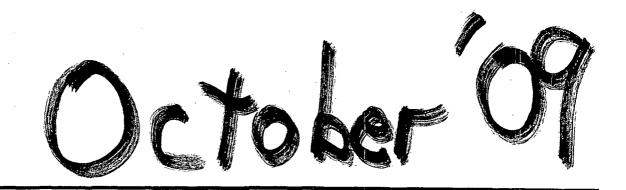


REPORTS

DATE:





November 30, 2009

Mr. Edward Hansen New Mexico Oil Conservation Division Environmental Bureau 1220 South St. Francis Drive Santa Fe, New Mexico 87505

RE: Plains Pipeline, L.P. Red Byrd Ranch Historical Site NMOCD Reference # 1RP-1299 Unit Letter H of Section 1, Township 20 South, Range 36 East Lea County, New Mexico

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2: 54 D	

Dear Mr. Hansen:

Plains Pipeline, L.P. is pleased to submit the attached *Remediation Summary and Soil Closure Request*, dated October 2009, for the Red Byrd Ranch Historical site. This site is located in Section 1 of Township 20 South, and Range 36 East of Lea County, New Mexico. This document details the soil remediation activities performed at the site.

Should you have any questions or comments, please contact me at (575) 441-1099.

Sincerely, l Dor

Jason Henry Remediation Coordinator Plains Pipeline, L.P.

CC: Larry Johnson, NMOCD, Hobbs Office

Enclosure

Basin Environmental Consulting, LLC

2800 Plains Highway P. O. Box 381 Lovington, New Mexico 88260 cdstanley@basin-consulting.com Office: (575) 396-2378 Fax: (575) 396-1429

ŵ **Effective Solutions**

REMEDIATION SUMMARY

AND

SOIL CLOSURE REQUEST

PLAINS MARKETING, L.P. (231735) Red Byrd Ranch Historical Lea County, New Mexico Plains SRS # Red Byrd Ranch-TNM Historical UNIT "H" (SE/NE), Section 01, Township 20 South, Range 36 East Latitude 32° 36' 12.84" North, Longitude 103° 18' 08.31" West NMOCD Reference # 1RP-1299

Prepared For:

Plains Marketing, L.P. 333 Clay Street Suite 1600 Houston, Texas 77002

Prepared By: Basin Environmental Consulting, LLC 2800 Plains Highway Lovington, New Mexico 88260

October 2009

Curt Ð

Project Manager

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Project Manager

TABLE OF CONTENTS

INTRODUCTION AND BACKGROUND INFORMATION	1
NMOCD SITE CLASSIFICATION	1
SUMMARY OF FIELD ACTIVITIES	2
SOIL CLOSURE REQUEST	
LIMITATIONS	8
DISTRIBUTION	.10

FIGURES

Figure 1 – Site Location Map Figure 2 – Site and Sample Location Map

TABLES

.

Table 1 – Concentrations of BTEX and TPH in Soil

APPENDICES

- Appendix A Photographs
- Appendix B Laboratory Reports
- Appendix C Soil Boring Logs

Appendix D - Release Notification and Corrective Action (Form C-141)

INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Consulting, LLC (Basin), on behalf of Plains Marketing, L.P. (Plains), has prepared this Remediation Summary and Soil Closure Request for the release site known as Red Byrd Ranch Historical (SRS # Red Byrd Ranch-TNM Historical). The legal description of the release site is Unit Letter "H" (SE ¼ NE ¼), Section 01, Township 20 South, Range 36 East, in Lea County, New Mexico. The property affected by the release is owned by Mr. J.R. "Red" Byrd. The release site GPS coordinates are 32° 36' 12.84" North and 103° 18' 08.31" West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site and Sample Location Map. General site photographs are provided as Appendix A and the Release Notification and Corrective Action (Form C-141) is provided as Appendix D.

On April 24, 2007, Plains reported a historical release of an unknown volume of crude oil from an inactive Plains pipeline. An area of asphaltine attributed to the release measured approximately fifteen (15) feet in width and two hundred eighty (280) feet in length, along the Plains pipeline right-of-way. The Red Byrd Ranch Historical release is located within the confines of the Plains Marketing, L.P. Red Byrd #1 release (NMOCD Reference # 1R-0085)

On November 17, 2008, Plains assigned excavation oversight activities to Basin.

NMOCD SITE CLASSIFICATION

According to data obtained from the New Mexico Office of the State Engineer (NMOSE), one (1) water well is recorded in Section 01 of the above referenced township. According to a depth to groundwater reference map utilized by the New Mexico Oil Conservation Division (NMOCD), groundwater should be encountered at approximately twenty-five (25) feet below ground surface (bgs). During the installation of monitor wells at the Red Byrd #1 site, Plains has encountered groundwater at approximately thirty-one (31) feet bgs. This depth to groundwater results in a score of twenty (20) being assigned to the site based on the New Mexico Oil Conservation Division (NMOCD) depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are no water wells less than 1,000 feet from the release, resulting in zero (0) points being assigned to this site as a result of this criteria.

There is no surface water body located within 1,000 feet of the site. Based on the NMOCD ranking system zero (0) points will be assigned to the site as a result of the criteria.

The *Guidelines for Remediation of Leaks, Spills and Releases* (NMOCD, 1993) indicates the Red Byrd Ranch Historical release site has a ranking score of twenty (20). Based on this score, the soil remediation levels for a site with a ranking score of twenty (20) points are as follows:

- Benzene 10 mg/Kg (ppm)
- BTEX 50 mg/Kg (ppm)
- TPH 100 mg/Kg (ppm)

In May 2008, a previous contractor submitted a *Site Investigation Report* to the NMOCD-Santa Fe Office. The report detailed the remediation efforts to date at the Red Byrd #1 (NMOCD reference #1R-0085) and Red Byrd Ranch Historical release site. The report proposed a closure strategy for the Red Byrd Ranch Historical release site, employing a risk-based closure using a twenty (20) mil polyethylene liner. Following the liner installation, remediated soil exhibiting a TPH concentration less than 1,000 mg/Kg was to be used as backfill material.

On February 18, 2009, Plains received NMOCD approval to commence activities as stated in the *Site Investigation Report*, dated May 2008.

SUMMARY OF FIELD ACTIVITIES

On April 23, 2007, Plains began soil investigation activities at the Red Byrd Ranch Historical site. The pipeline overburden soil was "stripped" by the previous contractor, to allow visual inspection of the pipeline for damage and/or releases. Visual inspection of the pipeline and the surrounding soil indicated a historical release had occurred at the site. On April 25, 2007, Plains representatives submitted Release Notification and Corrective Action to the NMOCD Hobbs District Office. Following the submission of the Release Notification, excavation activities continued. Impacted soil was stockpiled on-site pending final disposition.

On May 30, 2007, the previous contractor collected four (4) excavation sidewall soil samples (PEW, PSEW, PNWW, and PSEW Low) and submitted the soil samples to the laboratory for total petroleum hydrocarbons (TPH) determination by Method SW 846-8015M. The analytical results indicated the TPH concentrations ranged from 5,930 mg/Kg in soil sample PEW to 19,850 mg/Kg in soil sample PNWW. A site and sample location map is provided as Figure 2. A summary of Concentrations of BTEX and TPH in Soil is provided as Table 1 and laboratory analytical reports are provided as Appendix B.

On May 30, 2007, the previous contractor collected two (2) excavation floor soil samples (PBNC and PBE) and submitted the soil samples to the laboratory for TPH determination. The analytical results indicated the TPH concentrations ranged from 7,699 mg/Kg in soil sample PBE to 8,428 mg/Kg in soil sample PBNC.

On June 1, 2007, the previous contractor collected three (3) excavation sidewall soil samples (E Wall E 8", W Wall 3', W Wall 13') and submitted the soil samples to the laboratory for TPH determination. The analytical results indicated the TPH concentrations ranged from less than the laboratory method detection limit (MDL) of 10 mg/Kg in soil sample E Wall E 8" to 5,652 mg/Kg in soil sample W Wall 13'.

On June 1, 2007, the previous contractor collected three (3) excavation floor soil samples (FLR East Exc., Floor Ext Ecs 1 and FLR Ext Ecs 2) and submitted the soil samples to the laboratory for TPH determination. The analytical results indicated the TPH concentrations ranged from 420.6 mg/Kg in soil sample FLR East Exc. to 6,037 mg/Kg in soil sample FLR Ext Ecs 2.

On June 5, 2007, the previous contractor excavated two (2) investigation trenches (T-1 and T-2) to further delineate the horizontal and vertical extent of impact at the site. Trench #1 (T-1) was

excavated to the northwest of the excavation, north of the DCP Midstream (DCP) low pressure gas line. A soil sample (T-1 Bottom @ 10') was collected from the floor of the trench and submitted to the laboratory. The analytical results indicated the TPH concentration was less than the laboratory MDL of 50 mg/Kg. Trench #2 (T-2) was excavated to the south of the excavation, parallel to the Plains pipeline. Soil samples (T-2 WBH @ 8' and T-2 EBH @ 8') were collected from the floor of Trench #2 and submitted to the laboratory. The analytical results indicated the TPH concentration ranged from 3.24 mg/Kg in soil sample T-2 EBH @ 8' to 6.79 mg/Kg in soil sample T-2 WBH @ 8'.

In addition to the trench soil samples, three (3) excavation sidewall samples (PNEW, PSWW and PWW) were collected and submitted to the laboratory. The analytical results indicated TPH concentrations ranged from less than the laboratory MDL of 50 mg/Kg in soil sample PNEW to 3,102 mg/Kg in soil sample PSWW. An excavation floor sample (PBC) was collected and submitted to the laboratory for TPH determination. The analytical results indicated the TPH concentration was 4,520 mg/Kg in soil sample PBC.

Preliminary soil samples (SPE, SPS, SPN, and SPW) were collected from the on-site stockpile. The analytical results indicated TPH concentrations ranged from 189.4 mg/Kg in soil sample SPW to 592.6 mg/Kg in soil sample SPS.

On June 25, 2007, a soil sample (PNW) was collected and submitted to the laboratory. The analytical results indicated the soil sample exhibited a TPH concentration of 3,477 mg/Kg,

On November 28, 2007, Plains advanced six (6) soil borings (SB-1-07, SB-2-07, SB-3-07, SB-4-07, SB-5-07, and SB-6-07) to further delineate the vertical and horizontal extent of impact at the site. Soil boring logs are provided as Appendix C. Soil samples were collected at five (5) foot drilling intervals and field screened using a Photo Ionization Detector (PID). Selected soil samples were submitted to the laboratory for determination of concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) and TPH using Methods EPA SW-846 8021b and SW-846 8015M, respectively.

Soil boring SB-1-07 was located approximately forty (40) feet south of the excavation and was advanced to a total depth of approximately twenty (20) feet bgs. The laboratory analytical results indicated benzene concentrations were less than the laboratory MDL of 0.02 mg/Kg in the soil sample collected at twenty (20) feet bgs. The BTEX concentration was 0.1986 mg/Kg in the soil sample collected at twenty (20) feet bgs. The TPH concentration ranged from less than the laboratory MDL of 50 mg/Kg in the sample collected at ten (10) feet bgs to 864 mg/Kg in the soil sample collected at twenty (20) feet bgs.

Soil boring SB-2-07 was located approximately fifteen (15) feet south of the excavation and was advanced to a total depth of approximately twenty (20) feet bgs. The laboratory analytical results indicated benzene concentrations were less than the laboratory MDL of 0.05 mg/Kg in the soil sample collected at twenty (20) feet bgs. The BTEX concentration was 1.307 mg/Kg in the soil sample collected at twenty (20) feet bgs. The TPH concentration ranged from 1.12 mg/Kg in the sample collected at ten (10) feet bgs to 2,426 mg/Kg in the soil sample collected at twenty (20)

Soil boring SB-3-07 was located approximately thirty (30) feet north of the excavation and was advanced to a total depth of approximately twenty-nine (29) feet bgs. The laboratory analytical results indicated benzene and BTEX concentrations were less than the laboratory MDL of 0.01 mg/Kg in the soil sample collected at twenty-nine (29) feet bgs. The TPH concentration ranged from less than the laboratory MDL of 50 mg/Kg in the sample collected at twenty (20) feet bgs to 163.8 mg/Kg in the soil sample collected at twenty-nine (29) feet bgs.

Soil boring SB-4-07 was located approximately fifty (50) feet north of the excavation and was advanced to a total depth of approximately twenty-nine (29) feet bgs. The laboratory analytical results indicated benzene and BTEX concentrations were less than the laboratory MDL of 0.01 mg/Kg in the soil sample collected at twenty-nine (29) feet bgs. The TPH concentration was less than the laboratory MDL of 50 mg/Kg in all three (3) soil samples.

Soil boring SB-5-07 was located approximately one hundred (100) feet north of the excavation and was advanced to a total depth of approximately twenty-nine (29) feet bgs. The laboratory analytical results indicated benzene and BTEX concentrations were less than the laboratory MDL of 0.01 mg/Kg in the soil sample collected at twenty-nine (29) feet bgs. The TPH concentration was less than the laboratory MDL of 50 mg/Kg in all three (3) soil samples.

Soil boring SB-6-07 was located approximately fifty (50) feet east of the excavation and was advanced to a total depth of approximately twenty-nine (29) feet bgs. The laboratory analytical results indicated benzene and BTEX concentrations were less than the laboratory MDL of 0.01 mg/Kg in the soil sample collected at twenty-nine (29) feet bgs. The TPH concentration was less than the laboratory MDL of 50 mg/Kg in all three (3) soil samples.

In May 2008, a previous contractor submitted a *Site Investigation Report* (Report) to the NMOCD-Santa Fe Office. The report detailed the remediation efforts to date at the Red Byrd #1 (NMOCD reference #1R-0085) and Red Byrd Ranch Historical release site. The report proposed a closure strategy for the Red Byrd Ranch Historical release site, employing a risk-based closure using a twenty (20) mil polyethylene liner. Following the liner installation, remediated soil exhibiting a TPH concentration less than 1,000 mg/Kg was to be used as backfill material.

On December 10, 2008, two (2) baseline stockpile soil samples (E/S Stockpile and W/S Stockpile) were collected and submitted to the laboratory for TPH analysis. The analytical results indicated the E/S Stockpile and W/S Stockpile exhibited TPH concentrations of 631 mg/Kg and 1,244 mg/Kg, respectively.

Based on the analytical results of the baseline stockpile soil samples, blending of the stockpiles began at the site. Following the blending of the stockpiles, soil samples were collected for each approximately 500 cubic yards (cy) of stockpiled soil.

On January 5, 2009, eleven (11) soil samples (Blended Soil-1 through Blended Soil-10 and SP-1) were collected from the blended soil stockpiles. The analytical results indicated nine (9) of the eleven (11) collected soil samples (Blended Soil-3 through Blended Soil-10 and SP-1) exhibited TPH concentrations less than 1,000 mg/Kg, ranging from 23.6 mg/Kg for soil sample Blended

Soil-8 to 771.3 mg/Kg for soil sample Blended Soil-7. The analytical results indicated soil samples Blended Soil-3 through Blended Soil-10 and SP-1 exhibited benzene concentrations less than the laboratory MDL of 0.0011 mg/Kg. The analytical results indicated soil samples Blended Soil-3 through Blended Soil -10 and SP-1 exhibited BTEX concentrations ranging from less than the laboratory MDL of 0.0022 mg/Kg in soil sample Blended Soil-8 to 0.0267 mg/Kg in soil sample Blended Soil-4.

Based on the analytical results of the January 5, 2009 sampling event, soil represented by samples Blended Soil-3 through Blended Soil-10 and SP-1 was deemed suitable as backfill material. Soil represented by soil samples Blended Soil-1 and Blended Soil-2 exhibited TPH concentrations ranging from 1,108.2 mg/Kg in Blended Soil-2 to 1,244.5 mg/Kg in soil sample Blended Soil-1. Based on the analytical results soil represented by soil samples Blended Soil-1 and Blended Soil-1 and Blended Soil-1 and Blended Soil-1.

On January 14, 2009, three (3) stockpile soil samples (SP-2, SP-3 and SP-4) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations were less than the laboratory MDL in all three (3) soil samples. The laboratory analytical results indicated BTEX concentrations ranged from 0.0051 mg/Kg in soil sample SP-2 to 0.0694 mg/Kg in soil sample SP-4. The laboratory analytical results indicated TPH concentrations ranged from 256 mg/Kg in soil sample SP-2 to 1,123 mg/Kg in soil sample SP-3.

Based on the analytical results of the January 14, 2009 stockpile sampling event, soil represented by sample SP-2 was deemed suitable as backfill material and stockpiled. Soil represented by soil samples SP-3 and SP-4 exhibited TPH concentrations 1,123 mg/Kg and 1,017 mg/Kg, respectively. Based on the analytical results, soil represented by soil samples SP-3 and SP-4 was reblended.

On January 14, 2009, six (6) excavation sidewall soil samples (NSW 1A, NSW 1B, WSW 1A, SSW 1A, SSW 1B and SSW 1C) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL in all six (6) soil samples. The laboratory analytical results indicated BTEX concentrations ranged from less than the appropriate laboratory MDL to 22.261 mg/Kg in soil sample WSW 1A. The laboratory analytical results indicated TPH concentrations ranged from less than the laboratory MDL of 17.6 mg/Kg and 15.9 mg/Kg in soil samples SSW 1A and SSW 1C to 12,630 mg/Kg in soil sample NSW 1A. Based on the analytical results of the January 14, 2009 sidewall sampling event, additional excavation was required in areas represented by soil samples NSW 1A, WSW 1A and SSW 1B.

On January 26, 2009, ten (10) blended stockpile soil samples (Blended-11 through Blended-20) were collected and submitted to the laboratory. The laboratory analytical results indicated TPH concentrations ranged from 418.4 mg/Kg in soil sample Blended-13 to 2,510 mg/Kg in soil sample Blended-15.

Based on the analytical results of the January 26, 2009 stockpile sampling event, soil represented by soil samples Blended-12, Blended-13 and Blended-20 was deemed suitable as backfill material and stockpiled for use as backfill. The three (3) soil samples deem suitable for backfill

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were analyzed for benzene and BTEX constituents. The analytical results indicated benzene concentrations were less than the laboratory MDL of 0.0011 mg/Kg and BTEX constituent concentrations ranged from 0.0929 mg/Kg in soil sample Blended-13 to 0.4293 mg/Kg in soil sample Blended-12.

Soil represented by soil samples Blended-11 and Blended-14 through Blended-19 exhibited TPH concentrations ranging from 1,351 mg/Kg in soil sample Blended-16 to 2,510 mg/Kg in soil sample Blended-15. Based on the analytical results, soil represented by soil samples Blended-11 and Blended-14 through Blended-19 were reblended.

On January 26, 2009, five (5) excavation sidewall soil samples (WSW – 2A, SSW – 2B, SSW – 1D, West Wall 13' A and NSW – 2A) were collected and submitted to the laboratory. The laboratory analytical results indicated TPH concentrations ranged from less than the appropriate laboratory MDL to 424.4 mg/Kg in soil sample WSW–2A. Soil samples exhibiting a TPH concentration less than 100 mg/Kg (SSW – 2B, SSW–1D and West Wall 13' A) were analyzed for benzene and BTEX constituent concentrations. The analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL.

Based on the analytical results of the January 26, 2009 excavation sidewall sampling event, additional excavation was required in areas represented by soil samples WSW - 2A and NSW - 2A.

On February 6, 2009, two (2) excavation sidewall soil samples (NSW – 3A and WSW – 3A) were collected and submitted to the laboratory. The laboratory analytical results indicated TPH concentrations ranged from less than the laboratory MDL of 17.9 mg/Kg in soil sample WSW– 3A to 32.1 mg/Kg in soil sample NSW – 3A. The analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL.

On February 6, 2009, four (4) stockpile soil samples (Blended Soil-1A, Blended Soil-2A, SP–3A and SP–4A) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations were less than the laboratory MDL of 0.0011 mg/Kg in all four (4) soil samples. The laboratory analytical results indicated BTEX concentrations ranged from 0.0103 mg/Kg in soil sample Blended Soil-2A to 0.0859 mg/Kg in soil sample SP-3A. The laboratory analytical results indicated TPH concentrations ranged from 729.5 mg/Kg in soil sample SP-4A to 1,715 mg/Kg in soil sample Blended Soil-1A.

Based on the analytical results of the February 6, 2009 stockpile sampling event, soil represented by soil samples SP-3A and SP-4A was deemed suitable as backfill material and stockpiled. Soil represented by soil samples Blended Soil-1A and Blended Soil-2A exhibited TPH concentrations 1,715 mg/Kg and 1,035.3 mg/Kg, respectively. Based on the analytical results, soil represented by soil samples Blended-1A and Blended-2A was reblended.

On February 18, 2009, Plains received NMOCD approval to commence backfill activities as stated in the *Site Investigation Report*, dated May 2008. Following NMOCD approval soil closure activities commenced. Prior to the NMOCD proposal approval, soil was mechanically

screened and stockpiled for use as pad material above and beneath the twenty (20) mil polyethylene liner.

On February 20, 2009, a four (4) inch diameter PVC casing was installed around monitor well MW-12 casing, the outer casing was designed to protect the monitor well casing from damage during excavation backfill activities. Following the installation of the protective casing the polyethylene liner was installed on the floor of the excavation. A boot was installed on the protective casing and chemically welded to the liner to maintain the impermeable quality of the liner. Following the installation of the liner and placement of the pad material above the liner, backfilling activities commenced.

On March 17, 2009, six (6) stockpile soil samples (Blended-1B, Blended-2B, Blended-11A, Blended-14A, Blended-15A and Blended-16A) were collected and submitted to the laboratory. The laboratory analytical results indicated TPH concentrations ranged from 1,031.3 mg/Kg in soil sample Blended-1B to 2,095 mg/Kg in soil sample Blended-16A.

Based on the analytical results of the March 17, 2009 stockpile sampling event, soil represented by soil samples Blended-1B, Blended-2B, Blended-11A, Blended-14A, Blended-15A and Blended-16A was reblended.

On April 2, 2009, five (5) stockpile soil samples (Blended-1C, Blended-2C, Blended-17A, Blended-18A, and Blended-19A) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations were less than the laboratory MDL of 0.0011 mg/Kg in all five (5) soil samples. The laboratory analytical results indicated BTEX concentrations ranged from less than the laboratory MDL of 0.0021 mg/Kg in soil samples Blended-17A and Blended-18A to 0.0064 mg/Kg in soil sample Blended-19A. The laboratory analytical results indicated TPH concentrations ranged from 593.1 mg/Kg in soil sample Blended-1C to 754.0 mg/Kg in soil sample Blended-18A.

Based on the analytical results of the April 2, 2009 stockpile sampling event, soil represented by soil samples Blended-1C, Blended-2C, Blended-17A, Blended-18A, and Blended-19A was deemed suitable as backfill material and stockpiled.

On April 17, 2009, four (4) stockpile soil samples (Blended-11B, Blended-14B, Blended-15B and Blended-16B) were collected and submitted to the laboratory. The laboratory analytical results indicated TPH concentrations ranged from 1,198.2 mg/Kg in soil sample Blended-16B to 1,723 mg/Kg in soil sample Blended-15B.

Based on the analytical results of the April 17, 2009 stockpile sampling event, soil represented by soil samples Blended-11B, Blended-14B, Blended-15B, and Blended-16B was reblended.

On June 24, 2009, two (2) stockpile soil samples (Blended-11C, and Blended-14C) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations were 0.0011 mg/Kg in soil sample Blended-11C and less than the laboratory MDL of 0.001 mg/Kg in soil sample Blended-14C. BTEX concentrations were 0.0488 mg/Kg in

soil sample Blended-11C and 0.0142 in soil sample Blended-14C. TPH concentrations ranged from 623.3 mg/Kg in soil sample Blended-11C to 943.4 mg/Kg in soil sample Blended-14C.

Based on the analytical results of the June 24, 2009 stockpile sampling event, soil represented by soil samples Blended-11C and Blended-14C was deemed suitable as backfill material and stockpiled.

On August 5, 2009, one (1) stockpile soil sample (Blended-15C) was collected and submitted to the laboratory. The laboratory analytical results indicated the benzene and BTEX concentrations were less than the laboratory MDL of 0.0016 mg/Kg and 0.0033 mg/Kg, respectively and the TPH concentration was 206 mg/Kg.

On August 7, 2009, one (1) stockpile soil sample (Blended-16C) was collected and submitted to the laboratory. The laboratory analytical results indicated the benzene and BTEX concentrations were less than the laboratory MDL of 0.0011 mg/Kg and 0.0021 mg/Kg, respectively and the TPH concentration was 953 mg/Kg.

Based on the analytical results of the August 5 and 7, 2009 stockpile sampling events, soil represented by soil samples Blended-15C and Blended-16C was deemed suitable as backfill material and stockpiled.

Following the backfilling of the site, the site was contoured to fit the surrounding topography and seeded with vegetation acceptable to the landowner.

On September 9, 2009, remediation and restoration activities were completed.

SOIL CLOSURE REQUEST

Based on the analytical results of confirmation soil samples collected from the sidewalls of the excavation and as approved by the NMOCD, Basin recommends Plains provide the NMOCD Santa Fe Office a copy of this Remediation Summary and Soil Closure Request and request the NMOCD grant soil closure to the Red Byrd Ranch Historical release site.

LIMITATIONS

Basin Environmental Consulting, LLC has prepared this Remediation Summary and Soil Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin Environmental Consulting, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Consulting, LLC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

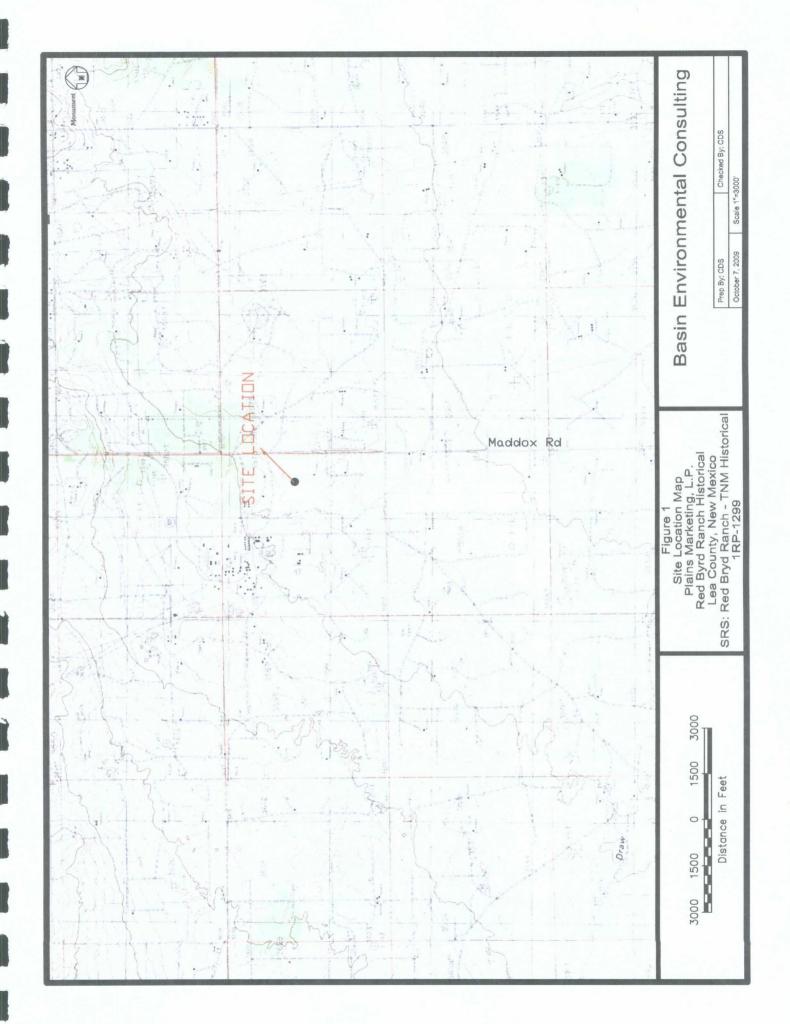
This report has been prepared for the benefit of Plains Marketing, L.P. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Consulting, LLC and/or Plains Marketing, L.P.

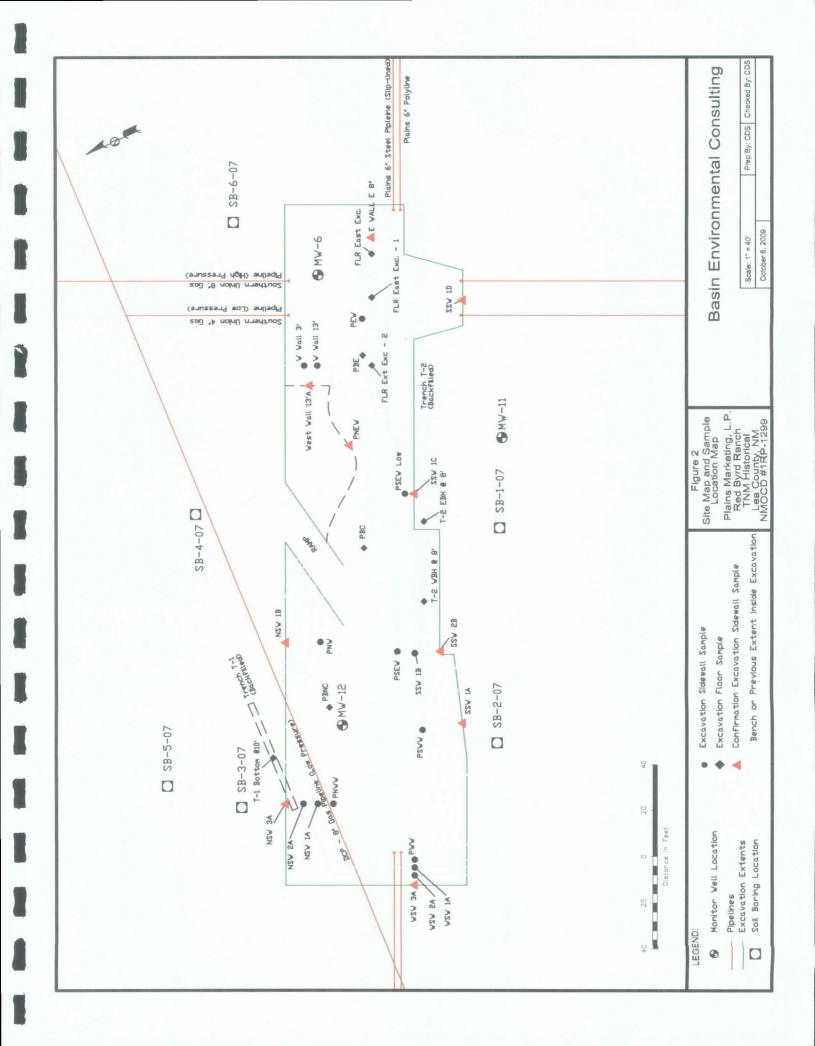
DISTRIBUTION:

Copy 1:	Ed Hansen New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505
Copy 2:	Larry Johnson New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (District 1) 1625 French Drive Hobbs, New Mexico 88240
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Figures

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Tables

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TABLE 1

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CONCENTRATIONS OF TPH AND BTEX IN SOIL

PLAINS MARKETING, L.P. RED BYRD RANCH HISTORICAL LEA COUNTY, NEW MEXICO SRS# RED BYRD RANCH TNM HISTORICAL NMOCD REF. # 1RP-1299

					2N N	VINUCU KEF. # 1KP-1299	IRF-1288			1			
	SAMPLE				METHC	METHOD: EPA SW 846-8021B, 5030	346-8021B, 5	030			SW 848-80	SW 848-8015M / 8015B	
SAMPLE	DEPTH	SAMPLE	SOIL	DENIZENIE		ЕТНҮС-	М,Р.	ò	TOTAL	GRO	DRO	oro	
LOCATION		DATE	STATUS			BENZENE	XYLENE		BTEX	$c_{c}c_{12}$	C ₁₂ -C ₂₈	$c_{28}-c_{35}$	
	SURFACE)			(By Built	(By)Bin)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
PEW	17 Feet	05/30/07	In-Situ	-		-		•	•	1,350	3,580	1,000	5,930
PSEW	16 Feet	05/30/07	Excavated	•	-	•	,		•	1,660	8,510	1,060	11,230
PNWW	16 Feet	05/30/07	Excavated		•	-	•	-	•	2,890	14,900	2,060	19,850
PBNC	17 Feet	05/30/07	In-Situ	-		•	•	-	•	2,270	5,230	928	8,428
PBE	17 Feet	05/30/07	In-Situ	-	-	•	-	•	•	2,370	4,540	789	7,699
PSEW Low	16 Feet	05/30/07	Excavated	'	•	•	-	•	•	1,420	5,150	810	7,380
												-	
** E Wall E 8"	8 Inches	06/01/07	In-Situ	•	ł	•	•	1	•	<10	<10	<10	<10
FLR East Exc.	17 Feet	06/01/07	In-Situ	-	-	1	,	I	•	80.6	286	54.0	420.6
FLR Ext Ecs 1	17 Feet	06/01/07	In-Situ		-		-			1,320	2,590	360	4,270
FLR Ext Ecs 2	17 Feet	06/01/07	In-Situ	•	1	-	-	-	•	1,880	3,710	447	6,037
W Wali 3'	3 Feet	06/01/07	Excavated		-	-	-		•	12.2	75.6	16.7	104.5
W Wall 13'	13 Feet	06/01/07	Excavated	1	1	-	-		•	1,810	3,420	422	5,652
										1			
T1Bottom @ 10'	10 Feet	06/05/07		1	1	-	-	T	•	4	<50	1	<50
** PNEW	13 Feet	06/05/07	In-Situ	1	I	-	1	1	•	₽	<50	I	<50
PBC	17 Feet	06/05/07	In-Situ	-	-	-			•	1,230	3,290	. 1	4,520
PSWW	13 Feet	06/05/07	Excavated	-	-	-	-		•	272	2,830	•	3,102
PWW	13 Feet	06/05/07	Excavated	1	1	-	•		,	7.64	183	-	190.64
SPE	•	06/05/07	•	1	I	•	•		•	28.2	183	•	211.2
SPS	-	06/05/07	•	•	-		•	1		66.6	526		592.6
SPN	,	06/05/07	-	•	-	•	•	-	-	71.1	489	•	560.1
SPW	•	06/05/07	-	•	-	•	•	-	•	56.4	133		189.4
T-2 WBH @8'	8 Feet	06/05/07	Excavated	-	-	•		-	•	6.79	<50	-	6.79
T-2 EBH @ 8'	8 Feet	06/05/07	In-Situ		•			1		3.24	<50		3.24
PNW	13 Feet	06/25/07	Excavated	1	I	1	•		1	227	3,250	1	3,477
										- 4			
SB1-07-10'	10 Feet	11/28/07	In-Situ	,	•	1	-	'		₽ V	€0	•	~20 ~20

Page 1 of 4

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TABLE 1

CONCENTRATIONS OF TPH AND BTEX IN SOIL

PLAINS MARKETING, L.P. RED BYRD RANCH HISTORICAL LEA COUNTY, NEW MEXICO SRS# RED BYRD RANCH TNM HISTORICAL NMOCD REF. # 1RP-1299

					MN	NMOCD REF. # 1RP-1299	1RP-1299						
	SAMPLE				METHO	METHOD: EPA SW 846-8021B,	46-8021B, 5	5030			SW 848-80	SW 848-8015M / 8015B	
SAMPLE	DEPTH	SAMPLE	SOIL	BENZENE TOLLIENE		ЕТНҮС-	M,P-	ò	TOTAL	GRO	DRO	oro	TOTAL
LOCATION		DATE	STATUS	(ma/Ka)	(ma/Ka)	BENZENE	XYLENE	XYLENE	BTEX	$c_{e}c_{12}$	C ₁₂ -C ₂₈	C ₂₈ -C ₃₅	ں۔ ت
	SURFACE)			1661		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
SB1-07-20'	20 Feet	11/28/07	In-Situ	<0.0200	0.0399	0.0926	0.0661	61	0.1986	104	760	-	864
SB2-07-10'	10 Feet	11/28/07	In-Situ	,	-		•	-	-	1.12	<50	-	1.12
SB2-07-20'	20 Feet	11/28/07	In-Situ	<0.0500	0.250	0.249	0.808	08	1.307	426	2,000	-	2,426
SB3-07-10'	10 Feet	11/28/07	In-Situ		-	-	•	-	-	3.09	<50	-	3.09
SB3-07-20	20 Feet	11/28/07	In-Situ	-	•		-	-	-	4	<50	-	<50
SB3-07-29'	29 Feet	11/28/07	In-Situ	<0.0100	<0.0100	<0.0100	<0.0100	100	<0.0100	11.8	152.0	-	163.8
SB4-07-10'	10 Feet	11/28/07	In-Situ	-	•	-	•	-	-	<1	<50	-	<50
SB4-07-20'	20 Feet	11/28/07	In-Situ		,	•		•	1	1>	<50	-	<50
SB4-07-29'	29 Feet	11/28/07	In-Situ	<0.0100	<0.0100	<0.0100	<0.0100	100	<0.0100	5	<50	-	<50
SB5-07-10'	10 Feet	11/28/07	In-Situ	1	-	-	•	•	-	4	<50	-	<50
SB5-07-20'	20 Feet	11/28/07	In-Situ			-	•	•	-	<1	<50	-	<50
SB5-07-29'	29 Feet	11/28/07	In-Situ	<0.0100	<0.0100	<0.0100	<0.0100	100	<0.0100	1>	<50	-	<50
SB6-07-10	10 Feet	11/28/07	In-Situ		-	-	-	-	•	4	<50	-	<50
SB6-07-20'	20 Feet	11/28/07	In-Situ	I	•	-		-	-	<1	<50	-	<50
SB6-07-29	29 Feet	11/28/07	In-Situ	<0.0100	<0.0100	<0.0100	<0.0100	100	<0.0100	4	<50	-	<50
										•			
E/S Stockpile	N/A	12/10/08	Baseline		-	-	-	ŀ	-	<89.6	514	117	631
W/S Stockpile	N/A	12/10/08	Baseline	•	,	-		-	1	140	927	177	1,244
	· · · ·				×		. e · · ·			······································			
Blended Soil-1	N/A	01/05/09	Reblended	1		-	•	•	•	95.5	958	191	1,244.5
Blended Soil-2	_ N/A	01/05/09	Rebiended	-	•	-		-	•	72.2	864	172	1,108.2
Blended Soil-3	N/A	01/05/09	Backfill	<0.0011	<0.0022	0.0035	0.0064	0.0098	0.0197	49.3	374	124	547.3
Blended Soil-4	N/A	01/05/09	Backfill	<0.0011	<0.0022	0.0052	0.008	0.0267	0.0399	64.7	508	104	676.7
Blended Soil-5	N/A	01/05/09	Backfill	<0.0011	<0.0022	0.0018	0.0041	0.0057	0.0116	38.8	350	127	516
Blended Soil-6	N/A	01/05/09	Backfill	<0.0011	<0.0022	<0.0011	<0.0022	0.0012	0.0012	<16.4	59.3	30.4	89.7
Blended Soil-7	N/A	01/05/09	Backfill	<0.0011	<0.0021	0.0027	0.0051	0.0082	0.016	44.3	592	135	771.3
Blended Soil-8	N/A	01/05/09	Backfill	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.2	23.6	<16.2	23.6
Blended Soil -9	N/A	01/05/09	Backfill	<0.0011	<0.0022	0.0012	0.0073	0.0084	0.0169	29.1	<u>98.3</u>	<16.8	127.4
Blended Soil-10	N/A	01/05/09	Backfill	<0.0011	<0.0022	<0.0011	<0.0022	0.0015	0.0015	28.3	114	<16.4	142.3

TABLE 1

CONCENTRATIONS OF TPH AND BTEX IN SOIL

PLAINS MARKETING, L.P. RED BYRD RANCH HISTORICAL LEA COUNTY, NEW MEXICO SRS# RED BYRD RANCH TNM HISTORICAL NMOCD RFE # 1RP-1299

					NN	NMOCD REF. # 1RP-1299	# 1RP-1299						
	SAMPLE				METHC	METHOD: EPA SW 846-8021B,	846-8021B, 5	5030			SW 848-80	SW 848-8015M / 8015B	
SAMPLE	DEPTH	SAMPLE	SOIL	RENZENC		ЕТНҮС-	M,P-	ò	TOTAL	GRO	DRO	oro	
LOCATION	GROUND	DATE	STATUS	(ma/Ka)		BENZENE	XYLENE	XYLENE	BTEX	$C_{6}C_{12}$	C ₁₂ -C ₂₈	C ₂₈ -C ₃₅	۲ ر ۲ ر
	SURFACE)			1661		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(bg/gm)	(mg/Kg)	(mg/Kg)	(mg/Kg)
SP-1	N/A	01/05/09	Backfill	<0.0011	0.0176	0.2528	0.042	0.1545	0.4669	147	395	<83.7	542
SP-2	N/A	01/14/09	Backfill	<0.0011	<0.0022	0.0011	<0.0022	0.004	0.0051	88	135	83	256
SP-3	NA	01/14/09 F	Reblended	<0.0010	<0.0021	0.0087	0.017	0.0247	0.0504	129	735	259	1,123
SP-4	N/A	01/14/09	01/14/09 Reblended	<0.0011	<0.0021	0.0086	0.0264	0.0344	0.0694	97	761	160	1,017
NSW 1A	17 Feet	01/14/09	01/14/09 Excavated	<0.0010	0.0435	0.0269	0.1214	0.0422	0.234	490	10,100	2,040	12,630
** NSW 1B	17 Feet	01/14/09	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	48	27	75
WSW 1A	17 Feet	01/14/09	Excavated	<0.0512	2.996	2.993	11.86	4.412	22.261	1,480	3500	493	5,473
** SSW 1A	17 Feet	01/14/09	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.6	<17.6	<17.6	<17.6
SSW1B	17 Feet	01/14/09	Excavated	<0.0514	0.9294	2.237	9.197	2.203	14.5664	2,050	5,260	701	8,011
** SSW 1C	17 Feet	01/14/09	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.9	<15.9	<15.9	<15.9
										•			
Blended -11	N/A	01/26/09 R		1	-	-	1	-		507	1,610	172	2,289
Blended -12	N/A	01/26/09	Backfill	<0.0011	0.0259	0.0639	0.269	0.0705	0.4293	166	290	63.2	819.2
Blended -13	N/A	01/26/09	Backfill	<0.0011	<0.0022	0.0124	0.0589	0.0216	0.0929	63.4	312	43	418.4
Blended -14	N/A		Reblended	'	-	-	1	1	•	297	1,220	171	1,688
Blended -15	A/N		Reblended	'	'	•	1	,	•	408	1,840	262	2,510
Blended -16	N/A	01/26/09	Reblended	ı	•	•	,			236	975	140	1,351
Blended -17	A/A	01/26/09	Reblended	ı		1	-	•	•	546	1,650	289	2,485
Blended -18	N/A	01/26/09	Reblended	•	1	I	1	•	-	521	1,160	162	1,843
Blended -19	A/A	01/26/09	01/26/09 Reblended	•	,	-	•		-	320	904	133	1,357
Blended -20	A/N	01/26/09	Backfill	<0.0011	0.0204	0.0323	0.155	0.079	0.2867	89.5	612	97.7	799.2
WSW - 2A	17 Feet	01/26/09	Excavated	,	1	-	'	1	-	41.5	341	41.9	424.4
** SSW - 2B	17 Feet	01/26/09	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.2	<16.2	<16.2	<16.2
	17 Feet	01/26/09	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3
** West Wall 13' A	13 Feet	01/26/09	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.1	<16.1	<16.1	<16.1
NSW - 2A	17 Feet	01/26/09	Excavated	•	1		-		-	<16.2	133.0	<16.2	133
			ίų.		~ ^ `						14 14 14 14 14 14 14 14 14 14 14 14 14 1		
** NSW - 3A	17 Feet	02/06/09	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	32.1	<15.5	32.1
** WSW - 3A	17 Feet	02/06/09	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<17.9	<17.9	<17.9	<17.9

Page 3 of 4

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TABLE 1

CONCENTRATIONS OF TPH AND BTEX IN SOIL

PLAINS MARKETING, L.P. RED BYRD RANCH HISTORICAL LEA COUNTY, NEW MEXICO SRS# RED BYRD RANCH TNM HISTORICAL 'NMOCD REF. # 1RP-1299

	:			ס		NAG# RED BIND RANCH INNI HISTORICAL NMOCD REF. # 1RP-1299	1RP-1299						
	SAMPLE				METHO	METHOD: EPA SW 846-8021B, 5030	346-8021B, 5	030	Π		SW 848-80	SW 848-8015M / 8015B	
SAMPLE	DEPTH	SAMPLE	SOIL			ЕТНҮС-	M,P.	Ġ	TOTAL	GRO	DRO	ORO	
LOCATION		DATE	STATUS	DENZENE		BENZENE	XYLENE	XYLENE	BTEX	C ₆ C ₁₂	C ₁₂ -C ₂₈	$c_{28}-c_{35}$	E
	SURFACE)			(Ry) Ruit	(RynRun)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	<u>(</u>	(mg/Kg)	(mg/Kg)	(mg/Kg)
Blended Soil 1A	N/A	02/06/09	Reblended	<0.0011	<0.0022	0.0104	0.0175	0.0053	0.0332	131	1,370	214	1,715
Blended Soil 2A	N/A	02/06/09	Reblended	<0.0011	<0.0022	0.0029	0.0052	0.0022	0.0103	54.3	831	150	1,035.3
SP - 3A	N/A	02/06/09	Backfill	<0.0011	<0.0021	0.0137	0.0246	0.0476	0.0859	111	718	118	947
SP - 4A	N/A	02/06/09	Backfill	<0.0011	<0.0022	0.0048	0.0078	0.0043	0.0169	67.9	565	96.6	729.5
				* •			24 44 4						
Blended 1B	N/A	03/17/09	Reblended	I	1	•	1	1	•	99.4	856	75.9	1,031.3
Blended 2B	N/A	03/17/09	Reblended	1	1	•		1	•	132	1,370	129	1,631
Blended 11A	N/A	03/17/09	Reblended	I	1	•	1	1	•	193	1,300	102	1,595
Blended 14A	N/A	03/17/09	Reblended	1	•	-	1	•	-	253	1520	114	1887
Blended 15A	N/A	03/17/09	Reblended	•	•	•	1	-	•	235	1,210	84.8	1,529.8
Blended 16A	N/A	03/17/09	Reblended	-	1	-		-		355	1,620	120	2,095
					1								
Blended 1C	N/A	04/02/09	Backfill	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	31.4	481	80.7	593.1
Blended 2C	N/A	04/02/09	Backfill	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	28.7	547	93.5	669.2
Blended 17A	N/A	04/02/09	Backfill	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	36.9	543	126	705.9
Blended 18A	N/A	04/02/09	Backfill	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	31.0	595	128	754
Blended 19A	N/A	04/02/09	Backfill	<0.0011	<0.0021	<0.0011	0.0033	0.0031	0.0064	32.9	514	88.6	635.5
		A 24.5 4.5	1 2 4 4 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	\$ \$ 10 m							的复数 新生产		
Blended 11B	N/A	04/17/09	Reblended	1	•	-	1	•	-	103	1,180	94.7	1,377.7
Blended 14B	N/A	04/17/09	Reblended	I	•	•		1	-	172	1,230	103	1,505
Blended 15B	N/A	04/17/09	Reblended	ı	1	•	•	-	,	201	1,400	122	1,723
Blended 16B	N/A	04/17/09	Reblended	1	'				-	106	1,010	82.2	1,198.2
	-									,			
Blended 11C	N/A	06/24/09	Backfill	0.0011	0.0171	0.0063	0.0152	0.0091	0.0488	<15.3	554	69.3	623.3
Blended 14C	N/A	06/24/09	Backfill	<0.0010	0.0062	0.0021	0.0039	0.002	0.0142	18.4	828	26	943.4
Blended 15C	N/A	08/05/09	Backfill	<0.0016	<0.0033	<0.0016	<0.0033	<0.0016	<0.0033	<24.3	178	27.9	206
Blended 16C	N/A	60/20/80	Backfill	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	32.4	841	79.1	953

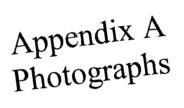
Page 4 of 4

Appendices

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Red Byrd Ranch Historical Site prior to remediation activities (Monitor Well MW-12) in photo center



Red Byrd Ranch Historical, Excavation Completed, Pad Sand for liner placed in Excavation (Looking East)



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Red Byrd Ranch Historical Liner Installation Completed (Looking East)



Red Byrd Ranch Historical, Chemically Welded Boot to liner

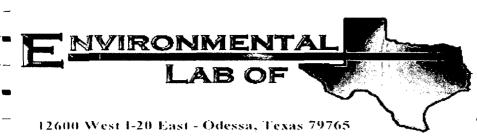


Red Byrd Ranch Historical, Remediation Completed (Looking Northeast)



Red Byrd Ranch Historical, Remediation Completed (Looking North)

Appendix B Laboratory Reports



A Xenco Laboratories Company

Analytical Report

Prepared for:

Camille Reynolds Plains All American EH & S 1301 S. County Road 1150 Midland, TX 79706-4476

Project: Red Bryd Ranch and Historical Project Number: SRS# Red Bryd Ranch & Historical Location: Monumnt, NM

Lab Order Number: 7E31014

Report Date: 06/01/07

Plains All American EH & S 1301 S. County Road 1150 Midland TX, 79706-4476 Project: Red Bryd Ranch and Historical Project Number: SRS# Red Bryd Ranch & Historical Project Manager: Camille Reynolds

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PEW	7E31014-01	Soil	05/30/07 16:45	05-31-2007 10:20
PSEW	7E31014-02	Soil	05/30/07 16:53	05-31-2007 10:20
PNWW	7E31014-03	Soil	05/30/07 17:00	05-31-2007 10:20
PBNC	7E31014-04	Soil	05/30/07 17:02	05-31-2007 10:20
PBE	7E31014-05	Soil	05/30/07 17:07	05-31-2007 10:20
PSEW Low	7E31014-06	Soil	05/30/07 17:12	05-31-2007 10:20

Project: Red Bryd Ranch and Historical Project Number: SRS# Red Bryd Ranch & Historical Project Manager: Camille Reynolds

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units		Detal	Description	A 1 1	Markad	N 1
	Result	Limi	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
PEW (7E31014-01) Soil				· · ·				<u></u>	
Carbon Ranges C6-C12	1350	100	mg/kg dry	10	EE73005	05/31/07	05/31/07	EPA 8015M	
Carbon Ranges C12-C28	3580	100	"		н	**	"		
Carbon Ranges C28-C35	1000	100	"	н	н		v	n	
Total Hydrocarbons	5930	100	"	"	u	n	17	"	
Surrogate: 1-Chlorooctane		8.42 %	70-1	130	"	"	"	"	S
Surrogate: 1-Chlorooctadecane		6.94 %	70-1	130	"	"	"	"	\$
PSEW (7E31014-02) Soil									
Carbon Ranges C6-C12	1660	50.0	mg/kg dry	5	EE73005	05/31/07	06/01/07	EPA 8015M	
Carbon Ranges C12-C28	8510	50.0	"		п	"		n	
Carbon Ranges C28-C35	1060	50.0			٣	"	"	u	
Totał Hydrocarbons	11200	50.0	"	"		n	н	"	
Surrogate: 1-Chlorooctane		18.2 %	70-1	130	"	"	"	"	s
Surrogate: 1-Chlorooctadecane		22.8 %	70-1	130	"	"	"	"	S
PNWW (7E31014-03) Soil									
Carbon Ranges C6-C12	2890	100	mg/kg dry	10	EE73005	05/31/07	06/01/07	EPA 8015M	
Carbon Ranges C12-C28	14900	100		'n	*	h			
Carbon Ranges C28-C35	2060	100	,	. "	"	'n	н		
Total Hydrocarbons	19800	100		**		н		85	
Surrogate: 1-Chlorooctane		11.7 %	70-	130	"	"	"	"	S
Surrogate: 1-Chlorooctadecane		15.1%	70-2	130	"	"	"	"	\$
PBNC (7E31014-04) Soil									
Carbon Ranges C6-C12	2270	50.0	mg/kg dry	5	EE73005	05/31/07	06/01/07	EPA 8015M	
Carbon Ranges C12-C28	5230	50.0	м	"	"	11	"	20	
Carbon Ranges C28-C35	928	50.0		۳	•	n	н	34	
Total Hydrocarbons	8430	50.0	н	"		n	н	ų	
Surrogate: 1-Chlorooctane		13.9 %	70-	130	"	"	"	"	S
Surrogate: 1-Chlorooctadecane		22.0 %	70-	130	"	"	"	"	s

Environmental Lab of Texas

A Xenco Laboratories Company

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas. Surrogate: 1-Chlorooctadecane

Project: Red Bryd Ranch and Historical Project Number: SRS# Red Bryd Ranch & Historical Project Manager: Camille Reynolds

Organics by GC

		Environ	mental L	ab of Te	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PBE (7E31014-05) Soil									
Carbon Ranges C6-C12	2370	50.0	mg/kg dry	5	EE73005	05/31/07	06/01/07	EPA 8015M	
Carbon Ranges C12-C28	4540	50.0	"		19	n	u	н	
Carbon Ranges C28-C35	789	50.0			"	"	"		
Total Hydrocarbons	7700	50.0			"	*	и	"	
Surrogate: 1-Chlorooctane		24.0 %	70-1	30	"	n	"	"	S-06
Surrogate: 1-Chlorooctadecane		21.0 %	70-1	30	"	"	"	"	S-06
PSEW Low (7E31014-06) Soil									
Carbon Ranges C6-C12	1420	50.0	mg/kg dry	5	EE73005	05/31/07	06/01/07	EPA 8015M	
Carbon Ranges C12-C28	5150	50.0	"	"		"	"		
Carbon Ranges C28-C35	810	50.0	"	н	"	"	"		
Total Hydrocarbons	7380	50.0	"		н	и	11	"	
Surrogate: 1-Chlorooctane		20.0 %	70-1	30	"	"	"	"	S-06

70-130

24.0%

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S-06

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
PEW (7E31014-01) Soit									
% Moisture	20.4	0.1	%	1	EF70108	05/31/07	05/31/07	% calculation	
PSEW (7E31014-02) Soil									
% Moisture	1.9	0.1	%	1	EF70108	05/31/07	05/31/07	% calculation	
PNWW (7E31014-03) Soil									
% Moisture	1.8	0.1	%	1	EF70108	05/31/07	05/31/07	% calculation	
PBNC (7E31014-04) Soil									
% Moisture	6.0	0.1	%	1	EF70108	05/31/07	05/31/07	% calculation	
PBE (7E31014-05) Soil									
% Moisture	8.6	0.1	%	1	EF70108	05/31/07	05/31/07	% calculation	
PSEW Low (7E31014-06) Soil									
% Moisture	4.9	0.1	%	1	EF70108	05/31/07	05/31/07	% calculation	

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Project: Red Bryd Ranch and Historical Project Number: SRS# Red Bryd Ranch & Historical Fax: (432) 687-4914

Project Manager: Camille Reynolds

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE73005 - Solvent Extraction (GC)										

Blank (EE73005-BLK1)	Prepared: 05/30/07 Analyzed: 05/31/07									
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	٠							
Carbon Ranges C28-C35	ND	10,0								
Total Hydrocarbons	ND	10.0								
Surrogate: 1-Chlorooctane	55.8		mg/kg	50.0		112	70-130			
Surrogate: 1-Chlorooctadecane	51.8		"	50.0		104	70-130			
LCS (EE73005-BS1)		Prepared: 05/30/07 Analyzed: 05/31/07								
Carbon Ranges C6-C12	613	10.0	mg/kg wet	500		123	75-125			
Carbon Ranges C12-C28	423	10.0	н	500		84.6	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Fotal Hydrocarbons	1040	10.0	u	1000		104	75-125			
Surrogate: 1-Chlorooctane	64.2		mg/kg	50.0		128	70-130			
Surrogate: 1-Chlorooctadecane	63.2		"	50.0		126	70-130			
Calibration Check (EE73005-CCV1)		Prepared: 05/30/07 Analyzed: 06/01/07								
Carbon Ranges C6-C12	221		mg/kg	250		88.4	80-120			
Carbon Ranges C12-C28	205			250		82.0	80-120			
Fotal Hydrocarbons	426			500		85.2	80-120			
Surrogate: 1-Chlorooctane	63.9		"	50.0		128	70-130			
Surrogate: 1-Chlorooctadecane	64.9		**	50.0		130	70-130			
Matrix Spike (EE73005-MS1)	Sourc	e: 7E31001	-01	Prepared: 0	5/30/07 A	5/01/07				
Carbon Ranges C6-C12	574	10.0	mg/kg dry	510	ND	113	75-125	·		
Carbon Ranges C12-C28	473	10.0		510	ND	92.7	75-125			
Carbon Ranges C28-C35	ND	10.0		0.00	ND		75-125			
Total Hydrocarbons	1050	10,0		1020	ND	103	75-125			
Surrogate: 1-Chlorooctane	56.6	a (144 a	mg/kg	50.0		113	70-130			
Surrogate: 1-Chlorooctadecane	54.3		"	50.0		109	70-130			

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Project: Red Bryd Ranch and Historical Project Number: SRS# Red Bryd Ranch & Historical Project Manager: Camille Reynolds

Organics by GC - Quality Control

Environmental Lab of Texas

1											
			Reporting		Spike	Source		%REC		RPD	
	Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EE73005 - Solvent Extraction (GC)

Matrix Spike Dup (EE73005-MSD1)	Source: 7E31001-01			Prepared: 0	5/30/07 A				
Carbon Ranges C6-C12	549	10.0	mg/kg dry	510	ND	108	75-125	4.52	20
Carbon Ranges C12-C28	416	10.0		510	ND	81.6	75-125	12.7	20
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20
Total Hydrocarbons	965	10.0	n	1020	ND	94.6	75-125	8.50	20
Surrogate: 1-Chlorooctane	53.4		mg/kg	50.0		107	70-130		
Surrogate: 1-Chlorooctadecane	52.7		"	50.0		105	70-130		

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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF70108 - General Preparation (Prep)				am. 4 (
Blank (EF70108-BLK1)				Prepared &	Analyzed:	05/31/07				
% Solids	100		%							
Duplicate (EF70108-DUP1)	Source: 7E31001-01			Prepared &	Analyzed:	05/31/07				
% Solids	97.9	·	%	98.0				0.102	20	
Duplicate (EF70108-DUP2)	Sourc	e: 7E31009-0)6	Prepared &	Analyzed:	05/31/07				
% Solids	95.6		%		94.7			0.946	20	
Duplicate (EF70108-DUP3)	Sourc	e: 7E31013-()1	Prepared &	: Analyzed:	05/31/07				
% Solids	89.2		%			0.112	20			

Environmental Lab of Texas

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Plains All American EH & S 1301 S. County Road 1150 Midłand TX, 79706-4476		Project Number:	Project: Red Bryd Ranch and Historical Project Number: SRS# Red Bryd Ranch & Historical Project Manager: Camille Reynolds					
		Notes and De	finitions					
S-06	The recovery of this surrogate is outs matrix interference's.	ide control limits due to sample dil	ution required from high analyte concentration a	nd/or				
DET	Analyte DETECTED							
ND	Analyte NOT DETECTED at or above the	Analyte NOT DETECTED at or above the reporting limit						
NR	Not Reported							
dry	Sample results reported on a dry weight b	asis						
RPD	Relative Percent Difference							
LCS	Laboratory Control Spike							
MS	Matrix Spike							
Dup	Duplicate							

Brent Barron, Laboratory Director/Corp. Technical Director

Report Approved By:

Celey D. Keene, Org. Tech Director

Raland K. Tuttle, Laboratory Consultant

Juron

James Mathis, QA/QC Officer Jeanne Mc Murrey, Inorg. Tech Director

6/1/2007

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If you have received this material in error, please notify us immediately at 432-563-1800.

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Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ent:	Nova Training
Date/ Time:	5-31-07 10.20
b ID # :	7E 31014
Initials.	GL

Sample Receipt Checklist

					Client Initials
	Temperature of container/ cooler?	Yes	No	//.ð °C	
	Shipping container in good condition?	res	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
.	Custody Seals intact on sample bottles/ container?	Yes	No	Not Presen	
j,	Chain of Custody present?	YEST	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
}	Chain of Custody agrees with sample label(s)?	Yes	No	(1D written on Cont./(id	1
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
<u>#10</u>	Sample matrix/ properties agree with Chain of Custody?	(Tes)	No		
11	Containers supplied by ELOT?	Yes	(No)		
	Samples in proper container/ bottle?	Yes)	No	See Below	
#13	Samples properly preserved?	Yes	(No)	👌 See Below	A JC
14	Sample bottles intact?	(Ves)	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	1

Variance Documentation

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Contacted by:

Date/ Time:

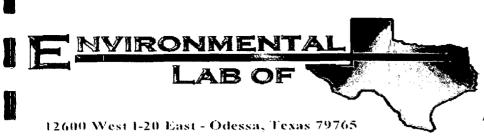
Regarding: #13, Not cold lnough

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



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Analytical Report

Prepared for:

Camille Reynolds Plains All American EH & S 1301 S. County Road 1150 Midland, TX 79706-4476

Project: Red Bryd Ranch and Historical Project Number: SRS# Red Bryd Ranch & Historical Location: None Given

Lab Order Number: 7F01016

Report Date: 06/08/07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E WALL E 8"	7F01016-01	Soil	06/01/07 13:12	06-01-2007 16:23
FLR East Exc.	7F01016-02	Soil	06/01/07 13:09	06-01-2007 16:23
FLR Ext Ecx1	7F01016-03	Soil	06/01/07 13:07	06-01-2007 16:23
FLR Ext Ecx2	7F01016-04	Soil	06/01/07 13:03	06-01-2007 16:23
W Wall 3'	7F01016-05	Soil	06/01/07 12:59	06-01-2007 16:23
W Wall 13'	7F01016-06	Soil	06/01/07 12:56	06-01-2007 16:23

Project: Red Bryd Ranch and Historical Project Number: SRS# Red Bryd Ranch & Historical Project

t Manager:	Camille Reynolds

Organics by GC

Environmental L	ab of Texas
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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
E WALL E 8" (7F01016-01) Soil	e							<u></u>	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF70515	06/05/07	06/05/07	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	11		"	e.	"	
Carbon Ranges C28-C35	ND	10.0	п			"	н	"	
Total Hydrocarbons	ND	10.0	n			"	"	n	
Surrogate: 1-Chlorooctane		104 %	70-1	30	"	"	11	"	2
Surrogate: 1-Chlorooctadecane		96.0 %	70-1	30	"	"	"	"	
FLR East Exc. (7F01016-02) Soil									
Carbon Ranges C6-C12	80.6	10.0	mg/kg dry	1	EF70515	06/05/07	06/05/07	EPA 8015M	
Carbon Ranges C12-C28	286	10.0			"		"	v	
Carbon Ranges C28-C35	54.0	10.0	"			*	н	и	
Total Hydrocarbons	421	10.0	м		"	•	"	"	
Surrogate: 1-Chlorooctane		104 %	70-1	30	"	"	n	15	
Surrogate: 1-Chlorooctadecane		111%	70-1	30	"	"	"	"	
FLR Ext Ecx1 (7F01016-03) Soil									
Carbon Ranges C6-C12	1320	100	mg/kg dry	10	EF70516	06/05/07	06/07/07	EPA 8015M	
Carbon Ranges C12-C28	2590	100	н	"		н	11	н	
Carbon Ranges C28-C35	360	100	"	"	9	"	v	н	
Total Hydrocarbons	4270	100		н	"		п	"	
Surrogate: 1-Chlorooctane		17.5 %	70-1	30	"	n	"	"	S
Surrogate: 1-Chlorooctadecane		10.6 %	70-1	30	"	"	"	"	S-
FLR Ext Ecx2 (7F01016-04) Soil									
Carbon Ranges C6-C12	1880	50.0	mg/kg dry	5	EF70516	06/05/07	06/07/07	EPA 8015M	
Carbon Ranges C12-C28	3710	50.0	"	"	"	IT.	**	**	
Carbon Ranges C28-C35	447	50.0	U.	"	н		n		
Total Hydrocarbons	6040	50.0	n		u		"		
Surrogate: 1-Chlorooctane		33.2 %	70-1	30	"	"	"	"	S-1
Surrogate: 1-Chlorooctadecane		24.0 %	70-1	30	"	"	"	п	S-

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
W Wall 3' (7F01016-05) Soil									· · · · · · · · · ·
Carbon Ranges C6-C12	12.2	10.0	mg/kg dry	1	EF70516	06/05/07	06/07/07	EPA 8015M	
Carbon Ranges C12-C28	75.6	10.0	n	"	н	11	"	**	
Carbon Ranges C28-C35	16.7	10.0	"	"	н	11			
Total Hydrocarbons	104	10.0				н		10	
Surrogate: 1-Chlorooctane	- <u></u>	107 %	70-1	30	n	"	"	"	
Surrogate: 1-Chlorooctadecane		118 %	70-1	30	"	"	"	"	
W Wall 13' (7F01016-06) Soil									
Carbon Ranges C6-C12	1810	50.0	mg/kg dry	5	EF70516	06/05/07	06/07/07	EPA 8015M	
Carbon Ranges C12-C28	3420	50.0	н		"	"		n	
Carbon Ranges C28-C35	422	50.0				"	**	n	
Total Hydrocarbons	5650	50.0	"	n.	**	•	"	*	
Surrogate: I-Chlorooctane		32.0 %	70-1	30	a	"	11	"	S-0
Surrogate: 1-Chlorooctadecane		21.6%	70-1	30	"	"	"	"	S-00

Environmental Lab of Texas

A Xenco Laboratories Company

Fax: (432) 687-4914

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
E WALL E 8'' (7F01016-01) Soil									
% Moisture	10.4	0.1	%	1	EF70406	06/02/07	06/02/07	% calculation	
FLR East Exc. (7F01016-02) Soil									
% Moisture	8.5	0.1	%	1	EF70406	06/02/07	06/02/07	% calculation	
FLR Ext Ecx1 (7F01016-03) Soil									
% Moisture	10.6	0.1	%	1	EF70406	06/02/07	06/02/07	% calculation	
FLR Ext Ecx2 (7F01016-04) Soil									
% Moisture	8.1	0.1	%	1	EF70406	06/02/07	06/02/07	% calculation	
W Wall 3' (7F01016-05) Soil									
% Moisture	12.0	0.1	%	I	EF70406	06/02/07	06/02/07	% calculation	
W Wall 13' (7F01016-06) Soil									
% Moisture	7.5	0.1	%	1	EF70406	06/02/07	06/02/07	% calculation	

Environmental Lab of Texas

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF70515 - Solvent Extraction (GC)										

Blank (EF70515-BLK1)				Prepared: 0	6/05/07 A	nalyzed: 06	5/07/07	
Carbon Ranges C6-C12	ND	10.0	mg/kg wet					
Carbon Ranges C12-C28	ND	10.0	*					
Carbon Ranges C28-C35	ND	10.0	*					
Total Hydrocarbons	ND	10.0						
Surrogate: 1-Chlorooctane	46.2		mg/kg	50.0		92.4	70-130	
Surrogate: 1-Chlorooctadecane	43.6		"	50.0		87.2	70-130	
LCS (EF70515-BS1)				Prepared &	Analyzed	: 06/05/07		
Carbon Ranges C6-C12	585	10.0	mg/kg wet	500		117	75-125	
Carbon Ranges C12-C28	415	10.0		500		83.0	75-125	
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125	
Total Hydrocarbons	1000	10.0	н	1000		100	75-125	
Surrogate: 1-Chlorooctane	46.7		mg/kg	50.0		93.4	70-130	
urrogate: 1-Chlorooctadecane	40.1		"	50.0		80.2	70-130	
Calibration Check (EF70515-CCV1)				Prepared: 0	6/05/07 A	nalyzed: 06	5/07/07	
Carbon Ranges C6-C12	256		mg/kg	250		102	80-120	
Carbon Ranges C12-C28	203			250		81.2	80-120	
Fotal Hydrocarbons	459		"	500		91.8	80-120	
Surrogate: 1-Chlorooctane	50.1		"	50.0	-	100	70-130	
Surrogate: 1-Chlorooctadecane	49.6		"	50.0		<i>99.2</i>	70-130	
Matrix Spike (EF70515-MS1)	Sour	ce: 7F01011	-04	Prepared: 0	6/05/07 A	nalyzed: 06	5/06/07	
Carbon Ranges C6-C12	651	10.0	mg/kg dry	557	ND	117	75-125	
Carbon Ranges C12-C28	454	10.0		557	ND	81.5	75-125	
Carbon Ranges C28-C35	ND	10.0		0.00	ND		75-125	
Fotal Hydrocarbons	1110	10.0		1110	ND	100	75-125	
Surrogate: 1-Chlorooctane	49.9		mg/kg	50.0		99.8	70-130	
Surrogate: 1-Chlorooctadecane	41.9		9	50.0		83.8	70-130	

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch EF70515 - Solvent Extraction (GC)	.=										
Matrix Spike Dup (EF70515-MSD1)	Sou	rce: 7F01011	-04	Prepared: (06/05/07 A	nalyzed: 06	5/06/07				
Carbon Ranges C6-C12	676	10.0	mg/kg dry	557	ND	121	75-125	3.36	20		
Carbon Ranges C12-C28	466	10.0	н	557	ND	83.7	75-125	2.66	20		
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20		
Total Hydrocarbons	1140	10.0		1110	ND	103	75-125	2.96	20		
Surrogate: 1-Chlorooctane	51.9		mg/kg	50.0		104	70-130				
Surrogate: 1-Chlorooctadecane	40.0		"	50.0		80.0	70-130				
Batch EF70516 - Solvent Extraction (GC)											
Blank (EF70516-BLK1)		Prepared: 06/05/07 Analyzed: 06/07/07									
Carbon Ranges C6-C12	ND	10.0	mg/kg wet					_			
Carbon Ranges C12-C28	ND	10,0	н								
Carbon Ranges C28-C35	ND	10.0	н								
Total Hydrocarbons	ND	10.0	"								
Surrogate: 1-Chlorooctane	50.1		mg/kg	50.0		100	70-130				
Surrogate: 1-Chlorooctadecane	49.3		"	50.0		98.6	70-130				
LCS (EF70516-BS1)				Prepared: ()6/05/07 A	nalyzed: 06	5/07/07				
Carbon Ranges C6-C12	531	10.0	mg/kg wet	500		106	75-125				
Carbon Ranges C12-C28	416	10.0	"	500		83.2	75-125				
Carbon Ranges C28-C35	ND	10.0	*	0.00			75-125				
Total Hydrocarbons	946	10.0		1000		94.6	75-125				
Surrogate: 1-Chlorooctane	54.6		mg/kg	50.0		109	70-130				
Surrogate: 1-Chlorooctadecane	47.8		"	50.0		95.6	70-130				
Calibration Check (EF70516-CCV1)				Prepared: 0)6/05/07 A	nalyzed: 06	08/0 7				
Carbon Ranges C6-C12	238		mg/kg wet	250		95.2	80-120				
Carbon Ranges C12-C28	202			250		80,8	80-120				
Total Hydrocarbons	440		и	500		88.0	80-120				
Surrogate: 1-Chlorooctane	50.3		mg/kg	50.0		101	70-130				
Surrogate: 1-Chlorooctadecane	47.2		"	50.0		94.4	70-130				

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EF70516 - Solvent Extraction (GC)

Matrix Spike (EF70516-MS1)	Sourc	e: 7F01016	-05	Prepared: 0	6/05/07	Analyzed: 00	5/08/07		
Carbon Ranges C6-C12	603	10.0	mg/kg dry	568	12.2	104	75-125	···	
Carbon Ranges C12-C28	493	10.0	н	568	75.6	73.5	75-125		M
Carbon Ranges C28-C35	21.2	10,0	"	0.00	16.7		75-125		
Total Hydrocarbons	1120	10.0	11	1140	104	89.1	75-125		
Surrogate: 1-Chlorooctane	56.2		mg/kg	50.0		112	70-130		
Surrogate: 1-Chlorooctadecane	61.9		"	50.0		124	70-130		
Matrix Spike Dup (EF70516-MSD1)	Sourc	e: 7F01016	-05	Prepared: 0	6/05/07	Analyzed: 04	5/08/07		

Carbon Ranges C6-C12	576	10.0 mg/kg dry	568	12.2	99,3	75-125	4.62	20	
Carbon Ranges C12-C28	506	10.0 "	568	75.6	75.8	75-125	3.08	20	
Carbon Ranges C28-C35	19.9	10.0 "	0.00	16.7		75-125		20	
Total Hydrocarbons	1100	10.0 "	1140	104	87.4	75-125	1.93	20	
Surrogate: 1-Chlorooctane	60.8	mg/kg	50.0		122	70-130			
Surrogate: 1-Chlorooctadecane	57.2	п	50.0		114	70-130			

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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

	-	Reporting		Spike	Source	-	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF70406 - General Preparation (Prep)										
Blank (EF70406-BLK1)				Prepared &	Analyzed:	06/02/07				
% Solids	100	· · · · · · · · · · · · · · · · · · ·	%					_		
Duplicate (EF70406-DUP1)	Sou	rce: 7F01011-0	01	Prepared & Analyzed: 06/02/07						
% Solids	90.3		%		91.5			1.32	20	
Duplicate (EF70406-DUP2)	Sou	rce: 7F01016-(03	Prepared &	Analyzed:	06/02/07				
% Solids	88.4		%		89.4			1.12	20	

Environmental Lab of Texas

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Plains All American EH & S	Project:	Red Bryd Ranch and Historical	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number:	SRS# Red Bryd Ranch & Historical	
Midland TX, 79706-4476	Project Manager:	Camille Reynolds	

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
M8	The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:

Bur Barron

6/8/2007

Date:

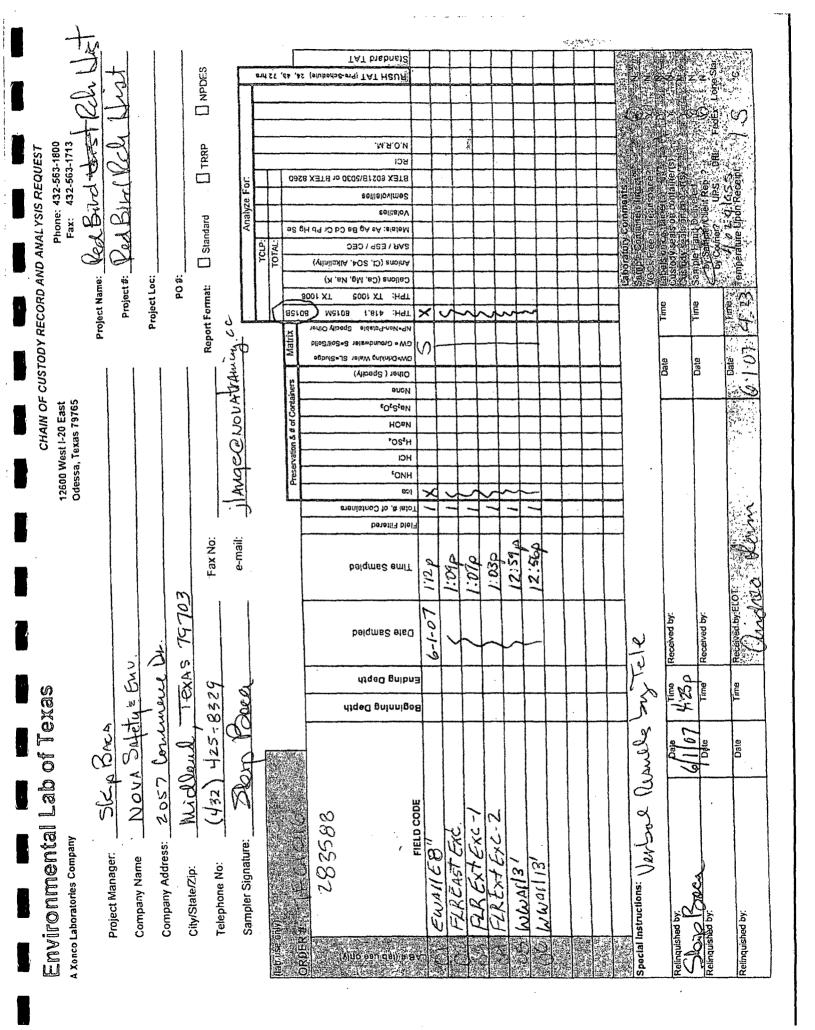
Brent Barron, Laboratory Director/Corp. Technical Director Celey D. Keene, Org. Tech Director Raland K. Tuttle, Laboratory Consultant James Mathis, QA/QC Officer Jeanne Mc Murrey, Inorg. Tech Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

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Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:	Plains
Date/ Time:	6.1.07 4:23
Lab ID # :	7F01016
Initials:	<u> </u>

Sample Receipt Checklist

				Clie	nt Initials
#1	Temperature of container/ cooler?	Yes	No	1.5 °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	ANot-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)?	ayes-	No	D written on Cont. Alid	
#9	Container label(s) legible and intact?	Kes	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?	Nes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Xes	No		
#16	Containers documented on Chain of Custody?	Kes	No		
#17	Sufficient sample amount for indicated test(s)?	Kes	No	See Below	
#18	All samples received within sufficient hold time?	<i>kes</i>	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:	gu,,	Contacted by:	Da	ate/ Time:
Regarding:				
Corrective Action Taker	i:			
		an a		
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Check all that Apply:		See attached e-mail/ fax	an a bhairt an san ann an stàirt ann an an san an san an san an san an san an san s	
oncon on mornippit.		Client understands and would	· · · ·	is
		Cooling process had begun sh	ortly after sampling event	

5701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110 - Ft. Worth, Texas 76132

Lubbock, Texas 79424 El Paso, Texas 79922 Midland, Texas 79703 E-Mail: lab@traceanalysis.com

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Analytical and Quality Control Report

Julie Koonce Nova Safety & Environmental 2057 Commerce St. Midland, TX, 79703

Report Date: June 18, 2007

Work Order: 7060718

Project Location: Monument, NM **Project** Name: Red Byrd Ranch - TNM Historical Red Byrd Ranch - TNM Historical **Project Number:**

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			\mathbf{Date}	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
126676	T-1 Bottom @ 10'	soil	2007-06-05	14:20	2007-06-07
126677	PNEW	soil	2007-06-06	14:00	2007-06-07
126678	PBC	soil	2007-06-06	14:10	2007-06-07
126679	PSWW	soil	2007-06-06	14:20	2007-06-07
126680	PWW	soil	2007-06-06	14:30	2007-06-07
126681	SPE	soil	2007-06-06	15:05	2007-06-07
126682	SPS	soil	2007-06-06	15:00	2007-06-07
126683	SPN	soil	2007-06-06	15:10	2007-06-07
126684	\mathbf{SPW}	soil	2007-06-06	15:15	2007-06-07
126685	T-2 WBH @ 8'	soil	2007-06-06	12:00	2007-06-07
126686	T-2 EBH @ 8'	soil	2007-06-06	12:05	2007-06-07

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 15 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Standard Flags

 ${\bf B}$ - The sample contains less than ten times the concentration found in the method blank.

Page 2 of 15

Case Narrative

Samples for project Red Byrd Ranch - TNM Historical were received by TraceAnalysis, Inc. on 2007-06-07 and assigned to work order 7060718. Samples for work order 7060718 were received intact at a temperature of 3 deg C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 7060718 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Analysis: QC Batch: Prep Batch:	TPH DRO 38003 32909		Date Ana	l Method: lyzed: reparation:	Mod. 8015 2007-06-08 2007-06-08	5	Analy	Method: N/A zed By: AG red By: AG
			\mathbf{RL}					
Parameter	F	lag	Result		Units		Dilution	R
DRO			<50.0		mg/Kg		1	50.
						Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilı	ition	Amount	Recovery	Limits
n-Triacontan		131	mg/Kg	·	1	150	87	32.9 - 16
Analysis: QC Batch: Prep Batch:	38006 32868		Analytica Date Ana Sample P RL		2007-06-08 2007-06-08		Prep Me Analyze Prepare	d By: AG
Parameter	FI	ag	Result		Units		Dilution	R
GRO			<1.00		mg/Kg		1	1.0
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)		0.783	mg/Kg	1	1.00	78	52.4 - 123.
4-Bromofluor	obenzene (4-BF	'B)	0.920	mg/Kg	1	1.00	92	67.5 - 140.
Sample: 12 Analysis: QC Batch: Prep Batch:	6677 - PNEW TPH DRO 38003 32909		Analytica Date Ana Sample Pr		Mod. 8015 2007-06-08 2007-06-08		Analy	Method: N/A zed By: AG red By: AG
_			RL					
	Fl	ag	Result		Units		Dilution	RI
Parameter			<50.0		mg/Kg		1	50.0
Parameter DR() Surrogate	Flag	Result	Units	Dilı	ition	Spike Amount	Percent Recovery	Recovery Limits

Sample: 126677 - PNEW

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38006	Date Analyzed:	2007-06-08	Analyzed By:	AG
Prep Batch:	32868	Sample Preparation:	2007-06-08	Prepared By:	AG

Report Date: June 18, 2007 Red Byrd Ranch - TNM Historical

Parameter	Flag		RL Result		Units		Dilution	\mathbf{RL}
GRO			<1.00		mg/Kg		1	1.00
						Spike	Percent	Recovery
Surrogate		Flag	Result	\mathbf{Units}	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			0.786	mg/Kg	1	1.00	79	52.4 - 123.7
4-Bromofluorobenzene (4-B	FB)		0.904	mg/Kg	1	1.00	90	67.5 - 140.3

Sample: 126678 - PBC

Analysis: QC Batch: Prep Batch:	TPH DRO 38003 32909		Analytical Me Date Analyze Sample Prepa	d: 2007-		Analyz	fethod: N/A ed By: AG ed By: AG
Parameter	Fla	J'	RL Result	II	uits	Dilution	\mathbf{RL}
DRO		ð	3290	mg/		1	50.0
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	e	222	mg/Kg	1	150	148	32.9 - 167

Sample: 126678 - PBC

Analysis: QC Batch: Prep Batch:	TPH GRO 38219 33088		Analytical Date Anal Sample Pi		S 8015B 2007-06-15 2007-06-15	Prep Metho Analyzed E Prepared B		By: KB
_			RL					
Parameter	Flag		\mathbf{Result}		Units	D	ilution	$\mathbf{R}\mathbf{L}$
GRO			1230		mg/Kg		20	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)		0.936	mg/Kg	20	1.00	94	33.2 - 160
4-Bromofluor	obenzene (4-BFB)		1.76	mg/Kg	20	1.00	176	10 - 227

Sample: 126679 - PSWW

Analysis: QC Batch: Prep Batch:	TPH DRO 38003 32909	Analytical Method: Date Analyzed: Sample Preparation:	Mod. 8015B 2007-06-08 2007-06-08	Prep Method: Analyzed By: Prepared By:	ÁĠ
Parameter	Flag	RL Result	Units	Dilution	\mathbf{RL}
DRO	0	2830	mg/Kg	1	50.0

Report Date: June 18, 2007 Red Byrd Ranch - TNM Historical

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		231	mg/Kg	1	150	154	32.9 - 167

Sample: 126679 - PSWW

Analysis:	TPH GRO			l Method:	S 8015B		Prep Me		5035
QC Batch:	38006		Date Ana	•	2007-06-08		Analyze	•	AG
Prep Batch:	32868		Sample P	reparation:	2007-06-08		Prepare	d By:	ŧG
			\mathbf{RL}						
Parameter	Flag		Result		Units		Dilution		RL
GRO			272		mg/Kg		5		1.00
						Spike	Percent	Reco	overy
Surrogate		\mathbf{Flag}	Result	Units	Dilution	Amount	Recovery	Lin	nits
Trifluorotolue	ene (TFT)		3.71	mg/Kg	5	5.00	74	52.4 -	123.7
4 D (1 .	obenzene (4-BFB)	1	11.7	mg/Kg	5	5.00	234	67.5 -	140.3
				<u> </u>					
	6680 - PWW TPH DRO 38003			l Method:	Mod. 8015E 2007-06-08	3		Method: zed By:	N/A AG
Sample: 120	6680 - PWW TPH DRO		Analytica Date Ana	l Method:		3	Analy		
Sample: 120 Analysis: QC Batch:	6680 - PWW TPH DRO 38003 32909		Analytica Date Ana	l Method: lyzed:	2007-06-08	3	Analy	zed By:	AG
Sample: 120 Analysis: QC Batch:	6680 - PWW TPH DRO 38003		Analytica Date Ana Sample P	l Method: lyzed:	2007-06-08	3	Analy	zed By:	AG
Sample: 120 Analysis: QC Batch: Prep Batch:	6680 - PWW TPH DRO 38003 32909		Analytica Date Ana Sample P RL	l Method: lyzed:	2007-06-08 2007-06-08	3	Analy Prepa	zed By:	AG AG RL
Sample: 120 Analysis: QC Batch: Prep Batch: Parameter	6680 - PWW TPH DRO 38003 32909 Flag		Analytica Date Ana Sample P RL Result 128	l Method: lyzed:	2007-06-08 2007-06-08 Units	} Spike	Analy Prepa Dilution	zed By: red By: Rec	AG AG RL 50.0
Sample: 120 Analysis: QC Batch: Prep Batch: Parameter	6680 - PWW TPH DRO 38003 32909 Flag	Result 126	Analytica Date Ana Sample P RL Result	l Method: lyzed: reparation: Dilt	2007-06-08 2007-06-08 Units mg/Kg		Analy Prepa Dilution 1	zed By: red By: Rec	AG AG RL 50.0

Sample: 126680 - PWW

Analysis: QC Batch: Prep Batch:	TPH GRO 38006 32868		Date Ana	l Method: lyzed: reparation:	S 8015B 2007-06-08 2007-06-08		Prep Me Analyze Prepare	d By: AG
Parameter	Flag		RL Result		Units		Dilution	RL
GRO			7.64		mg/Kg		1	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu 4-Bromofluo	ene (TFT) robenzene (4-BFB)	Y ~~	0.776 0.998	mg/Kg mg/Kg	1	1.00 1.00	78 100	52.4 - 123.7 67.5 - 140.3

¹High surrogate recovery due to peak interference.

Sample: 126681 - SPE

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	38003	Date Analyzed:	2007-06-08	Analyzed By:	AG
Prep Batch:	32909	Sample Preparation:	2007-06-08	Prepared By:	AG

			$\mathbf{R}\mathbf{L}$				
Parameter	Fla	g	Result	Uni	its	Dilution	\mathbf{RL}
DRO			183	mg/I	Кg	1	50.0
				·	Spike	Percent	Recovery
Surrogate	Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		126	mg/Kg	1	150	84	32.9 - 167

Sample: 126681 - SPE

Analysis:TPH GROQC Batch:38006Prep Batch:32868		Date Analyzed:		S 8015B 2007-06-08 2007-06-08		Prep Me Analyzec Preparec	d By: AG	
Parameter GRO	Flag		RL Result 28.2		Units mg/Kg		Dilution 1	RL 1.00
Surrogate Trifluorotoluo 4-Bromofluor	ene (TFT) obenzene (4-BFB)	Flag 2	Result 0.784 1.42	Units mg/Kg mg/Kg	Dilution 1 1	Spike Amount 1.00 1.00	Percent Recovery 78 142	Recovery Limits 52.4 - 123.7 67.5 - 140.3

Sample: 126682 - SPS

Analysis: QC Batch: Prep Batch:	TPH DRO 38003 32909	8003		ethod: Mod. d: 2007-0 ration: 2007-0		Analyz	fethod: N/A ed By: AG ed By: AG
Parameter	Fla	g	RL Result 526	Ur mg/	uits	Dilution	RL 50.0
			520	ng/		L	
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	e	108	mg/Kg	1	150	72	32.9 - 167

Sample: 126682 - SPS

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38006	Date Analyzed:	20()7-()6-()8	Analyzed By:	AG
Prep Batch:	32868	Sample Preparation:	2007-06-08	Prepared By:	AG

²High surrogate recovery due to peak interference.

Report Date: June 18, 2007 Red Byrd Ranch - TNM Historical

Parameter I	Flag		${ m RL} { m Result}$		Units		Dilution	\mathbf{RL}	
GRO		66.6		mg/Kg		· · · · · · · · · · · · · · · · · · ·	1	1.00	
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)		3	$\begin{array}{r} 0.714\\ 3.32\end{array}$	mg/Kg mg/Kg	1 1	1.00 1.00	71 332	52.4 - 123.7 67.5 - 140.3	

Sample: 126683 - SPN

Analysis: QC Batch: Prep Batch:	TPH DRO 38003 32909		Analytical Mo Date Analyze Sample Prepa	d: 2007-0		Analyz	Iethod: N/A ed By: AG ed By: AG
Parameter	Fla	ŗ	RL Result	Un	its	Dilution	\mathbf{RL}
DRO		·	489	mg/	Kg	1	50.0
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	e	110	mg/Kg	1	150	73	32.9 - 167

Sample: 126683 - SPN

Analysis: QC Batch: Prep Batch:			Date Analyzed:		S 8015B 2007-06-15 2007-06-15		Prep Metl Analyzed Prepared	By: KB
Parameter	Flag		${ m RL} { m Result}$		Units	D	vilution	RL
GRO			71.1		mg/Kg		10	1.00
Surrogate		Flag	Result	$\mathbf{U}\mathbf{n}\mathbf{i}\mathbf{t}\mathbf{s}$	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)			$\begin{array}{c} 0.957 \\ 1.91 \end{array}$	mg/Kg mg/Kg	10 10	$\frac{1.00}{1.00}$	96 191	33.2 - 160 10 - 227

Sample: 126684 - SPW

Analysis: QC Batch: Prep Batch:	TPH DRO 38003 32909		Analytical Method: Date Analyzed: Sample Preparation:	Mod. 8015B 2007-06-08 2007-06-08	Prep Method: Analyzed By: Prepared By:	AG
			\mathbf{RL}			
Parameter	F	lag	Result	Units	Dilution	\mathbf{RL}
DRO			133	mg/Kg	1	50.0

³High surrogate recovery due to peak interference.

Report Date: June 18, 2007 Red Byrd Ranch - TNM Historical

a .	-	D	TT .:	17.11		Spike	Percent	Recovery
Surrogate	Flag	Result	Units		ution	Amount	Recovery	Limits
n-Triacontane	<u> </u>	108	mg/Kg	5	1	150	72	32.9 - 16
Sample: 126	6684 - SPW							
Analysis:	TPH GRO			l Method:	S 8015B		Prep Me	
QC Batch: Prep Batch:	38006 32868		Date Ana Sample P	lyzed: reparation:	2007-06-08 2007-06-08		Analyze Prepared	
rop 2000	02000		-		2001 00 00		1 roputor	
Parameter	F	lag	${ m RL} { m Result}$		Units		Dilution	RJ
GRO			56.4		mg/Kg		1	1.0
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue			0.702	mg/Kg	1	1.00	70	52.4 - 123.
4-Bromofluor	obenzene (4-B	FB) ⁴	2.84	mg/Kg	1	1.00	284	67.5 - 140.
QC Batch:	TPH DRO 38003 32909		Date Ana	d Method: dyzed: reparation:	Mod. 8015 2007-06-08 2007-06-08		Analy	ved By: AG
QC Batch: Prep Batch:	38003 32909	۲lao	Date Ana Sample P RL	dyzed:	2007-06-08 2007-06-08		Analy: Prepa	zed By: AG red By: AG
QC Batch: Prep Batch: Parameter	38003 32909	`lag	Date Ana Sample P	dyzed:	2007-06-08 2007-06-08 Units		Analy	zed By: AG red By: AG R
QC Batch: Prep Batch: Parameter	38003 32909	Plag	Date Ana Sample P RL Result	dyzed:	2007-06-08 2007-06-08		Analy Prepa Dilution 1	zed By: AG red By: AG R 50.
QC Batch: Prep Batch: Parameter DRO	38003 32909 F		Date Ana Sample P RL Result <50.0	lyzed: reparation:	2007-06-08 2007-06-08 Units mg/Kg	Spike	Analy: Prepa Dilution 1 Percent	ed By: AG red By: AG R 50. Recover:
Analysis: QC Batch: Prep Batch: Parameter DRO	38003 32909	Flag	Date Ana Sample P RL Result	dyzed:	2007-06-08 2007-06-08 Units		Analy Prepa Dilution 1	zed By: A red By: A
QC Batch: Prep Batch: Parameter DRO Surrogate n-Triacontane Sample: 126	38003 32909 Flag 6685 - T-2 W	Result 111	Date Ana Sample P RL Result <50.0 Units mg/Kg	lyzed: reparation: Dilu	2007-06-08 2007-06-08 Units mg/Kg ntion 1		Analy: Prepar Dilution 1 Percent Recovery 74	zed By: AG red By: AG Recover Limits 32.9 - 16
QC Batch: Prep Batch: Parameter DRO Surrogate n-Triacontane Sample: 126 Analysis:	38003 32909 Flag 6685 - T-2 W TPH GRO	Result 111	Date Ana Sample P RL Result <50.0 Units mg/Kg	lyzed: reparation: Dilt	2007-06-08 2007-06-08 Units mg/Kg ntion 1 S 8015B	Spike Amount	Analy: Prepar Dilution 1 Percent Recovery 74 Prep Me	zed By: AG red By: AG <u>Recover</u> <u>Limits</u> <u>32.9 - 16</u> ethod: S 503
QC Batch: Prep Batch: Parameter DRO Surrogate n-Triacontane	38003 32909 Flag B685 - T-2 W TPH GRO 38006	Result 111	Date Ana Sample P RL Result <50.0 Units mg/Kg Analytica Date Ana	lyzed: reparation: Dilu S	2007-06-08 2007-06-08 Units mg/Kg ntion 1	Spike Amount	Analy: Prepar Dilution 1 Percent Recovery 74	zed By: AG red By: AG 50. Recover Limits 32.9 - 16 ethod: S 503 d By: AG
QC Batch: Prep Batch: Parameter DRO Surrogate n-Triacontane Sample: 126 Analysis: QC Batch: Prep Batch:	38003 32909 Flag 6685 - T-2 W TPH GRO 38006 32868	Result 111 /BH @ 8'	Date Ana Sample P RL Result <50.0 Units mg/Kg Analytica Date Ana Sample P RL	lyzed: reparation: Dilu S	2007-06-08 2007-06-08 mg/Kg ntion 1 S 8015B 2007-06-08 2007-06-08	Spike Amount	Analy: Prepar Dilution 1 Percent Recovery 74 Prep Me Analyze Prepare	zed By: AG red By: AG R: 50. Recover: Limits 32.9 - 16 ethod: S 503 d By: AG d By: AG
QC Batch: Prep Batch: Parameter DRO Surrogate n-Triacontane Sample: 126 Analysis: QC Batch: Prep Batch: Prep Batch: Parameter	38003 32909 Flag 6685 - T-2 W TPH GRO 38006 32868	Result 111	Date Ana Sample P RL Result <50.0 Units mg/Kg Analytica Date Ana Sample P RL Result	lyzed: reparation: Dilu S	2007-06-08 2007-06-08 <u>Units</u> mg/Kg ution 1 S 8015B 2007-06-08 2007-06-08 2007-06-08	Spike Amount	Analy: Prepar Dilution 1 Percent Recovery 74 Prep Me Analyze Prepare Dilution	zed By: AG red By: AG 50. Recover Limits 32.9 - 16 sthod: S 503 d By: AG d By: AG R.
QC Batch: Prep Batch: Parameter DRO Surrogate n-Triacontane Sample: 126 Analysis: QC Batch: Prep Batch: Prep Batch: Parameter	38003 32909 Flag 6685 - T-2 W TPH GRO 38006 32868	Result 111 /BH @ 8'	Date Ana Sample P RL Result <50.0 Units mg/Kg Analytica Date Ana Sample P RL	lyzed: reparation: Dilu S	2007-06-08 2007-06-08 mg/Kg ntion 1 S 8015B 2007-06-08 2007-06-08	Spike Amount	Analy: Prepar Dilution 1 Percent Recovery 74 Prep Me Analyze Prepare	zed By: AG red By: AG 50. Recover Limits 32.9 - 16 sthod: S 503 d By: AG d By: AG R.
QC Batch: Prep Batch: Parameter DRO Surrogate n-Triacontane Sample: 126 Analysis: QC Batch: Prep Batch: Prep Batch: Parameter GRO	38003 32909 Flag 6685 - T-2 W TPH GRO 38006 32868	Result 111 /BH @ 8'	Date Ana Sample P RL Result <50.0 Units mg/Kg Analytica Date Ana Sample P RL Result 6.79	lyzed: reparation: Dilu S J Method: lyzed: reparation:	2007-06-08 2007-06-08 units mg/Kg 1 S 8015B 2007-06-08 2007-06-08 2007-06-08 Units mg/Kg	Spike Amount 150 Spike	Analy: Prepar Dilution 1 Percent Recovery 74 Prep Me Analyze Prepared Dilution 1 Percent	zed By: AG red By: AG Recover Limits 32.9 - 16 ethod: S 503 d By: AG d By: AG Recovery R. 1.0 Recovery
QC Batch: Prep Batch: Parameter DRO Surrogate n-Triacontane Sample: 126 Analysis: QC Batch:	38003 32909 Flag B685 - T-2 W TPH GRO 38006 32868 F	Result 111 /BH @ 8'	Date Ana Sample P RL Result <50.0 Units mg/Kg Analytica Date Ana Sample P RL Result	lyzed: reparation: Dilu S	2007-06-08 2007-06-08 <u>Units</u> mg/Kg ution 1 S 8015B 2007-06-08 2007-06-08 2007-06-08	Spike Amount 150	Analy: Prepar Dilution 1 Percent Recovery 74 Prep Me Analyze Prepare Dilution 1	zed By: AG red By: AG 50. Recover Limits 32.9 - 16 sthod: S 503 d By: AG d By: AG R. 1.0

⁴High surrogate recovery due to peak interference.

Sample: 126686 - T-2 EBH @ 8'

Analysis:TPH DROQC Batch:38003Prep Batch:32909		Analytical Meth Date Analyzed: Sample Prepara		d:	Mod. 80 2007-06- 2007-06-	08	Prep Method: Analyzed By: Prepared By:		N/A AG AG
_			RL						
Parameter	Fla	g	\mathbf{Result}		Units	5	Dilution		$\mathbf{R}\mathbf{L}$
DRO			<50.0		mg/K),)	1		50.0
Surrogate	Flag	Result	Units	Dilut	iou	Spike Amount	Percent Recovery		overy mits
n-Triacontan		111	mg/Kg	1		150	74		- 167

Sample: 126686 - T-2 EBH @ 8'

Analysis:TPH GROQC Batch:38006Prep Batch:32868		Date Analyzed:		S 8015B 2007-06-08 2007-06-08		Prep Me Analyzec Preparec	l By: AG	
			\mathbf{RL}					
Parameter	Flag		Result		Units		Dilution	\mathbf{RL}
GRO			3.24		mg/Kg	· · · · · · · · · · · · · · · · · · ·	1	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)		0.774	mg/Kg	1.	1.00	77	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)			0.935	mg/Kg	1	1.00	94	67.5 - 140.3

Method Blank (1) QC Batch: 38003

QC Batch: Prep Batch:	-			Date Analyzed: 2007-06-08 QC Preparation: 2007-06-08			nalyzed By: A repared By: A	
				MDL				
Parameter		Flag		Result		Units		\mathbf{RL}
DRO				<14.6		mg/Kg		50
					Spike	Percent	Recove	ery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits	s
n-Triacontane	9	177	mg/Kg	1	150	118	44.7 - 13	33.6

Method Blank (1) QC Batch: 38006

QC Batch: Prep Batch:	38006 32868		Date Analyzed: QC Preparation:			Analyzed By: Prepared By:	
			М	DL			
Parameter		Flag	Res	sult	Units		RL
GRO			<0.	739	mg/Kg		1

Report Date: June 18, 2007 Red Byrd Ranch - TNM Historical

							Spike	Percent	Rec	covery
Surrogate	Flag	Re	sult	Units	Di	ution	Amount	Recovery		mits
Trifluorotoluene (TFT)	`		.876	mg/Kg	g' 2	1	1.00	88	52.4	- 123.7
4-Bromofluorobenzene (4	-BFB)	0.	.835	mg/Kg		1	1.00	84	67.5	- 140.3
Method Blank (1)	QC Batch: 38	219								
QC Batch: 38219 Prep Batch: 33088			ate Ana C Prepa	dyzed: aration:	2007-06 2007-06				yzed By ared By:	
Parameter	Flag			M Res	DL ault		Uni	ts		\mathbf{RL}
GRO	1 115			<0.4			mg/l			1
							0/			
Surrogate	Fla	t Re	esult	Unita	s D	ilution	Spike Amount	Percent Recovery		covery limits
Trifluorotoluene (TFT)		,	1.10	mg/K		1	1.00	110	73.	2 - 125
4-Bromofluorobenzene (4	-BFB)		.873	mg/K	.,	1	1.00	87		9 - 110
QC Batch: 38003	pike (LCS-1)		ate Ana	••	2007-06				yzed By	
Laboratory Control S QC Batch: 38003 Prep Batch: 32909	pike (LCS-1)	QQ		lyzed: aration:	2007-06 2007-06				yzed By ared By	
QC Batch: 38003 Prep Batch: 32909	pike (LCS-1)	QC LCS	C Prepa	aration:	2007-06	5-08 Spike	Matri	Prep	ared By	: AG Rec.
QC Batch: 38003 Prep Batch: 32909 Param	pike (LCS-1)	QC LCS <u>Result</u>	C Prepa Ui	aration: nits	2007-06 Dil.	5-08 Spike Amount	Resul	Prepa x t Rec.	ared By F L	: AG Rec. imit
QC Batch: 38003 Prep Batch: 32909 Param DRO		QC LCS Result 318	C Prepa Ui mg	aration: nits 5/Kg	2007-06 Dil.	5-08 Spike <u>Amount</u> 250	Resul <14.6	Prep x t <u>Rec.</u> 5 127	ared By F L	: AG Rec. imit
QC Batch: 38003 Prep Batch: 32909 Param DRO		QC LCS Result 318	C Prepa Ui mg	aration: nits 5/Kg	2007-06 Dil.	5-08 Spike <u>Amount</u> 250	Resul <14.6	Prep x t <u>Rec.</u> 5 127	ared By F L	: AG Rec. imit
QC Batch: 38003 Prep Batch: 32909 Param DRO	l on the spike re	QC LCS Result 318 sult. RF	C Prepa Ui ng PD is ba	aration: nits 5/Kg	2007-06 Dil.	5-08 Spike <u>Amount</u> 250	Resul <14.6	Prepa x t Rec. 5 127 result. Rec.	ared By F L 47.5	: AG Rec. imit - 144.1 RPD
QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based Param	l on the spike re LCS Res	QC LCS Result 318 sult. RF 5D alt. U	C Prepa Ui mg PD is ba	aration: nits ;/Kg ased on Dil.	2007-00 Dil. 1 the spike Spike Amount	S-08 Spike Amount 250 and spike Matrix Result	Resul <14.6 duplicate r Rec.	Prep x t Rec. <u>5 127</u> esult. Rec. Limit	ared By F L 47.5 R.PD	: AG Rec. imit - 144.1 RPD Limit
QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based Param	l on the spike re	QC LCS Result 318 sult. RF 5D alt. U	C Prepa Ui ng PD is ba	aration: nits s/Kg ased on t	2007-06 Dil. 1 the spike Spike	S-08 Spike Amount 250 and spike Matrix	Resul <14.6 duplicate r Rec.	Prepa x t Rec. 5 127 result. Rec.	ared By F L 47.5	: AG Rec. imit - 144.1 RPD
QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based Param DRO	l on the spike re LCS Res 29	QC LCS Result 318 sult. RF 5D 1lt U 8 mg	C Prepa Ui mg PD is ba [nits g/Kg	aration: nits s/Kg ased on Dil. 1	2007-06 Dil. 1 the spike Amount 250	S-08 Spike Amount 250 and spike Matrix Result <14.6	Resul <14.0 duplicate r Rec. 119 4	Prep x t Rec. 5 127 result. Rec. Limit 47.5 - 144.1	ared By F L 47.5 R.PD	: AG Rec. imit - 144.1 RPD Limit
QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based Param DRO	l on the spike re LCS Res 29 d on the spike re LCS L	QC LCS Result 318 sult. RF D 1lt U 8 mg sult. RF CSD	C Prepa Units g/Kg PD is ba	aration: nits s/Kg ased on Dil. 1 ased on t	2007-00 Dil. 1 the spike Amount 250 the spike	S-08 Spike Amount 250 and spike Matrix Result <14.6 and spike Spike	Resul <14.0 duplicate r Rec. 119 4 duplicate r LCS	Prepa x t Rec. 5 127 esult. Rec. Limit 47.5 - 144.1 esult. LCSD	ared By F L 47.5 R.PD 6 F	: AG Rec. imit - 144.1 RPD Limit 20 Rec.
QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based Param DRO Percent recovery is based Surrogate	l on the spike re LCS Res 29 d on the spike re LCS L Result R	QC LCS Result 318 sult. RF D ult U 8 mg sult. RF CSD esult	C Prepa Un PD is ba nits g/Kg PD is ba Uni	aration: <u>nits</u> <u>(/Kg</u> ased on 1 <u>1</u> ased on 1 its	2007-00 Dil. 1 the spike Amount 250 the spike Dil.	S-08 Spike Amount 250 and spike Matrix Result <14.6 and spike Spike Amount	Resul <14.0 duplicate r Rec. 119 4 duplicate r LCS Rec.	Prepa x t Rec. 5 127 esult. Rec. Limit 47.5 - 144.1 esult. LCSD Rec.	Ared By F L 47.5 R.PD 6 F L	: AG kec. - 144.1 RPD Limit 20 Rec. imit
QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based Param DRO Percent recovery is based	l on the spike re LCS Res 29 d on the spike re LCS L Result R	QC LCS Result 318 sult. RF D ult U 8 mg sult. RF CSD esult	C Prepa Un PD is ba nits g/Kg PD is ba Uni	aration: <u>nits</u> <u>(/Kg</u> ased on 1 <u>1</u> ased on 1 its	2007-00 Dil. 1 the spike Amount 250 the spike	S-08 Spike Amount 250 and spike Matrix Result <14.6 and spike Spike Amount	Resul <14.0 duplicate r Rec. 119 4 duplicate r LCS Rec.	Prepa x t Rec. 5 127 esult. Rec. Limit 47.5 - 144.1 esult. LCSD Rec.	Ared By F L 47.5 R.PD 6 F L	: AC Rec. <u>imit</u> <u>- 144</u> <u>RPI</u> Lim <u>20</u> Rec. imit
QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based Param DRO Percent recovery is based Surrogate n-Triacontane	l on the spike re LCS Res 29 I on the spike re LCS L Result R 122	QC LCS Result 318 sult. RF D 1lt U 8 mg sult. RF CSD	C Prepa Units g/Kg PD is ba	aration: <u>nits</u> <u>(/Kg</u> ased on 1 <u>1</u> ased on 1 its	2007-00 Dil. 1 the spike Amount 250 the spike	S-08 Spike Amount 250 and spike Matrix Result <14.6 and spike Spike	Resul <14.0 duplicate r Rec. 119 4 duplicate r LCS	Prepa x t Rec. 5 127 esult. Rec. Limit 47.5 - 144.1 esult. LCSD	Ared By F L 47.5 R.PD 6 F L	: AG Rec. imit - 144. RPI Limi 20 Rec. imit
QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based Param DRO Percent recovery is based Surrogate n-Triacontane Laboratory Control S QC Batch: 38006	l on the spike re LCS Res 29 I on the spike re LCS L Result R 122	QC LCS Result 318 sult. RF D sult. RF CSD esult 122 Da	C Prepa Un mg PD is ba (nits g/Kg PD is ba Uni mg/	aration: <u>nits</u> <u>s/Kg</u> ased on 1 <u>1</u> ased on 1 its Kg	2007-00 Dil. 1 the spike Amount 250 the spike Dil.	S-08 Spike Amount 250 and spike Matrix Result <14.6 and spike Spike Amount 150 S-08	Resul <14.0 duplicate r Rec. 119 4 duplicate r LCS Rec.	Prepa x t Rec. 5 127 esult. Rec. Limit 47.5 - 144.1 esult. LCSD Rec. 81	Ared By F L 47.5 R.PD 6 F L	: AG Rec. imit - 144. RPD Limit 20 Rec. imit - 131.6
QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based Param DRO Percent recovery is based Surrogate n-Triacontane Laboratory Control S QC Batch: 38006	l on the spike re LCS Res 29 I on the spike re LCS L Result R 122	$\begin{array}{c} QC\\ LCS\\ \underline{Result}\\ \overline{318}\\ \overline{318}\\ \overline{sult.} RF\\ \overline{SD}\\ \underline{sult.} RF\\ CSD\\ \underline{esult}\\ 122\\ \end{array}$	C Prepa Un mg PD is ba (nits g/Kg PD is ba Uni mg/	aration: nits (/Kg ased on the Dil. 1 ased on the its Kg alyzed:	2007-00 Dil. 1 the spike Amount 250 the spike Dil. 1	S-08 Spike Amount. 250 and spike Matrix Result <14.6 and spike Spike Amount 150 S-08 S-08	Resul <14.0 duplicate r Rec. 119 4 duplicate r LCS Rec.	Prepa x t Rec. 5 127 esult. Rec. Limit 47.5 - 144.1 esult. LCSD Rec. 81 Analy Prepa	RPD 6 FL 47.5 RPD 6 FL 57.3 yzed By ared By	: AG Rec. imit - 144.1 RPD Limit 20 Rec. imit - 131.6 : AG : JW
QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based Param DRO Percent recovery is based Surrogate n-Triacontane Laboratory Control S QC Batch: 38006	l on the spike re LCS Res 29 I on the spike re LCS L Result R 122	QC LCS Result 318 sult. RF D sult. RF CSD esult 122 Da	C Prepa Un PD is ba Inits g/Kg PD is ba Uni mg/ ate Ana C Prepa	aration: nits (/Kg ased on the Dil. 1 ased on the its Kg alyzed:	2007-00 Dil. 1 the spike Amount 250 the spike Dil. 1	S-08 Spike Amount 250 and spike Matrix Result <14.6 and spike Spike Amount 150 S-08	Resul <14.0 duplicate r Rec. 119 4 duplicate r LCS Rec. 81	Prepa x t Rec. 5 127 esult. Rec. Limit 47.5 - 144.1 esult. LCSD Rec. 81 Analy Prepa x	RPD 6 FL 47.5 RPD 6 FL 57.3 yzed By ared By	: AG Rec. imit - 144.1 RPD Limit 20 Rec. imit - 131.6 : AG

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: June 18, 2007Work Order: 7060718Red Byrd Ranch - TNM HistoricalRed Byrd Ranch - TNM Historical

				<i>a</i>							
Param	LCSD Result	Units	Dil.	Spike Amount	Mat Res		ec.	Rec. Limi		RPD	RPD Limit
GRO	9.48	mg/Kg	1	10.0	<0.'			7.7 - 1		1	20
										<u> </u>	
Percent recovery is based on	the spike result	5. RPD is	based of	i the spike	e and sp	ыке апр	ncate re	esuit.			
	LC	S LC	SD			Spike	LC	CS I	LCSD		ec.
Surrogate	Res				Dil.	Amoun			Rec.		mit
Trifluorotoluene (TFT)	1.(ng/Kg	1	1.00	1(110		- 152.5
4-Bromofluorobenzene (4-BF	FB) 0.9	96 ().9	89 n	ng/Kg	1	1.00	1(99	70	- 130
Laboratory Control Spik	e (LCS-1)										
QC Batch: 38219		Date Ar	nalvzed:	2007-0	6-15				Analy	ved By:	KB
Prep Batch: 33088		QC Pre								red By:	
		-	*						•		
	\mathbf{L}	CS			$\mathbf{S}_{\mathbf{k}}$	oike	Matı	ix			Rec.
Param			Units	Dil.		ount	Resu		Rec.		Jimit
GRO		28 r	ng/Kg	1	1).()	<0.4	59	93	79.	6 - 113
Percent recovery is based on	the spike result	. RPD is	based or	n the spike	e and sp	oike dup	licate re	esult.			
	LCSD			Spike	M	trix		Rec			RPD
Param	Result	Units	Dil.	Amoun			Rec.	Lim		RPD	Limit
GRO	9.41	mg/Kg	1	10.0		.459	94	79.6 -		1	20
Percent recovery is based on				i ono opini		_					_
Surrogate			SD sult	Units	Dil.	Spik Amou		LCS Rec.	LCSE Rec.		Rec. .imit
	Res 0.9	ult Re	sult	Units mg/Kg	Dil.	Amou	nt F	lec.	LCSE Rec. 96	Ι	Jimit
Trifluorotoluene (TFT)	Res 0.9	alt Re 34 0.9	sult 956	Units mg/Kg mg/Kg		-	nt F		Rec.	I 77.	.imit 1 - 117
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BF Matrix Spike (MS-1) QC Batch: 38003	Res 0.9	ault Re 34 0.9 947 0.9	sult 956 963 nalyzed:	mg/Kg mg/Kg 2007-0	1 1 6-08	Amou 1.00	nt F	Rec. 93	Rec. 96 96 Analy	I 77.	imit 1 - 117 1 - 118 : AG
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BF Matrix Spike (MS-1) QC Batch: 38003	Res 0.9 FB) 0.9	mlt Re 34 0.9 47 0.9 126586 Date An QC Pre	sult 956 963 nalyzed: paratior	mg/Kg mg/Kg 2007-0	1 1 6-08	Amou 1.00 1.00	nt F	Rec. 93 95	Rec. 96 96 Analy	I 77. 78. vzed By: ured By:	imit 1 - 117 1 - 118 : AG
Prifluorotoluene (TFT) 4-Bromofluorobenzene (4-BF Matrix Spike (MS-1) QC Batch: 38003 Prep Batch: 32909 Param	Res 0.9 FB) 0.9 Spiked Sample: M Res	Ballt Re 34 0.9 347 0.9 126586 Date Ar QC Pre QC Pre S Sault U	sult 956 963 nalyzed: paratior Units	mg/Kg mg/Kg 2007-0 n: 2007-0 Dil.	1 1 6-08 6-08 Spi Amo	Amou 1.00 1.00 ke unt	nt F	Rec. 93 95	Rec. 96 96 Analy Prepa	I 77. 78. vzed By: vred By: F Li	imit 1 - 117 1 - 118 AG AG Lec. mit
Prifluorotoluene (TFT) I-Bromofluorobenzene (4-BF Matrix Spike (MS-1) QC Batch: 38003 Prep Batch: 32909 Param DRO	Res 0.2 5B) 0.2 Spiked Sample: M Res 2;	<u>nlt Re</u> 34 0.9 47 0.9 126586 Date Ar QC Pre S Sult Ц 88 п	sult 956 963 nalyzed: paratior Units g/Kg	mg/Kg mg/Kg 2007-0 n: 2007-0 Dil. 1	1 1 6-08 6-08 Spi Amo 25	Amou 1.00 1.00 ke unt 0	nt F	Rec. 93 95	Rec. 96 96 Analy Prepa	I 77. 78. vzed By: vred By: F Li	imit 1 - 117 1 - 118 : AG AG Lec. : mit
Prifluorotoluene (TFT) 4-Bromofluorobenzene (4-BF Matrix Spike (MS-1) 2C Batch: 38003 Prep Batch: 32909 Param DRO	Res 0.2 5B) 0.2 Spiked Sample: M Res 2;	<u>nlt Re</u> 34 0.9 47 0.9 126586 Date Ar QC Pre S Sult Ц 88 п	sult 956 963 nalyzed: paratior Units g/Kg	mg/Kg mg/Kg 2007-0 n: 2007-0 Dil. 1	1 1 6-08 6-08 Spi Amo 25	Amou 1.00 1.00 ke unt 0	nt F	Rec. 93 95	Rec. 96 96 Analy Prepa	I 77. 78. vzed By: vred By: F Li	imit 1 - 117 1 - 118 : AG AG Lec. : mit
QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based on	Res 0.9 5B) 0.2 5B) 0.2 5piked Sample: MRes 23 the spike result MSD	nlt Re 34 0.9 34 0.9 47 0.9 126586 Date Ar QC Pre QC Pre S Sault I 38 m 38 n 38 n	sult 956 963 nalyzed: paratior Units <u>g/Kg</u> based or	mg/Kg mg/Kg 2007-0 n: 2007-0 Dil. 1 n the spike Spike	1 1 6-08 6-08 Spi Amo 25 e and sp Mat	Amou 1.00 1.00 ke unt 0 sike dup rix	Matriz Result <14.6 licate re	Rec. 93 95 95 esult. Rec.	Rec. 96 96 Analy Prepa Rec. 95	I 77. 78. zzed By: zred By: R Li 11.7	imit 1 - 117 1 - 117 - 117
Prifluorotoluene (TFT) 4-Bromofluorobenzene (4-BF Matrix Spike (MS-1) QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based on Param	Res 0.9 5B) 0.2 5B) 0.2 5B) 5D Result MSD Result	ult Re 34 0.9 47 0.9 126586 Date Ar QC Pre S Sult U 88 m 5. RPD is Units	sult 956 963 nalyzed: paratior Units ng/Kg based or Dil.	mg/Kg mg/Kg 2007-0 n: 2007-0 Dil. 1 n the spike Amount	1 1 6-08 6-08 Spi Amo 25 e and sp Mat Res	Amou 1.00 1.00 1.00 ke unt 0 vike dup rix ult R	Matriz Result <14.6 licate ro	Rec. 93 95 95 esult. Rec. Limi	Rec. 96 96 Analy Prepa Rec. 95	I 77. 78. zzed By: zred By: R Li 11.7 RPD	imit 1 - 117 1 - 117 - 117
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BF Matrix Spike (MS-1) SQC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based on Param DRO	Res 0.5 5B) 0.5 5piked Sample: 5piked Sample: MSD Result 278	ult Re 34 0.9 47 0.9 126586 Date Ar QC Pre S Mult U is RPD is Units mg/Kg	sult 956 963 ualyzed: paration Units g/Kg based on Dil. 1	mg/Kg mg/Kg 2007-00 n: 2007-00 Dil. 1 n the spike Amount 250	1 1 6-08 6-08 Spi Amo 25 e and sp Mat Res <14	Amou 1.00 1.00 1.00 ke unt 0 vike dup rix ult R 4.6 1	Matrip Result <14.6 licate ro	Rec. 93 95 95 esult. Rec. Limi 1.7 - 1	Rec. 96 96 Analy Prepa Rec. 95	I 77. 78. zzed By: zred By: R Li 11.7	imit 1 - 117 1 - 117 - 117 - 4G AG AG Lec. mit - 152.3 RPD
Prifluorotoluene (TFT) 4-Bromofluorobenzene (4-BF Matrix Spike (MS-1) SQC Batch: 38003 Prep Batch: 32909 Param DRO Param DRO Param DRO	Res 0.5 5B) 0.5 5piked Sample: 5piked Sample: MSD Result 278	ult Re 34 0.9 47 0.9 126586 Date Ar QC Pre S Mult U is RPD is Units mg/Kg	sult 956 963 ualyzed: paration Units g/Kg based on Dil. 1	mg/Kg mg/Kg 2007-00 n: 2007-00 Dil. 1 n the spike Amount 250	1 1 6-08 6-08 Spi Amo 25 e and sp Mat Res <14	Amou 1.00 1.00 1.00 ke unt 0 vike dup rix ult R 4.6 1	Matrip Result <14.6 licate ro	Rec. 93 95 95 esult. Rec. Limi 1.7 - 1	Rec. 96 96 Analy Prepa Rec. 95	I 77. 78. zzed By: zred By: R Li 11.7 RPD	imit 1 - 117 1 - 117 - 117
Prifluorotoluene (TFT) 4-Bromofluorobenzene (4-BF Matrix Spike (MS-1) QC Batch: 38003 Prep Batch: 32909 Param DRO Percent recovery is based on Param DRO Percent recovery is based on	Res 0.5 FB) 0.5 Spiked Sample: Spiked Sample: MSD Result 278 the spike result	ault Re 34 0.9 47 0.9 126586 Date An QC Pre 38 m 5. RPD is mg/Kg 5. RPD is	sult 956 963 ualyzed: paration Units g/Kg based on Dil. 1	mg/Kg mg/Kg 2007-00 n: 2007-00 Dil. 1 n the spike Amount 250	1 1 1 $6-08$ $6-08$ Spi Amo 25 $2 and sp$ Mat Res <14 $2 and sp$	Amou 1.00 1.00 1.00 ke unt o pike dup rix ult R 4.6 1 pike dup	Matrip Result <14.6 licate re	Rec. 93 95 95 esult. Rec. Limi 1.7 - 1 esult.	Rec. 96 96 96 96 96 Analy Prepa Rec. 95 t 52.3	I 77. 78. 78. 78. 78. 77. 78. 71. 71. 71. 71. 71. 72. 72. 73. 73. 74. 74. 74. 75. 75. 75. 77. 78. 77. 78. 77. 78. 78. 78. 77. 78. 78	imit 1 - 117 1 - 117 - 117
Prifluorotoluene (TFT) 4-Bromofluorobenzene (4-BF) 4-Bromofluorobenzene (4-BF) Matrix Spike (MS-1) SQC Batch: 38003 Prep Batch: 32909 Param DRO Param DRO Percent recovery is based on Param DRO Percent recovery is based on	Res 0.5 5B) 0.5 5B) 0.5 5piked Sample: MSD Result 278 the spike result	nult Re 34 0.9 34 0.9 34 0.9 47 0.9 126586 Date An QC Pre 38 m D D	sult 956 963 ualyzed: paration Units g/Kg based on Dil. 1	mg/Kg mg/Kg 2007-00 n: 2007-00 Dil. 1 n the spike Amount 250	1 1 $6-08$ $6-08$ Spi Amo 25 $2 and sp$ Mat Res <14 $2 and sp$ Sp	Amou 1.00 1.00 1.00 ke unt 0 vike dup rix ult R 4.6 1	Matrip Result <14.6 licate ro	Rec. 93 95 95 esult. Rec. Limi 1.7 - 1 esult.	Rec. 96 96 Analy Prepa Rec. 95	I 77. 78. 78. 78. 78. 79. 71. 71. 71. 71. 71. 71. 72. 72. 73. 73. 74. 74. 74. 75. 75. 75. 75. 75. 75. 75. 75. 75. 75	imit 1 - 117 1 - 117 - 117

I

QC Batch: 38006 Prep Batch: 32868		ate Analyzed: C Preparation	2007-06- 1: 2007-06-	-			-	yzed By ared By	
	MS			Spike		atrix			Rec.
Param	Result	Units	Dil.	Amount		esult	Rec.		Limit
GRO	5.77	mg/Kg	1	10.0	(0.739	58	10	- 141.5
Percent recovery is based on the s	pike result. R	PD is based or	n the spike :	and spike d	uplicate	e result.			
	MSD		Spike	Matrix		R	ec.		RPD
Param		Units Dil.	Amount	Result	Rec.		mit	RPD	Limit
GRO	6.62 n	ng/Kg 1	10.0	< 0.739	66	10 -	141.5	14	20
Percent recovery is based on the s	pike result. R	PD is based or	n the spike	and spike d	uplicate	e result.		·····	
	MS	MSD		Spi	ike	MS	MSD	Ŧ	Rec.
Surrogate	Result	Result	Units	Dil. Amo		Rec.	Rec.		imit
Trifluorotoluene (TFT)	0.697		mg/Kg	$\frac{1}{1}$		70	69		- 125.3
4-Bromofluorobenzene (4-BFB)	0.964		mg/Kg	1 1		96	97		- 144.5
-		ate Analyzed: C Preparation						yzed By ared By	
Prep Batch: 33088	Q MS	C Preparation	n: 2007-06-	-15 Spike		atrix	Prep	ared By	: KB Rec.
Prep Batch: 33088 Param	Q MS Result	C Preparation Units		-15 Spike Amount	R	esult	Prep. Rec.	ared By	: KB Rec. Limit
Prep Batch: 33088 Param GRO	Q MS Result 7.53	C Preparation Units mg/Kg	n: 2007-06- Dil.	-15 Spike Amount 10.0	R.	esult 0.459	Prep. Rec. 75	ared By	: KB Rec. Limit
Prep Batch: 33088 Param GRO	Q MS Result 7.53 pike result. R	C Preparation Units mg/Kg	Dil. 1 n the spike	-15 Spike Amount 10.0 and spike d	R.	esult 0.459 e result.	Prep. Rec. 75	ared By	: KB Rec. Limit .7 - 157
Prep Batch: 33088 Param GRO Percent recovery is based on the s	Q MS Result 7.53 pike result. R. MSD	C Preparation Units mg/Kg PD is based of	$\begin{array}{c} \text{Dil.}\\ \hline \\ 1\\ \hline \\ \text{a the spike}\\ \\ \text{Spike} \end{array}$	-15 Spike Amount 10.0 and spike d Matrix	Ro <0 uplicate	esult 0.459 e result. R	Prep. Rec. 75 ec.	ared By	: KB Rec. Limit .7 - 157 RPD
Prep Batch: 33088 Param GRO Percent recovery is based on the s Param	Q MS Result 7.53 pike result. R. MSD Result	C Preparation Units mg/Kg PD is based of Units Dil.	Dil. 1 a the spike Amount	-15 Spike Amount 10.0 and spike d Matrix Result	Ra <0 uplicate Rec.	esult 0.459 e result. R Lin	Prep. Rec. 75 ec. mit	ared By	: KB Rec. Limit .7 - 157 RPD Limit
Prep Batch: 33088 Param GRO Percent recovery is based on the s Param GRO	Q MS Result 7.53 pike result. R MSD Result 7.98 n	C Preparation Units mg/Kg PD is based of Units Dil. ng/Kg 1	Dil. Dil. 1 n the spike Amount 10.0	-15 Spike Amount 10.0 and spike d Matrix Result <0.459	Rac. Note: 10 - 20 - 20 - 20 - 20 - 20 - 20 - 20 -	esult 0.459 e result. R. Lin 40.7	Prep <u>Rec.</u> 75 ec. mit - 157	ared By 40 R.PD	: KB Rec. Limit .7 - 157 RPD Limit
Prep Batch: 33088 Param GRO Percent recovery is based on the s Param GRO	Q MS Result 7.53 pike result. R MSD Result 7.98 n pike result. R	C Preparation Units mg/Kg PD is based of Units Dil. ng/Kg 1 PD is based of	Dil. Dil. 1 n the spike Amount 10.0	-15 Spike Amount 10.0 and spike d Matrix Result <0.459 and spike d	Ro vplicate Rec. 80 uplicate	esult 0.459 e result. R. Lin 40.7 e result.	Prep <u>Rec.</u> 75 ec. mit - 157	ared By 40 <u>RPD</u> 6	: KB Rec. Limit .7 - 157 RPD Limit 19.6
Prep Batch: 33088 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s	Q MS Result 7.53 pike result. R MSD Result 7.98 n	C Preparation Units mg/Kg PD is based of Units Dil. ng/Kg 1 PD is based of MSD	Dil. Dil. 1 a the spike Amount 10.0 a the spike	-15 Spike Amount. 10.0 and spike d Matrix Result <0.459 and spike d	Rac. Note: 10 - 20 - 20 - 20 - 20 - 20 - 20 - 20 -	esult 0.459 e result. R. Lin 40.7	Prep Rec. 75 ec. mit - 157 MSI	ared By 40 <u>RPD</u> 6	: KB Rec. Limit
Prep Batch: 33088 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s Surrogate	Q MS Result 7.53 pike result. R MSD Result 7.98 n pike result. R MS	C Preparation Units mg/Kg PD is based of Units Dil. ng/Kg 1 PD is based of	Dil. Dil. 1 a the spike Amount 10.0 a the spike Units	-15 Spike Amount 10.0 and spike d Matrix Result <0.459 and spike d	Ra uplicate Rec. 80 uplicate pike	esult 0.459 e result. R. Lin 40.7 e result. MS	Prep <u>Rec.</u> 75 ec. mit - 157	ared By 40 RPD 6	: KB Rec. Limit .7 - 157 RPD Limit 19.6 Rec.
Prep Batch: 33088 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s Surrogate Trifluorotoluene (TFT)	Q MS Result 7.53 pike result. R MSD Result 7.98 n pike result. R MS Result	C Preparation Units Mg/Kg PD is based of Units Dil. 1g/Kg 1 PD is based of MSD Result	Dil. Dil. 1 a the spike Amount 10.0 a the spike	-15 Spike Amount 10.0 and spike d Matrix Result <0.459 and spike d Spil. An	Rec. Rec. 80 uplicate	esult 0.459 e result. R. Liu 40.7 e result. MS Rec.	Prep Rec. 75 ec. mit - 157 MSI Rec	ared By 40 <u>RPD</u> 6 34	: KB Rec. <u>Limit</u> .7 - 15' <u>RPD</u> Limit 19.6 Rec. Limit .9 - 155
Prep Batch: 33088 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Standard (ICV-1)	Q MS Result 7.53 pike result. R MSD Result 7.98 n pike result. R MS Result 0.790 0.891	C Preparation Units mg/Kg PD is based of Units Dil. ng/Kg 1 PD is based of MSD Result 0.828 0.948	Dil. 1 1 n the spike Amount 10.0 n the spike Units mg/Kg mg/Kg	-15 Spike Amount 10.0 and spike d Matrix Result <0.459 and spike d S Dil. An 1 1	Rec. Rec. 80 uplicate pike nount 1	esult 0.459 e result. R. Lin 40.7 e result. MS <u>Rec.</u> 79	Prep Rec. 75 ec. mit - 157 MSI Rec 83 95	ared By 40 <u>RPD</u> 6 34 58	: KB Rec. Limit .7 - 157 RPD Limit 19.6 Rec. Limit .9 - 155 .5 - 153
Prep Batch: 33088 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Standard (ICV-1)	Q MS Result 7.53 pike result. R MSD Result 7.98 n pike result. R MS Result 0.790 0.891	C Preparation Units PD is based of Units Dil. ng/Kg 1 PD is based of MSD Result 0.828	Dil. 1 1 n the spike Amount 10.0 n the spike Units mg/Kg mg/Kg	-15 Spike Amount 10.0 and spike d Matrix Result <0.459 and spike d S Dil. An 1 1	Rec. Rec. 80 uplicate pike nount 1	esult 0.459 e result. R. Lin 40.7 e result. MS <u>Rec.</u> 79	Prep Rec. 75 ec. mit - 157 MSI Rec 83 95	ared By 40 <u>RPD</u> 6 34	: KB Rec. Limit .7 - 157 RPD Limit 19.6 Rec. Limit .9 - 155 .5 - 155
Prep Batch: 33088 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Standard (ICV-1)	Q MS Result 7.53 pike result. R MSD Result 7.98 n pike result. R MS Result 0.790 0.891	C Preparation Units mg/Kg PD is based of Units Dil. ng/Kg 1 PD is based of MSD Result 0.828 0.948	Dil. 1 1 n the spike Amount 10.0 n the spike Units mg/Kg mg/Kg	-15 Spike Amount 10.0 and spike d Matrix Result <0.459 and spike d S Dil. An 1 1	Rec. Rec. 80 uplicate pike nount 1	esult 0.459 e result. R. Lin 40.7 e result. MS <u>Rec.</u> 79	Prep Rec. 75 ec. mit - 157 MSI Rec 83 95 Anal	ared By 40 <u>RPD</u> 6 34 58	: KB Rec. Limit .7 - 157 RPD Limit 19.6 Rec. Limit .9 - 155 .5 - 155
Prep Batch: 33088 Param GRO Percent recovery is based on the s Param GRO	Q MS Result 7.53 pike result. R MSD Result 7.98 n pike result. R MS Result 0.790 0.891 D LD	Units <u>Units</u> PD is based of Units Dil. 1g/Kg 1 PD is based of MSD Result 0.828 0.948 PD is based of MSD Result 0.948	Dil. 1 Dil. 1 n the spike Spike Amount 10.0 n the spike Units mg/Kg mg/Kg 2007-06-0	-15 Spike Amount 10.0 and spike d Matrix Result <0.459 and spike d S Dil. An 1 1	Rec. Rec. 80 uplicate pike nount 1	esult 0.459 e result. R. Liu 40.7 e result. MS Rec. 79 89	Prep Rec. 75 ec. mit - 157 MSI Rec 83 95 Anal	Ared By 40 RPD 6 34 58 yzed By	: KB Rec. Limit .7 - 157 RPD Limit 19.6 Rec. Limit .9 - 155 .5 - 153
Prep Batch: 33088 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Standard (ICV-1)	G MS Result 7.53 pike result. R MSD Result 7.98 n pike result. R MS Result 0.790 0.891 D IC Th ts Co	Units <u>Units</u> <u>mg/Kg</u> PD is based of <u>Units</u> Dil. <u>ng/Kg</u> 1 PD is based of <u>MSD</u> <u>Result</u> 0.828 0.948 PD is based of <u>MSD</u> <u>Result</u> 0.948 PD is based of <u>MSD</u> <u>Result</u> <u>C</u> <u>MSD</u> <u>Result</u> <u>C</u> <u>C</u> <u>C</u> <u>C</u> <u>C</u> <u>C</u> <u>C</u> <u>C</u>	Dil. Dil. 1 n the spike Spike Amount 10.0 n the spike Units mg/Kg mg/Kg 2007-06-0 CVs	-15 Spike Amount 10.0 and spike dr Matrix Result <0.459 and spike dr S Dil. An 1 1 1	Rec. Rec. 80 uplicate pike nount 1	esult 0.459 e result. R. Lin 40.7 e result. MS Rec. 79 89	Prep Rec. 75 ec. mit - 157 MSI Rec 83 95 Anal ent ery ts	ared By 40 RPD 6 34 58 yzed By A1	: KB Rec. Limit .7 - 157 RPD Limit 19.6 Rec. Limit .9 - 155 .5 - 153

Standard (CCV-1)

QC Batch:	38003		Date Ana	ulyzed: 2007-0	6-08	Anal	yzed By: AG
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	272	109	85 - 115	2007-06-08
Standard	(CCV-2)						
QC Batch:	38003		Date Ana	dyzed: 2007-0	6-08	Anal	yzed By: AG
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	264	106	85 - 115	2007-06-08
Standard QC Batch:	. ,		Date Ana	lyzed: 2007-0	5-08	Anal	yzed By: AG
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.888	89	85 - 115	2007-06-08
Standard	(CCV-1)						
QC Batch:	38006		Date Ana	ulyzed: 2007-0	6-08	Anal	yzed By: AG
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.912	91	85 - 115	2007-06-08
Standard	(ICV-1)						

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.968	97	85 - 115	2007-06-15

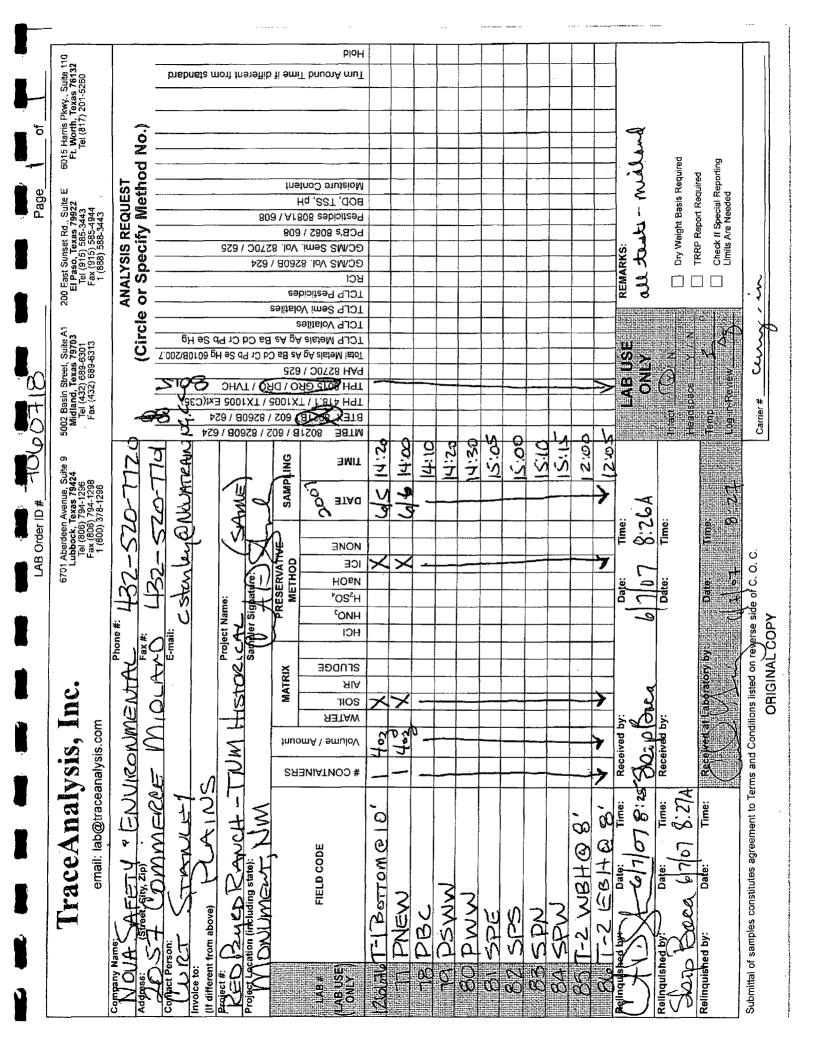
Standard (CCV-1)

QC Batch: 38219

Date Analyzed: 2007-06-15

Analyzed By: KB

Report Date: June 18, 2007 Red Byrd Rauch - TNM Historical			Red 1	Work Order: 7060718 Red Byrd Ranch - TNM Historical			umber: 15 of 15 Monument, NM
			CCVs	CCVs	CCVs	Percent	Data
			True	Found	Percent	Recovery	Date
\mathbf{Param}	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.977	98	85 - 115	2007-06-15



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132

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FAX 806 • 794 • 1298 FAX 915+585+4944 FAX 432+689+6313

E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Julie Koonce Nova Safety & Environmental 2057 Commerce St. Midland, TX, 79703

Report Date: July 2, 2007

Work Order: 7062721

Project Location: Monument, NM **Project Name:** Red Byrd Ranch - TNM Historical Red Byrd Ranch - TNM Historical Project Number:

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
128664	PNW	soil	2007-06-25	13:50	2007-06-27

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 5 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Ale

Dr. Blair Leftwich, Director

Standard Flags **B** - The sample contains less than ten times the concentration found in the method blank.

Prepared By: AG

Analytical Report

Analysis:	TPH DRO		•	l Method:	Mod. 8013			Method: N/A
QC Batch: Prep Batch:	38661 33456		Date Anal Sample Pi	lyzed: reparation:	2007-06-28 2007-06-28			vzed By: ared By:
ւ եր քանու	JJHJU		Dample L	сраганоп.	2001-00-20	5	11000	aen 13y.
D /			RL		TT 1 .			
Parameter DRO	Flag		Result. 3250		Units		Dilution	
			3230		mg/Kg		1	
						Spike	Percent	Recovery
Surrogate	Flag	Result	Units		ition	Amount	Recovery	Limits
n-Triacontane	e	206	mg/Kg		1	150	137	32.9 - 16
Sample: 12	8664 - PNW							
Analysis:	TPH GRO		Analytical	l Method:	S 8015B		Prep M	ethod: S 503
QC Batch:	38680		Date Anal		2007-07-01	L	Analyze	
Prep Batch:	33478		Sample Pr	reparation:	2007-07-01	L	Prepare	
•				•			-	
Parameter	Flag		RL Result		Units		Dilution	R
GRO	r lag		227				5	<u> </u>
<u>Gn()</u>			241		mg/Kg		0	1.0
						Spike	Percent	Recovery
		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue			3.49	mg/Kg	5	5.00	70	52.4 - 123.
Surrogate Trifluorotolue 4-Bromofluor	ene (TFT) robenzene (4-BFB)	Flag 1						
Trifluorotolue	robenzene (4-BFB)		3.49 12.9 Date At	mg/Kg mg/Kg nalyzed:	5	5.00	70 258 A	52.4 - 123.
Trifluorotolue 4-Bromofluor Method Bla QC Batch:	obenzene (4-BFB) ank (1) QC B 38661	1 atch: 38661	3.49 12.9 Date At	mg/Kg mg/Kg nalyzed: paration: MDL	5 5 2007-06-28	5.00 5.00	70 258 A	52.4 - 123. 67.5 - 14(). analyzed By: Prepared By:
Trifluorotolue 4-Bromofluor Method Bla QC Batch: Prep Batch:	obenzene (4-BFB) ank (1) QC B 38661	1	3.49 12.9 Date At	mg/Kg mg/Kg nalyzed: paration:	5 5 2007-06-28	5.00 5.00 Ur	70 258 A P	52.4 - 123. 67.5 - 140. analyzed By:
Trifluorotolue 4-Bromofluor Method Bl: QC Batch: Prep Batch: Parameter DRO	obenzene (4-BFB) ank (1) QC B 38661 33456	1 atch: 38661 Flag	3.49 12.9 Date A QC Pre	mg/Kg mg/Kg nalyzed: oparation: MDL Result <14.6	5 5 2007-06-28 2007-06-28	5.00 5.00 Ur mg Spike	70 258 A P nits /Kg Percent	52.4 - 123. 67.5 - 14(). Inalyzed By: Prepared By: RI 50 Recovery
Triffuorotolue 4-Bromofluor Method Bl QC Batch: Prep Batch: Parameter	robenzene (4-BFB) ank (1) QC B 38661 33456 Flag	1 atch: 38661	3.49 12.9 Date At	mg/Kg mg/Kg nalyzed: paration: MDL Result	5 5 2007-06-28 2007-06-28	5.00 5.00 Un mg	70 258 A P nits /Kg	52.4 - 123. 67.5 - 14(). analyzed By: Prepared By: RJ 5(

QC Preparation: 2007-07-01

¹High surrogate recovery due to peak interference.

Prep Batch: 33478

			MDL				
Parameter	Flag		Result		Uni	\mathbf{RL}	
GRO			< 0.739		mg/	Kg	1
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.762	mg/Kg	1	1.00	76	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.682	mg/Kg	1	1.00	68	67.5 - 140.3

Laboratory Control Spike (LCS-1)

QC Batch:	38661	Date Analyzed:	2007-06-28	Analyzed By:
Prep Batch:	33456	QC Preparation:	2007-06-28	Prepared By:

Param	$f LCS \ Result$	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	156	mg/Kg	1	250	<14.6	62	47.5 - 144.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

mg/Kg

		LCSD			Spike	Matrix		Rec.		\mathbf{RPD}
Param		Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}	RPD	Limit
DRO		184	mg/Kg	1	250	<14.6	74	47.5 - 144.1	16	20
Percent recovery i	s based on the sp	ike result.	RPD is b	ased o	u the spike	and spike o	luplicat	e result.		
	LCS	LCSD				Spike	LC	S LCSD		Rec.
Surrogate	\mathbf{Result}	Result	Un	its	Dil.	Amount	Rec	. Rec.	Ι	Limit

1

150

73

73

57.3 - 131.6

Laboratory Control Spike (LCS-1)

109

110

n-Triacontane

QC Batch:	38680	Date Analyzed:	2007-07-01	Analyzed By:	AG
Prep Batch:	33478	QC Preparation:	2007-07-01	Prepared By:	AG

	\mathbf{LCS}			Spike	Matrix		Rec.
Param	Result	\mathbf{Units}	Dil.	Amount	\mathbf{Result}	Rec.	Limit
GRO	9.4()	mg/Kg	1	10.0	< 0.739	94	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	R PD	Limit
GRO	8.52	mg/Kg	1	10.0	< 0.739	85	57.7 - 102.5	10	20
Demonstration bound on the						11	14		

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	\mathbf{Result}	\mathbf{Units}	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.03	0.932	mg/Kg	1	1.00	103	93	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.854	0.775	mg/Kg	1	1.00	85	78	70 - 130

QC Batch: 38661 Prep Batch: 33456				Analyze 'reparati						nalyzed repared	
		MS				Spike	Ма	trix			Rec.
Param		Resul		Units	Dil.	Amount		sult	Rec.		imit
DRO	· · · · · · · · · · · · · · · · · · ·	283		ng/Kg	1	250		.4.6	113	11.7	- 152.3
Percent recovery is based	l on the spik	e result.	RPD is	based o	on the spike	and spike d	uplicat	e result	•		
		MSD			Spike	Matrix		R	ec.		RPD
Param	I	Result	Units	Dil.	Amount	Result	Rec.	Li	mit	RPD	Limit
DRO		208	mg/Kg	1	250	<14.6	83	11.7 -	152.3	30	20
Percent recovery is based	l on the spik	e result.	RPD is	based o	on the spike	and spike d	uplicat	e result			
	MS	MSD				Spiles	-	MC	MSD		Rec.
Surrogate	Result	Result		Units	Dil.	Spike Amount		MS Rec.	Rec.		Limit
n-Triacontane	153	119		ng/Kg	1	150		102	79		- 163.1
									Prep		
		MS Resu	lt	Units	Dil.	Spike Amount	R	latrix esult	Rec.		Rec. Limit
			lt.	Units mg/Kg	Dil.	•	R		-		Limit
GRO	l on the spik	Resu 7.63	lt. 3	mg/Kg	1	Amount 10.0	R	esult 2.5	Rec.		Limit
GRO	l on the spik	Resu 7.63 e result.	lt. 3	mg/Kg	1 on the spike	Amount 10.0 and spike d	R	esult 2.5 e result	Rec. 51		Limit. - 141.8
GRO Percent recovery is based		Resu 7.63	lt. 3	mg/Kg	1 on the spike Spike	Amount 10.0 and spike d Matrix	R	esult 2.5 e result F	Rec.		Limit - 141.5 RPD
GRO Percent recovery is based Param		Resu 7.63 e result. MSD	lt. B RPD is	mg/Kg based c Dil.	1 on the spike Spike	Amount 10.0 and spike d Matrix	R uplicat	esult 2.5 e result F L	Rec. 51 	10	Limit - 141.5 RPD
GRO Percent recovery is based Param GRO		Resu 7.63 e result. MSD Result 7.45	lt RPD is Units mg/Kg	mg/Kg based c Dil. g 1	1 on the spike Spike Amount 10.0	Amount 10.0 and spike d Matrix Result 2.5	R uplicat Rec. 50	esult 2.5 e result F L 10 -	Rec. 51 Rec. imit 141.5	10 RPD	Limit - 141.8 RPD Limit
GRO Percent recovery is based Param GRO		Resu 7.63 e result. MSD Result 7.45 e result.	lt RPD is Units mg/Kg RPD is	mg/Kg based o Dil. g 1 based o	1 on the spike Spike Amount 10.0	Amount 10.0 and spike d Matrix Result 2.5 and spike d	R uplicat Rec. 50 uplicat	esult 2.5 e result F L 10 -	Rec. 51 Rec. imit 141.5	10 RPD 2	Limit - 141.8 RPD Limit 20
GRO Percent recovery is based Param GRO Percent recovery is based		Resu 7.63 e result. MSD Result 7.45 e result. MS	lt. RPD is Units mg/Kg RPD is	mg/Kg based c Dil. g 1 based c	1 on the spike Spike Amount 10.0 on the spike	Amount 10.0 and spike d Matrix Result 2.5 and spike d Sp	R uplicat Rec. 50 uplicat	esult 2.5 e result F Li 10 - e result MS	Rec. 51 tec. imit 141.5 MSD	10 RPD 2	Limit - 141.5 RPD Limit 20 Rec.
GRO Percent recovery is based Param GRO Percent recovery is based Surrogate		Resu 7.63 e result. MSD Result 7.45 e result.	lt RPD is Units mg/Kg RPD is M t Re	mg/Kg based o Dil. g 1 based o	1 on the spike Spike Amount 10.0 on the spike Units	Amount 10.0 and spike d Matrix Result 2.5 and spike d Sp Dil. Amo	R uplicat Rec. 50 uplicat	esult 2.5 e result F L 10 -	Rec. 51 Rec. imit 141.5	10 R.PD 2	Limit - 141. RPD Limit 20
Param <u>GRO</u> Percent recovery is based Param <u>GRO</u> Percent recovery is based Surrogate Triffuorotoluene (TFT) A Promofuoroborgane (4	l on the spik	Resu 7.63 e result. MSD Result 7.45 e result. MS Resul 0.569	$\frac{\text{Units}}{\text{RPD is}}$ $\frac{\text{Units}}{\text{mg/K}_{\xi}}$ $\frac{\text{RPD is}}{\text{M}}$ $\frac{\text{M}}{\text{t} - \text{Re}}$	mg/Kg based o 5 1 based o ISD sult 592	1 Spike Amount 10.0 on the spike Units mg/Kg	Amount 10.0 and spike d Matrix Result 2.5 and spike d Sp Dil. Amount 1	R uplicat Rec. 50 uplicat ike ount	esult 2.5 e result F L 10 - e result MS Rec. 57	Rec. 51 Rec. imit 141.5 MSD Rec. 59	10 RPD 2 H L 40	Limit - 141 RPI Lim 20 Rec. imit - 125.3
GRO Percent recovery is based Param GRO Percent recovery is based Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4	l on the spik	Resu 7.63 e result. MSD Result 7.45 e result. MS Resul	$\frac{\text{Units}}{\text{RPD is}}$ $\frac{\text{Units}}{\text{mg/K}_{\xi}}$ $\frac{\text{RPD is}}{\text{M}}$ $\frac{\text{M}}{\text{t} - \text{Re}}$	mg/Kg based c Dil. g 1 based c ISD ssult	1 on the spike Spike Amount 10.0 on the spike Units	Amount 10.0 and spike d Matrix Result 2.5 and spike d Sp Dil. Amount 1	R uplicat Rec. 50 uplicat ike punt	esult 2.5 e result F L 10 - e result MS Rec.	Rec. 51 Rec. imit 141.5 MSD Rec.	10 RPD 2 H L 40	Limit - 141. RPI Limi 20 Rec. Jimit - 125.3
GRO Percent recovery is based Param GRO Percent recovery is based Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4 Standard (CCV-1)	l on the spik	Resu 7.63 e result. MSD Result 7.45 e result. MS Resul 0.569	$\frac{\text{Units}}{\text{mg/Kg}}$ RPD is $\frac{\text{mg/Kg}}{\text{RPD}}$ RPD is $\frac{\text{M}}{\text{t} - \text{Re}}$	mg/Kg based o Dil. g 1 based o ISD esult 592 860	1 Spike Amount 10.0 on the spike Units mg/Kg	Amount 10.0 and spike d Matrix Result 2.5 and spike d Sp Dil. Amo 1 1	R uplicat Rec. 50 uplicat ike ount	esult 2.5 e result F L 10 - e result MS Rec. 57	Rec. 51 tec. imit 141.5 MSD Rec. 59 86	10 RPD 2 H L 40	Limit - 141. RPD Limi 20 Rec. imit - 125.3 - 144.
GRO Percent recovery is based Param GRO Percent recovery is based Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4 Standard (CCV-1)	l on the spik	Resu 7.63 e result. MSD Result 7.45 e result. MS Resul 0.569 0.914	$\frac{\text{Units}}{\text{mg/Kg}}$ RPD is $\frac{\text{mg/Kg}}{\text{RPD}}$ RPD is $\frac{\text{M}}{\text{t} - \text{Re}}$	mg/Kg based o Dil. g 1 based o ISD esult 592 860 Analyze	1 on the spike Spike Amount 10.0 on the spike Units mg/Kg mg/Kg ed: 2007-06	Amount 10.0 and spike d Matrix Result 2.5 and spike d Sp Dil. Amo 1 1 5-28	R uplicat Rec. 50 uplicat ike ount	esult 2.5 e result F L 10 - e result MS Rec. 57	Rec. 51 tec. imit 141.5 MSD Rec. 59 86	10 RPD 2 I L 40 86.7	Limit - 141. RPD Limi 20 Rec. imit - 125.3 - 144.
GRO Percent recovery is based Param GRO Percent recovery is based Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4 Standard (CCV-1)	l on the spik	Resul 7.63 e result. MSD Result 7.45 e result. MS Resul 0.569 0.914	$\frac{\text{Units}}{\text{mg/Kg}}$ RPD is $\frac{\text{mg/Kg}}{\text{RPD}}$ RPD is $\frac{\text{M}}{\text{t}}$ $\frac{\text{C}}{\text{R}}$ Date	mg/Kg based o Dil. g 1 based o ISD esult 592 860 Analyze	1 Spike Amount 10.0 on the spike Units mg/Kg mg/Kg	Amount 10.0 and spike d Matrix Result 2.5 and spike d Sp Dil. Amo 1 1	R uplicat Rec. 50 uplicat ike ount	esult 2.5 e result 10 - e result MS Rec. 57 91	Rec. 51 tec. imit 141.5 MSD Rec. 59 86 A ent	10 RPD 2 H L 40 86.7	Limit - 141. RPD Limi 20 Rec. imit - 125.3 - 144.
GRO Percent recovery is based Param GRO Percent recovery is based Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4 Standard (CCV-1)	l on the spik	Resu 7.63 e result. MSD Result 7.45 e result. MS Resul 0.569 0.914	It RPD is MRPD is MRPD is M t Re 0 0. (). Date CCVs	mg/Kg based o Dil. g 1 based o ISD esult 592 860 Analyze G	1 on the spike Amount 10.0 on the spike Units mg/Kg mg/Kg mg/Kg	Amount 10.0 and spike d Matrix Result 2.5 and spike d Sp Dil. Amo 1 1 5-28 CCVs	Rec. 50 uplicat ike ount 1	esult 2.5 e result F L' 10 - e result MS Rec. 57 91	Rec. 51 Rec. imit 141.5 MSD Rec. 59 86 A ent very its	10 RPD 2 I L 40 86.7 .nalyzed	Limit - 141.8 RPD Limit 20 Rec. imit - 125.3 - 144.8 By:

²Surrogate out due to peak interference.

Report Date: July 2, 2007 Red Byrd Ranch - TNM Historical Work Order: 7062721 Red Byrd Ranch - TNM Historical

Standard (CCV-2)

1

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1

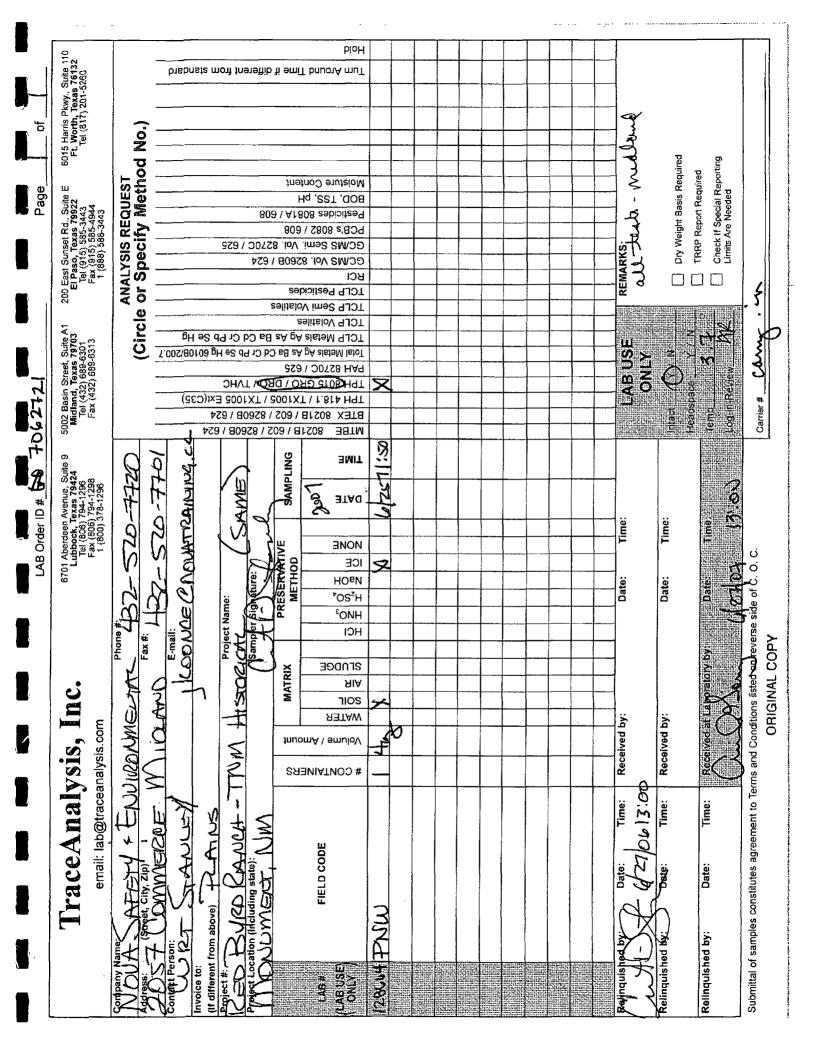
QC Batch:	38661		Date A	nalyzed: 2007-	Analyzed By:		
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	230	92	85 - 115	2007-06-28

Standard (ICV-1)

QC Batch:	38680	680Date Analyzed:2007-07-01Analyzed:					
			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.02	102	85 - 115	2007-07-01

Standard (CCV-1)

QC Batch:	38680		Date Ana	alyzed: 2007-0	Analyzed By: AG		
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.06	106	85 - 115	2007-07-01



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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Curt Stanley Nova Safety & Environmental 2057 Commerce St. Midland, TX, 79703

Report Date: December 10, 2007

Work Order: 7112916

Project Location: Monument, NM **Project Name:** Red Byrd Ranch - TNM Historical **Project Number:** Red Byrd Ranch - TNM Historical

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
143908	SB1-07-10'	soil	2007-11-28	09:00	2007-11-29
143909	SB1-07-20'	soil	2007-11-28	09:10	2007-11-29
143910	SB2-07-10'	soil	2007-11-28	09:50	2007-11-29
143911	SB2-07-20'	soil	2007-11-28	10:00	2007-11-29
143912	SB3-07-10'	soil	2007-11-28	10:35	2007 - 11 - 29
143913	SB3-07-20'	soil	2007-11-28	10:45	2007 - 11 - 29
143914	SB3-07-29'	soil	2007-11-28	10:55	2007-11-29
143915	SB4-07-10'	soil	2007-11-28	13:10	2007-11-29
143916	SB4-07-20'	soil	2007-11-28	13:20	2007-11-29
143917	SB4-07-29'	soil	2007-11-28	13:45	2007-11-29
143918	SB5-07-10'	soil	2007-11-28	14:45	2007-11-29
143919	SB5-07-20'	soil	2007-11-28	14:55	2007-11-29
143920	SB5-07-29'	soil	2007-11-28	15:10	2007-11-29
143921	SB6-07-10'	soil	2007-11-28	16:50	2007-11-29
143922	SB6-07-20'	soil	2007-11-28	17:05	2007 - 11 - 29
143923	SB6-07-29'	soil	2007-11-28	17:20	2007-11-29

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 24 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Blain Lapourch

Dr. Blair Leftwich, Director

Standard Flags

 ${\bf B}\,$ - The sample contains less than ten times the concentration found in the method blank.

Page 2 of 24

Sample: 143908 - SB1-07-10'

Analytical Report

Analysis: QC Batch: Prep Batch:	TPH DRO 43691 37678		Analytical M Date Analyz Sample Prep	ed: 2007	. 8015B -12-07 -12-07	Analy	Method: N/A yzed By: AG ared By: AG
			$\mathbf{R}\mathbf{L}$				
Parameter	Fla	g	\mathbf{Result}	U	Inits	Dilution	\mathbf{RL}
DRO			<50.0	mg	/Kg	1	50.0
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		122	mg/Kg	1	150	81	17.3 - 169.6

Sample: 143908 - SB1-07-10'

Analysis: QC Batch: Prep Batch:	TPH GRO 43475 37494		Analytical Date Anal Sample Pr		S 8015B 2007-11-29 2007-11-29		Prep Meth Analyzed I Prepared F	By: DC
			\mathbf{RL}					
Parameter	Flag		Result		Units	D	ilution	$\mathbf{R}\mathbf{L}$
GRO			<1.00		mg/Kg		1	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)		0.892	mg/Kg	1	1.00	89	70 - 130
4-Bromofluor	obenzene (4-BFB)		0.916	mg/Kg	1	1.00	92	70 - 130

Sample: 143909 - SB1-07-20'

Analysis: QC Batch: Prep Batch:	BTEX 43487 37494		Analytical M Date Analyze Sample Prepa	ed:	S 8021B 2007-11-29 2007-11-29		Prep Metho Analyzed E Prepared B	y: DC
Parameter	Fl	20	RL Result		Units	Di	ution	\mathbf{RL}
Benzene	1.14	1g	<0.0200		mg/Kg		2	0.0100
Toluene			0.0399		mg/Kg		2	0.0100
Ethylbenzene			0.0926		mg/Kg		2	0.0100
Xylene			0.0661		mg/Kg		2	0.0100
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue	ene (TFT)		1.83	mg/Kg	<u>z</u> 2	2.00	92	70 - 130
4-Bromofluor	obenzene (4-BFB))	1.93	mg/Kg	g 2	2.00	96	70 - 130

Sample: 143909 - SB1-07-20'

Analysis: QC Batch: Prep Batch:	TPH DRO 43691 37678		Analytical M Date Analyz Sample Prep	ed: 200	od. 8015B)7-12-07)7-12-07	Anal	Method: yzed By: ared By:	N/A AG AG
Parameter	Fl	ıg	RL Result		Units	Dilution		\mathbf{RL}
DRO			760	n	ng/Kg	1		50.0
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Reco Lin	•
n-Triacontane	9	218	mg/Kg	1	150	145	17.3 -	169.6

Sample: 143909 - SB1-07-20'

Analysis: QC Batch: Prep Batch:	TPH GR() 43475 37494		Analytical Date Anal Sample Pr	yzed:	S 8015B 2007-11-29 2007-11-29		Prep Meth Analyzed I Prepared I	By: DC
			RL		TT 1.			DI
Parameter	Flag		Result		Units	D	ilution	RL
GRO			104		mg/Kg		2	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)		1.76	mg/Kg	2	2.00	88	70 - 130
	robenzene (4-BFB)		2.32	mg/Kg	2	2.00	116	70 - 130

Sample: 143910 - SB2-07-10'

Analysis: QC Batch: Prep Batch:	TPH DRO 43691 37678		Analytical M Date Analyz Sample Prep	ed: 2	Mod. 8015B 2007-12-07 2007-12-07	Anal	Method: yzed By: ared By:	N/A AG AG
Parameter DRO	Fla	<u>,</u>	RL Result		Units	Dilution		RL 50.0
<u>DR()</u>			<50.0		mg/Kg	A.		
Surrogate	Flag	Result	Units	Dilutio	Spike n Amount	Percent Recovery	Reco Lim	•
n-Triacontan	e	122	mg/Kg	1	150	81	17.3 -	169.6

Sample: 143910 - SB2-07-10'

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	43475	Date Analyzed:	2007-11-29	Analyzed By:	DC
Prep Batch:	37494	Sample Preparation:	2007-11-29	Prepared By:	DC

Parameter	Flag		RL Result		Units	D	ilution	RL
GRO	В		1.12	······································	mg/Kg		1	1.00
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (T	FT)		0.889	mg/Kg	1	1.00	89	70 - 130
4-Bromofluorobenz	ene (4-BFB)		0.976	mg/Kg	· 1	1.00	98	70 - 130

Sample: 143911 - SB2-07-20'

Analysis: BTEX QC Batch: 43487 Prep Batch: 37494			Analytical M Date Analyze Sample Prep	ed:	S 8021B 2007-11-29 2007-11-29		Prep Meth Analyzed I Prepared I	By: DC
			$\mathbf{R}\mathbf{L}$					
Parameter	Flag		Result		Units	Dil	ution	\mathbf{RL}
Benzene			< 0.0500		mg/Kg		5	0.0100
Toluene			0.250		mg/Kg		5	0.0100
Ethylbenzene			0.249		mg/Kg		5	0.0100
Xylene			0.808		mg/Kg		5	0.0100
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			4.35	mg/K	g 5	5.00	87	70 - 130
4-Bromofluorobenzene (4-B	FB)		5.10	mg/K		5.00	102	70 - 130

Sample: 143911 - SB2-07-20'

Analysis: QC Batch: Prep Batch:	TPH DRO 43691 37678		Analytical M Date Analyz Sample Prep	ed: 2007-		Analy	Method: N/ yzed By: AC ared By: AC
Parameter	Fla	g	RL Result	U	nits	Dilution	R
DRO			2000	mg/	′Kg	5	50
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		129	mg/Kg	5	150	86	17.3 - 169

TPH GRO Analytical Method: Analysis: S 8015B Prep Method: S 5035 QC Batch: Date Analyzed: Analyzed By: DC434752007-11-29 Prep Batch: 37494 Sample Preparation: 2007-11-29 Prepared By: DC \mathbf{RL} Parameter Flag Result Units Dilution \mathbf{RL} GRO 426 mg/Kg $\mathbf{5}$ 1.00

Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolue	ene (TFT)		4.30	mg/Kg	5	5.00	86	70 - 130
	obenzene (4-BFB)		6.95	mg/Kg	5	5.00	139	70 - 130
Sample: 14	3912 - SB3-07-10)'						
Analysis:	TPH DRO		Analytical	Method:	Mod. 8015B		Prep Me	thod: N/A
QC Batch:	43691		Date Anal		2007-12-07		Analyze	
Prep Batch:	37678			reparation:	2007-12-07		Prepare	
			\mathbf{RL}					
Parameter	Flag		Result		Units		Dilution	RL
DR()			<50.0		mg/Kg		11	50.0
					Sp	ike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilut	tion Ame	ount	Recovery	Limits
n-Triacontan	e	130	mg/Kg	1	15	50	87	17.3 - 169.6
Sample: 14)?						
Analysis: QC Batch:	3912 - SB3-07-10 TPH GRO 43475 37494),	Analytical Date Anal		S 8015B 2007-11-29 2007-11-29		Prep Meti Analyzed Prepared	By: DC
Sample: 14 Analysis: QC Batch: Prep Batch:	3912 - SB3-07-10 TPH GRO 43475),	Analytical Date Anal	yzed:	2007-11-29		Prep Meti Analyzed	By: DC
Analysis: QC Batch: Prep Batch:	3912 - SB3-07-10 TPH GRO 43475),	Analytical Date Anal Sample Pr	yzed:	2007-11-29		Prep Meti Analyzed	By: DC
Analysis: QC Batch:	3912 - SB3-07-10 TPH GRO 43475 37494),	Analytical Date Anal Sample Pr RL	yzed:	2007-11-29 2007-11-29		Prep Meti Analyzed Prepared	By: DC By: DC RI
Analysis: QC Batch: Prep Batch: Parameter	3912 - SB3-07-10 TPH GRO 43475 37494 Flag		Analytical Date Anal Sample Pr RL Result	yzed:	2007-11-29 2007-11-29 Units		Prep Meth Analyzed Prepared Dilution	By: DC By: DC RI 1.00
Analysis: QC Batch: Prep Batch: Parameter GRO Surrogate	3912 - SB3-07-10 TPH GRO 43475 37494 Flag <i>B</i>), Flag	Analytical Date Anal Sample Pr RL Result 3.09	yzed: eparation:	2007-11-29 2007-11-29 Units mg/Kg	Spike	Prep Meth Analyzed Prepared Dilution 1 Percent	By: DC By: DC RL 1.00 Recovery
Analysis: QC Batch: Prep Batch: Parameter GRO Surrogate Trifluorotolue	3912 - SB3-07-10 TPH GRO 43475 37494 Flag <i>B</i>		Analytical Date Anal Sample Pr RL Result 3.09 Result	yzed: 'eparation: Units	2007-11-29 2007-11-29 Units mg/Kg Dilution	Spike Amount	Prep Meth Analyzed Prepared Dilution 1 Percent Recovery	By: DC By: DC RL 1.00 Recovery Limits
Analysis: QC Batch: Prep Batch: Parameter GRO Surrogate Trifluorotolue 4-Bromofluor	3912 - SB3-07-10 TPH GRO 43475 37494 Flag <i>B</i>	Flag	Analytical Date Anal Sample Pr RL Result 3.09 Result 0.895	yzed: eparation: Units mg/Kg	2007-11-29 2007-11-29 Units mg/Kg Dilution	Spike Amount 1.00	Prep Meth Analyzed Prepared Dilution 1 Percent Recovery 90	By: DC By: DC RI 1.00 Recovery Limits 70 - 130

QC Batch: Prep Batch:					12-07 12-07		yzed By: AG ared By: AG
		_	RL			ľ	J
Parameter	Flag	g	Result		nits	Dilution	R.L
DRO	· · · · · · · · · · · · · · · · · · ·		<50.0	mg	/Kg	1	50.0
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontan	e	117	mg/Kg	1	150	78	17.3 - 169.6

¹High surrogate recovery due to peak interference.

.

Sample: 143913 - SB3-07-20'

Analysis: QC Batch: Prep Batch:	TPH GRO 43475 37494	Analytical Method: Date Analyzed: Sample Preparation:	S 8015B 2007-11-29 2007-11-29	Prep Method: Analyzed By: Prepared By:	\mathbf{DC}
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
GRO		<1.00	mg/Kg	1	1.00

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.893	mg/Kg	1	1.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)		0.929	mg/Kg	1	1.00	93	70 - 130

Sample: 143914 - SB3-07-29'

Analysis: QC Batch: Prep Batch:	BTEX 43487 37494		Analytical M Date Analyze Sample Prepa	ed:	S 8021B 2007-11-29 2007-11-29		Prep Method Analyzed By: Prepared By:	
			\mathbf{RL}					
Parameter	Flag		\mathbf{Result}		Units	Dil	ution	\mathbf{RL}
Benzene			< 0.0100		mg/Kg		1	0.0100
Toluene			< 0.0100		mg/Kg		1	0.0100
Ethylbenzene	<u>;</u>		< 0.0100		mg/Kg		1	0.0100
Xylene			< 0.0100		mg/Kg		1	0.0100
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue	ene (TFT)		0.898	mg/Kg	g 1	1.00	90	70 - 130
4-Bromofluor	obenzene (4-BFB)		0.928	mg/Kg	,	1.00	93	70 - 130

Sample: 143914 - SB3-07-29'

Analysis: QC Batch: Prep Batch:	TPH DRO 43691 37678		Analytical M Date Analyz Sample Prep	ed: 2	Mod. 8015B 2007-12-07 2007-12-07	Anal	Method: N/A yzed By: AG ared By: AG
Parameter	Fla	g	RL Result		Units	Dilution	RL
DRO			152		mg/Kg	1	50.0
Surrogate	Flag	Result	Units	Dilutio	Spike n Amount	Percent Recovery	Recovery Limits
n-Triacontan	e	149	mg/Kg	1	150	99	17.3 - 169.6

Sample: 143914 - SB3-07-29'

Analysis: QC Batch: Prep Batch:	TPH GRO 43475 37494	Analytical Method: Date Analyzed: Sample Preparation:	S 8015B 2007-11-29 2007-11-29	Prep Method: Analyzed By: Prepared By:	DC
Parameter	Flag	RL Besult	Units	Dilution	\mathbf{RL}
GRO	ring				
GRO	· · · · · · · · · · · · · · · · · · ·	11.8	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.889	mg/Kg	1	1.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)		1.09	mg/Kg	1	1.00	109	70 - 130

Sample: 143915 - SB4-07-10'

Analysis: QC Batch: Prep Batch:	TPH DRO 43691 37678		Analytical M Date Analyz Sample Prep	ed: 2	Mod. 8015B 2007-12-07 2007-12-07	Anal	Prep Method: Analyzed By: Prepared By:	
Parameter	Fla	g	RL Result		Units	Dilution		RL
DRO			<50.0		mg/Kg	1		50.0
Surrogate	Flag	Result	Units	Dilutio	Spike n Amount	Percent Recovery	Reco Lin	."
n-Triacontane	9	125	ing/Kg	1	150	83	17.3 -	169.6

Sample: 143915 - SB4-07-10'

Analysis: QC Batch: Prep Batch:	TPH GRO 43475 37494	3475 Date Analyzed: 2		S 8015B 2007-11-29 2007-11-29	Prep Methoc Analyzed By Prepared By		By: DC	
Parameter	Pl		RL		TT •,		-1	DI
$\frac{r arameter}{GRO}$	Flag		Result <1.00		Units mg/Kg	D	ilution 1	
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu 4-Bromofluor	ene (TFT) cobenzene (4-BFB)		0.903 0.944	mg/Kg mg/Kg	1 1	1.00 1.00	90 94	70 - 130 70 - 130

Sample: 143916 - SB4-07-20'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	43691	Date Analyzed:	2007-12-07	Analyzed By:	AG
Prep Batch:	37678	Sample Preparation:	2007-12-07	Prepared By:	AG

Parameter	Fla	ıg	RL Result	U	nits	Dilution	\mathbf{RL}	
DR()			<50.0	mg/	′Kg	1	50.0	
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
n-Triacontane	1 100	120	mg/Kg	1	150	80	17.3 - 169.6	

Sample: 143916 - SB4-07-20'

Analysis: QC Batch: Prep Batch:	TPH GRO 43475 37494		Analytical l Date Analy Sample Pre	zed:	S 8015B 2007-11-29 2007-11-29	Prep Metho Analyzed B Prepared B		y: DC
			\mathbf{RL}					
Parameter	Flag		Result		Units	Di	ilution	\mathbf{RL}
GRO	·····		<1.00		mg/Kg		1	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)		0.892	mg/Kg	1	1.00	89	70 - 130
4-Bromofluor	cobenzene (4-BFB)		0.931	mg/Kg	1	1.00	93	70 - 130

Sample: 143917 - SB4-07-29'

QC Batch: 4	3TEX 3618 7578	Analytical Method:S 8021BDate Analyzed:2007-12-05Sample Preparation:2007-12-04			Prep Method: Analyzed By: Prepared By:			
			\mathbf{RL}					
Parameter	Flag		\mathbf{Result}		\mathbf{Units}	Dil	ution	\mathbf{RL}
Benzene			< 0.0100		mg/Kg		1	0.0100
Tohuene			< 0.0100		mg/Kg		1	0.0100
Ethylbenzene			< 0.0100		mg/Kg		· 1	0.0100
Xylene			< 0.0100		mg/Kg	10 m	1	0.0100
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene	e (TFT)		1.21	mg/Kg	1	1.00	121	70 - 130
4-Bromofluorob	enzene (4-BFB)		0.854	mg/Kg	1	1.00	85	70 - 130

Sample: 143917 - SB4-07-29'

Analysis: QC Batch:	TPH DRO 43692	Analytical Method: Date Analyzed:	Mod. 8015B 2007-12-08	Prep Method: Analyzed By:	,
Prep Batch:	37678	Sample Preparation:	2007-12-07	Prepared By:	AG
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
DRO		<50.0	mg/Kg	1	50.0

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		144	mg/Kg	1	150	96	17.3 - 169.6

Sample: 143917 - SB4-07-29'

Analysis:TPH GROQC Batch:43619Prep Batch:37578			Analytical Method: Date Analyzed: Sample Preparation:				Prep Meth Analyzed 1 Prepared 1	By: DC
			\mathbf{RL}					
Parameter Flag			Result		Units	Dilution		\mathbf{RL}
GRO			<1.00		mg/Kg		1	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)	0	0.911	mg/Kg	1	1.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			0.922	mg/Kg	1	1.00	92	70 - 130

Sample: 143918 - SB5-07-10'

Analysis: QC Batch: Prep Batch:	QC Batch: 43692		Analytical M Date Analyz Sample Prep	ed: 2007	. 8015B -12-08 -12-07	Anal	Method: N/A yzed By: AG ared By: AG
			\mathbf{RL}				
Parameter	Fla	g	\mathbf{Result}	τ	Inits	Dilution	\mathbf{RL}
DRO			<50.0	mg	/Kg	1	50.0
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontan	e	136	mg/Kg	1	150	91	17.3 - 169.6

Sample: 143918 - SB5-07-10'

.

Analysis:TPH GROQC Batch:43619Prep Batch:37578			Date Analyzed: 2		S 8015B 2007-12-05 2007-12-04		Prep Method Analyzed By Prepared By		
			\mathbf{RL}						
Parameter	Flag		Result		Units	D	ilution	RL	
GRO			<1.00		mg/Kg		1	1.00	
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotolue	ene (TFT)		0.923	mg/Kg	1	1.00	92	70 - 130	
4-Bromofluor	obenzene (4-BFB)		0.932	$\mathrm{mg/Kg}$	1	1.00	93	70 - 130	

Sample: 143919 - SB5-07-20'

Analysis: QC Batch: Prep Batch:	QC Batch: 43692		Analytical Method Date Analyzed: Sample Preparatio		od. 8015B 007-12-08 007-12-07	Analy	Method: N/A yzed By: AG ared By: AG
_			RL				
Parameter	Fla	lg	Result		Units	Dilution	$\mathbf{R}\mathbf{L}$
DRO			<50.0		mg/Kg	1	50.0
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontan	e	136	mg/Kg	1	150	91	17.3 - 169.6

Sample: 143919 - SB5-07-20'

Analysis: TPH GRO QC Batch: 43619 Prep Batch: 37578			Analytical Method: Date Analyzed: Sample Preparation:				Prep Metho Analyzed B Prepared B		
			\mathbf{RL}						
Parameter	Flag		Result		Units	Di	lution	\mathbf{RL}	
GRO			<1.00		mg/Kg		1	1.00	
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotolu	ene (TFT)		0.920	mg/Kg	1	1.00	92	70 - 130	
4-Bromofluor	obenzene (4-BFB)		0.933	mg/Kg	1	1.00	93	70 - 130	

Sample: 143920 - SB5-07-29'

Analysis: QC Batch: Prep Batch:	BTEX 43618 37578			Analytical Method:S 8021BDate Analyzed:2007-12-05Sample Preparation:2007-12-04		Prep Meth Analyzed I Prepared I	By: DC		
				\mathbf{RL}					
Parameter		Flag		Result		Units	I	Dilution	\mathbf{RL}
Benzene				< 0.0100		mg/Kg		1	0.0100
Toluene				< 0.0100		mg/Kg		1	0.0100
Ethylbenzene	;			< 0.0100		mg/Kg		1	0.0100
Xylene				< 0.0100		mg/Kg		1	0.0100
							Spike	Percent	Recovery
Surrogate			Flag	Result	Units	Dilution	n Amount	Recovery	Limits
Trifluorotolue	ene (TFT)			1.20	mg/K	g 1	1.00	120	70 - 130
4-Bromofluor	obenzene (4-B	FB)		0.858	mg/K	<u>g_1</u>	1.00	86	70 - 130

Sample: 143920 - SB5-07-29'

Analysis: QC Batch: Prep Batch:	QC Batch: 43692		Date Analyzed: 20		Mod. 8015B 2007-12-08 2007-12-07		Anal	Prep Method: Analyzed By: Prepared By:	
Parameter	Fl	ŧg	${f RL} {f Result}$		Units		Dilution		\mathbf{RL}
DRO			<50.0		mg/Kg		1		50.0
Surrogate	Flag	Result	Units	Dilutic		oike Iouut	Percent Recovery		overy nits
n-Triacontan	e	162	mg/Kg	1	1	.50	108	17.3 -	169.6

Sample: 143920 - SB5-07-29'

Analysis: QC Batch: Prep Batch:	TPH GR() 43619 37578		Analytical Date Anal Sample Pr	yzed:	2007-12-05 Analyz		Prep Meth Analyzed F Prepared F	By: DC
			\mathbf{RL}					
Parameter	Flag		Result		Units	Di	lution	\mathbf{RL}
GRO			<1.00		mg/Kg	· · · · · · · · · · · · · · · · · · ·	1	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)		0.919	mg/Kg	1	1.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.930	mg/Kg	1	1.00	93	70 - 130

Sample: 143921 - SB6-07-10'

Analysis:TPH DROQC Batch:43692Prep Batch:37678			Analytical Method: Date Analyzed: Sample Preparation:		Mod. 801 2007-12-(2007-12-()8	Prep Method: Analyzed By: Prepared By:		N/A AG AG		
Parameter	Fla	g.	RL Result		Units		Dilution		\mathbf{RL}		
DRO				<50.0			mg/Kg		1		50.0
Surrogate	Flag	Result	Units	Dilutic	n	Spike Amount	Percent Recovery		overy aits		
n-Triacontan	e	135	mg/Kg	1		150	90	17.3 -	169.6		

Sample: 143921 - SB6-07-10'

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	43619	Date Analyzed:	2007-12-05	Analyzed By:	DC
Prep Batch:	37578	Sample Preparation:	2007-12-04	Prepared By:	DC

Parameter	Flag		${ m RL} { m Result}$		Units	D	ilution	\mathbf{RL}
GRO			<1.00		mg/Kg		1	1.00
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TI	FT)		0.913	mg/Kg	1	1.00	91	70 - 130
4-Bromofluorobenze	ene (4-BFB)		0.923	mg/Kg	1	1.00	92	70 - 130

Sample: 143922 - SB6-07-20'

Analysis: QC Batch: Prep Batch:	TPH DRO 43692 37678		Analytical M Date Analyz Sample Prep	ed:	Mod. 801 2007-12-0 2007-12-0	8	Analy	Method: yzed By: ared By:	N/A AG AG
			\mathbf{RL}						
Parameter	Fla	g	Result		Units		Dilution		\mathbf{RL}
DRO			<50.0		mg/Kg		1		50.0
Surrogate	Flag	Result	Units	Dilutic	on	Spike Amount	Percent Recovery		overy nits
n-Triacontan	e	132	mg/Kg	1		150	88	17.3 -	169.6

Sample: 143922 - SB6-07-20'

Analysis: QC Batch: Prep Batch:	TPH GRO 43619 37578		Analytical Date Analy Sample Pro	yzed:	S 8015B 2007-12-05 2007-12-04		Prep Method Analyzed By Prepared By	
Parameter	Flag		${ m RL} { m Result}$		Units	D	ilution	\mathbf{RL}
GRO			<1.00		mg/Kg		1	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu 4-Bromofluor	ene (TFT) cobenzene (4-BFB)		0.919 0.931	mg/Kg mg/Kg	1 1	$\frac{1.00}{1.00}$	92 93	70 - 130 70 - 130

Sample: 143923 - SB6-07-29'

Analysis:	BTEX		Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	43618		Date Analyzed:	2007-12-05	Analyzed By:	\mathbf{DC}
Prep Batch:	37578		Sample Preparation:	2007-12-04	Prepared By:	DC
			RL			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Benzene			<0.0100	mg/Kg	1	0.0100
Toluene			< 0.0100	mg/Kg	1	0.0100
Ethylbenzen	e		< 0.0100	mg/Kg	1	0.0100
Xylene			< 0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.19	mg/Kg	1	1.00	119	70 - 130
4-Bromofluorobenzene (4-BFB)		0.849	mg/Kg	1	1.00	85	70 - 130

Sample: 143923 - SB6-07-29'

Analysis: QC Batch: Prep Batch:	TPH DRO 43692 37678		Analytical M Date Analyz Sample Prep	ed: 200	d. 8015B 17-12-08 17-12-07	Analy	Method: N/A yzed By: AG ared By: AG
_			RL				
Parameter	Fla	g	Result	-	Units	Dilution	\mathbf{RL}
DRO			<50.0	11	ig/Kg	1	50.0
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane	6	137	mg/Kg	1	150	91	17.3 - 169.6

Sample: 143923 - SB6-07-29'

Analysis: QC Batch:	TPH GRO 43619		Analytical Date Anal		S 8015B 2007-12-05		Prep Metho Analyzed E		
Prep Batch:			Sample Pr		2007-12-03	Prepared B		•/	
			\mathbf{RL}						
Parameter	Flag		Result		Units	D	ilution	RL	
GRO			<1.00		mg/Kg		1	1.00	
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotolu	ene (TFT)		0.912	mg/Kg	1	1.00	91	70 - 130	
4-Bromofluor	robenzene (4-BFB)		0.920	mg/Kg	1	1.00	92	70 - 130	

Method Blank (1) QC Batch: 43475

QC Batch: 43475 Prep Batch: 37494		Date Ana QC Prepa	•/)7-11-29)7-11-29			d By: DC d By: DC
			MDL				
Parameter	Flag		\mathbf{Result}		Units		\mathbf{RL}
GRO			0.527		mg/Kg	ç	1
a	ы		TT		Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.939	mg/Kg	1	1.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)		0.924	mg/Kg	11	1.00	92	70 - 130

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Method Blank (1) QC Batch: 43487

QC Batch: 43487 Prep Batch: 37494		Date Analyzed: 2007-11-29 QC Preparation: 2007-11-29		Analyzed By: Prepared By:	
		MDL			
Parameter	Flag	\mathbf{Result}	Units		\mathbf{RL}
Benzene		<0.00300	mg/Kg		0.01
Toluene		< 0.00300	mg/Kg		().01
Ethylbenzene		< 0.00400	mg/Kg		0.01
Xylene		<0.0140	mg/Kg		0.01
			Spike	Percent Re	covery

Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.952	mg/Kg	1	1.00	95	70 - 130
4-Bromofluorobenzene (4-BFB)		0.950	mg/Kg	1	1.00	95	70 - 130

Method Blank (1) QC Batch: 43618

QC Batch: 43618		Date Ana	lyzed: 200	7-12-05		Analyze	d By: DC
Prep Batch: 37578		QC Prepa	aration: 200	07-12-04		Prepare	d By: DC
			MDI	د			
Parameter	Flag		Resul	t	Units	8	\mathbf{RL}
Benzene			< 0.0030)	mg/K	g	0.01
Toluene			< 0.0030)	mg/K	g	0.01
Ethylbenzene			< 0.0040)	mg/K	g	0.01
Xylene			< 0.014)	mg/K	<u>g</u>	0.01
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Triffuorotoluene (TFT)		1.20	mg/Kg	1	1.00	120	70 - 130
4-Bromofluorobenzene (4-BFB)		0.850	mg/Kg	1	1.00	85	70 - 130

Method Blank (1) QC Batch: 43619

QC Batch: 43619 Prep Batch: 37578		Date Ana QC Prepa	lyzed: 20 tration: 20	07-12-05 07-12-04			d By: DC d By: DC
			MDL				
Parameter	Flag		Result		Units		\mathbf{RL}
GRO			0.585		mg/K	1	
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)		0.953 0.936	mg/Kg mg/Kg	1 1	$\begin{array}{c} 1.00\\ 1.00\end{array}$	95 94	70 - 130 70 - 130

QC Batch: 43691 Prep Batch: 37678			Date Analyzed: QC Preparation:	2007-12-07 2007-12-07			Analyzed I Prepared I	
			М	DL				
Parameter		Flag	Res			Units		RL
DR()			<1	.3.4		mg/Kg		50
Surrogate	Flag	Result	Units I	Dilution	Spike Amount	Percen Recove:		Recovery Limits
n-Triacontane		129	mg/Kg	1	15()	86		.9 - 156.1
Method Blank (1) QC Batch: 43692) QC I	Batch: 43692	Date Analyzed:	2007-12-08	3		Analyzed 1	By: AG
Prep Batch: 37678			QC Preparation:	2007-12-07	7		Prepared I	By: AG
Parameter		Flag	M Res	DL		Units		\mathbf{RL}
DRO		1 1105		.3.4		mg/Kg		<u>50</u>
······································					Spike	Percen	.+ т	Recovery
					эріке	rercen	ւն ք	recovery
Surrogate	Flag	Result	Units T	Dilution	Amount	Recover	rv	Limits
Surrogate n-Triacontane Laboratory Contr QC Batch: 43475 Prep Batch: 37494	Flag ol Spike (Result 153 LCS-1)	Units I mg/Kg Date Analyzed: QC Preparation:	Dilution 1 2007-11-29 2007-11-29		Recover 102		
n-Triacontane Laboratory Contr QC Batch: 43475		153	mg/Kg Date Analyzed:	1.	150		32 Analyzed 1	<u>.9 - 156.1</u> By: DC
n-Triacontane Laboratory Contr QC Batch: 43475 Prep Batch: 37494		153 LCS-1) LC	mg/Kg Date Analyzed: QC Preparation: CS	1 2007-11-29 2007-11-29	150) Spike	102 Matrix	32 Analyzed 1 Prepared I	<u>.9 - 156.1</u> By: DC By: DC Rec.
n-Triacontane Laboratory Contr QC Batch: 43475 Prep Batch: 37494 Param		153 LCS-1) LC Res	mg/Kg Date Analyzed: QC Preparation: CS sult Units	1 2007-11-29 2007-11-29 Dil.	150) Spike Amount	102 Matrix Result	32 Analyzed I Prepared I Rec.	.9 - 156.1 By: DC By: DC Rec. Limit
n-Triacontane Laboratory Contr QC Batch: 43475 Prep Batch: 37494 Param GRO	ol Spike (153 LCS-1) LCS-1)	mg/Kg Date Analyzed: QC Preparation: CS sult Units 36 mg/Kg	1 2007-11-29 2007-11-29 Dil. 1	150 Spike Amount 10.0	102 Matrix Result <0.0118	32 Analyzed 1 Prepared I	.9 - 156.1 3y: DC 3y: DC Rec.
n-Triacontane Laboratory Contr QC Batch: 43475	ol Spike (153 LCS-1) LCS-1) LC Res 8.3 8.3 8.4 8.4 8.4 8.4 8.4 8.4 8.4 8.4 8.4 8.4	mg/Kg Date Analyzed: QC Preparation: CS sult Units 36 mg/Kg	1 2007-11-29 2007-11-29 Dil. 1 the spike an	150 Spike Amount 10.0 d spike dupli	Matrix Result <0.0118 icate result.	32 Analyzed 1 Prepared I Rec. 84	.9 - 156.1 By: DC By: DC Rec. Limit 70 - 130
n-Triacontane Laboratory Contr QC Batch: 43475 Prep Batch: 37494 Param GRO Percent recovery is b Param	ol Spike (153 LCS-1) LCS-1) Res 8.3 e spike result. LCSD Result	mg/Kg Date Analyzed: QC Preparation: CS sult Units 36 mg/Kg . RPD is based on Units Dil.	1 2007-11-29 2007-11-29 Dil. 1	150 Spike Amount 10.0	102 Matrix Result <0.0118	32 Analyzed I Prepared I Rec. 84 c.	.9 - 156.1 3y: DC 3y: DC Rec. Limit 70 - 130 RPD
n-Triacontane Laboratory Contr QC Batch: 43475 Prep Batch: 37494 Param GRO Percent recovery is b Param GRO	ol Spike (pased on th	153 LCS-1) LCS-1) Result LCSD Result 7.96	mg/Kg Date Analyzed: QC Preparation: CS sult Units 36 mg/Kg . RPD is based on Units Dil. mg/Kg 1	1 2007-11-29 2007-11-29 Dil. 1 the spike an Spike Amount 10.0	150 Spike Amount 10.0 d spike dupli Matrix Result <0.0118	Matrix Result <0.0118 icate result. Rec. Lim 80 70 -	32 Analyzed I Prepared I Rec. 84 c. nit, RPD	.9 - 156.1 3y: DC 3y: DC Rec. Limit 70 - 130 RPD
n-Triacontane Laboratory Contr QC Batch: 43475 Prep Batch: 37494 Param GRO	ol Spike (pased on th	153 LCS-1) LCS-1) Result LCSD Result 7.96	mg/Kg Date Analyzed: QC Preparation: CS sult Units 36 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on	1 2007-11-29 2007-11-29 Dil. 1 the spike an Spike Amount 10.0	150 Spike Amount 10.0 d spike dupli Matrix Result <0.0118	Matrix Result <0.0118 icate result. Rec. Lim 80 70 -	32 Analyzed I Prepared I Rec. 84 c. nit, RPD	.9 - 156.1 3y: DC 3y: DC Rec. Limit 70 - 130 RPD
n-Triacontane Laboratory Contr QC Batch: 43475 Prep Batch: 37494 Param GRO Percent recovery is b Param GRO Percent recovery is b	ol Spike (pased on th	153 LCS-1) LCS-1) Result LCSD Result 7.96 e spike result. LC	mg/Kg Date Analyzed: QC Preparation: CS sult Units 36 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on CS LCSD	$\frac{1}{2007-11-29}$ $\frac{1}{2007-11-29}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{10.0}$ $\frac{1}{10.0}$	150 Spike Amount 10.0 d spike dupli Matrix Result <0.0118 d spike dupli Spike	Matrix Result <0.0118 icate result. 80 70 - icate result. e LCS	32 Analyzed 1 Prepared I Rec. 84 c. hit R.PD 130 5 LCSD	<u>.9 - 156.1</u> By: DC By: DC Rec. Limit 70 - 130 RPD Limit Rec.
n-Triacontane Laboratory Contr QC Batch: 43475 Prep Batch: 37494 Param GRO Percent recovery is b Param GRO Percent recovery is b Surrogate	ol Spike (pased on the	153 LCS-1) LCS-1) LCSD Result 7.96 e spike result. LCSD Result 7.96 e spike result. LC	mg/Kg Date Analyzed: QC Preparation: CS sult Units 36 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on CS LCSD ult Result	1 2007-11-29 2007-11-29 Dil. 1 the spike an Spike Amount 10.0 the spike an Units D	150 Spike Amount 10.0 d spike dupli Matrix Result <0.0118 d spike dupli Spike dil. Amou	Matrix Result <0.0118 icate result. 80 70 - icate result. e LCS int Rec.	32 Analyzed 1 Prepared I Rec. 84 c. hit R.PD 130 5 LCSD Rec.	<u>.9 - 156.1</u> By: DC By: DC Rec. Limit RPD Limit Rec. Limit
n-Triacontane Laboratory Contr QC Batch: 43475 Prep Batch: 37494 Param GRO Percent recovery is b Param GRO Percent recovery is b	ol Spike (pased on the pased on the T)	153 LCS-1) LCS-1) LCS-1) Result LCSD Result 7.96 e spike result. LCC Result LCC Result 2.99	mg/Kg Date Analyzed: QC Preparation: CS sult Units 36 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on CS LCSD ult Result 85 0.985	1 2007-11-29 2007-11-29 Dil. 1 the spike an Spike Amount 10.0 the spike an Units D ng/Kg	150 Spike Amount 10.0 d spike dupli Matrix Result <0.0118 d spike dupli Spike	Matrix Result <0.0118 icate result. 80 70 - icate result. e LCS int Rec. 98	32 Analyzed 1 Prepared I Rec. 84 c. hit R.PD 130 5 LCSD	.9 - 156.1 By: DC By: DC Rec. Limit 70 - 130 RPD Limit Rec. Limit 70 - 130
n-Triacontane Laboratory Contr QC Batch: 43475 Prep Batch: 37494 Param GRO Percent recovery is b Param GRO Percent recovery is b Surrogate Trifluorotoluene (TF	ol Spike (pased on the pased on the T) ne (4-BFB)	153 LCS-1) LCS-1) E spike result. LCSD Result 7.96 e spike result. LC Ress 0.94 0.94	mg/Kg Date Analyzed: QC Preparation: CS sult Units 36 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on CS LCSD ult Result 85 0.985	1 2007-11-29 2007-11-29 Dil. 1 the spike an Spike Amount 10.0 the spike an Units D ng/Kg	150 Spike Amount 10.0 d spike dupli Matrix Result <0.0118	Matrix Result <0.0118 icate result. 80 70 - icate result. e LCS int Rec. 98	Analyzed 1 Prepared I Rec. 84 c. hit RPD 130 5 LCSD Rec. 98	<u>.9 - 156.1</u> By: DC By: DC <u>Rec.</u> Limit 70 - 130 <u>RPD</u> Limit Rec.

Work Order: 7112916 Red Byrd Ranch - TNM Historical

Param	LCS Result	Units	Dil.	Spike	${f Matrix} {f Result}$	Rec.	Rec. Limit
	nesm	Units	DII.	Amount	nesun	nec.	
Benzene	0.826	mg/Kg	1	1.00	< 0.00300	83	70 - 130
Toluene	0.808	mg/Kg	1	1.00	< 0.00300	81	70 - 130
Ethylbenzene	0.792	mg/Kg	1	1.00	< 0.00400	79	70 - 130
Xylene	2.36	mg/Kg	1	3.00	< 0.0140	79	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	$\mathbf{U}\mathbf{n}\mathbf{i}\mathbf{t}\mathbf{s}$	Dil.	Amount	Result	Rec.	\mathbf{Limit}	\mathbf{RPD}	Limit
Benzene	0.809	mg/Kg	1	1.00	< 0.00300	81	70 - 130	2	
Toluene	0.807	mg/Kg	1	1.00	< 0.00300	81	70 - 130	0	
Ethylbenzene	0.812	mg/Kg	1	1.00	< 0.00400	81	70 - 130	2	
Xylene	2.44	mg/Kg	1	3.00	< 0.0140	81	70 - 130	3	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	\mathbf{Result}	Result	$\mathbf{U}\mathbf{nits}$	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.974	0.954	mg/Kg	1	1.00	97	95	70 - 130
4-Bromofluorobenzene (4-BFB)	0.948	0.978	mg/Kg	1	1.00	95	98	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch:	43618	Date Analyzed:	2007-12-05	Analyzed By:	DC
Prep Batch:	37578	QC Preparation:	2007-12-04	Prepared By:	\mathbf{DC}

	\mathbf{LCS}			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	1.21	mg/Kg	1	1.00	< 0.00300	121	70 - 130
Toluene	1.21	mg/Kg	1	1.00	< 0.00300	121	70 - 130
Ethylbenzene	1.19	mg/Kg	1	1.00	< 0.00400	119	70 - 130
Xylene	3.54	mg/Kg	1	3.00	< 0.0140	118	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}	RPD	Limit
Benzene	1.24	mg/Kg	1	1.00	< 0.00300	124	70 - 130	2	
Toluene	1.24	mg/Kg	1	1.00	< 0.00300	124	70 - 130	2	
Ethylbenzene	1.23	mg/Kg	1	1.00	< 0.00400	123	70 - 130	3	
Xylene	3.67	mg/Kg	1	3.00	< 0.0140	122	70 - 130	4	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.20	1.21	mg/Kg	1	1.00	120	121	70 - 130
4-Bromofluorobenzene (4-BFB)	0.859	0.861	mg/Kg	1	1.00	86	86	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch:	43619	Date Analyzed:	2007-12-05	Analyzed By:	DC
Prep Batch:	37578	QC Preparation:	2007-12-04	Prepared By:	DC

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Domonu		LC		TI. 11	D'1	Spike		atrix	n.	•	Rec.
Param		Res		Units	Dil.	Amour		esult	R.ee		Limit
GR.O		8.5		mg/Kg	1	10.0		0.0118	86)	70 - 130
Percent recovery is based	on the sp	oike result.	RPD is	s based o	n the spike	and spike	duplicate	result.			
		LCSD			Spike	Matri	ix	F	lec.		RPD
Param		Result	Unit		Amount	Resul	lt Rec.	\mathbf{L}	imit	RPD	Limit
GRO		8.54	mg/K	lg 1	10.0	< 0.01	18 85	70	- 130	1	
Percent recovery is based	on the sp	ike result.	RPD is	s based o	n the spike	and spike	duplicate	result.			
		\mathbf{LC}	S 1	LCSD			Spike	LCS	\mathbf{LC}	SD	Rec.
Surrogate		Rest		Result	Units	Dil.	Amount	Rec.	\mathbf{Re}		Limit
Trifluorotoluene (TFT)		1.0	2	1.02	mg/Kg	1	1.00	102	10)2	70 - 130
4-Bromofluorobenzene (4-	-BFB)	0.99	91	1.00	mg/Kg	1	1.00	99	10	00	70 - 130
QC Batch: 43691 Prep Batch: 37678				Analyzed: reparation						yzed B ared B	y: AG y: AG
		\mathbf{LC}	S			Spike	Mat	rix			Rec.
Param		Resu	ılt	Units	Dil.	Amount	Rest	ılt	Rec.		Limit
DRO		225	5	mg/Kg	1	250	<13	5.4	90	49.	1 - 142.3
											<u> </u>
Percent recovery is based	on the sp	ike result.	RPD is		n the spike	and spike	duplicate				
Percent recovery is based	on the sp	ike result. LCSD	RPD is		n the spike Spike	and spike Matrix	duplicate		:c.		
Param	on the sp	LCSD Result	RPD is Units	s based o	•	-	duplicate Rec.	result. Re Lin	nit	R.PD	RPD Limit
Param	on the sp	LCSD		s based o Dil.	Spike	Matrix	-	result. Re	nit	R .PD	RPD
		LCSD Result 251	Units mg/K	s based o Dil. g 1	Spike Amount 250	Matrix Result <13.4	Rec.	result. Re Lin 49.1 -	nit		RPD Limit
Param DRO		LCSD Result 251	Units mg/Kg RPD is	s based o Dil. g 1	Spike Amount 250	Matrix Result <13.4	Rec.	result. Re Lin 49.1 - result.	nit		RPD Limit
Param DRO	on the sp	LCSD Result 251 ike result.	Units mg/K RPD is	s based o Dil. g 1	Spike Amount 250	Matrix Result <13.4 and spike	Rec. 100 duplicate LC	result. Re Lin 49.1 - result. S	nit 142.3		RPD Limit 20
Param DRO Percent recovery is based	on the sp LCS	LCSD Result 251 ike result. LCSD	Units mg/Kr RPD is t	s based o Dil. g 1 s based o	Spike Amount 250 n the spike	Matrix Result <13.4 and spike Spike	Rec. 100 duplicate LC	result. Re Lin 49.1 - result. S c.	nit 142.3 LCSD	11	RPD Limit 20 Rec. Limit
Param DRO Percent recovery is based Surrogate	on the sp LCS Result 124	LCSD Result 251 ike result. LCSD Result 138	Units mg/Kj RPD is) t Date 4	s based o Dil. g 1 s based o Units	Spike Amount 250 n the spike Dil. 1 2007-12-	Matrix Result <13.4 and spike Spike Amount 150	Rec. 100 duplicate LC	result. Re Lin 49.1 - result. S c.	nit 142.3 LCSD Rec. 92 Anal	11 4 yzed B	RPD Limi 20 Rec. Limit
Param DRO Percent recovery is based Surrogate n-Triacontane Laboratory Control Sp QC Batch: 43692 Prep Batch: 37678	on the sp LCS Result 124	LCSD Result 251 ike result. LCSD Result 138 S-1)	Units mg/Kj RPD is) t Date A QC Pr	5 based o Dil. g 1 s based o Units ng/Kg Analyzed: reparation	Spike Amount 250 n the spike of Dil. 1 2007-12- 1: 2007-12-	Matrix Result <13.4 and spike Spike Amount 150 .08 .07 Spike	Rec. 100 duplicate LC t Rec 83 83	result. Re Lim 49.1 - result. S c.	nit 142.3 LCSD Rec. 92 Anal Prep	11 4 yzed B ared B	RPD Limit 20 Rec. Limit 9 - 133.2 y: AG y: AG Rec.
Param DRO Percent recovery is based Surrogate n-Triacontane Laboratory Control Sp QC Batch: 43692 Prep Batch: 37678 Param	on the sp LCS Result 124	LCSD Result 251 ike result. LCSD Result 138 S-1)	Units mg/Kj RPD is) t Date A QC Pr S ult	5 based o Dil. g 1 s based o Units mg/Kg Analyzed: eparation Units	Spike Amount 250 n the spike a Dil. 1 2007-12- 1: 2007-12- Dil.	Matrix Result <13.4 and spike Spike Amount 150 -08 -07 Spike Amount	Rec. 100 duplicate LC t Rec 83 Mat Res	result. Re Lim 49.1 - result. S c. S	nit 142.3 LCSD Rec. 92 Anal Prep Rec.	11 4 yzed B ared B	RPD Limit 20 Rec. Limit 9 - 133.2 y: AG y: AG y: AG Rec. Limit
Param DRO Percent recovery is based Surrogate n-Triacontane Laboratory Control Sp QC Batch: 43692 Prep Batch: 37678 Param DRO	on the sp LCS Result 124 pike (LC:	LCSD Result 251 ike result. LCSE Result 138 S-1) LCS Result 245	Units mg/Kj RPD is t t Date A QC Pr	5 based o Dil. g 1 s based o Units ng/Kg Analyzed: reparation Units mg/Kg	Spike Amount 250 n the spike a Dil. 1 2007-12- 1: 2007-12- Dil. 1	Matrix Result <13.4 and spike Spike Amount 150 -08 -07 -08 -07 -08 -07 -08 -07	Rec. 100 duplicate LC t Re 83 83 83 83 83 83 83 83 83 83 83 83 83	result. Re Lim 49.1 - result. S c.	nit 142.3 LCSD Rec. 92 Anal Prep	11 4 yzed B ared B	RPE Limii 20 Rec. Limit 9 - 133.: y: AG y: AG y: AG Rec. Limit
Param DRO Percent recovery is based Surrogate n-Triacontane Laboratory Control Sp QC Batch: 43692 Prep Batch: 37678 Param DRO	on the sp LCS Result 124 pike (LC:	LCSD Result 251 ike result. LCSD Result 338 S-1) LCS Resu 245 ike result.	Units mg/Kj RPD is t t Date A QC Pr	5 based o Dil. g 1 s based o Units ng/Kg Analyzed: reparation Units mg/Kg	Spike Amount 250 n the spike a Dil. 1 2007-12- 1: 2007-12- Dil. 1 n the spike a	Matrix Result <13.4 and spike Spike Amount 150 -08 -07 -08 -07 -08 -07 -08 -07 -08 -07 -08 -07 -08 -07 -08 -07 -08 -07 -08 -07 -08 -07 -07 -08 -07 -07 -07 -07 -07 -07 -07 -07 -07 -07	Rec. 100 duplicate LC t Re 83 83 83 83 83 83 83 83 83 83 83 83 83	result. Re Lim 49.1 - result. S c. s c. s c. s c. s c. s c. s c. s c	nit 142.3 LCSD Rec. 92 Anal Prep Rec. 98	11 4 yzed B ared B	RPE Limi 20 Rec. Limit 9 - 133.2 y: AG y: AG y: AG Rec. Limit 1 - 142.2
Param DRO Percent recovery is based Surrogate n-Triacontane Laboratory Control Sp QC Batch: 43692	on the sp LCS Result 124 pike (LC:	LCSD Result 251 ike result. LCSE Result 138 S-1) LCS Result 245	Units mg/Kj RPD is t t Date A QC Pr	5 based o Dil. g 1 s based o Units ng/Kg Analyzed: reparation Units mg/Kg	Spike Amount 250 n the spike a Dil. 1 2007-12- 1: 2007-12- Dil. 1	Matrix Result <13.4 and spike Spike Amount 150 -08 -07 -08 -07 -08 -07 -08 -07	Rec. 100 duplicate LC t Re 83 83 83 83 83 83 83 83 83 83 83 83 83	result. Re Lim 49.1 - result. S c.	nit 142.3 LCSD Rec. 92 Anal Prep Rec. 98	11 4 yzed B ared B	RPD Limit 20 Rec. Limit 9 - 133.2 y: AG y: AG Rec.

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Page Number: 19 of 24 Report Date: December 10, 2007 Work Order: 7112916 Red Byrd Ranch - TNM Historical Red Byrd Ranch - TNM Historical Monument, NM LCS LCSD LCSD Spike LCS Rec. Limit Surrogate Result Result Units Dil. Amount Rec. Rec. 147 110 49 - 133.2 n-Triacontane 165 mg/Kg 1 15098 Matrix Spike (MS-1) Spiked Sample: 143897 QC Batch: 43475 Date Analyzed: 2007-11-29 Analyzed By: DC Prep Batch: 37494 QC Preparation: 2007-11-29 Prepared By: DC MS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit GRO 9.71 < 0.011897 70 - 130 mg/Kg 1 10.0Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result. MSD RPD Spike Matrix Rec. Param Result Units Dil. Result Rec. Limit RPD Limit Amount GRO 11.1 mg/Kg 10.0< 0.0118 111 70 - 130 13 1 Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result. MS MSD Spike MS MSD Rec. Amount Surrogate Result Result Units Dil. Rec. Rec. Limit Trifluorotoluene (TFT) 79 88 70 - 130 0.793 0.878 mg/Kg 1 1 4-Bromofluorobenzene (4-BFB) 0.956 0.966 96 97 70 - 130 mg/Kg 1 1 Matrix Spike (MS-1) Spiked Sample: 143897 QC Batch: 43487 Analyzed By: DC Date Analyzed: 2007-11-29 37494Prep Batch: 2007-11-29 Prepared By: DC QC Preparation: MS Spike Matrix Rec. Param Result Units Dil. Result Rec. Limit Amount Benzene 0.800 mg/Kg 1.00< 0.00300 80 70 - 130 1 Toluene 0.798mg/Kg 1.00< 0.00300 80 70 - 130 1 Ethylbenzene 0.798 mg/Kg 1 1.00 < 0.00400 80 70 - 130 2.4070 - 130 Xylene mg/Kg 1 3.00< 0.014080 Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result. RPD MSD Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit RPD Limit Benzene 0.802mg/Kg 1.00< 0.0030080 70 - 130 1 0 Toluene 0.814 mg/Kg 1.00< 0.00300 70 - 130 $\mathbf{2}$ 1 81 Ethylbenzene 0.826 mg/Kg 1 1.00< 0.0040083 70 - 130 3 Xylene 2.49mg/Kg 1 3.00< 0.0140 83 70 - 1304 Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	\mathbf{Result}	\mathbf{Result}	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.910	0.893	mg/Kg	1	1	91	89	70 - 130
4-Bromofluorobenzene (4-BFB)	0.904	0.920	mg/Kg	1	1	90	92	70 - 130

Matrix Spike (MS-1) Spiked Sample: 143917

QC Batch:	43618	Date Analyzed:	2007-12-05	Analyzed By:	DC
Prep Batch:	37578	QC Preparation:	2007-12-04	Prepared By:	DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.27	mg/Kg	1	1.00	< 0.00300	127	70 - 130
Toluene	1.29	mg/Kg	1	1.00	< 0.00300	129	70 - 130
Ethylbenzene	1.30	mg/Kg	1	1.00	< 0.00400	130	70 - 130
\mathbf{X} ylene	3.91	mg/Kg	1	3.00	< 0.0140	130	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

		MSD			\mathbf{S} pike	Matrix		Rec.		\mathbf{RPD}
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	2	1.31	mg/Kg	1	1.00	< 0.00300	131	70 - 130	3	
Toluene	3	1.33	mg/Kg	1	1.00	< 0.00300	133	70 - 130	3	
\mathbf{E} thylbenzene	4	1.37	mg/Kg	1	1.00	< 0.00400	137	70 - 130	5	
Xylene	5	4.10	mg/Kg	1	3.00	< 0.0140	136	70 - 130	5	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	\mathbf{MS}	MSD	Rec.
Surrogate	Result	Result	\mathbf{Units}	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.13	1.12	mg/Kg	1	1	113	112	70 - 130
4-Bromofluorobenzene (4-BFB)	0.847	0.836	mg/Kg	1	1	85	84	70 - 130

Matrix Spike (MS-1) Spiked Sample: 143918

QC Batch:	43619	Date Analyzed:	2007-12-05	Analyzed By:	\mathbf{DC}
Prep Batch:	37578	QC Preparation:	2007-12-04	Prepared By:	DC

	MS			Spike	Matrix		Rec.
Param	\mathbf{Result}	Units	Dil.	Amount	Result	Rec.	Limit
GRO	8.14	mg/Kg	1	10.0	< 0.0118	81	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}	\mathbf{RPD}	Limit
GRO	8.07	mg/Kg	1	10.0	< 0.0118	81	70 - 130	1	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	${f MSD} {f Result}$	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.913	0.885	mg/Kg	1	1	91	88	70 - 130
4-Bromofluorobenzene (4-BFB)	0.964	0.968	mg/Kg	1	1	96	97	70 - 130

²Matrix spike recovery out of control limits due to extraction process. Use LCS/LCSD to demonstrate analysis is under control.

³Matrix spike recovery out of control limits due to extraction process. Use LCS/LCSD to demonstrate analysis is under control.

 4 Matrix spike recovery out of control limits due to extraction process. Use LCS/LCSD to demonstrate analysis is under control. 5 Matrix spike recovery out of control limits due to extraction process. Use LCS/LCSD to demonstrate analysis is under control.

QC Batch: 43691 Prep Batch: 37678			te Analyzed: C Preparation:	2007-12 2007-12				yzed By ared By	
Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Ľ	Rec. Jimit
DRO		600	mg/Kg	1	250	438	65	30.2	- 201.4
Percent recovery is based	on the spi	ke result. RP	'D is based on	the spike	and spike d	uplicate res	sult.		
		MSD		Spike	Matrix		Rec.		RPD
Param			nits Dil.	Amount	Result	Rec.	Limit	RPD	Limi
DRO		594 mg	5/Kg 1	250	438	62 30	.2 - 201.4	1	20
Percent recovery is based	on the spi	ke result. RP	'D is based on	the spike	and spike d	uplicate res	sult.		
	MS	MSD			Spike	MS	MSI)	Rec.
Surrogate	Result	Result	Units	Dil.	Amount				Limit
n-Triacontane	145	144	mg/Kg	1	150	97	96		10 - 194
Prep Batch: 37678		QC MS	C Preparation:	: 2007-12	2-07 Spike	Matrix	Prep	ared By	r: AG Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.		Limit
DR()		220	mg/Kg	1	250	<13.4	88		- 201.4
Percent recovery is based	on the spi	ke result. RP	D is based on	the spike	and spike d	uplicate res	sult.		
		MSD		Spike	Matrix		Rec.		RPE
Param			nits Dil.	Amount	Result	Rec.	Limit	RPD	Limi
DR()			g/Kg 1	250	<13.4		.2 - 201.4	11	20
Percent recovery is based	on the spi	ke result. RP	'D is based on	the spike	and spike d	uplicate res	sult.		
	MS	MSD			Spike	MS	MSI)	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	-			Limit
n-Triacontane	131	163	mg/Kg	1	150	87	109		10 - 19-
Standard (ICV-1) QC Batch: 43475		Da	ute Analyzed:	2007-11-	29		Anal	yzed By	7: DC
•		ICV	vs IC	Vs	ICVs		ercent		
	TT *•	Tri		und	Percent		ecovery		Date
Param Flag GRO	Units mg/Kg	Con 5 1.0		энс. 976	Recovery 98		Limits 5 - 115		alyzed)7-11-29
Standard (CCV-1)		<u>, </u>						200.	/ 11 2
		-							
QC Batch: 43475		Da	ate Analyzed:	2007-11-	29		Anal	yzed By	<i>'</i> :

Work Order: 7112916 Red Byrd Ranch - TNM Historical Page Number: 22 of 24 Monument, NM

			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.970	97	85 - 115	2007-11-29

Standard (ICV-1)

QC Batch: 434	87		Date Analyz	ed: 2007-11-2	Analyzed By: DC		
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.0857	86	85 - 115	2007-11-29
Toluene		mg/Kg	0.100	0.0864	86	85 - 115	2007 - 11 - 29
Ethylbenzene		mg/Kg	0.100	0.0872	87	85 - 115	2007 - 11 - 29
Xylene		mg/Kg	0.300	0.262	87	85 - 115	2007-11-29

Standard (CCV-1)

QC Batch: 434	487		Date Analyzed	: 2007-11-29	Analyzed By: DC		
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	\mathbf{Date}
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.0995	100	85 - 115	2007-11-29
Toluene		mg/Kg	0.100	0.0965	96	85 - 115	2007 - 11 - 29
Ethylbenzene		mg/Kg	0.100	0.0993	99	85 - 115	2007 - 11 - 29
Xylene		mg/Kg	0.300	0.284	95	85 - 115	2007-11-29

Standard (ICV-1)

QC Batch: 43618			Date Analyz	ed: 2007-12-0	Analyzed By: DC				
			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date		
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Benzene		mg/Kg	0.100	0.0986	99	85 - 115	2007-12-05		
Toluene		mg/Kg	0.100	0.0998	100	85 - 115	2007-12-05		
Ethylbenzene		mg/Kg	0.100	0.0990	99	85 - 115	2007-12-05		
Xylene		mg/Kg	0.300	0.295	98	85 - 115	2007-12-05		

Standard (CCV-1)

QC Batch: 4361	18		Date Analyzed:	2007-12-05		Ana	alyzed By: DC
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.115	115	85 - 115	2007-12-05
Toluene		mg/Kg	0.100	0.115	115	85 - 115	2007 - 12 - 05
Ethylbenzene		mg/Kg	0.100	0.113	113	85 - 115	2007-12-05
							continued

standard continued ...

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Xylene		mg/Kg	0.300	0.337	112	85 - 115	2007-12-05

Standard (ICV-1)

QC Batch:	43619		Date Ana	alyzed: 2007-1	Anal	Analyzed By: DC			
			ICVs	ICVs	ICVs	Percent			
			True	Found	Percent	Recovery	Date		
Param	\mathbf{Flag}	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed		
GRO		mg/Kg	1.00	1.09	109	85 - 115	2007-12-05		

Standard (CCV-1)

QC Batch:	43619		Date Ana	lyzed: 2007-12	2-05	Anal	yzed By: DC
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.12	112	85 - 115	2007-12-05

Standard (CCV-1)

QC Batch:	43691		Date Ana	alyzed: 2007-12	Analyzed By: AG			
			CCVs	CCVs	$\rm CCVs$	Percent		
			True	Found	Percent	Recovery	Date	
Param	Flag	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed	
DRO		mg/Kg	250	229	92	85 - 115	2007-12-07	

Standard (CCV-2)

QC Batch:	4369 1		Date Ana	alyzed: 2007-11	Analyzed By: AG			
			CCVs	CCVs	CCVs	Percent		
			True	Found	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
DRO		mg/Kg	250	236	94	85 - 115	2007-12-07	

Standard (CCV-3)

2

QC Batch:	43691		Date Ana	alyzed: 2007-1	Analyzed By: AG			
			CCVs	CCVs	CCVs	Percent		
			True	Found	Percent	Recovery	Date	
Param	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
DRO		mg/Kg	250	220	88	85 - 115	2007-12-07	

Work Order: 7112916 Red Byrd Ranch - TNM Historical

85 - 115

2007-12-08

Standard (ICV-1)

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DRO

mg/Kg

250

QC Batch:	43692		Date Ana	alyzed: 2007-1	Anal	Analyzed By: AG				
			ICVs	ICVs	ICVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
DRO		mg/Kg	250	216	86	85 - 115	2007-12-08			
Standard ((CCV-1)									
QC Batch:	43692		Date An	alyzed: 2007-1	2-08	Anal	yzed By: AG			
			CCVs	CCVs	CCVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
DRO		mg/Kg	250	221	88	85 - 115	2007-12-08			
Standard ((CCV-2)									
QC Batch:	43692		Date An	alyzed: 2007-1	2-08	Anal	yzed By: AG			
			CCVs	CCVs	CCVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			

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рюн All tody - Millburd Turn Around Time if different from standard En 501 + 502 - Kun BEY No.) 620 > 120 APM Dry Weight Basis Required or Specify Method Check If Special Reporting Limits Are Needed TRRP Report Required **ANALYSIS REQUEST** Moisture Content Hq ,227 ,008 Pesticides 808 \ A r 808 00 East Sunset Rd., Suite E El Paso, Texas 79922 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443 PCB's 8082 / 608 GC/MS Semi. Vol. 8270C / 625 REMARKS CC/MS Vol. 82608 / 624 RCI TCLP Pesticides TCLP Semi Volatiles Circle TCLP Volatiles Y TCLP Metals Ag As Ba Cd Cr Pb Se Hg ONLY ol Q L N Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 PAH 8270C / 625 PATON TPH 8015 GRØ / DRO / TVHC X х. × \succ * * 2 × × × 101 418-11-1X1002 / 1X1002 EXI(C32) Carrier # 80518/ 602 / 8260B / 624 BIEX $\mathbf{\times}$ × ų 3.7. c ы С Temp'c: 80218 / 602 / 82608 / 624 MTBE Temp Temp° 10: 45 10:00 10:35 18:3 1:45 9.50 Ą 0.6 6% 9.00 SAMPLING **JMIT** ちょうちょう -ک ک Time: Time: Time: 1an 123 6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 18 (306) 794-128 Fa (306) 794-128 78 (300) 378-1298 1 (300) 378-1298 **BTA** 7 -< ~ < --< Ξ TNM 11 Date: Date: Date: PRESERVATIVE **NONE** Ċ 7 ICE بحر ٧. ¥ × < しょうち METHOD بمخد 4 11 > `~ یے Ö (Name: LANCA Ý Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. HOBN Signature 5 Company: Company Company 1-TUNE *OS^zH ^cONH Phone #: noler Project mel ICH E-mail Fax #: 10 Received by: Received by: SLUDGE Received by MATRIX ЯІА * ⋝ SOIF ж. --* × Y **'** 4 **AETEW** email: lab@traceanalysis.com 204 8 truomA \ emuloV Time: Time: Time: **\$ CONTAINERS** 1/20/11 Date: Date: Date: 60 NNY 30 5-Lanker 50 2 N lan 20 2 3 Ģ. 2 FIELD CODE ł I ţ Curry and Company: tad Company: l ١ Company: tion (including state): ١ 584-07-1 (Street, City, Zip) l DOLUMENT 563-07 583-07 582-07 583-07 584-07 S 532-0 Us 44 Ĺ 01 her-Ì (If different from above) SAV SB4-581 ¥ Relinquished by? Relinquished by Refinquished by Company Name: Contact Person: Project Local 919 <u>8</u> 439.02 210 600 50 0 EAB USE) ONLY-J 909 5 Invoice to: Project #: Address: LAB#

8808 Camp Bowie Bivd. West, Suite 180 Ft. Worth, Texas 76116 Tel (817) 201-5260 Fax (817) 560-4336

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5002 Basin Street, Suite A1 Midland, Taxas 79703 Tel (432) 689-6301 Fax (432) 689-6313

TraceAnalysis, Inc.

7112916

LAB Order ID #

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Analytical Report 320259

for

PLAINS ALL AMERICAN EH&S

Project Manager: Daniel Bryant

Red Byrd Historical Red Byrd Ranch TNM Historical

16-DEC-08





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

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



16-DEC-08



Project Manager: **Daniel Bryant PLAINS ALL AMERICAN EH&S** 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: **320259 Red Byrd Historical** Project Address: Lea County, NM

Daniel Bryant:

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 320259. 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. 320259 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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Sample Cross Reference 320259



PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Historical

Sample Id	Matrix	Date Collected Sample Depth	Lab Sample Id
E/S Stockpile	S	Dec-10-08 13:10	320259-001
W/S Stockpile	S	Dec-10-08 13:40	320259-002

	A Historical
	Project ld: Red Byrd Ranch TNM Historica
	ld: Red Byr
	Project
S. 1	

Contact: Daniel Bryant

Certificate of Analysis Summary 320259 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd Historical



P

Date Received in Lab: Fri Dcc-12-08 01:30 pm Report Date: 16-DEC-08

Lab Id: 320259-001 32 Field Id: E/S Stockpile W// Depth: Depth: SOLL Matrix: SOLL Matrix: SOLL Matrix: SOLL Matrix: SOLL Depth: Dec-10-08 13:10 Matrix: SOLL Analyzed: Dec-10-08 13:10 Analyzed: Dec-12-08 17:00 Matrix: % RL % InityRL: % RL % IonityRL: % ND 89.6 UnityRL: mg/kg RL mg S ND S S14 S6 S14	Project Location: Lea County, NM				Report Date:	Report Date: 16-DEC-08	
Lab Id: 320259-001 32 Field Id: E/S Stockpile W/S Depth: Depth: Narrix: Narrix: SOIL No Sampled: Dec-10-0813:10 Dec-1 Sampled: Dec-10-0813:10 Dec-1 Analyzed: Dec-12-0817:00 Dec-1 Analyzed: Dec-12-0817:00 Dec-1 Marky: % RL % Analyzed: Dec-15-0817:00 Dec-1 Analyzed: Dec-12-0817:00 Dec-1 Marky: % RL % Marky: % RL % Marky: Marky: Marky: Marky: Analyzed: Dec-12-0814:00 Dec-1 Marky: Marky: Marky: Marky: Marky: Marky:					Project Manager:	Brent Barron, II	
Field Id: E/S Stockpile W/S Depth: Depth: SOIL Matrix: SOIL Soil Sampled: Dec-10-0813:10 Dec-1 Extracted: Dec-12-0817:00 Dec-1 Analyzed: Dec-12-0817:00 Dec-1 Matrix: % RL % Units/RL: % RL % Mathzed: Dec-15-0814:00 Dec-1 Mathzed: Dec-16-0814:0		Lab Id:	320259-001	320259-002			
Depth: SOIL Matrix: SOIL Sampleat: Dec-10-0813:10 Dec-1 Extracted: Dec-12-0813:10 Dec-1 Analyzed: Dec-12-0813:10 Dec-1 Matrix: % RL % Units/RL: % RL % Matrix: Dec-15-0814:00 Dec-1 Matrixed: Dec-15-0814:00 Dec-1 Matrixed: Dec-15-0814:00 Dec-1 Matrixed: Dec-16-0801:40 Dec-1 Matrixed: Dec-16-0801:40 Dec-1 Units/RL: mg/kg RL mg/k ND S14 89.6 117 S14 89.6 117 20.6	A section D and and	Field Id:	E/S Stockpile	W/S Stockpile			
Matrix: SOIL Sampleat: Dec-10-08 13:10 Dec-1 Extracted: Dec-12-08 17:00 Dec-1 Analyzed: Dec-12-08 17:00 Dec-1 Units/RL: % RL % Units/RL: % RL % Jd Extracted: Dec-15-08 14:00 Dec-1 Jd Extracted: Dec-15-08 14:00 Dec-1 Julits/RL: mg/kg RL mg/s Units/RL: mg/kg RL mg/s I 16.32 1.00 Dec-1 Jmits/RL: mg/kg RL mg/s I NiD 89.6 117 S14 89.6 117 89.6 117	naisanhay sissinut	Depth:					
Sampled: Dec-10-08 13:10 Dec-1 Extracted: Extracted: Dec-12-08 17:00 Dec-1 Analyzed: 9% RL % Units/RL: % RL % Jd Extracted: 16:32 1.00 Dec-1 Jd Extracted: Dec-15-08 14:00 Dec-1 Mai/sed: Dec-1 Jd Extracted: Dec-16-08 01:40 Dec-1 Mai/sed: Mai/sed: Dec-1 Units/RL: mg/kg RL mg/s Mai/sed: Dec-1 Dec-1 117 89.6 117 89.6 10 Dec-1 Dec-1<		Matrix:	SOIL	SOIL			
Extracted: Dec-12-08 7:00 Dec-1 Analyzed: Dec-12-08 7:00 Dec-1 Units/RL: % RL % Dd Extracted: 96 16.32 1.00 Analyzed: Dec-15-08 4:00 Dec-1 Mathyzed: Dec-15-08 4:00 Dec-1 Mathyzed: Dec-16-08 01:400 Dec-1 Mathyzed: Mathyzed: Mathyzed: Mathyzed: Dec-16-08 01:400 Dec-1 Mathyzed: Mathyzed: Mathyzed: Mathyzed: Mathyzed: <th></th> <th>Sampled:</th> <th>Dec-10-08 13:10</th> <th>Dec-10-08 13:40</th> <th></th> <th></th> <th></th>		Sampled:	Dec-10-08 13:10	Dec-10-08 13:40			
Analyzed: Dec-12-08 17:00 Dec-1 Univ/RL: % RL % Univ/RL: 16.32 1.00 % Analyzed: Dec-15-08 14:00 Dec-1 Analyzed: Dec-15-08 14:00 Dec-1 Univ/RL: mg/kg RL mg/k ND 89.6 117 89.6 117 89.6 117 89.6	Percent Maisture	Extracted:					
Units/RL: % RL % Units/RL: 16.32 1.00 96 Extracted: Dec-15-08 14:00 Dec-1 Analyzed: Dec-16-08 01:40 Dec-1 Units/RL: mg/kg RL mg/k 514 89.6 117 89.6		Analyzed:	Dec-12-08 17:00				
I6.32 1.00 Extracted: Dec-15-08 14:00 Dec-1 Analyzed: Dec-16-08 14:00 Dec-1 Units/RL: mg/kg RL mg/k S14 89.6 117 89.6		Units/RL:		%			
Dd Extracted: Dec-15-08 Dec-1 Analyzed: Dec-16-08 01:40 Dec-1 Units/RL: mg/kg RL mg/s S14 89.6 117 89.6	Percent Moisture		16.32 1.00				
Analyzed: Dec-16-08 01:40 Dec-1 Units/RL: mg/kg RL mg/l ND 89.6 117 89.6	TPH By SW8015 Mod	Extracted:	Dec-15-08 14:00				
Unitv/RL: mg/kg RL mg/ ND 89.6 514 89.6 117 89.6		Analyzed:		Dec-1 6-08 02:28			
ND 89.6 514 89.6 117 89.6		Units/RL:		mg/kg			
514 89.6 117 89.6	C6-C12 Gasoline Range Hydrocarbons						
117 89.6	C12-C28 Diesel Range Hydrocarbons						
	C28-C35 Oil Range Hydrocarbons						
0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Total TPH		631 89.6	1244 16.6			

This analytical report, and the entire dua package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throught this analytical report represent the best juggment of XEVCO Laboratories. XEVCO Laboratories assumes no responsibility and matks no warranty to the end use of the dua herby presamed. Our liability is limited to the amount invoiced for this work order unless observice agreed to in writing.

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Odessa Laboratory Director Brent Barron





- 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.

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	Phone	Fax
4143 Greenbriar Dr. Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hincs Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd Historical

ork Orders : 320259,			-	D: Red Byrd		111300
Lab Batch #: 743601	Sample: 320235-00			rix: Soil		
Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY	
TPH By SW80 Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		103	100	103	70-135	
o-Terphenyl		50.9	50.0	103	70-135	
Lab Batch #: 743601	Sample: 320235-00	ISD/MSD Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg			RROGATE R		STUDY	
TPH By SW80 Analyte:		Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc		103	100	103	70-135	
o-Terphenyl		54.8	50.0	110	70-135	
Lab Batch #: 743601	Sample: 320259-00	1/SMP Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY	
TPH By SW80		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
Analyte: I-Chlorooctanc		85.6	100	86	70-135	
o-Terphenyl		46.2	50.0	92	70-135	
	C 1 220250.00					
Lab Batch #: 743601 Units: mg/kg	Sample: 320259-00		tch: 1 Mat	rix: Soil	STUDY	
TPH By SW80		Amount Found [A]	True Amount {B]	Recovery %R [D]	Control Limits %R	Flags
Analytes	3	87.9	100	88	70-135	
o-Terphenyl		45.8	50.0	92	70-135	
Lab Batch #: 743601	Sample: 521181-1-1			rix: Solid	1	
Units: mg/kg	Gampie, 221101-14		RROGATE R		STUDY	
TPH By SW80 Analyte		Amount Found {A}	True Amount {B}	Recovery %R [D]	Control Limits %R	Flag
I-Chlorooctane		103	100	103	70-135	
			50.0		L	

** 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: Red Byrd Historical

Work Orders: 320259,

Project ID: Red Byrd Ranch TNM Historical 1 Matrix Solid

Lab Batch #: 743601	Sample: 521181-1-BLK	BLK Ba	tch: 1 Mat	rix: Solid		
Units: mg/kg		SU	RROGATE R	RECOVERY	STUDY	
·	W8015 Mod Ilytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		88.3	100	88	70-135	
o-Terphenyl		46.2	50.0	92	70-135	
Lab Batch #: 743601	Sample: 521181-1-BSD	BSD Ba	tch: Mat	rix: Solid		
Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY	
·	W8015 Mod Ilytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc	······································	102	100	102	70-135	

** 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.



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BS / BSD Recoveries



Project Name: Red Byrd Historical

Work Order #: 320259 Analyst: BHW Lab Batch ID: 743601 Sample: 521181-1-BKS Units: mg/kg

Date Prepared: 12/15/2008

Batch #: 1

Project ID: Red Byrd Ranch TNM Historical Date Analyzed: 12/15/2008 Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

											ĺ
TPH By SW8015 Mod	Blank Sample Result /	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[<u>B</u>]	[C]	[D]	9	Result [F]	[0]				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	879	88	1000	877	88	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	0001	949	95	1000	938	94	1	70-135	35	

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





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Project Name: Red Byrd Historical

Work Order #: 320259

Date Analyzed: 12/16/2008

Lab Batch ID: 743601

Project ID: Red Byrd Ranch TNM Historical

1 Matrix: Soil BHW ľ Batch #: Analyst: QC- Sample ID: 320235-001 S Date Prepared: 12/15/2008 L

Reporting Units: mg/kg		W	ATRIX SPIKI	TAM / 3	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY	TUDY		
TPH By SW8015 Mod	Parent Sample		Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Kesuit [A]	Added [B]	C	B %	Added [E]	Result [F]	6G %	~	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1160	266	86	1160	992	86	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	79.4	1160	1120	06	1160	0111	89	I	70-135	35	

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: Red Byrd Historical

Work Order #: 320259

Lab Batch #: 743418 Date Analyzed: 12/12/2008 QC- Sample ID: 320213-019 D	Batch #:	2/2008	Analy Matri	D: Red Byrd st: BEV ix: Soil		M Historic
Reporting Units: % Percent Moisture	Parent Sample Result		DUPLIC RPD	ATE REC Control Limits %RPD	OVERY Flag	
Analyte	[A]	[B]		%KPD		
Percent Moisture	8.36	8.72	4	20		

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

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CHAIN OF CUSTODY RECORD AND ANAL YSIS REQUEST 12600 West 1-20 East Odessa, Taxas 79765 Fax: 422-563-1713

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ş	Project Name: Red Byrd Historical	긝				2	×	00	BTEX 80218/5030 or BTEX 62] 🗟 🖁	coustries or reaspace. Labers on container(s) Custody seats on container(s) Custody seats on cooler(s)	ä	5 1
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	Camilie Bryant	Basin Envi	P. D. Box	Lovingtan,	(373)605-7210	the second		101 MC	FIELD CODE	E/S Stockpile	W/S Stockpile										A	
	Project Manager:	Company Name	Company Address: P. D. Box 301	City/State/Zp:	Telephone No:	Sampler Signature:				E/S	W IS								Special Instructions:	aly Walter	Mar lie le va	red by.
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Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

Client:	Basin	Plain	<u>.</u>
Date/ Time:	j2.	<u>1.03</u>	13:30
Lab ID #		3202'	<u>9</u>
Initials		a	-

Sample Receipt Checklist

				Client Initi
#1	Temperature of container/ cooler?	Yes	No	15 °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?	Ves	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?	Kes	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 321683

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd Ranch Historical TNM-Red Byrd Ranch Historical

15-JAN-09





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

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



15-JAN-09



Project Manager: Jason Henry PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: **321683 Red Byrd Ranch Historical** Project Address: Lea County, NM

Jason Henry:

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 321683. 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. 321683 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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Sample Cross Reference 321683

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Ranch Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended - 1	S	Jan-05-09 10:40		321683-001
Blended - 2	S	Jan-05-09 10:50		321683-002
Blended - 3	S	Jan-05-09 11:00		321683-003
Blended - 4	S	Jan-05-09 11:10		321683-004
Blended - 5	S	Jan-05-09 11:20		321683-005
Blended - 6	S	Jan-05-09 11:30		321683-006
Blended - 7	S	Jan-05-09 11:40		321683-007
Blended - 8	S	Jan-05-09 11:50		321683-008
Blended - 9	S	Jan-05-09 12:00		321683-009
Blended - 10	S	Jan-05-09 12:10		321683-010



Contact: Jason Henry

Certificate of Analysis Summary 321683 PLAINS ALL AMERICAN EH&S, Midland, TX



Date Received in Lab: Tue Jan-06-09 09:45 am Report Date: 15-JAN-09

WITH

Project Location: Lea County, NM					Report Date: 15-JAN-09	5-JAN-09	
					Project Manager: H	Brent Barron, Il	
	Lab Id:	321683-001	321683-002	321683-003	321683-004	321683-005	321683-006
Analysis Dogustad	Field Id:	Blended - 1	Blended - 2	Blended - 3	Blended - 4	Blended - 5	Blended - 6
naisanhay sistimut	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jan-05-09 10:40	Jan-05-09 10:50	Jan-05-09 11:00	Jan-05-09 11:10	Jan-05-09 11:20	Jan-05-09 11:30
BTEX hv FPA 8021B	Extracted:			Jan-14-09 12:15	Jan-14-09 12:15	Jan-14-09 12:15	Jan-14-09 12:15
	Analyzed:			Jan-14-09 17:55	Jan-14-09 18:16	Jan-14-09 18:38	Jan-14-09 18:59
	Units/RL:			mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene				1100'0 QN	ND 0.0011	1100'0 GN	ND 0.0011
Toluenc				ND 0.0022	ND 0.0022	ND 0.0022	ND 0.0022
Ethylbenzene				0.0035 0.0011	0.0052 0.0011	0.0018 0.0011	ND 0.0011
m,p-Xylenes				0.0064 0.0022	0.0080 0.0022	0.0041 0.0022	ND 0.0022
o-Xylene				0.0098 0.0011	0.0267 0.0011	0.0057 0.0011	0.0012 0.0011
Total Xylenes				0.0162 0.0022	0.0347 0.0022	0.0098 0.0022	0.0012 0.0022
Total BTEX				0.0197 0.0011	0.0399 0.0011	0.0116 0.0011	0.0012 0.0011
Percent Maisture	Extracted:				-		
	Analyzed:	Jan-06-09 17:00	Jan-06-09 17:00	Jan-06-09 17:00	Jan-06-09 17:00	Jan-06-09 17:00	Jan-06-09 17:00
:	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		7.18 1.00	7.35 1.00	7.87 1.00	7.30 1.00	8.27 1.00	8.78 1.00
TPH Rv SW8015 Mod	Extracted:	Jan-06-09 12:10	Jan-06-09 12:10	Jan-06-09 12:10	Jan-06-09 12:10	Jan-06-09 12:10	Jan-06-09 12:10
	Analyzed:	Jan-06-09 18:49	Jan-06-09 19:36	Jan-06-09 19:59	Jan-06-09 20:22	Jan-06-09 20:45	Jan-06-09 21:09
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		95.5 16.2	72.2 16.2	49.3 16.3	64.7 16.2	38.8 16.4	ND 16.4
C12-C28 Diesel Range Hydrocarbons		958 16.2	864 16.2	374 16.3	508 16.2	350 16.4	59.3 16.4
C28-C35 Oil Range Hydrocarbons		191 16.2	172 16.2	124 16.3	104 16.2	127 16.4	30.4 16.4
Total TPH		1244.5 16.2	1108.2 16.2	547.3 16.3	676.7 16.2	515.8 16.4	89.7 16.4

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed droughent dista targatical report represent the basil upgement OX ENCO Laboratories. XENCO Laboratories assumes to responsibility and makes no warranty or the rend use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Director Brent Barron



Contact: Jason Henry

Certificate of Analysis Summary 321683 PLAINS ALL AMERICAN EH&S, Midland, TX Project Name: Red Byrd Ranch Historical



Date Received in Lab: Tue Jan-06-09 09:45 am Report Date: 15-JAN-09

Project Location: Lea County, NM					Report Date: 15-JAN-09	15-JAN-09
					Project Manager:	Brent Barron, II
	Lab Id:	321683-007	321683-008	321683-009	321683-010	
Augheric Downseted	Field Id:	Blended - 7	Blended - 8	Blended - 9	Blended - 10	
naisanhay sistinut	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jan-05-09 11:40	Jan-05-09 11:50	Jan-05-09 12:00	Jan-05-09 12:10	
BTEX by EPA 8021B	Extracted:	Jan-14-09 12:15	Jan-14-09 12:15	Jan-14-09 12:15	Jan-14-09 12:15	
	Analyzed:	Jan-14-09 19:21	Jan-14-09 19:42	Jan-14-09 20:03	Jan-14-09 20:24	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		1100.0 UN	ND 0.0011	1100.0 UN	ND 0.0011	
Toluene		ND 0.0021	ND 0.0022	ND 0.0022	ND 0.0022	
Ethylbenzene		0.0027 0.0011	1100'0 QN	0.0012 0.0011	ND 0.0011	
m,p-Xylenes		0.0051 0.0021	ND 0.0022	0.0073 0.0022	ND 0.0022	
o-Xylene		0.0082 0.0011	ND 0.0011	0.0084 0.0011	0.0015 0.0011	
Total Xylenes		0.0133 0.0021	ND 0.0022	0.0157 0.0022	0.0015 0.0022	
Total BTEX		0.016 0.0011	ND 0.0011	0.0169 0.0011	0.0015 0.0011	
Percent Moisture	Extracted:					
	Analyzed:	Jan-06-09 17:00	Jan-06-09 17:00	Jan-06-09 17:00	Jan-06-09 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	
Percent Moisture		6.11 1.00	7.49 1.00	10.64 1.00	8.56 1.00	
TPH Bv SW8015 Mod	Extracted:	Jan-06-09 12:10	Jan-06-09 12:10	Jan-06-09 12:10	Jan-06-09 12:10	
	Analyzed:	Jan-06-09 21:32	Jan-06-09 21:56	Jan-06-09 22:19	Jan-06-09 22:43	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		44.3 16.0	ND 16.2	29.1 16.8	28.3 16.4	
C12-C28 Diesel Range Hydrocarbons		592 16.0	23.6 16.2	98.3 16.8	114 16.4	
C28-C35 Oil Range Hydrocarbons		135 16.0	ND 16.2	ND 16.8	ND 16.4	
Total TPH		771.3 16.0	23.6 16.2	127.4 16.8	142.3 16.4	

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

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Defect Barron Odessa Laboratory Director 5





- 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.
- * Outside XENCO's scope of NELAC Accreditation.

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Project Name: Red Byrd Ranch Historical

ork Orders : 321683,			Project I	D: TNM-Red	Byrd Ranc	h Histo
Lab Batch #: 746552	Sample: 321683-003 / SM	MP Ba	itch: l Matr	ix: Soil		
Units: mg/kg		SL	RROGATE R	ECOVERY	STUDY	
BTEX by I	EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Ana	lytes			[D]		
1,4-Difluorobenzene		0.0313	0.0300	104	80-120	
4-Bromofluorobenzene		0.0464	0.0300	155	80-120	*
Lab Batch #: 746552	Sample: 321683-003 S /	MS Ba	ntch: 1 Matr	ix: Soil		
Units: mg/kg	-	SU	RROGATE R	ECOVERY	STUDY	
BTEX by Ana		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0268	0.0300	89	80-120	
4-Bromofluorobenzene		0.0408	0.0300	136	80-120	*
Lab Batch #: 746552	Sample: 321683-003 SD	/ MSD Ba	tch: 1 Matr	ix: Soil		
Units: mg/kg			URROGATE R		STUDY	
-	EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	lytes		L			
1,4-Difluorobenzene	. <u></u>	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	<u></u>	0.0327	0.0300	109	80-120	
Lab Batch #: 746552	Sample: 321683-004 / SM			ix: Soil		
Units: mg/kg		SU	IRROGATE R	ECOVERY	STUDY	
BTEX by l	EPA 8021B lytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0315	0.0300	105	80-120	
4-Bromofluorobenzene		0.0669	0.0300	223	80-120	*
Lab Batch #: 746552	Sample: 321683-005 / St	MP Ba	ntch: Matr	ix: Soil		
Units: mg/kg			RROGATE R	ECOVERY	STUDY	
BTEX by I	EPA 8021B lytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0316	0.0300	105	80-120	
4-Bromofluorobenzenc		0.0408	0.0300	136	80-120	*

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

*** Poor recoveries due to dilution



Project Name: Red Byrd Ranch Historical

ork Orders : 321683,		Project I	D: TNM-Red	Byrd Ranc	h Histo
Lab Batch #: 746552 Sample:			ix: Soil		
Units: mg/kg	S	URROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
Analytes			[D]		
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0345	0.0300	115	80-120	
Lab Batch #: 746552 Sample:	321683-007 / SMP B	atch: 1 Mati	rix: Soil		
Units: mg/kg	S	URROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I,4-Difluorobenzene	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0455	0.0300	152	80-120	*
Lab Batch #: 746552 Sample:	321683-008 / SMP B	Batch: 1 Mati	rix: Soil		
Units: mg/kg		URROGATE R		STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
Analytes					
1,4-Difluorobenzene 4-Bromofluorobenzene	0.0314	0.0300	105	80-120 80-120	
	0.0376	0.0300	125	80-120	
•			ix: Soil		<u></u> .
Units: mg/kg	S	URROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0625	0.0300	208	80-120	*
Lab Batch #: 746552 Sample:	321683-010 / SMP B	atch: 1 Matr	ix: Soil		
Units: mg/kg	S	URROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0477	0.0300	159	80-120	*

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

*** Poor recoveries due to dilution



Project Name: Red Byrd Ranch Historical

ork Orders : 321683,		Project I	D: TNM-Red	Byrd Ranc	h Histor
Lab Batch #: 746552 Sample: 522943-	1-BKS / BKS Bat	tch: ¹ Mati	rix: Solid		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		I
I,4-Difluorobenzene	0.0247	0.0300	82	80-120	,
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	
Lab Batch #: 746552 Sample: 522943-	1-BLK / BLK Ba	tch: 1 Mat	rix: Solid		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	
Lab Batch #: 746552 Sample: 522943-	1-BSD / BSD Ba	tch: 1 Mat	rix: Solid		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0288	0.0300	95	80-120	
				00-120	
Lab Batch #: 745673 Sample: 321601-0			rix: Soil		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	126	100	126	70-135	
o-Terphenyl	59.8	50.0	120	70-135	
		·			
Lab Batch #: 745673 Sample: 321601-6	019 SD / MSD Bat	tch: I Mati	rix: Soil		
Lab Batch #: 745673 Sample: 321601-0 Units: mg/kg		tch: ¹ Mati		STUDY	
Units: mg/kg TPH By SW8015 Mod			Recovery %R	STUDY Control Limits %R	Flags
Units: mg/kg	SU Amount Found	RROGATE R True Amount	Recovery	Control Limits	Flags

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

*** Poor recoveries due to dilution



Project Name: Red Byrd Ranch Historical

ork Orders : 321683,		Project I	D: TNM-Red	Byrd Rand	h Histo						
Lab Batch #: 745673 Sample: 32	21683-001 / SMP Ba	itch: 1 Mati	rix: Soil								
Units: mg/kg	SU	JRROGATE R	ECOVERY	STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
Analytes											
I-Chlorooctanc o-Terphenyl	54.9	100	109	70-135							
Lab Batch #: 745673 Sample: 32		tch: 1 Mat	rix: Soil	L							
Units: mg/kg		RROGATE R	ECOVERY	STUDY							
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
l-Chlorooctane	107	100	107	70-135							
o-Terphenyl	54.2	50.0	108	70-135							
Lab Batch #: 745673 Sample: 32	1683-003 / SMP Ba	tch: Mati	rix: Soil								
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY							
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1-Chlorooctane	106	100	106	70-135							
o-Terphenyl	54.0	50.0	108	70-135							
Lab Batch #: 745673 Sample: 32	1683-004 / SMP Ba	tch: 1 Mati	rix: Soil								
Units: mg/kg		RROGATE R	ECOVERY	STUDY							
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
I-Chlorooctane	109	100	109	70-135							
p-Tcrphcnyl	55.2	50.0	110	70-135							
•			SURROGATE RECOVERY STUDY								
Lab Batch #: 745673 Sample: 32 Units: mg/kg				STUDY							
Units: mg/kg TPH By SW8015 Mod			ECOVERY S Recovery %R	STUDY Control Limits %R	Flags						
Units: mg/kg	Amount Found	RROGATE R True Amount	ECOVERY S	Control Limits	Flags						

** 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.



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Form 2 - Surrogate Recoveries

Project Name: Red Byrd Ranch Historical

ork Orders : 321683,			Project I	D: TNM-Red	Byrd Ranc	h Histor
Lab Batch #: 745673	Sample: 321683-006 / SM	IP Ba	tch: 1 Matr	ix: Soil		
Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY	
TPH By S'	W8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Ana	lytes			[D]		
I-Chlorooctanc	· · · · · · · · · · · · · · · · · · ·	109	100	109	70-135	
o-Terphenyl		55.3	50.0	111	70-135	
Lab Batch #: 745673	Sample: 321683-007 / SM	IP Ba	tch: 1 Matr	ix: Soil		
Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY	
	W8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc		112	100	112	70-135	
o-Terphenyl		55.1	50.0	110	70-135	
Lab Batch #: 745673	Sample: 321683-008 / SM	[P Ba	tch: 1 Matr	ix: Soil	<u> </u>	
Units: mg/kg			RROGATE R		STUDY	
	W8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc		107	100	107	70-135	
o-Terphenyl		53.9	50.0	108	70-135	
Lab Batch #: 745673	Sample: 321683-009 / SM	L IP Ra	tch: Matr	ix: Soil	<u>L</u>	
Units: mg/kg	Sample: 221000 000 + bill		RROGATE R		STUDY	
·	W8015 Mod lytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
-Chlorooctanc		106	100	106	70-135	
-Terphenyl		53.9	50.0	108	70-135	
Lab Batch #: 745673	Sample: 321683-010 / SM	IP Ba	L	ix: Soil	I	
Units: mg/kg	•		RROGATE R		STUDY	
·	W8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	lytes	I04 I00 I04 70-1				
I-Chlorooctanc	······				70-135	
p-Terphenyl		53.0	50.0	106	70-135	

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

*** Poor recoveries due to dilution



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Form 2 - Surrogate Recoveries

Project Name: Red Byrd Ranch Historical

/ork Orders : 321683,			Project I	D: TNM-Red	Byrd Ranc	h Histori
Lab Batch #: 745673	Sample: 522478-1-B	KS/BKS Ba	atch: ¹ Mati	rix: Solid		
Units: mg/kg		su	JRROGATE R	ECOVERY	STUDY	
TPH By SV Anal		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		124	100	124	70-135	
o-Terphenyl		60.8	50.0	122	70-135	
Lab Batch #: 745673	Sample: 522478-1-B	LK/BLK B:	atch: 1 Mat	rix: Solid		
Units: mg/kg		SU	JRROGATE R	ECOVERY	STUDY	
TPH By SV		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Anal	ytes			1		
I-Chlorooctane		108	100	108	70-135	
o-Terphenyl		53.4	50.0	107	70-135	
Lab Batch #: 745673	Sample: 522478-1-B	SD / BSD Ba	atch: 1 Mat	rix: Solid		
Units: mg/kg		SU	URROGATE R	ECOVERY	STUDY	
TPH By SV		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		125	100	125	70-135	
o-Terphenyl		64.5	50.0	129	70-135	

** 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: Red Byrd Ranch Historical

Work Order #: 321683 Analyst: ASA Lab Batch ID: 746552 Sample: 522943-1-BKS Units: mg/kg

Date Prepared: 01/14/2009

Batch #: 1

Project ID: TNM-Red Byrd Ranch Historical Date Analyzed: 01/14/2009 Matrix: Solid

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BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Bik. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[[B]	[<u>c]</u>		[E]	Result [F]	5	2			
Benzene	QN	0.1000	0660.0	66	0.1	0.1049	105	6	70-130	35	
Toluene	QN	0.1000	1660.0	100	0.1	0.1020	102	2	70-130	35	
Ethylbenzene	QN	0.1000	0.1044	104	0.1	0.1076	108	3	71-129	35	
m,p-Xylencs	QN	0.2000	0.1961	86	0.2	0.2123	106	8	70-135	35	
o-Xylene	0.0186	0.1000	0.0997	001	0.1	0.1017	102	2	71-133	35	
Analyst: BHW	ũ	ate Prepar	Date Prepared: 01/06/2009	6			Date A	nalyzed: 0	Date Analyzed: 01/06/2009		
Lab Batch ID: 745673 Sample: 522478-1-BKS	-BKS	Batch #:	1#: 1					Matrix: Solid	bolid		
Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPI	ICATE	RECOVE	CRY STUD	Y	

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]		ā	E	Result [F]	<u>[</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	1010	101	1000	1000	100	-	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	1060	106	1000	1050	105	1	70-135	35	

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

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Project Name: Red Byrd Ranch Historical

Work Order #: 321683

Lab Batch ID: 746552 Date Analyzed: 01/15/2009

 QC- Sample ID:
 321683-003 S
 Batch #:

 Date Prepared:
 01/14/2009
 Analyst:

Batch#: 1 Matrix: Soil Analyst: ASA

Project ID: TNM-Red Byrd Ranch Historical

Reporting Units: mg/kg		N	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MAT	RIX SPII	KE DUPLICA'	FE REC	JVERY	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup. %D	RPD %	Control Limits %D	Control Limits 2000	Flag
Analytes	[y]	[B]	2		[E]	[1] uncavi	(<u>6</u>	2			
Benzene	QN	0.1085	0.0636	59	0.1085	0.0561	52	13	70-130	35	x
Toluene	QN	0.1085	0.0438	40	0.1085	0.0370	34	16	70-130	35	×
Ethylbenzene	0.0035	0.1085	0.0331	27	0.1085	0.0285	23	16	71-129	35	x
m,p-Xylenes	0.0064	0.2171	0.0566	23	0.2171	0.0401	16	36	70-135	35	XF
o-Xylene	0.0098	0.1085	0.0296	18	0.1085	0.0257	15	18	71-133	35	х
Lab Batch ID: 745673 Date Analyzed: 01/06/2009	QC- Sample ID: 321601-019 S Date Prepared: 01/06/2009	321601 01/06/2	-019 S 009	Ba An	Batch #: Analyst:]	1 Matrix: Soil BHW	:: Soil				
Reporting Units: mg/kg		N	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MAT	RIX SPII	KE DUPLICA	FE RECO	VERY	STUDY		

			TOTIC THE LOCAL BURNING THE DATING WITCH						TADI		
TPH By CW8016 Mod	Parent		Spiked Sample	Spiked		Duplicate	Spiked		Control	Control	
MATAL CTAG AAC ACT IT IT	Sample	Spike	Result	Sample	e	Spiked Sample	Dup.	RPD	Limits Limits	Limits	Flag
	Result	Added	[0]	%R	ę	Result [F]	%R	%	%R	%RPD	
Analytes	[Y]	[B]		<u>[</u>]	_		ତ୍ର				
C6-C12 Gasoline Range Hydrocarbons	Q	1070	1070	100	1070	1070	100	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1070	1130	106	1070	1150	107		70-135	35	

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 Page 14 of 19





Project Name: Red Byrd Ranch Historical

Work Order #: 321683

Lab Batch #: 745691 Date Analyzed: 01/06/2009 QC- Sample ID: 321675-001 D Reporting Units: %	Project ID: TNM-Red Byrd Ranch Hi Date Prepared: 01/06/2009 Analyst: BEV Batch #: 1 Matrix: Soil SAMPLE / SAMPLE DUPLICATE RECOVERY
Percent Moisture	Parent Sample Sample Control Result Duplicate RPD Limits Flag
Analyte	[A] Result %RPD [B]
ercent Moisture	4.33 3.94 9 20

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

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CHAIN OF CUSTODY RECORD AND ANALYSIS REOUEST 12800 West1-26 East Odessa, Texas 73765 Project Name: Red Byrd Rench Historical

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Project Name: Red Byrd Ranch Historical		à			Report Format:	E			T,	WID AIRONS DIGEIDA-WON - AN			_			- 1	-	-1	η	4		۴	÷	G - 45
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Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

Client:	Broin Env / Plains
Date/ Time:	1.0.09 9 45
Lab ID # :	321683
initials:	<u> </u>

Sample Receipt Checklist

	oumple receipt	Onechiat		
		1		Cilent Initia
#1	Temperature of container/ cooler?	Yes	No	2.5 °C
#2	Shipping container in good condition?	(es)	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?	les	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?	Ves	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 Balow
#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

Date/ Time:

-

Contact:

Regarding:

Corrective Action Taken:

Check all that Apply:

See attached e-mail/ fax

Contacted by:

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

Andrea Lam

-

From:	"Curt D. Stanley" <cstanley@basinenv.com></cstanley@basinenv.com>
To:	"Andrea Lam" <andrea.iam@xenco.com></andrea.iam@xenco.com>
Seni:	Thursday, January 08, 2009 2:24 PM
Subject:	Re: WO 321683 / Red Byrd Ranch Historical

Please correct the error.

Thank you

Curl Stanley

---- Original Message ----From: Andrea Lam To: Curt Stanley Sent: Tuesday, January 06, 2009 9:06 AM Subject: WO 321683 / Red Byrd Ranch Historical

Curt-1 just want to confirm per our phone call that the sample year should be 2009 not 2008.

Thank You, Andrea Lam Sample Receiving / Project Assistant

Environmental Lab of Texas A Xenco Company 12600 W 1-20 E Odessa, TX 79765 432-563-1800

1/8/2009

Gracie Avalos

012010 / 1741					
- ···· ·	and the second	· · ·	 	•	
From:	Camille J. Bryant [cjbryant@basin-consulting.com]				
Sent:	Monday, January 12, 2009 3:44 PM				
To:	Gracie Avalos				
Subject:	Fw: WO 321686 / Red Byrd Ranch Historical				
Attachments:	2009_321686_TNM-Red_Byrd_Ranch_Historical.pdf				

Gracie,

Would you please test the soil samples with TPH concentrations under 1,000 ppm for BTEX concentrations method 8021B. Please do this for WO 321683 also.

Thanks, Camille Bryant ---- Original Message -----From: Curt Q._Stanley To: cjbryant@basin-consulting.com Sent: Friday, January 09, 2009 7:36 AM Subject: Fw: WO 321686 / Red Byrd Ranch Historical

---- Original Message -----From: <u>Gracie Avalos</u> To: cdstanley@basin-consulting.com ; Jason <u>Henry</u> Sent: Wednesday, January 07, 2009 2:42 PM Subject: WO 321686 / Red Byrd Ranch Historical

Gracle Avalos Project Assistant Xenco Labs - Odessa 432-563-1800 Office 432-4563-1713 Fax gracie.ayalos@xenco.com

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1/12/2009

Analytical Report 321686

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd Ranch Historical TNM-Red Byrd Ranch Historical

16-JAN-09





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

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



16-JAN-09



Project Manager: Jason Henry PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: **321686 Red Byrd Ranch Historical** Project Address: Lea County, NM

Jason Henry:

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 321686. 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. 321686 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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Page 2 of 14



Sample Cross Reference 321686



PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Ranch Historical

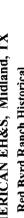
Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-1	S	Jan-05-09 10:30		321686-001



Contact: Jason Henry

•

Certificate of Analysis Summary 321686 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Red Byrd Ranch Historical



Tue Jan-06-09 09:45	16-JAN-09
Date Received in Lab:	Report Date:

am

Project Location: Lea County, NM			Report Date: 16-JAN-09 Project Manager: Brent Barron. II
	Lab Id:	321686-001	
	Field Id:	SP-1	
Analysis Nequesieu	Depth:		
	Matrix:	SOIL	
	Sampled:	Jan-05-09 10:30	
BTEX by EPA \$021B	Extracted:	Jan-15-09 09:00	
	Analyzed:	Jan-15-09 13:13	
	Units/RL:	mg/kg RL	
Benzene		ND 0.0011	
Toluene		0.0176 0.0022	
Ethylbenzene	1	0.2528 0.0011	
m,p-Xylenes		0.0420 0.0022	
o-Xylene		0.1545 0.0011	
Total Xylenes		0.1965 0.0022	
Total BTEX		0.4669 0.0011	
Percent Moisture	Extracted:		
	Analyzed:	Jan-06-09 17:00	
Ĭ	Units/RL:		
Percent Moisture		10.42 1.00	
TPH Bv SW8015 Mod	Extracted:	Jan-06-09 12:10	
	Analyzed:	Jan-06-09 23:06	
	Units/RL:	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		147 83.7	
C12-C28 Diesel Range Hydrocarbons		395 83.7	
C28-C35 Oil Range Hydrocarbons		ND 83.7	
Total TPH		542 83.7	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed through this analytical report research the shall degment of XENCO Laboratories. XENCO Laboratories are summers to repressed through and have an owarrangy to the end use of the data hereby presented. Our liability is limited to the arrount invoited for this work order unless otherwise agreed to in writing. Since 1990 Houston - Dallas - San Antonnio - Austin - Tampa - Miami - Latin Armerica - At

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

Odessa Laboratory Director Brent Barron





- 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.
- * Outside XENCO's scope of NELAC Accreditation.

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



Project Name: Red Byrd Ranch Historical

York Orders : 321686, Lab Batch #: 746674 Sample:	321686-001 / SMP Ba	•	D: TNM-Red	Dyru Raile	111300
Units: mg/kg		RROGATE R			
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			(D)	701	
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.7372	0.0300	2457	80-120	**
Lab Batch #: 746674 Sample:	523001-1-BKS / BKS Ba	tch: Mati	rix: Solid		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	
Lab Batch #: 746674 Sample:	523001-1-BLK / BLK Ba	tch: 1 Mati	rix: Solid		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	0.0322	0.0300	107	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	
Lab Batch #: 746674 Sample:	523001-1-BSD / BSD Ba	tch: ¹ Mati	rix: Solid	I	
Units: mg/kg		RROGATE R		STUDY	
BTEX by EPA 8021B Analytes	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	0.0288	0.0300	96	80-120	
Lab Batch #: 745673 Sample:	321601-019 S / MS Ba	tch: 1 Matu	rix: Soil		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	59.8	50.0	120	70-135	

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

*** Poor recoveries due to dilution



Project Name: Red Byrd Ranch Historical

ork Orders : 321686, Lab Batch #: 745673	Sample: 321601-019 SD /	MSD Bat	•	D:TNM-Red	Byrd Ranc	h Histo
Units: mg/kg	sample: 521001-019 3D7		RROGATE RI		STUDY	
TPH By SW8015 Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		127	100	127	70-135	
o-Tcrphenyl		54.6	50.0	109	70-135	
Lab Batch #: 745673 g Units: mg/kg	Sample: 321686-001 / SN		ich: 1 Matri RROGATE RI	ix: Soil ECOVERY S	STUDY	
TPH By SW8015 Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		104	100	104	70-135	
o-Terphenyl		55.8	50.0	112	70-135	
Lab Batch #: 745673 g Units: mg/kg	Sample: 522478-1-BKS /		tch: Matri RROGATE RI	ix: Solid ECOVERY S	STUDY	
TPH By SW8015 Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	,	124	100	124	70-135	
o-Terphenyl		60.8	50.0	122	70-135	
Lab Batch #: 745673 Units: mg/kg	Sample: 522478-1-BLK /		tch: Matri RROGATE RI	ix: Solid ECOVERY S	STUDY	
TPH By SW8015 Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		108	100	108	70-135	
o-Terphenyl		53.4	50.0	107	70-135	
Lab Batch #: 745673 g	Sample: 522478-1-BSD /		tch: ¹ Matri RROGATE RI	ix: Solid	STUDY	
TPH By SW8015 Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		125	100	125	70-135	
o-Terphenyl		64.5	50.0	129	70-135	

** 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: Red Byrd Ranch Historical

Work Order #: 321686 Analyst: ASA

Lab Batch ID: 746674

Date Prepared: 01/15/2009

Batch #: 1

Sample: 523001-1-BKS

Project ID: TNM-Red Byrd Ranch Historical **Date Analyzed:** 01/15/2009 Matrix: Solid

Units: mg/kg			BLAN	K/BLANK S	PIKE / B	LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	
BTEX by EPA 8021B		Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duolicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			[B]	[C]	[0]	E	Result [F]	Ū				
Benzene		QN	0.1000	0.1010	101	0.1	0.0966	16	4	70-130	35	
Toluene		QN	0.1000	0.0978	98	0.1	0.0943	94	4	70-130	35	
Ethylbenzene		QN	0.1000	0.1032	103	0.1	0.1000	100	3	71-129	35	
m,p-Xylenes		QN	0.2000	0.2045	102	0.2	0.1980	.66	я	70-135	35	
o-Xylene		ND	0.1000	0.0979	98	0.1	0.0946	95	3	71-133	35	
Analyst: BHW		Da	te Prepare	Date Prepared: 01/06/2009	6			Date Ar	alyzed: 0	Date Analyzed: 01/06/2009		
Lab Batch ID: 745673	Sample: 522478-1-BKS		Batch #:]	#: 1					Matrix: Solid	olid		

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	\square
TPH By SW8015 Mod	Blank Samnle Result	Spike Added	Blank Snike	Blank Snike	Spike Added	Blank Snike	Blk. Spk Dun.	RPD	Control Limits	Control Limits	Flag
	[A]		Result	%R		Duplicate	%R	%	%R	%RPD	0
Analytes		[B]		[D]	E	Result [F]	<u>[</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	1010	101	1000	1000	001	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	1060	901	1000	1050	105	1	70-135	35	

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







Project Name: Red Byrd Ranch Historical

Work Order #: 321686

Date Analyzed: 01/06/2009 Lab Batch ID: 745673

Batch #: 1 Analyst: BHW QC- Sample ID: 321601-019 S

Date Prepared: 01/06/2009

1 Matrix: Soil

Project ID: TNM-Red Byrd Ranch Historical

Reporting Units: mg/kg		M	ATRIX SPIK	E / MATI	IIAS XIX	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	FE RECO	VERY S	TUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample Sp	Spiked Sample		Duplicate Sr ke Spiked Sample L	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Kesult [A]	Added [B]	<u>.</u>	10]	- (+)	Result [F]	G G	%	%K	%крр	
C6-C12 Gasoline Range Hydrocarbons	QN	1070	1070	100	1070	1070	100	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	DN .	1070	1130	106	1070	1150	107	1	70-135	35	

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





Project Name: Red Byrd Ranch Historical

Work Order #: 321686

Lab Batch #: 745691 Date Analyzed: 01/06/2009 QC- Sample ID: 321675-001 D	Date Prepared: 0 Batch #:	1/06/2009 1	Analy	D: TNM-Re st: BEV ix: Soil	ed Byrd Ranch Histor
Reporting Units: %	SAMPL	E / SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sam Result [A]	ple Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
ercent Moisture	4.33	3.94	9	20	

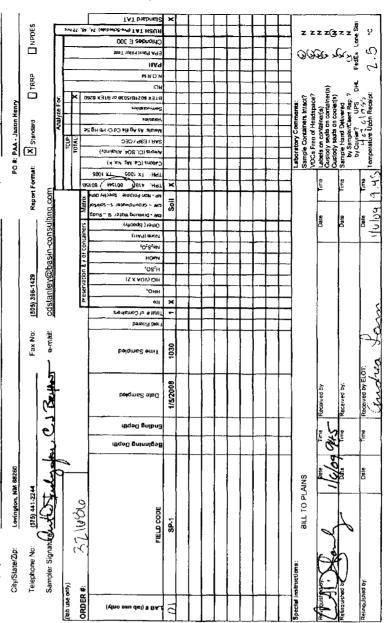
Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.

Texas
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Lab
nmental
Enviro

Project Manager: Company Name

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

NPDES Project #: TNM-Red Byrd Ranch Historical Project Name: Red Byrd Ranch Historical 🛛 тярр Phone: 432-563-1800 Fax: 432-563-1713 PO #: PAA - Jason Henry Project Loc: Lea County, NM Report Format: X Standard cdstanley@basin-consulting.com 12600 West I-20 East Odessa, Texas 79765 (505) 396-1429 Fax No: e-mail: 5 Jan, C.J. Ruther 01 OF PAGE Basin Environmental Consulting, LLC Company Address: 2600 Plains Hwy Curt Stanley



Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:	Basin Enu / Plains
Date/ Time:	1.6.09 9.45
Lab ID # :	3211036
Initials:	. aL .

Sample Receipt Checkilst

				Client Initial
#1	Temperature of container/ cooler?	1 des	No	2.5 .0
#2	Shipping container in good condition?	Xes)	No	
	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present
	Custody Seals intact on sample bottles/ container?	Yas	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?	(as	No	
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	(Tes)	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	Ves	No	
#11	Containers supplied by ELOT?	Yes	No	
#12		Ces	No	See Below
#13		Yes	No	See Balow
#14	Sample bottles intact?	Tes	No	
#15	Preservations documented on Chain of Custody?) (es	No	
#16	Containers documented on Chain of Custody?	Yes	No	
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below
#18		Yes	No	See Below
#19		Yes	No	Not Applicable
#20		(es	No	Not Applicable

Variance Documentation

Date/ Time:

Contacted by:

Contact: Regarding:

Corrective Action Taken:

Check all that Apply:

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

Andrea Lam

- - ---

From:	"Curt D. Stanley" <cstanley@basinenv.com></cstanley@basinenv.com>
To:	"Andrea Lam" <andrea.lam@xenco.com></andrea.lam@xenco.com>
Sent:	Thursday, January 08, 2009 2:24 PM
Subject:	Re: WO 321686 / Red Byrd Ranch Historical

Please correct the error.

Thank you

Curt Stanley

---- Original Message -----From: Andrea Lam To: Curt Stanley Sent: Tuesday, January 06, 2009 9:13 AM Subject: WO 321686 / Red Byrd Ranch Historical

Curt- I just want to confirm per our phone call that the sample year should be 2009 not 2008.

Thank You, Andrea Lam Sample Receiving / Project Assistant

Environmental Lab of Texas A Xenco Company 12600 W 1-20 E Odessa, TX 79765 432-563-1800

1/8/2009

,

Gracie Avalos

From:	Camille J. Bryant [cjbryant@basin-consulting.com]	
Sent:	Monday, January 12, 2009 3:44 PM	
То:	Gracie Avalos	
Subject:	Fw: WO 321686 / Red Byrd Ranch Historical	
Attachments:	2009_321686_TNM-Red_Byrd_Ranch_Historical.pdf	

Gracie.

Would you please test the soil samples with TPH concentrations under 1,000 ppm for BTEX concentrations method 8021B. Please do this for WO 321683 also.

Thanks Camille Bryant From: <u>Curt D. Stanley</u> To: cjbryan(<u>@basin-consulting.com</u> Sent: Friday, January 09, 2009 7:35 AM Subject: Fw: WO 321886 / Red Byrd Ranch Historical

----- Original Message -----From: <u>Gracie</u> Aval<u>os</u> To: <u>cdrstanlev@b</u>asin-con<u>sulting.com</u>; Jason Henry Sent: Wednesday, January 07, 2009 2:42 PM Subject: WO 321686 / Red Byrd Ranch Historical

Gracie Avalos Project Assistant Xenco Lobs - Odesso 432-563-1800 Office 432-4563-1713 Fox gracie.avalos@xenco.com

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Please consider the environment before printing this email.

1/12/2009

Analytical Report 322657

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd Ranch Historical TNM-Red Byrd Ranch Historical

27-JAN-09





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

> North Carolina certification numbers: Norcross(Atlanta), GA 483

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



27-JAN-09



Project Manager: Jason Henry PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: 322657 Red Byrd Ranch Historical Project Address: Lea County, NM

Jason Henry:

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 322657. 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. 322657 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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Sample Cross Reference 322657

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Ranch Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP # 2	S	Jan-14-09 13:00		322657-001
SP # 3	S	Jan-14-09 13:10		322657-002
SP # 4	S	Jan-14-09 13:20		322657-003
NSW-1A	S	Jan-14-09 13:30		322657-004
NSW-1B	S	Jan-14-09 13:40		322657-005
WSW-1A	S	Jan-14-09 13:50		322657-006
SSW-1A	S	Jan-14-09 14:00		322657-007
SSW-1B	S	Jan-14-09 14:10		322657-008
SSW-1C	S	Jan-14-09 14:20		322657-009

	TNM-Red Byrd Ranch Historical
EXAUGO International	Project Id: TNM-

Certificate of Analysis Summary 322657 PLAINS ALL AMERICAN EH&S, Midland, TX



ୁମ୍ମାପ୍ତି Date Received in Lab: Thu Jan-15-09 06:43 pm

ALLH

Contact: Jason Henry Project Location: Lea County, NM

Report Date: 27-JAN-09

Froject Location: Lea County, MIN					Dar-food Manager	Dame Daman II	
					I TUJECE INTAILAGET. DI CHILDALI ULI, IL		
	Lab Id:	322657-001	322657-002	322657-003	322657-004	322657-005	322657-006
A sufficient Description	Field Id:	SP # 2	SP#3	SP#4	NSW-1A	NSW-IB	WSW-IA
naisanhay sistinuy	Depth:						_
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jan-14-09 13:00	Jan-14-09 13:10	Jan-14-09 13:20	Jan-14-09 13:30	Jan-14-09 13:40	Jan-14-09 13:50
BTEX by EPA 8021B	Extracted:	Jan-22-09 15:30	Jan-22-09 15:30	Jan-22-09 15:30	Jan-22-09 15:30	Jan-22-09 15:30	Jan-23-09 08:00
	Analyzed:	Jan-23-09 01:46	Jan-23-09 02:06	Jan-23-09 02:27	Jan-23-09 02:48	Jan-23-09 03:52	Jan-23-09 13:03
:	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		1100.0 CN	ND 0.0010	1100'0 CIN	ND 0.0010	ND 0.0011	ND 0.0512
Toluene		ND 0.0022	ND 0.0021	ND 0.0021	0.0435 0.0020	ND 0.0021	2.996 0.1024
Ethylbenzene		0.0011 0.0011	0.0087 0.0010	0.0086 0.0011	0.0269 0.0010	1100:0 CIN	2.993 0.0512
m.p-Xylenes		ND 0.0022	0.0170 0.0021	0.0264 0.0021	0.1214 0.0020	ND 0.0021	11.86 0.1024
o-Xylene		0.0040 0.0011	0.0247 0.0010	0.0344 0.0011	0.0422 0.0010	1100'0 QN	4.412 0.0512
Total Xylenes		0.004 0.0022	0.0417 0.0021	0.0608 0.0021	0.1636 0.0020	ND 0.0021	16.272 0.1024
Total BTEX		0.0051 0.0011	0.0504 0.0010	0.0694 0.0011	0.234 0.0010	1100.0 CIN	22.261 0.0512
Percent Moisture	Extracted:						
	Analyzed:	Jan-16-09 17:00	Jan-16-09 17:00	Jan-16-09 17:00	Jan-16-09 17:00	Jan-16-09 17:00	Jan-16-09 17:00
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		7.42 1.00	2.52 1.00	4.72 1.00	1.50 1.00	5.07 1.00	2.39 1.00
TPH Bv SW8015 Mod	Extracted:	Jan-16-09 14:15	Jan-16-09 14:15	Jan-16-09 14:15	Jan-16-09 14:15	Jan-16-09 14:15	Jan-16-09 14:15
	Analyzed:	Jan-1 7-09 06:19	Jan-17-09 06:41	Jan-17-09 07:04	Jan-17-0907:27	Jan-17-09 07:50	Jan-1 7-09 08:36
	Units/RL.	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		38.2 16.2	129 76.9	96.5 15.7	490 76.1	ND 15.8	1480 76.8
C12-C28 Diesel Range Hydrocarbons		135 16.2	735 76.9	761 15.7	10100 76.1	48.1 15.8	3500 76.8
C28-C35 Oil Range Hydrocarbons		83.3 16.2	259 76.9	160 15.7	2040 76.1	26.6 15.8	493 76.8
Total TPH		256.5 16.2	1123 76.9	1017.5 15.7	12630 76.1	74.7 15.8	5473 76.8

This smallytical report, and the entire data package it represents, has been made for your exclusive and contridential use. The interpretores and results expressed throughout this smallytal report represent the best juggment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the smouth invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Director Brent Barron



Certificate of Analysis Summary 322657 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd Ranch Historical

TX Control of the Jan-15-09 06:43 pm

Contact: Jason Henry Proiect Location: Lea County, NM

Report Date: 27-JAN-09

Iab Id: 322657-008 322657-008 322657-008 322657-008 Field Id: SSW-IA SSW-IB SSW-IC SSW-IC Depth: Depth: SOIL SSW-IB SSW-IC Depth: Depth: SOIL SSW-IB SSW-IC Depth: Depth: SOIL SOIL SOIL Sempled: Jan-14-09 14:00 Jan-14-09 14:20 Jan-14-09 14:20 Marke: SOIL SOIL SOIL SOIL Sempled: Jan-22-09 15:30 Jan-14-09 14:20 Jan-14-09 14:20 Inits/RL mg/g RL Marke RL Analyzed: Jan-22-09 15:30 Jan-14-09 14:20 Jan-14-09 14:20 Inits/RL mg/g RL Marke RL MD Marke: RL MD MD MD MD MD MD Marke: ND MD MD MD MD MD MD MD MD Marke: ND MD MD </th <th></th> <th></th> <th></th> <th></th> <th></th> <th>Project Manager: Brent Barron, II</th>						Project Manager: Brent Barron, II
Inalysis Requested Field Id: Depti: SSW:1A SSW.1B SSW.1B SSW.1C Depti: Depti: SOIL SOIL SOIL SOIL SOIL BTEX by EPA 8021B Extracted: Jan-14.09 14:00 Jan-14.09 14:10 Jan-16-09 14:1		Lab Id:	322657-007	322657-008	322657-009	
Inturbation Requested Depth: SOIL SO		Field Id:	SSW-1A	SSW-1B	SSW-IC	
Matrix: SOIL	naisanhay sistinuy	Depth:				
Sampled: Jan-14.09 14.00 14.00 14.09 14.00 14.09 14.09 14.09 14.09 14.00 16.00 16.00		Matrix:	SOIL	SOIL	SOIL	
BTEX by EPA 8021B Extracted: Analyzed: Jan:25.09 16:13 Jan:26.09 16:13 Jan:22.09 15:13 Jan:22.09 15:13 $Jan:26.00 16:13$ $Jan:26.00 16:13$ $Jan:22.09 16:13$ $Jan:22.09 05:14$ mp/g mg/g mg/g RL mg/g RL mg/g mg/g RL mg/g RL mg/g ND 0.023 0.9294 0.1028 ND 0.0 mg/g RL ND 0.0012 2.237 0.0214 ND 0.0 ms ND 0.0012 2.237 0.0214 ND 0.0102 ms ND 0.0023 9.197 0.1028 ND 0.012 ms ND 0.0012 1.14 0.1028 ND		Sampled:	Jan-14-09 14:00	Jan-14-09 14:10	Jan-14-09 14:20	
Analyzed: Jan-23-09 04:34 Jan-26-09 16:13 Jan-23-09 05: Jan-23-09 05: Jan-23-09 05: Jan-0 Jan-23-09 05: Jan-0 Jan-23-09 05: Jan-16-09 17: Jan-17-09 09: Jan-17-09 09:	RTEX by EPA 8021B	Extracted:	Jan-22-09 15:30	Jan-26-09 10:00	Jan-22-09 15:30	
		Analyzed:	Jan-23-09 04:34	Jan-26-09 16:13	Jan-23-09 05:16	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Units/RL:	I			
ND 0.0023 0.9294 0.1028 ND 0.0 es ND 0.0012 2.237 0.0514 ND 0.0 es ND 0.0012 2.237 0.0514 ND 0.0 es ND 0.0012 2.203 0.0514 ND 0.0 ms ND 0.0012 2.203 0.0514 ND 0.0 ms ND 0.0012 2.203 0.0514 ND 0.0 ms ND 0.0012 14.5664 0.0514 ND 0.0 The second $1an-16-0917.00$ $1an-16-0917.00$ $1an-16-0917.00$ $1an-16-0917.00$ $1an-16-0917.00$ Statuce $1an-16-0914.15$ $1an-16-0917.00$ $1an-16-0917.00$ $1an-16-0917.00$ $1an-16-0917.00$ Statuce $1an-16-0914.15$ $1an-16-0914.15$ $1an-16-0914.15$ $1an-16-0914.15$ $1an-16-0914.15$ Statuce $1an-16-0914.15$ $1an-16-0914.15$ $1an-17-0909.23$ $1an-17-0909.2$	Benzene		ND 0.0012	ND 0.0514	1100'0 CIN	
me ND 0.0012 2.237 0.0514 ND 0.0 es ND 0.0023 9.197 0.1028 ND 0.0 mes ND 0.0012 2.203 0.0514 ND 0.0 mes ND 0.0012 11.4 0.1028 ND 0.0 X ND 0.0012 14.5664 0.0514 ND 0.0 Recent Moisture Extracted: Jan-16-09 17.00 Jan-16-09 17.00 Percent Moisture Extracted: Jan-16-09 17.00 Jan-16-09 17.00 Inturvel Jan-16-09 17.00 Jan-16-09 17.00 Jan-16-09 17.00 Sisture Inturvel Jan-16-09 14.15 Jan-16-09 17.00 5.54 Sisture Inturvel Jan-16-09 14.15 Jan-16-09 17.00 5.54 IPH By SW8015 Mod Extracted: Jan-16-09 14.15 Jan-17-09 5.54 IPH By SW8015 Mod Extracted	Toluene		ND 0.0023	0.9294 0.1028	ND 0.0021	
es ND 0.0023 9.197 0.1028 ND 0.002 mes ND 0.0012 2.203 0.0514 ND 0.001 X ND 0.0012 14.5664 0.0514 ND 0.001 X ND 0.0012 14.5664 0.0514 ND 0.001 Percent Moisture Extracted: Jan-16-09 17:00 Jan-16-09 17:00 Jan-16-09 17:00 Jan-16-09 17:00 Jan-16-09 17:00 Jan-16-09 14:15 Jan-16-09 14:17 Jan-16-09 14:15 Jan-16-09 14:17	Ethylbenzene		ND 0.0012	2.237 0.0514	1100.0 CIN	
ND 0.0012 2.203 0.0514 ND 0.0 x ND 0.0023 11.4 0.1028 ND 0.0 X ND 0.0012 14.5664 0.0514 ND 0.0 Percent Moisture Extracted: Jan-16-09 17.00 Jan-16-09 17.00 Analyzed: Jan-16-09 17.00 Jan-16-09 17.00 Jan-16-09 17.00 sisture Unix/NL: % RL % RL % Sisture 14.66 1.00 2.73 1.00 5.54 Sisture 13an-16-09 14:15 Jan-16-09 14:16 % FPH By SW8015 Mod Extracted: Jan-16-09 14:15 Jan-16-09 14:16 96 Sisture Madyzed: Jan-16-09 14:15 Jan-16-09 13 17.00 90:23 Jan-17-09 90:3 Jan-17-09 90:3 Jan-17-09 90:3 Jan-17-09 90:3 Jan-17-09 90:3 Jan-17-09	m,p-Xylenes		ND 0.0023	9.197 0.1028	ND 0.0021	
mes ND 0.0023 11.4 0.1028 ND 0.0 X ND 0.0012 14.5664 0.0514 ND 0.0 Percent Moisture Extracted: Jan-16-09 17.00 Jan-16-09 14.15 Jan-17-09 09:23 Jan-17-09 09:23 Jan-17-09 09:23 Jan-17-09	o-Xylene		ND 0.0012	2.203 0.0514	1100'0 CIN	
X ND 0.0012 14.5664 0.0514 ND 0.0 Percent Moisture Extracted: Jan-16-09 17.00 5.54 % Disture Unix/RL: % RL % RL % 5.54 9.556 9.54 <t< th=""><th>Total Xylenes</th><th></th><th>ND 0.0023</th><th>11.4 0.1028</th><th>ND 0.0021</th><th></th></t<>	Total Xylenes		ND 0.0023	11.4 0.1028	ND 0.0021	
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Units/RL: % RL % RL % oisture 14.66 1.00 2.73 1.00 5.54 ГPH By SW8015 Mod <i>Extracted</i> : Jan-16-09 14:15 Jan-16-09 14:15 Jan-16-09 14: <i>Analyzed</i> : Jan-17-09 09:00 Jan-17-09 09:23 Jan-17-09 09:23 Jan-17-09 09:23 soline Range Hydrocarbons <i>Units/RL</i> : mg/kg RL mg/kg RL soline Range Hydrocarbons ND 17.6 2050 154 ND Sitest Range Hydrocarbons ND 17.6 5260 154 ND Sitest Range Hydrocarbons ND 17.6 5260 154 ND Sitest Range Hydrocarbons ND 17.6 8011 154 ND		Analyzed:	Jan-16-09 17:00	Jan-16-09 17:00	Jan-16-09 17:00	
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Image Hydrocarbons Extracted: Jan-16-09 14:15 Jan-17-09 09:01 Analyzed: Jan-17-09 09:00 Jan-17-09 09:00 Jan-17-09 09:23 Jan-17-09 09:09 soline Range Hydrocarbons Units/RL: mg/kg RL mg/kg RL mg/kg soline Range Hydrocarbons NID 17.6 2050 154 NID Di Range Hydrocarbons NID 17.6 701 154 NID Di Range Hydrocarbons NID 17.6 8011 154 NID	Percent Moisture					
Analyzed: Jan-17-09 09:00 Jan-17-09 09:23 Jan-17-09 09:09 soline Range Hydrocarbons Units/RL: mg/kg RL mg/kg RL mg/kg soline Range Hydrocarbons ND 17.6 2050 154 ND bit Range Hydrocarbons ND 17.6 5260 154 ND bit Range Hydrocarbons ND 17.6 5260 154 ND bit Range Hydrocarbons ND 17.6 5260 154 ND bit Range Hydrocarbons ND 17.6 8011 154 ND	TPH Rv SW8015 Mod	Extracted:	Jan-16-09 14:15	Jan-16-09 14:15	Jan-16-09 14:15	
Units/RL: mg/kg RL mg/kg RL mg/kg ssoline Range Hydrocarbons ND 17.6 2050 154 ND Diesel Range Hydrocarbons ND 17.6 5260 154 ND Dil Range Hydrocarbons ND 17.6 5260 154 ND Dil Range Hydrocarbons ND 17.6 8011 154 ND ND 17.6 8011 154 ND		Analyzed:	Jan-1 7-09 09:00	Jan-17-09 09:23	Jan-1 7-09 09:46	
asoline Range Hydrocarbons ND 17.6 2050 154 ND Nesel Range Hydrocarbons ND 17.6 5260 154 ND NB 17.6 701 154 ND ND 17.6 8011 154 ND		Units/RL:				
NID 17.6 5260 154 ND Dil Range Hydrocarbons ND 17.6 701 154 ND Dil Range Hydrocarbons ND 17.6 8011 154 ND	C6-C12 Gasoline Range Hydrocarbons			0		
NID 17.6 701 154 ND NID 17.6 8011 154 ND	C12-C28 Diesel Range Hydrocarbons					
DN 17.6 8011 154 ND 17.6 8011 154 ND	C28-C35 Oil Range Hydrocarbons					
	Total TPH					

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

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Brent Barron Odessa Laboratory Director





- 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.
- * Outside XENCO's scope of NELAC Accreditation.

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Project Name: Red Byrd Ranch Historical

Lab Datab H. 747356 Samuela	322657 001 / SMP	Dat	tch: ¹ Matr	ix: Soil	•	h Histo	
•	322037-0017 SMF		tch: 1 Matr RROGATE R		TUN		
		50		ECUVERI			
Bromofluorobenzene Lab Batch #: 747356 Sample: 322657-002 Units: mg/kg BTEX by EPA 8021B Analytes 4-Difluorobenzene Bromofluorobenzene BTEX by EPA 8021B BTEX by EPA 8021B Analytes 4-Difluorobenzene Bromofluorobenzene		und	True Amount	Recovery	Control Limits	Flags	
		A]	B	%R	%R	riaga	
Analytes		-		{D}			
1,4-Difluorobenzene	0.0	311	0.0300	104	80-120		
4-Bromofluorobenzene	0.0	386	0:0300	129	80-120	*	
Lab Batch #: 747356 Sample:	322657-002 / SMP	Bat	tch: 1 Mati	ix: Soil			
Units: mg/kg		SU	RROGATE R	ECOVERY S	STUDY		
BTEX by EPA 8021B	An	iount	True		Control		
		und	Amount	Recovery	Limits	Flags	
Analytas		A]	[B]	%R [D]	%R		
		307	0.0300	102	80-120		
		671	0.0300	224	80-120	*	
			L				
•	322657-0037 SMP			ix: Soil			
Units: mg/kg		<u></u>	RROGATE R	RECOVERY STUDY Control			
BTEX by EPA 8021B		ount ound	True Amount	Recovery	Control Limits	Flags	
		A	[B]	%R	%R	riage	
Analytes		•		[D]			
1,4-Difluorobenzene	0.0	308	0.0300	103	80-120		
4-Bromofluorobenzene	0.0	780	0.0300	260	80-120	*	
Lab Batch #: 747356 Sample:	322657-004 / SMP	Ba	tch: 1 Mat	ix: Soil			
Units: mg/kg		SU	RROGATE R	ECOVERY S	STUDY		
BTEX by EPA 8021B	An	ount	True	T	Control		
		und	Amount	Recovery	Limits	Flags	
Analytas		Aļ	(B)	%R [D]	%R		
		391	0.0300	130	80-120	*	
4-Bromofluorobenzene		852	0.0300	284	80-120	*	
L - L D. Ask # 747356			L	ix: Soil	00 120		
	522057-0057 SMT		tch: ¹ Mati		STUDV		
	A	iount	True				
BIEX by EPA 8021B		und	Amount	Recovery	Control Limits	Flag	
		A]	[B]	%R	%R		
Analytes				[D]			
1,4-Difluorobenzene	0.0	321	0.0300	107	80-120		
4-Bromofluorobenzene		332					

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Red Byrd Ranch Historical

Lab Batch #: 747356 Sample: 32	22657-007 / SMP Ba	ch: 1 Mati	rix: Soil				
Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY	-		
BTEX by EPA 8021B	Amount Found [A]	True Amount B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
l,4-Difluorobenzene	0.0314	0.0300	105	80-120			
4-Bromofluorobenzene	0.0325	0.0300	108	80-120			
Lab Batch #: 747356 Sample: 32	22657-009 / SMP Ba	tch: l Mat	rix: Soil				
Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage		
1,4-Difluorobenzene	0.0311	0.0300	104	80-120			
4-Bromofluorobenzene	0.0330	0.0300	110	80-120			
Lab Batch #: 747356 Sample: 32	23065-007 S / MS Ba	tch: 1 Mat	rix: Soil				
Units: mg/kg	SU	SURROGATE RECOVERY STUDY Amount True Control					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage		
Analytes	0.0288	0.0300	96	80-120			
4-Bromofluorobenzene	0.0288	0.0300	90	80-120			
Lab Batch #: 747356 Sample: 32			rix: Soil		_		
Units: mg/kg		tch: 1 Mati		STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage		
1,4-Difluorobenzene	0.0300	0.0300	100	80-120			
4-Bromofluorobenzene	0.0300	0.0300	100	80-120			
Lab Batch #: 747356 Sample: 52	23469-1-BKS / BKS Ba	ich: 1 Mati	rix: Solid				
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R D]	Control Limits %R	= Flag		
Analytes	1			1 1			
1,4-Difluorobenzene	0.0277	0.0300	92	80-120			

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Red Byrd Ranch Historical

				5	h Histo
•			rix: Solid		
Units: mg/kg	S	URROGATE R	ECOVERYS	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		}	[D]		
I,4-Difluorobenzene	0.0319	0.0300	106	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	
Lab Batch #: 747356 Sample: 52	23469-1-BSD / BSD B	atch: 1 Mati	rix: Solid		
Units: mg/kg	S	URROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0272	0.0300	91	80-120	
Lab Batch #: 747389 Sample: 32	22657-006 / SMP	Batch: 1 Mat	rix: Soil		
Units: mg/kg		URROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
Analytes			[D]		
1,4-Difluorobenzene	0.0384	0.0300	128	80-120	**
4-Bromofluorobenzene	0.1170	0.0300	390	80-120	**
Lab Batch #: 747389 Sample: 32	22761-014 S / MS E	atch: 1 Mat	rix: Soil		
Units: mg/kg	S	URROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	
Lab Batch #: 747389 Sample: 32	22761-014 SD / MSD E	atch: ¹ Mat	rix: Soil		
Units: mg/kg	S	URROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
	1	1	1 - * *	I I	

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Red Byrd Ranch Historical

Lab Batch #: 747389	Sample: 523501-1-	-BKS / BKS Ba	itch: 1 Mati	rix: Solid		
Units: mg/kg		SU	JRROGATE R	ECOVERY	STUDY	
BTEX by E		Amount Found [A]	True Amount [B]	Recovery %R D	Control Limits %R	Flags
Anal	ytes					ļ
1,4-Difluorobenzene		0.0278	0.0300	93	80-120	
4-Bromofluorobenzene		0.0273	0.0300	91	80-120	
Lab Batch #: 747389	Sample: 523501-1-			rix: Solid		
Units: mg/kg		SU	JRROGATE R	ECOVERY	STUDY	
BTEX by E Analy		Amount Found [A]	True Amount B}	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0315	0.0300	105	80-120	
4-Bromofluorobenzene		0.0326	0.0300	109	80-120	
Lab Batch #: 747389	Sample: 523501-1-	BSD / BSD Ba	tch: 1 Mati	ix: Solid	·	
Units: mg/kg			RROGATE R		STUDY	
BTEX by E		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Anal	ytes			[D]		
1,4-Difluorobenzene	<u> </u>	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene		0.0278	0.0300	93	80-120	
Lab Batch #: 747608	Sample: 322657-00	08 / SMP Ba	itch: ¹ Mati	ix: Soil		
Units: mg/kg		su	JRROGATE R	ECOVERY S	STUDY	
BTEX by E Analy		Amount Found [A]	True Amount B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	, <u> </u>	0.0381	0.0300	127	80-120	**
4-Bromofluorobenzene		0.0898	0.0300	299	80-120	**
Lab Batch #: 747608	Sample: 523605-1-	BKS/BKS Ba	tch: 1 Matr	ix: Solid		
Units: mg/kg	•		RROGATE R		STUDY	
BTEX by E Analy		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Difluorobenzene		0.0275	0.0300	92	80-120	
1,4-DIHU0100Enzene						

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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Project Name: Red Byrd Ranch Historical

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Lab Batch #: 747608	Sample: 523605-1-BLK / 1	BLK Bat	tch: 1 Matr	ix: Solid		
Units: mg/kg	-	SU	RROGATE R	ECOVERY S	STUDY	
Units: mg/kg BTEX by EPA 8021B Analytes Difluorobenzene Bromofluorobenzene BTEX by EPA 8021B BTEX by EPA 8021B BTEX by EPA 8021B Analytes Difluorobenzene Bromofluorobenzene Bromofluorobenzene Lab Batch #: 746816 Sample: 322641-003 Units: mg/kg TPH By SW8015 Mod Analytes Chlorooctane Ferphenyl Lab Batch #: 746816 Sample: 322641-003 Units: mg/kg TPH By SW8015 Mod Analytes Chlorooctane Ferphenyl Lab Batch #: 746816 Sample: 322641-003 Units: mg/kg	ι,	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene		0.0315	0.0300	105	80-120	
4-Bromofluorobenzene		0.0337	0.0300	112	80-120	
Lab Batch #: 747608	Sample: 523605-1-BSD / 1			ix: Solid	CTELIDA	
Units: mg/kg			RROGATE R	ECOVERY		
- 		Amount Found [A]	True Amount B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene		0.0281	0.0300	94	80-120	
4-Bromofluorobenzene		0.0287	0.0300	96	80-120	
Lab Batch #: 746816	Sample: 322641-003 S / M	IS Bat	tch: 1 Matr	ix: Soil		
Units: mg/kg		SURROGATE RECOVERY STUDY				
		Amount Found]A}	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
· · · · · · · · · · · · · · · · · · ·	•	126	100	126	70-135	
p-Terphenyl		64.3	50.0	120	70-135	
Lab Batch # 746816	Sample: 322641-003 SD /	MSD Bai	tch: ¹ Matr	ix: Soil	<u> </u>	
	Sumple. Salott tot of		RROGATE R		STUDY	
		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I-Chlorooctane		127	100	127	70-135	
p-Terphenyl		63.1	50.0	126	70-135	
Lab Batch #: 746816	Sample: 322657-001 / SM	P Ba	tch: 1 Matr	ix: Soil	<u> </u>	
Units: mg/kg	-	SU	RROGATE R		STUDY	
TPH By SW80		Amount Found [A]	True Amount B]	Recovery %R	Control Limits %R	Flag
Analytes	; 			[D]		
			100	1 114	20.100	
1-Chlorooctane		114	100	114	70-135	

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

*** Poor recoveries due to dilution

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



Project Name: Red Byrd Ranch Historical

Lab Batch #: 746816 Sample: 322657-002 /	SMP Ba	tch: ¹ Mati	rix: Soil		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R D	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	59.3	50.0	119	70-135	
Lab Batch #: 746816 Sample: 322657-003 /	· · · · · · · · · · · _		rix: Soil		
Units: mg/kg		tch: Mati		STUDY	_
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	60.1	50.0	120	70-135	
Lab Batch #: 746816 Sample: 322657-004 /	SMP Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	117	50.0	234	70-135	**
Lab Batch #: 746816 Sample: 322657-005 /	SMP Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg		RROGATE R		STUDY	<u> </u>
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	114	100	114	70-135	
o-Terphenyl	57.2	50.0	114	70-135	
Lab Batch #: 746816 Sample: 322657-006 /	SMP Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg	SŪ	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount {B}	Recovery %R [D]	Control Limits %R	Flags
Analytes	1	1		1	
1-Chlorooctane	143	100	143	70-135	**

** 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.



Project Name: Red Byrd Ranch Historical

ork Orders : 322657, Lab Batch #: 746816	Sample: 322657-007 / SM	IP Bat		D:TNM-Red		II IIIsto
Units: mg/kg	Sample. 322007 0077 Di		RROGATE RI		STUDY	
TPH By SV	W8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	lytes					
1-Chlorooctane o-Terphenyl	· · · ·	58.1	100	115	70-135	
Lab Batch #: 746816	Sample: 322657-008 / SN			ix: Soil		
Units: mg/kg	Sample: 522057-0087 SW		RROGATE RI		STUDY	
TPH By SV	W8015 Mod lytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	· · · ·	154	100	154	70-135	**
o-Terphenyl		69.9	50.0	140	70-135	**
Lab Batch #: 746816	Sample: 322657-009 / SM	1P Bat	tch: ¹ Matri	ix: Soil		-
Units: mg/kg		SU	RROGATE RI	ECOVERY S	STUDY	
·	W8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	lytes		100		70.125	
o-Terphenyl		57.8	100	114	70-135 70-135	
Lab Batch #: 746816	Sample: 523072-1-BKS /			ix: Solid		·
Units: mg/kg	Sample, 525072 T BROY		RROGATE RI		STUDY	
TPH By SV	W8015 Mod lytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	lytes	130	100	130	70-135	
o-Terphenyl		62.1	50.0	124	70-135	
Lab Batch #: 746816	Sample: 523072-1-BLK /	BLK Bat	tch: ¹ Matr	ix: Solid	L	
Units: mg/kg	-		RROGATE R		STUDY	
	W8015 Mod lytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
I-Chlorooctane	-	114	100	114	70-135	
o-Terphenyl		57.6	50.0	115	70-135	

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Red Byrd Ranch Historical

Work Orders: 322657,

Project ID: TNM-Red Byrd Ranch Historical

Lab Batch #: 746816 Sample: 52 Units: mg/kg		atch: 1 Mat	rix: Solid	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	63.4	50.0	127	70-135	

** 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: Red Byrd Ranch Historical

Work Order #: 322657

Lab Batch ID: 747356 Analyst: ASA

Sample: 523469-1-BKS

Date Prepared: 01/22/2009 Batch #: 1

Project ID: TNM-Red Byrd Ranch Historical Date Analyzed: 01/22/2009 Matrix: Solid

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Units: mg/kg			BLAN	K /BLANK S	PIKE / E	LANK S	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	A 8021B	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		[A]	B	Kesult [C]	1 0]	[E]	Duphcate Result [F]	[G]	%	Х1%	WKLD	
Benzene		Ð	0.1000	0.1002	100	0.1	0.1035	104	3	70-130	35	
Toluene		Ð	0.1000	0.0952	95	0.1	0.0983	86	3	70-130	35	
Ethylbenzene		Ð	0.1000	0.0987	66	0.1	0.1039	104	5	71-129	35	
m,p-Xylenes		Ð	0.2000	0.1947	67	0.2	0.2059	103	6	70-135	35	
o-Xylene		QN	0.1000	0.0946	95	0.1	0.0981	98	4	71-133	35	
Analyst: ASA		Dî	ate Prepar	Date Prepared: 01/23/2009	6			Date A	Date Analyzed: 01/23/2009	1/23/2009		
Lab Batch ID: 747389	Sample: 523501-1-BKS	KS	Batch	Batch #:]					Matrix: Solid	olid		
Units: mg/kg			BLAN	K /BLANK S	PIKE / E	LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	

1											
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD.	Flag
Analytes		[B]	[c]	lal	[E]	Result [F]	[6]				
Benzene	Ð	0.1000	0.0967	16	0.1	0.0951	95	2	70-130	35	
Toluene	Q	0.1000	0.0944	94	0.1	0.0918	92	3	70-130	35	
Ethylbenzene	Q	0.1000	0.1025	103	0.1	0.0996	100	Э	71-129	35	
m,p-Xylenes	QN	0.2000	0.2028	101	0.2	0.1976	66	3	70-135	35	
o-Xylene	QN	0.1000	0.0972	97	0.1	0.0948	95	3	71-133	35	

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

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B



Project Name: Red Byrd Ranch Historical

Work Order #: 322657

Lab Batch ID: 747608 Analyst: ASA

Sample: 523605-1-BKS

Date Prepared: 01/26/2009 Batch #: 1

Project ID: TNM-Red Byrd Ranch Historical Date Analyzed: 01/26/2009 Matrix: Solid

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	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY
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Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE / E	LANK S	PIKE DUPI	ICATE I	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike Doort	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup. %D	RPD %	Control Limits 0.5 D	Control Limits % ppn	Flag
Analytes	<u>.</u>	B	[C]	ā	[E]	Result [F]	[C]	2	Vio/		
Benzene	Ð	0.1000	0.1046	105	0.1	0.1040	104	-	70-130	35	
Toluene	£	0.1000	0.1001	100	0.1	0.0987	66	1	70-130	35	
Ethylbenzene	Ð	0.1000	0.1056	106	0.1	0.1039	104	2	71-129	35	
m,p-Xylenes	£	0.2000	0.2103	105	0.2	0.2074	104	1	70-135	35	
o-Xylene	Ð	0.1000	0.0996	100	0.1	0.0985	66	1	71-133	35	
Analyst: BHW	Da	te Prepar	Date Prepared: 01/16/2009	6			Date AI	nalyzed: 0	Date Analyzed: 01/17/2009		
Lab Batch ID: 746816 Sample: 523072-1-BKS	BKS	Batch #:]	ı #: 1					Matrix: Solid	solid		
linite: mg/kg		BLAN	BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE / E	LANK S	PIKE DUPI	ICATE 1	RECOVE	CRY STUD	Y	

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Bik. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[<u>B</u>]	[]	<u>[</u> 0]	[E]	Result [F]	[6]				
C6-C12 Gasoline Range Hydrocarbons	Q	1000	928	93	1000	918	92	-1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	Q	1000	974	67	1000	957	96	2	70-135	35	

Relative Percent Difference RPD = 2004 [(C-F)/(C+F)] Blank Spike Recovery [D] = 1004 (C)/[B] Blank Spike Duplicate Recovery [G] = 1004 (F)/[E] All results are based on MDL and Validated for QC Purposes



I





Project Name: Red Byrd Ranch Historical

Work Order #: 322657

Date Analyzed: 01/23/2009 Lab Batch ID: 747356

Reporting Units: mg/kg

Matrix: Soil Analyst: ASA Batch #:

-

QC- Sample ID: 323065-007 S

Date Prepared: 01/22/2009

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Project ID: TNM-Red Byrd Ranch Historical

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	Q	0.1007	0.0827	82	0.1007	0.0875	87	9	70-130	35	
Toluene	0.0126	0.1007	0.1042	16	0.1007	0.1071	94	e	70-130	35	
Ethylbenzene	0.0069	0.1007	0.0805	73	0.1007	0.0809	73	0	71-129	35	
m,p-Xylenes	0.0218	0.2014	0.1711	74	0.2014	0.1807	64	7	70-135	35	
o-Xylene	0.0049	0.1007	0.0781	73	0.1007	0.0816	76	4	71-133	35	
Lab Batch ID: 747389 Date Analyzed: 01/23/2009	QC- Sample ID: 322761-014 S Date Prepared: 01/23/2009	322761- 01/23/2(014 S 009	Bat Ani	Batch #: Analyst: /	1 Matrix: Soil ASA	c: Soil				

Reporting Units: mg/kg		M	ATRIX SPIKI	E / MAT	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	FE RECO	VERY S	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	QN	0.1123	0.0682	61	0.1123	0.0789	70	14	70-130	35	×
Toluene	QN	0.1123	0.0650	58	0.1123	0.0756	67	14	70-130	35	×
Ethylbenzene	0.0013	0.1123	0.0705	62	0.1123	0.0831	73	16	71-129	35	х
m,p-Xylenes	0.0035	0.2246	0.1405	61	0.2246	0.1654	72	17	70-135	35	x
o-Xylene	0.0015	0.1123	0.0608	53	0.1123	0.0725	63	17	71-133	35	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

Page 17 of 22







Project Name: Red Byrd Ranch Historical

Work Order #: 322657

Lab Batch ID: 746816

Date Analyzed: 01/19/2009 Reporting Units: mg/kg

Project ID: TNM-Red Byrd Ranch Historical

QC- Sample ID: 322641-003 S Date Prepared: 01/16/2009

Batch #: 1 Matrix: Soil Analyst: BHW

Reporting Units: mg/kg		W	ATRIX SPIKI	E / MAT	IIAS XIX	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	FE RECO	VERY S	STUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	nple Spiked Duplicate Spiked Sample Spike Spiked Sample Dup.	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]		D	88 [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	QN	1160	1170	101	1160	1100	95	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	46.7	1160	1220	101	1160	1190	66	2	70-135	35	

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: Red Byrd Ranch Historical

Work Order #: 322657

Lab Batch #: 746793	Data Durana da d)1/16/2009	•		d Byrd Ran	ch Historical
Date Analyzed: 01/16/2009 QC- Sample ID: 322657-001 D	Date Prepared: C Batch #:	1	•	st: ASA ix: Soil		
Reporting Units: %	SAMPL	E / SAMPLE	DUPLIC	ATE REC	OVERY	
Percent Moisture	Parent Sam Result [A]	ple Sample Duplicate Result	RPD	Control Limits %RPD	Flag	
Analyte		[B]				
Percent Moisture	7.42	9.66	26	20	F	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. Environmental Lab of Texas

TAT bisbosi2 × × × × × × × × ZZZZGZZ Barry Solowy So O NPDES ASE-ININ TAT HEUR -----000 3 estinoirio Project #: TNM-Red Byrd Ranch Historical EPA Parti Filter Tos Sample Containers Intact? Sample Containers Intact? VCGS for container(s) (custory seals on container(s)/(abr) Custory seals on container(s)/(abr) Sample Hard Delivers of HAq Project Name: Red Byrd Ranch Historical Phone: 432-563-1800 Fax: 432-563-1713 M.R.O.N 🛛 таяр CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Ĩ юы Femperature Upon Receipt: BTEX 80218/5030 or BIEX 8260 Project Loc: Lea County, NM by Sampler/Chent by Courier? U PO#: PAA - J. Hany SHIE! aboratory Comer Report Format: X Standard S 6H 04 10 PO 68 BY SY ISING DHD/ 4531 HM ×(Q' 204 (); 'en 'fin 'u') suose 14:5Y 2001 XT ÷Hø. Ē E. нат × × × х cibryant@basin-consulting.com Soil Soil Soil Soil Soll 3 Soil Soil Soli י כניסי 11/11/11 A - MILLING - M Oato Date Other (Specify) (HAQ) SOON 12600 West I-20 East Odessa, Texas 79765 O'S²RN HOPN S Preservation & **'**05'н (505) 396-1428 (Z X YOA) IDH ^rONI 23 × × × × × × × '~ H CIN & OLCONE ** beathing big Fax No: e-mail: 1300 1350 1310 1320 1330 1340 1400 1410 1420 me2 amil 2 PAGE 01 OF Received by ELOT 1/14/2009 1/14/2009 1/14/2009 1/14/2009 1/14/2009 1/14/2009 1/14/2009 1/14/2009 1/14/2009 Received by: tecerved by: Basin Environmental Service Technologies, LLC ť J K and by the behavior of the state of the stat 54: \$1-80/19/12. rugaO gnibn ritqeQ galanige all mad Lovington, NM 88260 Company Address: 2860 Plains Hwy (575) 605-7210. Camille Bryant 322457 NSW - 1A SSW-1B FIELD CODE SSW - 1A NSW - 1B WSW 1A SSW - 1C SP # SP #2 SP #3 Project Manager: Company Name Sampler Signature Telephone No: City/State/Zip: Podal Instructions: Rehpushed by: **Seljanulshed by:** (tab use only) ORDER #: S 20 100 57 5 6 5 õ (Apio een qej) # gy

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01-15.09 1843

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Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

Client.	Plains /BasinEnv.
Date/ Time:	0-13-09 6 1843
Lab ID # :	372651
Initials:	JMF

Sample Receipt Checklist

	Sample Receipt C	Meckiat		
		<u> </u>		Client Initials
#1	Temperature of container/ cooler?	Yes	No	4.0 °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? / [Gh: 1]	(Yes)	No	Not Present
#5	Chain of Custody present?	(YES)	No	
#6	Sample Instructions complete of Chain of Custody?	Hes:	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?	(Yeg	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?	Ves	No	The second se
#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	digt Applicable
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable

Variance Documentation

Date/ Time:

Contact:

Regarding:

Corrective Action Taken:

Check all that Apply:

See attached e-mail/ fax

Contacted by:

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

Gracie Avalos

From:	Camille J. Bryant [cjbryant@basin-consulting.com]
Sant:	Wednesday, January 21, 2009 1:46 PM
Το:	Gracie Avalos
Subject:	Fw: WO 322657 / Red Byrd Ranch Historical
Attachments	2009_322657_TNM-Red_Byrd_Ranch_Historical.pdf

Gracie,

Please run BTEX 8021b on all soil samples on this COC (322857).

Thank you,

Curt Stanley Basin Environmental

---- Original Message -----From: Gracie <u>Avalos</u> To: 'Camille J. Bryant'; Jason <u>Henry</u> Sent: Monday, January 19, 2008 12:44 PM Subject: WO 322657 / Red Byrd Ranch Historical

Gracie Avalos Project Assistant Xenco Labs - Odessa 432-563-1800 Office A32-4563-1713 Fax gracie.<u>avalos@xenc</u>o.com

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1/21/2009

Analytical Report 323416

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd Ranch Historical Red Byrd Ranch TNM Historical

05-FEB-09





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

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



05-FEB-09



Project Manager: Jason Henry PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: 323416 Red Byrd Ranch Historical Project Address: Lea County, NM

Jason Henry:

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 323416. 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. 323416 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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Sample Cross Reference 323416

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Ranch Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended - 11	S	Jan-26-09 14:00		323416-001
Blended - 12	S	Jan-26-09 14:05		323416-002
Blended - 13	S	Jan-26-09 14:10		323416-003
Blended - 14	S	Jan-26-09 14:15		323416-004
Blended - 15	S	Jan-26-09 14:20		323416-005
Blended - 16	S	Jan-26-09 14:25		323416-006
Blended - 17	S	Jan-26-09 14:30		323416-007
Blended - 18	S	Jan-26-09 14:40		323416-008
Blended - 19	S	Jan-26-09 14:45		323416-009
Blended - 20	S	Jan-26-09 14:50		323416-010
WSW - 2A	S	Jan-26-09 15:00		323416-011
SSW - 2B	S	Jan-26-09 15:10		323416-012
SSW - 1D	S	Jan-26-09 15:20		323416-013
West Wall 13' A	S	Jan-26-09 15:30		323416-014
NSW - 2A	S	Jan-26-09 15:40		323416-015

	M Historical
	Project Id: Red Byrd Ranch TNM Historical
	ld: Red By
EXENCO Leave de Par	Project

Contact: Jason Henry Project Location: Lea County, NM

Certificate of Analysis Summary 323416 PLAINS ALL AMERICAN EH&S, Midland, TX



Date Received in Lab: Tue Jan-27-09 02:40 pm

Report Date: 05-FEB-09

Froject Location: Lea County, INM						:		
	_				Project Manager: Brent Barron, II	Brent Barron, II		Г
	Lab Id:	323416-001	323416-002	323416-003	323416-004	323416-005	323416-006	
· · · · · · · · · · · · · · · · · · ·	Field Id:	Blended - 11	Blended - 12	Blended - 13	Blended - 14	Blended - 15	Blended - 16	
Anaiysis Kequesieu	Depth:							
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jan-26-09 14:00	Jan-26-09 14:05	Jan-26-09 14:10	Jan-26-09 14:15	Jan-26-09 14:20	Jan-26-09 14:25	
BTEX by EPA 8021B	Extracted:		Feb-04-09 13:23	Feb-04-09 13:23				··· -
	Analyzed:		Feb-04-09 13:35	Feb-04-09 13:56				
	Units/RL:		mg/kg RL	mg/kg RL				
Benzene			ND 0.0011	ND 0.0011				_
Toluene			0.0259 0.0023	ND 0.0022				1
Ethylbenzene			0.0639 0.0011	0.0124 0.0011				
m,p-Xylenes			0.2690 0.0023	0.0589 0.0022				
o-Xylene			0.0705 0.0011	0.0216 0.0011				
Total Xylenes			0.3395 0.0023	0.0805 0.0022				
Total BTEX			0.4293 0.0011	0.0929 0.0011				
Percent Moisture	Extracted:							
	Analyzed:	Jan-27-09 17:00	Jan-27-09 17:00	Jan-27-09 17:00	Jan-27-09 17:00	Jan-27-09 17:00	Jan-27-09 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		7.73 1.00	12.04 1.00	8.54 1.00	9.05 1.00	7.19 1.00	9.62 1.00	
TPH RV SW8015 Mod	Extracted:	Jan-30-09 14:00	Jan-30-09 14:00	Jan-30-09 14:00	Jan-30-09 14:00	Jan-30-09 14:00	Jan-30-09 14:00	
	Analyzed:	Jan-30-09 16:03	Jan-30-09 16:25	Jan-30-09 16:48	Jan-30-09 17:11	Jan-30-09 17:34	Jan-30-09 17:56	•
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		507 81.3	166 17.1	63.4 16.4	297 16.5	408 16.2	236 16.6	Ś
C12-C28 Diesel Range Hydrocarbons		1610 81.3	590 17.1	312 16.4	1220 16.5	1840 16.2	975 16.6	5
C28-C35 Oil Range Hydrocarbons		172 81.3	63.2 17.1	43.0 16.4	171 16.5	262 16.2	140 16.6	5
Total TPH		2289 81.3	819.2 17.1	418.4 16.4	1688 16.5	2510 16.2	1351 16.6	5
								1

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The imprementations and results expressed throughout this analytical report treates the best juggment of XEWCO Laboratories. XEWCO Laboratories assumes to regonstibility and marks to warranty to the red use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron Odessa Laboratory Director

M Historical
Project Id: Red Byrd Ranch TNM Historica
d: Red By
Project l

Contact: Jason Henry

Certificate of Analysis Summary 323416 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd Ranch Historical



Date Received in Lab: Tue Jan-27-09 02:40 pm

Report Date: 05-FEB-09

Project Location: Lea County, NM					Report Date: 05-FEB-09)5-FEB-09	
					Project Manager: 1	Brent Barron, II	
	Lab Id:	323416-007	323416-008	323416-009	323416-010	323416-011	323416-012
Analysis Docusedad	Field Id:	Blended - 17	Blended - 18	Blended - 19	Blended - 20	WSW - 2A	SSW - 2B
naicanhau sistimuv	Depth:						
	Matrix:	TIOS	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jan-26-09 14:30	Jan-26-09 14:40	Jan-26-09 14:45	Jan-26-09 14:50	Jan-26-09 15:00	Jan-26-09 15:10
RTEX by FPA 8021B	Extracted:				Feb-04-09 13:23		Feb-04-09 13:23
	Analyzed:				Feb-04-09 14:17		Feb-04-09 14:39
	Units/RL:				mg/kg RL		mg/kg RL
Benzene					ND 0.0011		ND 0.0011
Toluenc					0.0204 0.0022		ND 0.0022
Ethylbenzene					0.0323 0.0011		ND 0.0011
m,p-Xylenes					0.1550 0.0022		ND 0.0022
o-Xylene					0.0790 0.0011		ND 0.0011
Total Xylenes					0.234 0.0022		ND 0.0022
Total BTEX					0.2867 0.0011		ND 0.0011
Percent Moisture	Extracted:						
	Analyzed:	Jan-27-09 17:00	Jan-27-09 17:00	Jan-27-09 17:00	Jan-27-09 17:00	Jan-27-09 17:00	Jan-27-09 17:00
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		12.48 1.00	13.85 1.00	14.48 1.00	9.27 1.00	10.53 1.00	7.59 1.00
TPH By SW8015 Mod	Extracted:	Jan-30-09 14:00	Jan-30-09 14:00	Jan-30-09 14:00	Jan-30-09 14:00	Jan-30-09 14:00	Jan-30-09 14:00
	Analyzed:	Jan-30-09 18:19	Jan-30-09 18:42	Jan-30-09 19:06	Jan-30-09 19:29	Jan-30-09 20:15	Jan-30-09 20:38
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons	•	546 85.7	521 17.4	320 17.5	89.5 16.5	41.5 16.8	ND 16.2
C12-C28 Diesel Range Hydrocarbons		1650 85.7	1160 17.4	904 17.5	612 16.5	341 16.8	ND 16.2
C28-C35 Oil Range Hydrocarbons		289 85.7	162 17.4	133 17.5	97.7 16.5	41.9 16.8	ND 16.2
Total TPH		2485 85.7	1843 17.4	1357 17.5	799.2 16.5	424.4 16.8	ND 16.2

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Desa Laboratory Director 4



Contact: Jason Henry

Certificate of Analysis Summary 323416 PLAINS ALL AMERICAN EH&S, Midland, TX



416 X Date Received in Lab: Tuc Jan-27-09 02:40 pm Report Date: 05-FEB-09

Analysis Requested						
Analysis Requested					Project Manager: Brent Barron, Il	
Analysis Requested	Lab Id:	323416-013	323416-014	323416-015		
notes they exclude	Field Id:	SSW - ID	West Wall 13' A	NSW - 2A		
	Depth:					
	Matrix:	SOIL	SOIL	SOIL		
	Sampled:	Jan-26-09 15:20	Jan-26-09 15:30	Jan-26-09 15:40		
BTEX hv EPA 8021B	Extracted:	Feb-04-09 13:23	Feb-04-09 13:23			
	Analyzed:	Feb-04-09 15:00	Feb-04-09 15:21			
	Units/RL:	mg/kg RL	mg/kg RL			
Benzene		1100'0 QN	ND 0.0011			
Toluene		ND 0.0022	ND 0.0021			
Ethylbenzene		ND 0.0011	ND 0.0011			
m,p-Xylenes		ND 0.0022	ND 0.0021			
o-Xylene		1100.0 UN	ND 0.0011			
Total Xylenes		ND 0.0022	ND 0.0021			
Total BTEX		ND 0.0011	ND 0.0011			
Percent Moisture	Extracted:					
	Analyzed:	Jan-27-09 17:00	Jan-27-09 17:00	Jan-27-09 17:00		
	Units/RL:	% RL	% RL	% RL		
Percent Moisture		7.93 1.00	6.93 1.00	7.14 1.00		
TPH Bv SW8015 Mod	Extracted:	Jan-30-09 14:00	Jan-30-09 14:00	Jan-30-09 14:00		
	Analyzed:	Jan-30-09 21:01	Jan-30-09 21:24	Jan-30-09 21:47		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		ND 16.3	ND 16.1	ND 16.2		
C12-C28 Diesel Range Hydrocarbons		ND 16.3	ND 16.1	133 16.2		
C28-C35 Oil Range Hydrocarbons		ND 16.3	ND 16.1	ND 16.2		
Total TPH		ND 16.3	ND 16.1	133 16.2		

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

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Odessa Laboratory Director Brent Barron





- 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.
- * Outside XENCO's scope of NELAC Accreditation.

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Project Name: Red Byrd Ranch Historical

Lab Batch #: 748495	Sample: 323416-002 / SN	AP Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg			RROGATE R		STUDY	
BTEX by EPA	8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes				[D]		
1,4-Difluorobenzene		0.0345	0.0300	115	80-120	
4-Bromofluorobenzene		0.1889	0.0300	630	80-120	**
Lab Batch #: 748495 Units: mg/kg	Sample: 323416-003 / SM		Itch: 1 Mat	rix: Soil	STUDY	
	· <u> </u>					
BTEX by EPA Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	· · · · ·	0.1079	0.0300	360	80-120	**
Lab Batch #: 748495	Sample: 323416-010 / SN	AP Ba	itch: 1 Mat	rix: Soil		
Units: mg/kg		SL	RROGATE R	ECOVERY	STUDY	
BTEX by EPA Analytes	8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0353	0.0300	118	80-120	
4-Bromofluorobenzene	<u></u>	0.1364	0.0300	455	80-120	**
Lab Batch #: 748495	Sample: 323416-012 / SN	1. P. P.	itch: 1 Mat	rix: Soil	L	
Units: mg/kg	Sample: 525+10-0127 50		RROGATE R		STUDY	
BTEX by EPA	8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes	· · · · · · · · · · · · · · · · · · ·	0.0215	0.0300			
1,4-Diffuorobenzene 4-Bromofluorobenzene		0.0315	0.0300	105	80-120 80-120	
			L		00-120	
Lab Batch #: 748495 Units: mg/kg	Sample: 323416-013 / SM		Itch: 1 Mati	rix: Soil ECOVERY S	STUDY	
	8021B	Amount Found	True Amount	Recovery	Control Limits	Flags
BTEX by EPA Analytes		[A]	[B]	%R [D]	%R	
BIEX by EPA Analytes		1			%R 80-120	

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Red Byrd Ranch Historical

/ork Orders : 323416,		Project I	D: Red Byrd	Ranch TNN	/ Histor		
Lab Batch #: 748495 Sample: 32341	6-014 / SMP Ba	itch: 1 Mati	rix: Soil				
Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0315	0.0300	105	80-120			
4-Bromofluorobenzene	0.0333	0.0300	111	80-120			
Lab Batch #: 748495 Sample: 32370	8-007 S / MS Ba	tch: 1 Mati	rix: Soil				
Units: mg/kg		RROGATE R	ECOVERY	STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
I,4-Difluorobenzene	0.0285	0.0300	95	80-120			
4-Bromofluorobenzene	0.0270	0.0300	90	80-120			
Lab Batch #: 748495 Sample: 32370	8-007 SD / MSD Ba	tch: 1 Mat	rix: Soil	•			
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0181	0.0300	60	80-120	**		
4-Bromofluorobenzenc	0.0170	0.0300	57	80-120	**		
Lab Batch #: 748495 Sample: 52414	5-1-BKS/BKS Ba	tch: 1 Mati	rix: Solid	I			
Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	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	0.0308	0.0300	103	80-120			
Lab Batch #: 748495 Sample: 52414	5-1-BLK / BLK Ba	tch: Matu	ix: Solid				
Units: mg/kg		SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags		
I,4-Difluorobenzene	0.0314	0.0300	105	80-120	e		
4-Bromofluorobenzene	0.0323	0.0300	108	80-120			

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Red Byrd Ranch Historical

ork Orders : 323416,		Project I	D: Red Byrd	Ranch TNN	/ Histor
Lab Batch #: 748495 Sample: 52414	5-1-BSD / BSD Ba	tch: Mati	rix: Solid		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	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	0.0306	0.0300	102	80-120	
Lab Batch #: 748060 Sample: 32341	6-001 / SMP Ba	tch: 1 Mati	rix: Soil	<u> </u>	
Units: mg/kg		RROGATE R		STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc	123	100	123	70-135	
o-Terphenyl	63.7	50.0	127	70-135	
Lab Batch #: 748060 Sample: 32341	6-002 / SMP Ba	tch: 1 Mati	rix: Soil	L	
Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc	121	100	121	70-135	
o-Tcrphcnyl	58.9	50.0	118	70-135	
Lab Batch #: 748060 Sample: 32341	6-003 / SMP Ba	tch: Mati	rix: Soil		
Units: mg/kg	SU	SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	58.1	50.0	116	70-135	
Lab Batch #: 748060 Sample: 32341			ix: Soil		
Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc	125	100	125	70-135	

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Red Byrd Ranch Historical

ork Orders : 323416,		Project I	D: Red Byrd	Ranch TNN	A Histor	
Lab Batch #: 748060 Sample: 323416-	-005 / SMP Ba	atch: 1 Mat	rix: Soil			
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY		
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			{D]			
1-Chlorooctanc	124	100	124	70-135		
o-Terphenyl	60.7	50.0	121	70-135		
Lab Batch #: 748060 Sample: 323416-	006 / SMP Ba	tch: 1 Mat	rix: Soil			
Units: mg/kg	SL	JRROGATE R	RECOVERY	STUDY		
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctanc	123	100	123	70-135		
o-Terphenyl	59.9	50.0	120	70-135		
Lab Batch #: 748060 Sample: 323416-		itch: 1 Mat	rix: Soil	<u></u>		
Units: mg/kg		RROGATE R		STUDY		
TPH By SW8015 Mod	Amount	True		Control		
Analytes	Found [A]	Amount [B]	Recovery %R [D]	Limits %R	Flags	
1-Chlorooctanc	119	100	119	70-135		
o-Terphenyl	60.5	50.0	121	70-135		
Lab Batch #: 748060 Sample: 323416-	008 / SMP Ba	tch: 1 Mat	rix: Soil	I		
Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
I-Chlorooctanc	123	100	123	70-135		
o-Terphenyl	61.4	50.0	123	70-135		
Lab Batch #: 748060 Sample: 323416-	009 / SMP Ba	itch: 1 Mati	rix: Soil			
Units: mg/kg		SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctanc	120	+ 100	120	70-135		
o-Terphenyl		50.0	120	10.55		

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Red Byrd Ranch Historical

ork Orders : 323416,		-	D: Red Byrd			
•			ix: Soil			
Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY		
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes		100		70.126		
o-Terphenyl	60.2	100	122	70-135 70-135		
Lab Batch #: 748060 Sample: 3	23416-011 / SMP Ba	tch; ¹ Mati	ix: Soil			
Units: mg/kg		RROGATE R		STUDY		
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
I-Chlorooctanc	118	100	118	70-135		
o-Terphenyl	58.0	50.0	116	70-135		
Lab Batch #: 748060 Sample: 3	23416-012 / SMP Ba	tch: 1 Matu	ix: Soil			
Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY		
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctanc	109	100	109	70-135		
o-Terphenyl	54.3	50.0	109	70-135		
Lab Batch #: 748060 Sample: 32	23416-012 S / MS Ba	tch: 1 Mati	ix: Soil			
Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
I-Chlorooctane	129	100	129	70-135		
o-Terphenyl	62.4	50.0	125	70-135		
Lab Batch #: 748060 Sample: 32	23416-012 SD / MSD Ba	tch: 1 Matr	ix: Soil			
Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D]	Control Limits %R	Flags	
	128	100	128	70-135		
1-Chlorooctanc	1 120					

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Red Byrd Ranch Historical

Lab Batch #: 748060	Sample: 323416-01	3 / SMP Ba	tch: 1 Mat	rix: Soil				
Units: mg/kg		SU	SURROGATE RECOVERY STUDY					
TPH By SW801	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Analytes		·····	ļ					
I-Chlorooctanc o-Terphenyl		55.9	100	114	70-135 70-135			
					70-135			
Lab Batch #: 748060	Sample: 323416-01			rix: Soil				
Units: mg/kg		SL	RROGATE R	ECOVERY	STUDY			
TPH By SW801 Analytes	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane		122	100	122	70-135	, I		
o-Terphenyl		59.3	50.0	119	70-135			
Lab Batch #: 748060	Sample: 323416-01	5 / SMP Ba	tch: Mat	rix: Soil				
Units: mg/kg		su	SURROGATE RECOVERY STUDY					
TPH By SW801	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes				[D]				
1-Chlorooctanc o-Terphenyl		122	100	122	70-135			
		59.6	50.0		70-133			
Lab Batch #: 748060	Sample: 523906-1-			rix: Solid				
Units: mg/kg		SU	SURROGATE RECOVERY STUDY					
TPH By SW801 Analytes	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane		125	100	125	70-135			
o-Terphenyl		62.6	50.0	125	70-135			
Lab Batch #: 748060	Sample: 523906-1-	BLK / BLK Ba	tch: 1 Mati	ix: Solid				
Units: mg/kg	-		SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
			1		70.125	<u> </u>		
1-Chlorooctane		116	100	116	70-135			

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

*** Poor recoveries due to dilution

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



Project Name: Red Byrd Ranch Historical

Work Orders : 323416,

Project ID: Red Byrd Ranch TNM Historical

Lab Batch #: 748060 Sample: 523906-1-BSD / BSD Units: mg/kg			Batch: 1 Matrix: Solid SURROGATE RECOVERY STUDY					
TPH By SW		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
I-Chlorooctane	<u> </u>	126	100	126	70-135			
o-Terphenyl		60.5	50.0	121	70-135			

** 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: Red Byrd Ranch Historical

Work Order #: 323416 Lab Batch ID: 748495 Analyst: ASA

Date Prepared: 02/04/2009

Batch #: 1

Sample: 524145-1-BKS

Project ID: Red Byrd Ranch TNM Historical Date Analyzed: 02/04/2009 Matrix: Solid

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPI	ICATE	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %B	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	<u>E</u>	[B]	[C]		E	Result [F]	<u></u>	2			
Benzene	QN	0.1000	0.1135	114	0.1	0.1123	112	-	70-130	35	
Toluene	QN	0.1000	0.1137	114	0.1	0.1131	113	1	70-130	35	
Ethylbenzene	QN	0.1000	0.1141	114	0.1	0.1142	114	0	71-129	35	
in,p-Xylencs	QN	0.2000	0.2392	120	0.2	0.2392	120	0	70-135	35	
o-Xylene	ND	0.1000	0.1182	118	0.1	0.1174	117	1	71-133	35	
Analyst: BHW	Da	tte Prepar	Date Prepared: 01/30/2009	6			Date A	nalyzed: 0	Date Analyzed: 01/30/2009		
Lab Batch ID: 748060 Sample: 523906-1-BKS	BKS	Batch #:	1#: 1					Matrix: Solid	olid		
Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	ILANK S	PIKE DUPI	ICATE]	RECOVE	RY STUD	Y	
TPH By SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[V]	[<u>B</u>]	Kesult [C]	D	[E]	Duplicate Result [F]	<u>ی</u> ۲	%	%K	%KPD	

35 35

70-135 70-135

0

8 97

996 1000

1000 1000

96

959 1000

Q QZ

C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons

Analytes

100

0001 1000 B

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







Project Name: Red Byrd Ranch Historical

Work Order #: 323416

Date Analyzed: 02/04/2009 Lab Batch ID: 748495

QC- Sample ID: 323708-007 S Date Prepared: 02/04/2009

Analyst: Batch #:

Matrix: Soil -ASA

Project ID: Red Byrd Ranch TNM Historical

Reporting Units: mg/kg		2	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MAT	RIX SPI	KE DUPLICA	TE RECO	DVERY S	STUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	0.0	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	Added [B]	[c]	л% В	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzenc	QN	0.1162	0.0802	69	0.1162	0.0489	42	49	70-130	35	XF
Toluenc	QN	0.1162	0.0793	68	0.1162	0.0462	40	52	70-130	35	XF
Ethylbenzene	QN	0.1162	0.0812	70	0.1162	0.0507	44	46	71-129	35	XF
m,p-Xylenes	QN	0.2325	0.1713	74	0.2325	0.1108	48	43	70-135	35	XF
o-Xylenc	DN	0.1162	0.0802	69	0.1162	0.0494	43	46	71-133	35	XF
Lab Batch ID: 748060 Date Analyzed: 01/31/2009	QC- Sample ID: 323416-012 S Date Prepared: 01/30/2009	: 323416 : 01/30/2	-012 S 009	Ba An	Batch #: Analyst:]	1 Matrix: Soil BHW	t: Soil				
Renorting Units: mg/kp			WATERY SPILE (WATERY SPILE BUILT ATE BECOMEDV STUDY		DIV CDI	VE DIN IV		NUTUV 6			ſ

Keporting Units: mgkg		W	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MATI	RIX SPII	KE DUPLICA	TE RECO	OVERY S	STUDY		
TPH By SW8015 Mod	Parent Sample		Spiked Sample Spiked Decult Sounds So	Spiked		Duplicate Sniked Semula	Spiked	uaa	Control Control Limits Limits	Control I ímite	Eloa
Analytes	Result [A]	Added [B]		%R [D]	led	Result [F]		%	%R	%RPD	2 2 20
C6-C12 Gasoline Range Hydrocarbons	QN	1080	1030	95	1080	1020	94	-	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1080	1080	100	1080	1090	101	1	70-135	35	

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

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





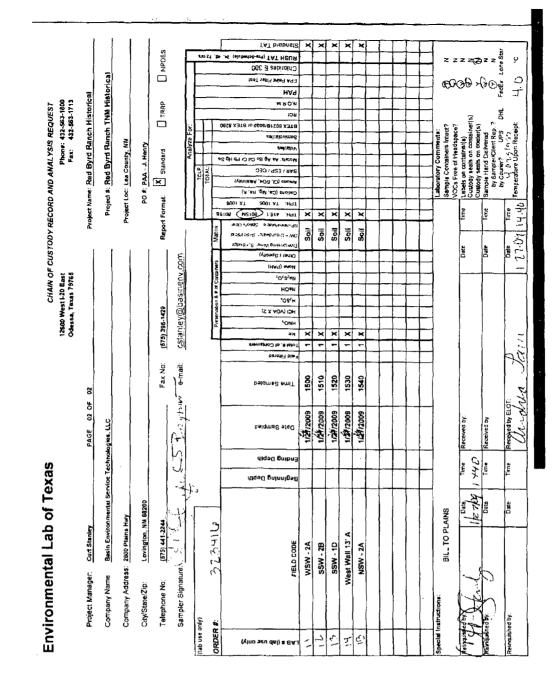
Project Name: Red Byrd Ranch Historical

Work Order #: 323416

Lab Batch #: 747671 Date Analyzed: 01/27/2009 QC- Sample ID: 323262-001 D	Date Pre Ba	atch #: 1	7/2009	Analy Matr	D: Red Byr st: BEV ix: Soil		M Historie
Reporting Units: % Percent Moisture		Parent Sample Result	SAMPLE Sample Duplicate Result	DUPLIC RPD	ATE REC Control Limits %RPD	OVERY Flag	
Analyte		[A]	[B]		76 RF D		
ercent Moisture		2.65	1.49	56	20	F	

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

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Phone: 432-563-1800 Fax: 432-563-1713	Project Name: Red Byrd Ranch Historical	Project #: Red Byrd Ranch TNM Historical				- 1	ыĽ	Π	0928 X 918 % 00	BTEX 8021B/50	1				+	+	+		-+	1	. 8 9	 Costriation container(s) Custody seals on container(s) 	3	^	
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	2	2	Project Loc: Lea County, NM	PO #: PAA - J. Henry	P		Analyze	\square		SB(1810V			_	_	_	_	_		-		MIXIN Ters	Letters on container(s) Custody seals on conta	o uo	sample mand Ulerivered by Sampler/Client Re by Cowier? UPS	<u>-</u> 5-8
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	Curt Stanley	Basin Environmental Service Technologies, LLC	Company Address: 2800 Plains Hwy	Lovington, NM 66260	(575) 441-224			37 3411 -		FIELD CODE	Blended - 11	Blended - 12	Blended - 13	Blanded - 14	Blended - 15	Blended - 16	Blanded - 17	Blended - 18	Blended - 19	Blended - 20	BILL TO PLAINS		ا ا ک	0	
	Project Manager:	Company Name	y Address:	le/Zio:	De No:	Sampler Signature:			4	FIE	Bler	Bler	Blei	Bła	Blei	Blei	Bla	Be	Bie	Blei			イント	h	
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Environmental Lab of Texas // Corrective Action Report- Sample Log-In

	Variance/ Corrective Action Repo	rt-
Client:	Basin Plains	
Date/ Time:	<u>VID 09 14140</u>	
Lab iD # :	323416	
Iniuals.	Cal	

Sample Receipt Checklist

Client Initials ¥05 166 #1 Temperature of container/ cooler? No 40 °C #2 Shipping container in good condition? No #3 Custody Seals intact on shipping container/ cooler?
 #4 Custody Seals intact on sample bottles/ container? Yes No Not Present Yes No Not Present #5 Chain of Custody present? Yes' No Yes #6 Sample instructions complete of Chain of Custody? No #7 Chain of Custody signed when relinquished/ received? No Yes #8 Chain of Custody agrees with sample label(s)? No ID written on Cont./ Lld Yes #9 Container label(s) legible and intact? No Not Applicable #10 Sample matrix/ properties agree with Chain of Custody? No #11 Containers supplied by ELOT? (as No #12 Samples in proper container/ bottle? Yes No See Below Yes Yes Yes #13 Samples properly preserved? No See Below No #14 Sample bottles intact? #15 Preservations documented on Chain of Custody? No Yes #16 Containers documented on Chain of Custody? No #17 Sufficient sample amount for indicated test(s)? No See Below #18 All samples received within sufficient hold time? #19 Subcontract of sample(s)? Yes Yes No See Below No Not Applicable #20 VOC samples have zero headspace? Yes No Not Applicable

Variance Documentation

Contact:	CUIT		Contacted by	· Condice	N	Date/ Time:	VELOSIM 40
Regarding: <u>\'しい</u> び		A.	en les	orts state		should	15E
Corrective Action	on Taken;						
Check all that ,	Apply:			mail/ fax nds and would like is had begun shortly	•	•	

Gracie Avalos

To: Gracie Avalos

Subject: Re: WO 323416 / Red Byrd Ranch Historical

Gracie,

Please run BTEX 8021b on samples:

323416-002 323416-003 323416-010 323416-012 323416-013 323416-014

Thanks,

Curt Stanley Basin

> ---- Original Message ----From: Gracie Avalos To: cstanley@basineny.com ; Jason Henry Sent: Monday, February 02, 2009 7:08 AM Subject: WO 323416 / Red Byrd Ranch Historical

Gracie Avalos Project Assistant Xenco Labs - Odessa 432-563-1800 Office 432-4563-1713 Fax gracie_avalos@xenco.com

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Please consider the environment before printing this email.

Analytical Report 324356

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd Ranch Historical Red Bryd Ranch TNM Historical

10-FEB-09





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

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



10-FEB-09



Project Manager: Jason Henry PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: 324356 Red Byrd Ranch Historical Project Address: Lea County, NM

Jason Henry:

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 324356. 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. 324356 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,

A.D

Brent Barron, II Odessa Laboratory Manager

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Page 2 of 13



Sample Cross Reference 324356



PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Ranch Historical

Sample Id	Matrix	Date Collected Sample Depth	Lab Sample Id
NSW-3A	S	Feb-06-09 07:45	324356-001
WSW-3A	S	Feb-06-09 07:55	324356-002
Blended Soil 1A	S	Feb-06-09 08:10	324356-003
Blended Soil 2A	S	Feb-06-09 08:20	324356-004
SP-3A	S	Feb-06-09 08:30	324356-005
SP-4A	S	Feb-06-09 08:40	324356-006

Certificate of Analysis Summary 324356	PLAINS ALL AMERICAN EH&S, Midland, TX	Project Name: Red Byrd Ranch Historical
À		IM Historical
ł		 Red Brvd Ranch TNM Historic
Ĩ		: Red Bi



Date Received in Lab: Fri Feb-06-09 12:20 pm Report Date: 10-FEB-09

Project I acation: Les County NM								Keport Date: 10-FEB-09	10-EED-01	_		
								Project Manager:	Brent Barron, II	on, II		
	Lab Id:	324356-001		324356-002	2	324356-003		324356-004	32435	324356-005	324356-006	9
	Field Id:	NSW-3A		WSW-3A		Blended Soil 1A	IA	Blended Soil 2A	SP	SP-3A	SP-4A	
Anaiysis Kequestea	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL	S	SOIL	TIOS	
	Sampled:	Feb-06-09 07:45		Feb-06-09 07:55	1:55	Feb-06-09 08:10	01:	Feb-06-09 08:20	Feb-06-	Feb-06-09 08:30	Feb-06-09 08:40	8:40
Percent Maisture	Extracted:											
	Analyzed:	Feb-06-09 17:45		Feb-06-09 17:45	7:45	Feb-06-09 17:45	:45	Feb-06-09 17:45	Feb-06-	Feb-06-09 17:45	Feb-06-09 17:45	7:45
	Units/RL:	%	RL	%	RL	%	RL	% RL	%	RL	%	RL
Percent Moisture		3.33		16.1		7.86		7.57	6.45	5	7.71	
TPH Rv SW8015 Mod	Extracted:	Feb-08-09 11:24		Feb-08-09 11:24	:24	Feb-08-09 11:24	:24	Feb-08-09 11:24	Feb-08-	Feb-08-09 11:24	Feb-08-09 11:24	:24
	Analyzed:	Feb-08-09 18:31		Feb-08-09 18:54	3:54	Feb-08-09 19:17	:17	Feb-08-09 19:40	Feb-08-	Feb-08-09 20:02	Feb-08-09 20:24):24
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		I QN	15.5	QN	17.9	131	16.3	54.3 16.2	111	1 I6.0	67.9	16.3
C12-C28 Diesel Range Hydrocarbons		32.1 1	15.5	QN	17.9	1370	16.3	831 16.2		718 16.0	565	16.3
C28-C35 Oil Range Hydrocarbons		I QN	15.5	QN	17.9	214	16.3	150 16.2		118 16.0	99.96	16.3
Total TPH		32.1 1	15.0	QN	15.0	1715	15.0	1035.3 15.0	947	7 15.0	729.5	15.0

This analytical report, and the entite data package it represents has been made for your exclusive and confidential use. The interpretations and results expressed throughout this margical report represent the best juggment of XEVCD Laboratories. XEXCO Laboratories assumes to reportshiftly and makes no warmany to the end use of the data hereby presented.

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Odessa Laboratory Director Brent Barron 2





- 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.
- * Outside XENCO's scope of NELAC Accreditation.

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



Project Name: Red Byrd Ranch Historical

ork Orders : 324356,			Project I	D: Red Bryd	Ranch TNN	A Histor
Lab Batch #: 748792	Sample: 324344-003 S / M	AS B	atch: ¹ Matr	ix: Soil		
Units: mg/kg		SU	URROGATE R	ECOVERY	STUDY	12
TPH By SW801		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes				[D]		
1-Chlorooctanc		115	100	115	70-135	
o-Terphenyl	<u> </u>	56.6	50.0	113	70-135	
Lab Batch #: 748792	Sample: 324344-003 SD	MSD B	atch: 1 Matr	ix: Soil		
Units: mg/kg		S	URROGATE R	ECOVERY	STUDY	
TPH By SW801 Analytes	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc	· · · · · · · · · · · · · · · · · · ·	115	100	115	70-135	
o-Terphenyl		54.7	50.0	109	70-135	
					10135	
Lab Batch #: 748792	Sample: 324356-001 / SM			ix: Soil		
Units: mg/kg		SI	URROGATE R	ECOVERY	STUDY	
TPH By SW801 Analytes	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		95.3	100	95	70-135	
o-Tcrphenyl		47.6	50.0	95	70-135	
Lab Batch #: 748792	Sample: 324356-002 / SN		atch: 1 Matr	ix: Soil	I	
Units: mg/kg	Sample: 52 (550 002 / 50		URROGATE R		STUDY	
TPH By SW801 Analytes	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		100	100	100	70-135	
o-Terphenyl		49.7	50.0	99	70-135	
	Sample: 324356-003 / SN		· · · · ·	ix: Soil		
Lab Batch #: 748792	Sample: 524550-0057 All	l Re	aten: I wistr			
Lab Batch #: 748792 Units: mg/kg	Sample: 324330-0037 31				STUDY	
Units: mg/kg TPH By SW801			URROGATE R True Amount [B]		STUDY Control Limits %R	Flags
Units: mg/kg		SU Amount Found	URROGATE R	ECOVERY S Recovery %R	Control Limits	Flags

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

*** Poor recoveries due to dilution

I

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



Project Name: Red Byrd Ranch Historical

/ork Orders : 324356,			Project II	D: Red Bryd	Ranch TNN	1 Histor
Lab Batch #: 748792	Sample: 324356-004 / SN	1P Ba	tch: Matr	ix: Soil		
Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY	
TPH By SV		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Anal	ytes			[D]		
1-Chlorooctanc		97.7	100	98	70-135	
o-Terphenyl		48.3	50.0	97	70-135	
Lab Batch #: 748792	Sample: 324356-005 / SN	1P Ba	itch: 1 Matr	ix: Soil		
Units: mg/kg		SL	RROGATE R	ECOVERY	STUDY	
TPH By SV		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		98.2	100	98	70-135	
o-Terphenyl		48.5	50.0	97	70-135	
Lab Batch #: 748792	Sample: 324356-006 / SN	10 p.	tch: 1 Matr	I ix: Soil	I	
Units: mg/kg	Sample. 52+550-0007 54		RROGATE R		STUDY	
TPH By SV	V8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Anal	lytes	[**]		[D]		
1-Chlorooctanc		98.0	100	98	70-135	
o-Terphenyl		48.6	50.0	97	70-135	
Lab Batch #: 748792	Sample: 524290-1-BKS /	BKS Ba	ntch: 1 Matr	ix: Solid		
Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY	
TPH By SV		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		109	100	109	70-135	
o-Terphenyl	······································	51.0	50.0	102	70-135	
Lab Batch #: 748792	Sample: 524290-1-BLK /	BLK R	tch: 1 Matr	ix: Solid	L	
Units: mg/kg	•		RROGATE R		STUDY	
TPH By SV		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Ana	ytes			[D]		
I-Chlorooctane	·······	97.2	100	97	70-135	
o-Terphenyl	•	48.0	50.0	96	70-135	

** 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.



Project Name: Red Byrd Ranch Historical

Work Orders : 324356,

Project ID: Red Bryd Ranch TNM Historical

Lab Batch #: 748792	Sample: 524290-1-	BSD / BSD Ba	tch: 1 Mat	rix: Solid		
Units: mg/kg		SU	RROGATE R	RECOVERY	STUDY	
TPH By SW8		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		110	100	110	70-135	
o-Terphenyl		51.6	50.0	103	70-135	

** 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

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Project Name: Red Byrd Ranch Historical

Work Order #: 324356 Analyst: BHW Lab Batch ID: 748792 Sample: 524290-1-BKS

Date Prepared: 02/08/2009

Batch #: 1

Project ID: Red Bryd Ranch TNM Historical Date Analyzed: 02/08/2009 Matrix: Solid

		İ									
Units: mg/kg		BLAN	K /BLANK S	PIKE / B	LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE F	RECOVE	RY STUD	Y	
TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Ч
Analytes	[[B]	[C]	[0]	[E]	Result [F]	<u></u> <u></u>				
C6-C12 Gasoline Range Hydrocarbons	6.50	1000	953	95	1000	958	96	-	70-135	35	
C12-C28 Diesel Range Hydrocarbons	12.3	1000	166	66	1000	995	100	0	70-135	35	

Flag

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







Project Name: Red Byrd Ranch Historical

Work Order #: 324356

Date Analyzed: 02/08/2009 Lab Batch ID: 748792

Project ID: Red Bryd Ranch TNM Historical 1 Matrix: Soil

BHW

Batch #: Analyst:

QC- Sample ID: 324344-003 S Date Prepared: 02/08/2009

Reporting Units: mg/kg		Σ	ATRIX SPIKI	E / MAT	IIAS XIN	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY S	TUDY		
TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample Spi {C} %R Add	Spiked Sample %R [D]	led ke	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1030	986	96	1030	985	96	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1030	1060	103	1030	1060	103	0	70-135	35	

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 Blatck, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: Red Byrd Ranch Historical

Work Order #: 324356

Lab Batch #: 748919 Date Analyzed: 02/06/2009 QC- Sample ID: 324356-001 D	Project ID: Red Bryd Ranch TNM Historic Date Prepared: 02/06/2009 Analyst: LATCOR Batch #: 1 Matrix: Soil
Reporting Units: %	SAMPLE / SAMPLE DUPLICATE RECOVERY
Percent Moisture	Parent SampleSampleControlResultDuplicateRPDLimits[A]Result%RPD
Analyte	[B]
Percent Moisture	3.33 3.72 11 20

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

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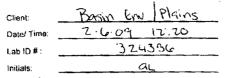
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(AL YS/S REQUEST Phone: 432-583-1800 Fax: 432-563-1713	Project Name: Red Byrd Ranch Historical	Project #: Red Bryd Rench TNM Historical			Ċ		۶Þ	< 0	BTEK 80218/5030 or BTEX 826	-	-				-		+-	┢┈				<u>ੇ ਵ</u> ੱ
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Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In



Sample Receipt Checklist

				Client Initial
#1	Temperature of container/ cooler?	66	No	•5 °C
#2	Shipping container in good condition?	4.05	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?	Vea	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)?	Gs	No	ID written on Cont./ Lid
#9	Containerilabel(s) legible and intact?	Yes	No	Not Applicable
#10	Sample matrix properties agree with Chain of Custody?	Ves	No	
#11	Containers supplied by ELOT?	Yes	No	1
#12	Samples in proper container/ bottle?	Yes	No	See Below
#13	Samples properly preserved?	Yes	No	See Below
#14	Sample bottles intact?	Kes	No	
#15	Preservations documented on Chain of Custody?	Kes	No	
#16	Containers documented on Chain of Custody?	Ves	No	
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below
#18		Yes	No	See Below
#19	Subcontract of sample(s)?	Yes.	No	Not Applicable~
#20		Nes	No	Not Applicable

Variance Documentation

Date/ Time:

Contacted by:

Contact:

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 327979

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd Ranch Historical Red Byrd Ranch TNM Historical

23-MAR-09





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Miramar, FL E86349 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

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



23-MAR-09



Project Manager: Jason Henry PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: 327979 Red Byrd Ranch Historical Project Address: Lea County, NM

Jason Henry:

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 327979. 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. 327979 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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Sample Cross Reference 327979

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Ranch Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended 1 B	S	Mar-17-09 13:00		327979-001
Blended 2 B	S	Mar-17-09 13:30		327979-002
Blended 11 A	S	Mar-17-09 14:00		327979-003
Blended 14 A	S	Mar-17-09 14:30		327979-004
Blended 15 A	S	Mar-17-09 14:55		327979-005
Blended 16 A	S	Mar-17-09 15:25		327979-006

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Certificate of Analysis Summary 327979 PLAINS ALL AMERICAN EH&S, Midland, TX	Project Name: Red Byrd Ranch Historical
	Project Id: Red Byrd Ranch TNM Historical
	Project Id:

ig J

Contact: Jason Henry



Date Received in Lab: Thu Mar-19-09 04:52 pm Report Date: 23-MAR-09

							Project Manager: Brent Barron, II	Brent Barron, 11		
	Lab Id:	327979-001		327979-002	327979-003	3	327979-004	327979-005	327979-006	90
Landa Damardad	Field Id:	Blended 1 B		Blended 2 B	Blended 11 A	A	Blended 14 A	Blended 15 A	Blended 16 A	5 A
Anaiysis Kequesieu	Depth:									
	Matrix:	SOIL		SOIL	SOIL		SOIL	SOIL	SOIL	
	Sampled:	Mar-17-09 13:00	00	Mar-17-09 13:30	Mar-17-09 14:00	00-1	Mar-17-0914.30	Mar-17-09 14:55	Mar-17-09 15:25	5:25
Percent Moisture	Extracted:									
	Analyzed:	Mar-19-09 17:00	00	Mar-19-09 17:00	Mar-19-09 17:00	2:00	Mar-19-09 17:00	Mar-19-09 17:00	Mar-19-09 17:00	7:00
	Units/RL:	%	RL	% RL	%	RL	% RL	% RL	%	RL
Percent Moisture		8.55	1.00	8.03 1.00	6.63	1.00	6.89 1.00	7.38 1.00	6.24	1.00
TPH Rv SW8015 Mod	Extracted:	Mar-20-09 12:12	12	Mar-20-09 12:12	Mar-20-09 12:12	2:12	Mar-20-09 12:12	Mar-20-09 12:12	Mar-20-09 12:12	2:12
	Analyzed:	Mar-20-09 19:05	05	Mar-20-09 19:30	Mar-20-09 19:54	P:54	Mar-20-09 20:19	Mar-20-09 20:44	Mar-20-09 21:10	01:10
	Units/RL:	mg/kg	RL	mg/kg RL	mg/kg	RL	mg/kg RL	mg/kg RL	- mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		99.4	16.4	132 16.3	193	16.1	253 16.1	235 16.2	355	16.0
C12-C28 Diesel Range Hydrocarbons		856	16.4	1370 16.3	1300	16.1	1520 16.1	1210 16.2	1620	16.0
C28-C35 Oil Range Hydrocarbons		75.9	16.4	129 16.3	102	16.1	114 16.1	84.8 16.2	120	16.0
Total TPH	-	1031.3	16.4	1631 16.3	1595	16.1	1887 16.1	1529.8 16.2	2095	16.0

This analytical report, and the entire data package it represents, has been trade for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report research the back judgment of XENCO Laboratories. XENCO Laboratories assumes to repossibility and makes no warranty to the retu tate of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless observise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

Brent Barron Odessa Laboratory Director





- 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.
- * Outside XENCO's scope of NELAC Accreditation.

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



Form 2 - Surrogate Recoveries

Project Name: Red Byrd Ranch Historical

Work Orders : 327979, Project ID: Red Byrd Ranch TNM					Ranch TNN	1 Historio
Lab Batch #: 753327	Sample: 526814-1-BKS / E	KS B	atch: 1 Matr	ix: Solid		
Units: mg/kg	Date Analyzed: 03/20/09 12:58	S	URROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			(D)		
1-Chlorooctane			100	111	70-135	
o-Terphenyl		45.7	50.0	91	70-135	
Lab Batch #: 753327	Sample: 526814-1-BSD / E	BSD B	atch: 1 Matu	ix: Solid		
Units: mg/kg	Date Analyzed: 03/20/09 13:23	S	URROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		109	100	109	70-135	
o-Tcrphenyl	<u></u>	44.6	50.0	89	70-135	
Lab Batch #: 753327	Sample: 526814-1-BLK / E		atch: 1 Mati	ix: Solid	I	
Units: mg/kg	Date Analyzed: 03/20/09 13:47		URROGATE R		STUDY	
·	Amount	True		Control		
TPH	Found [A]	Amount [B]	Recovery %R [D]	Limits %R	Flags	
1-Chlorooctanc	Analytes	93.5	100	94	70-135	
o-Terphenyl		48.5	50.0	97	70-135	
			l		10125	
Lab Batch #: 753327	Sample: 327979-001 / SMI			rix: Soil	CONTRACTOR NO.	
Units: mg/kg	Date Analyzed: 03/20/09 19:05		URROGATE R	ECOVERY		
TPH 1	By SW8015 Mod Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		97.8	100	98	70-135	•
o-Terphenyl		52.8	50.0	106	70-135	
Lab Batch #: 753327	Sample: 327979-002 / SMI	рупинания В	atch: 1 Mat	rix: Soil	•	
Units: mg/kg	Date Analyzed: 03/20/09 19:30		URROGATE R		STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		L
1-Chlorooctane		93.8	100	94	70-135	
o-Terphenyl		51.1	50.0	102	70-135	

** 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.



Project Name: Red Byrd Ranch Historical

ork Orders: 327979),	Project ID: Red Byrd Ranch TNM Histo					
Lab Batch #: 753327	Sample: 327979-003 / SMP	Batch: 1 Matrix: Soil					
Units: mg/kg	Date Analyzed: 03/20/09 19:54	SI	URROGATE R	ECOVERY	STUDY		
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
I-Chlorooctane		96.0	100	· 96	70-135		
o-Tcrphenyl		51.4	50.0	103	70-135		
Lab Batch #: 753327	Sample: 327979-004 / SMP	B	atch: 1 Matr	ix: Soil			
Units: mg/kg	Date Analyzed: 03/20/09 20:19	SI	URROGATE R	ECOVERY	STUDY		
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctanc		96.7	100	97	70-135		
o-Terphenyl		51.4	50.0	103	70-135		
Lab Batch #: 753327	Sample: 327979-005 / SMP	B	atch: 1 Matr	ix: Soil	<u> </u>		
Units: mg/kg	Date Analyzed: 03/20/09 20:44	SU	URROGATE R	ECOVERY	STUDY	<u>, </u>	
TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
1. Oblassa tara	Analytes		100	[D]			
I-Chlorooctanc o-Terphenyl		97.0	50.0	97	70-135 70-135		
					70-135		
Lab Batch #: 753327	Sample: 327979-006 / SMP			ix: Soil	CTTLENK		
Units: mg/kg	Date Analyzed: 03/20/09 21:10 By SW8015 Mod	Amount Found	URROGATE R True Amount	Recovery	Control Limits	Flags	
	Analytes	[A]	[B]	%R [D]	%R		
I-Chlorooctane	-	97.5	100	98	70-135		
o-Terphenyl		50.4	50.0	101	70-135		
Lab Batch #: 753327	Sample: 327670-001 S / MS	B	atch: 1 Matr	ix: Soil			
Units: mg/kg	Date Analyzed: 03/20/09 22:50		URROGATE R		STUDY		
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane		111	100	111	70-135		
o-Terphenyl		45.7	50.0	91	70-135		

** 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.



Project Name: Red Byrd Ranch Historical

Work Orders : 327979,

Project ID: Red Byrd Ranch TNM Historical

Lab Batch #: 753327	Sample: 327670-001 SD / 1	MSD Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg	Date Analyzed: 03/20/09 23:16	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		114	100	114	70-135	
o-Terphenyl		46.6	50.0	93	70-135	

** 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: Red Byrd Ranch Historical

Work Order #: 327979 Analyst: BHW Lab Batch ID: 753327

Units: mg/kg

Date Prepared: 03/20/2009

Batch #: 1

Sample: 526814-1-BKS

Project ID: Red Byrd Ranch TNM Historical Date Analyzed: 03/20/2009 Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	
ERV	
LANK SPIKE DUPLICATE RECO	
ATE	
LIC	ŀ
DUP	
IKE	l
K SP	┢
ILAN	
E/B	
SPIK	
X	
/BLA	l
X	┠
BLA	
	┠

TPH Bv SW8015 Mod	Blank	Spike	Blank	Blank	Spike	Blank	Blk. Spk		Control	Control	
	Sample Result	Added	Spike	Spike	Added	Spike	Dup.	RPD	Limits	Limits	Flag
	[A]		Result	%R		Duplicate	%R		%R	%RPD	
Analytes		[B]	[C]	[a]	[E]	Result [F]	<u>[</u>				
C6-C12 Gasoline Range Hydrocarbons	ŊŊ	1000	1090	109	1000	1100	110	-	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	1030	103	1000	1040	104	-	70-135	35	

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







Project Name: Red Byrd Ranch Historical

Work Order #: 327979

Date Analyzed: 03/20/2009 Lab Batch ID: 753327

BHW Batch #: Analyst: Date Prepared: 03/20/2009

QC- Sample ID: 327670-001 S

1 Matrix: Soil

Project ID: Red Byrd Ranch TNM Historical

Reporting Units: mg/kg		M	ATRIX SPIKI	TAM / 3	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	OVERY (STUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample S	Spiked Sample	Spike	Duplicate Spike Spiked Sample	Spiked Dup.	RPD	Control Control Limits Limits	Control Limits	Flag
Analytes	Kesult [A]	Added [B]	<u>[</u>]	B 10	Added [E]	Result [F]	6G]	%	% R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	DN	1040	1130	601	1040	0911	112	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	139	1040	1190	101	1040	1230	105	ю	70-135	35	

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

Page 10 of 13





Project Name: Red Byrd Ranch Historical

Work Order #: 327979

Lab Batch #: 753155 Date Analyzed: 03/19/2009 QC- Sample ID: 327979-001 D	Project ID: Red Byrd Ranch TNM Historica Date Prepared: 03/19/2009 Analyst: BEV Batch #: 1 Matrix: Soil
Reporting Units: %	SAMPLE / SAMPLE DUPLICATE RECOVERY
Percent Moisture Analyte	Parent Sample Sample Control Result Duplicate RPD Limits Flag [A] Result %RPD [B]
Percent Moisture	8.55 7.32 16 20

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

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ZZZZ YAO & TAT brobnere × XX × Star 🗌 NPDES Appendiate and JAT HOUR 1.1. 7/ 'De 'se int Lone 0000 Project #: Red Byrd Ranch TNM Historical FedEx norts Vlahak COLO E 200 Project Name: Red Byrd Ranch Historical è. Phone: 432-563-1800 Fax: 432-563-1713 Птякр WHO! CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Ĩ 10 Laboratory Comments: Sarudas Compiners Interd? VOCs Free of Neadspace? Labels on container(s) Labels on container(s) Custory statis on container(s) 11EX 0051842030 04 81EX 0560 solisioving Project Loc: Lea County, NM PO #: PAA - J. Henry SOIRS: Report Format: X Standard OS TH OL IS PO US DY BY SA 030/483/50 מיש (כר צוכר' או 6 Å (H : SN . GM . ND) India 31.06/07 1500 00 9001 X1 BOOS X1 He 1 cmo -Time (WSLOR) 1'817 Hd 65109 × × × recalinations flags hun BTEX BO21 & and the samples wittel concernitations cibryant@basin-consulting.com 5005-с илемонного - Ма - 16 TEAN BRITCHIO - W Dans Date (Viber (Specify) BUCK 12600 West I-20 East Odessa, Texas 79765 'O'S'ON HORN 105'H (505) 396-1429 'ONH aż E × ×× × × r20/ no) to .a terro ---1 the milding the Fax No: e-mail: . 1400 1430 1455 1330 1525 1300 belgms2 emlT - fere posited by ELOT: 3/17/2009 3/17/2009 3/17/2009 3/17/2009 3/17/2009 3/17/2009 Basin Environmental Service Technologies, LLC paidules area rtigo Dalba 1652 200 19 19 19 Town day Duriend 1 UTES diga Brinniga 3 19/20 Lovington, NM 88260 Date Sampler Signature Camille Bryam (\$75) 605-7210 Company Address: P.O. Box 301 37.79.79 than Blended 14A Blended 15A Blonded 1B **Blended 11A** Blended 16A Blanded 2B FIELD CODE AL NE 52 Project Manager. Company Name City/State/Zlp: Telephane No: (tab use only) ORDER #: **N** 2000 28 Ш (Aluo san gal) # 87 0

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emperature Upon Receipt:

16521

P3-P1-E0

44.4

Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-

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	Variance/ Corrective Action Rep	ort- Sample	e Log-In		
Client:	Basin Env / Plains	•			
Date/ Time:	03-19-09 C 1652				
	327979				
Lab ID # :	52 10001			•	
Initials: .	JMF	· ·			
	Sample Receipt	Checklist			
			•	c	lient Initials
#1 Temper	ature of container/ cooler?	(Yes)	No	5.5 °C	a di sua di sua di sua di sua di sua di sua di sua di sua di sua di sua di sua di sua di sua di sua di sua di s
	g container in good condition?	Yes	No	(*#>···	
	Seals intact on shipping container/ cooler?	Yes	No	Not Present Par	
	Seals intact on sample bottles/ container?/labo	(Yes)	No'	Not Present	
#5 Chain o	f Custody present?	Yes)	No	· · · ·	
	instructions complete of Chain of Custody?	Yes	No		1
	f Custody signed when relinquished/ received?	(Yes)	No		
	Custody agrees with sample label(s)?	Yes.	No	ID written on Cont./ Ltd	
	er label(s) legible and intact?	TTES)	No	Not Applicable	
	a matrix/ properties agree with Chain of Custody?	Yes	No		
	ners supplied by ELOT?	Yes)	No		· · · · ·
	es in proper container/ bottle?	Tes	No	See Below	
	es properly preserved?	(Yes)	No	See Below	
	e bottles intact?	(Yee	No	JEE DEIOW	· · ·
	vations documented on Chain of Custody?	Yes	No		· ·
		and the second se	No		
	ners documented on Chain of Custody?	Yes			
	ent sample amount for indicated test(s)?	Tes	No	See Below	
	ples received within sufficient hold time?	(Yes).	No	See Below	the second second second second second second second second second second second second second second second se
	ntract of sample(s)?	Yes	·No	Not Applicable	
#20 VOC s	amples have zero headspace?	Yes	No	Not Applicable	
	Variance Docur	nentation			
Contact:	Contacted by:		. N	Date/ Time:	· · · · · · · · · · · · · · · · · · ·
			÷ *		
Regarding:					
		·*•		et al second de la seconda de la seconda de la seconda de la seconda de la seconda de la seconda de la seconda	
		· · · · · · · · · · · · · · · · · · ·		•	
Corrective A	Action Taken:			· ·	
				·····	
·	· .				
;				· .	
Check all th	at Apply: See attached e-mail/ fax Client understands and wou Cooling process had begun				• .
THE CONTRACT OF CONTRACT.					

Analytical Report 329162

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd Ranch Historical Red Byrd Ranch-TNM Hist.

07-APR-09



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Miramar, FL E86349 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

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



07-APR-09



Project Manager: Jason Henry PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: 329162 Red Byrd Ranch Historical Project Address: S of Monument, NM

Jason Henry:

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 329162. 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. 329162 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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Sample Cross Reference 329162

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Ranch Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended 1 C	S	Apr-02-09 09:00		329162-001
Blended 2 C	S	Apr-02-09 09:10		329162-002
Blended 17 A	S	Apr-02-09 09:20		329162-003
Blended 18 A	S	Apr-02-09 09:30		329162-004
Blended 19 A	S	Apr-02-09 09:40		329162-005

						0	
Project Id: Red Ryrd Ranch-TNM Hist		Project Name	Project Name: Red Byrd Ranch Historical	Historical		Y	
Contact: Jacon Henry				Da	te Received in Lab:	Date Received in Lab: Thu Apr-02-09 05:00 pm	
Protect I ocetion: S of Monument NM					Report Date: 07-APR-09	07-APR-09	
					Project Manager: _Brent Barron, Il	Brent Barron, II	
	Lab Id:	329162-001	329162-002	329162-003	329162-004	329162-005	
A I D accorded	Field Id:	Blended 1 C	Blended 2 C	Blended 17 A	Blended 18 A	Blended 19 A	
Analysis Kequesieu	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Apr-02-09 09:00	Apr-02-09 09:10	Apr-02-09 09:20	Apr-02-09 09:30	Apr-02-09 09:40	
Percent Moisture	Extracted:						
	Analyzed:	Apr-03-09 17:00	Apr-03-09 17:00	Apr-03-09 17:00	Apr-03-09 17:00	Apr-03-09 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		5.81 1.00	6.10 1.00	6.43 1.00	5.41 1.00	5.95 1.00	
TPH Bv SW8015 Mod	Extracted:	Apr-06-09 14:11	Apr-06-09 14:11	Apr-06-09 14:11	Apr-06-09 14:11	Apr-06-09 14:11	
	Analyzed:	Apr-06-09 16:35	Apr-06-09 16:59	Apr-06-09 17:22	Apr-06-09 17:46	Apr-06-09 18:10	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		31.4 15.9	28.7 16.0	36.9 16.0	31.0 15.9	32.9 15.9	
C12-C28 Diesel Range Hydrocarbons		481 15.9	547 16.0	543 16.0	595 15.9	514 15.9	
C28-C35 Oil Range Hydrocarbons		80.7 15.9	93.5 16.0	126 16.0	128 15.9	88.6 15.9	
Total TPH		593.1 15.9	669.2 16.0	705.9 16.0	754 15.9	635.5 15.9	

Certificate of Analysis Summary 329162

PLAINS ALL AMERICAN EH&S, Midland, TX

boording

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This analytical report, and the entire data package it represents, has been trade for your exclusive and confidential use. The interpretations and results expressed droughout this manufactal report research the bary adprent of XENCO Laboratories. XEXCO Laboratories assumes to responsibility and makes no warranty to the text use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Director Brent Barron

Page 4 of 12





- 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.
- * Outside XENCO's scope of NELAC Accreditation.

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



Project Name: Red Byrd Ranch Historical

Work Orders : 329162,	,		Project II	D: Red Byrd	Ranch-TNN	A Hist.
Lab Batch #: 755046	Sample: 527839-1-BKS / BI	KS Bat	tch: l Matri	ix: Solid		
Units: mg/kg	Date Analyzed: 04/06/09 15:02	SU	RROGATE RE	COVERY S	STUDY	
ТРН Г	By SW8015 Mod	Amount Found [A]	True Amount {B]	Recovery %R	Control Limits %R	Flags
	Analytes	<u> </u>		[D]		
1-Chlorooctane		120	100	120	70-135	
o-Terphenyl		58.6	50.0	117	70-135	
Lab Batch #: 755046	Sample: 527839-1-BSD / B	SD Baf	tch: Matri	ix: Solid		
Units: mg/kg	Date Analyzed: 04/06/09 15:25	SU	RROGATE RE	ECOVERY	STUDY	
ТРН Р	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		121	100	121	70-135	
o-Terphenyl		57.4	50.0	115	70-135	
Lab Batch #: 755046	Sample: 527839-1-BLK / B			ix: Solid		····
Units: mg/kg	Date Analyzed: 04/06/09 15:48	SU	RROGATE RE	ECOVERY	STUDY	
ТРН Н	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		108	100	108	70-135	
o-Terphenyl	<u> </u>	52.6	50.0	105	70-135	
Lab Batch #: 755046	Sample: 329162-001 / SMP	' Ba	tch: 1 Matri	ix: Soil	.	
Units: mg/kg	Date Analyzed: 04/06/09 16:35	SU	RROGATE RE	ECOVERY	STUDY	·····
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		108	100	108	70-135	
o-Terphenyl		53.6	50.0	100	70-135	
Lab Batch #: 755046	Sample: 329162-002 / SMP			ix: Soil		
Units: mg/kg	Date Analyzed: 04/06/09 16:59	SU	RROGATE RE	ECOVERY	STUDY	
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
I-Chlorooctane		104	100	104	70-135	
o-Terphenyl		52.3	50.0	105	70-135	

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Red Byrd Ranch Historical

Vork Orders : 329162	,		Project If	D: Red Byrd I	Ranch-TNN	Л Hist.
Lab Batch #: 755046	Sample: 329162-003 / SMP	Bat	tch: 1 Matri	ix: Soil		
Units: mg/kg	Date Analyzed: 04/06/09 17:22	SU!	RROGATE RE	COVERY S	STUDY	
ТРН 1	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes		I′	[D]		
1-Chlorooctane		105	100	105	70-135	
o-Terphenyl		51.5	50.0	103	70-135	
Lab Batch #: 755046	Sample: 329162-004 / SMP	Bat	tch: Matri	ix: Soil		
Units: mg/kg	Date Analyzed: 04/06/09 17:46	SU	RROGATE RE	COVERY	STUDY	
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount {B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		103	100	103	70-135	
o-Terphenyl		50.5	50.0	103	70-135	
Lab Batch #: 755046	Sample: 329162-005 / SMP	Baf		ix: Soil	<u></u>	
Units: mg/kg	Date Analyzed: 04/06/09 18:10		RROGATE RE	COVERY S	STUDY	
ТРН 1	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Ahaiyics	106	100	106	70-135	
o-Terphenyl		52.7	50.0	106	70-135	
Lab Batch #: 755046	Sample: 329162-005 S / MS			ix: Soil		L
Units: mg/kg	Date Analyzed: 04/07/09 01:02		RROGATE RE		TUDY	
r	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes	· · · · · · · · · · · · · · · · · · ·	1	[D]]	
1-Chlorooctane			100	120	70-135	
]	120	1 100	•		
o-Terphenyl		57.1	50.0	114	70-135	
o-Tcrphenyl Lab Batch #: 755046	Sample: 329162-005 SD / M	57.1	50.0	114 ix: Soil	70-135	· · · · · · · · · · · · · · · · · · ·
	Sample: 329162-005 SD / M Date Analyzed: 04/07/09 01:25	57.1 ISD Bat	50.0	ix: Soil	L	
Lab Batch #: 755046 Units: mg/kg		57.1 ISD Bat	50.0 tch: 1 Matri	ix: Soil	L	Flags
Lab Batch #: 755046 Units: mg/kg	Date Analyzed: 04/07/09 01:25 By SW8015 Mod	57.1 ISD Bat SUJ Amount Found	50.0 tch: 1 Matri RROGATE RE True Amount	ix: Soil ECOVERY S Recovery %R	STUDY Control Limits	Flags

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

*** Poor recoveries due to dilution

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



BS / BSD Recoveries



Project Name: Red Byrd Ranch Historical

Work Order #: 329162 Analyst: BHW Lab Batch ID: 755046 Sample: 527839-1-BKS Units: mg/kg

Date Prepared: 04/06/2009

Batch #: 1

Project ID: Red Byrd Ranch-TNM Hist. Date Analyzed: 04/06/2009 Matrix: Solid

Units: mg/kg		BLAN	K /BLANK S	SPIKE / B	TANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	
TPH By SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
	[V]		Result	%R		Duplicate	%R	%	%R	%RPD	1
Analytes		[B]	[c]	ē	[E]	Result [F]	<u>5</u>				
C6-C12 Gasoline Range Hydrocarbons	Ŋ	1000	016	16	1000	905	16	-	70-135	35	
C12-C28 Dicsel Range Hydrocarbons	ND	1000	974	67	1000	975	98	0	70-135	35	

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







Project Name: Red Byrd Ranch Historical

Work Order #: 329162

Lab Batch ID: 755046 Date Analyzed: 04/07/2009 Reporting Units: ma/kg

Batch #: 1 Matrix: Soil Analyst: BHW

QC- Sample ID: 329162-005 S

Date Prepared: 04/06/2009

Project ID: Red Byrd Ranch-TNM Hist.

Reporting Units: mg/kg		M	ATRIX SPIK	E / MATI	IIAS XIX	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	FE RECO	VERY S	TUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	Added [B]	[c]	10]	Added [E]	Result [F]	[G]	%	%K	%крр	
C6-C12 Gasoline Range Hydrocarbons	32.9	1060	959	87	1060	978	89	2	70-135	35	
C12-C28 Dicsel Range Hydrocarbons	514	1060	1420	85	1060	1470	60	3	70-135	35	

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

Page 9 of 12



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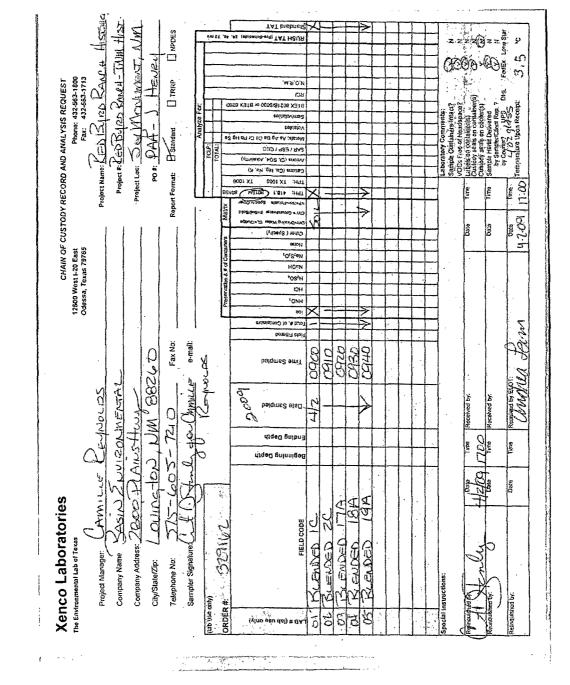


Project Name: Red Byrd Ranch Historical

Work Order #: 329162

Lab Batch #: 754848 Date Analyzed: 04/03/2009 QC- Sample ID: 329147-041 D	Batch #: 1	3/2009	Analy Matri	st: BEV ix: Soil	Ranch-TNM
Reporting Units: % Percent Moisture	Parent Sample Result	Duplicate	RPD	Control Limits	Flag
Analyte	[A]	Result [B]		%RPD	
ercent Moisture	3.72	4.50	19	20	

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



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			18	· · · · · · · · ·	2 ^{- 1}	
	Environmental La			· · · · ·	· ·	
	Variance/ Corrective Action Rej	port- Sampl	e Log-In	En la seconda de la seconda de la seconda de la seconda de la seconda de la seconda de la seconda de la second		
Client:	Basin Env. Phins		×	•		
Date/ Time:	4.2.09. 17:00			1		
	non -	·		1. s. s.		
Lab ID # :	329162					
initials:	- OIL			•		
		• *.		5 g.		
	Sample Receipt	Checklist				
······		1 0.00			lient Initials	÷.
and the second s	ature of container/ cooler?	(Yes)	No	3.3.00		1.1
	container in good condition?	(Yes)	No	A DECEMBER OF THE OWNER OWN	<u> </u>	
	Seals intact on shipping container/ cooler?	Yes	No No	CNot PresenP	i	
the second second second second second second second second second second second second second second second se	Seals intact on sample bottles/ container?	Yes	No	Not Present		
	instructions complete of Chain of Custody?	d'és	Nô ³			
	Custody signed when relinquished/ received?	(Yes)	No			
	Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid		· ' .
	er label(s) legible and intact?	(Yes)	No	Not Applicable		• '
	matrix/ properties agree with Chain of Custody?	(Yes)	No			, * ^ •
				++		. 1 M.
#11 Contain	ers supplied by ELOT?	(Yes)	No.		- 1 J - 1	
	ers supplied by ELOT? s in proper container/ bottle?	Yes/	No No	See Below		

#12 Samples in proper container/ bottle? #13 Samples properly preserved?

ļ

#14 Sample bottles intact?
#15 Preservations documented on Chain of Custody?
#16 Containers documented on Chain of Custody?

#17 Sufficient sample amount for indicated test(s)?

No

No No No

No

Y.es'

(Yes) (Yes) (Yes)

(Yêš)

See Below

See Below

		vanan	ce Docume	entation	. (·
Contact:		Contacted by:				Date/ Time:		
Regarding:							la fra	÷.,.
							······	••••••
Corrective Action Taken:					1 .			•
	-			·····	, * , *			·······
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Check all that Apply:	c 🗍	ee attached e-m lient understand coling process h	s and would					· .
								• :

Analytical Report 330525

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd Ranch Hist. TNM-Red Byrd Ranch Hist.

21-APR-09





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Miramar, FL E86349 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

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21-APR-09



Project Manager: Jason Henry PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: 330525 Red Byrd Ranch Hist. Project Address: S of Monument, NM

Jason Henry:

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 330525. 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. 330525 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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Sample Cross Reference 330525

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Ranch Hist.

Sample Id	Matrix	Date Collected Sample Dept	h Lab Sample Id
Blended 11 B	S	Apr-17-09 14:00	330525-001
Blended 14 B	S	Apr-17-09 14:20	330525-002
Blended 15 B	S	Apr-17-09 14:40	330525-003
Blended 16 B	S	Apr-17-09 15:10	330525-004

	ch Hist.
	Project Id: TNM-Red Byrd Ranch Hist
	I-MNT :bi
EXELUCO Meconomia	Project l

Contact: Jason Henry



Project Name: Red Byrd Ranch Hist.



Date Received in Lab: Mon Apr-20-09 08:39 am Report Date: 21-APR-09

Project Location: S of Monument NM						Report Date: 21-APR-09	21-APR-09
						Project Manager: Brent Barron, II	Brent Barron, II
	Lab Id:	330525-001	330525-002		330525-003	330525-004	
between 0	Field Id:	Blended 11 B	Blended 14 B		Blended 15 B	Blended 16 B	
Anutysis Nequesieu	Depth:						
	Matrix:	SOIL	SOIL		SOIL	SOIL	
	Sampled:	Apr-17-09 14:00	Apr-17-09 14:20	0	Apr-17-09 14:40	Apr-17-09 15:10	
Percent Moisture	Extracted:						
	Analyzed:	Apr-20-09 17:00	Apr-20-09 17:00	0	Apr-20-09 17:00	Apr-20-09 17:00	
	Units/RL:	% RL	%	RL	% RL	% RL	
Percent Moisture		2.86 1.00	0 4.77 1.00	00.	5.13 1.00	2.56 1.00	
TPH Rv SW8015 Mod	Extracted:	Apr-20-09 15:00	Apr-20-09 15:00	0	Apr-20-09 15:00	Apr-20-09 15:00	
	Analyzed:	Apr-20-09 22:36	Apr-20-09 23:02	5	Apr-20-09 23:27	Apr-20-09 23:52	
	Units/RL:	mg/kg RL	mg/kg	RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		103 15.4	172	15.8	201 15.8	106 15.4	
C12-C28 Diesel Range Hydrocarbons		1180 15.4	4 1230 15.8	5.8	1400 15.8	1010 15.4	
C28-C35 Oil Range Hydrocarbons		94.7 15.4	103	15.8	122 15.8	82.2 15.4	
Total TPH		1377.7 15.4	1505	15.8	1723 15.8	1198.2 15.4	

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

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Brent Barron Odessa Laboratory Director





- 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.
- * Outside XENCO's scope of NELAC Accreditation.

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(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116
	(281) 240-4200 (214) 902 0300 (210) 509-3334 (813) 620-2000 (305) 823-8500 (432) 563-1800



Project Name: Red Byrd Ranch Hist.

Vork Orders : 330525	,		Project II	D: TNM-Red	Byrd Ranc	h Hist.		
Lab Batch #: 756418	Sample: 528558-1-BKS / B	KS Ba	tch: 1 Matri	ix: Solid				
Units: mg/kg	Date Analyzed: 04/20/09 16:47	SU	RROGATE RI	ECOVERY	STUDY			
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctanc		125	100	125	70-135	<u> </u>		
o-Tcrphcnyl		60.3	50.0	123	70-135			
Lab Batch #: 756418	Sample: 528558-1-BSD / B	SD Ba	tch: 1 Matri	ix: Solid	<u></u>	1		
Units: mg/kg	Date Analyzed: 04/20/09 17:12		RROGATE RI		STUDY			
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
I-Chlorooctanc		115	100	. 115	70-135			
o-Terphenyl		53.8	50.0	108	70-135			
Lab Batch #: 756418	Sample: 528558-1-BLK / B	BLK Batch: 1 Matrix: Solid						
Units: mg/kg	Date Analyzed: 04/20/09 17:37	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
I-Chlorooctanc		101	100	101	70-135			
o-Terphenyl		58.8	50.0	118	70-135			
Lab Batch #: 756418	Sample: 330525-001 / SMP	Ba	tch: Matri	ix: Soil	<u></u>			
Units: mg/kg	Date Analyzed: 04/20/09 22:36	SU	RROGATE RI	ECOVERY	STUDY			
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	Analytes	95.0	100	95	70-135			
o-Terphenyl		54.2	50.0	108	70-135			
Lab Batch #: 756418	Sample: 330525-002 / SMP	Ba	tch: 1 Matri	ix: Soil	<u>I</u>			
Units: mg/kg	Date Analyzed: 04/20/09 23:02		RROGATE RI		STUDY			
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	· · · · · · · · · · · · · · · · · · ·	93.9	100	94	70-135			
o-Terphenyl		53.5	50.0	107	70-135			

** 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.

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Project Name: Red Byrd Ranch Hist.

Work Orders : 330525	<i>s</i> ,		Project II	D: TNM-Red	Byrd Ranc	h Hist.
Lab Batch #: 756418	Sample: 330525-003 / SMP			ix: Soil		
Units: mg/kg	Date Analyzed: 04/20/09 23:27	SU	RROGATE RE	ECOVERY ?	STUDY	
TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		95.4	100	95	70-135	[
o-Terphenyl		54.3	50.0	109	70-135	
Lab Batch #: 756418	Sample: 330525-004 / SMP	Ba	tch: Matri	ix: Soil	<u> </u>	
Units: mg/kg	Date Analyzed: 04/20/09 23:52	SU	RROGATE RE	ECOVERY !	STUDY	
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		90.1	100	90	70-135	· · · ·
o-Tcrphenyl		51.0	50.0	102	70-135	l
Lab Batch #: 756418	Sample: 330555-005 S / MS	Ba Ba	tch: 1 Matri	ix: Soil		
Units: mg/kg	Date Analyzed: 04/21/09 00:18	SU	RROGATE RE	ECOVERY (STUDY	<u></u>
ТРН 1	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		98.1	100	98	70-135	ſ
o-Terphenyl		43.4	50.0	87	70-135	
Lab Batch #: 756418	Sample: 330555-005 SD / M	ASD Ba	tch: Matri	ix: Soil	k	
Units: mg/kg	Date Analyzed: 04/21/09 00:42		RROGATE RE		STUDY	<u></u>
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		99.4	100	99	70-135	
o-Tcrphenyl		44.1	50.0	88	70-135	1

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

*** Poor recoveries due to dilution

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



BS / BSD Recoveries



Project Name: Red Byrd Ranch Hist.

Work Order #: 330525 Analyst: BHW Lab Batch ID: 756418 Sample: 528558-1-BKS

Date Prepared: 04/20/2009

Batch #:]

Project ID: TNM-Red Byrd Ranch Hist. **Date Analyzed:** 04/20/2009 **Matrix:** Solid

Units: mg/kg		BLANI	K /BLANK S	PIKE / B	LANK S	3LANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	$\left[\right]$
TPH By SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Bik. Spk Dup.	RPD	Control Limits	Control Limits	Flag
	[A]		Result	%R		Duplicate	%R	%	%К	%RPD	
Analytes		[B]	[C]	[D]	(E)	Result [F]	[6]				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	1140	114	1000	1070	107	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	DN	1000	1110	111	1000	1030	103	7	70-135	. 35	

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







Project Name: Red Byrd Ranch Hist.

Work Order #: 330525

Lab Batch ID: 756418 Date Analyzed: 04/21/2009

 QC- Sample ID:
 330555-005 S
 Batch #:
 1

 Date Prepared:
 04/20/2009
 Analyst:
 BHW

1 Matrix: Soil

Project ID: TNM-Red Byrd Ranch Hist.

Reporting Units: mg/kg		M	ATRIX SPIKI	E / MATI	IIAS XI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	FE RECO	VERY S	TUDY		
TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	QN	1010	982	67	1010	1010	100	'n	70-135	35	
C12-C28 Diesel Range Hydrocarbons	64.7	1010	966	92	1010	1010	94	-	70-135	35	

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

ierence, NA = Not



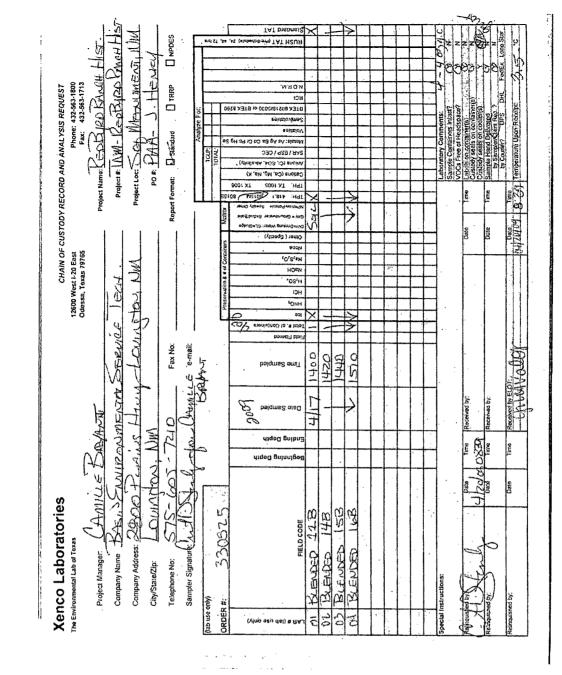


Project Name: Red Byrd Ranch Hist.

Work Order #: 330525

Lab Batch #: 756421 Date Analyzed: 04/20/2009 QC- Sample ID: 330525-001 D	Date Prepared: 04/2 Batch #:	20/2009	Analy	D: TNM-Re st: BEV ix: Soil	d Byrd Ranch H
Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
ercent Moisture	2.86	2.88	1	20	

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



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,	Environmental La	ab of Texa	as	,	
Va	riance/ Corrective Action Re	port- Sampl	e Log-In	ŕ "	
client: Basim	Plains				
	20/09 8:39			•**	
~~~~	0525	•			
Lab ID #:	0525				
Initials:	WK.				
	Sample Receipt	Checklist			
					Client Initials
#1 Temperature of container/ c		CYes	No	3.5 °C	
#2 Shipping container in good c #3 Custody Seals intact on ship		Yes Yes	No No	<not present<="" td=""><td>┝┥</td></not>	┝┥
#3 Custody Seals Intact on san #4 Custody Seals Intact on san		Yes	No	Not Present	<b>├</b>
#5 Chain of Custody present?		(Yes	No		·
#6 Sample instructions comple	te of Chain of Custody?	(Yes	No		
#7 Chain of Custody signed wh	en relinguished/ received?	(Yes	No		
#8 Chain of Custody agrees wi		(Yes)	No	ID written on Cont./ Lid	ļ
#9 Container label(s) legible ar		Yes	No	Not Applicable	<b></b>
#10 Sample matrix/ properties a #11 Containers supplied by ELC		(Yes)	No No		+
#12 Samples in proper container		(Yes	No	See Below	+
#13 Samples properly preserve		(Yes)	No	See Below	+
#14 Sample bottles intact?		CYes	No		1
#15 Preservations documented	on Chain of Custody?	(Yes)	No		1
#16 Containers documented or	Chain of Custody?	(Yes)	No		
#17 Sufficient sample amount f		Yes	No	See Below	
#18 All samples received within		(Yes)	No	See Below	<b></b>
#19 Subcontract of sample(s)? #20 VOC samples have zero h		Yes	No No	Not Applicable	
1 20 VOO Samples have zero h	0000000			T Not Applicable	المسمحم
	Variance Docu	mentation			
<b>A</b>	Contract has			-	
Contact:	Contacted by:	· · · · · · · · · · · · · · · · · · ·	<b>.</b> .	Date/ Time:	
Regarding:					
· · · · · · · · · · · · · · · · · · ·		**********	····		
	· · ·				
Corrective Action Taken:					
					** 
				· .	
Check all that Apply:	See attached e-mail/ fax				
	Client understands and wo Cooling process had begur				
		1 SHOFIN ARE!	samplin	a event	

# Analytical Report 336451

for

# PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

Red Byrd Ranch Historical TNM-Red Byrd Ranch Historical

07-JUL-09





### 12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Miramar, FL E86349 Norcross(Atlanta), GA E87429

> Arixona certification numbers: Houston, TX AZ0738

South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

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07-JUL-09



Project Manager: Jason Henry PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: 336451 Red Byrd Ranch Historical Project Address: Lea County, NM

### Jason Henry:

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 336451. 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. 336451 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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# Sample Cross Reference 336451



### PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Ranch Historical

Sample Id	Matrix	Date Collected Sample Depth	Lab Sample Id
Blended 11 C	S	Jun-24-09 13:30	336451-001
Blended 14 C	S	Jun-24-09 13:40	336451-002

### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S Project Name: Red Byrd Ranch Historical

Project ID:TNM-Red Byrd Ranch His.Work Order Number:336451

Report Date: 07-JUL-09 Date Received: 06/25/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763629 Percent Moisture None

Batch: LBA-763866 TPH by SW8015 Mod None

### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S Project Name: Red Byrd Ranch Historical

Project ID:TNM-Red Byrd Ranch His.Work Order Number:336451

Report Date: 07-JUL-09 Date Received: 06/25/2009

Batch: LBA-764550 BTEX-MTBE EPA 8021B SW8021BM

Batch 764550, Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 336451-001, -002. The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits

### SW8021BM

Batch 764550, 4-Bromofluorobenzene recovered below QC limits; QC Data not confirmed by reanalysis. Samples affected are: 533130-1-BLK.

### SW8021BM

Batch 764550, Benzene RPD was outside laboratory control limits In the LCS. The RPD was within limits for the Matrix Spike and Matrix Spike duplicate. Analyst spiking error suspected.. Samples affected are: 336451-001, -002

### SW8021BM

Batch 764550, Benzene, Toluene recovered below QC limits in the laboratory control sample these compounds were within QC limits in the CCVs as well as the Laboratory Control Sample Duplicate, analyst spiking error is suspected, there should be no appreciable affect to the sample data.

Samples affected are: 336451-001, -002.



Contact: Jason Henry

Certificate of Analysis Summary 336451 PLAINS ALL AMERICAN EH&S, Midland, TX



Date Received in Lab: Thu Jun-25-09 09:05 am

Report Date: 07-JUL-09

Lab Id:         336451-001         336451-001         336451-002           Analysis Requested         Depth:         336451-001         336451-001         336451-001           Analysis Requested         Depth:         SOIL         336451-001         336451-001         336451-002           BTEX by EPA 8021B         Extracted         Jun-24-09 13:30         Jun-24-09 13:30         Jun-24-09 13:30         Jun-24-09 13:30           BTEX by EPA 8021B         Extracted:         Jul-01-09 15:30         Jun-24-09 13:30         Jun-24-09 13:30         Jun-24-09 13:30           BTEX by EPA 8021B         Extracted:         Jun-24-09 13:30         Jun-24-09 13:30         Jun-24-09 13:30           BTEX by EPA 8021B         Extracted:         Jun-24-09 13:30         Jun-24-09 13:30         Jun-24-09 13:30           BTEX by EPA 8021B         Extracted:         Jun-24-09 13:30         Jun-24-09 13:30         Jun-24-09 13:30           BTEX by EPA 8021B         Extracted:         Jun-37-09 12:00         Jun-24-09 13:30         Jun-24-09 13:30           Bencence         0.011 0.0021 0.002         0.0010 0.0021 0.002         0.0021 0.002         Jun-25-09 16:00           Total BTEX         Percent Moisture         Extracted:         Jun-25-09 16:00         Jun-27-09 16:11           Percent Moisture         Manbyz	Project Manager:         Brent Barron, II           336451-002         Blended 14 C           336451-002         Blended 14 C           SOIL         Jun-24-09 13:40           Jun-24-09 13:40         Jul-01-09 15:30           Jul-01-09 15:30         Jul-01-09 15:30           Jul-01-0
Lab Id:       Lab Id:       336451-001       ::::::::::::::::::::::::::::::::::::	336451-002       Blended 14 C         Blended 14 C       SOIL         SOIL       Jun-24-09 13:40         Jun-24-09 13:40       Jun-24-09 13:40         Jul-01-09 15:30       Jun-24-09 13:40         Jul-01-09 15:30       Jun-24-09 13:40         Jun-01-09 15:30       Jun-24-09 13:40         Jun-24-09 13:40       Jun-24-09 13:40         Jun-01-09 15:30       Jun-24-09 12:40         Jun-01-09 15:30       Jun-24-09 12:40         Jun-24-09 15:40
alysis Requested     Field Id:     Blended II C     B       Depth:     Natrix:     SOIL       Matrix:     SOIL       Sampled:     Jun-24-09 13:30     Ju       IntrivRL:     mg/kg     RL     m       Matrix:     mg/kg     RL     m       IntrivRL:     mg/kg     RL     m       0.0011     0.0010     0.0010     0.0010       Percent Moisture     Extracted:     Jun-25-09 16:00     Ju       Net     Units/RL:     %     RL     Ju       Net     Units/RL:     %     RL     Ju       Net     Jun-25-09 16:00     Ju     Ju       Net     Units/RL:     %     RL     Ju       Net     Units/RL:     %     RL     Ju	Blended 14 C SOIL Jun-24-09 13:40 Jul-01-09 15:30 Jul-03-09 02:37 mg/kg RL ND 0.0010 0.0022 0.0020 0.0020 0.0010
Depth:         Depth:         SOIL           Marix:         SOIL         Jun-24-09 13:30         Ju           Sampled:         Jun-24-09 13:30         Ju         Ju           FEX by EPA 8021B         Extracted:         Jul-01-09 15:30         Ju           InivRL:         mg/kg         RL         m           InivRL:         mg/kg         RL         m           0.0011         0.0010         0.0010         0.0010           Percent Moisture         Extracted:         Jun-25-09 16:00         Ju           InivRL:         %         RL         m           InivRL:         %         RL         m           InivRL:         0.0012         0.0010         Ju           InivRL:         0.0014         0.0010         Ju           InivRL:         %         RL         m           InivRL:         %         RL         Ju           InivRR:         Jun-25-09 16:00         Ju         Ju           InivRR:         %         2:43         Ju         Ju           InivRR:         %         2:43         Ju         Ju           InivRR:         %         2:43         Ju         Ju	SOIL Jun-24-09 13:40 Jul-01-09 15:30 Jul-03-09 02:37 mg/kg RL ND 0.0010 0.0022 0.0020 0.0020 0.0010
Matrix:         SOIL           Sampled:         Jun-24-09 13:30         Ju           FEX by EPA 8021B         Extracted:         Jul-01-09 15:30         Ju           TeX by EPA 8021B         Extracted:         Jul-03-09 02:15         Ju           Tex by EPA 8021B         Extracted:         Jul-03-09 02:15         Ju           Tex by Exp and and an advect         0.0010         0.0010         Ju           Percent Moisture         Extracted:         Jun-25-09 16:00         Ju           Ture         0.0488         0.0010         Ju           Ture         2.43         Ju0         Ju           Ture         2.43         Ju         Ju	SOIL Jun-24-09 13:40 Jul-01-09 15:30 Jul-03-09 02:37 mg/kg RL ND 0.0010 0.0062 0.0020 0.0021 0.0010 0.0020 0.0010
Sampled:         Jun-24-09 13:30         Ju           FEX by EPA 8021B         Extracted:         Jul-01-09 15:30         Ju           Analyzed:         Jul-03-09 02:15         Ju         Ju           Units/RL:         mg/kg         RL         m           O.0011         0.0010         0.0010         0.0010           Percent Moisture         Extracted:         Jun-25-09 16:00         Ju           ure         Units/RL:         %         RL         Ju           Units/RL:         %         RL         Ju         Ju           Units/RL:         %         RL         Ju         Ju	Jun-24-09 13:40 Jul-01-09 15:30 Jul-03-09 02:37 mg/kg RL ND 0.0010 0.0062 0.0020 0.0021 0.0010 0.0020 0.0010
TEX by EPA 8021B     Extracted:     Jul-01-09 15:30     Ju       Analyzed:     Jul-03-09 02:15     Ju       Units/RL:     mg/kg     RL     m       0.0011     0.0010     0.0010     m       0.011     0.0011     0.0010     m       0.011     0.0011     0.0010     m       0.011     0.0010     0.0010     m       0.011     0.0112     0.0110     m       0.011     0.0112     0.0110     m       0.011     0.0112     0.0110	Jul-01-09 15:30 Jul-03-09 02:37 mg/g RL ND 0.0010 0.0062 0.0020 0.0021 0.0010 0.0020 0.0010
Analyzed:     Jul-03-09 02:15     Ju       Units/RL:     mg/kg     R1.     m       0.0011     0.0010     0.0010     m       0.0171     0.0011     0.0010     m       0.0152     0.0010     0.0010     m       0.021     0.0231     0.0010     m       0.021     0.0243     0.0010     m       0.0221     0.0243     0.0010     m       0.0231     0.0243     0.0010     m       0.0241     Jun-25-0916:00     Jun     Jun       0.025     0.02115     Jun     Jun       0.0261     Jun-27-0911:17     Jun       1     Jun-27-0921:15     Jun	Jul-03-09 02:37 mg/tg RL ND 0.0010 0.0062 0.0020 0.0021 0.0010 0.0039 0.0020 0.0030 0.0010
Units/RL:     mg/kg     RL     m       0.0011     0.0010     0.0011     0.0010       0.0171     0.0010     0.0010     0.0010       0.0152     0.0010     0.0010     0.0010       0.0152     0.0010     0.0010     0.0010       Percent Moisture     Extracted:     Jun-25-09 16:00     Jun       ure     2.43     1.00     Jun       H By SW8015 Mod     Extracted:     Jun-27-09 11:17     Jun	0.0 0.0 0.0
0.0011       0.0010       0.0011       0.0010         0.0171       0.0021       0.0021       0.0021         0.0152       0.0010       0.0021       0.0010         0.0152       0.0010       0.0010       0.0100         0.0124       0.0148       0.0010       0.0100         0.0243       0.0010       0.0100       0.0100         0.0243       0.0010       0.0100       0.0100         Percent Moisture       Extracted:       Jun-25-09 16:00       Jun         ure       2.43       1.00       Jun         Ture       2.43       1.00       Jun         H By SW8015 Mod       Extracted:       Jun-27-09 11:17       Jun	ND         0.0010           0.0062         0.0020           0.0021         0.0010           0.0020         0.0010
0.0171     0.0021       0.0063     0.0010       0.0152     0.0021       0.0152     0.0010       0.0248     0.0010       0.0248     0.0010       0.0248     0.0010       0.02488     0.0010       0.02488     0.0010       0.02488     0.0010       0.02488     0.0010       0.02488     0.0010       0.02488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010    <	0.0062 0.0020 0.0021 0.0010 0.0039 0.0020 0.0020 0.0010
0.0063     0.0010       0.0152     0.001       0.0152     0.001       0.0091     0.0010       0.0243     0.0010       0.0248     0.0010       0.0248     0.0010       0.0248     0.0010       0.0248     0.0010       0.02488     0.0010       0.02488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010       0.0488     0.0010	0.0021 0.0010 0.0039 0.0020 0.0020 0.0010
Percent Moisture     0.0152     0.0021       Percent Moisture     0.0488     0.0010       Percent Moisture     Extracted:     0.0488     0.0010       Percent Moisture     Extracted:     Jun-25-09     Jun       Padiyzed:     Jun-25-09     16:00     Jun       Padiyzed:     Jun-27-09     11:17     Jun       H By SW8015 Mod     Analyzed:     Jun-27-09     11:17     Jun	0.0039 0.0020 0.0020 0.0010
0.0091         0.0010         0.0010           0.0243         0.0010         0.0243         0.0010           Percent Moisture         Extracted:         0.0488         0.0010         Jun           Percent Moisture         Extracted:         Jun-25-09         16:00         Jun           Imaiyzed:         Jun-27-09         16:117         Jun           Imaiyzed:         Jun-27-09         11:17         Jun	0.0020 0.0010
0.0243         0.0010           Percent Moisture         Extracted:         0.0448         0.0010           Percent Moisture         Extracted:         Jun-25-09         16:00         Jun           Ine         Tracted:         Jun-27-09         16:00         Jun           Ine         Z:43         1.00         Jun           H By SW8015 Mod         Extracted:         Jun-27-09         Jun	
Percent Moisture         Extracted: Analyzed:         0.0488         0.0010         0.0142         0.0           Percent Moisture         Extracted: Analyzed:         Jun-25-09         16:00         Jun-25-09         16:0           sture         UnityRL:         %         RL         %           sture         2:43         1:00         1.75         1           PH By SW8015 Mod         Extracted:         Jun-27-09         11:1         Jun-27-09         11:1	0.0059 0.0010
ccent Moisture         Extracted: Analyzed:         Jun-25-09 16:00         Jun-25-09 16:00           Analyzed:         Jun-27-09 11:0         Jun-27-09 11:0           Units/RL:         %         RL         %           Extracted:         Jun-27-09 11:17         Jun-27-09 11:17         Jun-27-09 11:17           By SW8015 Mod         Extracted:         Jun-27-09 11:17         Jun-27-09 11:17         Jun-27-09 11:17	0.0142 0.0010
Analyzed:         Jun-25-09 [6:00         Jun-25-09 [6:0           Units/RL:         %         RL         %           Units/RL:         %         RL         %           By SW8015 Mod         Extracted:         Jun-27-09 11:17         Jun-27-09 11:17         Jun-27-09 11:17	
Units/RL:         %         RL         %           2.43         1.00         1.75         1           Extracted:         Jun-27-09         11:17         Jun-27-09         11:17           By SW8015         Mod         Analyzed:         Jun-27-09         21:45         Jun-27-09         21:45	Jun-25-09 16:00
By SW8015 Mod         Extracted:         Jun-27-09 11:17         Jun-27-09 11:           Anabyzed:         Jun-27-09 21:15         Jun-27-09 21:15         Jun-27-09 21:	% RL
Extracted: Jun-27-09 11:17 Analyzed: Jun-27-09 21:15	1.75 1.00
Analyzed: Jun-27-09 21:15	71:17 Jun-27-09 11:17
	Jun-27-09 21:40
Units/RL: mg/kg RL mg/kg	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons ND 15.3 18.4 1	18.4 15.3
C12-C28 Diesel Range Hydrocarbons 554 15.3 828 1	828 15.3
C28-C35 Oil Range Hydrocarbons 69.3 15.3 97.0 1	97.0 15.3
Total TPH 623.3 15.3 943.4 1	943.4 15.3

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

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Odessa Laboratory Director Brent Barron





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

BRL Below Reporting Limit.

**RL** Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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Project Name: Red Byrd Ranch Historical

ork Orders : 336451	-			D: TNM-Red	Byrd Ranc	h Histor
Lab Batch #: 764550 Units: mg/kg	Sample: 533130-1-BKS / B Date Analyzed: 07/02/09 22:40		RROGATE R	ix: Solid ECOVERY S	STUDY	
	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0284	0.0300	95	80-120	
4-Bromofluorobenzene		0.0306	0.0300	102	80-120	
Lab Batch #: 764550	Sample: 533130-1-BSD / E	SD Ba	itch: ¹ Matr	ix: Solid		
Units: mg/kg	Date Analyzed: 07/02/09 23:02	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0290	0.0300	97	80-120	
4-Bromofluorobenzene		0.0317	0.0300	106	80-120	
Lab Batch #: 764550	Sample: 533130-1-BLK / E		tch: 1 Matr	ix: Solid	L	
Units: mg/kg	Date Analyzed: 07/02/09 23:45	SURROGATE RECOVERY STUDY				
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0263	0.0300	88	80-120	
4-Bromofluorobenzene		0.0146	0.0300	49	80-120	*
Lab Batch #: 764550	Sample: 336451-001 / SMF	) Ba	itch: 1 Mati	ix: Soil	ł	
Units: mg/kg	Date Analyzed: 07/03/09 02:15	SU	JRROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	Analytes	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene		0.0358	0.0300	119	80-120	
Lab Batch #: 764550	Sample: 336451-002 / SMF	) <u>Ba</u>	itch: 1 Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 07/03/09 02:37		URROGATE R		STUDY	
	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes					
1.4-Difluorobenzene	Analytes	0.0248	0.0300	83	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

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### Project Name: Red Byrd Ranch Historical

/ork Orders : 336451 Lab Batch #: 764550	l, Sample: 336622-003 S / M	S Ba	5	D:TNM-Red ix: Soil	Byrd Ranc	h Histor
Units: mg/kg	Date Analyzed: 07/03/09 07:36		JRROGATE R		STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]	· ·	
1,4-Difluorobenzene		0.0292	0.0300	97	80-120	
4-Bromofluorobenzene		0.0305	0.0300	102	80-120	
Lab Batch #: 764550	Sample: 336622-003 SD / 1			ix: Soil		
Units: mg/kg	Date Analyzed: 07/03/09 07:58	SU	URROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I,4-Difluorobenzene		0.0293	0.0300	98	80-120	
4-Bromofluorobenzene		0.0286	0.0300	95	80-120	
Lab Batch #: 763866	Sample: 532726-1-BKS / E	I	atch: 1 Matr	ix: Solid	1	
Units: mg/kg	Date Analyzed: 06/27/09 12:58		URROGATE R		STUDY	— <u> </u>
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		108	100	108	70-135	
o-Terphenyl		47.4	50.0	95	70-135	
Lab Batch #: 763866	Sample: 532726-1-BSD / E	BSD Ba	atch: ¹ Matr	ix: Solid	11	
Units: mg/kg	Date Analyzed: 06/27/09 13:24	SI	URROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc		106	100	106	70-135	
o-Terphenyl		46.6	50.0	93	70-135	
Lab Batch #: 763866	Sample: 532726-1-BLK / E	BLK B	atch: ] Matr	ix: Solid		<u> </u>
Units: mg/kg	Date Analyzed: 06/27/09 13:51		URROGATE R		STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Anglytas			[D]		
1-Chlorooctane	Analytes	93.3	100	<b>[D]</b> 93	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



### Project Name: Red Byrd Ranch Historical

'ork Orders : 336451 Lab Batch #: 763866	, Sample: 336451-001 / SMP	Ra	•	D:TNM-Red ix: Soil	Byrd Ranc	h Histo	
Units: mg/kg	Date Analyzed: 06/27/09 21:15		JRROGATE R		STUDY		
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane		88.5	99.6	89	70-135		
o-Terphenyl		48.4	49.8	97	70-135		
Lab Batch #: 763866	Sample: 336451-002 / SMP	Ba	itch: ¹ Matr	ix: Soil			
Units: mg/kg	Date Analyzed: 06/27/09 21:40	SU	JRROGATE R	ECOVERY	STUDY		
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	Analytes	00.7	00.0		<u> </u>		
o-Terphenyl		90.7	99.9 50.0	91 98	70-135		
	a 1 22/224 001 B /MS	.,,,,			10-155		
Lab Batch #: 763866 Units: mg/kg	Sample: 336334-001 S / MS Date Analyzed: 06/27/09 23:48	S Batch: 1 Matrix: Soil SURROGATE RECOVERY STUDY					
	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes	[7 •]		[D]	/ <b>u</b> t		
1-Chlorooctane		194	200	97	70-135		
o-Terphenyl		89.6	100	90	70-135		
Lab Batch #: 763866	Sample: 336334-001 SD / N	ISD Ba	itch: ¹ Matr	ix: Soil			
Units: mg/kg	Date Analyzed: 06/28/09 00:13	SL	RROGATE R	ECOVERY	STUDY		
ТРН І	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes	11		[D]			
1-Chlorooctanc		197	200	99.	70-135		
o-Terphenyl		91.5	99.9	92	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



**BS / BSD Recoveries** 

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Project Name: Red Byrd Ranch Historical

Work Order #: 336451 Lab Batch ID: 764550 Analyst: ASA

Date Prepared: 07/01/2009

Batch #: 1

Sample: 533130-1-BKS

**Project ID:** TNM-Red Byrd Ranch Historical Date Analyzed: 07/02/2009 Matrix: Solid

**BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** 

Units: mg/kg		BLAN	K /BLANK S	PIKE / B	LANK S	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVI	ERY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Bik. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	(V)	[ <b>B</b> ]	(C)	10]	[E]	Duplicate Result [F]	<u>[</u> ]	%	%K	WKPD	
Benzene	QN	0.1000	0.0534	53	0.1	0.0802	80	40	70-130	35	Ľ
Toluene	Q	0.1000	0.0608	61	0.1	0.0841	84	32	70-130	35	
Ethylbenzene	Q	0.1000	0.0722	72	0.1	0.0922	92	24	71-129	35	
m,p-Xylenes	Q	0.2000	0.1470	74	0.2	0.1844	92	23	70-135	35	
o-Xylene	QN	0.1000	0.0719	72	0.1	0.0880	88	20	71-133	35	
Analyst: BHW	Ä	te Prepare	Date Prepared: 06/27/2009	6			Date A	nalyzed: 0	Date Analyzed: 06/27/2009		
Lab Batch ID: 763866 Sample: 532726-1-BKS	1-BKS	Batch #: ]	#: 1					Matrix: Solid	solid		
Units: mg/kg		BLANI	K /BLANK S	PIKE / B	<b>LANKS</b>	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Y	

TPH By SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Bik. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	<u> </u>	[B]	[C]		[E]	Result [F]	હ				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	849	85	1000	843	84	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	DN	1000	912	91	1000	899	96	1	70-135	35	

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/MSD Recoveries



**Project Name: Red Byrd Ranch Historical** 

Work Order #: 336451

Lab Batch ID: 764550 Date Analyzed: 07/03/2009 Decorting Indice, 100/03

 QC- Sample ID:
 336622-003 S
 Batch #:
 1

 Date Prepared:
 07/01/2009
 Analyst:
 ASA

1 Matrix: Soil

Project ID: TNM-Red Byrd Ranch Historical

Reporting Units: mg/kg		W	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MAT	RIX SPII	KE DUPLICA'	FE RECO	<b>DVERY</b>	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R (D)	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	Q	0.1006	- 0.0873	87	0.1006	0.0879	87	-	70-130	35	
Toluene	QN	0.1006	0.0712	11	0.1006	0.0719	71	-	70-130	35	
Ethylbenzene	QN	0.1006	0.0399	40	0.1006	0.0394	39	-	71-129	35	x
m,p-Xylencs	QN	0.2013	0.0793	39	0.2013	0.0840	42	6	70-135	35	Х
o-Xylene	ΟN	0.1006	0.0538	53	0.1006	0.0526	52	2	71-133	35	х
Lab Batch ID: 763866 Date Analyzed: 06/27/2009	QC- Sample ID: 336334-001 S Date Prepared: 06/27/2009	336334- 06/27/20	-001 S 309	Ba An	Batch #: Analyst: I	1 <b>Matrix:</b> Soil BHW	:: Soil				
Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MAT	RIX SPH	KE DUPLICA	FE RECO	<b>DVERY</b>	STUDY		
											ļ

keporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	C / MATH	RIX SPIH	KE DUPLICA	TE RECO	<b>DVERY S</b>	TUDY		
PUM 2106/MA AULT	Parent		Spiked Sample Spiked	Spiked		Duplicate	Spiked			Control	
MOTAT CTAO AA C ÂGT TT TT	Sample	Spike	Result	Sample		Spike Spiked Sample	Dup.	RPD	Limits	Limits	Flag
	Result	Added	<u>[</u> ]	%К		Result [F]	%R	%		%RPD	
Analytes	[ <b>A</b> ]	[ <b>B</b> ]		<u>a</u>			Ū				
C6-C12 Gasoline Range Hydrocarbons	QN	1010	869	86	1010	878	87	1	70-135	35	
C12-C28 Dicsel Range Hydrocarbons	ND	1010	970	96	1010	989	98	2	70-135	35	

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 Page 12 of 15



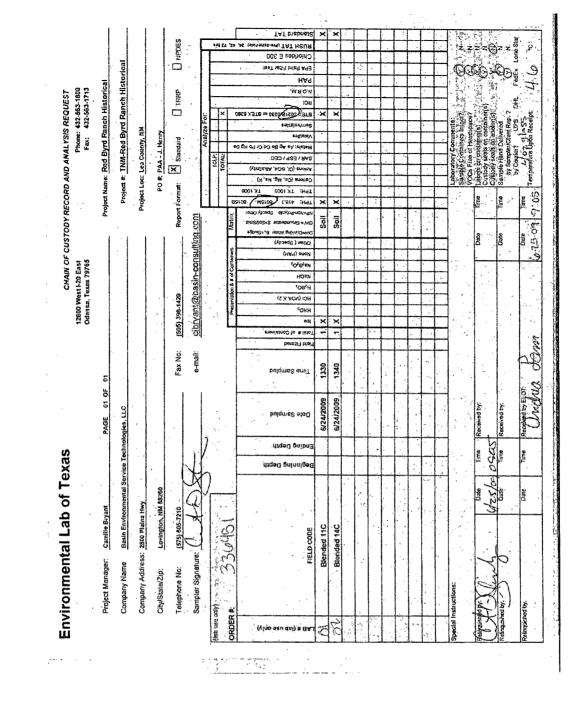


### Project Name: Red Byrd Ranch Historical

Work Order #: 336451

Lab Batch #: 763629 Date Analyzed: 06/25/2009 QC- Sample ID: 336424-001 D	Date Prepared: 06/2 Batch #: 1	25/2009	Analy	D: TNM-Re st: WRU ix: Soil	d Byrd Ran	ch Historical
Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY	
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag	
Analyte		<b>[B</b> ]				
Percent Moisture	17.2	17.2	0	20		

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



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	Environmental Lab of Texas
	Variance/ Corrective Action Report- Sample Log-In
5	Basin / Plains
	6.25.09 9.05
	336451

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Client: Date/ Time: Lab ID # :

Initials:

### Sample Receipt Checklist

· · · · · · · · · · · · · · · · · · ·			ç	lient Initials
#1 Temperature of container/ cooler?	VEST	No.	4.6 C	
#2 Shipping container in good condition?	CYES	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No ,	Not Present	
#4 Custody Seals intect on sample bottles/ container?	des	No	Not Present	14 
#5 Chain of Custody present?	Cless	No .		
#6 Sample instructions complete of Chain of Custody?	Yês	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?	(Tes)	No	Not Applicable	· .
#10 Sample matrix/ properties agree with Chain of Custody?	(Yes)	No	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second sec	
#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	1	· · · ·
#16 Containers documented on Chain of Custody?	(Yes)	No		
#17 Sufficient sample amount for Indicated test(s)?	Xêş	No	See Below	
#18 All samples received within sufficient hold time?	Yes	No	See Below	1
#19 Subcontract of sample(s)?	Yes	No.	CNot Applicable	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	2.1

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Contact:		Contacted by:	Date/ Time:		
Regarding:					
Corrective Action Taken:			·······		
			n en en en en en en en en en en en en en		
Check all that Apply:		See attached e-mail/ fax Client understands and would like to proceed v Cooling process had begun shortly after sample			
्र अः सम्प्रदान्त्रीय वाद्य	11. J		an ^{da} n tanàn	lan ( tanakana	

# **Analytical Report 340054**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

Red Byrd Ranch Historical Red Byrd Ranch TNM Historical

10-AUG-09





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-08-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 (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AAL11), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

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

Xenco-Miramar (EPA Lab code: FL01246): Florida (E86349)

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Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

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-10-AUG-09



Project Manager: Jason Henry PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: 340054 Red Byrd Ranch Historical Project Address: Lea County, NM

#### Jason Henry:

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 340054. 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. 340054 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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Sample Cross Reference 340054



PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Ranch Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended 15C	S	Aug-05-09 13:05		340054-001





### Client Name: PLAINS ALL AMERICAN EH&S Project Name: Red Byrd Ranch Historical

Project ID:Red Byrd Ranch TNM HistWork Order Number:340054

Report Date: 10-AUG-09 Date Received: 08/06/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

**Analytical Non Conformances and Comments:** 

Batch: LBA-768017 Specific Conductance by EPA 120.1 None

Batch: LBA-768021 TX1005 None

Batch: LBA-768053 BTEX-MTBE EPA 8021B SW8021BM

Batch 768053, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by reanalysis. Samples affected are: 535108-1-BLK.

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<b>P</b> E
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Certificate of Analysis Summary 340054 PLAINS ALL AMERICAN EH&S, Midland, TX

**Project Name: Red Byrd Ranch Historical** 



Project Id: Red Byrd Ranch TNM Historical Contact: Jason Henry

Date Received in Lab: Thu Aug-06-09 05:40 pm Report Date: 10-AUG-09

Project Location: Lea County, NM			Report Date: 10-AUG-09	10-AUG-09
			Project Manager: Brent Barron, II	Brent Barron, II
	Lab Id:	340054-001		
Auchicic Decisional	Field Id:	Blended 15C		
naisan hay sisting	Depth:			
	Matrix:	SOIL		
	Sampled:	Aug-05-09 13:05		
BTEX by EPA 8021B	Extracted:	Aug-07-09 16:00		
	Analyzed:	Aug-07-09 22:40		
	Units/RL:	mg/kg RL		
Benzene		ND 0.0016		
Tolucue		ND 0.0033		
Ethylbenzene		ND 0.0016		
m,p-Xylencs		ND 0.0033		
o-Xylene		ND 0.0016		
Total Xylenes		ND 0.0016		
Total BTEX		ND 0.0016		
Percent Moisture	Extracted:			
	Analyzed:	Aug-10-09 09:02		
	Units/RL:	% RL		
Percent Moisture		38.55 1.00		
TPH By SW8015 Mod	Extracted:	Aug-09-09 19:03		
	Analyzed:	Aug-09-09 21:15		
	Units/RL:	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		ND 24.3		
C12-C28 Diesel Range Hydrocarbons		178 24.3		
C28-C35 Oil Range Hydrocarbons		27.9 24.3		
Total TPH		206 24.3		

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

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Odessa Laboratory Manager Brent Barron, II





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

**BRL** Below Reporting Limit.

**RL** Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lanc, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



### Form 2 - Surrogate Recoveries

### Project Name: Red Byrd Ranch Historical

	KS Ba		•	Ranch TNM	1 Histo
Date Analyzed: 08/07/09 19:54		RROGATE R	ECOVERY	STUDY	
K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	0.0311	0.0300	104	80-120	
	0.0336	0.0300	112	80-120	
Sample: 535108-1-BSD / B	SD Ba	itch: 1 Mati	rix: Solid		
Date Analyzed: 08/07/09 20:12	SU	JRROGATE R	ECOVERY	STUDY	
•	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes	0.0308	0.0300	. ,	80.120	
				<u> </u>	
5 1 525109 1 DLV / D			1	00 120	
•				STUDV	
	Amount	True		Control	Flag
Analytes	[A]	[B]	%R [D]	%R	
	0.0279	0.0300	93	80-120	
	0.0134	0.0300	45	80-120	*
Sample: 340054-001 / SMF	) Ba	itch: 1 Mat	rix: Soil		
Date Analyzed: 08/07/09 22:40	0 SURROGATE RECOVERY ST	STUDY			
·	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
	0.0270	0.0300	90	80-120	
	0.0243	0.0300	81	80-120	
Sample: 339957-004 S / M	S Br	itch: 1 Mat	rix: Soil		
Date Analyzed: 08/08/09 04:11	SU	JRROGATE R	ECOVERY	STUDY	
Date Analyzeu. 08/08/09 04.11			T	T T	
K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
	Found	Amount		Limits	Flags
	Date Analyzed: 08/07/09 19:54 K by EPA 8021B Analytes Sample: 535108-1-BSD / B Date Analyzed: 08/07/09 20:12 K by EPA 8021B Analytes Sample: 535108-1-BLK / B Date Analyzed: 08/07/09 20:49 K by EPA 8021B Analytes Sample: 340054-001 / SMF Date Analyzed: 08/07/09 22:40 K by EPA 8021B Analytes Sample: 339957-004 S / M3	Sample:         535108-1-BKS / BKS         Ba           Date Analyzed:         08/07/09         919:54         St           K by EPA 8021B         Amount Found [A]         Amount Found [A]           Analytes         0.0311         0.0336           Sample:         535108-1-BSD / BSD         Ba           Date Analyzed:         08/07/09         20:12         St           K by EPA 8021B         Amount Found [A]         Amount Found [A]           Analytes         0.0308         0.0352           Sample:         535108-1-BLK / BLK         Ba           Date Analyzed:         08/07/09         20:49           K by EPA 8021B         Amount Found [A]         Ba           Date Analyzed:         08/07/09         20:49           K by EPA 8021B         Amount Found [A]         Ba           Analytes         0.0279         0.0134           Sample:         340054-001 / SMP         Ba           Date Analyzed:         08/07/09         St           K by EPA 8021B         Amount Found [A]         Found [A]           Analytes         0.0279         0.0243           Sample:         339957-004 S / MS         Ba	Sample:       535108-1-BKS / BKS       Batch:       1       Mattrian         Date Analyzed:       08/07/09       19:54       SURROGATE       R         K by EPA 8021B       Amount Found [A]       True Amount [B]       True Amount [B]       True Amount [B]       Image: Support         Analytes       0.0311       0.0300       0.0300       0.0300         Sample:       535108-1-BSD / BSD       Batch:       1       Mattrian         Date Analyzed:       08/07/09       20:12       SURROGATE       R         K by EPA 8021B       Amount [A]       True Amount [A]       True Amount [A]       Imatrian         Analytes       0.0308       0.0300       0.0300       0.0300         Sample:       535108-1-BLK / BLK       Batch:       1       Mattrian         Date Analyzed:       08/07/09       20:49       SURROGATE       R         K by EPA 8021B       Amount [A]       True Amount [A]       Imatrian       Imatrian         Analytes       0.0279       0.0300       0.0300       0.0300         Sample:       340054-001 / SMP       Batch:       1       Mattrian         Date Analyzed:       08/07/09       2:40       SURROGATE       R         K by E	Sample: 535108-1-BKS / BKS     Batch: 1 Matrix: Solid       Date Analyzed: 08/07/09 19:54     SURROGATE RECOVERY if Matrix: Solid       Analytes     0.0311     0.0300     104       Analytes     0.0311     0.0300     104       0.0311     0.0300     104       0.0311     0.0300     104       0.0336     0.0300     112       Sample: 535108-1-BSD / BSD     Batch: 1 Matrix: Solid       Date Analyzed: 08/07/09 20:12     SURROGATE RECOVERY if Matrix: Solid       Analytes     Amount Found [A]     True Amount [B]       Malytes     0.0308     0.0300     103       0.0352     0.0300     103     0.0352     0.0300       Matrix: Solid     0.0352     0.0300     117       Sample: 535108-1-BLK / BLK     Batch: 1 Matrix: Solid       Date Analyzed: 08/07/09 20:49     SURROGATE RECOVERY if Matrix: Solid       Mater Recovery     %R       Manalytes     I     Matrix: Solid       Date Analyzed: 08/07/09 20:49     SURROGATE RECOVERY if Matrix: Solid       Sample: 340054-001 / SMP     Batch: 1 Matrix: Soil       Date Analyzed: 08/07/09 22:40     SURROGATE RECOVERY if Matrix: Soil       Sample: 340054-001 / SMP     Batch: 1 Matrix: Soil       Date Analyzed: 08/07/09 22:40     SURROGATE RECOVERY if Ma	Sample:         535108-1-BKS / BKS         Batch:         1         Matrix:         Solid           Date Analyzed:         08/07/09         19:54         SURROGATE         Recovery         Control           K by EPA 8021B         Amount         Found         Amount         Recovery         %R         Initis           Analytes         0.0311         0.0300         104         80-120           0.0336         0.0300         112         80-120           Sample:         535108-1-BSD / BSD         Batch:         1         Matrix:         Solid           Date Analyzed:         08/07/09 20:12         SURROGATE         Recovery         Control           K by EPA 8021B         Amount         True         Recovery         Control           Analytes         0.0308         0.0300         103         80-120           Sample:         535108-1-BLK / BLK         Batch:         1         Matrix:         Solid           Sample:         535108-1-BLK / BLK         Batch:         1         Matrix:         Solid           Sample:         535108-1-BLK / BLK         Batch:         1         Matrix:         Solid           Analytes         0.0279         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

53	J	V	A	0)
La		ct	or	es

### Project Name: Red Byrd Ranch Historical

/ork Orders : 340054 Lab Batch #: 768053	, Sample: 339957-004 SD / №	vISD Ba	-	D: Red Byrd I ix: Soil	Ranch TNN	1 Histor			
Units: mg/kg	Date Analyzed: 08/08/09 04:29		JRROGATE RI		STUDY				
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene		0.0308	0.0300	103	80-120				
4-Bromofluorobenzene		0.0352	0.0300	117	80-120				
Lab Batch #: 768021	Sample: 535079-1-BKS / B	KS Ba	tch: 1 Matr	ix: Solid	I I				
Units: mg/kg	Date Analyzed: 08/09/09 19:59		JRROGATE RI		STUDY				
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1 Chloropatona	Analytes	101	100		70.126				
1-Chlorooctane o-Terphenyl		101	100	101	70-135				
					70-155				
Lab Batch #: 768021	Sample: 535079-1-BSD / B			ix: Solid					
Units: mg/kg	Date Analyzed: 08/09/09 20:25	SU	JRROGATE RI	ECOVERY	STUDY				
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	- <b>-</b>	102	100	102	70-135				
o-Terphenyl		43.5	50.0	87	70-135				
Lab Batch #: 768021	Sample: 535079-1-BLK / E	LK Ba	ıtch: ¹ Matr	ix: Solid					
Units: mg/kg	Date Analyzed: 08/09/09 20:50		JRROGATE RI		STUDY				
• •	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
	Analytes			[D]					
1-Chlorooctane		87.1	100	87	70-135				
o-Terphenyl		46.4	50.0	93	70-135				
Lab Batch #: 768021	Sample: 340054-001 / SMF			ix: Soil					
Units: mg/kg	Date Analyzed: 08/09/09 21:15	SU	<b>RROGATE R</b>	ECOVERY	STUDY				
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	Analytes	84.8		85	70-135				
1 - Chlorootant									

* 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



### Project Name: Red Byrd Ranch Historical

Vork Orders : 340054 Lab Batch #: 768021	, Sample: 340239-002 S / MS	S Ba		D: Red Byrd ix: Soil	Ranch TNN	1 Historic
Units: mg/kg	Date Analyzed: 08/10/09 06:13	SU	RROGATE R	ECOVERY	STUDY	
TPH 1	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		107	99.7	107	70-135	<u> </u>
o-Terphenyl		Found Amount Recovery Limits Flags [A] [B] %R %R [D]				
Lab Batch #: 768021	Sample: 340239-002 SD / N	ASD Ba	itch: 1 Mati	·ix: Soil		
Units: mg/kg	Date Analyzed: 08/10/09 06:39	SU	JRROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc		106	99.7	106	70-135	
o-Terphenyl		43.8	49.9	88	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

**BS / BSD Recoveries** 



Project Name: Red Byrd Ranch Historical

Work Order #: 340054 Analyst: ASA Lab Batch ID: 768053

Units: mg/kg

Date Prepared: 08/07/2009 Batch #: 1

Sample: 535108-1-BKS

Project ID: Red Byrd Ranch TNM Historical Date Analyzed: 08/07/2009 Matrix: Solid

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BTEX by EPA 8021B	A 8021B	Blank Samnle Result	Spike Added	Blank Snike	Blank Snike	Spike	Blank Snike	Bik. Spk Dun-	Uda	Control Limits	Control Limits	Ыас
		[A]		Result	%R		Duplicate	%R	%	%R	%RPD	0
Analytes			[ <b>B</b> ]	[c]	ā	[E]	Result [F]	<u>ច</u>				
Benzene		QN	0.1000	0.0935	94	0.1	0.0943	94	-	70-130	35	
Toluene		QN	0.1000	0.0907	16	0.1	6160.0	92	1	70-130	35	
Ethylbenzene		Q	0.1000	0.1038	104	0.1	0.1057	106	2	71-129	35	
m,p-Xylenes		QN	0.2000	0.2107	105	0.2	0.2140	107	2	70-135	35	ļ
o-Xylene		QN	0.1000	0.1012	101	0.1	0.1032	103	2	71-133	35	
Analyst: BHW		Da	te Prepare	Date Prepared: 08/09/2009	6			Date A	nalyzed: (	Date Analyzed: 08/09/2009		
Lab Batch ID: 768021	Sample: 535079-1-BKS	KS	Batch #: ]	#: 1					Matrix: Solid	Solid		
11-110, mo/ka			BLAN	<pre></pre>	PIKE / B	I ANK S	BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE BECOVERY STUDY	ICATE	RECOVE	ERV STUD	A	

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE	RECOVE	RY STUD	Å	
TPH By SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
	[¥]		Result	%R		Duplicate	%В		%R	%RPD	
Analytes		[ <b>B</b> ]	[C]	[D]	[E]	Result [F]	[ <u></u> ]				
C6-C12 Gasoline Range Hydrocarbons	DN	1000	866	87	1000	878	88	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	DN	1000	106	60	1000	921	92	2	70-135	35	

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







**Project Name: Red Byrd Ranch Historical** 

Work Order #: 340054

Lab Batch ID: 768053 Date Analyzed: 08/08/2009 Reporting Units: mg/kg

Project ID: Red Byrd Ranch TNM Historical

QC- Sample ID: 339957-004 S Date Prepared: 08/07/2009

Batch #: 1 Matrix: Soil Analyst: ASA

Neportuig Units: ung sg		W	ATRIX SPIKI	E / MATI	ALX SPLE	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	LE RECC	VERY S	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Spike Spiked Sample Added Result [F] [E]	Spiked Dup. %R [G]	RPD %	Control Control Limits Limits %R %RPD	Control Limits %RPD	Flag
Benzene	Q	0.1092	0.0851	84	0.1092	0.0858	62	-	70-130	35	
Tolucne	QN	0.1092	0.0825	76	0.1092	0.0829	76	0	70-130	35	
Ethylbenzene	Q	0.1092	0.0934	86	0.1092	0.0934	86	0	71-129	35	
m,p-Xylenes	QN	0.2185	0.1876	86	0.2185	0.1880	86	0	70-135	35	
o-Xylene	DN	0.1092	0.0906	83	0.1092	0.0909	83	0	71-133	35	
Lab Batch ID: 768021 Date Analyzed: 08/10/2009	QC- Sample ID: 340239-002 S Date Prepared: 08/09/2009	340239- 08/09/20	002 S 009	Bai Ani	Batch #: Analyst: H	1 <b>Matrix:</b> Soil BHW	t: Soil				

Reporting Units: mg/kg		W	ATRIX SPIKI	E / MATI	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	<b>DVERY S</b>	TUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample S	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	8% [D]	Added [E]	Added Result [F]	% <b>R</b> [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1050	968	92	1050	959	91	1	70-135	35	
C12-C28 Dicsel Range Hydrocarbons	40.3	1050	1070	98	1050	1050	96	2	70-135	35	

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



Historical

### Project Name: Red Byrd Ranch Historical

Work Order #: 340054

Lab Batch #: 768017 Date Analyzed: 08/10/2009 QC- Sample ID: 340058-001 D	Date Prepared: 08/1 Batch #: 1	0/2009	Analy	<b>D:</b> Red Byro /st: BEV fix: Solid	i Ranch TNI
Reporting Units: %	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		<b>[B]</b>			
Percent Moisture	ND	ND	NC	20	

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

Е Ш	Environmental Lab of Texas	Lab of Te	Xai	ín			-	CHAIN OF 12600 West H20 East Odessa, Texas 79765	Vest F	4AIN C 20 Eas s 7976	P CC	STOD	r RECI	A and	ND A	VAL Y? Phone Fax:	IS RE: 432-5	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 1+20 East Fax: 432-563-1910 Fax: 432-563-1713			
	Project Manager. Cal	Camille Bryant										,	Projec	o Namo	Red	Byrd	anch	Project Name: Red Byrd Ranch Historical	cal		
	Company Name Ba	Basin Environmental Consulting, LLC	Sutting	LLC LLC					ŀ			,	đ	oject #	Red	ByrdF	anch	Project #: Red Byrd Ranch TNM Historical	istori	cal	
	Company Address: P.(	P. O. Box 381										,	Prok	set Loc	Les C	Project Loc: Las County, NM	ş				
	City/State/Zip: Lo	Lovington, NM 58260										1		4 O 4	PAA.	PO #: PAA - J. Henry	. ,				
	Telephone No: 187	(375) 605-7210 -				Fax No:	(505	(505) 396-1429	429			å,	Report Format:		N N N	X Standard		🗌 TRRP		O NPDES	ŝŝ
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Special	pectal Instructions:					· · · (								189.7	aboratory ample Con	y Com	Laboratory Comments: Sample Continues Intex? ( VOCs Free of Headspace?		80	A Carl	X
Registration by	MALLON - VOIL VI	11 8/6/0	A 0713	° M	- Annalis	N.	4				816	5	100	10 M M	oels ton stooty	abelsion contribution transfor scale on cont transforty scale on con-	abelston consilicatio) Austroiy scals on containe Austroiy scals on containe	m(s) N/1/A	Ð,		zzz
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Environmental Lat	o of Texa	as				
Variance/ Corrective Action Repo			1			
ctions Basin Environmental/Plain	• • •					
	1.2					
Date/Time: 8/6/09 17:40						
340054			5			
Lab ID #: 040034			i i			
Initials: 8 A.Y.			4			
8/6/09						
Sample Receipt C	Checklist					
	0.37		01		lient Initia	is T
#1 Temperature of container/ cooler?	Ves	No No	.361	<u>° C</u>		-
#2 Shipping container in good condition?     #3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present			+
#3 Custody Seals intact on shipping container/ cooler? #4 Custody Seals intact on sample bottles/ container? / a b c   S	Yes	No	Not Present		. <del></del>	-
#4 Custody Seals Inact on sample Jonres' Container / Tab CTS #5 Chain of Custody present?	Yes	No	NOL FIGSEIL	$\frac{1}{1}$		4
#6 Sample instructions complete of Chain of Custody?	(Tes)	No				1
#7 Chain of Custody signed when relinquished/ received?	Ves	No				1
#8 Chain of Custody agrees with sample label(s)?	Cles	No	ID written on Cont.	iud		٦
#9 Container label(s) legible and intact?	(Yes)	. No	Not Applicable		*******	٦
#10 Sample matrix/ properties agree with Chain of Custody?	(Yes)	No				٦
#11 Containers supplied by ELOT?	(Yes)	No	Ì			]
#12 Samples in proper container/ bottle?	(Yes)	No	See Below			
#13 Samples properly preserved?	Yes	· No "	See Below	. :		7
#14 Sample bottles intact?	(Yes)	No		·		
#15 Preservations documented on Chain of Custody?	Ves	No	. 1	1.2	· ·	
#16 Containers documented on Chain of Custody?	(Yes)	No				
#17 Sufficient sample amount for indicated test(s)?	(Yes	No	See Below)			4
#18 All samples received within sufficient hold time?	(Yes)	No.	See Below!	-		_
#19 Subcontract of sample(s)?	Yes	No -	Nol Applicable			4
#20 VOC samples have zero headspace?	Yes)	No	Not Applicabl	<u>e</u> [		÷
	<b></b>					
Variance Docum	rentation		4 1		•	
Contact: Contacted by:	ξ.		Date/ Time:		. **	
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Regarding:			, ,		•	
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Corrective Action Taken:						
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Ober Hiller Mark Ander Mitte						
Check all that Apply: See attached e-mail/ fax						

# **Analytical Report 340488**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

Red Byrd Ranch Historical TNM-Red Byrd Ranch Historical

13-AUG-09





#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-08-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 (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87428), 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-Miramar (EPA Lab code: FL01246): Florida (E86349)

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

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

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



13-AUG-09



Project Manager: Jason Henry PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No: 340488 Red Byrd Ranch Historical Project Address: Lea County, NM

#### Jason Henry:

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 340488. 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. 340488 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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nelao:

Sample Cross Reference 340488

### PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd Ranch Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended-16 C	S	Aug-07-09 12:30		340488-001





Client Name: PLAINS ALL AMERICAN EH&S Project Name: Red Byrd Ranch Historical

Project ID: TNM-Red Byrd Ranch His. Work Order Number: 340488 Report Date: 13-AUG-09 Date Received: 08/10/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-768265 TX1005 None

Batch: LBA-768270 Percent Moisture None

Batch: LBA-768368 BTEX-MTBE EPA 8021B SW8021BM

Batch 768368, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 340488-001. The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits

#### SW8021BM

Batch 768368, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by reanalysis. Samples affected are: 535290-1-BLK. 4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 535290-1-BKS, 535290-1-BSD



Project Id: TNM-Red Byrd Ranch Historical

Contact: Jason Henry

Certificate of Analysis Summary 340488 PLAINS ALL AMERICAN EH&S, Midland, TX Project Name: Red Byrd Ranch Historical



Date Received in Lab: Mon Aug-10-09 05:13 pm Report Date: 13-AUG-09

<b>Project Location:</b> Lea County, NM						
				Project Manag	Project Manager: Brent Barron, II	
	Lab Id:	340488-001				
Auntralia Decomposited	Field Id:	Blended-16 C	C	<u> </u>	- <u> </u>	
naisanhay sisting	Depth:					
	Matrix:	NOS				
	Sampled:	Aug-07-09 12:30	2:30			
BTEX by EPA 8021B	Extracted:	Aug-12-09 17:00	2:00			
	Analyzed:	Aug-12-09 19:50	9:50			
	Units/RL:	mg/kg	RL			
Benzene		ND 0.0011	1100.			
Toluene		ND 0.0021	.0021			
Ethylbenzene		ND 0.0011	.0011			
m,p-Xylenes		ND 0.0021	.0021			-
o-Xylene		ND 0.0011	1100'			
Total Xylenes		ND 0.0011	1100.			
Total BTEX		ND 0.0011	1100.			
Percent Moisture	Extracted:					
	Analyzed:	Aug-12-09 10:03	0:03			
	Units/RL:	%	RL			
Percent Moisture		5.23	1.00			
TPH By SW8015 Mod	Extracted:	Aug-11-09 13:33	3:33			
	Analyzed:	Aug-11-09 19:23	9:23			
	Units/RL:	mg/kg	RL			
C6-C12 Gasoline Range Hydrocarbons		32.4	15.8			
C12-C28 Diesel Range Hydrocarbons		841	15.8			
C28-C35 Oil Range Hydrocarbons		1.97	15.8			
Total TPH		953	15.8			

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

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Odessa Laboratory Manager Brent Barron, II





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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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LCDO	PQ	<u> </u>	65

### Project Name: Red Byrd Ranch Historical

<b>ork Orders :</b> 340488 Lab Batch #: 768368	s, Sample: 535290-1-BKS / B	KS Ba	•	D: TNM-Red ix: Solid	Byrd Ranc	h Histor
Units: mg/kg	Date Analyzed: 08/12/09 18:17		RROGATE R	ECOVERY S	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0309	0.0300	103	80-120	
4-Bromofluorobenzene		0.0368	0.0300	123	80-120	*
Lab Batch #: 768368	Sample: 535290-1-BSD / B	SD Ba	atch: 1 Matr	ix: Solid		
Units: mg/kg	Date Analyzed: 08/12/09 18:35	SU	JRROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	7 Mary 005	0.0309	0,0300	103	80-120	
4-Bromofluorobenzene		0.0364	0.0300	121	80-120	*
Lab Batch #: 768368	Sample: 535290-1-BLK / B		1	ix: Solid		
Units: mg/kg	Date Analyzed: 08/12/09 19:13		atch: 1 Matr		STUDY	
	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	· · · · ·	0.0135	0.0300	45	80-120	*
Lab Batch #: 768368	Sample: 340488-001 / SMP	B	atch: 1 Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 08/12/09 19:50		URROGATE R		STUDY	
	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
14.0.0	Analytes	0.02((	0.0200		80.120	
1,4-Difluorobenzene 4-Bromofluorobenzene		0.0266	0.0300	89	80-120 80-120	
	Sample: 340660-001 S / M			ix: Soil	00120	
Lab Batch #: 768368	<b>Date Analyzed:</b> 08/13/09 02:55		atch:   Matr URROGATE R		STUDY	
Units: mg/kg BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0305	0.0300	102	80-120	
		0.0505	0.0500	102	00-120	

* 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

<b>F</b> A	$\overline{\mathcal{A}}$	A	$\circ$
labo	ret	ori	es.
	sissuej o	den de la composition de la composition de la composition de la composition de la composition de la composition La composition de la composition de la composition de la composition de la composition de la composition de la c	

### Project Name: Red Byrd Ranch Historical

'ork Orders:340488 Lab Batch #: 768368	3, Sample: 340660-001 SD / N	/ISD Ba	•	D:TNM-Red ix: Soil	Byrd Ranc	h Histor
Units: mg/kg	Date Analyzed: 08/13/09 03:13		RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B 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		0.0329	0.0300	110	80-120	
Lab Batch #: 768265	Sample: 535219-1-BKS / B	KS Ba	utch: 1 Matr	ix: Solid		
Units: mg/kg	Date Analyzed: 08/11/09 14:39	SU	JRROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount. Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Analytes	00.4	100		70.125	
o-Terphenyl		99.4 40.7	100	99 81	70-135	
· ·	6 525210 L DOD / D	l			70-155	
Lab Batch #: 768265	Sample: 535219-1-BSD / B		atch: 1 Matr	ix: Solid	STUDY	
Units: mg/kg	Date Analyzed: 08/11/09 15:04					
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		102	100	102	70-135	
o-Terphenyl		41.1	50.0	82	70-135	
Lab Batch #: 768265	Sample: 535219-1-BLK / B	LK Ba	atch: 1 Matr	ix: Solid	·	
Units: mg/kg	Date Analyzed: 08/11/09 15:30	SU	JRROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Analytes	84.2	100	84	70-135	
o-Terphenyl		44.3	50.0	89	70-135	
Lab Batch #: 768265	Sample: 340488-001 / SMP	I		ix: Soil		
Units: mg/kg	Date Analyzed: 08/11/09 19:23		JRROGATE R		STUDY	• • • • • • • • • • • • • • • • • • • •
	By SW8015 Mod	Amount Found	True Amount	Recovery	Control Limits	Flags
	Analytes	[A]	(B)	%R [D]	%R	
1-Chlorooctane	Analytes	[A] 72.6	(B) 99.8		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



### Project Name: Red Byrd Ranch Historical

Vork Orders : 340488 Lab Batch #: 768265	, Sample: 340373-004 S / MS	S Ba	•	D:TNM-Red	Byrd Ranc	h Historio
Units: mg/kg	Date Analyzed: 08/11/09 22:47	SU	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		98.8	99.9	99	70-135	
o-Terphenyl		39.6	50.0	79	70-135	
Lab Batch #: 768265	Sample: 340373-004 SD / M	ASD Ba	tch: 1 Mati	rix: Soil		
Units: mg/kg	Date Analyzed: 08/11/09 23:12	SU	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	•	100	100	100	70-135	
o-Terphenyl		40.9	50.0	82	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



**BS / BSD Recoveries** 



Project Name: Red Byrd Ranch Historical

Work Order #: 340488

Lab Batch ID: 768368 Analyst: ASA

Sample: 535290-1-BKS

Date Prepared: 08/12/2009 Batch #: ]

Project ID: TNM-Red Byrd Ranch Historical Date Analyzed: 08/12/2009 Matrix: Solid

I	
	STUDY
	VERY
	RECO
	<b><i>(E)</i> DUPLICATE RECOVERY STUDY</b>
	KE DUP
	NK SPI
	/ BLA
	<b>SPIKE</b>
	BLAN
	<b>BLANK /BLANK SPIKE / BLANK SPIKI</b>

Units: mg/kg			BLAN	K /BLANK S	SPIKE / B	LANK S	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	:	Blank Sample Result	Spike Added	Blank Spike Decente	Blank Spike %D	Spike Added	Blank Spike Durdigete	Blk. Spk Dup. %D	RPD %	Control Limits %D	Control Limits %DDD	Flag
Analytes		<u>.</u>	[ <b>B</b> ]			E	Result [F]	<u>e</u>	e,	VIA/		
Benzene		QN	0.1000	0.1102	110	0.1	0.1092	109	-	70-130	35	
Toluene		QN	0.1000	0.1058	106	0.1	0.1046	105	1	70-130	35	
Ethylbenzene		Ð	0.1000	0.1193	119	0.1	0.1179	118	-	71-129	35	
m,p-Xylenes		QN	0.2000	0.2451	123	0.2	0.2420	121	-	70-135	35	
o-Xylene		DN	0.1000	0.1151	115	0.1	0.1139	114	1	71-133	35	
Analyst: BHW		Da	te Prepare	Date Prepared: 08/11/2009	6(			Date A	<b>Date Analyzed:</b> 08/11/2009	8/11/2009		
Lab Batch ID: 768265	Sample: 535219-1-BKS	S	Batch #: 1	#: 1					Matrix: Solid	olid		
	L											

Units: mg/kg		BLAN	K /BLANK S	SPIKE / F	STANK S	PIKE DUPL	ICATE I	RECOVE	RY STUD	Å	
TPH By SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Doorte	Blank Spike	Spike Added	Blank Spike Duritato	Bik. Spk Dup. 2. D	RPD 20	Control Limits %D	Control Limits % D D D	Flag
Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY       od     Blank     Blank     Blank     Blank     Blank     Blank     Spike     Control     Control     Control       od     Blank     Spike     Blank     th=""></t<>										
C6-C12 Gasoline Range Hydrocarbons											
C12-C28 Diesel Range Hydrocarbons	QN	1000	1120	112	1000	1130	113	1	70-135	35	

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







**Project Name: Red Byrd Ranch Historical** 

Work Order #: 340488

Date Analyzed: 08/13/2009 Lab Batch ID: 768368 Reporting Units: mg/kg

Matrix: Soil -ASA Batch #: Analyst: QC- Sample ID: 340660-001 S Date Prepared: 08/12/2009

Project ID: TNM-Red Byrd Ranch Historical

		Z	A I KIA SPINI	C MAT	KLX SPII	MATKLX SPIKE / MATKLX SPIKE DUPLICATE RECOVERY STUDY		OVERY :	STUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]		8% [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	QN	0.1111	0.0806	73	0.1111	0.0821	74	2	70-130	35	
Toluene	QN	0.1111	0.0662	60	0.1111	0.0663	60	0	70-130	35	×
Ethylbenzene	QN	0.1111	0.0729	66	0.1111	0.0716	64	2	71-129	35	×
m,p-Xylenes	GN	0.2222	0.1467	66	0.2222	0.1433	64	2	70-135	35	×
o-Xylene	QN	0.1111	0.0696	63	0.1111	0.0685	62	2	71-133	35	×
Lab Batch ID: 768265 Data Analyzad: 08/11/2009	QC- Sample ID: 340373-004 S Date Prenared: 08/11/2009	340373-08/11/2	-004 S 009	Ba	Batch #: Analvet:	1 Matrix: Soil BHW	c: Soil				

Date Analyzed: 08/11/2009 Reporting Units: mg/kg

Date Prepared: 08/11/2009

its: mg/kg		W	ATRIX SPIKI	(TAM / S	RIX SPI	AATRIX SPIKE / MATRIX SPIKE DUPLICATE I	<b>FE REC</b>	RECOVERY STUDY	STUDY	
TDH By CW/8015 Mod	Parent		Spiked Sample	Spiked		Duplicate	Spiked		Control	Control
nnia ctagas cár ii ti	Sample	Spike	Result	Sample	Spike	Sp	Dup.	RPD	Limits	Limits
	Result	Added	[]	%R	Added	Result [F]	%В	%	%К	%RPD
Analytes	[ <b>A</b> ]	[ <b>B</b> ]		ā	E]		ย			

Flag

35 35

70-135 70-135

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115

94

1100 1350

1170 1170

1090 1310

1170 1170

QZ ĝ

C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons

112 93

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

Page 11 of 14



### Sample Duplicate Recovery

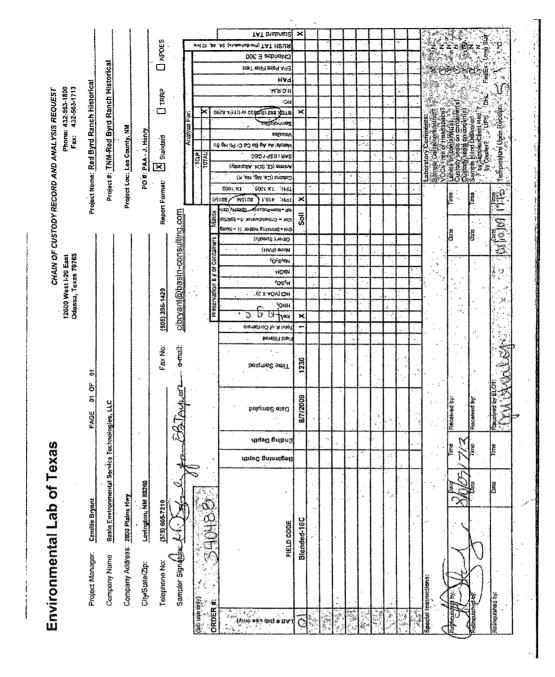


### **Project Name: Red Byrd Ranch Historical**

Work Order #: 340488

Lab Batch #: 768270 Date Analyzed: 08/12/2009 QC- Sample ID: 340491-001 D Reporting Units: %	Batch #: 1	2/2009	Analy Matr	st: BEV ix: Soil	
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	ID: TNM-Red Byrd lyst: BEV rix: Soil CATE RECOVER Control Limits %RPD 20	Flag
Analyte	()	<b>(B)</b>			
ercent Moisture	5.49	6.71	20	20	

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



#### Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

Client	Plains / Basin Env.
Date/ Time:	08/10/09 17:13
Lab ID #	340488
Initials:	- Qurret

#### Sample Receipt Checklist

**Client Initials** #1 Temperature of container/ cooler? (Yes) No 5-1 °C #2 Shipping container in good condition /.

 #3 Custody Seals intact on shipping container/ cooler? Ves Nö Yes Not Present No (Yês (Yês No Not Present #4 Custody Seals intact on sample bottles/ container? #5 Chain of Custody present? #6 Sample Instructions complete of Chain of Custody? No Yes No Chain of Custody signed when relinquished/ received? (Yes No #7 (Yes #8 Chain of Custody agrees with sample label(s)? No., ID written on Cont./ Lid #9 Container label(s) legible and intact? #10 Sample matrix/ properties agree with Chain of Custody? Yes No Not Applicable Yes No. Yes #11 Containers supplied by ELOT? No (Yes (Yes #12 Samples in proper container/ bottle? No See Below #13 Samples properly preserved? No See Below (Yes (Yes) No #14 Sample bottles intect? No #15 Preservations documented on Chain of Custody? Yes #16 Containers documented on Chain of Custody? No #17 Sufficient sample amount for indicated test(s)? Yes No See Below #18 All samples received within sufficient hold time? Yès No See Below Yes No. #19 Subcontract of sample(s)? Not Applicable (Yes #20 VOC samples have zero headspace? No Not Applicable

#### Variance Documentation

••

Date/ Time:

Contact: Regarding:

Contraction of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the local distance of the loc

Corrective Action Taken:

Check all that Apply:

#### See attached e-mail/ fax

Contacted by:

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

4.

# Appendix C Soil Boring Logs

	Soil Boring Details	Date Drilled11-28-07						<ul> <li>Indicates samples selected for Laboratory Analysis.</li> <li>PID Head-space reading in ppm obtained with a photo-ionization detector.</li> </ul>	Completion Notes	1. The soil boring was installed on date using air rotary drilling techniques.	<ol><li>The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.</li></ol>	3. The depths indicated are referenced from below ground surface. (bgs)	Basin Environmental Consulting	CAD By: DGC Checked By: TKC
Soil Boring SB-1-07		0 - 3' - Sandy clay, brown	3 - 6' - Caliche-buff	6 - 10' - Sand, brown, loose and caliche lenses	10 - 14' - Sandy clay, light brown with sand lenses		14 - 18' - Sand, sandy clay with caliche nodules	18 - 20' - Sand and sandstone, brown with odor					Soil Boring Log and Details Soil Boring SB-1-07	Lea County, New Mexico
	Petroleum Petroleum <u>Odor</u> <u>Stain</u>		None	None		None		None					Boring Log and De Soil Boring SB-1-07	Historical Lea Cou Plains Marketing, L.P
	Petroleum <u>Odor</u>		None	None		None		Odor					oil Borin Soil Bo	Red Bryd Ranch Historical Plains Marke
	PID Reading		5	m		10		308					Ŵ	yd Ranc
	Columns													Red Br
-	Depth (feet) 0		ي ب	2	1.1	- 15	1 1	20						

	Soil Boring Details	Date Drilled11-28-07 Depth ofSoil Boring20 ft				<ul> <li>Indicates samples selected for Laboratory Analysis.</li> <li>PID Head-space reading in ppm obtained with a photo-ionization detector.</li> </ul>	<ul> <li>Completion Notes</li> <li>The soil boring was installed on date using air rotary drilling techniques.</li> <li>The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.</li> <li>The depths indicated are referenced from below ground surface. (bgs)</li> </ul>	Basin Environmental Consulting           CAD BY: DGC         Checked By: TKC           May 15, 2008         Checked By: TKC
Soil Boring SB-2-07	Soil Description	0 - 5' - Sandy clay, brown		5 - 10' - Caliche with sand lenses 10 - 17' - Sand, fine gained, tan		17 - 20' - Sand - odor at 17' getting stronger with depth		l and Details SB-2-07 Lea County, New Mexico eting, L.P.
	etroleum <u>Stain</u>		None	None	None	None		
	Petroleum Petroleum <u>Odor</u> <u>Stain</u>		None	None	None	Odor		Soil Boring Log and Details Soil Boring SB-2-07 Red Bryd Ranch Historical Lea County, Plains Marketing, L.P.
	Reading		m	m	120	346		S( yd Ranc
	Soil Columns	探探	₿₺₺₿  \$  \$  \$  \$  \$    \$  \$  \$  \$  \$  \$  \$			F		Red Br
	Depth (feet)				19			

Soil Boring Details Date Difled 11-28-07	Boring			<ul> <li>Indicates samples selected for Laboratory Analysis.</li> <li>PID Head-space reading in ppm obtained with a photo-ionization detector.</li> </ul>	Completion Notes         1. The soil boring was installed on date using air rotary drilling techniques.         2. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.         3. The depths indicated are referenced from below ground surface. (bgs)	Basin Environmental Consulting           CAD By: DGC         Checked By: TKC           May 15, 2008         Checked By: TKC
Soil Boring SB-3-07 Soil Description	0 - 5' - Sandy clay, brown	5 - 13' - Sand, fine grained, tan- with caliche nodules- and buff caliche lenses	13 - 15' - Sand with caliche, tan	15 - 25' - Sand, tan, loose		g and Details SB-3-07 Lea County, New Mexico eting, L.P.
etroleum <u>Stain</u>	None	None	None	None	None	
Petroleum Petroleum <u>Odor</u> <u>Stain</u>	None	None	None	None	None	Soil Boring Log and Details Soil Boring SB-3-07 Red Bryd Ranch Historical Lea County, Plains Marketing, L.P.
PID Reading	m	ى	٢	Q	۲	Sc yd Rancl
Columns	1980 1980 1980 1980 1980 1980 1980 1980				ę	Red Bŋ
Depth (feet)			<u>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 </u>	20	22 28	

07	Soil Boring Details	Date Drilled 11-28-07 Depth of Soil Boring 29 ft						Indicates samples selected for Laboratory Analysis.	PID Head-space reading in ppm obtained with a photo-ionization detector.	Completion Notes	<ol> <li>The soil boring was installed on date using air rotary drilling techniques.</li> <li>The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.</li> </ol>	<ol><li>The depths indicated are referenced from below ground surface. (bgs)</li></ol>	Basin Environmental Consulting
Soil Boring SB-4-07		0 - 5' - Sandy clay, brown		5 - 10' - Caliche and sand layers		10 - 15' - Caliche - white buff - dusting brown sand at 15'		15 - 20' - Sand, brown			20 - 29' - Sand, brown with some rock fragments		Soil Boring Log and Details Soil Boring SB-4-07 Red Bryd Ranch Historical Lea County, New Mexico Plains Marketing, L.P.
	Petroleum <u>Stain</u>		None		None		None		None		None	None	il Boring Log and Deta Soil Boring SB-4-07 n Historical Lea Cour Plains Marketing, L.P.
	Petroleum Petroleum <u>Odor</u> <u>Stain</u>		None		None		None		None		None	None	oil Borin Soil B( h Histor Plains h
	PID Reading		0		٢		~		F		7-	-	Sı yd Ranc
	Soil Columns	權權					大学					Ð	Red Br
L	Depth (feet)			I. T. J	10						- 25	39	

	Soil Boring Details	Date Drilled 11-28-07 Depth ofSoil Boring 29 ft						<ul> <li>Indicates samples selected for Laboratory Analysis.</li> <li>PID Head-space reading in pom obtained with a photo-ionization detector.</li> </ul>		Completion Notes	<ol> <li>The soil boring was installed on date using air rotary drilling techniques.</li> <li>The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.</li> </ol>	3. The depths indicated are referenced from below ground surface. (bgs)		Basin Environmental Consulting	-
Soil Boring SB-5-07	Soil Description	0 - 5' - Sandy clay, brown		5 - 13' - Sandy clay - reddish brown		13 - 15' - Caliche buff, dusting				15 - 29' - Sand, brown				Soil Boring Log and Details Soil Boring SB-5-07 Red Bryd Ranch Historical Lea County, New Mexico	LP.
	etroleum <u>Stain</u>		None	None			NOILE		None		None		None	Boring Log and De Soil Boring SB-5-07 Historical Lea Cou	Plains Marketing, L.P
	Petroleum Petroleum <u>Odor</u> <u>Stain</u>		None	None			BION		None		None		None	Soil Boring Log and Details Soil Boring SB-5-07 nch Historical Lea County,	Plains M
	PID Reading		0	-			-		<del>~ .</del>		~		4	Sc yd Ranc	
	Columns		開設的		保持					R.			17	Red Br	
-	Depth (feet)	1 1 1		9			<u>0</u>		20				%		

	Soil Boring Details	Date Drilled 11-28-07 Depth ofSoil Boring 29 ft					<ul> <li>Indicates samples selected for Laboratory Analysis.</li> <li>PID Head-space reading in ppm obtained with a photo-ionization detector.</li> </ul>	Completion Notes	<ol> <li>The soil boring was installed on date using air rotary drilling techniques.</li> <li>The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.</li> </ol>	3. The depths indicated are referenced from below ground surface. (bgs)		Basin Environmental Consulting	CAD By: DGC Checked By: TKC Max 15, 2008
Soil Boring SB-6-07	Soil Description	0 - 5' - Sandy clay, brown		5 - 10' - Sandy clay - caliche nodules		10 - 15' - Sand and streaks of caliche		15 - 29' - Sand, brown, fine grained, loose				Details -07	County, New Mexico L.P.
-	Stain		None		None	None	None		None		None	Boring Log and De Soil Boring SB-6-07	n Historical Lea Coul Plains Marketing, L.P
-	Petroleum Petroleum Odor Stain		None		None	None	None		None		None	Soil Boring Log and Details Soil Boring SB-6-07	Red Bryd Ranch Historical Lea County, Plains Marketing, L.P.
	Reading		0		-	~	~		2	,	<del></del>	Ś	yd Ranc
:	Columns		(9454) 1414) 1114)			1758882 969682 184682		同步			TD		Red Br
400	(feet)		Ω I		1 10	Γ Γ Γ Γ Γ ά	 		1 25		30		

Appendix D Release Notification and Corrective Action (Form C-141)

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District   1625 N. French Dr., Hobbs, NM 88240	State of	New Mexico		Form C 141					
District II make	Energy Minerals	and Natural Resources		Form C-141 Revised October 10, 2003					
1301 W. Grand Avenue, Artesia, NM 88210 District III	010	nation Division	S	ibmit 2 Copies to appropriate					
1000 Rio Brazos Road, Aztec, NM 87410		vation Division	District Office in accordance						
DE: IV III 12. St. Francis Dr., Santa Fe, NM 87505		St. Francis Dr.		with Rule 116 on back side of form					
		o, NM 87505							
Release Notification and Corrective Action									
		OPERATOR .	X Initial I	Report 🔲 Final Report					
Name of Company //// IS Pip	eline, LP. T	Contact Cample KC	ELMOLO						
Address 3/12 42, U.S. 14104	82	Telephone No. (065)441-	0965						
Facility Name Kick Burch KAME	h Historical	Facility Type 19" Dipe lik	Le						
Surface Owner R Burch	Mineral Owner		Lease No.						
		N OF RELEASE							
Unit Letter Section Township Rang	c Feet from the North	South Line Feet from the East/	West Line C	ounty					
1 205 36	E			rea					
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<b>a</b>	Latitude	Longitude							
	NATURE	OF RELEASE							
Type of Release Crucle Oll		Volume of Release UNKNOW							
Source of Release		Date and Hour of Occurrence/1 K	Date and Ho	ur of Discovery 4/24/070 /0;					
Was Immediate Notice Given?	🗌 No 🔲 Not Required	Pat, C. Derton							
By Whom? Camiller B		Date and Hour 4/24/07	Cant	<u>م</u> ک					
Was a Watercolurse Reached?	-yrioco-s	If YES, Volume Impacting the Wat	lercourse.						
T Yes	DX No		( <b>)</b>						
If a Watercourse was Impacted, Describe Fu	llv.*								
	•••••								
a									
		4							
Describe Cause of Problem and Remedial A	ction Taken.* Dur	May injustical	ion (	$-\alpha - \alpha $					
ISITO from idicition	1 discours	bistance	L. Dog						
		Tust actu	/ LLXLL	se and ig					
pyeure kou	•								
Describe Area Affected and Cleanup Action	Taken.*	antion in a	hackes	s					
		entern on p	wyus	3					
		•							
I hereby certify that the information given al regulations all operators are required to repo	bove is true and complete to j at and/or file certain release i	ine best of my knowledge and underst	and that purious	es which miny endanger					
public health or the environment. The accer	stance of a C-141 report by the	ie NMOCD marked as "Final Report"	does not reliev	e the operator of liability					
should their operations have failed to adequa	ately investigate and remedia	te contamination that pose a threat to	ground water,	auface water, human health					
or the environment. In addition, NMOCD a federal, state, or local laws and/or regulation		noes not relieve the operator of respon	sidility for cor	apliance with any other					
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Printed Name: CAMILLE KAL	nolds	Approved by District Supervisor:							
	ANC								
Tille: KCOMICLICITON)	Cou.	Approval Date:	Expiration D	ate:					
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Attach Additional Sheets If Necessary									
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