GW-269

Annual GW Reporting

DATE: 04.04.11



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April 4, 2011

Mr. Edward Hansen New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Annual Groundwater Monitoring Reports Southern Union Gas Services, Ltd Boyd Compressor Station (GW-269) House Compressor Station (GW-243) Lea County, New Mexico

Mr. Hansen,

Enclosed are the *Annual Groundwater Monitoring Reports* for the following groundwater remediation sites in Lea County, New Mexico:

Boyd Compressor Station (GW-269) Unit Letter "J", Section 26, Township 22 South, Range 37 East, NMPM

House Compressor Station (GW-243) Unit Letter "O", Section 11, Township 20 South, Township 38 East, NMPM

I have personally reviewed these documents, prepared by Eco-logical Environmental Services, Inc. on behalf of Southern Union Gas Services, and believe the facts are true and accurate to the best of my knowledge and ability. If you have any questions or comments, please contact me at 432-940-5147 or by email at rose.slade@sug.com.

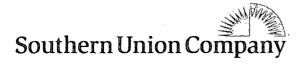
Respectfully submitted,

Rose L. Slade

EHS Compliance Specialist Southern Union Gas Services, Ltd

rose.slade@sug.com

Cc: Geoffrey R. Leking, NMOCD Hobbs District Office SUG Environmental Files Enclosures



Groundwater Investigation

GW-269 FORMER BOYD COMPRESSOR STATION

Lea County

March 29, 2011

Prepared For:

New Mexico Oil Conservation Division 1200 South Saint Francis Drive Santa Fe, New Mexico 87505

On Behalf of:

Southern Union Gas Services 301 Commerce Street, Suite 700 Fort Worth, Texas 76102 Telephone: (817) 302-9408

Prepared By:

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FORMER BOYD COMPRESSOR STATION Groundwater Monitoring LEA COUNTY NEW MEXICO

Date Prepared: March 29, 2011

Eco-logical Project Number: 1005-4157

Prepared For:Southern Union Gas Services

Prepared By:
Eco-logical Environmental Services, Inc.

Aaron Pachlhofer, P.G. Project Manager

Reviewed By:

Scott Springer, P.G.

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INTRODUCTION

Eco-logical Environmental Services, Inc. (Eco-logical), on behalf of Southern Union Gas Services, Ltd (SUGS), prepared this annual report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an annual report by April 1 of each year. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of the quarterly groundwater monitoring events conducted in the calendar year 2010 and 1st quarter of 2011. SUGS anticipates a "Soil Remediation Summary, Risk Based Soil Closure Request and Proposed Groundwater Remediation Strategy" will be submitted to the NMOCD for consideration in the 2nd quarter of 2011. For reference, the Site Location Map is provided as Figure 1. This facility is covered by a New Mexico Discharge Plan and Permit (GW-269)

At the request of the NMOCD, initial groundwater monitoring was conducted during the 1st quarter of 2009 to assess any potential groundwater impact from dissolved phase benzene, toluene, ethylbenzene, and xylene (BTEX) constituents and/or chlorides. The groundwater monitoring event consisted of measuring static water levels in the monitoring wells, checking of the presence of phase-separated hydrocarbons (PSH) on the water column, and purging and sampling of each monitor well exhibiting sufficient recharge. Based on the results of the initial monitoring and sampling event, this site was placed on a quarterly groundwater monitoring program.

SITE DESCRIPTION AND BACKGROUND INFORMATION

The legal description of the release site is Unit Letter "J" (NW ¼ SE ¼), Section 26, Township 22 South, Range 37 East, NMPM in Lea County, New Mexico. The property affected by the release is owned by RD Simms of Eunice, New Mexico. The release site GPS coordinates are 32° 21.748' North and 103° 07.830' West.

On September 18, 2007, a preliminary soil investigation commenced at the Boyd Compressor Station. Soil samples were collected using a hand auger at two (2) locations to evaluate the extent of hydrocarbon impact adjacent to the compressor skids. The analytical results indicated hydrocarbon impact was present in the areas sampled.

On May 14, 2008, SUGS submitted a Pit or Below-Grade Tank Registration or Closure (Form C-144) to the New Mexico Oil Conservation Division (NMOCD) Santa Fe Office. The Form C-144 was accompanied by Remediation Plan (Plan) to remove an approximately eighty (80) barrel (bbl) reinforced fiberglass below-grade tank (BGT), an approximately 463 bbl above-ground steel storage tank (AST), non-utilized piping, concrete slabs, equipment and structures associated with the Boyd Compressor Station. The BGT was installed prior to the implementation of NMOCD rules regarding the utilization of BGTs.

On June 17, 2008, Basin Environmental Services Technologies (Basin), on behalf of SUG, began the excavation and removal of the eighty (80) barrel BGT at the Boyd Compressor Station. Following the excavation and removal of the BGT, the structural integrity of the tank was evaluated. On evaluation, the reinforced fiberglass tank exhibited corrosion around the bolts used

to secure the two (2) halves of the tank and most likely resulted in the release of liquids adjacent to and beneath the tank.

On June 18, 2008, decommissioning of the compressor station and excavation of the previously identified impacted soil commenced. Several soil samples of the stockpile were collected. The piles that were clean were used as backfill and the impacted soil was transported offsite.

On July 29, 2008, two soil borings were advanced at the compressor station to further investigate and delineate the extent of vertical impact.

On December 15, 2008, SUGS submitted an email to the NMOCD Santa Fe Office, in the email SUGS presented the analytical results of collected soil samples and remedial activities to date. Based on the analytical results and the depth of impacted soil below the below grade tank (BGT), SUGS requested and received NMOCD approval to backfill the area associated with the BGT to ten (10) feet bgs and install a twenty (20) mil polyethylene liner on the floor of the excavation. In addition, SUGS requested and received NMOCD approval to install four (4) monitor wells at the Boyd Compressor Station. The monitor wells were designed to evaluate the status of the groundwater and evaluate any potential impact to the groundwater.

On December 29, 2008, a six (6) inch pad of fine sand was applied to the floor of the excavation to protect the twenty (20) mil polyethylene liner from punctures. Following the emplacement of the pad material, the liner measuring approximately twenty (20) feet in width and length was installed in the excavation. An approximately six (6) inch pad of fine sand was emplaced on top of the liner before backfilling activities commenced.

Based on the analytical results, backfilling of the compressor area excavation began on November 18, 2008. The blended backfill material was water packed in the excavation to minimize the settling of the soil.

On December 23, 2008, compressor excavation backfill activities were completed and the compressor area soil was contoured to fit the surrounding topography. During the course of the remediation activities, approximately 900 cy of impacted soil was transported off-site and approximately 5,185 cy of soil was blended on-site and utilized as backfill material.

On January 14, 2009, four (4) groundwater monitor wells (MW-1 through MW-4) were installed at the Boyd Compressor Station using an air rotary drilling rig. The monitor wells were installed to a depth of approximately sixty-five (65) feet bgs.

Monitor well MW-1 was installed south and down-gradient of the previously installed twenty (20) mil polyethylene liner. The analytical results for TPH analysis indicated concentrations of TPH were less than the laboratory MDL of 50 mg/Kg for all of the collected soil samples, with the exception of the soil sample collected at five (5) feet bgs.

Monitor well MW-2 was installed north and up-gradient of the former below grade tank. The analytical results for TPH analysis indicated concentrations of TPH were less than the laboratory MDL of 50 mg/Kg for all of the collected soil samples. The analytical results for chloride

concentrations indicated concentrations ranged from less than the laboratory MDL of 200 mg/Kg in the soil samples collected at twenty (20) feet bgs, thirty (30) feet bgs, fifty (50) feet bgs and sixty (60) feet bgs to 2,190 mg/Kg in the soil sample collected at ten (10) feet bgs.

Monitor well MW-3 was installed south-southwest and down-gradient of the former below grade tank. The analytical results for TPH analysis indicated concentrations of TPH were less than the laboratory MDL of 50 mg/Kg for all of the collected soil samples, with the exception of the soil sample collected at forty (40) feet bgs. The soil sample collected at forty (40) feet bgs exhibited a laboratory confirmed TPH concentration of 1.16 mg/Kg. The analytical results for chloride concentrations indicated concentrations ranged from less than the laboratory MDL of 200 mg/Kg in the soil samples collected at twenty (20) feet bgs, thirty (30) feet bgs, fifty (50) feet bgs and sixty (60) feet bgs to 2,190 mg/Kg in the soil sample collected at ten (10) feet bgs.

Monitor well MW-4 was installed south-southeast and down-gradient of the former below grade tank. The analytical results for TPH analysis indicated concentrations of TPH were less than the laboratory MDL of 50 mg/Kg for all of the collected soil samples. The analytical results for chloride concentrations indicated concentrations were less than the laboratory MDL of 200 mg/Kg for all of the collected soil samples.

Currently, there are four (4) groundwater monitoring wells (MW1 through MW-4) on-site.

FIELD ACTIVITIES

No PSH was detected in any of the site monitor wells during the reporting period.

The site monitoring wells were gauged and sampled March 25, 2010, July 1, 2010, October 9, 2010 and February 8, 2011. During these sampling events, the monitoring wells were purged of a minimum of three (3) well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Groundwater was allowed to recharge and samples were obtained using disposable Teflon bailers. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field.

Locations of the groundwater monitoring wells and the inferred groundwater elevations were constructed from the measurements collected during the quarterly sampling events, and are depicted on Figures 2A through 2D. Groundwater elevation data is provided as Table 1.

The Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.000675 feet/foot to the south-southeast as measured between groundwater monitor wells MW-2 and MW-4. The groundwater elevation ranged between 3,258.66 and 3,257.45 feet above mean sea level, in monitor well MW-2 on October 29, 2010 and in monitor wells MW-3 and MW-4 on February 8, 2011, respectively.

LABORATORY RESULTS

Groundwater samples collected from the groundwater monitoring wells (MW-1 through MW-4) during the quarterly monitoring events were delivered to Xenco Laboratories, Odessa, Texas, for

determination of benzene, toluene, ethylbenzene and xylenes (BTEX) constituent concentrations by EPA Method SW846-8021b. Total Petroleum Hydrocarbons (TPH) by SW846-8015M, Anions by EPA Method 300, Cations by EPA Method SW846-6010B and Total Dissolved Solids (TDS) by EPA Method SM-2540C. A summary of Concentrations of benzene, BTEX and TPH in Groundwater and Concentrations of Anions, Cations and Total Dissolved Solids in Groundwater are presented in Table 2 and Table 3, respectively. Laboratory analytical reports are provided as Appendix A.

Monitor well MW-1 is sampled on a quarterly schedule and analytical results indicate concentrations of benzene ranged from less than the laboratory MDL of 0.001 mg/L during the July 2010, October 2010 and February 2011 sampling events to 0.0015 mg/L during the March 2010 sampling event. Benzene concentrations were less than the NMOCD regulatory standard during the all four (4) quarters of the reporting period. Toluene concentrations ranged from less than the laboratory MDL of 0.002 mg/L during the July 2010, October 2010 and February 2011 sampling events to 0.0019 mg/L during the March 2010 sampling event. Ethyl benzene and xylene concentrations were less than the laboratory MDL during all four (4) sampling events of the reporting period. Concentrations of benzene, toluene, ethyl benzene and xylene were less than the NMOCD and New Mexico Water Quality Control Commission (NMWQCC) regulatory standards during all four (4) sampling events.

Calcium concentrations ranged from 385 mg/L during the February 2011 sampling event to 496 mg/L during the March 2010 sampling event. Magnesium concentrations ranged from 310 mg/L during the February 2011 sampling event to 409 mg/L during the October 2010 sampling event. Potassium concentrations ranged from 39.8 mg/L during the July 2010 sampling event to 52.5 mg/L during the October 2010 sampling event. Sodium concentrations ranged from 2,120 mg/L during the July 2010 sampling event to 3,190 mg/L during the October 2010 sampling event. TDS was sampled during the July 2010, October 2010 and February 2011 sampling events. TDS concentrations ranged from 8,650 mg/l during the February 2011 sampling event to 9,500 mg/L during the October 2010 sampling event. Analysis for TDS was not requested in March 2010.

TDS concentrations exceeded the NMOCD and NMWQCC regulatory standards during all three (3) sampling events.

Bromide, Chloride, Fluoride and Sulfate concentrations were analyzed during the October 2010 and February 2011 sampling events. Bromide concentrations ranged from 27.0 mg/L during the October 2010 sampling event to 101 mg/L during the February 2011 sampling event. Chloride concentrations ranged from 5,400 mg/L during the February 2011 sampling event to 5,910 mg/L during the October 2010 sampling event. Chloride concentrations exceeded the NMOCD and NMWQCC regulatory standards during both sampling events. Fluoride concentrations ranged from less than the laboratory MDL of 40 mg/L during the February 2011 sampling event to 13.4 mg/L during the October 2010 sampling event. Fluoride concentrations exceeded the NMOCD and NMWQCC regulatory standards during both sampling events. Sulfate concentrations ranged from 368 mg/L during the October 2010 sampling event to 409 mg/L during the February 2011 sampling event. Sulfate concentrations were less than the NMOCD and NMWQCC regulatory standards during both sampling events.

TPH analysis of groundwater is not generally required by NMOCD or NMQWCC regulations. TPH analysis was requested during all four (4) sampling events of the reporting period. The analytical results indicated TPH concentrations were less than the laboratory MDL during all (4) sampling events of the reporting period.

Monitor well MW-2 is sampled on a quarterly schedule and analytical results indicate concentrations of benzene ranged from less than the laboratory MDL of 0.001 mg/L during the March 2010, July 2010, October 2010 and February 2011 sampling. Toluene concentrations ranged from less than the laboratory MDL of 0.001 mg/L during the July 2010, October 2010 and February 2011 sampling events to 0.0019 mg/L during the March 2010 sampling event. Ethyl benzene and xylene concentrations were less than the laboratory MDL during all four (4) sampling events of the reporting period. All BTEX concentrations were less than the NMOCD and New Mexico Water Quality Control Commission (NMWQCC) regulatory standards during all four (4) sampling events.

Calcium concentrations ranged from 57.2 mg/L during the March 2010 sampling event to 63.4 mg/L during the February 2011 sampling event. Magnesium concentrations ranged from 43.4 mg/L during the March 2010 sampling event to 51.9 mg/L during the October 2010 sampling event. Potassium concentrations ranged from 6.98 mg/L during the July 2010 sampling event to 8.77 mg/L during the February 2011 sampling event. Sodium concentrations ranged from 116 mg/L during the March 2010 sampling event to 152 mg/L during the October 2010 sampling event.

TDS was sampled during the July 2010, October 2010 and February 2011 sampling events. TDS concentrations ranged from 766 mg/l during the July 2010 sampling event to 882 mg/L during the October 2010 sampling event. TDS concentrations were less than the NMOCD and NMWQCC regulatory standards during all three (3) sampling events in monitor well MW-2.

Bromide, Chloride, Fluoride and Sulfate concentrations were analyzed during the October 2010 and February 2011 sampling events. Bromide concentrations ranged from less than the laboratory MDL of 5.0 mg/L during the February 2011 sampling event to 1.34 mg/L during the October 2010 sampling event. Chloride concentrations ranged from 126 mg/L during the February 2011 sampling event to 141 mg/L during the October 2010 sampling event. Chloride concentrations were less than the NMOCD and NMWQCC regulatory standards during both sampling events. Fluoride concentrations ranged from 2.09 mg/L during the February 2011 sampling event to 3.88 mg/L during the October 2010 sampling event. Fluoride concentrations exceeded the NMOCD and NMWQCC regulatory standards during both sampling events. Sulfate concentrations ranged from 162 mg/L during the February 2011 sampling event to 194 mg/L during the October 2010 sampling event. Sulfate concentrations were less than the NMOCD and NMWQCC regulatory standards during both sampling events.

TPH analysis of groundwater is not generally required by NMOCD or NMQWCC regulations. TPH analysis was requested during all four (4) sampling events of the reporting period. The analytical results indicated TPH concentrations were less than the laboratory MDL during all (4) sampling events of the reporting period.

Monitor well MW-3 is sampled on a quarterly schedule and analytical results indicate concentrations of benzene, toluene, ethyl benzene and xylene were less than the laboratory MDL during all four (4) sampling events of the reporting period. Concentrations of benzene, toluene, ethyl benzene and xylene were less than the NMOCD and New Mexico Water Quality Control Commission (NMWQCC) regulatory standards during all four (4) sampling events of the reporting period.

Calcium concentrations ranged from 60.1 mg/L during the March 2010 sampling event to 71.6 mg/L during the October 2010 sampling event. Magnesium concentrations ranged from 44.1 mg/L during the July 2010 sampling event to 51.2 mg/L during the October 2010 sampling event. Potassium concentrations ranged from 6.91 mg/L during the July 2010 sampling event to 8.18 mg/L during the October 2010 sampling event. Sodium concentrations ranged from 119 mg/L during the July 2010 sampling event to 142 mg/L during the October 2010 sampling event.

TDS was sampled during the July 2010, October 2010 and February 2011 sampling events. TDS concentrations ranged from 676 mg/l during the February 2011 sampling event to 728 mg/L during the October 2010 sampling event. TDS concentrations were less than the NMOCD and NMWQCC regulatory standards during all three (3) sampling events in monitor well MW-3.

Bromide, Chloride, Fluoride and Sulfate concentrations were analyzed during the October 2010 and February 2011 sampling events. Bromide concentrations ranged from less than the laboratory MDL of 5.0 mg/L during the February 2011 sampling event to 1.34 mg/L during the October 2010 sampling event. Chloride concentrations ranged from 109 mg/L during the February 2011 sampling event to 124 mg/L during the October 2010 sampling event. Chloride concentrations were less than the NMOCD and NMWQCC regulatory standards during both sampling events. Fluoride concentrations ranged from 2.25 mg/L during the February 2011 sampling event to 3.85 mg/L during the October 2010 sampling event. Fluoride concentrations exceeded the NMOCD and NMWQCC regulatory standards during both sampling events. Sulfate concentrations ranged from 173 mg/L during the February 2011 sampling event to 203 mg/L during the October 2010 sampling event. Sulfate concentrations were less than the NMOCD and NMWQCC regulatory standards during both sampling events.

TPH analysis of groundwater is not generally required by NMOCD or NMQWCC regulations. TPH analysis was requested during all four (4) sampling events of the reporting period. The analytical results indicated TPH concentrations were less than the laboratory MDL during all (4) sampling events of the reporting period.

Monitor well MW-4 is sampled on a quarterly schedule and analytical results indicate concentrations of benzene, toluene, ethyl benzene and xylene were less than the laboratory MDL during all four (4) sampling events of the reporting period. Concentrations of benzene, toluene, ethyl benzene and xylene were less than the NMOCD and New Mexico Water Quality Control Commission (NMWQCC) regulatory standards during all four (4) sampling events of the reporting period.

Calcium concentrations ranged from 77.9 mg/L during the February 2011 sampling event to 98.8 mg/L during the March 2010 sampling event. Magnesium concentrations ranged from 59.0 mg/L

during the July 2010 sampling event to 64.5 mg/L during the October 2010 sampling event. Potassium concentrations ranged from 8.01 mg/L during the July 2010 sampling event to 9.74 mg/L during the March 2010 sampling event. Sodium concentrations ranged from 133 mg/L during the July 2010 sampling event to 165 mg/L during the October 2010 sampling event.

TDS was sampled during the July 2010, October 2010 and February 2011 sampling events. TDS concentrations ranged from 804 mg/l during the February 2011 sampling event to 900 mg/L during the July 2010 and October 2010 sampling events. TDS concentrations were less than the NMOCD and NMWQCC regulatory standards during all three (3) sampling events in monitor well MW-4.

Bromide, Chloride, Fluoride and Sulfate concentrations were analyzed during the October 2010 and February 2011 sampling events. Bromide concentrations ranged from less than the laboratory MDL of 5.0 mg/L during the February 2011 sampling event to 1.47 mg/L during the October 2010 sampling event. Chloride concentrations ranged from 180 mg/L during the February 2011 sampling event to 196 mg/L during the October 2010 sampling event. Chloride concentrations were less than the NMOCD and NMWQCC regulatory standards during both sampling events. Fluoride concentrations ranged from 2.10 mg/L during the February 2011 sampling event to 3.60 mg/L during the October 2010 sampling event. Fluoride concentrations exceeded the NMOCD and NMWQCC regulatory standards during both sampling events. Sulfate concentrations ranged from 193 mg/L during the February 2011 sampling event to 225 mg/L during the October 2010 sampling event. Sulfate concentrations were less than the NMOCD and NMWQCC regulatory standards during both sampling events.

TPH analysis of groundwater is not generally required by NMOCD or NMQWCC regulations. TPH analysis was requested during all four (4) sampling events of the reporting period. The analytical results indicated TPH concentrations were less than the laboratory MDL during all (4) sampling events of the reporting period.

Laboratory analytical results were compared to NMOCD and NMQWCC regulatory limits based on the New Mexico groundwater standards found in section 20.6.2.3103 of the New Mexico Administrative Code.

SUMMARY

No PSH was detected in any of the site monitor wells during the reporting period.

Currently, there are four (4) groundwater monitoring wells (MW-1 through MW-4) on-site. The Groundwater Gradient Map Figure 2D, indicates a general gradient of approximately 0.000675 feet/foot to the south-southeast as measured between groundwater monitor wells MW-2 and MW-4.

Laboratory analytical results obtained during the February 2011 groundwater sampling event indicated benzene and BTEX constituent concentrations were less than the laboratory MDL, and NMOCD and NMQWCC regulatory standards for all four (4) monitor wells.

Laboratory analytical results obtained during the February 2011 groundwater sampling event indicated TDS concentrations ranged from 676 mg/L (MW-3) to 8,650 mg/L (MW-1). The analytical results indicate only monitor well MW-1 exhibits a TDS concentration which exceeds the NMOCD and NMWQCC regulatory standard of 1,000 mg/L, all others are below the standard.

Laboratory analytical results obtained during the February 2011 groundwater sampling event indicated chloride concentrations ranged from 109 mg/L (MW-3) to 5,400 mg/L (MW-1). The analytical results indicate only monitor well MW-1 exhibits a chloride concentration which exceeds the NMOCD and NMWQCC regulatory standard of 250 mg/L.

Laboratory analytical results obtained during the February 2011 groundwater sampling event indicated fluoride concentrations ranged from less than the laboratory MDL of 40 mg/L (MW-1) to 2.10 mg/L (MW-4). The analytical results indicate all four (4) monitor wells exhibit a fluoride concentration which exceeds the NMOCD and NMWQCC regulatory standard of 1.6 mg/L. The analytical results indicate fluoride concentrations are consistence within the aquifer and the fluoride concentrations exhibited may be naturally occurring within the aquifer.

Laboratory analytical results obtained during the February 2011 groundwater sampling event indicated sulfate concentrations ranged from 162 mg/L (MW-2) to 409 mg/L (MW-1). The analytical results indicate all four (4) monitor wells exhibit sulfate concentrations less than the NMOCD and NMWQCC regulatory standard of 600 mg/L.

ANTICIPATED ACTIONS

Quarterly monitoring and groundwater sampling will continue in the reporting year 2011.

Southern Union Gas Services anticipates, a "Soil Remediation Summary, Risk Based Soil Closure Request and Proposed Groundwater Remediation Strategy" will be submitted to the NMOCD for consideration in the 2nd quarter of 2011. Southern Union Gas Services anticipates, an enhanced chloride recovery system will be installed at the former Boyd Compressor Station in the future. The system may employ a total fluid remediation pump installed in monitor well MW-1. The recovered water will be collected on the site.

Southern Union Gas Services anticipates the removal of the groundwater containing chlorides will assist in abating the groundwater issues at former Boyd Compressor Station release site, as well as maintaining contaminant plume control. The actual volume of groundwater pumped from the release site will be dependent on the groundwater recharge rate of the monitor wells, which may fluctuate seasonally.

DISTRIBUTION

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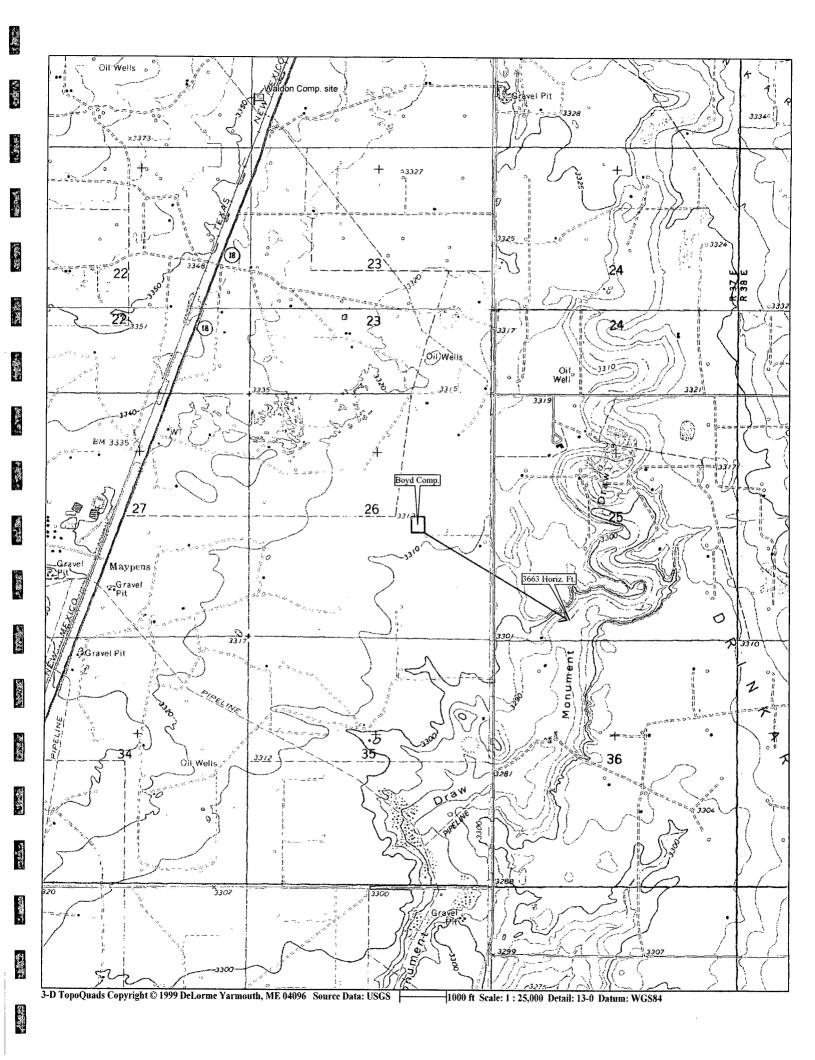
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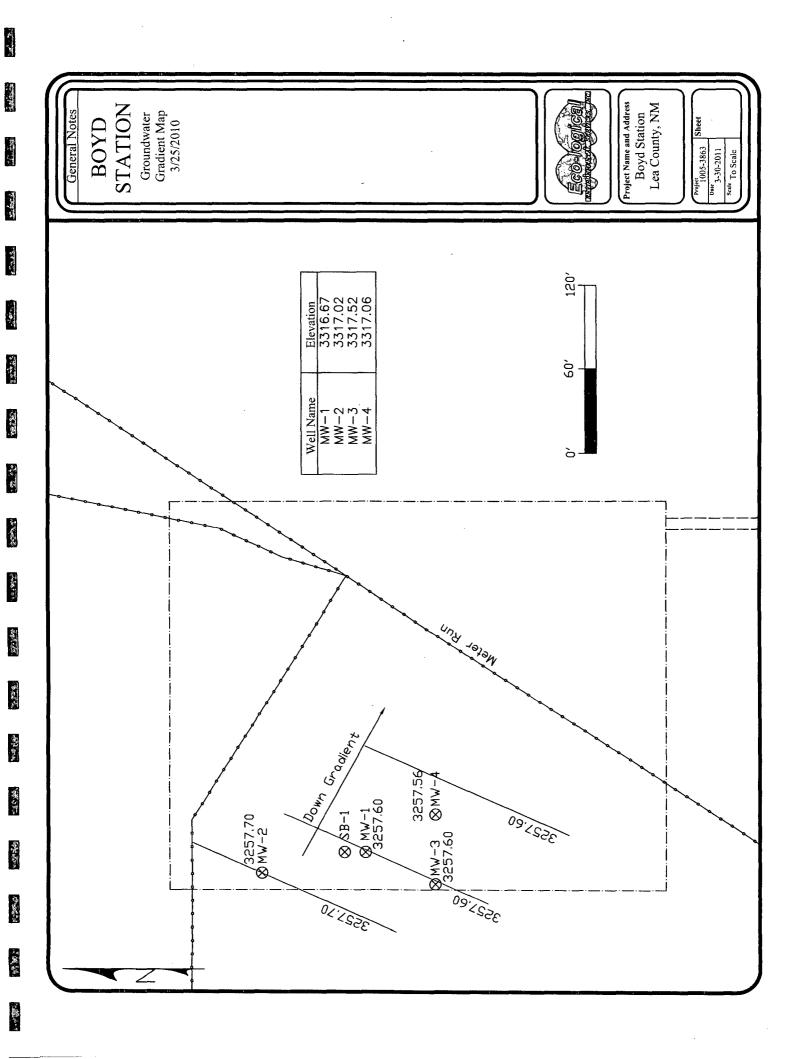
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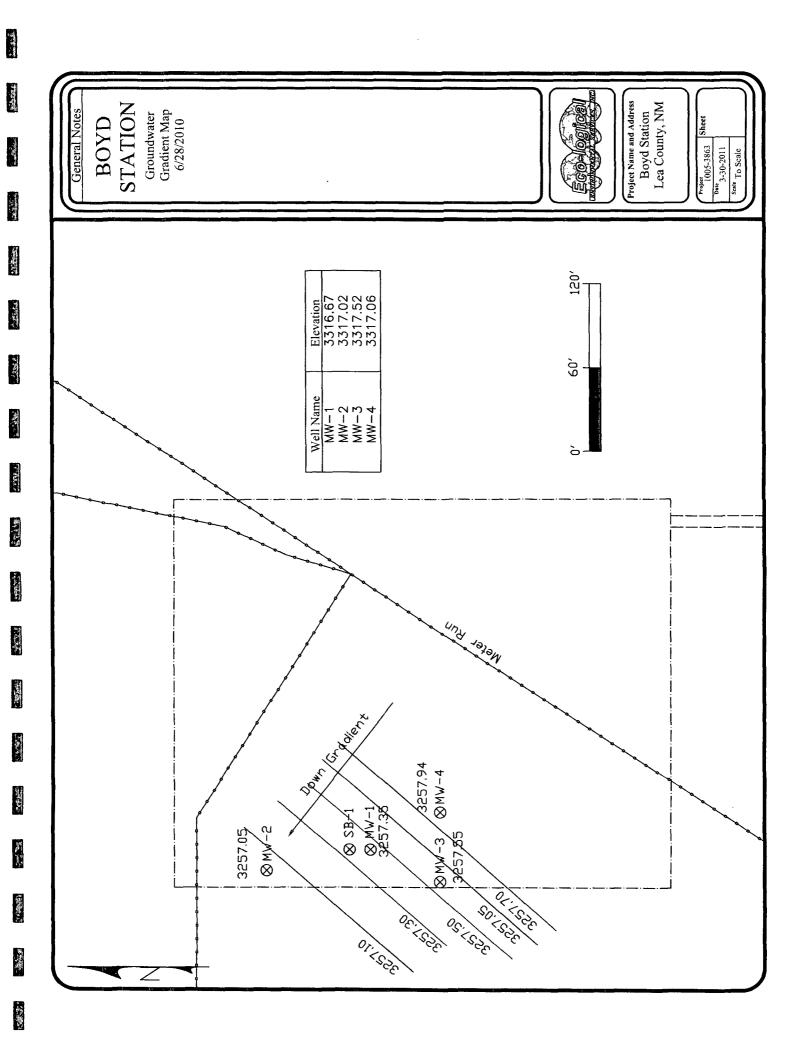
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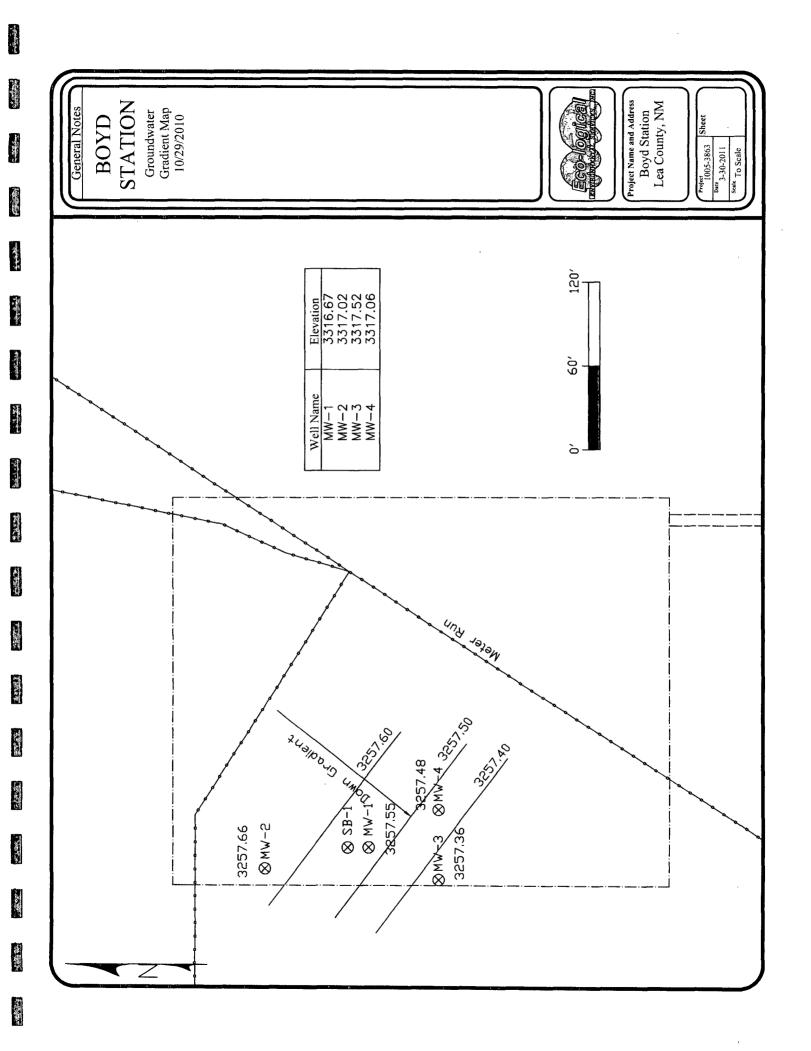
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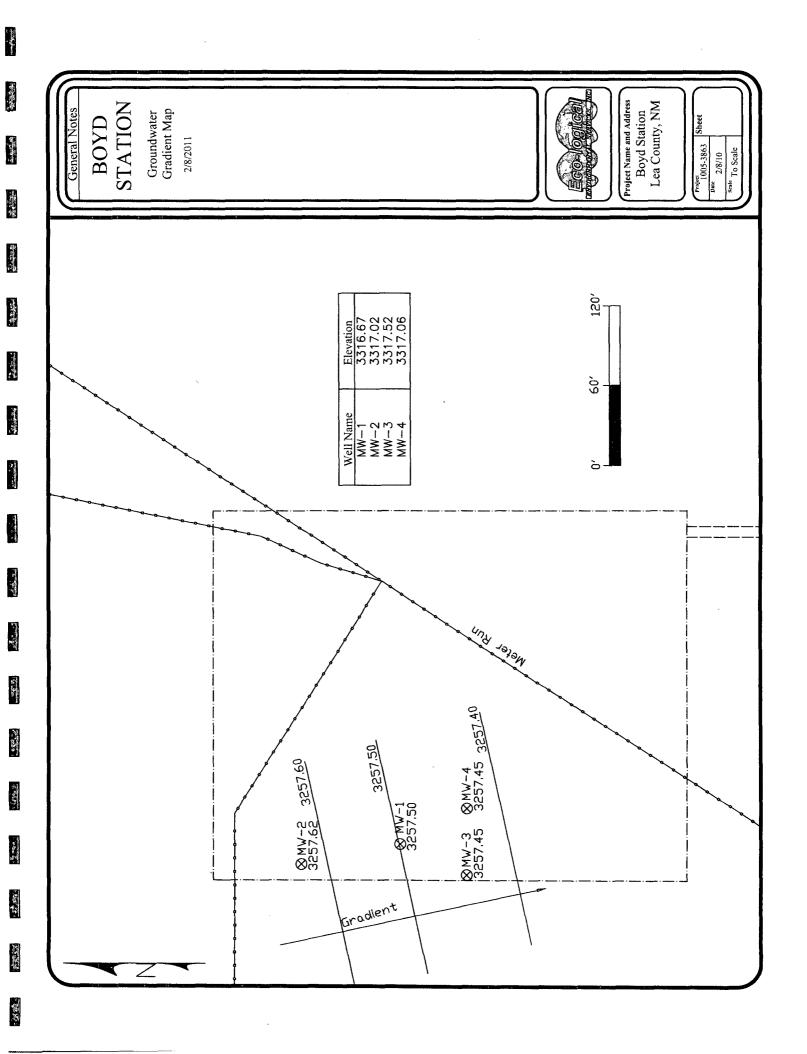
FIGURES

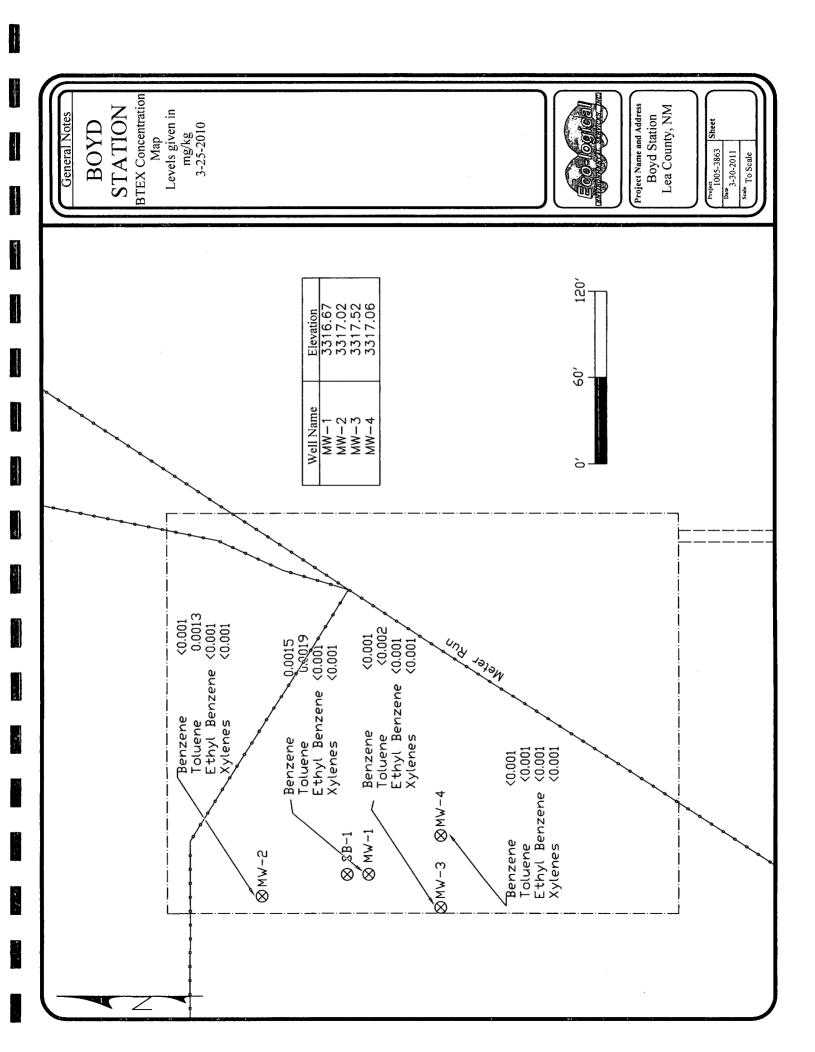


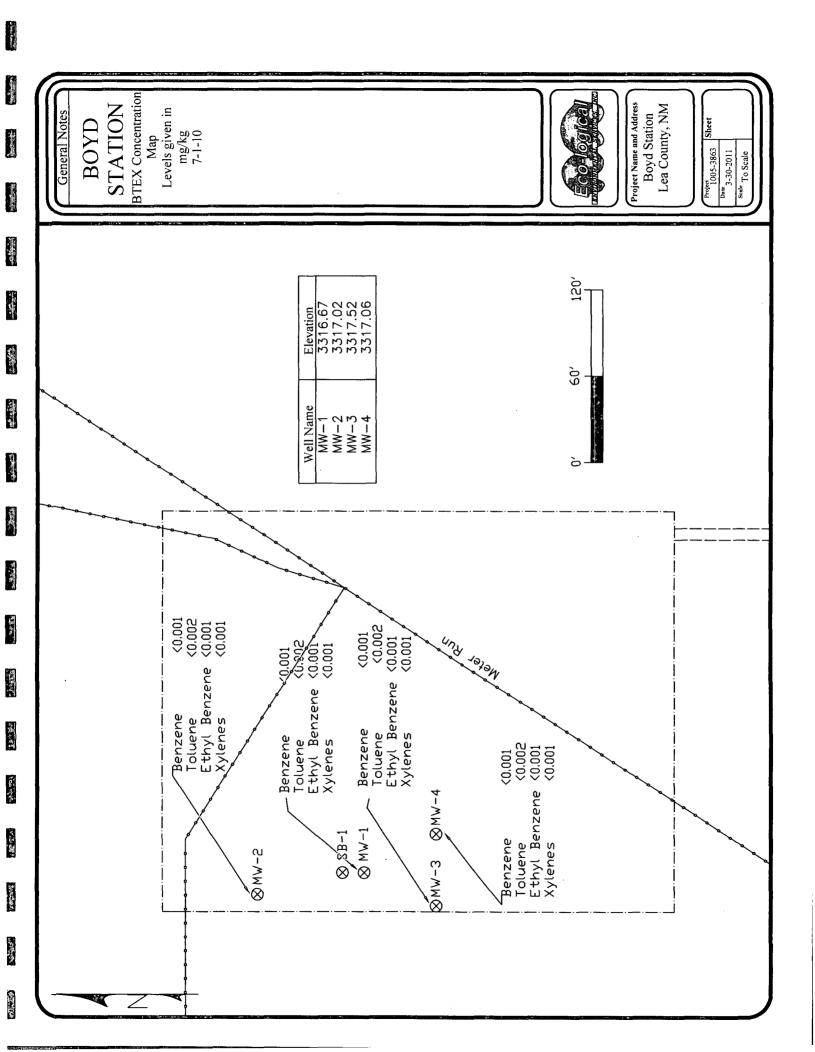


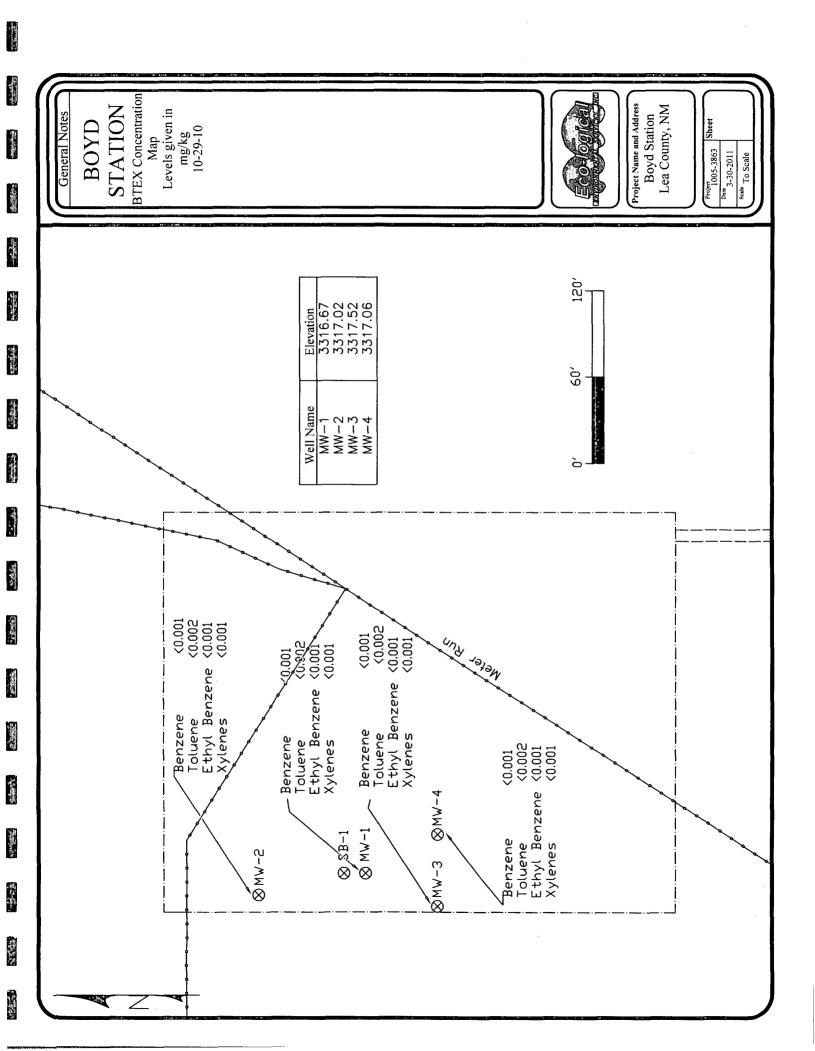


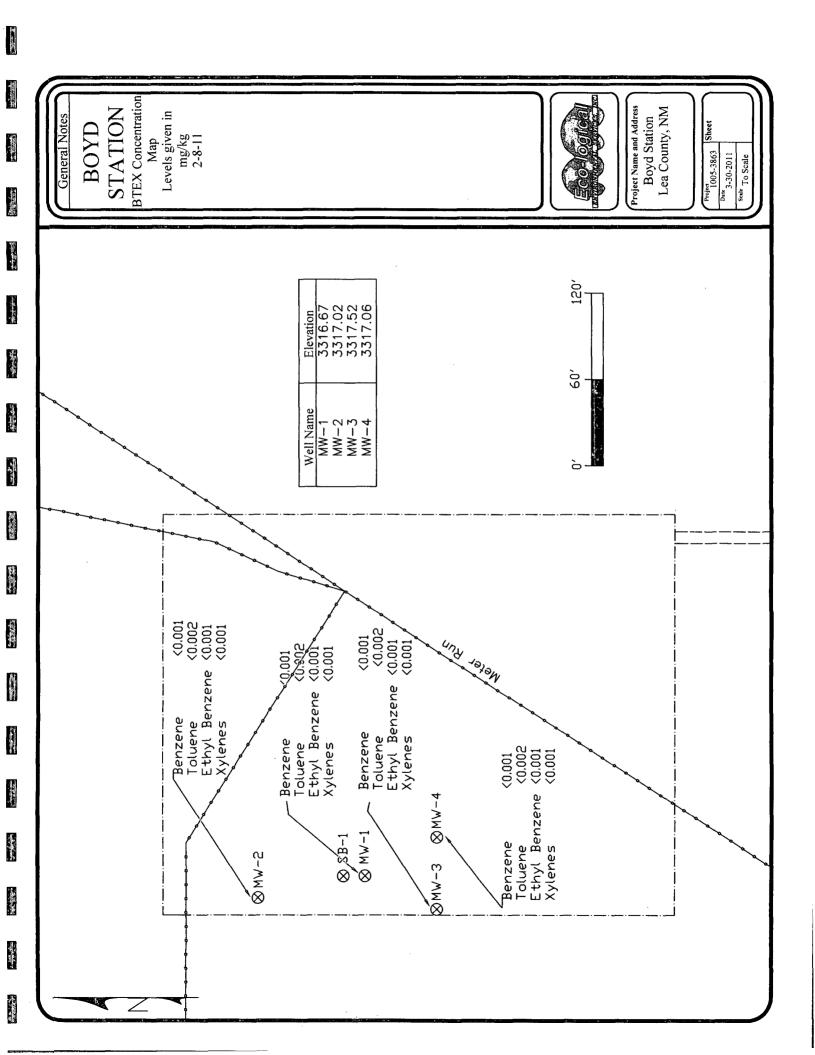


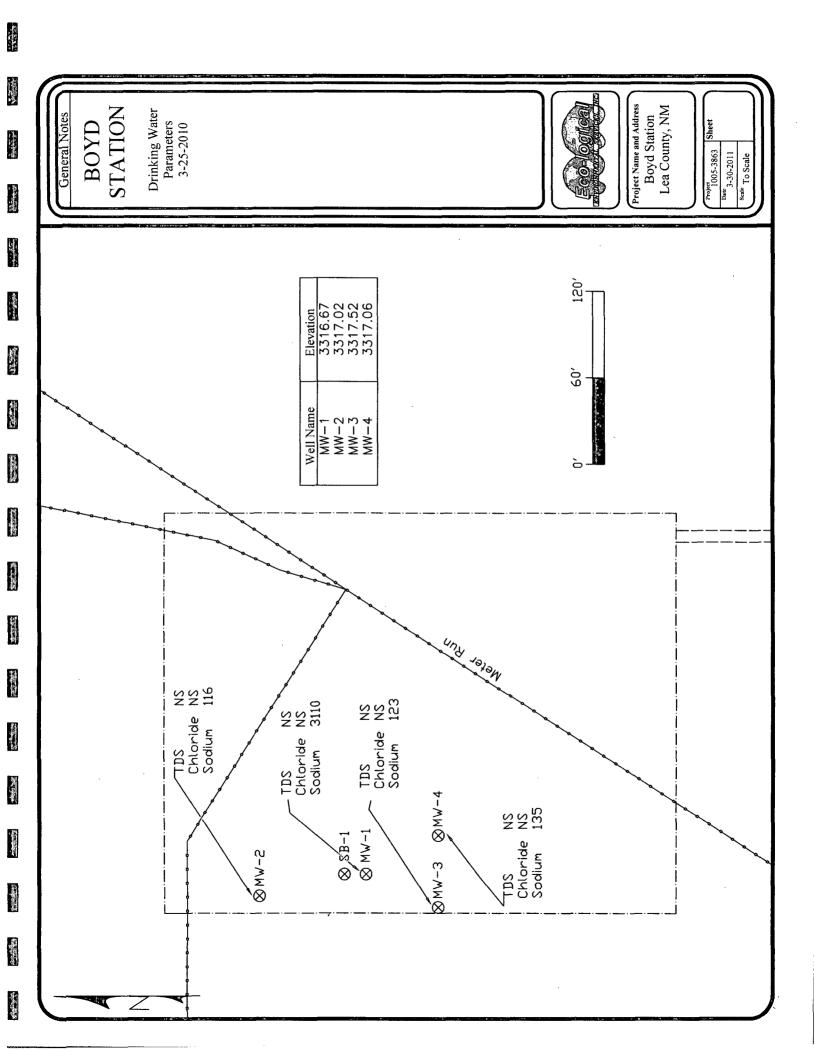


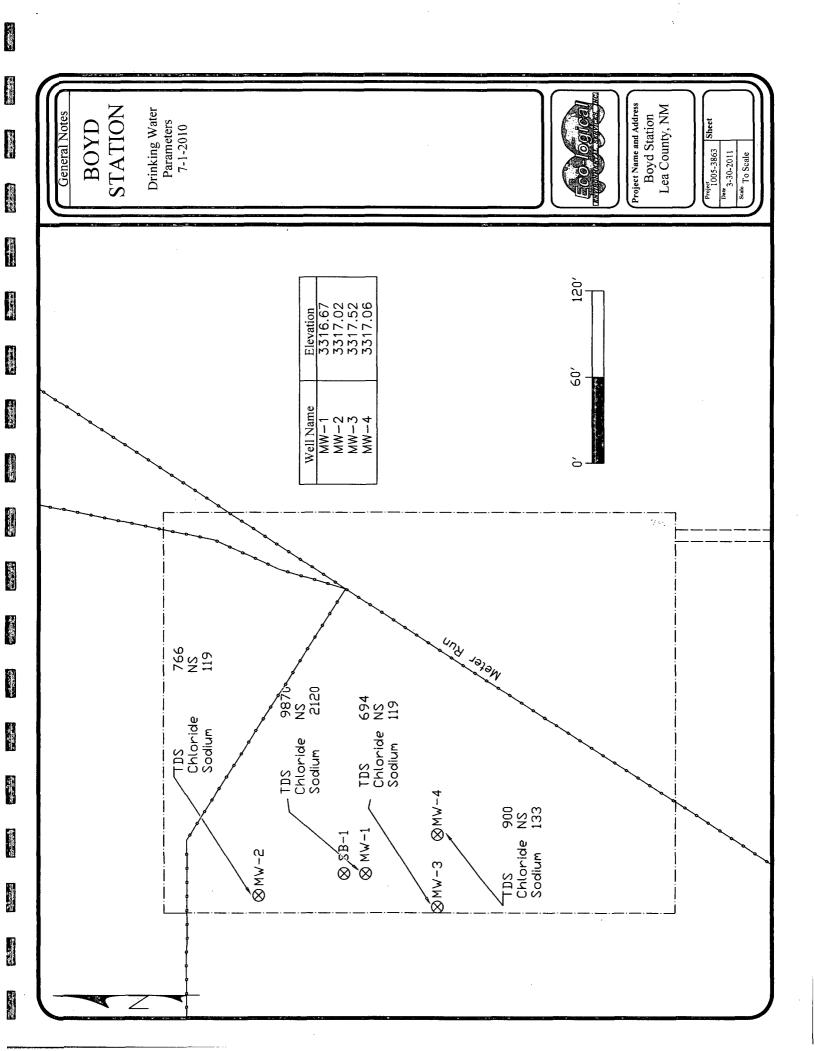


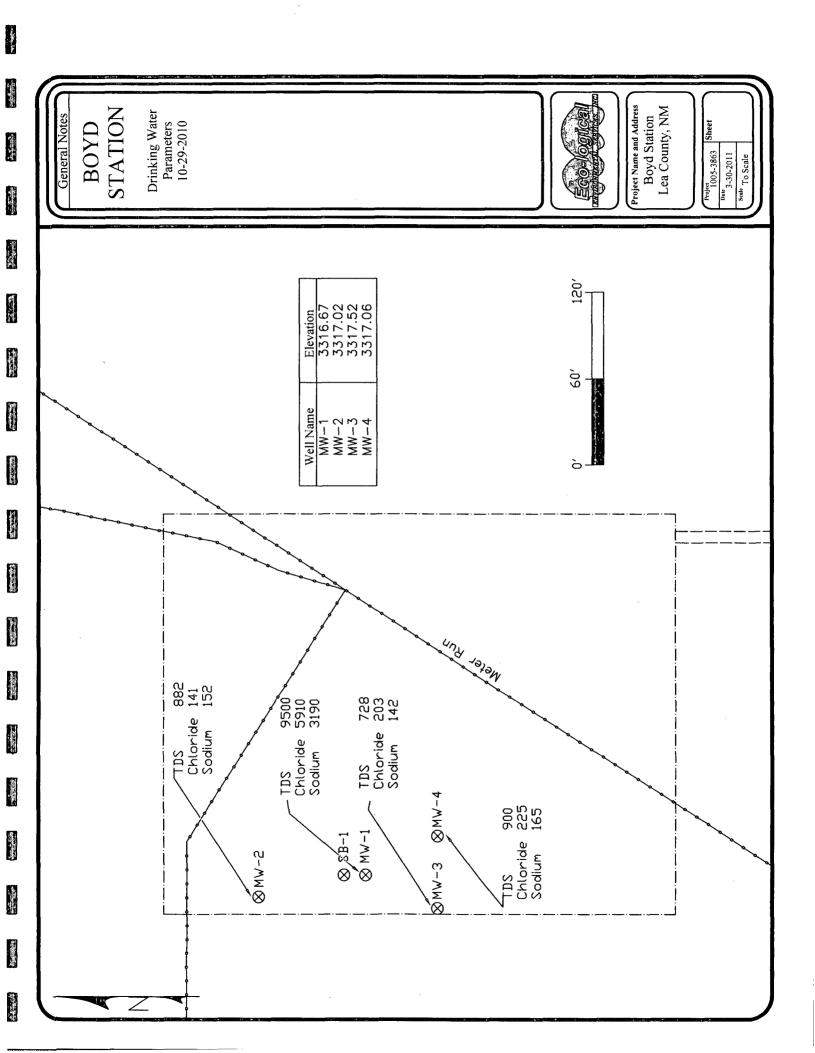


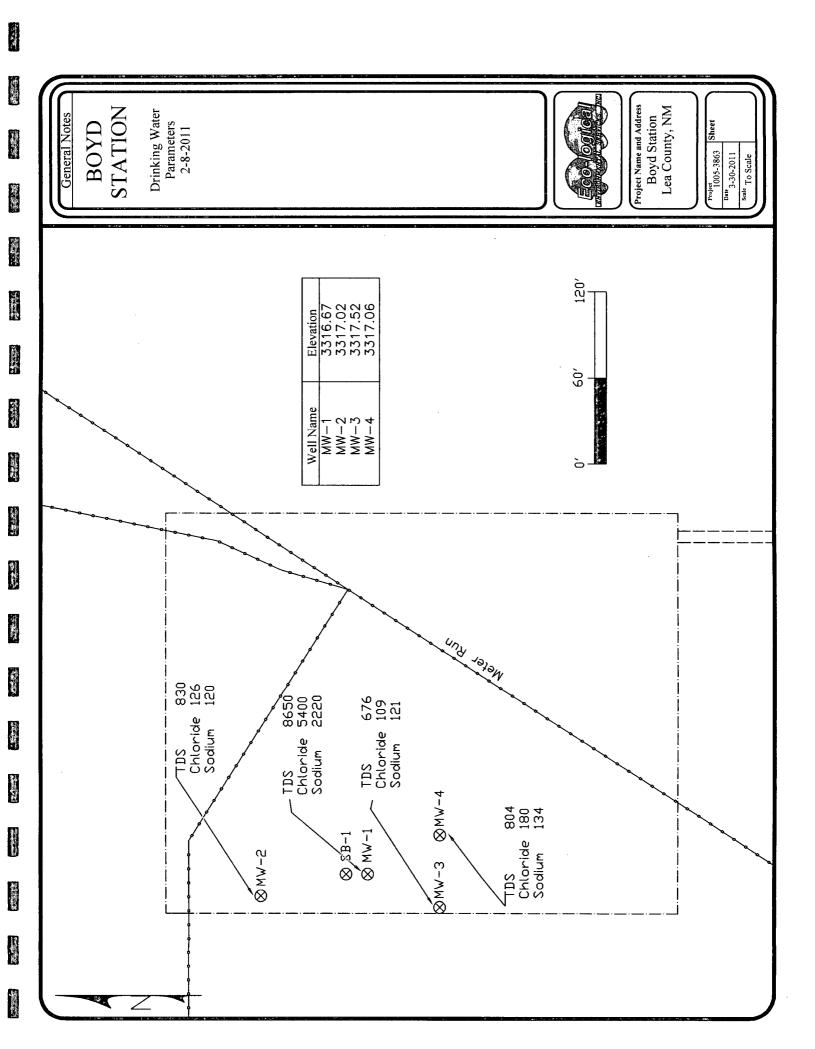












TABLES

Table 1 - Groundwater Gauging Southern Union Former Boyd Compressor Station Eunice, Lea County, New Mexico

WELL NUMBER	I DATE MEASURED!		DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-1	6/26/2009	3316.67	-	58.95	0.00	3,257.72
	3/25/2010	3316.67	-	59.07	0.00	3,257.60
	6/28/2010	3316.67	<u>-</u>	59.32	0.00	3,257.35
	10/29/2010	3316.67	_	59.12	0.00	3,257.55
	2/8/2011	3316.67	-	59.17	0.00	3,257.50
MW-2	6/26/2009	3317.02	_	59.16	0.00	3,257.86
	3/25/2010	3317.02	_	59.32	0.00	3,257.70
	6/28/2010	3317.02	-	59.97	0.00	3,257.05
	10/29/2010	3317.02	_	57.36	0.00	3,259.66
	2/8/2011	3317.02	_	59.4	0.00	3,257.62
MW-3	6/26/2009	3317.52	-	59.16	0.00	3,258.36
	3/25/2010	3317.52	_	59.92	0.00	3,257.60
	6/28/2010	3317.52	_	59.97	0.00	3,257.55
	10/29/2010	3317.52	-	60.16	0.00	3,257.36
	2/8/2011	3317.52	-	59.4	0.00	3,258.12
		For the State Line of the State	A Section of the sect			
MW-4	6/26/2009	3317.06	-	59.36	0.00	3,257.70
	3/25/2010	3317.06	-	59.5	0.00	3,257.56
	6/28/2010	3317.06	-	59.12	0.00	3,257.94
	10/29/2010	3317.06	-	59.58	0.00	3,257.48
	2/8/2011	3317.06	-	59.61	0.00	3,257.45
制制的 经营						

Table 3 CONCENTRATIONS OF ANIONS, CATIONS, AND TOTAL DISSOLVED SOLIDS IN GROUNDWATER Southern Union

Former Boyd Compressor Station Eunice, Lea County, New Mexico

ij

Well	Date	TDS	Fluoride	Chloride	Sulfate	Bromide	Calcium	Magnesium	Potassium	Sodium
	1/15/2009	3820	2.88	2610	266	N/A	338	219	16.8	2610
	6/26/2009	5700	5.07	2960						2960
MW-1	3/25/2010						496	369	46	3,110
IVI VV - I	7/1/10	9870					425	323	39.8	2120
	10/29/10	9500	13.4	5910	368	27	432	409	52.5	3190
	2/8/11	8650	<40.0	5,400	409	101	385	310	41	2,220
			,	٠,						
	1/15/2009	840	3.48	145	236	N/A	67.5	49.3	7.65	145
	6/26/2009	924	3.52	132						132
MW-2	3/25/2010						57.2	43.4	7.77	116
IVI W -2	7/1/10	766					60.9	44.4	6.98	119
	10/29/10	882	3.88	141	194	1.34	61.1	51.9	8.29	152
	2/8/11	830	2.09	126	162	<5.00	63.4	46.6	8.77	120
,										
	1/15/2009	825	3.58	150	236	N/A	70.1	49.8	7.73	150
	6/26/2009	810	3.51	132						132
MW-3	3/25/2010						60.1	44.5	7.94	123
101 00-5	7/1/10	694					63.1	44.1	6.91	119
	10/29/10	728	3.85	124	203	1.34	71.6	51.2	8.18	142
	2/8/11	676	2.25	109	173	<5.00	60.7	44.4	7.22	121
			. 1.	-						
	1/15/2009	986	3.67	208	270	N/A	98.7	63.1	8.79	208
	6/26/2009	978	3.48	198						198
MW-4	3/25/2010						98.8	62.5	9.74	135
171 77 -4	7/1/10	900					82.8	59	8.01	133
	10/29/10	900	3.6	196	225	1.47	82.1	64.5	9.16	165
	2/8/11	804	2.1	180	193	< 5.00	77.9	59.6	8.22	134
			, .							
	OCD limits	1000	1.6	250	600	N/A	N/A	N/A	N/A	N/A

Table 2 CONCENTRATIONS OF BENZENE, BTEX, TPH IN GROUNDWATER

Southern Union

Former Boyd Compressor Station Eunice, Lea County, New Mexico

Well	Date	Benzene	Toluene	Ethylbenzene	Xylenes	TPH C6- C12	TPH C12- C28	TPH C28- C35
	1/15/2009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.100	< 5.00	N/A
	6/26/2009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.100	<5.00	N/A
MW-1	3/25/2010	0.0015	0.0019	< 0.001	< 0.001	< 5.00	<5.00	< 5.00
101 00 - 1	7/1/10	< 0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	10/29/10	<0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	2/8/11	< 0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	· · ·	•						
	1/15/2009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.10	< 5.00	N/A
	6/26/2009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.100	<5.00	N/A
MW-2	3/25/2010	< 0.001	0.0013	< 0.001	< 0.001	<5.00	<5.00	<5.00
1V1 VV -Z	7/1/10	< 0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	10/29/10	< 0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	2/8/11	< 0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	1/15/2009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.10	<5.00	N/A
	6/26/2009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.100	<5.00	N/A
MW-3	3/25/2010	< 0.001	< 0.002	< 0.001	< 0.001	<5.00	<5.00	<5.00
IVI VV -3	7/1/10	<0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	10/29/10	< 0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	2/8/11	< 0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	1/15/2009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.10	<5.00	N/A
	6/26/2009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.100	<5.00	N/A
MW-4	3/25/2010	< 0.001	< 0.002	< 0.001	< 0.001	<5.00	<5.00	<5.00
171 77 -4	7/1/10	< 0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	10/29/10	< 0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	2/8/11	< 0.001	< 0.002	< 0.001	< 0.001	<1.50	<1.50	<1.50
	OCD limits	0.01	0.75	0.75	0.62		N/A	

APPENDICES

Analytical Report 367023

for

Eco-Logical Environmental

Project Manager: Scott Springer

Eco-Logical Pricing 1005-4157

02-APR-10



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL00449):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295)



02-APR-10

Project Manager: Scott Springer Eco-Logical Environmental 2200 Market Street Midland, TX 79703

Reference: XENCO Report No: 367023

Eco-Logical PricingProject Address:

Scott Springer:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 367023. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 367023 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 367023



Eco-Logical Environmental, Midland, TX

Eco-Logical Pricing

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Boyd MW-1	W	Mar-25-10 13:30		367023-001
Boyd MW-2	W	Mar-25-10 13:30		367023-002
Boyd MW-3	W	Mar-25-10 13:30		367023-003
Boyd MW-4	W	Mar-25-10 13:30		367023-004





Client Name: Eco-Logical Environmental

Project Name: Eco-Logical Pricing

Proiect ID:

1005-4157

Work Order Number: 367023

Report Date: 02-APR-10

Date Received: 03/26/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

Analytical Non Conformances and Comments:

Batch: LBA-800123 Total Petroleum Hydrocarbons by Texas 1005 TX1005

Batch 800123, C6-C12 Gasoline Range Hydrocarbons recovered above QC limits in the Matrix

Samples affected are: 367023-004, -002, -001, -003.

The Laboratory Control Sample for C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

Batch: LBA-800456 BTEX by EPA 8021

SW8021BM

Batch 800456, 4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 559483-1-BLK,366989-002 S,366989-002 SD.

Batch: LBA-800712 Metals per ICP by SW846 6010B

SW6010B IC

Batch 800712, Calcium recovered below QC limits in the Matrix Spike Duplicate. Magnesium recovered above QC limits in the Matrix Spike.

Samples affected are: 367023-004, -002, -001, -003.

The Laboratory Control Sample for Magnesium, Calcium is within laboratory Control Limits



Certificate of Analysis Summary 367023

Eco-Logical Environmental, Midland, TX

Project Name: Eco-Logical Pricing

Project Location:

Contact: Scott Springer

Project Id: 1005-4157

Date Received in Lab: Fri Mar-26-10 03:13 pm Report Date: 02-APR-10

Project Manager: Brent Barron, II

					1 Pyter Manager . Dient Danon, 11
	Lab Id:	367023-001	367023-002	367023-003	367023-004
And I was Dogwood	Field Id:	Boyd MW-1	Boyd MW-2	Boyd MW-3	Boyd MW-4
Analysis Requesieu	Depth:				
	Matrix:	WATER	WATER	WATER	WATER
	Sampled:	Mar-25-10 13:30	Mar-25-10 13:30	Mar-25-10 13:30	Mar-25-10 13:30
BTEX by EPA 8021	Extracted:	Mar-30-10 15:30	Mar-30-10 15:30	Mar-30-10 15:30	Mar-30-10 15:30
	Analyzed:	Mar-31-10 03:26	Mar-31-10 04:27	Mar-31-10 04:48	Mar-31-10 05:08
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		0.0015 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010
Toluene		0.0019 0.0010	0.0013 0.0010	BRL 0.0010	BRL 0.0010
Ethylbenzene		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010
m,p-Xylenes		BRL 0.0020	BRL 0.0020	BRL 0.0020	BRL 0.0020
o-Xylene		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010
Total Xylenes		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010
Total BTEX		0.0034 0.0010	0.0013 0.0010	BRL 0.0010	BRL 0.0010
Metals per ICP by SW846 6010B	Extracted:	Mar-31-10 06:30	Mar-31-10 06:30	Mar-31-10 06:30	Mar-31-10 06:30
SUB: T104704295-TX	Analyzed:	Apr-01-10 10:30	Apr-01-10 10:22	Apr-01-10 10:23	Apr-01-10 10:24
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Calcium		496 2.00	57.2 0.100	60.1 0.100	98.8 0.100
Magnesium		369 0.200	43.4 0.010	44.5 0.010	62.5 0.010
Potassium		45.7 10.0	7.77 0.500	7.94 0.500	9.74 0.500
Sodium		3110 10.0	116 0.500	123 0.500	135 0.500
Total Petroleum Hydrocarbons by	Extracted:	Mar-27-10 13:30	Mar-27-10 13:30	Mar-27-10 13:30	Mar-27-10 13:30
Texas 1005	Analyzed:	Mar-29-10 09:48	Mar-29-10 10:18	Mar-29-10 10:51	Mar-29-10 11:20
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	
C6-C12 Gasoline Range Hydrocarbons		BRL 5.00	BRL 5.00	BRL 5.00	BRL 5.00
C12-C28 Diesel Range Hydrocarbons		BRL 5.00	BRL 5.00	BRL 5.00	BRL 5.00
C28-C35 Oil Range Hydrocarbons		BRL 5.00	BRL 5.00	BRL 5.00	BRL 5.00
Total TPH 1005		BRL 5.00	BRL 5.00	BRL 5.00	BRL 5.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warminy to the end use of the data hereby presented. Our jiability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Manager Brefit Barron, II



Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte.

 The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL Below Reporting Limit.
- **RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Project Name: Eco-Logical Pricing

Work Orders: 367023,

Project ID: 1005-4157

Lab Batch #: 800456

Sample: 559483-1-BKS/BKS

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 03/30/10 22:37	Units: mg/L Date Analyzed: 03/30/10 22:37 SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0279	0.0300	93	80-120		
4-Bromofluorobenzene	0.0263	0.0300	88	80-120		

Lab Batch #: 800456

Sample: 559483-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/30/10 22:57	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0259	0.0300	86	80-120	

Lab Batch #: 800456

Sample: 559483-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/30/10 23:59	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021 Analytes	Amount Found {A}	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0238	0.0300	79	80-120	*

Lab Batch #: 800456

Sample: 367023-001 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 03/31/10 03:26	SU	RROGATE R	ECOVERY S	STUDY	•
BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 800456

Sample: 367023-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 03/31/10 04:27	SU	RROGATE R	ECOVERY	STUDY	
ВТІ	EX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0273	0.0300	91	80-120	
4-Bromofluorobenzene		0.0389	0.0300	130	80-120	*

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Eco-Logical Pricing

Work Orders: 367023,

Project ID: 1005-4157

Lab Batch #: 800456

Sample: 367023-003 / SMP

Matrix: Water Batch: 1

Units: mg/L Date Analyz	ed: 03/31/10 04:48	SÜ	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 802	:1	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes 1,4-Difluorobenzene		0.0287	0.0300	96	80-120	
4-Bromofluorobenzene		0.0303	0.0300	101	80-120	1.00

Lab Batch #: 800456

Sample: 367023-004 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 03/31/10 05:08	SU	RROGATE R	RECOVERY	STUDY	
BTEX	by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
I,4-Difluorobenzene		0.0271	0.0300	90	80-120	
4-Bromofluorobenzene		0.0315	0.0300	105	80-120	

Lab Batch #: 800456

Sample: 366989-002 S / MS

Batch:

Matrix: Water

Units: mg/L D	ate Analyzed: 03/31/10 06:52	SU	RROGATE R	ECOVERY	STUDY	
	EPA 8021 lytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0270	0.0300	90	80-120	
4-Bromofluorobenzene		0.0197	0.0300	66	80-120	*

Lab Batch #: 800456

Sample: 366989-002 SD / MSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 03/31/10 07:13	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes		l	1~1	<u> </u>		
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	-	
4-Bromofluorobenzene	0.0227	0.0300	76	80-120	* -	

Lab Batch #: 800123

Sample: 559258-1-BKS / BKS

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/27/10 16:26	SU	SURROGATE RECOVERY STUDY						
Total Petroleum Hydrocarbons by Texas 1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	11.7	10.0	117	70-135				
o-Terphenyl	5.39	5.00	108	70-135				

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Eco-Logical Pricing

Work Orders: 367023,

Project ID: 1005-4157

Lab Batch #: 800123

Sample: 559258-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 03/27/10 16:56	St	RROGATE R	ECOVERY	STUDY	
Total Petroleum Hydrocarbons by Texas 1005	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	12.1	10.0	121	70-135	
o-Terphenyl	5.64	5.00	113	70-135	

Lab Batch #: 800123

Sample: 559258-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/27/10 17:28	SU	RROGATE R	ECOVERY	STUDY	
Total Petroleum Hydrocarbons by Texas 1005	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	,	
1-Chlorooctane	9.65	10.0	97	70-135	
o-Terphenyl	5.25	5.00	105	70-135	

Lab Batch #: 800123

Sample: 367023-001 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/29/10 09:48	SU	RROGATE R	ECOVERY	STUDY	
Total Petroleum Hydrocarbons by Texas 1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
				ļ	
1-Chlorooctane	8.38	10.0	84	70-135	
o-Terphenyl	4.43	5.00	89	70-135	

Lab Batch #: 800123

Sample: 367023-002 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 03/29/10 10:18	SU	RROGATE R	ECOVERY	STUDY	
Total Petroleum Hydrocarbons by Texas 1005	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	10.8	10.0	108	70-135	
o-Terphenyl	5.79	5.00	116	70-135	

Lab Batch #: 800123

Sample: 367023-003 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 03/29/10 10:51	SU	RROGATE R	ECOVERY	STUDY	
Total Petroleum	Hydrocarbons by Texas 1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		9.45	10.0	95	70-135	
o-Terphenyl		4.93	5.00	99	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Eco-Logical Pricing

Work Orders: 367023,

Project ID: 1005-4157

Lab Batch #: 800123

o-Terphenyl

Sample: 367023-004 / SMP

Batch: 1 Matrix: Water

5.00

114

70-135

Units: mg/L Date Analyzed: 03/29/10 11:20	SU SU	RROGATE R	RECOVERY	STUDY	
Total Petroleum Hydrocarbons by Texas 1005	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	ĺ	
1-Chlorooctane	9.20	10.0	92	70-135	
o-Terphenyl	4.84	5.00	97	70-135	

Lab Batch #: 800123 Sample: 366989-003 S/MS Matrix: Water Batch: 1 SURROGATE RECOVERY STUDY Date Analyzed: 03/29/10 12:51 Units: mg/L Amount True Control **Total Petroleum Hydrocarbons by Texas 1005** Found Amount Recovery Limits Flags [A] [B] %R %R [D] Analytes 1-Chlorooctane 10.0 116 11.6 70-135

5.69

Surrogate Recovery [D] = 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution







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Project Name: Eco-Logical Pricing

Work Order #: 367023

Analyst: ASA

Lab Batch ID: 800456

Sample: 559483-1-BKS

Date Prepared: 03/30/2010

Batch #: 1

Project ID: 1005-4157 **Date Analyzed:** 03/30/2010

Matrix: Water

REANK / BLANK SPIKE / BLANK SPIKE DITPLICATE RECOVERY STITING

Units: mg/L		DLAIN	BLANK IBLANK STIKE I BLANK STIKE DUFLICATE KECUVEKY STUDY	FINE / B	LAIVA	rine Duri	AAIE	KECUVE	AKY STOL	, I	
BTEX by EPA 8021	Blank	Spike	Blank	Blank	Spike	Blank	Blk. Spk		Control	Control	
	Sample Result [A]	Added	Spike Result	Spike %R	Added	Spike Duplicate	Dup. %R	RPD %	Limits %R	Limits %RPD	Flag
Analytes		[8]	<u></u>	<u>a</u>	E	Result [F]	<u>5</u>				
Benzene	<0.0010	0.1000	0.0926	93	0.1	0.0999	100	8	70-125	25	
Toluene	<0.0010	0.1000	0.0929	93	0.1	0.1007	101	8	70-125	25	
Ethylbenzene	<0.0010	0.1000	0.0953	95	0.1	0.1035	104	8	71-129	25	
m,p-Xylenes	<0.0020	0.2000	0.1941	97	0.2	0.2112	106	8	70-131	25	
o-Xylene	<0.0010	0.1000	0.0957	96	0.1	0.1045	105	6	71-133	25	

Analyst: DAT

Lab Batch ID: 800712

Date Prepared: 03/31/2010

Batch #: 1

Sample: 559412-1-BKS

Matrix: Water

Date Analyzed: 04/01/2010

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE 1	ECOVE	RY STUD	Y	
Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[2]	[a]	(E)	Result [F]	<u>5</u>				
Calcium	<0.100	1.00	0.949	95	1	0.933	93	2	75-125	25	
Magnesium	<0.010	1.00	1.06	106	1	1.04	104	2	75-125	25	
Potassium	<0.500	10.0	9.37	94	10	9.46	95	1	75-125	25	
Sodium	<0.500	11.0	11.0	100	11	10.5	95	5	75-125	25	ļ

Relative Percent Difference RPD = 200*[(C-F)/(C+F)]Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(F)/[E]All results are based on MDL and Validated for QC Purposes

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Project Name: Eco-Logical Pricing

Work Order #: 367023

Project ID: 1005-4157

Analyst: BEV		Da	te Prepar	Date Prepared: 03/27/2010	0			Date A	Date Analyzed: 03/27/2010	3/27/2010		
Lab Batch ID: 800123	Sample: 559258-1-BKS		Batch #:	1#: 1					Matrix: Water	Vater		
Units: mg/L			BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
Total Petroleum Hydrocarbons by Texas 1005	carbons by Texas	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Bik. Spk Dup. %R	RPD	Control Limits	Control Limits	Flag
Analytes			[<u>B</u>]	[C]	<u>a</u>	Œ	Result [F]	<u></u> <u></u>	2			
C6-C12 Gasoline Range Hydrocarbons	arbons	<5.00	100	113	113	100	113	113	0	70-135	25	
C12-C28 Diesel Range Hydrocarbons	rrbons	<5.00	100	78.5	79	100	5.77	78	1	70-135	25	

Relative Percent Difference RPD = 200*[(C-F)/(C+F)]
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Final Ver. 1.000



Form 3 - MS Recoveries

helao

Project Name: Eco-Logical Pricing

Work Order #: 367023 **Lab Batch #:** 800123

Project ID: 1005-4157

Date Analyzed: 03/29/2010

Date Prepared: 03/27/2010

Analyst: BEV

QC-Sample ID: 366989-003 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	RECO'	VERY STU	DY
TPH by Texas1005	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[A]	[B]	1		ł	i
C6-C12 Gasoline Range Hydrocarbons	7.11	100	226	219	70-135	1x
C12-C28 Diesel Range Hydrocarbons	<2.50	100	79.9	80	70-135	

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference [E] = 200*(C-A)/(C+B)All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: Eco-Logical Pricing



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Work Order #: 367023

Lab Batch ID: 800456

Matrix: Water _ Batch #:

Project ID: 1005-4157

QC-Sample ID: 366989-002 S Date Prepared: 03/30/2010

Date Analyzed: 03/31/2010

ASA Analyst:

eporting Units: mg/L		×	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/MAT	RIX SPIF	CE DUPLICAT	TE RECO	VERY S	TUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0021	0.1000	0.0851	83	0.1000	0.0732	7.1	15	70-125	25	
Toluene	<0.0020	0.1000	0.0849	85	0.1000	0.0730	73	15	70-125	25	
Bithylbenzene	<0.0010	0.1000	0.0867	87	0.1000	0.0742	74	16	71-129	25	
m,p-Xylenes	<0.0020	0.2000	0.1726	98	0.2000	0.1517	92	13	70-131	25	
o-Xylene	<0.0010	0.1000	0.0863	98	0.1000	0.0757	9/	13	71-133	25	
				l							

Date Analyzed: 04/01/2010 Lab Batch ID: 800712

QC-Sample ID: 366935-001 S Date Prepared: 03/31/2010

Analyst: DAT Batch #:

Matrix: Water

Reporting Units: mg/L		X	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	SIX SPII	Œ DUPLICA	re reco	VERY S	STUDY		
Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Spike Spiked Sample Added Result [F]	Spiked Dup. %R [G]	RPD	Control Limits	Control Limits %RPD	Flag
Calcium	181	1.00	182	100	1.00	178	0	2	75-125	25	×
Magnesium	11.1	1.00	12.5	140	1.00	12.2	110	2	75-125	25	×
Potassium	1.89	10.0	13.0	111	10.0	12.7	108	2	75-125	25	
Sodium	35.2	11.0	47.1	108	11.0	47.1	108	0	75-125	25	

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference RPD = 200*(C-F)/(C+F)

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

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12600 West 1-20 12600 West	1500 West 1700 Mest 1700	_	ď			:тот-	pλ:	КоЯ			Date			3	ıpp∀		~	<u>e</u>	4	ი დ 	<u> </u>	- 80	6		wise mples	
12600 West 1-20-20309 1260	12600 West 1-20-20309 1260	N OF CUSTODY RECORD	ဖ		AT is project specific. vel III and IV data.)) (p	H izərig porove	g S Hig	Mg/K nd are	e ƙid	,W J\gr	n agns	e urch	vods HA9 :r	ibbA bloH									Cooler Temp:	ond/tions unle XENCO until ereby requesi	(0)
12600 West 1-20 East, Cocess. The Property Composite of Composite of Containers 12600 West 1-20 East, Cocess. The Property of Containers 12600 West 1-20 East, Cocess. The Property of Containers 12600 West 1-20 East, Cocess. The Property of Containers 12600 West 1-20 East, Cocess. The Property of Containers 12600 West 1-20 East, Cocess. The Property of	Drive, Signature Signature Commainer Signa Date & Time Dive, Signature Commainer Signa Date & Time Date & Time Dive, Signature Commainer Signa Date & Time Date & Time Date & Time Diversity of Signature Commainer Signa Date & Time Date & Time Diversity of Signature Commainer Signa Date & Time Date	ALYSIS REQUEST & CHAI			7d 10d 21d and 10+ Working			51	×0!	7	0	5		3.4 P	20 803									otal Containers per COC:	pon signings this COC you accept XEN greed on writing. Reports are the Intellerall be held 30 days after final report is e Anarges and Collection Fees are pre-apt	None (NA) See Label (L). Other
214-902-0309 Phone Phone Phone Composite Composite Composite Composite Relinquished Relinquished Relinquished (Container Size (Containe	Drive, Stafford, Tx 77477 281-240-4200 Onive, San Antonio, Tx 78238 210-509-3334 S Bivd., Dailas, Tx 78230 214-902-0300 Project ID LOOS - 41 S Proj. Manager (PM) Signature S See Lab PM Included Call PM) Signature Signature Signature Signature Date & Time Relinquished Signature Date & Time Relinquished Signature	Complete to the control of the contr		ab Only: 267032	5.7 5.7	d× 2	Offher:	Pppdx-2 pdx-2	YPH HqV qA q besq '	AM Appdd	A EPH Thickes Thickes Thickes	дА V М С ИВ \ І-АЯ	BA DW GBS GBS	s PP TCLP (see Perfect Print P	VOC PMeta	×								Sign) Date & Time	3.18	ZnankNaCH (7) (Cool <4C) (C)
	1 4143 Greenbriar I 532 Blackberry D 532 Blackberry D 1 9701 Harry Hines 1 Previously don 2 - Log (C.C.), C. 1 Ind and 2 - Log (C.C.), C. 1 Previously don 1 Previously don 2 - Log (C.C.), C. 1 Previously don 1 Previously don 2 - Log (C.C.), C. 2 Proviously don 2 - Log (C.C.), C. 2 Proviously don 2 - Log (C.C.), C. 2 Previously don 3 Previously don 2 - Log (C.C.), C. 3 Previously don 4 Previously don 5 Previously don 6 Previously don	400	214-902-0300	Savice 432-530-15-35	NCO Project ID 1005-41.57		432-520-7737	☐ Invoice must have a P.O	☐ Call for P.O.	DW TRRP	E OTHER: Ided Call PM)		Seat some	m x definers resiner Size giner Type	Imed dend tood * trood trood	3								Date & Time	aulo 3:13	3 oHe2 (N) Ache A

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subcontractors and assigns under Xenco's standard terms and conditions of service unless previolusly negotiated under a fully executed client contract.

Notice: Signature of this document and relinquishment of these samples constitutes a valid purchase order from client company to Xenco Laboratories and its affiliates,

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Date/ Time: <u>Ecological Environ</u> M 3/26/10 3:13	cental	<u>.</u>		
Date/ Time: 3/26/10 3:13				
Lab ID#: 367023				
Initials:				
Initials.				
Sample Receipt	Checklist			
			Client In	itials
#1 Temperature of container/ cooler?	(Yes)	No_	1.1 °C	
#2 Shipping container in good condition?	Yes	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5 Chain of Custody present?	des	<u>No</u>		
#6 Sample instructions complete of Chain of Custody?	(Yes)	No		 -
#7 Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8 Chain of Custody agrees with sample label(s)?	(ES)	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	(√es)	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	(es)	No		
#11 Containers supplied by ELOT?	(Yes)	No	·	
#12 Samples in proper container/ bottle?	(Yes)	No	See Below	
#13 Samples properly preserved?	Yes	No	See Below	
#14 Sample bottles intact?	(Yes)	No_		
#15 Preservations documented on Chain of Custody?	(Yes)	No		
#16 Containers documented on Chain of Custody?	(YES)	No		
#17 Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18 All samples received within sufficient hold time?	Yes	No	See Below	
#19 Subcontract of sample(s)?	Yes	140	Not Applicable	
#20 VOC samples have zero headspace?	(res)	No	Not Applicable	
Contact: Contacted by:	nentation		Date/ Time:	
Regarding:				
Corrective Action Taken:				
		· · · · · · · · · · · · · · · · · · ·		
Check all that Apply: See attached e-mail/ fax Client understands and woul Cooling process had begun s	d like to proc	eed with	<u> </u>	

Analytical Report 380158

for

Eco-Logical Environmental

Project Manager: Scott Springer

BOYD 1005-4157

16-JUL-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALII), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL00449):

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917) North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)





16-JUL-10

Project Manager: Scott Springer Eco-Logical Environmental 2200 Market Street Midland, TX 79703

Reference: XENCO Report No: 380158

BOYD

Project Address: NM

Scott Springer:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 380158. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 380158 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



Sample Cross Reference 380158



Eco-Logical Environmental, Midland, TX BOYD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Jul-01-10 18:20		380158-001
MW-2	W	Jul-01-10 19:50		380158-002
MW-3	W	Jul-01-10 20:20		380158-003
MW-4	W	Jul-01-10 20:40		380158-004

CASE NARRATIVE



Client Name: Eco-Logical Environmental

Project Name: BOYD



Project ID: Work Order Number: 380158

1005-4157

Report Date: 16-JUL-10 Date Received: 07/06/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-813583 Inorganic Anions by EPA 300

E300MI

Batch 813583, Chloride recovered above QC limits in the Matrix Spike.

Samples affected are: 380158-002, -004, -001, -003.

The Laboratory Control Sample for Chloride is within laboratory Control Limits

Batch: LBA-813595 BTEX by EPA 8021

None

Batch: LBA-813778 TPH by SW8015 Mod

None

Batch: LBA-813789 TDS by SM2540C

None

Batch: LBA-814788 Inductively Coupled Plasma Atomic Emission Spectroscopy Mass

SW6020

Spectrometry

Batch 814788, Calcium recovered below QC limits in the Matrix Spike and Matrix Spike

Duplicate.

Samples affected are: 380158-002, -004, -001, -003.

The Laboratory Control Sample for Calcium is within laboratory Control Limits



Contact: Scott Springer

Project Location: NM

Project Id: 1005-4157

Certificate of Analysis Summary 380158

Eco-Logical Environmental, Midland, TX

Project Name: BOYD

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10 May 2012

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Date Received in Lab: Tue Jul-06-10 09:00 am

Report Date: 16-JUL-10 Bront Bo

					Project Manager: Brent Barron, II	t Barron, II
	Lab Id:	380158-001	380158-002	380158-003	380158-004	
Analysis Donnostod	Field Id:	MW-1	MW-2	MW-3	MW-4	
naisan hay sistiniiv	Depth:					
	Matrix:	WATER	WATER	WATER	WATER	
	Sampled:	Jul-01-10 18:20	Jul-01-10 19:50	Jul-01-10 20:20	Jul-01-10 20:40	
Anions in Water by EPA 300	Extracted:					
	Analyzed:	Jul-06-10 15:45	Jul-06-10 15:45	Jul-06-10 15:45	Jul-06-10 15:45	
•	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Chloride		6000 250	130 5.00	124 5.00	187 10.0	
BTEX by EPA 8021	Extracted:	Jul-06-10 15:30	Jul-06-10 15:30	Jul-06-10 15:30	Jul-06-10 15:30	
	Analyzed:	Jul-06-10 21:07	Jul-06-10 19:37	Jul-06-10 19:59	Jul-06-10 20:22	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Benzene		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010	
Toluene		BRL 0.0020	BRL 0.0020	BRL 0.0020	BRL 0.0020	
Ethylbenzene		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010	
m,p-Xylenes		BRL 0.0020	BRL 0.0020	BRL 0.0020	BRL 0.0020	
o-Xylene		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010	
Xylenes, Total		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010	
Total BTEX		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010	
Inductively Coupled Plasma Atomic	Extracted:	Jul-15-10 10:25	Jul-15-10 10:25	Jul-15-10 10:25	Jul-15-10 10:25	
Emission Spectroscopy Mass	Analyzed:	Jul-15-10 18:19	Jul-15-10 18:24	Jul-15-10 18:29	Jul-15-10 18:33	***************************************
Spectrometry SUB: T104704215-TX	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Calcium		425 0.500	60.9 0.500	63.1 0.500	82.8 0.500	
Magnesium		323 0.500	44.4 0.500	44.1 0.500	59.0 0.500	
Potassium		39.8 0.300	6.98 0.300	6.91 0.300	8.01 0.300	
Sodium		2120 D 50	119 0.500	119 0.500	133 0.500	
TDS by SM2540C	Extracted:					
	Analyzed:	Jul-06-10 16:00	Jul-06-10 16:00	Jul-06-10 16:00	Jul-06-10 16:00	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Total dissolved solids		9870 5.00	766 5.00	694 5.00	900 5.00	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data fareisy presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager Brent Barron, II

Page 5 of 19

Final 1.000



Project Id: 1005-4157 Contact: Scott Springer

Project Location: NM

Certificate of Analysis Summary 380158

Eco-Logical Environmental, Midland, TX

Project Name: BOYD



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Date Received in Lab: Tue Jul-06-10 09:00 am

Report Date: 16-JUL-10

Project Manager: Reent Barron II

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	Lab Id:	380158-001		380158-002		380158-003	33	380158-004	4		
	Field Id:	MW-1		MW-2	_	MW-3		MW-4			
Anulysis Neywested	Depth:						·				
*	Matrix:	WATER		WATER		WATER		WATER			
Sai	Sampled:	Jul-01-10 18:20	50	Jul-01-10 19:50	20	Jul-01-10 20:20	1:20	Jul-01-10 20:40	40		
TPH by SW8015 Mod Extr	Extracted:	Jul-07-10 10:30	30								
Am	Analyzed:	Jul-07-10 16:46	46	Jul-07-10 17:15	15	Jul-07-10 17:45	:45	Jul-07-10 18:14	41:	 	
Uni	Units/RL:	mg/L	R	mg/L	RL	mg/L	RL	mg/L	RL		
C6-C12 Gasoline Range Hydrocarbons		BRL	1.50	BRL	1.50	BRL	1.50	BRL	1.50		
C12-C28 Diesel Range Hydrocarbons		BRL	1.50	BRL	1.50	BRL 1.50	1.50	BRL	1.50		
C28-C35 Oil Range Hydrocarbons		BRL	1.50	BRL	1.50	BRL	1.50	BRL	1.50		
Total TPH		BRL	1.50	BRL	1.50	BRL	1.50	BRL	1.50		

Brefit Barron, II Odessa Laboratory Manager

Page 6 of 19

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

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Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- **BRL** Below Reporting Limit.
- **RL** Reporting Limit
- MDL Method Detection Limit
- PQL Practical Quantitation Limit
- * Outside XENCO's scope of NELAC Accreditation.

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842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Project Name: BOYD

Work Orders: 380158,

Project ID: 1005-4157

Lab Batch #: 813595

Sample: 567462-1-BKS / BKS

Matrix: Water Batch: 1

Units: mg/L Date Analyzed: 07/06/10 16:16	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0345	0.0300	115	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 813595

Sample: 567462-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 07/06/10 16:38	SU	RROGATE R	ECOVERY S	STUDY	
вті	EX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	- Alluly Cos	0.0333	0.0300	111	80-120	
4-Bromofluorobenzene		0.0304	0.0300	101	80-120	

Lab Batch #: 813595

Sample: 567462-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 07/06/10 18:07	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 813595

Sample: 380158-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 07/06/10 19:37	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes 1.4-Diffuorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 813595

Sample: 380158-003 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 07/06/10 19:59	SU	RROGATE R	ECOVERY	STUDY	
ВТІ	EX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	-	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene		0.0306	0.0300	102	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: BOYD

Work Orders: 380158,

Project ID: 1005-4157

Lab Batch #: 813595

Sample: 380158-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 07/06/10 20:22	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 813595

Sample: 380158-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L Date Ar	nalyzed: 07/06/10 21:07	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes				[D]		
1,4-Difluorobenzene		0.0266	0.0300	89	80-120	
4-Bromofluorobenzene		0.0314	0.0300	105	80-120	

Lab Batch #: 813595

Sample: 380158-001 S / MS

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 07/06/10 21:30	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 813595

Sample: 380158-001 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 07/06/10 21	:52 SU	RROGATE R	ECOVERY :	STUDY	
BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount · [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 813778

Sample: 567567-1-BKS / BKS

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 07/07/10 13:19	9 SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane		11.6	10.0	116	70-135		
o-Terphenyl		6.26	5.00	125	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: BOYD

Work Orders: 380158,

Sample: 567567-1-BSD / BSD

Project ID: 1005-4157

Lab Batch #: 813778

Matrix: Water Batch: 1

Units: mg/L Date Analyzed: 07/07/10 14:18	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	12.3	10.0	123	70-135		
o-Terphenyl	6.57	5.00	131	70-135		

Lab Batch #: 813778

Sample: 567567-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 07/07/10 14:47	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		11.4	10.0	114	70-135	
o-Terphenyl		6.55	5.00	131	70-135	

Lab Batch #: 813778

Sample: 380158-001 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 07/07/10 16:46	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		10.8	10.0	108	70-135	
o-Terphenyl		6.29	5.00	126	70-135	

Lab Batch #: 813778

Sample: 380158-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 07/07/10 17:15	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	Analytes	10.3	10.0	103	70-135		
o-Terphenyl		6.10	5.00	122	70-135		

Lab Batch #: 813778

Sample: 380158-003 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 07/07/10 1		SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane		11.2	10.0	112	70-135		
o-Terphenyl		6.53	5.00	131	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: BOYD

Work Orders: 380158,

Project ID: 1005-4157

Lab Batch #: 813778

Sample: 380158-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 07/07/10 18:14	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		10.9	10.0	109	70-135	
o-Terpheny!		6.37	5.00	127	70-135	

Lab Batch #: 813778

Sample: 380156-001 S / MS

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 07/07/10 18:43 TPH by SW8015 Mod Analytes		SURROGATE RECOVERY STUDY						
		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane		12.0	10.0	120	70-135			
o-Terphenyl		6.54	5.00	131	70-135			

Surrogate Recovery [D] = 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Blank Spike Recovery



Project Name: BOYD

Work Order #: 380158

Project ID:

1005-4157

Lab Batch #: 814788

Sample: 568114-1-BKS

Matrix: Water

Date Analyzed: 07/15/2010

Date Prepared: 07/15/2010

Analyst: HAT

Reporting Units: mg/L

Batch #:	1	BLANK/BLANK SPIKE RECOVERY STUDY

ten #: 1	DEATH.	DEAME	IXE KEC	OVERT	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
		[C]	[D]		
<0.500	3.00	2.63	88	75-125	
<0.500	3.00	3.12	104	75-125	
< 0.300	2.00	2.03	102	75-125	
< 0.500	3.00	2.81	94	75-125	
	Blank Result [A]	Blank Spike Added [A]	Blank Result [A] Spike Added [B] Blank Spike Result [C] <0.500	Blank Result [A] Spike Added [B] Blank Spike Result [C] Blank Spike Pike Pike Pike Pike Pike Pike Pike P	Blank Result [A] Spike Added [B] Blank Spike Result [C] Blank Spike Phike Spike Result [C] Spike Phike Phik







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Project Name: BOYD

Work Order #: 380158

Analyst: ASA

Date Prepared: 07/06/2010

Project ID: 1005-4157 **Date Analyzed:** 07/06/2010

Flag Control Limits %RPD 25 25 25 25 25 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 71-129 70-125 70-131 71-133 70-125 Matrix: Water RPD 9 9 9 9 Blk. Spk Dup. %R [G] 104 102 101 102 96 Duplicate Result [F] 0.0957 0.1011 0.2043 0.1015 0.1039 Spike Added 0.1 0.1 Ξ 0.1 0.7 0.1 Blank Spike %R [D] 86 91 95 96 96 Blank Spike Result [C] 0.1923 0.0954 0.0955 0.0909 0.0978 Batch #: 1 0.1000 0.1000 0.2000 Spike Added 0.1000 0.1000 <u>B</u> Sample Result <0.0010 <0.0010 <0.0010 <0.0020 <0.0020 <u>v</u> Sample: 567462-1-BKS BTEX by EPA 8021 Lab Batch ID: 813595 Units: mg/L Analytes Ethylbenzene m,p-Xylenes o-Xylene Toluene Benzene

Analyst: LATCOR

Lab Batch ID: 813583

Date Prepared: 07/06/2010

Batch #: 1

Sample: 813583-1-BKS

Matrix: Water

Date Analyzed: 07/06/2010

omes: "See See See See See See See See See Se		BLANK	K/BLANKS	PIKE/B	LANK S	SLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	CATE F	RECOVE	RY STUD	Y	
Anions in Water by EPA 300 Sample	Blank mple Result	Spike Added	Blank Spike Desult	Blank Spike	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup. %R	RPD	Control Limits	Control Limits	Flag
Analytes	<u></u>	[B]	[0]	<u>e</u>	(E)	Result [F]	<u>5</u>	•			
Chloride <1	<10.0	10.0	10.2	102	10	10.2	102	0	90-110	20	

Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(E)/[E]All results are based on MDL and Validated for QC Purposes Relative Percent Difference RPD = 200*[(C-F)/(C+F)]

Final 1.000







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No.

Project Name: BOYD

Work Order #: 380158

Analyst: WRU

Lab Batch ID: 813789

Sample: 813789-1-BKS

Date Prepared: 07/06/2010

Project ID: 1005-4157 Date Analyzed: 07/06/2010

Batch #: 1

Matrix: Water

Units: mg/L		BLANI	SLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPI	ICATE F	RECOVE	RY STUD	Y	
TDS by SM2540C	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes		<u>a</u>	[C]	<u>@</u>	<u> </u>	Result [F]	[5]				
Total dissolved solids	<5.00	1000	936	94	1000	926	96	2	80-120	30	

Analyst: BEV

Lab Batch ID: 813778

Date Prepared: 07/07/2010 Batch #: 1 Sample: 567567-1-BKS

Date Analyzed: 07/07/2010 Matrix: Water

Units: mg/L		BLAN	K /BLANK S	PIKE / I	SLANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	
TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[B	<u></u>	<u>a</u>	a	Result [F]	<u>[5]</u>				
C6-C12 Gasoline Range Hydrocarbons	<1.50	100	99.2	66	100	101	101	2	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<1.50	100	82.6	83	100	87.0	87	5 .	70-135	25	

Relative Percent Difference RPD = 200*((C-F)/(C+F)| Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes

Final 1.000





Project Name: BOYD



Work Order #: 380158

Lab Batch #: 813583 Date Analyzed: 07/06/2010

QC-Sample ID: 380156-001 S

Date Prepared: 07/06/2010

Project ID: 1005-4157

Analyst: LATCOR

Batch #:

Matrix: Water

Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added {B}	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	177	200	403	113	90-110	Х

Lab Batch #: 813778

Date Analyzed: 07/07/2010

Date Prepared: 07/07/2010

Analyst: BEV

QC-Sample ID: 380156-001 S

Batch #:

Matrix: Water

Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
C6-C12 Gasoline Range Hydrocarbons	<1.50	100	103	103	70-135	
C12-C28 Diesel Range Hydrocarbons	<1.50	100	83.1	83	70-135	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

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Project Name: BOYD

QC-Sample ID: 380158-001 S

Matrix: Water _ Batch #:

Project ID: 1005-4157

Date Prepared: 07/06/2010

Date Analyzed: 07/06/2010

Work Order #: 380158 Lab Batch ID: 813595

ASA Analyst:

Reporting Units: mg/L		M	ATRIX SPIKI	/MAT	AIX SPIF	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	re rec	OVERY S	STUDY		
BTEX by EPA 8021	Parent Sample Result		Spiked Sample Spiked Result Sample	Spiked Sample		Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	(B)	2	(<u>0</u>	(E)	Result [F]	<u>[</u>]	•	1 00	WANT D	
Benzene	<0.0010	0.1000	0.0881	88	0.1000	0.0887	68	1	70-125	25	
Toluene	<0.0020	0.1000	0.0818	82	0.1000	0.0814	81	0	70-125	25	
Ethylbenzene	<0.0010	0.1000	0.0864	98	0.1000	0.0865	87	0	71-129	25	
m,p-Xylenes	<0.0020	0.2000	0.1750	88	0.2000	0.1750	88	0	70-131	25	
o-Xylene	<0.0010	0.1000	0.0845	85	0.1000	0.0849	85	0	71-133	25	

Matrix: Water Batch #: QC-Sample ID: 381504-001 S Date Prepared: 07/15/2010 Date Analyzed: 07/15/2010 Lab Batch ID: 814788

Analyst: HAT

Reporting Units: mg/L		Z	ATRIX SPIK	E/MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	STUDY		
Inductively Coupled Plasma Atomic Emission Spectroscopy Mass Spectrometry	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Calcium	29.5	3.00	31.7	73	3.00	31.5	19	_	75-125	25	×
Magnesium	3.91	3.00	18.9	26	3.00	6.73	94	1	75-125	25	
Potassium	5.15	2.00	7.03	94	2.00	6.94	90	1	75-125	25	
Sodium	20.7	3.00	23.8	103	3.00	23.2	83	3	75-125	25	

Matrix Spike Percent Recovery [D] = $100^{4}(C-A)/B$ Relative Percent Difference RPD = $200^{4}((C-F)/(C+F))$

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Final 1.000



Sample Duplicate Recovery



Project Name: BOYD

Work Order #: 380158

Lab Batch #: 813583

Project ID: 1005-4157

Analyst: LATCOR

QC- Sample ID: 380156-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Anions in Water by EPA 300	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Chloride	177	188	6	20	

Lab Batch #: 814788

Date Analyzed: 07/15/2010

Date Prepared: 07/15/2010

Analyst: HAT

QC- Sample ID: 381504-001 D Batch

Batch #: 1

Matrix: Water

Reporting Units: mg/L	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Inductively Coupled Plasma Atomic Emission Spectroscopy Mass Spectrometry Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Calcium	29.5	29.5	0	20	
Magnesium	3.91	3.90	0	20	
Potassium	5.15	5.18	1	20	
Sodium	20.7	20.9	1	20	

Lab Batch #: 813789

Date Analyzed: 07/06/2010

Date Prepared: 07/06/2010

Analyst: WRU

QC- Sample ID: 380156-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
125 5, 5.1.25 10 5	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		1-1			
Total dissolved solids	972	998	3	30	

B A AOCS: Enli-List BIEX JIBE EIOH Oxyg AOOPS TO THE FILE TO THE FILE TO THE FILE TO THE FILE	### Composite Co	ANALYSIS REQUEST & CHAIN OF CUSTOUT RECORD 12600 West 1-20 East, Odessa, Tx 79765 432-563-1800	Only:		24h 48h 3d (5d) 7d 10d 21d Standard TAT is project specific. king Days for level II and 10+ Working days for level III and IV data.	CBS)	erb. Pr	ж траф Н	e bee	q g	13PH 13PH	7/6W	24 Sals	12h 12h 12c 13c 13c 13c	8-A9 9 q d Q Q (1) Q	Metals: RCI Metals: RCI CHLO CHLO CHLO CHLO CHLO CHLO CHLO CHLO				-			& Time	otherwise agreed on writing. Reports are the Intellectual Property of XENCO Luntil paid. Samples will be held. 30 days after final report is e-mailed unless	,
Selford, Tx 77477 281-240-4200 San Antonio, Tx 78238 210-509-3334 Dailas, Tx 75220 214-902-0300 4 J J St. 520 - 11 ENCO Phone A. O 432-520-11 ENCO Phone A. Confect to Phone A. Confect to Project to Project to Project to Project to Project to Phone A. Confect to Phone A. Confect to Phone A. Confect to Project to Phone A. Confect to Phone A. Conf	4143 Greenbriar Drive, Stafford, Tx 77477 281-240-4200 5332 Blackberry Drive, Sam Antonio, Tx 78238 210-609-3334 9701 Harry Hines Blvd., Dalles, Tx 78220 214-902-0300 Project ID A. LA. MS. NC. Proj. Manager Pall A. LA. MS. NC. Proj. Manager Pall Dire. Invoice with Final Report II Invoice must have P.O. NO. P.O. NO. CLEAN Land-Fill Waste-Disp NPDES DW TRRP APCEE NAVY DOE DOD USACE OTHER: Date Date PROJECT SPOLUS BLS See Lab PM Included Call PM) T. SPOLUS BLS SEE Lab PM Included Call PM) T. SPOLUS BLS SEE Lab PM Included Call PM) T. SPOLUS BLS SEE Lab PM Included Call PM) T. SPOLUS BLS SEE Lab PM Included Call PM) T. SPOLUS BLS SEE Lab PM Included Call PM) T. SPOLUS BLS SEE Lab PM Included Call PM) T. SPOLUS BLS SEE Lab PM Included Call PM ST. SPOLUS BLS SEE Lab PM Included Call PM ST. SPOLUS BLS SEE LAB ST. SPOLUS BLS SE		直		TAT: ASAP If is typically	_	VOAs::	SHOV SALL	2 (VPH	WW.	Α 1-> Η۹ ΟΤ Ξ	Appdx	8 A	GBC	ype TCL TCL	Container T. VOCs: Ful VOCs: Ful TX-1005 EVARs TX-1005 EVARS TX-1005 EVARS TX-1005 EVARS TX-1005 EVARS EVARS	×	1 1		1 1			(Initials and Sign) Date		1111
	S32 Blackberry Drive, 9701 Harry Hines Blvd., 9701 Har	Stafford, Tx 77477 281-240-4200 San Antonio, Tx 78238 210-609-3334		735-255	Project 15	Manager (PM)	tal. Con 432-520	Final Report D Invoice must have		Vaste-Disp NPDES DW TRRP	E DOD USACE OTHER:	e Lab PM Included Call PM)		800		Pepth fatrix Composite Srab Srab	*8	20	02				 		

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Final 1.000

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subcontractors and assigns under Xento's standard terms and conditions of service unless previolusly negotiated under a fully executed client contract.

Notice: Signature of this document and relinquishment of these samples constitutes a valid purchase order from client company to Xenco Laboratories and its affiliates,

Matrix: Air (A), Product (P), Solid(S), Water (W), Liquid (L)



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

r relogiti / Noncomormance Report	Campi	c Log-III			
client: Eco-Logical Environmental					
Client: Eco-Logical Environmental Date/Time: 07-06-10 C 0900					
Lab ID#: 380158					
Initials: JMF					
Sample Receipt Check	list				
1. Samples on ice?	Blue	Water	No		
2. Shipping container in good condition?		No	None		
3. Custody seals intact on shipping container (cooler) and bottles?		No	N/A		
4. Chain of Custody present?		No			
5. Sample instructions complete on chain of custody?		No			
6. Any missing / extra samples?		No >		······································	
7. Chain of custody signed when relinquished / received?		No			
8. Chain of custody agrees with sample label(s)?		No			
9. Container labels legible and intact?		No			
10. Sample matrix / properties agree with chain of custody?	Yes	No			
11. Samples in proper container / bottle?		No			
12. Samples properly preserved?		No	N/A		
13. Sample container intact?		No			
14. Sufficient sample amount for indicated test(s)?		No			
15. All samples received within sufficient hold time?		No			
16. Subcontract of sample(s)?	Yes	No	N/A		
17. VOC sample have zero head space?	Yes	No	N/A		
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	<u>), </u>	Cooler 5 No.		
ibs 3,\ °C ibs °C ibs °C	lbs	°C	lbs	°c	
Nonconformance Docume	ntation				
Contact: Contacted by: Date/Time:					
Regarding:					
Corrective Action Taken:					

Check all that apply: Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

□ Initial and Backup Temperature confirm out of temperature conditions

□ Client understands and would like to proceed with analysis

Analytical Report 395498

for **Eco-Logical Environmental**

Project Manager: Scott Springer

Boyd

1005-4157

08-NOV-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

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Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)





08-NOV-10

Project Manager: Scott Springer Eco-Logical Environmental 2200 Market Street Midland, TX 79703

Reference: XENCO Report No: 395498

Boyd

Project Address:

Scott Springer:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 395498. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 395498 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 395498



Eco-Logical Environmental, Midland, TX Boyd

Sample Id	Matrix	Date Collected Sample I	Depth Lab Sample Id
MW-1	W	Oct-29-10 11:30	395498-001
MW-2	W	Oct-29-10 11:30	395498-002
MW-3	W	Oct-29-10 11:30	395498-003
MW-4	W	Oct-29-10 11:30	395498-004

CASE NARRATIVE



Client Name: Eco-Logical Environmental

Project Name: Boyd



Project ID:

1005-4157

Work Order Number: 395498

Report Date: 08-NOV-10

Date Received: 11/01/2010

Sample receipt non conformances and Comments:

Sample receipt Non Conformances and Comments per Sample:

Analytical Non Conformances and Comments:

Batch: LBA-830631 BTEX by EPA 8021B

SW8021BM

Batch 830631, 1,4-Difluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 395498-004.395498-003.395498-001.395498-002. Batch 830631, 1,4-Difluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 577933-1-BLK.

Batch: LBA-830858 ICP-MS Metals by SW 6020A

SW6020

Batch 830858, Sodium recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 395498-001, -004, -002, -003.

The Laboratory Control Sample for Sodium is within laboratory Control Limits



Contact: Scott Springer Project Id: 1005-4157

Project Location:

Certificate of Analysis Summary 395498

Eco-Logical Environmental, Midland, TX

Project Name: Boyd

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Date Received in Lab: Mon Nov-01-10 11:58 am Report Date: 08-NOV-10

\blacksquare
Brent Barron,
roject Manager:
Pr

					Project Manager: Brent Barron, II	srent Barron, II
	Lab Id:	395498-001	395498-002	395498-003	395498-004	
Analysis Requested	Field Id:	MW-1	MW-2	MW-3	MW-4	
marcanhar steamer	Depth:					
	Matrix:	WATER	WATER	WATER	WATER	
	Sampled:	Oct-29-10 11:30	Oct-29-10 11:30	Oct-29-10 11:30	Oct-29-10 11:30	
BTEX by EPA 8021B	Extracted:	Nov-04-10 09:00	Nov-04-10 09:00	Nov-04-10 09:00	Nov-04-10 09:00	
	Analyzed:	Nov-04-10 17:24	Nov-04-10 17:45	Nov-04-10 18:07	Nov-04-10 18:28	
- The state of the	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	
Total Xylenes		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	
ICP-MS Metals by SW 6020A	Extracted:	Nov-04-10 12:50	Nov-04-10 12:50	Nov-04-10 12:50	Nov-04-10 12:50	
SUB: T104704215-TX	Analyzed:	Nov-05-10 16:09	Nov-05-10 16:14	Nov-05-10 16:19	Nov-05-10 16:24	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Calcium		432 0.500	61.1 0.500	71.6 0.500	82.1 0.500	
Magnesium		409 D 50.0	51.9 0.500	51.2 0.500	64.5 0.500	
Potassium		52.5 0.300	8.29 0.300	8.18 0.300	9.16 0.300	
Sodium		3190 D 50.0	152 D 50.0	142 D 50.0	165 D 50.0	
Inorganic Anions by EPA 300/300.1	Extracted:					
	Analyzed:	Nov-02-10 12:55	Nov-02-10 12:55	Nov-02-10 12:55	Nov-02-10 12:55	
	Units/RL:		mg/L RL	mg/L RL	mg/L RL	
Bromide		27.0 0.200	1.34 0.200	1.34 0.200	1.47 0.200	
Chloride		5910 0.200	141 0.200	124 0.200	196 0.200	
Fluoride		13.4 0.200	3.88 0.200	3.85 0.200	3.60 0.200	
Sulfate		368 0.200	194 0.200	203 0.200	225 0.200	

This analytical report, and the emire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories, XENCO Laboratories assumes no responsibility and nakes no warranty to the end use of the data bretsp presented. Our liability its limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Manager Brefit Barron, II



Contact: Scott Springer Project Id: 1005-4157

Project Location:

Certificate of Analysis Summary 395498

Eco-Logical Environmental, Midland, TX

Project Name: Boyd

Date Received in Lab: Mon Nov-01-10 11:58 am

Report Date: 08-NOV-10

Project Manager: Brent Barron, II

						(
	Lab Id:	395498-001	395498-002	395498-003	395498-004		•
Analysis Pounostod	Field Id:	MW-1	MW-2	MW-3	MW-4		
naicanhau sistinut	Depth:						
	Matrix:	WATER	WATER	WATER	WATER		
	Sampled:	Oct-29-10 11:30	Oct-29-10 11:30	Oct-29-10 11:30	Oct-29-10 11:30		
TDS by SM2540C	Extracted:						
	Analyzed:	Nov-02-10 16:00	Nov-02-10 16:00	Nov-02-10 16:00	Nov-02-10 16:00		
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL		
Total dissolved solids		9500 5.00	882 5.00	728 5.00	900 2:00		
TPH By SW8015 Mod	Extracted:	Nov-02-10 10:40	Nov-02-10 10:40	Nov-02-10 10:40	Nov-02-10 10:40		
	Analyzed:	Nov-02-10 17:12	Nov-02-10 17:40	Nov-02-10 18:10	Nov-02-10 18:42		
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL		
C6-C12 Gasoline Range Hydrocarbons		ND 1.50	ND 1.50	ND 1.50	ND 1.50		
C12-C28 Diesel Range Hydrocarbons		ND 1.50	ND 1.50	ND 1.50	ND 1.50		
C28-C35 Oil Range Hydrocarbons		ND 1.50	ND 1.50	ND 1.50	ND 1.50		
Total TPH		ND 1.50	ND 1.50	ND 1.50	ND 1.50		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and rankes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Manager Brefit Barron, II



Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL Below Reporting Limit.
- **RL** Reporting Limit
- MDL Method Detection Limit
- **PQL** Practical Quantitation Limit
- * Outside XENCO's scope of NELAC Accreditation.

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12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Project Name: Boyd

Work Orders: 395498,

Sample: 577933-1-BKS / BKS

Project ID: 1005-4157

Lab Batch #: 830631

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 11/04/10 13:33	s Su	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 830631

Sample: 577933-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 11/04/10 13:55	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount {B}	Recovery %R	Control Limits %R	Flags
	Analytes	<u>.</u>		[D]		
1,4-Difluorobenzene		0.0257	0.0300	86	80-120	
4-Bromofluorobenzene		0.0261	0.0300	87	80-120	

Lab Batch #: 830631

Sample: 577933-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L Date	Analyzed: 11/04/10 14:37	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EP Analyt		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0,0225	0.0300	75	80-120	*
4-Bromofluorobenzene		0.0264	0.0300	88	80-120	

Lab Batch #: 830631

Sample: 395498-001 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/04/10 17:24	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		1	[D]		}
1,4-Difluorobenzene	0.0227	0.0300	76	80-120	**
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

Lab Batch #: 830631

Sample: 395498-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date An	alyzed: 11/04/10 17:45	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8 Analytes	3021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0214	0.0300	71	80-120	**
4-Bromofluorobenzene		0.0280	0.0300	93	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Boyd

Work Orders: 395498,

Sample: 395498-003 / SMP

Batch:

Project ID: 1005-4157 Matrix: Water

Lab Batch #: 830631 Unite mg/I

SU	RROGATE
Amount Found [A]	True Amount [B]
	Amount Found

Units: mg/L	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0212	0.0300	71	80-120	**
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

Lab Batch #: 830631

Sample: 395498-004 / SMP

Batch:

Matrix: Water

Units: mg/L

'L	Date Analyzed: 11/04/10 18:28	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
e		0.0216	0.0300	72	80-120	**
ene		0.0269	0.0200	90	90 120	

4-Bromofluorobenzene Lab Batch #: 830631

1,4-Difluorobenzene

Sample: 395498-004 S / MS

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 11/04/10 18:49	SURROGATE RECOVERY STUDY						
	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes				[D]				
1,4-Difluorobenzene		0.0240	0.0300	80	80-120			
4-Bromofluorobenzene		0.0248	0.0300	83	80-120			

Lab Batch #: 830631

Sample: 395498-004 SD / MSD

Batch:

Matrix: Water

Units: mg/L Date Analyz	zed: 11/04/10 19:10	SURROGATE RECOVERY STUDY						
BTEX by EPA 802	1B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes				[D]	ĺ			
1,4-Difluorobenzene		0.0282	0.0300	94	80-120			
4-Bromofluorobenzene		0.0287	0.0300	96	80-120			

Lab Batch #: 830248

Sample: 577712-1-BKS / BKS

Batch: Matrix: Water

Units: mg/L	Date Analyzed: 11/02/10 13:09	SURROGATE RECOVERY STUDY						
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery	Control Limits %R	Flags		
Analytes			1	[D]	, •==			
1-Chlorooctane	-Chlorooctane		10.0	118	70-135			
o-Terphenyl	5.64	5.00	113	70-135				

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Boyd

Work Orders: 395498,

Project ID: 1005-4157

Lab Batch #: 830248

Sample: 577712-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/02/10 13:41	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	12.2	10.0	122	70-135			
o-Terphenyl	5.19	5.00	104	70-135			

Lab Batch #: 830248

Sample: 577712-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 11/02/10 14:11	SURROGATE RECOVERY STUDY						
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	Analytes	11.5	100		70.125			
		11.5	10.0	115	70-135			
		5.74	5,00	115	70-135			

Lab Batch #: 830248

Sample: 395498-001 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 11/02/10 17:12	SURROGATE RECOVERY STUDY						
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane		10.9	10.0	109	70-135			
p-Terphenyl		5.33	5.00	107	70-135			

Lab Batch #: 830248

Sample: 395498-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 11/02/10 17:40	SURROGATE RECOVERY STUDY						
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
	Analytes			[D]				
1-Chlorooctane		11.7	10.0	117	70-135			
o-Terphenyl	Terphenyl		5.00	114	70-135			

Lab Batch #: 830248

Sample: 395498-003 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 11/02/10 18:10	SURROGATE RECOVERY STUDY						
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane		11.6	10.0	116	70-135			
o-Terphenyl		5.67	5.00	113	70-135	·		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Boyd

Work Orders: 395498,

Project ID: 1005-4157

Lab Batch #: 830248

Batch: 1 Matrix: Water

Units: mg/L

/L	Date Analyzed: 11/02/10 18:42	SURROGATE RECOVERY STUDY						
TPH 1	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
	Analytes	[,		[D]	/ / /			
		10.7	10.0	107	70-135			
		5.21	5.00	104	70-135			

Lab Batch #: 830248

1-Chlorooctane o-Terphenyl

Sample: 395485-004 S / MS

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 11/02/10 20:45	SURROGATE RECOVERY STUDY						
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
I-Chlorooctane		11.2	10.0	112	70-135			
o-Terphenyl		5.23	5.00	105	70-135			

Surrogate Recovery [D] = 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Blank Spike Recovery



Project Name: Boyd

Work Order #: 395498

Project ID:

1005-4157

Lab Batch #: 830858

Sample: 577876-1-BKS

Matrix: Water

Date Analyzed: 11/05/2010

Date Prepared: 11/04/2010

Reporting	Units:	mg/L
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	n			1		Г	_	_	

Analy	st:	HAT	

Reporting Units: mg/L	Batch #: 1	BLANK /	BLANK SPI	KE REC	COVERY	STUDY
ICP-MS Metals by SW 6020A	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	()	1-1	[C]	[D]	,,,,,	
Calcium	ND	3.00	2.72	91	75-125	
Magnesium	ND	3.00	3.20	107	75-125	
Potassium	ND	2.00	2.15	108	75-125	
Sodium	ND	3.00	3.18	106	75-125	



BS / BSD Recoveries



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Section 1

Project Name: Boyd

Work Order #: 395498 Analyst: ASA

Lab Batch ID: 830631

Date Prepared: 11/04/2010

Project ID: 1005-4157 **Date Analyzed:** 11/04/2010

Units: mg/L

Batch #: 1 Sample: 577933-1-BKS

Matrix: Water

Flag Control Limits %RPD 25 25 25 25 25 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-125 70-125 71-129 70-131 71-133 RPD Blk. Spk Dup. %R [G] 112 97 4 95 86 Blank Spike Duplicate Result [F] 0.0970 0.1117 0.0979 0.1873 0.0945 Spike Added 0.1 Ξ 0.1 0.1 0.1 0.2 Blank Spike %R [D] 110 97 95 93 93 Blank Spike Result [C] 0.1102 0.1860 8960.0 0.0953 0.0933 0.1000 0.2000 0.1000 0.1000 0.1000 Spike Added <u>B</u> Blank Sample Result 8 £ ₽ 呈 Y g BTEX by EPA 8021B Analytes Ethylbenzene m,p-Xylenes o-Xylene Toluene Benzene

Analyst: LATCOR

Date Prepared: 11/02/2010

Date Analyzed: 11/02/2010 Matrix: Water

		Flag					
	Y	Control Limits		20	70	20	20
Vater	RY STUD	Control Limits	*	80-120	80-120	80-120	80-120
Matrix: Water	RECOVE	RPD	?	0	0	0	1
	CATE I	Blk. Spk Dup.	<u>5</u>	. 103	101	102	86
	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	Blank Spike	Result [F]	1.55	10.1	2.03	82.6
	LANKS	Spike Added	(E)	1.5	10	7	10
	PIKE / B	Blank Spike	ē	103	101	102	86
#: 1	K/BLANK	Blank Spike Posmit	[0]	1.55	10.1	2.03	9.83
Batch #: 1	BLAN	Spike Added	[<u>B</u>]	1.50	10.0	2.00	10.0
3KS		Blank Sampie Result	€.	Q.	ON.	QN.	Ð
Lab Batch ID: 830229 Sample: 830229-1-BKS	Units: mg/L	Inorganic Anions by EPA 300/300.1	Analytes	de	Je	le	
Lab Bat	-	Inor	An	Bromide	Chloride	Fluoride	Sulfate

Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes Relative Percent Difference RPD = 200*[(C-F)/(C+F)]







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Project Name: Boyd

Date Prepared: 11/02/2010

Project ID: 1005-4157 **Date Analyzed:** 11/02/2010

Sample: 830426-1-BKS

Lab Batch ID: 830426

Work Order #: 395498

Analyst: WRU

Batch #: 1

Matrix: Water

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE / B	LANK S	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
TDS by SM2540C	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Bik. Spk Dup. %R	RPD	Control Limits	Control Limits	Flag
Analytes	<u> </u>	[B]	[C]	<u>[</u>	(E)	Result [F]	<u>5</u>		,		
Total dissolved solids	ΩŽ	1000	902	06	1000	926	96	. 9	80-120	30	

Date Prepared: 11/02/2010 Sample: 577712-1-BKS

Analyst: BEV

Batch #: 1

Matrix: Water

Date Analyzed: 11/02/2010

	Sample: 577712-1-BKS	KS	Batch #:	1#: 1				-	Mairix: water	arcı		
Units: mg/L			BLANI	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPI	JCATE F	RECOVE	RY STUD	Y	
TPH By SW8015 Mod	Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
		[V]		Result	%R		Duplicate	%R	%	%R	%RPD	
Analytes			[8]	[]	ē	(E)	Result [F]	[]				
C6-C12 Gasoline Range Hydrocarbons	S	QN	100	84.5	85	100	79.4	62	9	70-135	25	
C12-C28 Diesel Range Hydrocarbons		Ð.	001	87.4	87	100	82.9	83	5	70-135	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)| Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Boyd

Work Order #: 395498 **Lab Batch #:** 830248

Project ID: 1005-4157

Date Analyzed: 11/02/2010

Date Prepared: 11/02/2010

Analyst: BEV

QC-Sample ID: 395485-004 S

Batch #:

Matrix: Water

Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
TPH by SW8015 Mod	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R {D}	Control Limits %R	Flag
Analytes	[A]	[B]	}			1
C6-C12 Gasoline Range Hydrocarbons	ND	100	83.3	83	70-135	
C12-C28 Diesel Range Hydrocarbons	ND	100	85.1	85	70-135	

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference [E] = 200*(C-A)/(C+B)All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: Boyd

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Work Order #: 395498

Lab Batch ID: 830631

Date Analyzed: 11/04/2010 Reporting Units: mg/L

QC-Sample ID: 395498-004 S

Matrix: Water Batch #:

Project ID: 1005-4157

ASA

Date Prepared: 11/04/2010

Analyst:

Acpoining ourse mg E		Σ	ATRIX SPIKI	E/MAT	KIX SPIF	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	IE KEC	VERY	TUDY		
BTEX by EPA 8021B	Parent Sample		Spiked Sample Result	Spiked Sample	Spil	Duplicate Spiked Sample I	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C] %R	%R [D]	Add (E)	Result [F]	% R [G]	%	%R	%RPD	
Benzene	QN	0.1000	0.1042	104	0.1000	0.1172	1117	12	70-125	25	
Toluene	QN	0.1000	0.0912	91	0.1000	0.1027	103	12	70-125	25	
Ethylbenzene	QX	0.1000	0.0899	06	0.1000	0.1017	102	12	71-129	25	
m.p-Xylenes	QN	0.2000	0.1717	98	0.2000	0.1915	96	11	70-131	25	
o-Xylene	ND	0.1000	0.0881	88	0.1000	0.0995	001	12	71-133	25	

Date Analyzed: 11/05/2010 Lab Batch ID: 830858

QC-Sample ID: 395493-001 S Date Prepared: 11/04/2010

Matrix: Water HAT Analyst: Batch #:

Reporting Units: mg/L

MATRIY SPIKE / MATRIX SPIKE DIIDI ICATE BECOVEDV STIIDV

Action of the court of the cour		X.	MAIRIA SPINE / MAIRIA SPINE DUPLICATE RECUVERY STUDY	V MAI	ALA SPIR	E DUPLICA	IE KEC	VERY	N TO T		
ICP-MS Metals by SW 6020A	Parent Sample Result	Spike Added	Spiked Sample Spiked Result Sample Spiked [C] %R Ac	Spiked Sample %R	oike Ided	Duplicate Spiked Sample Result [F]	Spiked Dup.	RPD	Control Limits %R	Control Limits %RPD	Flag
CALIMITY ICS	₹	<u>a</u>		<u>3</u>	<u>1</u>		5				
Calcium	143	3.00	146	100	3.00	146	100	0	75-125	25	
Magnesium	37.2	3.00	40.4	107	3.00	40.7	117	1	75-125	25	
Potassium	86.8	2.00	11.2	111	2.00	11.2	111	0	75-125	52	
Sodium	163	3.00	167	133	3.00	171	267	2	75-125	25	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, 1 = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: Boyd

Work Order #: 395498

Lab Batch #: 830858

Project ID: 1005-4157

Date Analyzed: 11/05/2010

Date Prepared: 11/04/2010

Analyst: HAT

QC- Sample ID: 395493-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
ICP-MS Metals by SW 6020A Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Calcium	143	143	0	20	
Magnesium	37.2	37.2	0	20	
Potassium	8.98	8.98	0	20	
Sodium	163	162	1	20	

Lab Batch #: 830229

Date Analyzed: 11/02/2010

Date Prepared: 11/02/2010

Analyst: LATCOR

QC- Sample ID: 395488-001 D

Batch #:

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

Inorganic Anions by EPA 300/300.1 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Bromide	1.90	1.91	1	20	
Chloride	261	261	0	20	
Fluoride	1.38	1.39	1	20	
Sulfate	171	172	1	20	

Lab Batch #: 830426

Date Analyzed: 11/02/2010

Date Prepared: 11/02/2010

Analyst: WRU

QC- Sample ID: 395488-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
TDS by SM2540C Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids	1220	1220	0	30	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

Policet ID Call for P. O. Call for P. O. Call for P. O. Call for P. O. Call for D. O. Call for D	set 1.20 East, Odessa, Tx 79765 432-563-1800 Serial #: 2505
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Committed to Excellence in Service and Quality

subcontractors and assigns under Xenco's standard terms and conditions of service unless previolusly negotiated under a fully executed client contract.

Notice: Signature of this document and relinquishment of these samples constitutes a valid purchase order from client company to Xenco Laboratories and its affiliates,

Matrix: Air (A), Product (P), Solid(S), Water (W), Liquid (L)



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client 800 Lo	aical Snyiv	OAR	vental			•		
Date/Time: /0 /								
Lab ID#:								
Initials: XM								
		s	ample Receipt Cl	hecki	list			
1. Samples on ice?					Blue	Water	No	
2. Shipping container i	n good condition?				Yes	No	None	
3. Custody seals intact	on shipping contai	iner (co	ooler) and bottles?		Yes	No	NA	
4. Chain of Custody pr	esent?				(Yee)	No		
5. Sample instructions	complete on chain	of cus	tody?		Yes	No		
6. Any missing / extra s	samples?				Yes	No		
7. Chain of custody sig	ned when relinquis	hed / r	eceived?		(YES)	No		
8. Chain of custody ag	rees with sample la	bel(s)?			(Yes)	No		
9. Container labels legi	ible and intact?				Yes	No		
10. Sample matrix / pro	perties agree with	chain c	of custody?		Yee	No ·		
11. Samples in proper	container / bottle?				Yes	No		
12. Samples property p	reserved?				Yes	No	NA	
13. Sample container in	ntact?				YES	No		
14. Sufficient sample a	mount for indicated	test(s)?		Yes	No		
15. All samples receive	ed within sufficient	hold tii	ne?		Yes	No		
16. Subcontract of san	nple(s)?				Yes	No	N/A	
17. VOC sample have a	ero head space?				Yes	No	N/A_	
18. Cooler 1 No.	Cooler 2 No.		Cooler 3 No.		Cooler 4 No).	Cooler 5 No.	
1bs 26°	C lbs	್ಲಿ	ibs	°င	lbs	°c	!bs	°c
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Regarding:		···-						
Corrective Action Take	en:			•				
Check all that apply:	condition a □ Initial and Backu	ccepta p Tem	egun shortly after san able by NELAC 5.5.8.3 perature confirm out would like to procee	i.1.a.1. of tem	perature co		ature	

Analytical Report 406349

for Southern Union Gas Services- Monahans

Project Manager: Rose Slade

Boyd

1005-4157

16-FEB-11



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

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Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

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Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917) North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

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Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)





16-FEB-11

Project Manager: Rose Slade Southern Union Gas Services- Monahans 1507 W. 15th Street Monahans, TX 79756

Reference: XENCO Report No: 406349

Boyd

Project Address:

Rose Slade:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 406349. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 406349 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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Sample Cross Reference 406349



Southern Union Gas Services- Monahans, Monahans, TX Boyd

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Feb-08-11 00:00		406349-001
MW-2	W	Feb-08-11 00:00		406349-002
MW-3	W	Feb-08-11 00:00		406349-003
MW-4	W	Feb-08-11 00:00		406349-004

CASE NARRATIVE



Client Name: Southern Union Gas Services- Monahans

Project Name: Boyd



Proiect ID:

1005-4157

Work Order Number: 406349

Report Date: 16-FEB-11

Date Received: 02/10/2011

Sample receipt non conformances and Comments:

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-843781 Metals per ICP by SW846 6010B

SW6010B_IC

Batch 843781, Sodium recovered above QC limits in the Matrix Spike.

Samples affected are: 406349-004, -001, -002, -003.

The Laboratory Control Sample for Sodium is within laboratory Control Limits



Project Id: 1005-4157 Contact: Rose Slade

Project Location:

Certificate of Analysis Summary 406349

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Boyd

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Date Received in Lab: Thu Feb-10-11 11:35 am

Report Date: 16-FEB-11

					Project Manager: Brent Barron, II
	Lab Id:	406349-001	406349-002	406349-003	406349-004
Analysis Pognostod	Field Id:	MW-1	MW-2	MW-3	MW-4
Trutysis Mequesica	Depth:				
	Matrix:	WATER	WATER	WATER	WATER
	Sampled:	Feb-08-11 00:00	Feb-08-11 00:00	Feb-08-11 00:00	Feb-08-11 00:00
Anions by E300	Extracted:				
	Analyzed:	Feb-11-11 11:11	Feb-11-11 11:11	Feb-11-11 11:11	Feb-11-11 11:11
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L , RL
Fluoride		ND 40.0	2.09 2.00	2.25 2.00	2.10 2.00
Chloride		5400 100	126 5.00	109 5.00	180 5.00
Sulfate		409 100	162 5.00	173 5.00	193 5.00
Bromide		101 100	ND 5.00	ND 5.00	ND 5.00
BTEX by EPA 8021B	Extracted:	Feb-10-11 15:50	Feb-10-11 15:50	Feb-10-11 15:50	Feb-10-11 15:50
	Analyzed:	Feb-11-11 15:26	Feb-11-11 15:49	Feb-11-11 16:12	Feb-11-11 16:35
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Toluene		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200
Ethylbenzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
m_p-Xylenes		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200
o-Xylene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Total Xylenes		ND 0.00100	ND 0.00100	ND 0.00100	·ND 0.00100
Total BTEX		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Metals per ICP by SW846 6010B	Extracted:	Feb-14-11 08:00	Feb-14-11 08:00	Feb-14-11 08:00	Feb-14-11 08:00
SUB: T104704295-TX	Analyzed:	Feb-14-11 13:48	Feb-14-11 13:50	Feb-14-11 13:52	Feb-14-11 13:54
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Calcium		385 0.100	63.4 0.100	60.7 0.100	77.9 0.100
Magnesium		310 0.0100	46.6 0.0100	44.4 0.0100	
Potassium		40.6 0.500	8.77 0.500	7.22 0.500	8.22 0.500
Sodium		2220 0.500	120 0.500	121 0.500	134 0.500

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expansed throughout this analytical report represent the best) ingignent of XENCO Laboratories. XENCO Laboratories assumes no responsibility and nakes no warranty to the end use of the data bretch presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager Brefit Barron, II



Contact: Rose Slade Project Id: 1005-4157

Project Location:

Certificate of Analysis Summary 406349

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Boyd

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Date Received in Lab: Thu Feb-10-11 11:35 am

Report Date: 16-FEB-11

Tolect Location:						
					Project Manager: Brent Barron, II	II
	Lab Id:	406349-001	406349-002	406349-003	406349-004	
And Living Dannesday	Field Id:	MW-1	MW-2	MW-3	MW-4	
Analysts Nequesieu	Depth:				· · · · · ·	
	Matrix:	WATER	WATER	WATER	WATER	
	Sampled:	Feb-08-11 00:00	Feb-08-11 00:00	Feb-08-11 00:00	Feb-08-11 00:00	
TDS by SM2540C	Extracted:					
	Analyzed:	Feb-10-11 16:00	Feb-10-11 16:00	Feb-10-11 16:00	Feb-10-11 16:00	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Total dissolved solids		8650 5.00	830 5.00	676 5.00	804 5.00	
TPH By SW8015 Mod	Extracted:	Feb-10-11 16:00	Feb-10-11 16:00	Feb-10-11 16:00	Feb-10-11 16:00	
	Analyzed:	Feb-11-11 03:18	Feb-11-11 03:37	Feb-11-11 03:55	Feb-11-11 04:14	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
C6-C12 Gasoline Range Hydrocarbons		ND 1.50	ND 1.50	ND 1.50	ND 1.50	
C12-C28 Diesel Range Hydrocarbons		ND 1.50	ND 1.50	ND 1.50	ND 1.50	
C28-C35 Oil Range Hydrocarbons		ND 1.50	ND 1.50	ND 1.50	ND 1.50	
Total TPH		ND 1.50	ND 1.50	ND 1.50	ND 1.50	

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Odessa Laboratory Manager Breft Barron, II



Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- **BRL** Below Reporting Limit.
- **RL** Reporting Limit
- MDL Method Detection Limit
- PQL Practical Quantitation Limit
- * Outside XENCO's scope of NELAC Accreditation.

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2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Project Name: Boyd

Work Orders: 406349,

Project ID: 1005-4157

Lab Batch #: 843493

Sample: 595536-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 02/11/11 09:02	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	-		[D]		
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 843493

Sample: 595536-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 02/11/11 09:24	SU	RROGATE RI	ECOVERY S	STUDY	
ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes			[10]		
1,4-Difluorobenzene		0.0303	0.0300	101	80-120	
4-Bromofluorobenzene		0.0299	0.0300	100	80-120	

Lab Batch #: 843493

Sample: 595536-1-BLK / BLK

Rate

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 02/11/11 14:39	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 843493

Sample: 406349-001 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 02/11/11 15:26	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 843493

Sample: 406349-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 02/11/11 15:49	Su	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Boyd

Work Orders: 406349,

Project ID: 1005-4157

Lab Batch #: 843493

Sample: 406349-003 / SMP

Matrix: Water Batch: 1

Units: mg/L D	ate Analyzed: 02/11/11 16:12	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by	EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Ana	lytes			[D]		
1,4-Difluorobenzene		0.0276	0.0300	92	80-120	
4-Bromofluorobenzene		0.0284	0.0300	95	80-120	

Lab Batch #: 843493

Sample: 406349-004 / SMP

Matrix: Water Batch: 1

Units: mg/L	Date Analyzed: 02/11/11 16:35	SU	RROGATE R	RECOVERY	STUDY	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes		ļ	[D]		
1,4-Difluorobenzene		0.0280	0.0300	93	80-120	
4-Bromofluorobenzene		0.0280	0.0300	06	80 120	

Lab Batch #: 843493

Sample: 406348-001 S / MS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 02/11/11 23:48	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

Lab Batch #: 843493

Sample: 406348-001 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 02/12/11 00:11	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0301	0.0300	100	80-120	
4-Bromofluorobenzene		0.0302	0.0300	101	80-120	

Lab Batch #: 843226

Sample: 595378-1-BKS / BKS

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 02/11/11 02:22	SU	RROGATE RI	ECOVERY S	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		9.07	10.0	91	70-135	
o-Terphenyl		4.07	5.00	81	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Boyd

Work Orders: 406349,

Project ID: 1005-4157

Lab Batch #: 843226

Sample: 595378-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 02/11/11 02:	41 SU	RROGATE R	ECOVERY :	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		. ,	[D]		
1-Chlorooctane	9.52	10.0	95	70-135	
o-Terphenyl	4.94	5.00	99	70-135	

Lab Batch #: 843226

Sample: 595378-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 02/11/11 03:00	SU	RROGATE R	ECOVERY	STUDY	
	y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		7.91	10.0	79	70-135	
o-Terphenyl		3.90	5.00	78	70-135	

Lab Batch #: 843226

Sample: 406349-001 / SMP

Batch:

ch: 1 Matrix: Water

Units: mg/L Date Analyzed: 02/11/11 03:18	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.7	10.0	107	70-135	
o-Terphenyl	5.60	5.00	112	70-135	

Lab Batch #: 843226

Sample: 406349-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 02/11/11 03:37	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes			(12)		
1-Chlorooctane		7.65	10.0	77	70-135	
o-Terphenyl		3.76	5.00	75	70-135	

Lab Batch #: 843226

Sample: 406349-003 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 02/11/1	1 03:55 SU	JRROGATE, R	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	7.41	10.0	74	70-135	
o-Terphenyl	3.64	5.00	73	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Boyd

Work Orders: 406349,

Project ID: 1005-4157

Lab Batch #: 843226

Sample: 406349-004 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 02/11/11 04:14	SU	RROGATE RI	ECOVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	7.81	10.0	78	70-135	
o-Terphenyl	3.79	5.00	76	70-135	

Lab Batch #: 843226	Sample: 406406-001 S / MS	Bate	h: 1 Matrix	k:Water		
Units: mg/L	Date Analyzed: 02/11/11 05:09	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		9.39	10.0	94	70-135	
o-Terphenyl		3.69	5.00	74	70-135	

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution





BS / BSD Recoveries

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Project Name: Boyd

Work Order #: 406349 Analyst: ASA Sample: 595536-1-BKS

Lab Batch ID: 843493

Date Prepared: 02/10/2011 Batch #: 1

Project ID: 1005-4157 Date Analyzed: 02/11/2011 Matrix: Water

Flag Limits %RPD Control 25 25 25 25 25 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-125 70-125 71-129 70-131 71-133 RPD % 3 7 7 Blk. Spk Dup. %R [G] 4 92 92 4 4 Spike Duplicate Result [F] 0.0972 0.0944 0.0916 Blank 0.183 0.0941 Spike Added 0.100 0.100 0.100 0.200 0.100 Ξ Blank Spike %R [D] 001 97 4 8 6 Blank Spike Result 0.0998 0.0969 0.0939 0.0965 0.187 $\overline{\Omega}$ Spike Added 0.100 0.100 0.100 0.200 0.100 <u>B</u> Blank Sample Result [A] <0.00100 <0.00100 <0.00100 <0.00200 <0.00200 BTEX by EPA 8021B Units: mg/L Analytes Ethylbenzene m_p-Xylenes Benzene o-Xylene Toluene

Sample: 843234-1-BKS Analyst: LATCOR Lab Batch ID: 843234

Date Prepared: 02/11/2011

Batch #: 1

Matrix: Water

Date Analyzed: 02/11/2011

Units: mg/L		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE KECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	CATE	CCOVE	KY STUD	×	
Anions by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits	Control Limits %RPD	Flag
Fluoride	<0.200	2.00	2.11	106	2.00	1.95	86	8	80-120	20	
Chloride	<0.500	10.0	10.2	102	10.0	10.1	101	1	80-120	20	
Sulfate	<0.500	10.0	10.5	105	10.0	10.4	104	1	80-120	20	
Bromide	<0.500	1.50	1.53	102	1.50	1.53	102	0	80-120	20	

Blank Spike Recovery [D] = 100*(C)/(B)Blank Spike Duplicate Recovery [G] = 100*(F)/[E]All results are based on MDL and Validated for QC Purposes Relative Percent Difference RPD = 200*|(C-F)/(C+F)|







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Section 2

No.

Project Name: Boyd

Date Prepared: 02/14/2011

Project ID: 1005-4157 Date Analyzed: 02/14/2011

Matrix: Water

Sample: 595496-1-BKS Lab Batch ID: 843781

Work Order #: 406349

Analyst: DAT

Batch #: 1

Flag Limits %RPD Control 25 25 25 25 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 75-125 75-125 75-125 75-125 RPD % Blk. Spk Dup. [G] 109 60 106 86 Blank Spike Duplicate Result [F] 1.09 9.84 1.09 11.7 Spike Added 1.00 10.0 11.0 1.00 3 Blank Spike %R [D] 104 118 108 4 Blank Spike Result 1.18 1.08 9.43 11.4 Spike Added 10.0 1.00 11.0 1.00 <u>B</u> Blank
|Sample Result|
|A| <0.0100 <0.500 <0.500 <0.100 Metals per ICP by SW846 6010B Units: mg/L Analytes Magnesium Potassium Calcium

Date Prepared: 02/10/2011

Analyst: WRU

Sodium

Date Analyzed: 02/10/2011

Lab Batch ID: 843267	Sample: 843267-1-BKS	KS	Batch #:	h#: 1				-	Matrix: Water	/ater		
Units: mg/L			BLAN	K/BLANKS	PIKE / E	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE F	LECOVE	RY STUD	٨.	
TDS by SM2540C	2540C	Blank Sample Resuit	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	I ~	Control Limits	Control Limits	Flag
		· [<u>v</u>		Result	%R		Duplicate	%R	%	%R	%RPD)
Analytes			<u>B</u>	[]	<u>e</u>	<u>[a]</u>	Result [F]	<u>5</u>				
Total dissolved solids		<5.00	1000	910	16	1000	946	95	4	80-120	30	

Relative Percent Difference RPD = 200*[(C-F)/(C+F)] Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes







Project Name: Boyd

Work Order #: 406349

Analyst: BEV

Lab Batch ID: 843226

Sample: 595378-1-BKS

Date Prepared: 02/10/2011

Project ID: 1005-4157 **Date Analyzed:** 02/11/2011

Matrix: Water Batch #: 1

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPI	ICATE 1	RECOVE	SRY STUD	Y	
TPH By SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike	Spike Added	Blank Spike Dunlicate	Bik. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u>.</u>	8	[5]	[a]	<u>a</u>	Result [F]	[5]				
C6-C12 Gasoline Range Hydrocarbons	<1.50	100	92.4	92	100	99.0	66	7	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<1.50	100	82.4	82	100	7.68	06	8	70-135	25	}

Relative Percent Difference RPD = 200*(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(F)/[E]All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: Boyd



Work Order #: 406349

Lab Batch #: 843234 Date Analyzed: 02/11/2011

Date Prepared: 02/11/2011

Project ID: 1005-4157

Analyst: LATCOR

QC- Sample ID: 406240-001 S

Batch #:

Matrix: Water

Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes		1-1				<u> </u>
Fluoride	<2.00	20.0	21.4	107	80-120	
Chloride	166	100	268	102	80-120	
Sulfate	76.5	100	162	86	80-120	
Bromide	<5.00	15.0	16.6	111	80-120	

Lab Batch #: 843226

Date Analyzed: 02/11/2011

Date Prepared: 02/10/2011

Analyst: BEV

QC-Sample ID: 406406-001 S

Batch #:

Matrix: Water

Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY.
TPH by SW8015 Mod	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[A]	[B]				
C6-C12 Gasoline Range Hydrocarbons	<2.50	100	95.9	96	70-135	
C12-C28 Diesel Range Hydrocarbons	<2.50	100	76.7	77	70-135	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference [E] = 200*(C-A)/(C+B)All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit





Project Name: Boyd

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Work Order #: 406349

Date Analyzed: 02/11/2011 Lab Batch ID: 843493

Repor

QC-Sample ID: 406348-001 S

Batch #:

ASA

Analyst: Date Prepared: 02/10/2011

Matrix: Water

Project ID: 1005-4157

Reporting Units: mg/L		M	ATRIX SPIKI	/ MATI	IIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY S	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0968	6	0.100	0.0946	95	2	70-125	25	
Toluene	<0.00200	0.100	0.0935	94	0.100	0.0912	91	2	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0917	92	0.100	0.0887	68	3	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.184	92	0.200	0.177	68	4	70-131	25	
o-Xylene	<0.00100	0.100	0.0931	93	0.100	9060'0	91	3	71-133	25	

Date Analyzed: 02/14/2011 Lab Batch ID: 843781

QC-Sample ID: 406476-001 S Date Prepared: 02/14/2011

Batch #:

Matrix: Water Analyst: DAT

Reporting Units: mg/L		2	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPII	KE DUPLICA	TE REC	OVERY	STUDY		
Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample (C) %R A	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits	Control Limits %RPD	Flag
Calcium	7.73	1.00	8.58	85	1.00	8.57	84	0	75-125	25	
Magnesium	1.24	1.00	2.24	100	1.00	2.21	- 26	-	75-125	25	
Potassium	10.8	10.0	21.9	111	10.0	20.1	93	6	75-125	25	
Sodium	356	11.0	374	164	11.0	365	82	2	75-125	25	×

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference RPD = 200*((C-F)/(C+F))

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E



Sample Duplicate Recovery



Project Name: Boyd

Work Order #: 406349

Lab Batch #: 843234

Project ID: 1005-4157

Date Analyzed: 02/11/2011 11:11

Date Prepared: 02/11/2011

Analyst: LATCOR

QC- Sample ID: 406240-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

Aniona by E200	Parant Samula	Sample		Control	_ : <u>_</u>
Anions by E300	Parent Sample Result [A]	Duplicate Result	RPD	Limits %RPD	Flag
Analyte		[B]			
Fluoride	<2.00	<2.00	NC	20	
Chloride	166	167	1	20	
Sulfate	76.5	76.9	1	20	
Bromide	<5.00	<5.00	NC	20	

Lab Batch #: 843267

Date Analyzed: 02/10/2011 16:00

Date Prepared: 02/10/2011

Analyst: WRU

QC- Sample ID: 406346-001 D

Batch #: 1

Matrix: Water

SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
924	956	3	30	
	Parent Sample Result [A]	Parent Sample Result [A] Sample Duplicate Result [B]	Parent Sample Result [A] Sample Duplicate Result [B]	Result Duplicate RPD Limits [A] Result %RPD [B]

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6) (Indred Clary 2.10:11/11:35	6) (1.35 10.11 1.35	L'armin x	often							until pai	d. Samples will	be held 30 o	days after fine	al report	s e-mai	led unles	vs.
	Preservatives: Various (V). HCI pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Asbc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool,<4C) (C), None (NA), See Label (L), Other (O)	5)		(9)	mores	(den		10.01	1.35	needed	equested. Rus	n charges ar		aces are	מפים	" panel	

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Notice: Signature of this document and relinquishment of these samples constitutes a valid purchase order from client company to Xenco Laboratories and its affiliates, subcontractors and assigns under Xencó's standard terms and conditions of service unless previolusly negotiated under a fully executed client contract. Committed to Excellence in Service and Quality Matrix: Air (A), Product (P), Solid(S), Water (W), Liquid (L)

www.xenco.com



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dailas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

	Prelogin /	NOR	comormance Re	port	- Sample	: Log-III		
Client: (0 - 09)	ral /S	MG	S			•		
Date/Time: 2 10	1 1.:		42					
Lab ID #:	406349	1						
Initials:	AE							
		s	ample Receipt Ch	necki	ist			
1. Samples on ice?					Blue	Water	No	
2. Shipping container in	good condition?				Yes	No	None	
3. Custody seals intact	on shipping conta	iner (c	ooler) and bottles?		Yes	No	(N/A)	,
4. Chain of Custody pre					Yes	No		
5. Sample instructions	complete on chain	of cus	tody?		Yes	No		
6. Any missing / extra s	amples?				Yes	(No		
7. Chain of custody sign	ned when relinqui	shed / r	eceived?		(Yes)	No		
8. Chain of custody agn	ees with sample la	ibel(s)?	?		Yes	No		
9. Container labels legil	ole and intact?				Yes	No		
10. Sample matrix / pro	perties agree with	chain d	of custody?		Yee	No		
11. Samples in proper c	ontainer / bottle?				Yes	No		
12. Samples properly p	reserved?				Yes	No	N/A	
13. Sample container intact?					Yes	No		
14. Sufficient sample ar	nount for indicate	d test(s	3)?		Yes	No		
15. All samples received	d within sufficient	hold ti	me?		(Vec)	No		
16. Subcontract of sam	ple(s)?				Yes	No	N/A	
17. VOC sample have ze	ero head space?				Yes	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	<u>-</u>	Cooler 3 No.		Cooler 4 No	•	Cooler 5 No.	
lbs /.6 °c	lbs	°C	lbs	°c	lbs	°c	lbs	°C
		None	conformance Doc	umer	ntation			
Contact:	Conta		y:			Date/Time:		
		iowa b	J •			Date/ Inne		
Regarding:				-		····		
							· · · · · · · · · · · · · · · · · · ·	
Corrective Action Taker	n:							
Check all that apply:	Cooling process	. bac b	aun charth affar a-	nlina	ovent and a	it of to-	ntura	
oneck an that apply:			able by NELAC 5.5.8.3		eventanu O	ar or remper	ause	

□ Initial and Backup Temperature confirm out of temperature conditions

□ Client understands and would like to proceed with analysis