GW-269

Annual GW Reporting

DATE:
04.04.11

Southern Union Gas Services

801 South Loop 464
Monahans, Texas 79756

432.943.1100 Fax: 432.943.1101

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

Southern Union Company

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:

Eco-logical Environmental Services, Inc.
2200 Market Street
Midland, Texas 79703
Telephone: (423) 520-7535

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.

TABLE OF CONTENTS

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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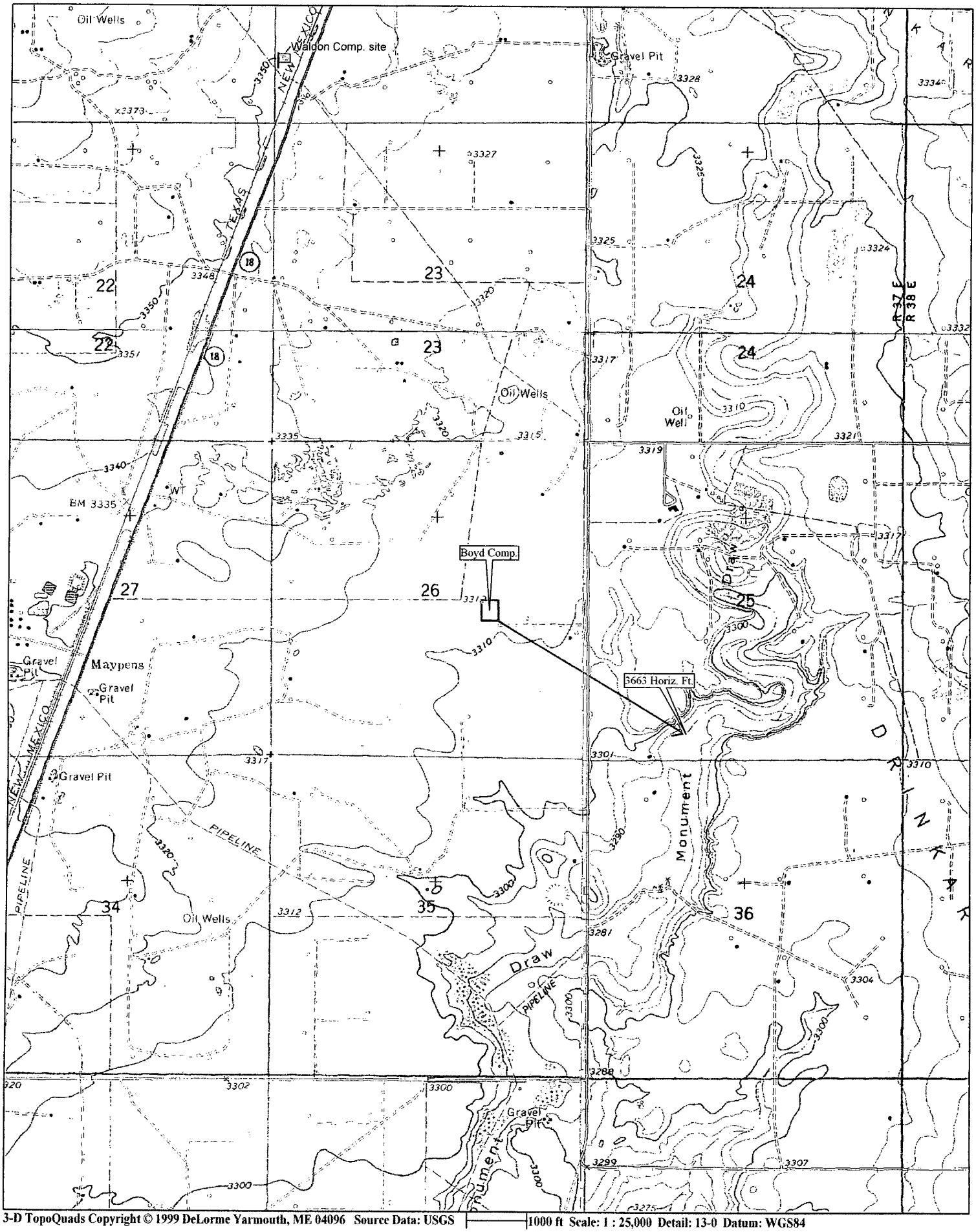
Midland, Texas 79703
scott@eco-logical.com

Copy Number: 1

FIGURES



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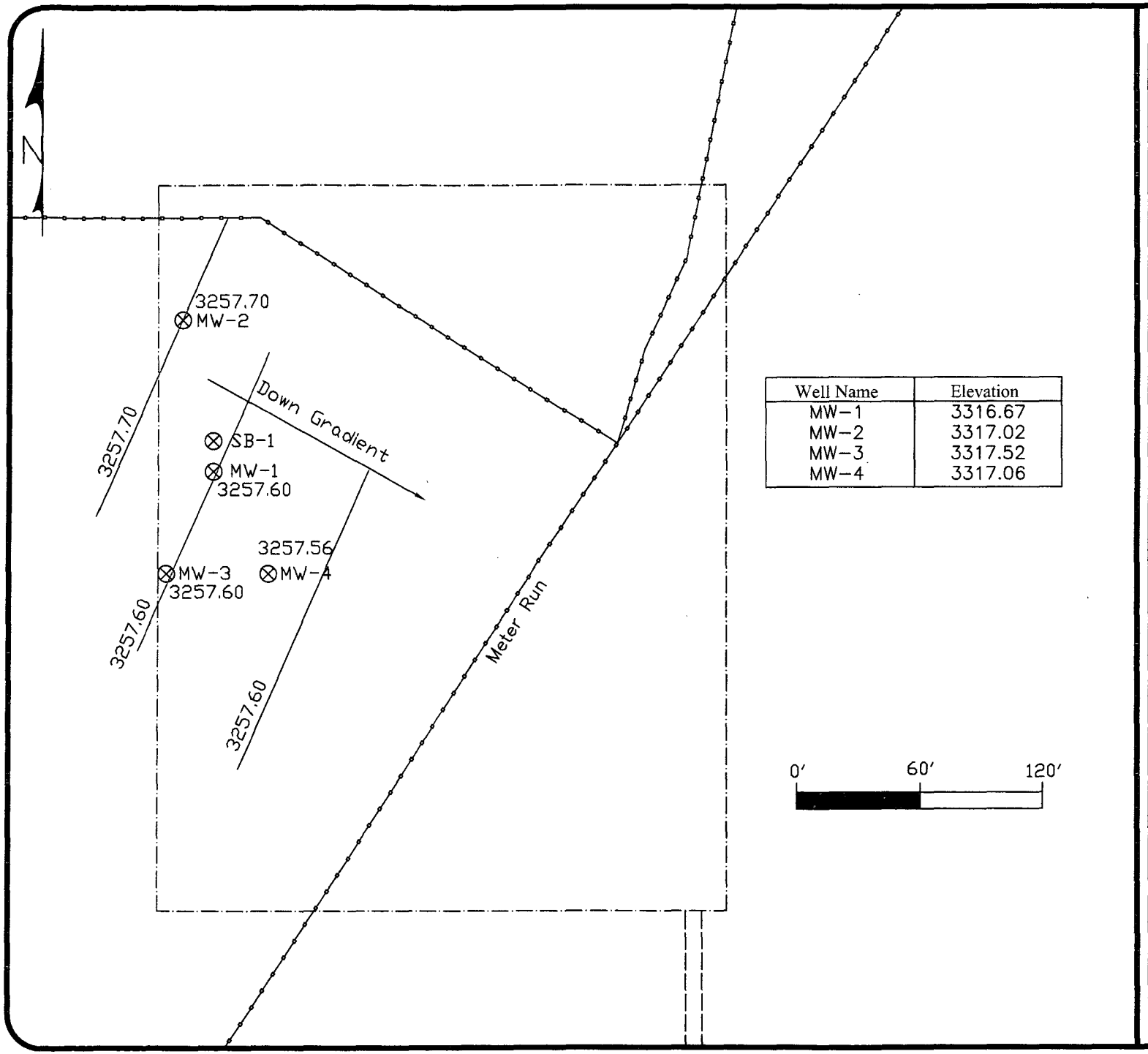


Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

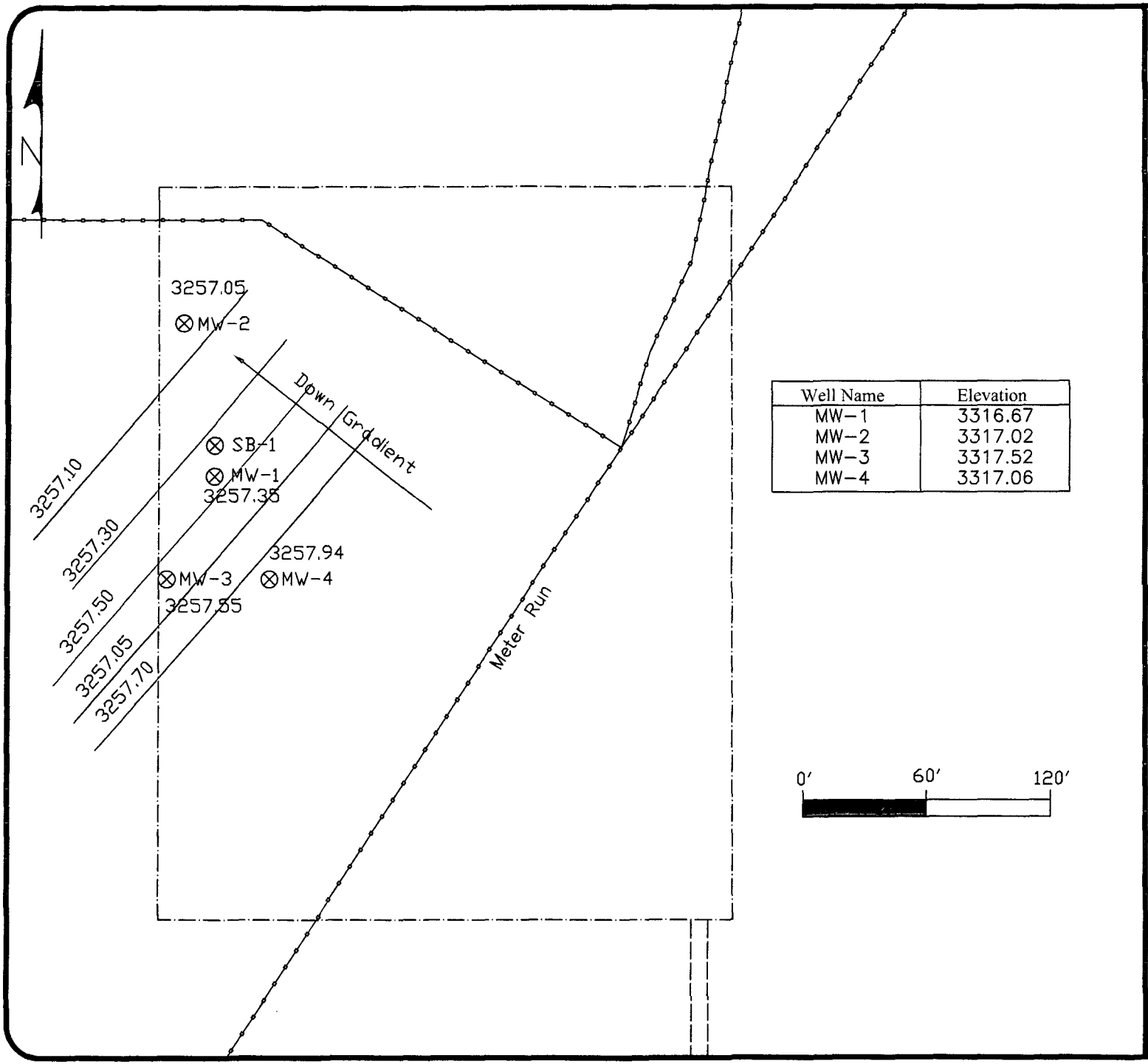
BOYD STATION

Groundwater Gradient Map
3/25/2010

Eco-logical Environmental Services, Inc.

Project Name and Address
Boyd Station
Lea County, NM

Project 1005-3863	Sheet
Date 3-30-2011	
Scale To Scale	



Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

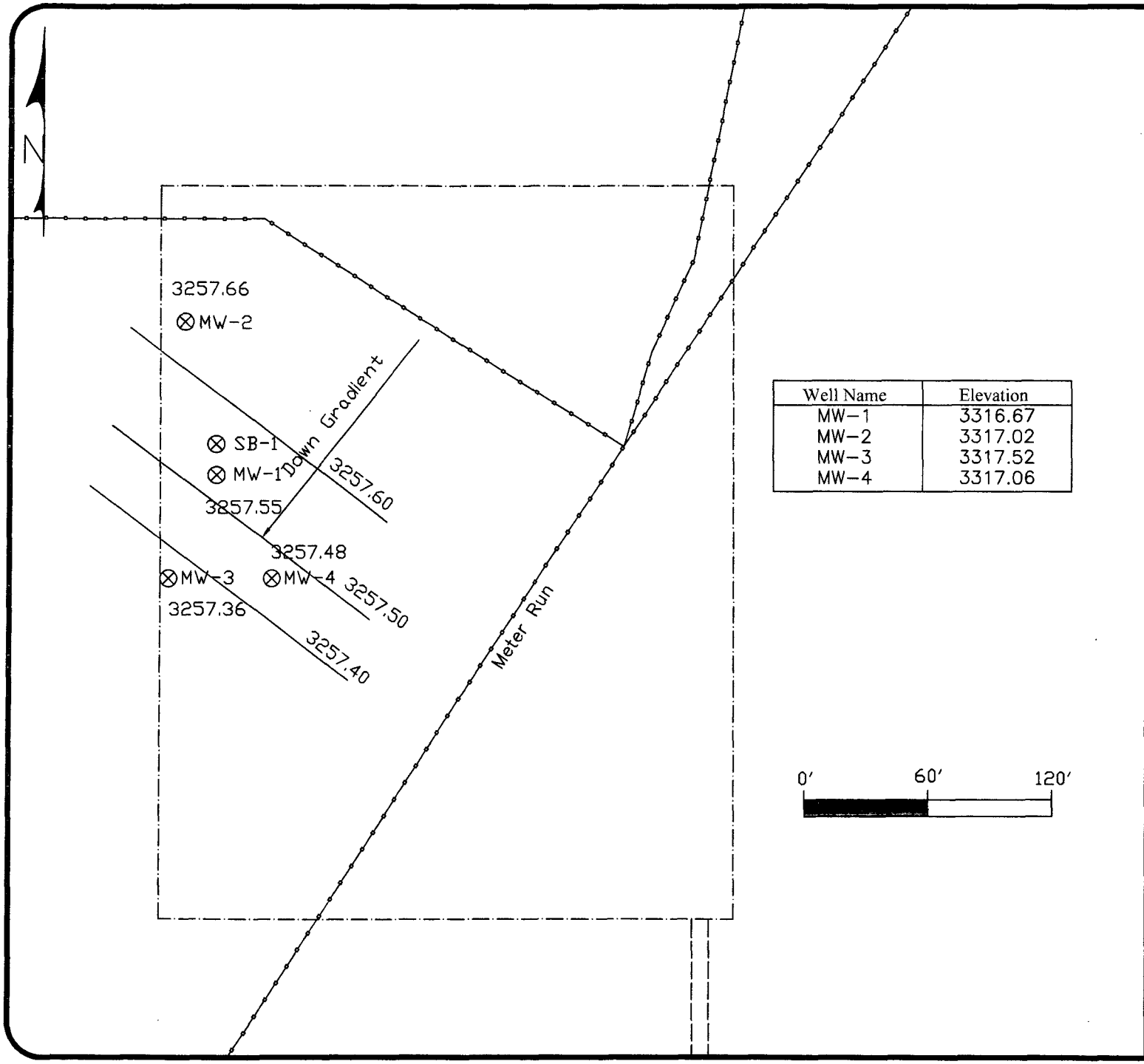
BOYD STATION

Groundwater Gradient Map
6/28/2010

Eco-logical Environmental Services, Inc.

Project Name and Address
Boyd Station
Lea County, NM

Project	Sheet
1005-3863	
Date: 3-30-2011	
Scale: To Scale	



Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

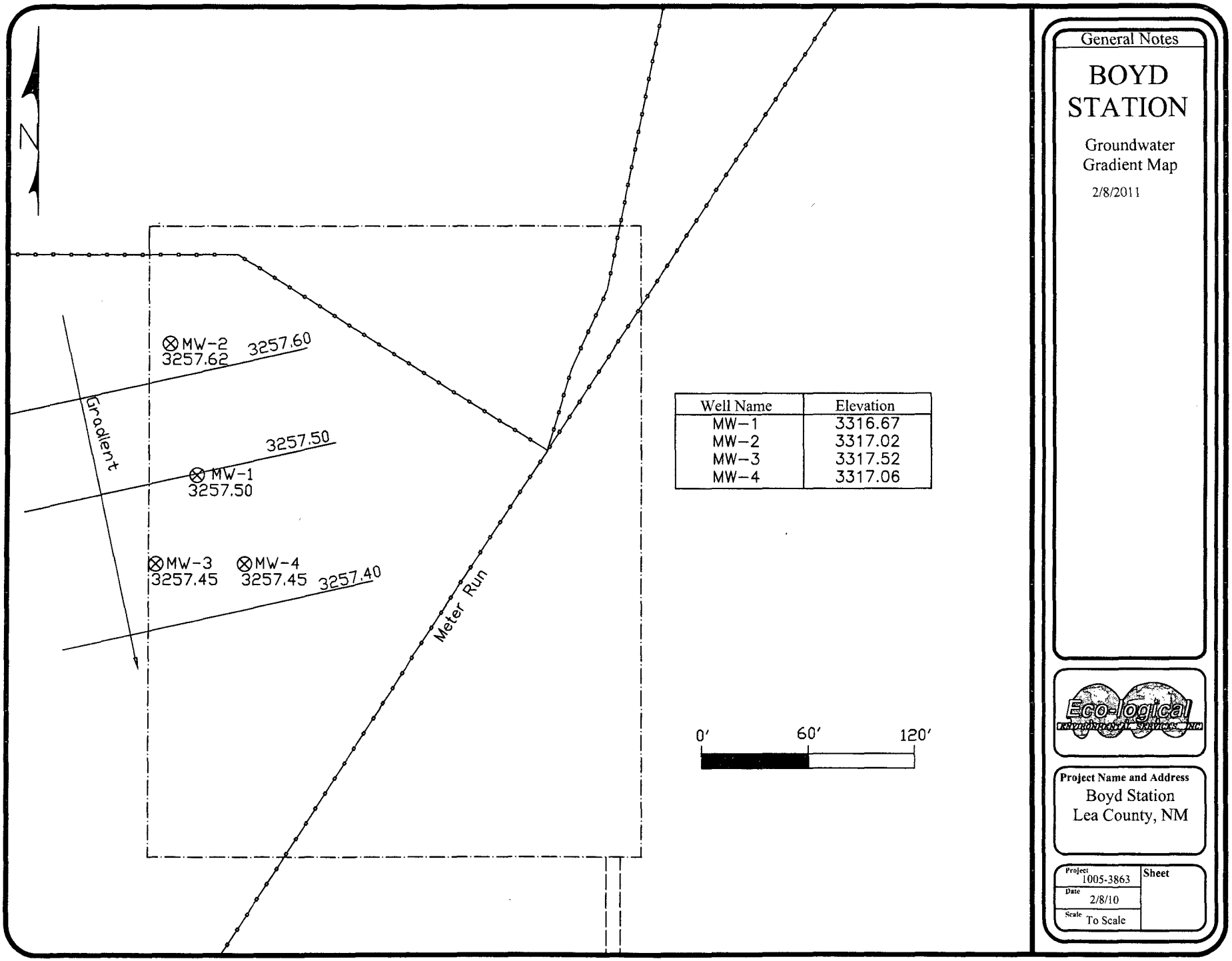
BOYD STATION

Groundwater Gradient Map
10/29/2010

Eco-logical Environmental Services, Inc.

Project Name and Address
Boyd Station
Lea County, NM

Project	Sheet
1005-3863	
Date: 3-30-2011	
Scale: To Scale	



Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

BOYD STATION

Groundwater Gradient Map

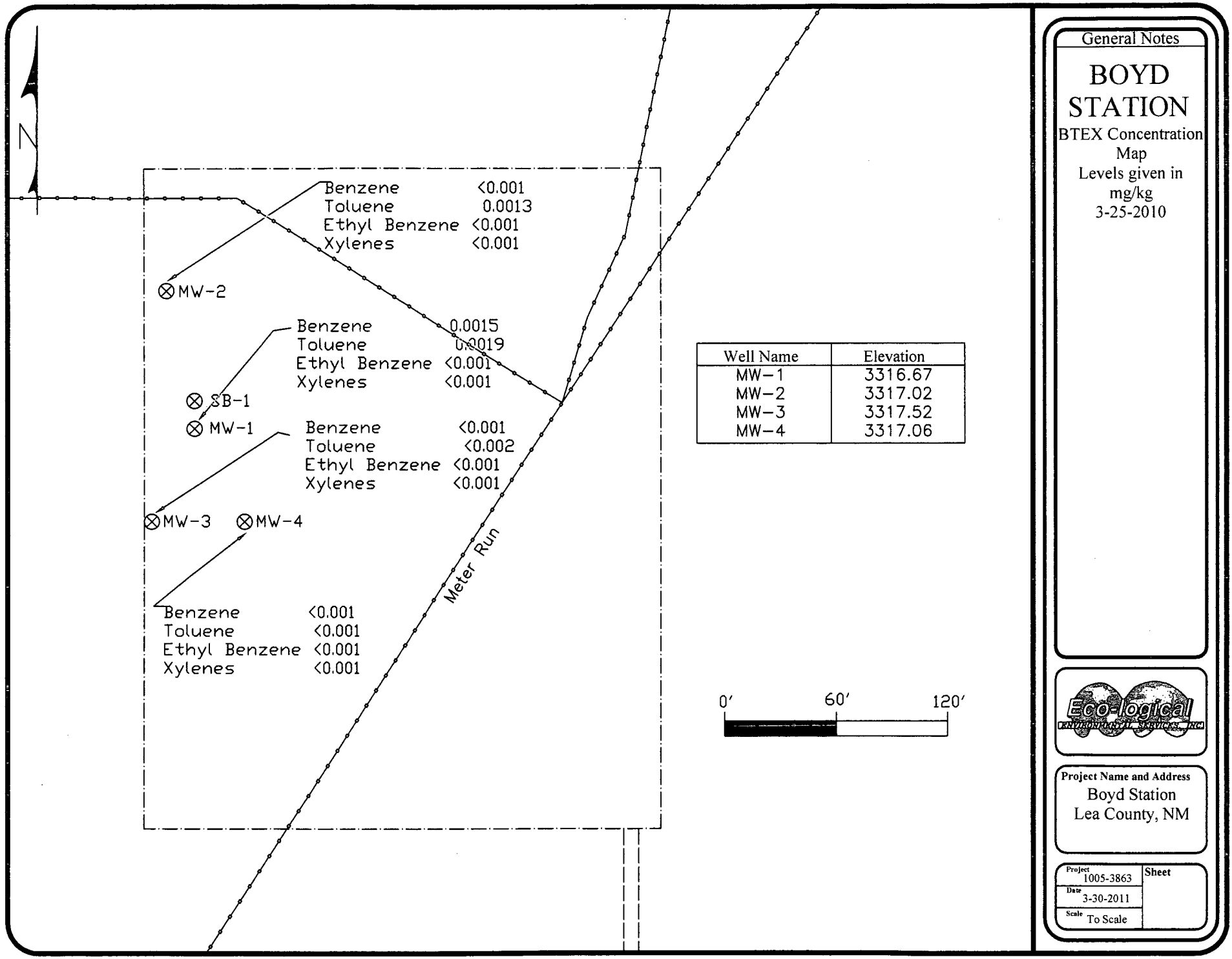
2/8/2011

Eco-logical Environmental Services, NM

Project Name and Address

Boyd Station
Lea County, NM

Project 1005-3863	Sheet
Date 2/8/10	
Scale To Scale	



Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

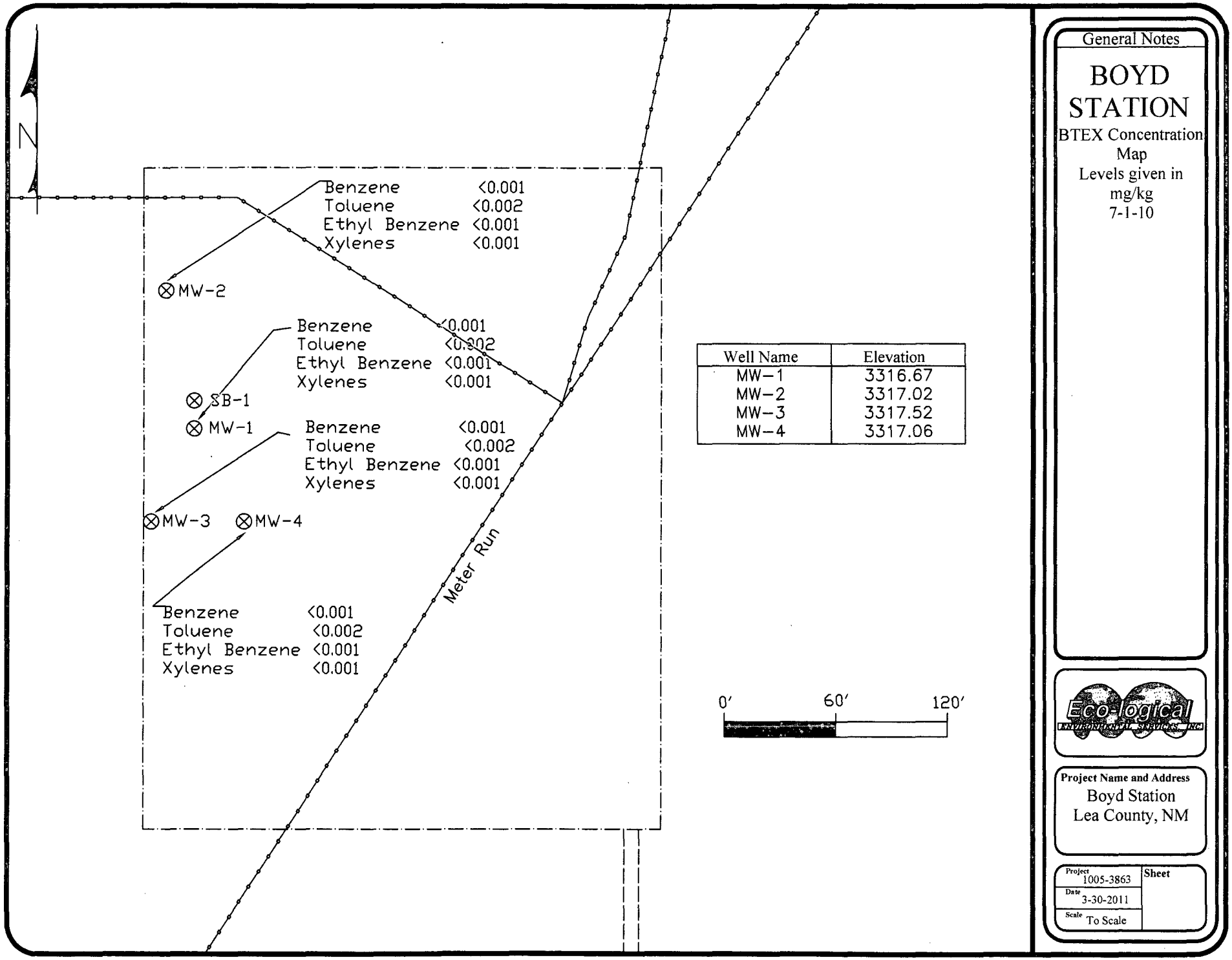
BOYD STATION

BTEX Concentration Map
Levels given in mg/kg
3-25-2010

Eco-logical Environmental Services, Inc.

Project Name and Address
Boyd Station
Lea County, NM

Project	Sheet
1005-3863	
Date: 3-30-2011	
Scale: To Scale	



Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

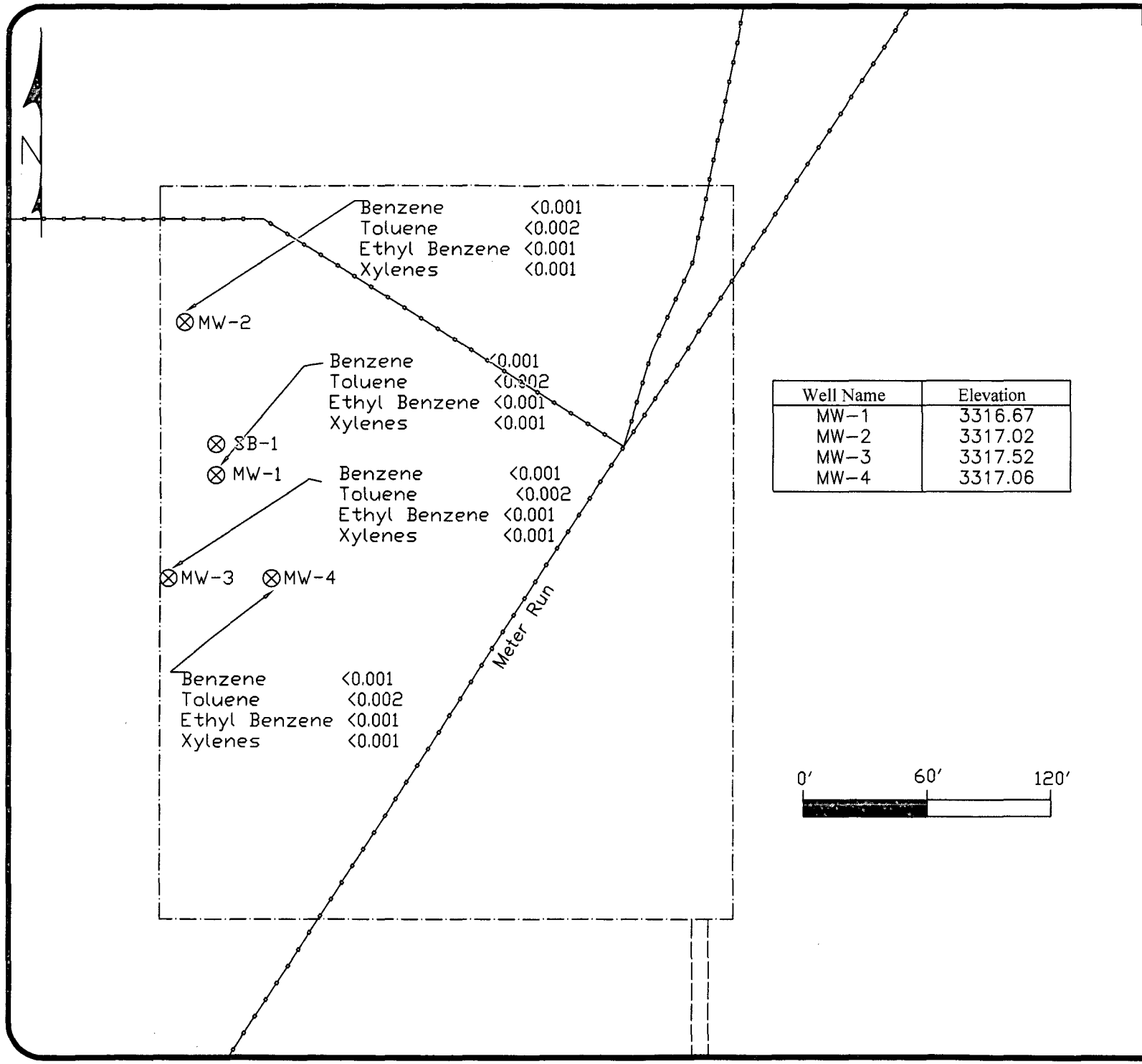
BOYD STATION

BTEX Concentration Map
Levels given in mg/kg
7-1-10

Eco-logical Environmental Services, Inc.

Project Name and Address
Boyd Station
Lea County, NM

Project 1005-3863	Sheet
Date 3-30-2011	
Scale To Scale	



Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

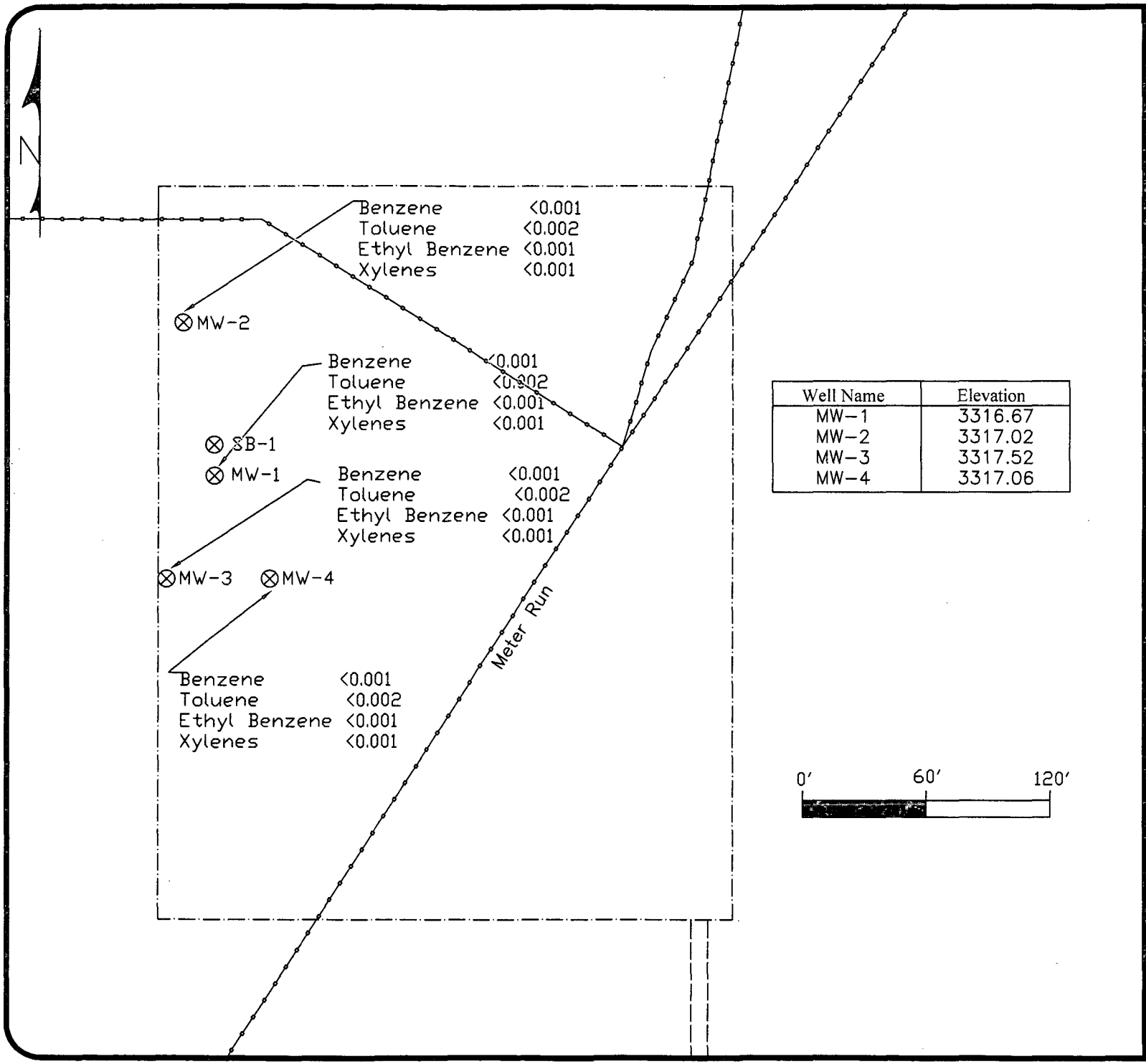
BOYD STATION

BTEX Concentration Map
Levels given in mg/kg
10-29-10

Eco-logical Environmental Services, Inc.

Project Name and Address
Boyd Station
Lea County, NM

Project 1005-3863	Sheet
Date 3-30-2011	
Scale To Scale	



Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

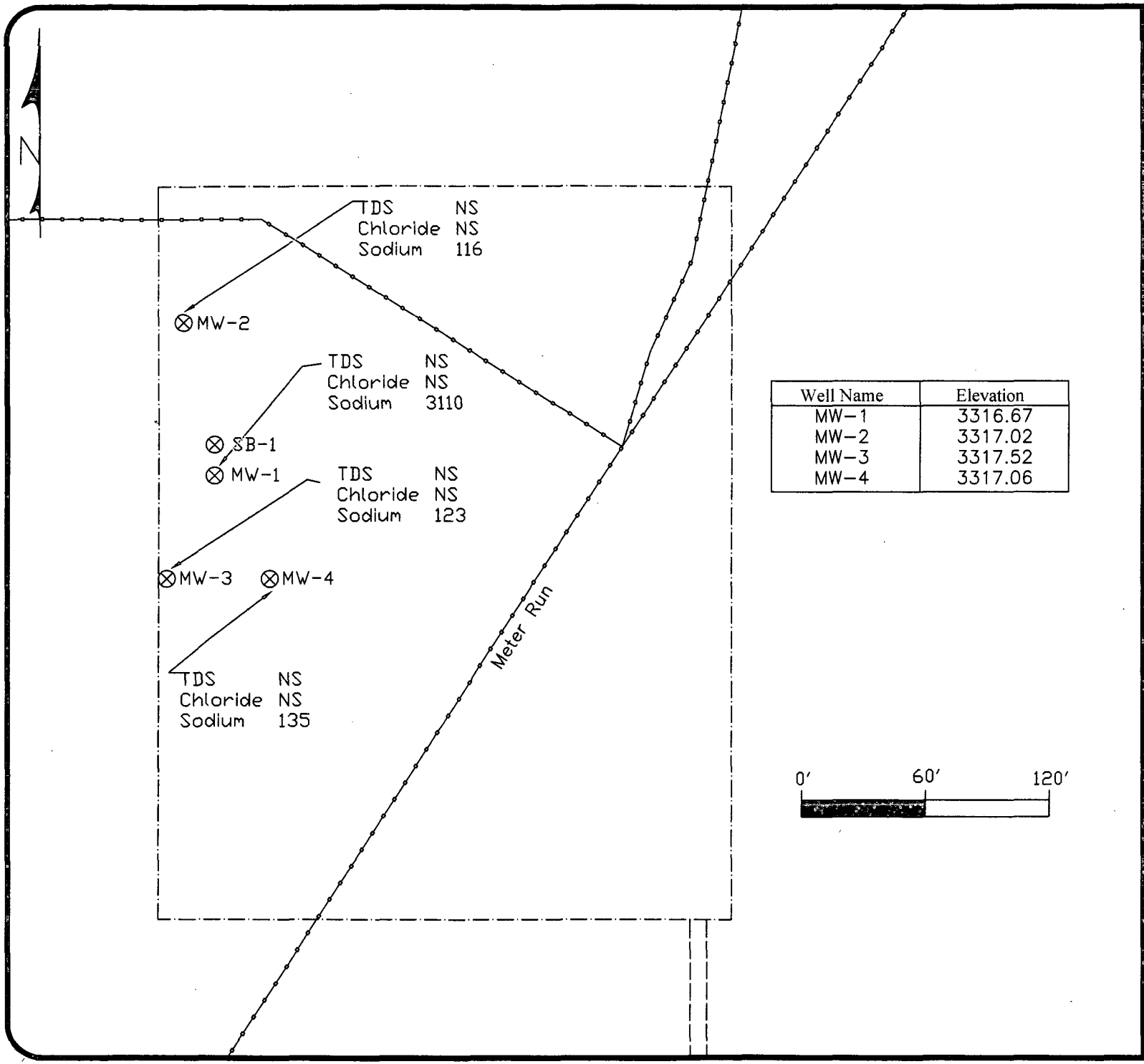
BOYD STATION

BTEX Concentration Map
Levels given in mg/kg
2-8-11

Eco-logical Environmental Services, Inc.

Project Name and Address
Boyd Station
Lea County, NM

Project 1005-3863	Sheet
Date 3-30-2011	
Scale To Scale	



Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

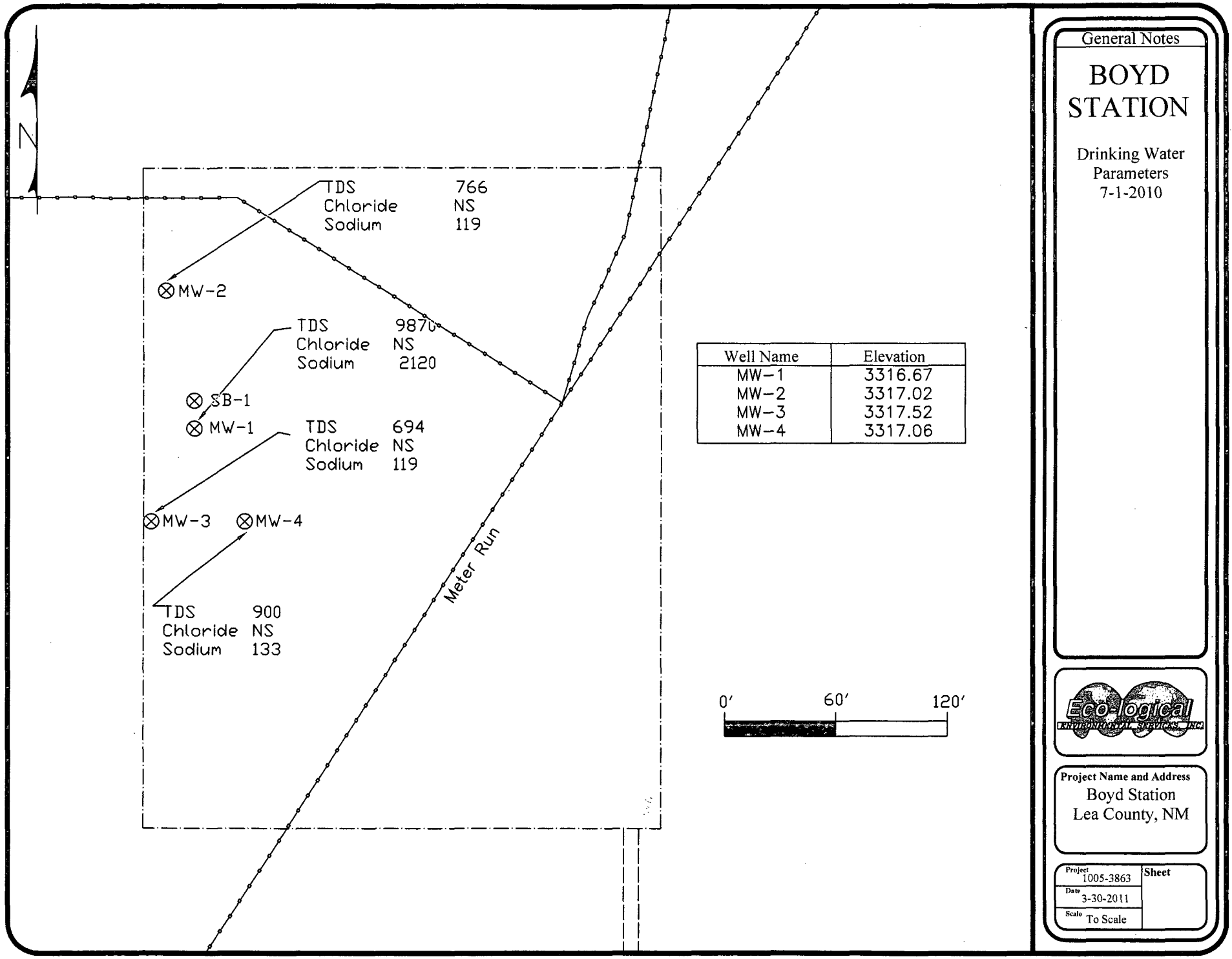
BOYD STATION

Drinking Water Parameters
3-25-2010

Eco-logical Environmental Services, NM

Project Name and Address
Boyd Station
Lea County, NM

Project 1005-3863	Sheet
Date 3-30-2011	
Scale To Scale	



Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

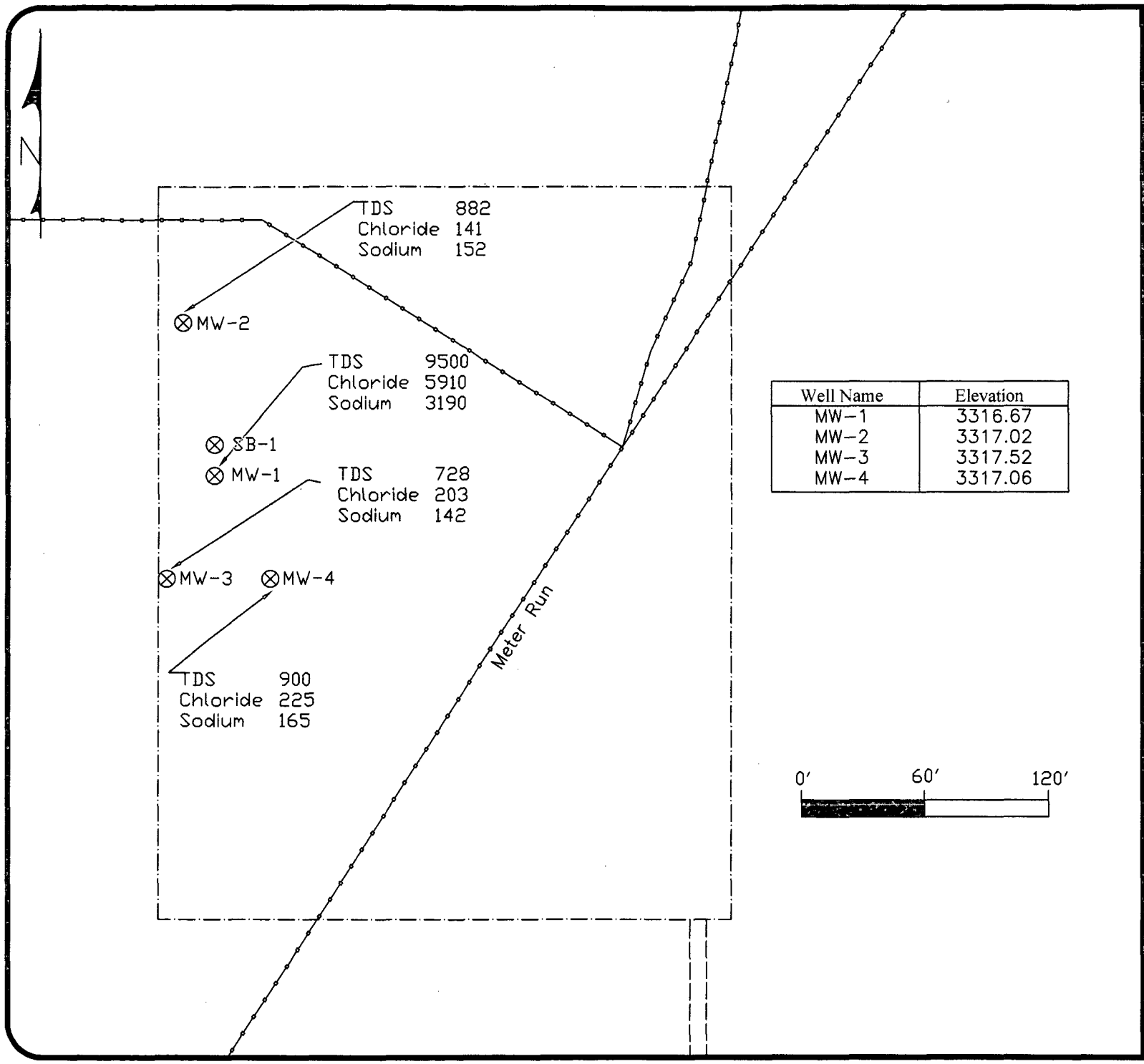
BOYD STATION

Drinking Water Parameters
7-1-2010

Eco-logical Environmental Services, Inc.

Project Name and Address
Boyd Station
Lea County, NM

Project 1005-3863	Sheet
Date 3-30-2011	
Scale To Scale	



Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

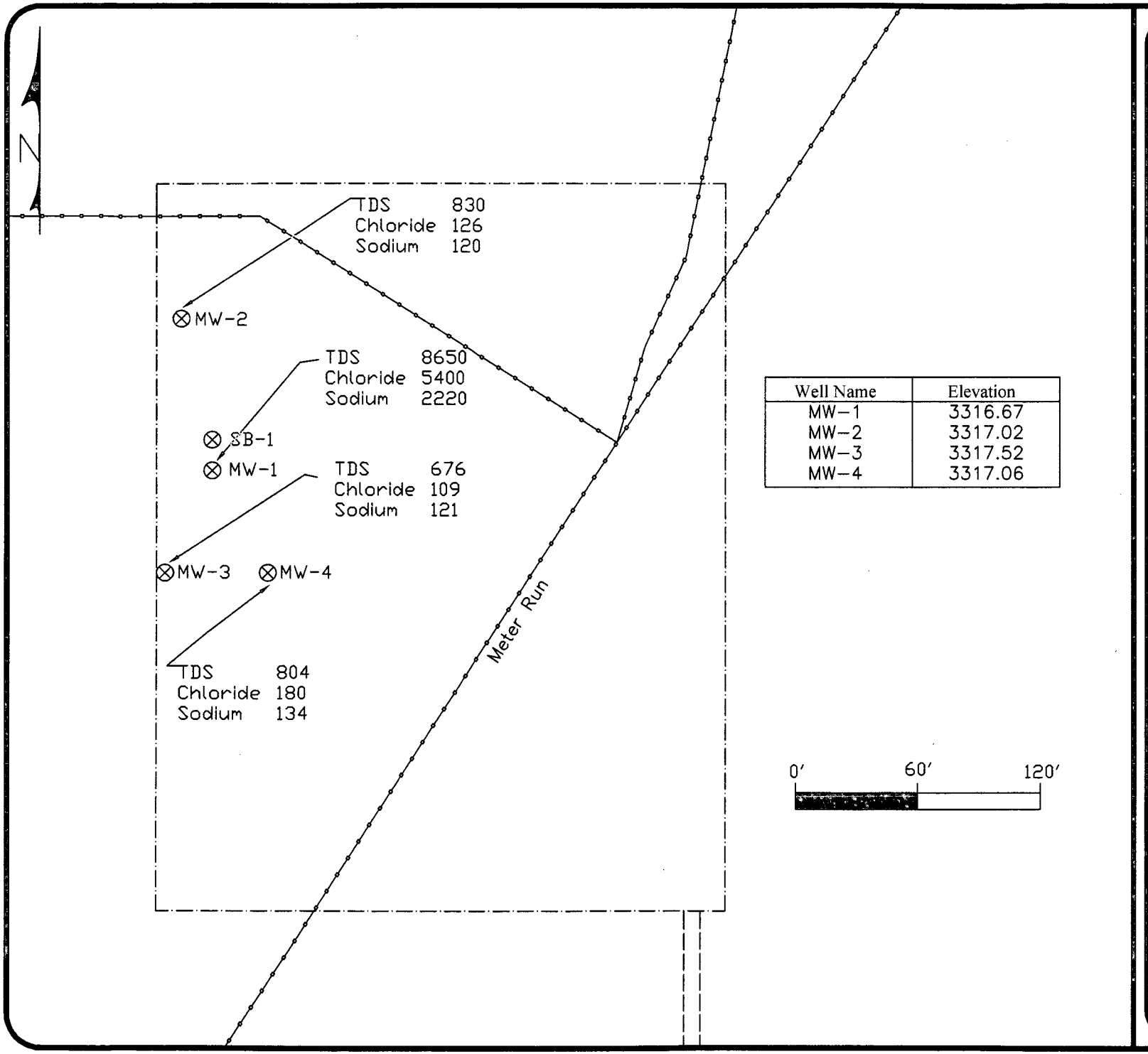
BOYD STATION

Drinking Water Parameters
10-29-2010

Eco-logical Environmental Services, Inc.

Project Name and Address
Boyd Station
Lea County, NM

Project 1005-3863	Sheet
Date 3-30-2011	
Scale To Scale	



Well Name	Elevation
MW-1	3316.67
MW-2	3317.02
MW-3	3317.52
MW-4	3317.06

General Notes

BOYD STATION

Drinking Water Parameters
2-8-2011

Eco-logical Environmental Services, Inc.

Project Name and Address
Boyd Station
Lea County, NM

Project 1005-3863	Sheet
Date 3-30-2011	
Scale To Scale	

TABLES

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

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	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	-	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
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

Table 3

CONCENTRATIONS OF ANIONS, CATIONS, AND TOTAL DISSOLVED SOLIDS IN GROUNDWATER

Southern Union

Former Boyd Compressor Station

Eunice, Lea County, New Mexico

Well	Date	TDS	Fluoride	Chloride	Sulfate	Bromide	Calcium	Magnesium	Potassium	Sodium
MW-1	1/15/2009	3820	2.88	2610	266	N/A	338	219	16.8	2610
	6/26/2009	5700	5.07	2960	---	---	---	---	---	2960
	3/25/2010	---	---	---	---	---	496	369	46	3,110
	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
MW-2	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
	3/25/2010	---	---	---	---	---	57.2	43.4	7.77	116
	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
MW-3	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
	3/25/2010	---	---	---	---	---	60.1	44.5	7.94	123
	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
MW-4	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
	3/25/2010	---	---	---	---	---	98.8	62.5	9.74	135
	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
MW-1	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
	3/25/2010	0.0015	0.0019	<0.001	<0.001	<5.00	<5.00	<5.00
	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
MW-2	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
	3/25/2010	<0.001	0.0013	<0.001	<0.001	<5.00	<5.00	<5.00
	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
MW-3	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
	3/25/2010	<0.001	<0.002	<0.001	<0.001	<5.00	<5.00	<5.00
	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
MW-4	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
	3/25/2010	<0.001	<0.002	<0.001	<0.001	<5.00	<5.00	<5.00
	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 Pricing
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 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

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

CASE NARRATIVE

Client Name: Eco-Logical Environmental
Project Name: Eco-Logical Pricing

Project ID:	*1005-4157*	*Report Date:*	*02-APR-10*
Work Order Number:	*367023*	*Date Received:*	*03/26/2010*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

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 Spike.
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 Id: 1005-4157
Contact: Scott Springer
Project Location:

Date Received in Lab: Fri Mar-26-10 03:13 pm
Report Date: 02-APR-10
Project Manager: Brent Barron, II

Analysis Requested									
	Lab Id:	367023-001		367023-002		367023-003		367023-004			
	Field Id:	Boyd MW-1		Boyd MW-2		Boyd MW-3		Boyd MW-4			
	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 SUB: T104704295-TX	*Extracted:*	Mar-31-10 06:30		Mar-31-10 06:30		Mar-31-10 06:30		Mar-31-10 06:30			
	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 Texas 1005	*Extracted:*	Mar-27-10 13:30		Mar-27-10 13:30		Mar-27-10 13:30		Mar-27-10 13:30			
	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	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		

Brent Barron, II
Odessa Laboratory Manager

Final Ver. 1.000

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.

Form 2 - Surrogate Recoveries

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

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY 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:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/31/10 03:26

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY 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

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY 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
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Eco-Logical Pricing

Work Orders : 367023,

Project ID: 1005-4157

Lab Batch #: 800456 **Sample:** 367023-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/31/10 04:48

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 800456 **Sample:** 367023-004 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/31/10 05:08

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-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:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/31/10 06:52

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY 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:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/31/10 07:13

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

Total Petroleum Hydrocarbons by Texas 1005 Analytes	SURROGATE RECOVERY STUDY 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

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

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

Total Petroleum Hydrocarbons by Texas 1005 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

Total Petroleum Hydrocarbons by Texas 1005 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

Total Petroleum Hydrocarbons by Texas 1005 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/29/10 10:18

Total Petroleum Hydrocarbons by Texas 1005 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

Total Petroleum Hydrocarbons by Texas 1005 Analytes	SURROGATE RECOVERY STUDY 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

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Eco-Logical Pricing

Work Orders : 367023,

Project ID: 1005-4157

Lab Batch #: 800123 **Sample:** 367023-004 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/29/10 11:20

Total Petroleum Hydrocarbons by Texas 1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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 **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/29/10 12:51

Total Petroleum Hydrocarbons by Texas 1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.6	10.0	116	70-135	
o-Terphenyl	5.69	5.00	114	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Eco-Logical Pricing

Work Order #: 367023 **Project ID:** 1005-4157

Analyst: ASA **Date Prepared:** 03/30/2010 **Date Analyzed:** 03/30/2010

Lab Batch ID: 800456 **Sample:** 559483-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021 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 %R	Control Limits %RPD	Flag
	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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	9	71-133	25	

Analyst: DAT **Date Prepared:** 03/31/2010 **Date Analyzed:** 04/01/2010

Lab Batch ID: 800712 **Sample:** 559412-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

Metals per ICP by SW846 6010B 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 %R	Control Limits %RPD	Flag
	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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	

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

BS / BSD Recoveries

Project Name: Eco-Logical Pricing

Work Order #: 367023
Analyst: BEV
Lab Batch ID: 800123
Sample: 559258-1-BKS
Units: mg/L

Date Prepared: 03/27/2010
Batch #: 1

Project ID: 1005-4157
Date Analyzed: 03/27/2010
Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Total Petroleum Hydrocarbons by Texas 1005 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 %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<5.00	100	113	113	100	113	113	0	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<5.00	100	78.5	79	100	77.5	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

Form 3 - MS Recoveries

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

TPH by Texas1005 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
C6-C12 Gasoline Range Hydrocarbons	7.11	100	226	219	70-135	X
C12-C28 Diesel Range Hydrocarbons	<2.50	100	79.9	80	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

Project Name: Eco-Logical Pricing

Work Order # : 367023 **Project ID:** 1005-4157

Lab Batch ID: 800456 **QC- Sample ID:** 366989-002 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 03/31/2010 **Date Prepared:** 03/30/2010 **Analyst:** ASA

Reporting Units: mg/L

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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	71	15	70-125	25	
Toluene	<0.0020	0.1000	0.0849	85	0.1000	0.0730	73	15	70-125	25	
Ethylbenzene	<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	86	0.2000	0.1517	76	13	70-131	25	
o-Xylene	<0.0010	0.1000	0.0863	86	0.1000	0.0757	76	13	71-133	25	

Lab Batch ID: 800712 **QC- Sample ID:** 366935-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 04/01/2010 **Date Prepared:** 03/31/2010 **Analyst:** DAT

Reporting Units: mg/L

Metals per ICP by SW846 6010B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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
Calcium	181	1.00	182	100	1.00	178	0	2	75-125	25	X
Magnesium	11.1	1.00	12.5	140	1.00	12.2	110	2	75-125	25	X
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)/B

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

Relative 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

XENCO Laboratories, Inc.

☐ 4143 Greenbriar Drive, Stafford, Tx 77477 281-240-4200
☐ 5332 Blackberry Drive, San Antonio, Tx 78238 210-509-3334
☐ 9701 Harry Hines Blvd., Dallas, Tx 75220 214-902-0300
☐ 12600 West I-20 East, Odessa, Tx 79765 432-569-1800
☐ 842 Cantwell, Corpus Christi, Tx 78408 361-884-0371

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

Serial #: 245896 Page of

Company-City / Phone	Eco-logical Environmental Services 432-530-7535
Proj Name-Location ☐ Previously done at XENCO	Project ID: 1005-4157
Proj State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other	Proj. Manager (PM): Scott Springer
e-Mail Results to ☐ PM and	Fax No: 432-530-7737
	Scott@eco-logical.com
Invoice to ☐ Accounting ☐ Inc. Invoice with Final Report ☐ Invoice must have a P.O	
Bill to:	
Quote/Pricing:	P.O No: ☐ Call for P.O.
Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP	
QAPP Per-Contract CLP AFCEE NAVY DOE DOD USACE OTHER:	
Special DLs (GW DW QAPP MDLs RLs See Lab PM Included Call PM)	
Sampler Name: Scott Springer Signature: Scott Springer	

Lab Only: 367023

TAT: ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d Standard TAT is project specific.
It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.

#	Sample ID	Sampling Date	Time	Depth ft/in/m	Matrix	Composite	Grab	# Containers	Container Size	Container Type	Preservatives
1	Boyd MW-1	3/25/10	1:30		W			7			H
2	Boyd MW-2	3/25/10									
3	Boyd MW-3	3/25/10									
4	Boyd MW-4	3/25/10									
5											
6											
7											
8											
9											
10											

#	Relinquished by (Initials and Sign)	Date & Time	Relinquished to (Initials and Sign)	Date & Time
1		3/26/10 3:13	2)	
2	3)		4)	
3	5)		6)	3/26/10 3:13

Total Containers per COC: Cooler Temp: 1.1

Upon signings this COC you accept XENCO terms and Conditions unless otherwise agreed on writing. Reports are the Intellectual Property of XENCO until paid. Samples will be held 30 days after final report is e-mailed unless hereby requested. Rush Charges and Collection Fees are pre-approved if needed.

VOCs: Full-List BTEX-MTBE EtOH Oxyg VOHs VOAs
VOC's PP TCL DW Appdx-1 Appdx-2 CALL Other:
PAHs
TX-1005 DRO GRO MA EPH MA VPH
SVOCs: Full-List DW BN&AE TCL PP Appdx-2 CALL
OC Pesticides PCBs Herbicides OP Pesticides
Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx 2
SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)
EDB / DBCP
X Cations

TAT ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d
Addn: PAH above mg/L W, mg/Kg S Highest Hit
Hold Samples (Surcharges will apply and are pre-approved)
Sample Clean-ups are pre-approved as needed

Remarks
From:
Rcv by:
Date
Addn:

Preservatives: Various (V), HCl 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) _____

Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other _____ **Cont. Type:** Glass Amb (A), Glass Clear (C), Plastic (P), Various (V)

Matrix: Air (A), Product (P), Solid(S), Water (W), Liquid (L) 1 liter Amber, 6 voas for each

Committed to Excellence in Service and Quality www.xenco.com

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

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Ecological Environmental

Date/ Time: 3/26/10 3:13

Lab ID # : 367023

Initials: AS

Sample Receipt Checklist

					Client Initials
#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?	(Yes)	No		
#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)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	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	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken:

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

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 (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), 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

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: 1005-4157 *Report Date:* 16-JUL-10
Work Order Number: 380158 *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

Certificate of Analysis Summary 380158

Eco-Logical Environmental, Midland, TX

Project Name: BOYD

Project Id: 1005-4157
Contact: Scott Springer
Project Location: NM

Date Received in Lab: Tue Jul-06-10 09:00 am
Report Date: 16-JUL-10
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	380158-001		380158-002		380158-003		380158-004					
	Field Id:	MW-1		MW-2		MW-3		MW-4					
	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 Emission Spectroscopy Mass Spectrometry SUB: T104704215-TX	*Extracted:*	Jul-15-10 10:25		Jul-15-10 10:25		Jul-15-10 10:25		Jul-15-10 10:25					
	Analyzed:	Jul-15-10 18:19		Jul-15-10 18:24		Jul-15-10 18:29		Jul-15-10 18:33					
	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				

Brent Barron, II
Odessa Laboratory Manager

Certificate of Analysis Summary 380158

Eco-Logical Environmental, Midland, TX

Project Name: BOYD

Project Id: 1005-4157
Contact: Scott Springer
Project Location: NM

Date Received in Lab: Tue Jul-06-10 09:00 am
Report Date: 16-JUL-10
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	380158-001		380158-002		380158-003		380158-004					
	Field Id:	MW-1		MW-2		MW-3		MW-4					
	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					
TPH by SW8015 Mod	***Extracted:***	Jul-07-10 10:30		Jul-07-10 10:30		Jul-07-10 10:30		Jul-07-10 10:30					
	Analyzed:	Jul-07-10 16:46		Jul-07-10 17:15		Jul-07-10 17:45		Jul-07-10 18:14					
	Units/RL:	mg/L	RL	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	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				

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

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.

Form 2 - Surrogate Recoveries

Project Name: BOYD

Work Orders : 380158,

Project ID: 1005-4157

Lab Batch #: 813595 **Sample:** 567462-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 07/06/10 16:16

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY 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

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	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

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY 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

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	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

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY 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

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

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

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY 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	0.0300	0.0300	100	80-120	

Lab Batch #: 813595 **Sample:** 380158-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 07/06/10 21:07

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY 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

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY 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

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: BOYD

Work Orders : 380158,

Project ID: 1005-4157

Lab Batch #: 813778 **Sample:** 567567-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 07/07/10 14:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY 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

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	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 17:45

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY 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

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

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

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.9	10.0	109	70-135	
o-Terphenyl	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 outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

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					
Inductively Coupled Plasma Atomic Emission Sp Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Calcium	<0.500	3.00	2.63	88	75-125	
Magnesium	<0.500	3.00	3.12	104	75-125	
Potassium	<0.300	2.00	2.03	102	75-125	
Sodium	<0.500	3.00	2.81	94	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

BS / BSD Recoveries

Project Name: BOYD

Work Order #: 380158 **Project ID:** 1005-4157

Analyst: ASA **Date Prepared:** 07/06/2010 **Date Analyzed:** 07/06/2010

Lab Batch ID: 813595 **Sample:** 567462-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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 %R	Control Limits %RPD	Flag
Benzene	<0.0010	0.1000	0.0978	98	0.1	0.1039	104	6	70-125	25	
Toluene	<0.0020	0.1000	0.0909	91	0.1	0.0957	96	5	70-125	25	
Ethylbenzene	<0.0010	0.1000	0.0954	95	0.1	0.1011	101	6	71-129	25	
m,p-Xylenes	<0.0020	0.2000	0.1923	96	0.2	0.2043	102	6	70-131	25	
o-Xylene	<0.0010	0.1000	0.0955	96	0.1	0.1015	102	6	71-133	25	

Analyst: LATCOR **Date Prepared:** 07/06/2010 **Date Analyzed:** 07/06/2010

Lab Batch ID: 813583 **Sample:** 813583-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

Anions in Water by EPA 300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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 %R	Control Limits %RPD	Flag
Chloride	<10.0	10.0	10.2	102	10	10.2	102	0	90-110	20	

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

BS / BSD Recoveries

Project Name: BOYD

Work Order #: 380158 **Project ID:** 1005-4157

Analyst: WRU **Date Prepared:** 07/06/2010 **Date Analyzed:** 07/06/2010

Lab Batch ID: 813789 **Sample:** 813789-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C 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 %R	Control Limits %RPD	Flag
Total dissolved solids	<5.00	1000	936	94	1000	956	96	2	80-120	30	

Analyst: BEV **Date Prepared:** 07/07/2010 **Date Analyzed:** 07/07/2010

Lab Batch ID: 813778 **Sample:** 567567-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod 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 %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<1.50	100	99.2	99	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

Form 3 - MS Recoveries

Project Name: BOYD

Work Order #: 380158

Lab Batch #: 813583 **Project ID:** 1005-4157

Date Analyzed: 07/06/2010 **Date Prepared:** 07/06/2010 **Analyst:** LATCOR

QC- Sample ID: 380156-001 S **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
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	X

Lab Batch #: 813778

Date Analyzed: 07/07/2010 **Date Prepared:** 07/07/2010 **Analyst:** BEV

QC- Sample ID: 380156-001 S **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

TPH by SW8015 Mod	MATRIX / MATRIX SPIKE RECOVERY STUDY					
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

Project Name: BOYD

Work Order # : 380158 **Project ID:** 1005-4157

Lab Batch ID: 813595 **QC- Sample ID:** 380158-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 07/06/2010 **Date Prepared:** 07/06/2010 **Analyst:** ASA

Reporting Units: mg/L

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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	<0.0010	0.1000	0.0881	88	0.1000	0.0887	89	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	86	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	

Lab Batch ID: 814788 **QC- Sample ID:** 381504-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 07/15/2010 **Date Prepared:** 07/15/2010 **Analyst:** HAT

Reporting Units: mg/L

Inductively Coupled Plasma Atomic Emission Spectroscopy Mass Spectrometry	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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
Calcium	29.5	3.00	31.7	73	3.00	31.5	67	1	75-125	25	X
Magnesium	3.91	3.00	6.81	97	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*(C-A)/B

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

Relative 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

Sample Duplicate Recovery

Project Name: BOYD

Work Order #: 380158

Lab Batch #: 813583 **Project ID:** 1005-4157
Date Analyzed: 07/06/2010 **Date Prepared:** 07/06/2010 **Analyst:** LATCOR
QC- Sample ID: 380156-001 D **Batch #:** 1 **Matrix:** Water
Reporting Units: mg/L

Anions in Water by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
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 #:** 1 **Matrix:** Water
Reporting Units: mg/L

Inductively Coupled Plasma Atomic Emission Spectroscopy Mass Spectrometry	SAMPLE / SAMPLE DUPLICATE RECOVERY				
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

TDS by SM2540C	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids	972	998	3	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

XENCO Laboratories

☐ 4143 Greenbriar Drive, Stafford, Tx 77477 281-240-4200
☐ 5332 Blackberry Drive, San Antonio, Tx 78238 210-509-3334
☐ 9701 Harry Hines Blvd., Dallas, Tx 75220 214-902-0300
☐ 12600 West I-20 East, Odessa, Tx 79765 432-563-1800
☐ 842 Cantwell, Corpus Christi, Tx 78408 361-884-0371

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

Serial #: 250133 Page 1 of 1

Lab Only: 380158

Company-City: ECO-LOGICAL - MIDLAND	Phone: 432-520-7535
Proj Name-Location: BOYD ☒ Previously done at XENCO	Project ID: 1005-4157
Proj State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other NM	Proj. Manager (PM): SCOTT SPRINGER
e-Mail Results to ☐ PM and: SCOTT@eco-logical.com	Fax No: 432-520-7535
Invoice to ☐ Accounting ☐ Inc. Invoice with Final Report ☐ Invoice must have a P.O Bill to: SOUTHERN UNION	
Quote/Pricing:	P.O No: ☐ Call for P.O.

Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP

QAPP Per-Contract CLP AFCEE NAVY DOE DOD USACE OTHER:

Special DLs (GW DW QAPP MDLs RLs See Lab PM Included Call PM)

Sampler Name: SCOTT SPRINGER Signature:

TAT: ASAP 5h 12h 24h 48h 3d (5d) 7d 10d 21d Standard TAT is project specific.
It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.

	Sample ID	Sampling Date	Time	Depth ft' in" m	Matrix	Composite	Grab	# Containers	Container Size	Container Type	Preservatives	VOCs: Full-List (BTEX-MTBE EtOH Oxyg VOHs VOAs	VOC's PP TCL DW Appdx-1 Appdx-2 CALL Other:	PAHs	TX-1005 (DRO GRO MA EPH MA VPH	SVOCs: Full-List DW BN&AE TCL PP Appdx-2 CALL	OC Pesticides PCBs Herbicides OP Pesticides	Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx 2	SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)	EDB / DBCP	CATIONS	CHLORIDES	TDS	TATASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d	Addn: PAH above mg/L W, mg/Kg S Highest Hit	Hold Samples (Surcharges will apply and are pre-approved)	Sample Clean-ups are pre-approved as needed	
1	MW-1	7-1-10	6:20					5	40	X		X			X						X	X	X					1
2	MW-2	"	7:50					"	"	"		"			"						"	"	"					2
3	MW-3	"	8:20					"	"	"		"			"						"	"	"					3
4	MW-4	"	8:40					"	"	"		"			"						"	"	"					4
5																												5
6																												6
7																												7
8																												8
9																												9
10																												10

Relinquished by (Initials and Sign)	Date & Time	Relinquished to (Initials and Sign)	Date & Time
1)	7/6/10 5:00	2)	
3)		4)	
5)		6) Jeanne Fitts	7/6/10 0900

Total Containers per COC: Cooler Temp: 3.1°C

otherwise agreed on writing. Reports are the Intellectual Property of XENCO until paid. Samples will be held 30 days after final report is e-mailed unless hereby requested. Rush Charges and Collection Fees are pre-approved if needed.

Preservatives: Various (V), HCl 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) _____

Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other _____ Cont. Type: Glass Amb (A), Glass Clear (C), Plastic (P), Various (V) Labels no seals

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

Committed to Excellence in Service and Quality www.xenco.com

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

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Eco-Logical Environmental

Date/Time: 07-06-10 @ 0900

Lab ID # : 380158

Initials: JMF

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	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.		Cooler 5 No.	
lbs	3.1 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-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: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), California(06244CA), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
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

Sample Cross Reference 395498

Eco-Logical Environmental, Midland, TX

Boyd

Sample Id	Matrix	Date Collected	Sample 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*	*Report Date:*	*08-NOV-10*
Work Order Number:	*395498*	*Date Received:*	*11/01/2010*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

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

Certificate of Analysis Summary 395498

Eco-Logical Environmental, Midland, TX

Project Name: Boyd

Project Id: 1005-4157
Contact: Scott Springer
Project Location:

Date Received in Lab: Mon Nov-01-10 11:58 am
Report Date: 08-NOV-10
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	395498-001		395498-002		395498-003		395498-004					
	Field Id:	MW-1		MW-2		MW-3		MW-4					
	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					
	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 SUB: T104704215-TX	*Extracted:*	Nov-04-10 12:50		Nov-04-10 12:50		Nov-04-10 12:50		Nov-04-10 12:50					
	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	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				

Brent Barron, II
Odessa Laboratory Manager

Certificate of Analysis Summary 395498

Eco-Logical Environmental, Midland, TX

Project Name: Boyd

Project Id: 1005-4157
Contact: Scott Springer
Project Location:

Date Received in Lab: Mon Nov-01-10 11:58 am
Report Date: 08-NOV-10
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	395498-001		395498-002		395498-003		395498-004					
	Field Id:	MW-1		MW-2		MW-3		MW-4					
	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	5.00				
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				

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

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.

Form 2 - Surrogate Recoveries

Project Name: Boyd

Work Orders : 395498,

Project ID: 1005-4157

Lab Batch #: 830631 **Sample:** 577933-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/04/10 13:33

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/04/10 14:37

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	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:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/04/10 17:24

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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 Analyzed:** 11/04/10 17:45

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	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

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Boyd

Work Orders : 395498,

Project ID: 1005-4157

Lab Batch #: 830631 **Sample:** 395498-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/04/10 18:07

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
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:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/04/10 18:28

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0216	0.0300	72	80-120	**
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

Lab Batch #: 830631 **Sample:** 395498-004 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/04/10 18:49

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/04/10 19:10

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 13:09

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.8	10.0	118	70-135	
o-Terphenyl	5.64	5.00	113	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Boyd

Work Orders : 395498,

Project ID: 1005-4157

Lab Batch #: 830248 **Sample:** 577712-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 13:41

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY 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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.5	10.0	115	70-135	
o-Terphenyl	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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.9	10.0	109	70-135	
o-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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.7	10.0	117	70-135	
o-Terphenyl	5.70	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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY 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
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Boyd

Work Orders : 395498,

Project ID: 1005-4157

Lab Batch #: 830248 **Sample:** 395498-004 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 18:42

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.7	10.0	107	70-135	
o-Terphenyl	5.21	5.00	104	70-135	

Lab Batch #: 830248 **Sample:** 395485-004 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 20:45

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.2	10.0	112	70-135	
o-Terphenyl	5.23	5.00	105	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

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 **Analyst:** HAT

Reporting Units: mg/L **Batch #:** 1

		BLANK /BLANK SPIKE RECOVERY STUDY				
ICP-MS Metals by SW 6020A **Analytes**	**Blank Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Control Limits %R**	**Flags**
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	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

BS / BSD Recoveries

Project Name: Boyd

Work Order #: 395498 **Project ID:** 1005-4157

Analyst: ASA **Date Prepared:** 11/04/2010 **Date Analyzed:** 11/04/2010

Lab Batch ID: 830631 **Sample:** 577933-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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 %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1102	110	0.1	0.1117	112	1	70-125	25	
Toluene	ND	0.1000	0.0968	97	0.1	0.0979	98	1	70-125	25	
Ethylbenzene	ND	0.1000	0.0953	95	0.1	0.0970	97	2	71-129	25	
m,p-Xylenes	ND	0.2000	0.1860	93	0.2	0.1873	94	1	70-131	25	
o-Xylene	ND	0.1000	0.0933	93	0.1	0.0945	95	1	71-133	25	

Analyst: LATCOR **Date Prepared:** 11/02/2010 **Date Analyzed:** 11/02/2010

Lab Batch ID: 830229 **Sample:** 830229-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

Inorganic Anions by EPA 300/300.1	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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 %R	Control Limits %RPD	Flag
Bromide	ND	1.50	1.55	103	1.5	1.55	103	0	80-120	20	
Chloride	ND	10.0	10.1	101	10	10.1	101	0	80-120	20	
Fluoride	ND	2.00	2.03	102	2	2.03	102	0	80-120	20	
Sulfate	ND	10.0	9.83	98	10	9.78	98	1	80-120	20	

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

BS / BSD Recoveries

Project Name: Boyd

Work Order #: 395498 **Project ID:** 1005-4157

Analyst: WRU **Date Prepared:** 11/02/2010 **Date Analyzed:** 11/02/2010

Lab Batch ID: 830426 **Sample:** 830426-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C 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 %R	Control Limits %RPD	Flag
Total dissolved solids	ND	1000	902	90	1000	956	96	6	80-120	30	

Analyst: BEV **Date Prepared:** 11/02/2010 **Date Analyzed:** 11/02/2010

Lab Batch ID: 830248 **Sample:** 577712-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod 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 %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	100	84.5	85	100	79.4	79	6	70-135	25	
C12-C28 Diesel Range Hydrocarbons	ND	100	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 #: 1
Matrix: Water
Reporting Units: mg/L

TPH by SW8015 Mod Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
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)/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

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: Boyd

Work Order # : 395498 **Project ID:** 1005-4157

Lab Batch ID: 830631 **QC- Sample ID:** 395498-004 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/04/2010 **Date Prepared:** 11/04/2010 **Analyst:** ASA

Reporting Units: mg/L

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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	ND	0.1000	0.1042	104	0.1000	0.1172	117	12	70-125	25	
Toluene	ND	0.1000	0.0912	91	0.1000	0.1027	103	12	70-125	25	
Ethylbenzene	ND	0.1000	0.0899	90	0.1000	0.1017	102	12	71-129	25	
m,p-Xylenes	ND	0.2000	0.1717	86	0.2000	0.1915	96	11	70-131	25	
o-Xylene	ND	0.1000	0.0881	88	0.1000	0.0995	100	12	71-133	25	

Lab Batch ID: 830858 **QC- Sample ID:** 395493-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/05/2010 **Date Prepared:** 11/04/2010 **Analyst:** HAT

Reporting Units: mg/L

ICP-MS Metals by SW 6020A Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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
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	8.98	2.00	11.2	111	2.00	11.2	111	0	75-125	25	
Sodium	163	3.00	167	133	3.00	171	267	2	75-125	25	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative 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, I = 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

ICP-MS Metals by SW 6020A	SAMPLE / SAMPLE DUPLICATE RECOVERY				
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 #:** 1 **Matrix:** Water
Reporting Units: mg/L

Inorganic Anions by EPA 300/300.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
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

TDS by SM2540C	SAMPLE / SAMPLE DUPLICATE RECOVERY				
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

XENCO Laboratories

☐ 4143 Greenbriar Drive, Stafford, Tx 77477 281-240-4200
☐ 5332 Blackberry Drive, San Antonio, Tx 78238 210-509-3334
☐ 9701 Harry Hines Blvd., Dallas, Tx 75220 214-902-0300
☐ 12600 West I-20 East, Odessa, Tx 79765 432-563-1800
☐ 842 Cantwell, Corpus Christi, Tx 78408 361-884-0371

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

Serial #: 250550 Page of

Company-City: Eco-logical Environmental SVCS	Phone: 432-520-7535
Proj Name-Location: Boyd ☐ Previously done at XENCO	Project ID: 4157 1005--3868
Proj State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other	Proj. Manager (PM): Scott Springer
e-Mail Results to: PM and scott@eco-logical.com	Fax No: 432 520 7737
Invoice to: ☑ Accounting ☐ Inc. Invoice with Final Report ☐ Invoice must have a P.O Bill to: SAME	
Quote/Pricing:	P.O No: ☐ Call for P.O.
Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP	
QAPP Per-Contract CLP AFCEE NAVY DOE DOD USACE OTHER:	
Special DLs (GW DW QAPP MDLs RLs See Lab PM Included Call PM)	
Sampler Name: Anna Vargas	Signature:

Lab Only: 395498

TAT: ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d Standard TAT is project specific.
It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.

	Sample ID	Sampling Date	Time	Depth ft" in" m	Matrix	Composite	Grab	# Containers	Container Size	Container Type	Preservatives
1	MW-1	10:29	11:30		L			4		G	HCL
2	MW-2										
3	MW-3										
4	MW-4										
5											
6											
7											
8											
9											
10											

	VOCs: Full-List BTEX MTBE EtOH Oxyg VOHs VOAs	VOC's PP TCL DW Appdx-1 Appdx-2 CALL Other:	PAHs	TX-1005 GRO DRO MA EPH MA VPH	SVOCs: Full-List DW BN&AE TCL PP Appdx-2 CALL	OC Pesticides PCBs Herbicides OP Pesticides	Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx 2	SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)	EDB / DBCP	Cations	Anions	TDS	TAT ASAP 5h 12h 24h 48h 3d (5d) 7d 10d 21d	Addn: PAH above mg/L W, mg/Kg S Highest Hit	Hold Samples (Surcharges will apply and are pre-approved)
1	X			X						X	X	X	X		
2															
3															
4															
5															
6															
7															
8															
9															
10															

Remarks

Sample Clean-ups are pre-approved as needed

Addn: Date Rcv by: From:

Relinquished by (Initials and Sign)	Date & Time	Relinquished to (Initials and Sign)	Date & Time
1) Anna Vargas AV	11/1/10 11:58 AM	Kim Murdock	11/01/10 11:58
2)		4)	
3)		6)	
5)			

Total Containers per COC: 20 Cooler Temp: 2.6

otherwise agreed on writing. Reports are the Intellectual Property of XENCO until paid. Samples will be held 30 days after final report is e-mailed unless hereby requested. Rush Charges and Collection Fees are pre-approved if needed.

Preservatives: Various (**V**), HCl 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**) _____

Cont. Size: 4oz (**4**), 8oz (**8**), 32oz (**32**), 40ml VOA (**40**), 1L (**1**), 500ml (**5**), Tedlar Bag (**B**), Various (V), Other _____ **Cont. Type:** Glass Amb (**A**), Glass Clear (**C**), Plastic (**P**), Various (**V**)

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

Committed to Excellence in Service and Quality *www.xenco.com*

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

Final 1.000

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Eco-Logical Environmental

Date/Time: 11/01/10 11:58

Lab ID # :

Initials: KM

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	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.	Cooler 5 No.
lbs 2.6 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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 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

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-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: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
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

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

Project ID:	*1005-4157*	*Report Date:*	*16-FEB-11*
Work Order Number:	*406349*	*Date Received:*	*02/10/2011*

Sample receipt non conformances and Comments:

None

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

Certificate of Analysis Summary 406349

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Boyd

Project Id: 1005-4157
Contact: Rose Slade
Project Location:

Date Received in Lab: Thu Feb-10-11 11:35 am
Report Date: 16-FEB-11
Project Manager: Brent Barron, II

Analysis Requested		*Lab Id:*	406349-001		406349-002		406349-003		406349-004			
		Field Id:	MW-1		MW-2		MW-3		MW-4			
		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 SUB: T104704295-TX		*Extracted:*	Feb-14-11 08:00		Feb-14-11 08:00		Feb-14-11 08:00		Feb-14-11 08:00			
		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	59.6	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		

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

Certificate of Analysis Summary 406349

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Boyd

Project Id: 1005-4157
Contact: Rose Slade
Project Location:

Date Received in Lab: Thu Feb-10-11 11:35 am
Report Date: 16-FEB-11
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	406349-001		406349-002		406349-003		406349-004					
	Field Id:	MW-1		MW-2		MW-3		MW-4					
	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				

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

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.

Form 2 - Surrogate Recoveries

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

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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 **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/11/11 14:39

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Boyd

Work Orders : 406349,

Project ID: 1005-4157

Lab Batch #: 843493 **Sample:** 406349-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/11/11 16:12

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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 **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/11/11 16:35

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 843493 **Sample:** 406348-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/11/11 23:48

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY 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
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/11/11 03:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY 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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/11/11 03:55

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	7.41	10.0	74	70-135	
o-Terphenyl	3.64	5.00	73	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY 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 **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/11/11 05:09

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY 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 outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Boyd

Work Order #: 406349 **Project ID:** 1005-4157

Analyst: ASA **Date Prepared:** 02/10/2011 **Date Analyzed:** 02/11/2011

Lab Batch ID: 843493 **Sample:** 595536-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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 %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0998	100	0.100	0.0972	97	3	70-125	25	
Toluene	<0.00200	0.100	0.0969	97	0.100	0.0944	94	3	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0939	94	0.100	0.0916	92	2	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.187	94	0.200	0.183	92	2	70-131	25	
o-Xylene	<0.00100	0.100	0.0965	97	0.100	0.0941	94	3	71-133	25	

Analyst: LATCOR **Date Prepared:** 02/11/2011 **Date Analyzed:** 02/11/2011

Lab Batch ID: 843234 **Sample:** 843234-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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 %R	Control Limits %RPD	Flag
Fluoride	<0.200	2.00	2.11	106	2.00	1.95	98	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	

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

BS / BSD Recoveries

Project Name: Boyd

Work Order #: 406349 **Project ID:** 1005-4157

Analyst: DAT **Date Prepared:** 02/14/2011 **Date Analyzed:** 02/14/2011

Lab Batch ID: 843781 **Sample:** 595496-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

Metals per ICP by SW846 6010B Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
	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 %R	Control Limits %RPD	Flag
Calcium	<0.100	1.00	1.18	118	1.00	1.09	109	8	75-125	25	
Magnesium	<0.0100	1.00	1.08	108	1.00	1.09	109	1	75-125	25	
Potassium	<0.500	10.0	9.43	94	10.0	9.84	98	4	75-125	25	
Sodium	<0.500	11.0	11.4	104	11.0	11.7	106	3	75-125	25	

Analyst: WRU **Date Prepared:** 02/10/2011 **Date Analyzed:** 02/10/2011

Lab Batch ID: 843267 **Sample:** 843267-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

TDS by SM2540C Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
	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 %R	Control Limits %RPD	Flag
Total dissolved solids	<5.00	1000	910	91	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

BS / BSD Recoveries

Project Name: Boyd

Work Order #: 406349
Analyst: BEV
Lab Batch ID: 843226 **Sample:** 595378-1-BKS
Units: mg/L

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

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

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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 %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<1.50	100	92.4	92	100	99.0	99	7	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<1.50	100	82.4	82	100	89.7	90	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

Final 1.000

Form 3 - MS Recoveries

Project Name: Boyd

Work Order #: 406349

Lab Batch #: 843234 **Project ID:** 1005-4157

Date Analyzed: 02/11/2011 **Date Prepared:** 02/11/2011 **Analyst:** LATCOR

QC- Sample ID: 406240-001 S **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
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 #:** 1 **Matrix:** Water

Reporting Units: mg/L

TPH by SW8015 Mod Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
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

Form 3 - MS / MSD Recoveries

Project Name: Boyd

Work Order # : 406349 **Project ID:** 1005-4157

Lab Batch ID: 843493 **QC- Sample ID:** 406348-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 02/11/2011 **Date Prepared:** 02/10/2011 **Analyst:** ASA

Reporting Units: mg/L

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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	<0.00100	0.100	0.0968	97	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	89	3	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.184	92	0.200	0.177	89	4	70-131	25	
o-Xylene	<0.00100	0.100	0.0931	93	0.100	0.0906	91	3	71-133	25	

Lab Batch ID: 843781 **QC- Sample ID:** 406476-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 02/14/2011 **Date Prepared:** 02/14/2011 **Analyst:** DAT

Reporting Units: mg/L

Metals per ICP by SW846 6010B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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
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	97	1	75-125	25	
Potassium	10.8	10.0	21.9	111	10.0	20.1	93	9	75-125	25	
Sodium	356	11.0	374	164	11.0	365	82	2	75-125	25	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

Relative 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

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

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
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
Reporting Units: mg/L

TDS by SM2540C Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids	924	956	3	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

XENCO Laboratories

☐ 4143 Greenbriar Drive, Stafford, Tx 77477 281-240-4200
☐ 5332 Blackberry Drive, San Antonio, Tx 78238 210-509-3334
☐ 9701 Harry Hines Blvd., Dallas, Tx 75220 214-902-0300
☐ 12600 West I-20 East, Odessa, Tx 79765 432-563-1800
☐ 842 Cantwell, Corpus Christi, Tx 78408 361-884-0371

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

Serial #: 249971 Page of

Company-City Phone: ECO-LOGICAL ENVIRONMENTAL 432-520-2539	Lab Only: 406349
Proj Name-Location: BOYD ☐ Previously done at XENCO	Project ID: 1005-4157
Proj State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other	Proj. Manager (PM): SCOTT SPRINGER
e-Mail Results to PM and: RASG@SUG.COM	Fax No:
Invoice to ☐ Accounting ☐ Inc. Invoice with Final Report ☐ Invoice must have a P.O Bill to: SUG	
Quote/Pricing:	P.O No: ☐ Call for P.O.
Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP	
QAPP Per-Contract CLP AFCEE NAVY DOE DOD USACE OTHER:	
Special DLs (GW DW QAPP MDLs RLs See Lab PM Included Call PM)	
Sampler Name: Anna Vargas	Signature: Anna Vargas

TAT: ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d Standard TAT is project specific.
It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.

	Sample ID	Sampling Date	Time	Depth ft/in m	Matrix	Composite	Grab	# Containers	Container Size	Container Type	Preservatives	VOCs: Full-List (BTEX-MTBE EtOH Oxyg VOHs VOAs)	VOCs PP TCL DW Appdx-1 Appdx-2 CALL Other:	PAHs	TX-1005 (DRO GRO) MA EPH MA VPH	SVOCs: Full-List DW BN&AE TCL PP Appdx-2 CALL	OC Pesticides PCBs Herbicides OP Pesticides	Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx 2	SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)	EDB / DBCP	CATIONS (Ca,Fe,Mg,K) ANIONS (Cl,F,SO4,B) TOTAL Dissolves
1	MW-1	2-8-11			W		X	5	1/40		HCl	X			X						X
2	MW-2	"			"		"	"	"		"	"			"						"
3	MW-3	"			"		"	"	"		"	"			"						"
4	MW-4	"			"		"	"	"		"	"			"						"
5																					
6																					
7																					
8																					
9																					
10																					

TAT ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d | Addn: PAH above mg/L W, mg/Kg S Highest Hit | Hold Samples (Surcharges will apply and are pre-approved) | Remarks | Sample Clean-ups are pre-approved as needed | From: | Rcv by: | Date | Addn:

Relinquished by (Initials and Sign)	Date & Time	Relinquished to (Initials and Sign)	Date & Time
1) [signature] AV.	2/10/11 1135	2)	
3)		4)	
5)		6) Andrea Clem	2.10.11 11.35

Total Containers per COC: Cooler Temp: 1.10

otherwise agreed on writing. Reports are the Intellectual Property of XENCO until paid. Samples will be held 30 days after final report is e-mailed unless hereby requested. Rush Charges and Collection Fees are pre-approved if needed.

Preservatives: Various (V), HCl 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) _____

Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other _____ **Cont. Type:** Glass Amb (A), Glass Clear (C), Plastic (P), Various (V)

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

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

Final 1.000

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Eco-logical / SUGS

Date/Time: 2-10-11 11:35

Lab ID # : 406349

Initials: AE

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	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.		Cooler 5 No.	
lbs	1.6 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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