15/2006 16:40

SAMPLE MATRIX : LIQUID

METHOD REFERENCE : SM4500B

LAB CONTROL SAMPLE

LAB CONTROL SAMPLE DUPLICATE

LCS SAMPLE ID : LCS099

LCSD SAMPLE ID :

CLIENT SAMPLE ID :

CLIENT SAMPLE ID :

DATE ANALYZED : 12/12/06

DATE ANALYZED :

INSTRUMENT FILE :

INSTRUMENT FILE :

PARAMETER	UNITS	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	QC LIMITS	
		TRUE	TRUE	FOUND	FOUND	RECOVERY	RECOVERY		LIMIT	REC.
		VALUE	VALUE	VALUE	VALUE	(%)	(%)			
Chloride as Cl	MG/L	500		539		108			20	80 - 120

* Indicate values outside of QC limits

RPD : 0 out of 0 outside limits
Spike Recovery : 0 out of 1 outside limits