State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division ai - D

Submit 2 Copies to appropriate District Office in accordance

| Saina PC, NW 87305 Release Notification and Corrective Action OPERATOR Initial Report Final Re Name of Company Plains Pipeline, LP Contact Daniel Bryant Final Re Address 3705 E. Hwy 158 Midland, TX 79706 Telephone No. (432) 557-5865 Facility Type Pipeline Facility Name Red Byrd #4 Mineral Owner Lease No. LOCATION OF RELEASE Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County D 12 208 36E Feet from the North/South Line Feet from the Latitude N 32° 35' 33 3" Longitude W 103° 18' 50 1" | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--|
| Kelease Notification and Corrective Action OPERATOR Initial Report Final Re Name of Company Plains Pipeline, LP Contact Daniel Bryant Final Re Address 3705 E. Hwy 158 Midland, TX 79706 Telephone No. (432) 557-5865 Facility Name Red Byrd #4 Facility Type Pipeline Surface Owner Red Byrd Mineral Owner Mineral Owner Lease No. LOCATION OF RELEASE Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County D 12 20S 36E Feet from the North/South Line Feet from the Latitude N 32° 35' 33 3" Longitude W 103° 18' 50 1" | | |
| OPERATOR Initial Report INITIAL Report <th colsp<="" td=""><td></td></th> | <td></td> | |
| Name of company Prains ripenile, LP Contact Daniel Bryant Address 3705 E. Hwy 158 Midland, TX 79706 Telephone No. (432) 557-5865 Facility Name Red Byrd #4 Facility Type Pipeline Surface Owner Red Byrd Mineral Owner Lease No. Surface Owner Red Byrd Mineral Owner Lease No. Loccation OF RELEASE County Lease Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County D 12 20S 36E Feet from the North/South Line Feet from the Lease Latitude N 32° 35' 33 3" Longitude W 103° 18' 50 1" Image Section Image Section Image Section Image Section | Report | |
| Facility Name Red Byrd #4 Facility Type Pipeline Surface Owner Red Byrd Mineral Owner Lease No. Loccation of Release Loccation of Release County Lease Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County D 12 20S 36E Feet from the North/South Line Feet from the Latitude N 32° 35' 33 3" Longitude W 103° 18' 50 1" | | |
| Surface Owner Red Byrd Lease No. LOCATION OF RELEASE Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County D 12 20S 36E Feet from the North/South Line Feet from the East/West Line County Lease 12 20S 36E Image: Source of the source o | | |
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| I atitude N 32° 35' 33 3" Longitude W 103° 18' 50 1" | | |
| Latitude 1432 35 35.5 Longitude W 105 10 50.1 | ····· | |
| NATURE OF RELEASE | | |
| Type of Release Crude Oil Volume of Release Unknown Volume Recovered Unknown | | |
| Source of Release 4" steel idled line Date and Hour of Occurrence Date and Hour of Discovery | | |
| Unknown 5/1/00 Was Immediate Notice Given? If YES, To Whom? | | |
| ☐ Yes ☐ No ☐ Not Required | | |
| By Whom? Date and Hour | | |
| Was a Watercourse Reached? | | |
| | | |
| If a Watercourse was Impacted, Describe Fully.* UEU04 2008 | | |
| | | |
| TYPES M. | | |
| Describe Cause of Problem and Remedial Action Taken.* | | |
| | | |
| NOTE: This information was obtained from historical EOTT files, Plains acquired EOTT/Link on April 1, 2004 and Plains assumes this information to be correct | | |
| ISCACIL TERMEN | | |
| CCG/PC9 11CHSAT 11 | | |
| Describe Area Affected and Cleanup Action Taken.* . | | |
| Please see the attached Terracon Soil Closure Compliance Report for details of remedial activities conducted for site closure. | 1 | |
| | | |
| | | |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and | t | |
| public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability | av III | |
| should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human healt | alth | |
| or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations | | |
| OIL CONSERVATION DIVISION | | |
| Sim N. R. F | | |
| Signature: Du District Surgering | | |
| Printed Name: Daniel Bryant ENVIRONMENTAL ENGINEER | | |
| Title: Environmental R/C Specialist Approval Date: 12.4.08 Expiration Date: | | |
| E-mail Address: dmbryant@paalp.com Conditions of Approval: Attached | | |
| Date: 12/4/08 Phone: (432) 557-5865 | <u> </u> | |

Soil Closure Compliance Report

Red Byrd #4 - Monument NW ¼ of NW ¼ Section 12, Township 20 South, Range 36 East Lea County, New Mexico

> Plains All American Leak Number 2000-10479 Terracon Project Number A4087064 Railroad Commission Job #1643

> > **December 1, 2008**

Prepared for:

Plains Pipeline, L.P. 3112 West US Highway 82 Lovington, New Mexico 88260

DEC 0 4 2008

Prepared by:



Midland, Texas

Distribution:

Copy 1: Plains – Midland, TX Copy 2: Plains – Houston, TX Copy 3: NMOCD – Hobbs, NM Copy 4: Terracon – Midland, TX December 1, 2008

Plains Pipeline, L.P. 3112 West US Highway 82 Lovington, NM 88260 Attn: Mr. Daniel Bryant

Telephone: (432) 686-1769

Re: Red Byrd # 4 - Monument NW ¼ of NW ¼ Section 12, Township 20 South, Range 36 East Plains Pipeline SRS Number 2000-10479 Lea County, New Mexico Terracon Project Number A4087064

Dear Mr. Bryant:

Terracon is pleased to submit four copies of the Closure Compliance Report for the above referenced site.

We appreciate the opportunity to participate in the site remediation project at Red Byrd #4 - Monument site for Plains Pipeline, L.P. Please contact either of the undersigned at (432) 684-9600 if you have questions regarding the information provided in the report.

Sincerely,

llerracon

Prepared by:

Clay McDonald Office Manager for Clay McDonald

Reviewed by:

Barrett W. Bole, P.G. Operations Manager

Tierracon Consulting Engineers & Scientists

> Terracon Consultants, Inc 24 Smith Road, Suite 261 Midland, Texas 79705 Phone 432.684.9600 Fax 432.684.9608 www.terracon.com

Terracon

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| | Figure 3 – Site Plan and Confirmation Sample Location Map |
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Soil Closure Compliance Report

Red Byrd #4 - Monument NW ¼ of NW ¼ Section 12, Township 20 South, Range 36 East Plains Pipeline SRS Number 2000-10479 Lea County, New Mexico

Terracon Project Number A4087064

1.0 INTRODUCTION

The Red Byrd #4 - Monument project site is located approximately 6 miles west of Highway 8 near the town of Monument in Lea County, New Mexico and approximately 2 miles west of Maddox Road on Byrd Ranch Road. The leak site was located on property owned by Byrd Ranches. The site was discovered on May 1, 2000, with a reported 1⁄4 acre of pastureland impacted by asphaltine material. At the time of the discovery, the three inch diameter pipeline was owned by Link Energy Partners, L. P. (Link) and was reported to be abandoned in place. The impacted area was deemed as a historical crude oil spill site.

A visual site assessment was conducted on April 29, 2008 by Plains and Terracon representatives. The decision was made to conduct a limited site investigation using a backhoe, prior to remedial activities, in an effort to evaluate the vertical and horizontal extent of soil contamination. A utility notification call was placed to identify unknown facilities in the area and a backhoe and crew was scheduled.

1.1 Site Description

| Site Name | Red Byrd #4 - Monument |
|--------------------------|----------------------------------------------------------------------------------------------------------|
| Site Location/GPS | The legal description of the site is the NW ¼ of the NW ¼, Section 12, Township 20 South, Range 36 East. |
| General Site Description | The immediate area surrounding the pipeline right-of-way is native pasture land. |

A topographic map is included as Figure 1, a Site Investigation & Sample Locations map is included as Figure 2 and a Site Map & Sample Locations map is included as Figure 3 of Appendix A.

1.2 Scope of Services

The Scope of Services for Terracon as requested by Plains Pipeline included:

Investigation and remediation of impacted soil;

lerracon

Soil Closure Compliance Report Red Byrd #4 - Monument Plains Pipeline SRS # 2000-10479 Terracon Project #A4087064 December 1, 2008

- Subsequent to analytical data indicating adherence to NMOCD closure requirements, backfill and site restoration; and
- Submittal of a Soil Closure Compliance Report detailing field activities, site maps and photographs.

1.3 Regulatory Framework

Crude oil facilities in New Mexico are generally regulated by the NMOCD. Contamination of soil due to a surface release of crude oil is addressed within a NMOCD guideline titled *Guidelines for Remediation of Leaks, Spills and Releases*, dated August 13, 1993.

Soils which are impacted by petroleum constituents are scored according to the ranking criteria to determine their relative threat to public health, fresh water, and the environment. Such limits are defined by the depth to groundwater, wellhead protection area, and distance to surface water. Based on these ranking criteria, the remediation action level at this site is as follows:

Depth to Ground Water <50 feet Ranking Score = 20 (As defined as vertical distance from lowermost contaminants to seasonal high water level). Groundwater was not encountered during excavation activities; confirmation soil samples were collected approximately 24 to 36 inches below ground surface. According to information obtained from the New Mexico Tech groundwater database groundwater at the site is approximately 25 to 30 feet bgs.

| Wellhead Protection Area | >1000' to water source >200' to domestic well | Ranking Score = 0 |
|---------------------------|--------------------------------------------------|--------------------------|
| Distance to Surface Water | >1000 horizontal feet | Ranking Score = 0 |
| | | Total Ranking Score = 20 |

Based on total ranking criteria of 10, the remediation levels are as follows:

Benzene = 10 ppm BTEX = 50 ppm TPH = 100 ppm



Soil Closure Compliance Report Red Byrd #4 - Monument Plains Pipeline SRS # 2000-10479 Terracon Project #A4087064 December 1, 2008

1.4 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report.

1.5 Additional Scope Limitations

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

1.6 Reliance

This report has been prepared for the exclusive use of Plains Pipeline, LP, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Plains Pipeline, LP and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in this report, and Terracon's Terms and Conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.



Soil Closure Compliance Report Red Byrd #4 - Monument Plains Pipeline SRS # 2000-10479 Terracon Project #A4087064 December 1, 2008

2.0 FIELD ACTIVITIES

2.1 Site Investigation

On May 6, 2008 a backhoe was transported to the site to begin site investigation of the vertical and horizontal extent of the impacted surface soil. A series of test trenches, approximately 20 inches wide and ranging from 50 to 100 feet in length, were excavated through an area approximately 180 feet wide and 150 long. Total depth of the trenches ranged from 18 to 30 inches below ground surface (bgs). Based on a visual inspection of the trenches, it appeared the impact to surface soils ranged in depth from 12 to 18 inches bgs. Confirmation soil samples were collected from the bottom of each of the five test trenches and labeled T-1 through T-5. The soil samples were placed in laboratory provided glass jars with a custody seal, placed on ice and relinquished to Environmental Labs of Texas for analysis of BTEX (using EPA Method 8021B) and total petroleum hydrocarbons (TPH, using EPA Method 8015M). Laboratory results indicated TPH concentrations ranging from below laboratory detection limits in samples T-4 and T-5, to 85.4 mg/kg in sample T-3. The laboratory summary and data sheets are included in Appendix B & C.

2.2 Site Remediation

Based on the laboratory results from the site investigation activities, it appeared the impact to surface soil was limited to approximately 1,000 cubic yards of surface soil in an area approximately 115 feet long, 160 feet wide and 18 inches bgs. In consultation with the Plains representative, it was decided to excavate the impacted soil, transport it to the Plains Lea Station land-farm for remediation, and complete the site restoration activities using ambient soil provided by the landowner, Byrd Ranches. A soil sample of the impacted material was collected on May 30, 2008, placed in laboratory provided glass jars with a custody seal, placed on ice and relinquished to Environmental Labs of Texas for analysis of TCLP SVOC's, TCLP VOA's, flashpoint, chlorides, mercury, paint filter, moisture content, RCRA Metals, Cyanide, sulfates and ph (laboratory summary and data sheets are included in Appendix B & C). Laboratory results indicated the soil was acceptable to be transported to and remediated in a NMOCD approved land-farm.

On June 16, 2008, a front-loader and two 14-cubic yard dump trucks were mobilized to the site and excavation and transport of the impacted soil commenced. There was approximately 1,022 cubic yards of soil excavated and transported to the Plains, Lea Station land-farm. On June 17, 2008, confirmation soil samples were collected from the bottom of the excavated area and labeled CS-1 through CS-4. The soil samples were placed in laboratory provided glass jars with a custody seal, placed on ice and relinquished to Environmental Labs of Texas for analysis of BTEX and TPH. Laboratory results indicated TPH concentrations below laboratory detection limits in samples CS-1 and CS-2, 24.1 mg/kg in sample CS-3 and 19.9 mg/kg in sample CS-4. Laboratory results also

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Soil Closure Compliance Report Red Byrd #4 - Monument Plains Pipeline SRS # 2000-10479 Terracon Project #A4087064 December 1, 2008

indicated benzene and BTEX concentrations below laboratory detection limits in samples CS-1 through CS-4 (laboratory summary and data sheets are included in Appendix B & C).

2.2 Site Restoration

Based on laboratory results indicating adherence to the NMOCD remediation levels, approximately 1,050 cubic yards of ambient soil from the Byrd Ranch was transported to the site. A front loader was utilized to backfill the excavated area and the site was restored as near possible to the surrounding topography.

3.0 FINDINGS AND CONCLUSIONS

The Plains Pipeline, Red Byrd #4 – Monument project site was investigated and remediated following the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases*, dated August 13, 1993. Based on a total ranking criteria of 20, the remediation levels were established as Benzene - 10 ppm, BTEX - 50 ppm and TPH - 100 ppm.

Terracon respectfully submits this closure compliance report to Plains Pipeline, L.P. as documentation of the site soil closure activities. Based on the results of our field activities and laboratory analyses, Terracon recommends that Plains Pipeline, L.P. submit this report to the New Mexico Oil Conservation Division as documentation that remediation was completed to NMOCD standards. Terracon further recommends Plains requests a "no further action" letter for closure of this project site.

Terracon

Soil Closure Compliance Report Red Byrd #4 - Monument Plains Pipeline SRS # 2000-10479 Terracon Project #A4087064 December 1, 2008

DISTRIBUTION

| Copy 1: | Mr. Larry Johnson New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division, District 1 1625 French Drive Hobbs, NM 88240 |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Copy 2: | Mr. Daniel Bryant Plains Pipeline, L.P. 3705 E. State Highway 158 Midland, Texas 79706 <u>dmbryant@paalp.com</u> |
| Сору 3: | Mr. Jeff Dann, P.G. Plains Marketing, L.P. 333 Clay Street, Suite 1600 Houston, TX 77002 jpdann@paalp.com |
| Сору 4: | Mr. Clay McDonald Terracon Consultants, Inc. 24 Smith Road, Suite 261 Midland, TX 79705 <u>camcdonald@terracon.com</u> |

APPENDIX A

Figure 1 – Topographic Map

Figure 2 – Site Investigation and Confirmation Sample Location Map

Figure 3 – Site Plan and Confirmation Sample Location Map











APPENDIX B

Tables

TABLE 1

SUMMARY OF SOIL BTEX AND TPH ANALYTICAL RESULTS Red Byrd #4 - Monument Monument Lea County, New Mexico Plains Pipeline, L. P. SRS Number 2000-10479 Terracon Project Number A4087064

(all concentrations are in milligrams per kilogram) Total Petroleum Hydrocarbons BTEX EPA Method 8021B EPA Method 8015M Sample Sample Sample Soil Carbon Carbon Carbon Total Status ID Date Depth Xylene Xylene Total Ranges Ranges Ranges Hydrocarbon Benzene Ethylbenzene Toluene (p/m) BTEX (o) C₈ - C-12 C12 - C28 C28 - C35 S <17.4 76.5 05/06/08 24" 41.2 35.3 T-1 In-Situ na na na na na na <18 2 50.8 34.9 85.7 T-2 05/06/08 24" In-Situ na na na na na na 85.4 T-3 24" <18.9 50.8 34.6 05/06/08 In-Situ na na na na na na <16.4 ND T-4 24" <16.4 <16.4 05/06/08 In-Situ nà na na na na na <21.3 <21 3 <21.3 ND T-5 05/06/08 24" In-Situ < 0.014 < 0.028 <0 014 <0.028 < 0.014 ND ND CS-1 06/01/07 24" In-Situ < 0.011 <0 022 < 0.011 <0 022 < 0.011 ND <16 8 <16.8 <16.8 <16 7 <16.7 ND CS-2 06/01/07 24" In-Situ < 0.011 <0 022 <0 011 < 0.022 <0 011 ND <16.7 24.1 <17.1 24.1 CS-3 06/01/07 24" In-Situ < 0.011 <0 023 < 0.011 < 0.023 <0 011 ND <17.1 <15 9 199 <15.9 199 CS-4 06/01/07 24" In-Situ < 0.011 < 0.021 <0 011 <0 021 <0.011 ND NMOCD Remediation Limits 10 50 100

EPA - United States Environmental Protection Agency

NMOCD - New Mexico Oil Conservation Division

na - Sample not analyzed for this consituent

Soil Remediation Limits were determined using the NMOCD Guidelines for Remediation of Leaks, Spills and Releases dated August 13, 1993.

ND - Analyte not detected above laboratory detection limits

Prepared by/date_____ Checked by/date_____

TABLE 2

SUMMARY OF LAND-FARM SOIL ANALYTICAL RESULTS SAMPLE ID: LF smpl Red Byrd #4 - Monument Monument Lea County, New Mexico Plains Pipeline, L. P. SRS Number 2000-10479 Terracon Project Number A4087064

| Analysis | Results | Analysis | Results | |
|-----------------------|----------|-----------------------------------|---------|--|
| TCLP SVOC'S by E | PA 8270C | Flash Point (CC) SW-846 1010 | >150 | |
| 1,4 Dichlorobenzene | ND | Inorganic Anions by EPA 300 | ND | |
| 2,4 Dinitrotolunene | ND | Mercury by SW 7471A | ND | |
| Hexachlorobenzene | ND | Paint Filter Liquid Test, SW-9095 | PASS | |
| Hexachlorobutadiene | ND | Percent Moisture | 0.24 | |
| Hexachloroethane | ND | Reactive Cyanide by EPA 9010 | ND | |
| 2-methylphenol | , ND | Reactive Sulfide by W-9030B | ND | |
| 3&4-methylphenol | ND | Soil ph by EPA 9045C | 6.17 | |
| Nitrobenzene | ND | | | |
| Pentachlorophenol | ND | RCRA Metals by SW846-6 | 010B | |
| Pyridine | ND | Lead | ND | |
| 2,4,5-Trichlorophenol | ND | Barium | 16.00 | |
| 2,4,6-Trichlorophenol | ND | Selenium | ND | |
| | | Arsenic | 2.82 | |
| TCLP VOA'S by EF | PA 8260B | Chromium | 4.33 | |
| Benzene | 0.431 | Cadmium | ND | |
| 2-Butanone | ND | Silver | ND | |
| Carbon Tetrachloride | ND | | | |
| Chlorobenzene | ND | | | |
| Chloroform | ND | | | |
| 1,4 Dichlorobenzene | 0.313 | | | |
| 1,2- Dichloroethane | ND | | | |
| 1,1- Dichloroethene | ND | | | |
| Tetrachloroethene | ND | | | |

ND - Analyte not detected above laboratory detection limits

ND

Vinylchloride

APPENDIX Ć

Laboratory Data Sheets

.

Analytical Report 303351

for

PLAINS ALL AMERICAN EH&S

Project Manager: Camille Reynolds

Red Byrd # 4 - Monument

2000-10479

14-MAY-08

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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 - Austin - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta



14-MAY-08



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

Reference: XENCO Report No: 303351 Red Byrd # 4 - Monument Project Address:

Camille Reynolds:

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 303351. 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. 303351 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



Sample Cross Reference 303351



PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd #4 - Monument

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|-----------------|--------------|---------------|
| T-1 | S | May-06-08 13:00 | | 303351-001 |
| T-2 | S | May-06-08 13:20 | | 303351-002 |
| T-3 | S | May-06-08 13:40 | | 303351-003 |
| T-4 | S | May-06-08 14:00 | | 303351-004 |
| T-5 | S | May-06-08 14:20 | | 303351-005 |



Certificate of Analysis Summary 303351

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd # 4 - Monument

Project Id: 2000-10479 Contact: Camille Reynolds

| Project Location: | | | | | | | | Report | Date: | 14-MAY-08 | | |
|------------------------------------|------------|-----------|-------|-----------|-------|-----------|-------|-------------|-------|---------------|--------|---------------------------------------|
| | | | | | | | | Project Mar | ager: | Brent Barron, | II | |
| | Lab Id: | 303351- | 001 | 303351-0 | 02 | 303351-0 | 003 | 303351-0 | 04 | 303351-0 | 05 | |
| Analysis Deguested | Field Id: | T-1 | | T-2 | | T-3 | | T-4 | | T-5 | | |
| Analysis Requested | Depth: | | | | | | | | | | | |
| | Matrix: | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | |
| | Sampled: | May-06-08 | 13:00 | May-06-08 | 13:20 | May-06-08 | 13:40 | May-06-08 | 14:00 | May-06-08 | 14:20 | |
| BTEX by EPA 8021B | Extracted: | | | | | | | | | May-14-08 | 09:57 | |
| | Analyzed: | | | | | | | | | May-14-08 | 16:04 | |
| | Units/RL: | | | | | | | | | mg/kg | RL | |
| Benzene | | | | | | | | | | ND | 0.0014 | |
| Toluene | | | | | | | | | | ND | 0.0028 | |
| Ethylbenzene | | | | | | | | | | ND | 0.0014 | |
| m,p-Xylenes | | | | | | | | | | ND | 0.0028 | |
| o-Xylene | | - | | | | | | | | ND | 0.0014 | |
| Xylenes, Total | | | | | | | | | | ND | | |
| Total BTEX | | | | | | | | | | ND | | |
| Percent Moisture | Extracted: | | | | | | | | | | | |
| | Analyzed: | May-08-08 | 17:00 | May-08-08 | 17:00 | May-08-08 | 17:00 | May-08-08 | 17:00 | May-08-08 | 17:00 | |
| | Units/RL: | % | RL | % | RL | % | RL | % | RL | % | RL | |
| Percent Moisture | | 14 | | 17.4 | | 20.4 | | 8.48 | | 29.4 | | |
| TPH by SW8015 Mod | Extracted: | May-08-08 | 12:03 | May-08-08 | 12:03 | May-08-08 | 12:03 | May-08-08 | 12:03 | May-08-08 | 12:03 | |
| · | Analyzed: | May-08-08 | 12:10 | May-08-08 | 12:36 | May-08-08 | 13:02 | May-08-08 | 13:28 | May-08-08 | 13:54 | |
| | Units/RL: | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | |
| C6-C12 Gasoline Range Hydrocarbons | | ND | 17.4 | ND | 18.2 | ND | 18.9 | ND | 16.4 | ND | 21.3 | · · · · · · · · · · · · · · · · · · · |
| C12-C28 Diesel Range Hydrocarbons | | 41.2 | 17.4 | 50.8 | 18.2 | 50.8 | 18.9 | ND | 16.4 | ND | 21.3 | |
| C28-C35 Oil Range Hydrocarbons | | 35.3 | 17.4 | 34.9 | 18.2 | 34.6 | 18.9 | ND | 16.4 | ND | 21.3 | |
| Total TPH | | 76.5 | | 85.7 | | 85.4 | | ND | | ND | | |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data 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

Date Received in Lab: Wed May-07-08 04:30 pm

Odessa Laboratory Director



Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL(PQL) and above the SQL(MDL).
- 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.
- * Outside XENCO'S scope of NELAC Accreditation

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| 6017 Financial Dr., Norcross, GA 30071 | (770) 449-8800 | (770) 449-5477 |
| | | |



Form 2 - Surrogate Recoveries



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Project Name: Red Byrd # 4 - Monument

| ork Order #: 303351 | | | Project ID | 2000-104/ | 9 | |
|-------------------------|---------------------------------------|------------------------|-------------------------|-----------------------|-------------------------|---------|
| Lab Batch #: 722613 | Sample: 303351-005 / SM | IP Bat | ch: 1 Matri | x: Soil | | |
| Units: mg/kg | | SUI | RROGATE RE | COVERY | STUDY | |
| BTEX by EPA | 8021B | Amount Found [A] | True Amount [B] | Recovery %R (D) | Control Limits %R | Flags |
| Analytes | | | | 1~1 | | |
| 1,4-Difluorobenzene | , | 0.0320 | 0.0300 | 107 | 80-120 | <u></u> |
| 4-Bromotiuorobenzene | | 0.0267 | 0.0300 | עא | 80-120 | |
| Lab Batch #: 722613 | Sample: 509029-1-BKS / | BKS Bat | ch: 1 Matri | x: Solid | | |
| Units: mg/kg | | SU | RROGATE RE | COVERY S | STUDY | |
| BTEX by EPA Analytes | 8021B | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | | 0.0271 | 0.0300 | 90 | 80-120 | ······ |
| 4-Bromofluorobenzene | ······ | 0.0276 | 0.0300 | 92 | 80-120 | |
| Lab Batch #: 722613 | Sample: 509029-1-BLK / | BLK Bat | tch: 1 Matri | x: Solid | I | |
| Units: mg/kg | <i></i> | SU | RROGATE RE | COVERY S | STUDY | |
| BTEX by EPA | 8021B | Amount Found [A] | True Amount [B] | Recovery %R | Control Limits %R | Flags |
| Allalyics | | 0.0220 | 0.0200 | 100 | 00.120 | |
| 1,4-DIIIU0IODERIZERE | | 0.0328 | 0.0300 | 109 86 | 80-120 | |
| | 500000 1 DCD / | 0.02.50 | | 0 1: 1 | 00-140 | |
| Lab Batch #: 722013 | Sample: 509029-1-8507 | BSD Bat | ich: 1 Matri | x: Solia | CONTINE/ | |
| Units: mg/kg | | 50 | RROGATE RE | COVERY | STUDY | |
| BTEX by EPA Analytes | 8021B | Amount Found [A] | True Amount {B] | Recovery %R [D] | Control Limits %R | Flag |
| 1,4-Difluorobenzene | | 0.0268 | 0.0300 | 89 | 80-120 | |
| 4-Bromofluorobenzene | · · · · · · · · · · · · · · · · · · · | 0.0280 | 0.0300 | 93 | 80-120 | |
| Lab Batch #: 722227 | Sample: 303351-001 / SN | AP Bat | tch: ¹ Matri | x: Soil | | |
| Units: mg/kg | • | SU | RROGATE RE | COVERY | STUDY | <u></u> |
| TPH by SW801 | 5 Mod | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flag |
| Analytes | | 1 | t . | | 1 1 | |
| 1-Chlorooctane | | 77.2 | 100 | 77 | 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.



Form 2 - Surrogate Recoveries



Project Name: Red Byrd # 4 - Monument

| Vork Order #: 303351 | | Project II |): 2000-1047 | /9 | |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------|--------------------------------------------|---------------------------------------------------|
| Lab Batch #: 722227 Sample: 303351-001 57 | MS Bat | Ch: I Matri | x: Soil | STUDY | |
| TPH by SW8015 Mod | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| Chiarasstan | | 100 | 87 | 70-135 | |
| o-Terphenyl | 39.0 | 50.0 | 78 | 70-135 | I |
| Lab Batch #: 722227 Sample: 303351-001 SD | / MSD Ba | tch: 1 Matri | ix: Soil | L | |
| Units: mg/kg | SU | RROGATE RI | ECOVERY S | STUDY | |
| TPH by SW8015 Mod Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1-Chlorooctane | 88.0 | 100 | 88 | 70-135 | |
| o-Terphenyl | 42.2 | 50.0 | 84 | 70-135 | [|
| Lah Batch #: 722227 Sample: 303351-002 / Sl | MP Ba | tch: 1 Matr | ix: Soil | <u></u> | |
| Units: mg/kg | SU | RROGATE RI | ECOVERY | STUDY | |
| TPH by SW8015 Mod | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1-Chlorooctane | 75.6 | 100 | 76 | 70-135 | |
| o-Terphenyl | 40.7 | 50.0 | 81 | 70-135 | |
| Lah Batch #: 722227 Sample: 303351-003 / S | MP Ba | tch: 1 Matr | ix: Soil | · | , , , , , , , , , , , , , , , , , , , |
| Units: mg/kg | SU | RROGATE RI | ECOVERY | STUDY | |
| TPH by SW8015 Mod Analytes | Amount Found [A] | True · Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1-Chlorooctane | 76.6 | 100 | 77 | 70-135 | |
| o-Terphenyl | | | | 70.125 | |
| | 41.4 | 50.0 | 83 | 10-135 | |
| Lab Batch #: 722227 Sample: 303351-004 / Si | 41.4 VIP Bat | tch: 1 Matri | ix: Soil | 70-135 | · |
| Lab Batch #: 722227 Sample: 303351-004 / Si Units: mg/kg | 41.4 MP Ba | 50.0 tch: 1 Matr. RROGATE RI | ix: Soil | STUDY | • |
| Lab Batch #: 722227 Sample: 303351-004 / S) Units: mg/kg TPH by SW8015 Mod Analytes | 41.4 MP Ba SU Amount Found [A] | 50.0 tch: 1 Matr RROGATE R1 True Amount [B] | ix: Soil ECOVERY : Recovery %R [D] | STUDY Control Limits %R | Flags |
| Lab Batch #: 722227 Sample: 303351-004 / S. Units: mg/kg TPH by SW8015 Mod Analytes 1-Chlorooctane | 41.4 MP Ba SU Amount Found [A] 71.7 | 50.0 tch: 1 Matr RROGATE RI True Amount [B] 100 | ix: Soil ECOVERY %R [D] 72 | STUDY Control Limits %R 70-135 | 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.



Form 2 - Surrogate Recoveries



Project Name: Red Byrd # 4 - Monument

| Vork Order #: 303351 | | Project II | D: 2000-1047 | 9 | | | | | | |
|------------------------------------|------------------------|--------------------------|-----------------------|-------------------------|-------------------|--|--|--|--|--|
| Lab Batch #: 722227 Sample: 303351 | -005 / SMP Ba | tch: l 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 | | | | | |
| 1-Chlorooctane | 75.6 | 100 | 76 | 70-135 | | | | | | |
| o-Terphenyl | 40.7 | 50.0 | 81 | 70-135 | | | | | | |
| Lab Batch #: 722227 Sample: 508805 | -1-BKS/BKS Ba | tch: 1 Matr | ix: Solid | | | | | | | |
| 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-Chlorooctane | 77.2 | 100 | 77 | 70-135 | | | | | | |
| o-Terphenyl | 36.7 | 50.0 | 73 | 70-135 | · ··· · · · · · · | | | | | |
| Lab Batch #: 722227 Sample: 508805 | -1-BLK / BLK Ba | tch: 1 Matr | ix: Solid | | | | | | | |
| 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 | 71.0 | 100 | 71 | 70-135 | | | | | | |
| o-Terphenyl | 38.8 | /50.0 | 78 | 70-135 | | | | | | |
| Lab Batch #: 722227 Sample: 508805 | -1-BSD / BSD Ba | tch: 1 Matr | ix: Solid | | | | | | | |
| 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 | 77.3 | 100 | 77 | 70-135 | | | | | | |
| o-Terphenyl | 36.4 | 50.0 | 73 | 70-135 | | | | | | |

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

*** Poor recoveries due to dilution

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



BS / BSD Recoveries

Project Name: Red Byrd # 4 - Monument



| Work Order #: 303351 Analyst: SHE | Da | ate Prepar | •ed: 05/14/200 | 8 | Project ID: 2000-10479 Date Analyzed: 05/14/2008 | | | | | | | | | | |
|---------------------------------------------------------|-----------------------------------------------------------|-----------------------|---------------------------------|-----------------------------|-------------------------------------------------------------------|-------------------------------------------|-------------------------------|----------|-------------------------|---------------------------|------|--|--|--|--|
| Lab Batch ID: 722613 Sample: 509029-1-E | ple: 509029-1-BKS Batch #: 1 | | | | | | Matrix: Solid | | | | | | | | |
| Units: mg/kg | BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | | | | | |
| BTEX by EPA 8021B | Blank Sample Result [A] | Spike Added (B) | Blank Spike Result | Blank Spike %R (D) | Spike Added | Blank Spike Duplicate Result (Fl | Blk. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag | | | | |
| Analytes | ND | 0.1000 | 0.0967 | 1-1 | 0.1 | 0.0764 | 76 | 12 | 70.120 | 25 | | | | | |
| Toluene | ND | 0.1000 | 0.0803 | 00 | 0.1 | 0.0704 | 70 | 12 | 70-130 | 35 | | | | | |
| Fthylhenzene | ND | 0.1000 | 0.0908 | 101 | 0.1 | 0.0884 | 88 | 13 | 71-129 | 35 | | | | | |
| m n-Xvlenes | ND | 0.1000 | 0.1000 | 101 | 0.1 | 0.0864 | 02 | 13 | 70 125 | 25 | | | | | |
| o-Xviene | | 0.2000 | 0.1011 | 100 | 0.2 | 0.1855 | 89 | 12 | 71-133 | 35 | | | | | |
| | | - | | | | 0.005,5 | D-t- A | | , 1 100 7 100 10000 | | | | | | |
| Analyst: ASA Lab Batch ID: 722227 Sample: 508805-1-E | Da BKS | ate Prepar Bate | •ed: 05/08/200 h #: 1 | 8 | Date Analyzed: 05/08/2008 Matrix: Solid | | | | | | | | | | |
| Units: mg/kg | | BLAN | K /BLANK S | SPIKE / E | BLANK S | PIKE DUPI | LICATE I | RECOVE | ERY STUD | Ŷ | | | | | |
| TPH by SW8015 Mod Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Bik. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag | | | | |
| C6-C12 Gasoline Range Hydrocarbons | ND | 1000 | 987 | 99 | 1000 | 997 | 100 | 1 | 70-135 | 35 | | | | | |
| C12-C28 Diesel Range Hydrocarbons | ND | 1000 | 869 | 87 | 1000 | 864 | 86 | 1 | 70-135 | 35 | | | | | |

Relative Percent Difference RPD = 200*|(D-F)/(D+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 # 4 - Monument



| Work Order #: 303351 | | | | | | Project II | D: 2000-1 | 0479 | | | |
|---------------------------------------------------|----------------------------------|-------------------|-------------------------|------------------|------------------|----------------------------|------------------|-------|-------------------|-------------------|------|
| Lab Batch ID: 722227 Date Analyzed: 05/08/2008 | QC- Sample ID: Date Prepared: | 303351 05/08/2 | -001 S 008 | Ba An | tch #: alyst: | l Matri: ASA | x: Soil | | | | |
| Reporting Units: mg/kg | | N | IATRIX SPIK | E / MAT | RIX SPI | KE DUPLICA | TE REC | OVERY | STUDY | | |
| TPH by SW8015 Mod | Parent Sample | Spike | Spiked Sample Result | Spiked Sample | Spike | Duplicate Spiked Sample | Spiked Dup. | RPD | Control Limits | Control Limits | Flag |
| Analytes | Result [A] | Added [B] | [C] | %R [D] | Added [E] | Result [F] | %R [G] | % | %R | %RPD | |
| C6-C12 Gasoline Range Hydrocarbons | ND | 1160 | 1160 | 100 | 1160 | 1270 | 109 | 9 | 70-135 | 35 | |
| C12-C28 Diesel Range Hydrocarbons | 41.2 | 1160 | 986 | 81 | 1160 | 1080 | 90 | 11 | 70-135 | 35 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*(D-G)/(D+G) 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 # 4 - Monument

Work Order #: 303351

| Lab Batch #: | 722164 | | | | Project I | D: 2000-10 | 479 |
|-------------------------|------------------|---------|--------------------------------|--------------------------------------|------------------|---------------------------|-------|
| Date Analyzed: | 05/08/2008 | Date Pr | epared: 05/0 | 8/2008 | Analy | st: JLG | |
| QC- Sample ID: | 303351-001 D | 1 | Batch #: 1 | | Matr | ix: Soil | |
| Reporting Units: | % | | SAMPLE | / SAMPLE | DUPLIC | ATE REC | OVERY |
| | Percent Moisture | | Parent Sample Result [A] | Sample Duplicate Result (Bl | RPD | Control Limits %RPD | Flag |
| Percent Moisture | | | 14.0 | 14.4 | 3 | 20 | ļ |
| | | | | | | | I |

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

| | | | EN | VIRO | NM | ENTAI | ., GEOTEC | HNICA | .t. AN | o co | NSTR | aeri | ION | МX | (ER | IALS | SER | VICES | | | | CHAIN OF CUSTODY RECORD |
|----------------------------------|---------------------------------|-------------------------------------|--------------------------------------|--------------------------|------------|---------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------|----------------------------|-----------------------------------------|--------------------------|------------------|----------------|----------------------|----------------|-----------------------------------------|----------------------------------------------------|------------------------------|------------------|---------------------------------------------------------------------------------------------------------------|
| Offic Proje Samp | Cons e Lo ect N hers P | Partin catio | BEngling In Mid ger C/ Ligh | Ican Ican M tfo | set d | DIT Ientiiste I | X Conta Phone PO/S Sampi | atory: ss: uot: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: sc 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9: 9:0 9:0 9:0 9:_ | | 07 10 | 470 | <u> </u> | | | An Ri | | SIS | 0 9 120g | | 7 | | Lab use only Due Date. Temp of coolers when received (C ²): -[() 1 2 3 4 5 Pageof |
| Proj. 1 A4, | ም እይ | 70 | 64 | Proje | a Ne .d | Bvre | | ADM | - | ۴ | 5 | 4 OZ | g ba | ୟ <u>ହ</u> | | /' | <u>م</u> /م | 5// | | 11 | [] | |
| Matrix | 0 | ate . | Time | Com | Gra | Identify | ing Marks of S | emple(a) | La de | E E | VOA | A/G 1LL | 250 mi | P/0 | | -ipu | 10 | 1 | /// | ' | / | Lab Sample (D (Lab Use Only) |
| 5 | 54 | 108 | 18:00 | | X | T- 1 | Ĩ | | <u> </u> | | <u> </u> | 1 | † | | | X | | | -1-1 | 1 | 1 | 303351-01 |
| | | | 13:20 | | X | 7-2 | | | | | | | | | | X | | | | 1 | | -0: |
| Π. | | | 13:40 | | Х | 1-3 | <u>ه</u> | | | | | | | | | X | | | | | | -0,3 |
| []. | | | 14:00 | | X | T-4 | | | | | | | | | | X | | | | | | -04 |
| T. | | | 14:20 | | Х | T-S | | | | | | | | | | \bowtie | X | | | | | -05 |
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| Relin | guish cruish | d time ad by | (Signature | | - 5 | 25% Ru Date: 5-7-08 | th 0.50% | Rush Recei | ved by | K Rus (Signa | h xture) | | | Oate | r | Th | me: | NOTES | Cam | .ie (| B. | w/ plains |
| Retin | quísh | ed by | (Signature) | | T | Date: | Time: | Recei | ved by. | (Signa | NUre) | | | Date | ۴Î | Te | ne: | | Terra | on | | |
| Rein | quish | ad by | (Signature) |) | 1 | Date: | Time: | Recei | ved by: | (Signa | nune) | | + | Date | <u>د</u> ا | Ta | ne: | 1 | | | | |
| Relin | queh | od by | (Signature) |) | | Date: | Time: | Rechi | ved by | ISigne Left | nurof T | m | k | Data 5] | 03 | ті]С | me: YU | - wit | abels | ξS | eal | 5 |
| Matrix Conta | iner | W V | W - Wasterna DA - 40 mi vi | eteer at | | W - Wate A/G - Arr | tr S - Soll ther / Or Glass | SD-So 1 Litter | Xrd | L - Liqui 250 mi | d A Glass | Air Bi wide mo | agr suith | C P/C | · Cha O · P | rcoal tu astic or | other other | SL • sludg | 36 O | - 01 | | |
| House 11555 House (713) | on Off Ciry F m, Tex. | ice iceed, S as 770= 89 Fm | usie 100 (3 x (713) 690-8 | 187 | | Da 890 Da (21 | lies Office Di Carpenier Fre Liss, Texas 75267 4) 630-1010 Fr | tway, Saint | 100 | | For 260 For (\$17 | Worth Gazvel Worth, 1 1 268-86 | Office Drive Fexas | 76118 as (811 | 7) 268 | -8602 | | Austin 5307 in Austin, (512) 4 | Office dustrial Oak Texas 7873 42-1122 Fa | s Bivd. (5 st (5)2) - | # 160 442-115 | Midland Office 24 Smrth Rd., # 261 Mudland, Texar 79705 41 (412) 654-9600 Pax (432) 684-9608 |

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

| Client | Terracon / Plains | | | | | | | | | |
|-------------|-------------------|--|--|--|--|--|--|--|--|--|
| Date/ Time: | 5100 10 30 | | | | | | | | | |
| Lab ID # : | 303351 | | | | | | | | | |
| Initials | GL | | | | | | | | | |

Sample Receipt Checklist

| | | | | Client initia |
|---------|------------------------------------------------------|----------|----|--------------------------|
| ≇1 Tem | perature of container/ cooter? | Yes | No | -10 °C |
| #2 Ship | ping container in good condition? | M | No | |
| #3 Cust | tody Seals intact on shipping container/ cooler? | Yes | No | Not Present |
| #4 Cust | tody Seals intact on sample bottles/ container? | Yes | No | Not Present |
| #5 Cha | in of Custody present? | Yes | No | |
| #6 San | nple instructions complete of Chain of Custody? | Yes | No | |
| #7 Cha | in of Custody signed when relinquished/ received? | Yea | No | |
| #8 Cha | in of Custody agrees with sample label(s)? | res | No | ID written on Cont./ Lid |
| #9 Con | tainer label(s) legible and intact? | Yes | No | Not Applicable |
| #10 Sar | mple matrix/ properties agree with Chain of Custody? | Yes | No | |
| #11 Cor | ntainers supplied by ELOT? | Yes | No | |
| #12 Sar | mples in proper container/ bottle? | Yes | No | See Below |
| #13 Sar | mples properly preserved? | Yes | No | See Below |
| #14 Sar | mple bottles intact? | Yes' | No | |
| #15 Pre | eservations documented on Chain of Custody? | Yes | No | |
| #16 Co | ntainers documented on Chain of Custody? | Yes | No | |
| #17 Sul | fficient sample amount for indicated test(s)? | Ves | No | See Below |
| #18 All | samples received within sufficient hold time? | Yes | No | See Below |
| #19 Su | bcontract of sample(s)? | Yes | No | Not Applicable |
| #20 VO | C samples have zero headspace? | (Yes) | No | Not Applicable |

Variance Documentation

Analytical Report 305015

for

PLAINS ALL AMERICAN EH&S

Project Manager: Camille Reynolds

Red Byrd # 4 2000-10479

10-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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10-JUN-08



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

Reference: XENCO Report No: 305015 Red Byrd # 4 Project Address:

Camille Reynolds:

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 305015. 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. 305015 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 305015



PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd # 4

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|-----------------|--------------|---------------|
| LF Smpl | S | May-30-08 12:40 | | 305015-001 |

Certificate of Analysis Summary 305015 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd # 4

۶.

:

Project Id: 2000-10479

Contact: Camille Reynolds

| Date Received in Lab: | May-30-08 04:15 pm |
|-------------------------|--------------------|
| Report Date: | 10-JUN-08 |
| Project Manager: | Brent Barron, II |

Project Location:

| | | | | - | ~ | |
|-------------------------|-----------------------------------------|-----------------|---------|---|---|---|
| | Lab Id: | 305015-0 | 001 | | | |
| Analysis Requested | Field Id: | LF Smp | l | | | |
| | Depth: | | | | | |
| | Matrix: | SOIL | J | | | |
| | Sampled: | May-30-08 | 12:40 | | | |
| TCLP SVOCs by EPA 8270C | Extracted: | Jun-05-08 (| 08:18 | | | |
| | Analyzed: | Jun-05-08 1 | 7:12 | | | |
| | Units/RL: | mg/L | RL | | | |
| 1,4-Dichlorobenzene | | ND | 0.020 | | | |
| 2,4-Dinitrotoluene | | ND | 0.020 | | | |
| Hexachlorobenzene . | | ND | 0.020 | | | |
| Hexachlorobutadiene | | ND | 0.020 | | | |
| Hexachloroethane | | ND | 0.020 | | | |
| 2-methylphenol | | ND | 0.020 | | | |
| 3&4-Methylphenol | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ND | 0.020 | | | |
| Nitrobenzene | | ND | 0.020 | | | |
| Pentachlorophenol | ND | 0.020 | | | | |
| Pyridine | Pyridine | | | | | - |
| 2,4,5-Trichlorophenol | | ND | 0.020 | | | |
| 2,4,6-Trichlorophenol | | ND | 0.020 | | | |
| TCLP VOAs by EPA 8260B | Extracted: | Jun-05-08 10:20 | | | | |
| | Analyzed: | Jun-05-08 | 17:36 | | | |
| | Units/RL: | mg/L | RL | | | |
| Benzene | | 0.431 | . 0.250 | | | |
| 2-Butanone | | ND | 2.50 | | | |
| Carbon Tetrachloride | | ND | 0.250 | | | |
| Chlorobenzene | | ND | 0.250 | | | |
| Chloroform | | ND | 0.250 | | | |
| 1,4-Dichlorobenzene | | 0.313 | 0.250 | | | |
| 1,2-Dichloroethane | ND | 0.250 | | | | |
| 1,1-Dichloroethene | ND | 0.250 | | | | |
| Tetrachloroethylene | | ND | 0.250 | | | |
| Trichloroethene | | ND | 0.250 | | | |
| Vinyl Chloride | | ND | 0.100 | | | |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data 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 V

Odessa Laboratory Director

Since 1990 Version: 1.016

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Certificate of Analysis Summary 305015 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd # 4

Project Id: 2000-10479 Date Received in Lab: May-30-08 04:15 pm 10-ЈИМ-08 **Report Date:** Contact: Camille Reynolds **Project Location: Project Manager:** Brent Barron, II Lab Id: 305015-001 Field Id: LF Smpl Analysis Requested Depth: Matrix: SOIL Sampled: May-30-08 12:40 Extracted: Flash Point (CC) SW-846 1010 Analyzed: Jun-03-08 11:41 Units/RL: Deg F RL Flash Point > 150 50.0 Extracted: **Inorganic Anions by EPA 300** Jun-05-08 09:29 Analyzed: Units/RL: mg/kg RL Chloride ND 5.00 Extracted: Mercury by SW 7471A Jun-05-08 12:38 Analyzed: Units/RL: ug/kg RI. 12.50 ND Mercury Extracted: Paint Filter Liquids Test by SW-Analyzed: Jun-03-08 13:35 9095 Units/RL: Paint Filter PASS Extracted: **Percent Moisture** Analyzed: Jun-06-08 17:00 Units/RL: % RL Percent Moisture .241 Extracted: **RCRA Metals by SW846-6010B** Analyzed: Jun-05-08 12:57 Units/RL: mg/kg RL Lead ND 0.600 Barium 0.500 16.0 Selenium ND 0.500 0.500 Arsenic 2.82 Chromium 4.33 0.250 Cadmium ND 0.250 Silver ND 0.200 Extracted: **Reactive Cyanide by EPA 9010** Analyzed: Jun-10-08 10:00 Units/RL: mg/kg RI. ND 0.200 Cyanide

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Odessa Laboratory Director

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Certificate of Analysis Summary 305015 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd #4

| Project Id: 2000-10479 | | - | | Date Received in Lab: | May-30-08 04:15 pm |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|------|-------------------------|--------------------|
| Contact: Camille Reynolds | • | | | Report Date: | 10-JUN-08 |
| Project Location: | | | | Project Manager: | Brent Barron, II |
| | Lab Id: | 305015-00 | 1 | | |
| Analysis Requested | Field Id: | LF Smpl | | | |
| | Depth: | | | | |
| | Matrix: | SOIL | | | |
| | Sampled: | May-30-08 12 | 2:40 | | |
| Reactive Sulfide by SW 9030B | Extracted: | | | | |
| The sum of stars and stars | Analyzed: | Jun-05-08 11 | :15 | | |
| | Units/RL: | mg/kg | RL | | |
| Sulfide | | ND | 50.0 | | |
| Soil pH by EPA 9045C | Extracted: | | | | |
| | Analyzed: | Jun-03-08 13 | :50 | | |
| | Units/RL: | SU | RL | | |
| pH | | 6.17 | | | |

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

Brent Barron Ì

Odessa Laboratory Director

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- 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(PQL) and above the SQL(MDL).
- 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.
- * 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 |
| 6017 Financial Dr., Norcross, GA 30071 | (770) 449-8800 | (770) 449-5477 |





Project Name: Red Byrd #4

| Lab Batch #: 72400 Sample: 305015-001 / SMP Batch: 1 Matrix: Soil Units: TCLP SVOCs by EPA 8270C Amount [A] True [B] Recovery [B] Control Recovery [B] Control Recovery [B] Control Recovery [B] Control Recovery [B] Control Recovery [B] Control Recovery [B] Control Recovery [B] Flag 2-Fluorobiphenyl 0.045 0.100 45 43-116 . 2-Fluorobiphenyl 0.045 0.100 40 35-114 . Phenol-d6 0.026 0.100 26 10-94 . Phenol-d6 0.026 0.100 77 33-141 . 2,46-Tribromophenol 0.077 0.100 77 33-141 . Z,46-Tribromophenol 0.079 0.100 78 14-125 . TCLP SVOCs by EPA 8270C Amount [A] Matrix: Water . Matrix: Water 2-Fluorobiphenyl 0.039 0.050 78 43-116 . 2-Fluorobiphenyl 0.039 0.050 78 35- | /ork Order #: 305015 | | Project II | D: 2000-1047 | 19 | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|----------|
| Units: SURROGATE RECOVERY STUDY TCLP SVOCs by EPA 8270C Amount [A] True [B] Recovery %R Limits %R Flags 2.Fluorobiphenyl 0.045 0.100 45 43-116 5%R 100 45 43-116 5%R 100 45 43-116 100 35-114 100 100 31 2.1-100 100 40 35-114 100 100 40 35-114 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 123 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 | Lab Batch #: 724606 Sample: 3 | 05015-001 / SMP Ba | tch: 1 Matri | ix: Soil | | |
| TCLP SVOCs by EPA 8270C Amount Found [A] True Amount [B] Recovery (B) Control Linits (B) Flag 2-Fluorobjhenyl 0.045 0.100 45 43-116 - 2-Fluorobjhenyl 0.045 0.100 45 43-116 - 2-Fluorobjhenyl 0.040 0.100 40 33-141 - 1000 26 10.94 - - - Phenol-d6 0.026 0.100 77 33-141 - 2,4,6-Tribromophenol 0.077 0.100 77 33-141 - Lab Batch #: 724606 Sample: 510146-1-BKS / BKS Batch: 1 Matrix: Water TCLP SVOCs by EPA 8270C True Found [A] True Found [A] Amount [B] Recovery Support Control Linits 's/R Fings 2-Fluorobiphenyl 0.039 0.050 78 43-116 - 2-Fluorobiphenol 0.020 0.050 78 35-114 Phenol-46 2-Fluorobiphenol 0.039 0.0 | Units: mg/L | SU | RROGATE RI | ECOVERY | STUDY | |
| Analytes Control 43-116 2-Fluorobjhenyl 0.045 0.100 45 43-116 2-Fluorobjhenol 0.031 0.100 40 35-114 Nitrobenzen-d5 0.040 0.100 40 35-114 Phenol-d6 0.026 0.100 26 10-94 Terphenyl-D14 0.077 0.100 77 33-141 2,4,6-Tribromophenol 0.079 0.100 79 10-123 Lab Batch #: 724606 Sample: 510146-1-BKS / BKS Batch: 1 Matrix: Water TCLP SVOCs by EPA 8270C Amount Amount Recovery Controls 9/k Analytes 0.039 0.050 78 43-116 2-100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 | TCLP SVOCs by EPA 82700 | Amount Fóund [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Floorophenol 0.045 0.100 45 43-116 2-Floorophenol 0.031 0.100 31 21-100 Nitrobenzene-d5 0.040 0.100 40 35-114 Phenol-d6 0.026 0.100 26 10-94 Terphenyl-D14 0.077 0.100 77 33-141 2,4,6-Tribromophenol 0.079 0.100 79 10-123 Lab Batch #: 724606 Sample: 510146-1-BKS / BKS Batch: 1 Matrix: Water TCLP SVOCs by EPA 8270C Amount [A] True [B] Recovery %R Control %R Ininits %R 2-Floorobiphenyl 0.039 0.050 78 43-116 2-Floorobiphenyl 0.039 0.050 78 43-116 2-Floorobiphenyl 0.039 0.050 78 43-116 2-Floorobiphenyl 0.039 0.050 78 35-114 Phenol-d6 0.013 0.050 94 33-141 2,4,6-Tribromophenol 0.047 0.050 | Analytes | | 0.100 | | 12.116 | |
| 2-Fluorophenol 0.031 0.100 31 21-100 Nitrobenzene-d5 0.040 0.100 40 35-114 Phenol-d6 0.026 0.100 26 10-94 Terphenyl-D14 0.077 0.100 77 33-141 2,4,6-Tribromophenol 0.079 0.100 79 10-123 Lab Batch #: 724606 Sample: 510146-1-BKS / BKS Batch: 1 Matrix: Water TCLP SVOCs by EPA 8270C Amount [A] True [A] True [B] Recovery %R Control Limits %R Flags 2-Fluorophenol 0.039 0.050 78 43-116 2-100 2-Fluorophenol 0.039 0.050 78 35-114 2-100 Nitrobenzene-d5 0.039 0.050 78 31-141 2-100 Phenol-d6 0.013 0.050 26 10-94 2-100 10-04 0.047 0.050 94 10-123 2-100 2,4,6-Tribromophenol 0.047 <td< td=""><td></td><td>0.045</td><td>0.100</td><td>45</td><td>43-110</td><td></td></td<> | | 0.045 | 0.100 | 45 | 43-110 | |
| Nitroenzene-05 0.040 0.100 40 35-114 Phenol-d6 0.026 0.100 26 10-94 Terphenyl-D14 0.077 0.100 77 33-141 2,4,6-Tribromophenol 0.079 0.100 79 10-123 Lab Batch #: 724606 Sample: 510146-1-BKS / BKS Batch: 1 Matrix: Water TCLP SVOCs by EPA 8270C Amount [A] True [B] Recovery % R Control Limits % R Flags 2-Fhorobiphenyl 0.039 0.050 78 43-116 2-Fhorobiphenyl 0.039 0.050 78 43-116 2-Fhorobiphenyl 0.039 0.050 78 35-114 Phenol-d6 0.013 0.050 26 10-94 Terphenyl-D14 0.047 0.050 94 13-141 2,46-Tribromophenol 0.047 0.050 94 10-123 Lab Batch #: 724606 Sample: 510146-1-BLK / BLK Batch: 1 Matrix: Wa | | 0.031 | 0.100 | 31 | 21-100 | |
| Phenol-do 0.026 0.100 26 10-94 Terphenyl-D14 0.077 0.100 77 33-141 2,4,6-Tribromophenol 0.079 0.100 79 10-123 Lab Batch #: 724606 Sample: 510146-1-BKS / BKS Batch: 1 Matrix: Water TCLP SVOCs by EPA 8270C Amount [A] True [A] Macount [B] Recovery %R Control Limits Flags 2-Fhorobiphenyl 0.039 0.050 78 43-116 2- 2-Fhorobiphenyl 0.039 0.050 78 43-116 2-Fhorobiphenyl 0.039 0.050 78 35-114 Phenol-d6 10-94 Terphenyl-D14 0.047 0.050 94 33-141 2,4,6-Tribromophenol 0.047 0.050 94 10-123 Lab Batch #: 724606 Sample: 510146-1-BLK / BLK Batch: 1 Matrix: Water Units: mg/L TCLP SVOCs by EPA 8270C Amount [A] Flags %K Ip) %K Flags 2-Fluorobiphenol 0.047 0.050 | Nitrobenzene-d5 | 0.040 | 0.100 | 40 | 35-114 | |
| Terphenyl-D14 0.077 0.100 77 33-141 2,4,6-Tribromophenol 0.079 0.100 79 10-123 Lab Batch #: 724606 Sample: 510146-1-BKS / BKS Batch: 1 Matrix: Water TCLP SVOCs by EPA 8270C Amount Found [A] True [B] Recovery %R Control Imits %R Flags 2-Fluorobiphenyl 0.039 0.050 78 43-116 21-100 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-12 | Phenol-d6 | 0.026 | 0.100 | 26 | 10-94 | |
| 2,4,6-Tribromophenol 0.079 0.100 79 10-123 Lab Batch #: 724606 Sample: 510146-1-BKS / BKS Batch: 1 Matrix: Water Units: mg/L SURROGATE RECOVERY STUDY Control Flags Analytes Analytes 0.039 0.050 78 43-116 2-Fluorobiphenyl 0.039 0.050 78 43-116 2-Fluorobiphenyl 0.039 0.050 78 35-114 Phenol-d6 0.013 0.050 78 35-114 Phenol-d6 0.047 0.050 94 10-123 Lab Batch #: 724606 Sample: 510146-1-BLK / BLK Batch: 1 Matrix: Water Units: mg/L SURROGATE RECOVERY STUDY Control Limits 74 10-45 0.047 0.050 94 10-123 24,6-Tribromophenol 0.047 0.050 94 10-123 Lab Batch #: 724606 | Terphenyl-D14 | 0.077 | 0.100 | 77 | 33-141 | |
| Lab Batch #: 724606 Sample: 510146-1-BKS / BKS Batch: 1 Matrix: Water TCLP SVOCs by EPA 8270C Amount [A] True [B] Recovery %R Control [JM] Flags 2-Fhorobiphenyl 0.039 0.050 78 43-116 1 2-Fhorobiphenyl 0.039 0.050 78 43-116 1 2-Fhorobiphenyl 0.039 0.050 78 35-114 1 Phenol-d6 0.013 0.050 78 35-114 1 2,4,6-Tribromophenol 0.047 0.050 94 31-141 1 2,4,6-Tribromophenol 0.047 0.050 94 10-123 1 Lab Batch #: 724606 Sample: 510146-1-BLK / BLK Batch: 1 Matrix: Water Units: mg/L Sumple: 510146-1-BLK / BLK Batch: 1 Matrix: Water Units: mg/L Sumple: 510146-1-BLK / BLK Batch: 1 Matrix: Water | 2,4,6-Tribromophenol | 0.079 | 0.100 | 79 | 10-123 | |
| Units: mg/L SURROGATE RECOVERY STUDY TCLP SVOCs by EPA 8270C Amount Found [A] True Amount [B] Recovery %R Control Limits %R Flags 2-Fhorobiphenyl 0.039 0.050 78 43-116 21-100 Nitrobenzene-d5 0.039 0.050 78 35-114 Phenol-d6 0.013 0.050 78 35-114 21-100 Nitrobenzene-d5 0.039 0.050 78 35-114 21-100 Nitrobenzene-d5 10-94 33-141 2.4,6-Tribromophenol 0.047 0.050 94 33-141 2.4,6-Tribromophenol 0.047 0.050 94 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 10-123 <td>Lab Batch #: 724606 Sample: 5</td> <td>10146-1-BKS / BKS Ba</td> <td>ntch: 1 Matri</td> <td>ix: Water</td> <td></td> <td></td> | Lab Batch #: 724606 Sample: 5 | 10146-1-BKS / BKS Ba | ntch: 1 Matri | ix: Water | | |
| TCLP SVOCs by EPA 8270C Amount Found [A] True Amount [B] Recovery %R [D] Control Limits %R [D] Flags 2-Fluorobiphenyl 0.039 0.050 78 43-116 2 2-Fluorobiphenyl 0.039 0.050 78 43-116 2 2-Fluorophenol 0.020 0.050 40 21-100 Nitrobenzene-d5 0.039 0.050 78 35-114 Phenol-d6 10-94 33-141 2.4/6-Tribromophenol 0.047 0.050 94 33-141 24/6-Tribromophenol 10-123 Lab Batch #: 724606 Sample: 510146-1-BLK / BLK Batch: 1 Matrix: Water TCLP SVOCs by EPA 8270C Amount [A] True Amount [A] True Amount [B] Recovery %R Control Limits %R Flags 2-Fluorobiphenyl 0.093 0.100 93 43-116 2 2-Fluorobiphenyl 0.093 0.100 93 43-116 2 2-Fluorobiphenyl 0.068 0.100 68 21-100 <t< td=""><td colspan="6">Units: mg/L SURROGATE RECOVERY STUDY</td></t<> | Units: mg/L SURROGATE RECOVERY STUDY | | | | | |
| Analytes Image: Constraint of the second secon | TCLP SVOCs by EPA 82700 | C Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluctobpletyl 0.039 0.030 78 43-110 2-Fluorophenol 0.020 0.050 40 21-100 Nitrobenzene-d5 0.039 0.050 78 35-114 Phenol-d6 0.013 0.050 26 10-94 Terphenyl-D14 0.047 0.050 94 33-141 2,4,6-Tribromophenol 0.047 0.050 94 10-123 Lab Batch #: 724606 Sample: 510146-1-BLK / BLK Batch: 1 Matrix: Water Units: mg/L SURROGATE RECOVERY STUDY TCLP SVOCs by EPA 8270C Amount Found [A] Recovery for a standard stan | 2 Eboschiskend | 0.020 | 0.050 | | 42.116 | |
| 2-Hudophenol 0.020 0.030 40 21-100 Nitrobenzene-d5 0.039 0.050 78 35-114 Phenol-d6 0.013 0.050 26 10-94 Terphenyl-D14 0.047 0.050 94 33-141 2,4,6-Tribromophenol 0.047 0.050 94 10-123 Lab Batch #: 724606 Sample: 510146-1-BLK / BLK Batch: 1 Matrix: Water Units: mg/L SurroGATE Recovery %R [D] Control Limits %R [P] Flags 2-Fluorobiphenyl 0.093 0.100 93 43-116 2-Fluorobiphenyl 0.093 0.100 93 35-114 Phenol-d6 0.093 0.100 93 35-114 Phenol-d6 0.052 0.100 93 35-114 Phenol-d6 0.052 0.100 52 10-94 Terphenyl-D14 0.101 0.100 101 33-141 | | 0.039 | 0.050 | /8 | 43-110 | |
| Nitrobenzene-d5 0.039 0.050 78 35-114 Phenol-d6 0.013 0.050 26 10-94 Terphenyl-D14 0.047 0.050 94 33-141 2,4,6-Tribromophenol 0.047 0.050 94 10-123 Lab Batch #: 724606 Sample: S10146-1-BLK/BLK Batch: 1 Matrix: Water Units: mg/L Sumple: S10146-1-BLK/BLK Batch: 1 Matrix: Water Units: mg/L Sumple: S10146-1-BLK/BLK Batch: 1 Matrix: Water TCLP SVOCs by EPA 8270C Amount [A] True Found [A] Recovery %R [D] Control Limits %R Flags 2-Fluorobiphenyl 0.093 0.100 93 43-116 2 2-Fluorobiphenol 0.068 0.100 68 21-100 1 Nitrobenzene-d5 0.093 0.100 93 35-114 2 Phenol-d6 0.052 0.100 52 10-94 | | 0.020 | 0.050 | 40 | 21-100 | , |
| Prenci-do 0.013 0.050 26 10-94 Terphenyl-D14 0.047 0.050 94 33-141 2,4,6-Tribromophenol 0.047 0.050 94 10-123 Lab Batch #: 724606 Sample: 510146-1-BLK / BLK Batch: 1 Matrix: Water Units: mg/L SurROGATE Recovery Limits %R Control Flags Analytes 0.093 0.100 93 43-116 2-Fluorobiphenyl 0.093 0.100 93 35-114 Phenol-d6 0.052 0.100 93 35-114 Phenol-d6 0.052 10-94 2.4,6-Tribromophenol 0.101 0.100 101 33-141 24,6-Tribromophenol 10.123 | Nitrobenzene-d5 | 0.039 | 0.050 | 78 | 35-114 | <u>.</u> |
| Terpnenyl-D14 0.047 0.050 94 33-141 2,4,6-Tribromophenol 0.047 0.050 94 10-123 Lab Batch #: 724606 Sample: 510146-1-BLK / BLK Batch: 1 Matrix: Water Units: mg/L SURROGATE RECOVERY STUDY Control Limits Flags Analytes 0.093 0.100 93 43-116 2-Fluorobiphenyl 0.093 0.100 93 43-116 2-Fluorobiphenyl 0.093 0.100 93 35-114 Phenol-d6 0.052 0.100 52 10-94 10-123 Phenol-d6 0.052 0.100 101 0.101 0.101 101 33-141 2,4,6-Tribromophenol 0.108 0.100 108 10-123 10-123 | Phenol-do | 0.013 | 0.050 | 26 | 10-94 | |
| 2,4,6-Tribromophenol 0.047 0.050 94 10-123 Lab Batch #: 724606 Sample: 510146-1-BLK / BLK Batch: 1 Matrix: Water Units: mg/L SURROGATE RECOVERY STUDY Control Limits Flags TCLP SVOCs by EPA 8270C Amount [A] True [B] Recovery %R [D] Control Flags 2-Fluorobiphenyl 0.093 0.100 93 43-116 100 2-Fluorobiphenyl 0.068 0.100 68 21-100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 <td>Terphenyl-D14</td> <td>0.047</td> <td>0.050</td> <td>94</td> <td>33-141</td> <td></td> | Terphenyl-D14 | 0.047 | 0.050 | 94 | 33-141 | |
| Lab Batch #: 724606 Sample: 510146-1-BLK / BLK Batch: 1 Matrix: Water Units: mg/L SURROGATE RECOVERY STUDY TCLP SVOCs by EPA 8270C Amount [A] True [B] Recovery %R Control Limits %R Flags 2-Fluorobiphenyl 0.093 0.100 93 43-116 1 2-Fluorobiphenyl 0.068 0.100 68 21-100 1 Nitrobenzene-d5 0.093 0.100 93 35-114 1 Phenol-d6 0.052 0.100 52 10-94 1 2,4,6-Tribromophenol 0.108 0.100 101 33-141 | 2,4,6-Tribromophenol | 0.047 | 0.050 | 94 | 10-123 | |
| Units: mg/L SURROGATE RECOVERY STUDY TCLP SVOCs by EPA 8270C Amount Found [A] True Amount [B] Recovery %R [D] Control Limits %R Flags 2-Fluorobiphenyl 0.093 0.100 93 43-116 100 2-Fluorophenol 0.068 0.100 68 21-100 100 101 101 Nitrobenzene-d5 0.093 0.100 93 35-114 100 101 Phenol-d6 0.052 0.100 52 10-94 10-94 10-123 | Lab Batch #: 724606 Sample: 5 | 10146-1-BLK / BLK Ba | tch: 1 Matri | ix: Water | | |
| TCLP SVOCs by EPA 8270C Amount Found [A] True Amount [B] Recovery %R [D] Control Limits %R Flags 2-Fluorobiphenyl 0.093 0.100 93 43-116 2-Fluorophenol 0.068 0.100 68 21-100 Nitrobenzene-d5 0.093 0.100 93 35-114 Phenol-d6 0.052 0.100 52 10-94 Terphenyl-D14 0.101 0.100 101 33-141 2,4,6-Tribromophenol 0.108 0.100 108 10-123 | Units: mg/L | SU | RROGATE RI | ECOVERY | STUDY | |
| 2-Fluorobiphenyl 0.093 0.100 93 43-116 2-Fluorophenol 0.068 0.100 68 21-100 Nitrobenzene-d5 0.093 0.100 93 35-114 Phenol-d6 0.052 0.100 52 10-94 Terphenyl-D14 0.101 0.100 101 33-141 2,4,6-Tribromophenol 0.108 0.100 108 10-123 | TCLP SVOCs by EPA 82700 Analytes | C Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fhorophenol 0.068 0.100 68 21-100 Nitrobenzene-d5 0.093 0.100 93 35-114 Phenol-d6 0.052 0.100 52 10-94 Terphenyl-D14 0.101 0.100 101 33-141 2,4,6-Tribromophenol 0.108 0.100 108 10-123 | 2-Fluorobiphenyl | 0.093 | 0.100 | 93 | 43-116 | |
| Nitrobenzene-d5 0.093 0.100 93 35-114 Phenol-d6 0.052 0.100 52 10-94 Terphenyl-D14 0.101 0.100 101 33-141 2,4,6-Tribromophenol 0.108 0.100 108 10-123 | 2-Fluorophenol | 0.068 | 0,100 | 68 | 21-100 | <u>.</u> |
| Phenol-d6 0.052 0.100 52 10-94 Terphenyl-D14 0.101 0.100 101 33-141 2,4,6-Tribromophenol 0.108 0.100 108 10-123 | Nitrobenzene-d5 | 0.093 | 0,100 | 93 | 35-114 | |
| Terphenyl-D14 0.101 0.100 101 33-141 2,4,6-Tribromophenol 0.108 0.100 108 10-123 | Phenol-d6 | 0.052 | 0,100 | 52 | 10-94 | |
| 2,4,6-Tribromophenol 0.108 0.100 108 10-123 | Terphenyl-D14 | 0.101 | 0.100 | 101 | 33-141 | |
| | 2,4,6-Tribromophenol | 0.108 | 0.100 | 108 | 10-123 | ·· |

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

*** Poor recoveries due to dilution





Project Name: Red Byrd # 4

| ork Order #: 305015 | | Project II | D: 2000-104 7 | 19 | |
|-----------------------------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------------|-------------------------------------------|--------------------------------------------|---------|
| Lab Batch #: 724606 Sample: 5101 | 46-1-BSD / BSD Ba | itch: 1 Matr | ix: Water | | |
| Units: mg/L | SU | RROGATE R | ECOVERY S | STUDY | |
| TCLP SVOCs by EPA 8270C Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluorobiphenyl | 0.041 | 0.050 | 82 | 43-116 | |
| 2-Fluorophenol | 0.021 | 0.050 | 42 | 21-100 | |
| Nitrobenzene-d5 | 0.039 | 0.050 | 78 | 35-114 | |
| Phenol-d6 | 0.014 | 0.050 | 28 | 10-94 | |
| Terphenyl-D14 | 0.045 | 0.050 | 90 | 33-141 | |
| 2,4,6-Tribromophenol | 0.043 | 0.050 | 86 | 10-123 | <u></u> |
| Lab Batch #: 724700 Sample: 3050 | 015-001 / SMP Ba | itch: 1 Matr | ix: Soil | | |
| Units: mg/L | SU | RROGATE R | ECOVERY S | STUDY | <u></u> |
| TCLP VOAs by EPA 8260B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0520 | 0.0500 | 104 | 86-115 | |
| Dibromofluoromethane | 0.0484 | 0.0500 | 97 | 86-118 | |
| 1,2-Dichloroethane-D4 | 0.0529 | 0.0500 | 106 | 80-120 | |
| Toluene-D8 | 0.0466 | 0.0500 | 93 | 88-110 | |
| Lab Batch #: 724700 Sample: 3050 | 015-001 S / MS Ba | itch: ¹ Matr | ix: Soil | <u></u> | |
| Units: mg/L | SU | IRROGATE R | ECOVERY | STUDY | |
| | | | 1 | Control | |
| TCLP VOAs by EPA 8260B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Limits %R | Flags |
| TCLP VOAs by EPA 8260B Analytes 4-Bromofluorobenzene | Amount Found [A] 0.0474 | True Amount [B] | Recovery %R [D] 95 | Limits %R 86-115 | Flags |
| TCLP VOAs by EPA 8260B Analytes 4-Bromofluorobenzene Dibromofluoromethane | Amount Found [A] 0.0474 0.0541 | True Amount [B] 0.0500 | Recovery %R [D] 95 108 | Limits %R 86-115 86-118 | Flags |
| Analytes 4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 | Amount Found [A] 0.0474 0.0541 0.0513 | True Amount [B] 0.0500 0.0500 0.0500 | Recovery %R [D] 95 108 103 | Limits %R 86-115 86-118 80-120 | 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.





Project Name: Red Byrd #4

| ork Order #: 305015 | | | Project II | D: 2000-1047 | 79 | |
|-----------------------|----------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|-----------------------|-------------------------|------|
| Lab Batch #: 724700 | Sample: 305015-001 SD / | MSD Ba | itch: l Matri | ix: Soil | | |
| Units: mg/L | | SL | RROGATE RI | ECOVERY | STUDY | |
| TCLP VOAs b | y EPA 8260B lytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flag |
| 4-Bromofluorobenzene | - | 0.0537 | 0.0500 | 107 | 86-115 | |
| Dibromofluoromethane | | 0.0554 | 0.0500 | 111 | 86-118 | |
| 1,2-Dichloroethane-D4 | ······ | 0.0537 | 0.0500 | 107 | 80-120 | |
| Toluene-D8 | | 0.0492 | 0.0500 | 98 | 88-110 | |
| Lab Batch #: 724700 | Sample: 510201-1-BKS / | BKS Ba | tch: 1 Matri | ix: Water | | |
| Units: mg/L | | SU | RROGATE RI | ECOVERY | STUDY | |
| TCLP VOAs b | y EPA 8260B lytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flag |
| 4-Bromofluorobenzene | · · · · · · · · · · · · · · · · · · · | 0.0466 | 0.0500 | 93 | 86-115 | |
| Dibromofluoromethane | | 0.0501 | 0.0500 | 100 | 86-118 | |
| 1,2-Dichloroethane-D4 | | 0.0494 | 0.0500 | 99 | 80-120 | |
| Toluene-D8 | name fore and the to an an an and a star of the second second second second second second second second second | 0.0462 | 0.0500 | 92 | 88-110 | |
| Lab Batch #: 724700 | Sample: 510201-1-BLK / | BLK Ba | ntch: 1 Matri | ix: Water | | |
| Units: mg/L | | SU | JRROGATE RI | ECOVERY | STUDY | |
| TCLP VOAs b Anal | by EPA 8260B lytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flag |
| 4-Bromofluorobenzene | | 0.0520 | 0.0500 | 104 | 86-115 | |
| Dibromofluoromethane | · · · · · · · · · · · · · · · · · · · | 0.0493 | 0.0500 | . 99 | 86-118 | |
| 1,2-Dichloroethane-D4 | ···· | 0.0542 | 0.0500 | 108 | 80-120 | |
| | | | | | 4 | |

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

*** Poor recoveries due to dilution





Project Name: Red Byrd # 4

| Work Order #: 305015 | | Pı | oject ID: | | 200 | 0-10479 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------------|
| Lab Batch #: 724479 | Sample: 724479 | -1-BKS | Matr | | | |
| Date Analyzed: 06/05/2008 | Date Prepared: 06/05/2 | 008 | Analyst: LATCOR | | | |
| Reporting Units: mg/kg | Batch #: 1 | BLANK / | BLANK SPI | KE REC | OVERY S | STUDY |
| Inorganic Anions by EPA 300 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
| Chloride | ND | 10.0 | 9.02 | 90 | 75-125 | |
| Lab Batch #: 724550 Date Analyzed: 06/10/2008 | Sample: 724550 Date Prepared: 06/10/2 | -1-BKS 008 | Matrix: Solid Analyst: WRU | | | |
| Reporting Units: mg/kg | Batch #: 1 | BLANK / | BLANK SPIKE RECOVERY STUDY | | | |
| | | 1 | | | | |
| Reactive Cyanide by EPA 9010 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
| Reactive Cyanide by EPA 9010 Analytes | Blank Result [A] ND | Spike Added [B] 5.00 | Blank Spike Result [C] 4.38 | Blank Spike %R [D] 88 | Control Limits %R 80-120 | Flags |
| Reactive Cyanide by EPA 9010 Analytes Cyanide Lab Batch #: 724536 Date Analyzed: 06/05/2008 Reporting Units: mg/kg | Blank Result [A] ND Sample: 724536 Date Prepared: 06/05/2 Batch #: 1 | Spike Added [B] 5.00 -1-BKS 008 BLANK / | Blank Spike Result [C] 4.38 Matri Analy BLANK SPI | Blank Spike %R [D] 88 ix: Solid st: WRU KE REC | Control Limits %R 80-120 | Flags |
| Reactive Cyanide by EPA 9010 Analytes Cyanide Lab Batch #: 724536 Date Analyzed: 06/05/2008 Reporting Units: mg/kg Departing Sulfide by SW 0020P | Blank Result [A] ND Sample: 724536 Date Prepared: 06/05/2 Batch #: 1 Blank | Spike Added [B] 5.00 -1-BKS 008 BLANK // | Blank Spike Result [C] 4.38 Matri Analy BLANK SPI | Blank Spike %R [D] 88 ix: Solid st: WRU KE REC | Control Limits %R 80-120 | Flags |
| Reactive Cyanide by EPA 9010 Analytes Cyanide Lab Batch #: 724536 Date Analyzed: 06/05/2008 Reporting Units: mg/kg Reactive Sulfide by SW 9030B Analytes | Blank Result [A] ND Sample: 724536 Date Prepared: 06/05/2 Batch #: 1 Blank Result [A] | Spike Added [B] 5.00 -1-BKS 008 BLANK // Spike Added [B] | Blank Spike Result [C] 4.38 Matri Analy BLANK SPI Blank Spike Result [C] | Blank Spike %R [D] 88 x: Solid st: WRU KE REC Blank Spike %R [D] | Control Limits %R 80-120 COVERY S Control Limits %R | Flags STUDY Flags |

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

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Project Name: Red Byrd # 4

| Work Order #: 305015 | | | Pro | | 2000-10479 | | |
|--------------------------------------------------|---------------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-------------------------|-------|
| Lab Batch #: 724700 Date Analyzed: 06/05/2008 | Sam _] Date Prepar | ple: 510201- red: 06/05/20 | 1-BKS)08 | Matri Analys | x: Water | | |
| Reporting Units: mg/L | Batcl | h#: 1 | BLANK /B | BLANK SPI | KE REC | OVERY S | STUDY |
| TCLP VOAs by EPA 8260B Analytes | | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
| Benzene | | ND | 0.050 | 0.054 | 108 | 66-142 | |
| 2-Butanone | | ND | 0.500 | 0.494 | 99 | 60-140 | |
| Carbon Tetrachloride | | ND | 0.050 | 0.049 | 98 | 62-125 | |
| Chlorobenzene | | ND | 0.050 | 0.054 | 108 | 60-133 | |
| Chloroform | | ND | 0.050 | 0.050 | 100 | 74-125 | |
| 1,4-Dichlorobenzene | | ND | 0.050 | 0.051 | 102 | 75-125 | |
| 1,2-Dichloroethane | | ND | 0.050 | 0.050 | 100 | 68-127 | |
| 1,1-Dichloroethene | | ND | 0.050 | 0.050 | 100 | 59-172 | |
| Tetrachloroethylene | | ND | 0.050 | 0.047 | 94 | 71-125 | |
| Trichloroethene | | ND | 0.050 | 0.048 | 96 | 62-137 | |
| Vinyl Chloride | | ND | 0.050 | 0.051 | 102 | 75-125 | |

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



BS / BSD Recoveries



Project Name: Red Byrd # 4

| Work Order #: 305015 Analyst: LATCOR | D | ate Prepar | ed: 06/05/200 | 18 | | | Pro Date A | ject ID: 2 nalyzed: (| 2000-10479 06/05/2008 | I | |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------|
| Lab Batch ID: 724517 Sample: 724517- | 1-BKS | Bate | h #: 1 | | | | | Matrix: S | Solid | | |
| Units: ug/kg | | BLAN | K /BLANK S | SPIKE / E | BLANK S | SPIKE DUPI | ICATE | RECOVI | ERY STUD | Ŷ | |
| Mercury by SW 7471A | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Bik. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Mercury | ND | 1.000 | 1.010 | 101 | 1 | 1.080 | 108 | 7 | 75-125 | 25 | |
| Analyst: LATCOR Lab Batch ID: 724520 Sample: 724520- | Da 1-BKS | ate Prepar Batc | red: 06/05/200 | 8 | | | Date A | nalyzed: (Matrix: S |)6/05/2008 Solid | | |
| | | | | | | | | | | | |
| Units: mg/kg | | BLAN | K /BLANK S | SPIKE / E | BLANK S | PIKE DUPI | ICATE | RECOVI | ERY STUD | Ŷ | |
| Units: mg/kg RCRA Metals by SW846-6010B Analytes | Blank Sample Result [A] | BLAN Spike Added [B] | K /BLANK S Blank Spike Result [C] | Blank Blank Spike %R [D] | Spike Added [E] | Blank Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R [G] | RECOVI RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Units: mg/kg RCRA Metals by SW846-6010B Analytes Arsenic | Blank Sample Result [A] ND | BLAN Spike Added [B] | K /BLANK S Blank Spike Result [C] 0.793 | Blank Spike %R [D] 99 | Spike Added [E] | PIKE DUPI Blank Spike Duplicate Result [F] 0.796 | JCATE Blk. Spk Dup. %R [G] 100 | RECOVI RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Units: mg/kg RCRA Metals by SW846-6010B Analytes Arsenic Barium | Blank Sample Result [A] ND ND | BLAN Spike Added [B] 0.800 0.200 | K /BLANK S Blank Spike Result [C] 0.793 0.191 | Blank Spike %R [D] 99 96 | Spike Added [E] 0.8 0.2 | Blank Spike Duplicate Result [F] 0.796 0.198 | JICATE Bik. Spk Dup. %R [G] 100 99 | RECOVI RPD % 0 4 | Control Limits %R 75-125 75-125 | Y Control Limits %RPD 20 20 | Flag |
| Units: mg/kg RCRA Metals by SW846-6010B Analytes Arsenic Barium Cadmium | Blank Sample Result [A] ND ND ND | BLAN Spike Added [B] 0.800 0.200 0.200 | K /BLANK Spike Result [C] 0.793 0.191 0.191 | Blank Spike %R [D] 99 96 96 | BLANK S Spike Added [E] 0.8 0.2 0.2 | Blank Spike Duplicate Result [F] 0.796 0.198 0.200 | JCATE Bik. Spk Dup. %R [G] 100 99 100 | RECOVI RPD % 0 4 5 | Control Limits %R 75-125 75-125 75-125 | Y Control Limits %RPD 20 20 20 20 | Flag |
| Units: mg/kg RCRA Metals by SW846-6010B Analytes Arsenic Barium Cadmium Chromium | Blank Sample Result [A] ND ND ND ND | BLAN Spike Added [B] 0.800 0.200 0.200 0.200 | K /BLANK S Blank Spike Result [C] 0.793 0.191 0.191 0.195 | Blank Spike %R [D] 99 96 96 98 | BLANK S Spike Added [E] 0.8 0.2 0.2 0.2 0.2 | Blank Spike Duplicate Result [F] 0.796 0.198 0.200 0.197 | JCATE Bik. Spk Dup. %R [G] 100 99 100 99 | RECOVI RPD % 0 4 5 1 | Control Limits %R 75-125 75-125 75-125 75-125 | Control Limits %RPD 20 20 20 20 20 | Flag |
| Units: mg/kg RCRA Metals by SW846-6010B Analytes Arsenic Barium Cadmium Chromium Lead | Blank Sample Result [A] ND ND ND ND ND ND | BLAN Spike Added [B] 0.800 0.200 0.200 0.200 1.10 | K /BLANK Spike Result [C] 0.793 0.191 0.191 0.195 1.12 | Blank Spike %R [D] 99 96 96 96 98 102 | Spike Added [E] 0.8 0.2 0.2 1.1 | Blank Spike Duplicate Result [F] 0.796 0.198 0.200 0.197 1.11 | JCATE Bik. Spk Dup. %R [G] 100 99 100 99 101 | RECOVI RPD % 0 4 5 1 1 | Control Limits %R 75-125 75-125 75-125 75-125 75-125 75-125 | Control Limits %RPD 20 20 20 20 20 20 20 | Flag |
| Units: mg/kg RCRA Metals by SW846-6010B Analytes Arsenic Barium Cadmium Chromium Lead Selenium | Blank Sample Result [A] ND ND ND ND ND ND ND | BLAN Spike Added [B] 0.800 0.200 0.200 0.200 1.10 0.400 | K /BLANK S Blank Spike Result [C] 0.793 0.191 0.191 0.195 1.12 0.434 | Blank Spike %R [D] 99 96 98 102 109 | BLANK S Spike Added [E] 0.8 0.2 0.2 0.2 0.2 1.1 0.4 | Blank Spike Duplicate Result [F] 0.796 0.198 0.200 0.197 1.11 0.418 | JCATE Blk. Spk Dup. %R [G] 100 99 100 99 101 105 | RECOVI % 0 4 5 1 1 4 | Control Limits %R 75-125 75-125 75-125 75-125 75-125 75-125 75-125 | Control Limits %RPD 20 20 20 20 20 20 20 20 20 | Flag |

Relative Percent Difference RPD = 200*|(D-F)/(D+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



Work Order #: 305015

BS / BSD Recoveries

Project Name: Red Byrd # 4



| Work Order #: 305015 Analyst: OIB | 'n | te Prenar | ed: 06/05/200 | 18 | | | Proj Date Au | ect ID: 2 nalvzed: 0 | 2000-10479 16/05/2008 | | |
|-----------------------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|-------------------------------------------|-------------------------------|-------------------------|--------------------------|---------------------------|------|
| Lab Batch ID: 724606 Sample: 510146-1-B | KS | Batcl | h #: 1 | | | | | Matrix: V | Vater | | |
| Units: mg/L | | BLAN | K /BLANK S | SPIKE / E | BLANK S | PIKE DUPI | JCATE I | RECOVE | ERY STUD | Y | |
| TCLP SVOCs by EPA 8270C Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| 1,4-Dichlorobenzene | ND | 0.050 | 0.035 | 70 | 0.05 | 0.037 | 74 | 6 | 19-121 | 28 | |
| 2,4-Dinitrotoluene | ND | 0.050 | 0.044 | 88 | 0.05 | 0.047 | 94 | 7 | 22-135 | 38 | |
| Hexachlorobenzene | ND | 0.050 | 0.041 | 82 | 0.05 | 0.040 | 80 | 2 | 46-133 | 25 | |
| Hexachlorobutadiene | ND | 0.050 | 0.036 | 72 | 0.05 | 0.038 | 76 | 5 | 44-125 | 25 | |
| Hexachloroethane | ND | . 0.050 | 0.034 | 68 | 0.05 | 0.036 | 72 | 6 | 25-153 | 25 | |
| 2-methylphenol | ND | 0.050 | 0.030 | 60 | 0.05 | 0.031 | 62 | 3 | 14-176 | 25 | |
| 3&4-Methylphenol | ND | 0.100 | 0.057 | 57 | 0.1 | 0.059 | 59 | 3 | 14-176 | 25 | |
| د Nitrobenzene | ND | 0.050 | 0.036 | 72 | 0.05 | 0.038 | 76 | 5 | 65-135 | 25 | |
| Pentachlorophenol | ND | 0.050 | 0.040 | 80 | 0.05 | 0.040 | 80 | 0 | 17-117 | 50 | |
| Pyridine | ND | 0.050 | 0.011 | 22 | 0.05 | 0.012 | 24 | 9 | 16-86 | 28 | |
| 2,4,5-Trichlorophenol | ND | 0.050 | 0.041 | 82 | 0.05 | 0.042 | 84 | 2 | 65-135 | 25 | |
| 2,4,6-Trichlorophenol | ND | 0.050 | 0.040 | 80 | 0.05 | 0.043 | 86 | 7 | 65-135 | 25 | |

Relative Percent Difference RPD = 200*|(D-F)/(D+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

| | rm 3 - MS I | Recover | ries |) | | STER TH ACCO |
|-----------------------------------------|-----------------------------------|-----------------------|--------------------------------|-----------|-------------------------|--------------|
| Laboratories Project Na | me: Red Byrd # | 4 | | | | inela |
| Work Order #: 305015 | | | | | | |
| Lab Batch #: 724479 | | | Pr | oject ID: | 2000-1047 | 9 |
| Date Analyzed: 06/05/2008 | Date Prepared: | 06/05/2008 | | Analyst: | LATCOR | |
| QC- Sample ID: 304950-001 S | Batch #: | 1 | | Matrix: | Soil | |
| Reporting Units: mg/kg | MAT | 'RIX / MA' | FRIX SPIKE | RECO | VERY STL | JDY |
| Inorganic Anions by EPA 300 Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | %R [D] | Control Limits %R | Flag |
| Chloride | ND | 130 | 125 | 96 | 75-125 | |
| Lab Batch #: 724517 | | | | | | |
| Date Analyzed: 06/05/2008 | Date Prepared: | 06/05/2008 | | Analyst: | LATCOR | |
| QC- Sample ID: 305015-001 S | Batch #: | 1 | | Matrix: | Soil | |
| Reporting Units: ug/kg | MAT | 'RIX / MA' | TRIX SPIKE | RECO | VERY STU | JÐY |
| Mercury by SW 7471A Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | %R [D] | Control Limits %R | Flag |
| Mercury | ND | 50.00 | 58.50 | 117 | 75-125 | |
| Lab Batch #: 724520 | | 0.6/05/2000 | | | LATCOR | |
| Date Analyzed: 06/05/2008 | Date Prepared: | 00/03/2008 | | Anaiyst: | LAICOR | |
| QC- Sample ID: 305015-001 S | Batch #: | 1 | | Matrix: | Soil | |
| Reporting Units: mg/kg | MAT | | I'RIX SPIKE | RECO | VERY SIU | JDY |
| RCRA Metals by SW846-6010B Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | %R [D] | Control Limits %R | Flag |
| Silver | ND | 4.00 | ND | 0 | 75-125 | x |
| Chromium | 4.33 | 10.0 | 9.32 | 50 | 75-125 | x |
| Lead | ND | 55.0 | 41.2 | 75 | 75-125 | |
| Selenium | ND | 20.0 | 21.1 | 106 | 75-125 | |
| Barium | 16.0 | 10.0 | 25.5 | 95 | 75-125 | |
| Arsenic | 2.82 | 40.0 | 32.4 | 74 | 75-125 | x |
| Cadmium | ND. | 10.0 | 7.88 | 79 | 75-125 | 1 |

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



Form 3 - MS / MSD Recoveries

Project Name: Red Byrd # 4



| Work Order #: 305015 | | | | | | Project II | D: 2000-1 | 0479 | | | |
|------------------------------------------------------------------------------|-----------------------------------|------------------------|----------------------------------------|-------------------------------|-----------------------------|------------------------------------------|-----------------------------|----------|-------------------------|---------------------------|------|
| Lab Batch ID: 724700 (Date Analyzed: 06/05/2008 Reporting Units: mg/L | QC- Sample ID: Date Prepared: | 305015 06/05/2 M | -001 S 008 I ATRIX SPIK I | Ba An E / MAT | tch #: alyst: RIX SPI | 1 Matrix | : Soil | OVERY | STUDY | | |
| TCLP VOAs by EPA 8260B Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | 0.431 | 2.50 | 5.83 | 216 | 2.50 | 5.83 | 216 | 0 | 66-142 | 21 | Х |
| 2-Butanone | ND | 25.0 | 26.6 | 106 | 25.0 | 26.9 | 108 | 2 | 60-140 | 20 | |
| Carbon Tetrachloride | ND | 2.50 | 2.62 | 105 | 2.50 | 2.70 | 108 | 3 | 62-125 | 20 | |
| Chlorobenzene | ND | 2.50 | 4.64 | 186 | 2.50 | 4.81 | 192 | 3 | 60-133 | 21 | Х |
| Chloroform | ND | 2.50 | 2.94 | 118 | 2.50 | 2.81 | 112 | 5 | 74-125 | 20 | |
| 1,4-Dichlorobenzene | 0.313 | 2.50 | 5.43 | 205 | 2.50 | 4.37 | 162 | 23 | 75-125 | 20 | XF |
| 1,2-Dichloroethane | ND | 2.50 | 3.09 | 124 | 2.50 | 2.85 | 114 | 8 | 68-127 | 20 | |
| 1,1-Dichloroethene | ND | 2.50 | · 3.13 | 125 | 2.50 | 2.70 | 108 | 15 | 59-172 | 22 | |
| Tetrachloroethylene | ND | 2.50 | 2.83 | 113 | 2.50 | 2.61 | 104 | 8 | 71-125 | 20 | |
| Trichloroethene . | ND | 2.50 | 2.94 | 118 | 2.50 | 2.47 | 99 | 18 | 62-137 | 24 | |
| Vinyl Chloride | ND | 2.50 | 2.81 | 112 | 2.50 | 2.56 | 102 | 9 | 75-125 | 20 | |

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

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 # 4

Work Order #: 305015

| Lab Batch #: 724270 | | | Project I | D: 2000-104 | 79 |
|--------------------------------------|--------------------------------|--------------------------------------|------------------|---------------------------|-------|
| Date Analyzed: 06/03/2008 Date Pr | epared: 06/0 | 3/2008 | Analy | rst: JLG | |
| QC- Sample ID: 305015-001 D | latch #: 1 | | Matr | ix: Soil | |
| Reporting Units: Deg F | SAMPLE | / SAMPLE | DUPLIC | ATE REC | OVERY |
| Flash Point (CC) SW-846 1010 | Parent Sample Result [A] | Sample Duplicate Result | RPD | Control Limits %RPD | Flag |
| Analyte | | [0] | | | |
| Flash Point | > 150 | > 150 | 0 | 25 | |
| Lab Batch #: 724479 | | | | | |
| Date Analyzed: 06/05/2008 Date Pr | epared: 06/0 |)5/2008 | Analy | st: LATCOF | ι |
| QC- Sample ID: 304950-001 D E | atch #: 1 | | Matr | ix: Soil | |
| Reporting Units: mg/kg | SAMPLE | / SAMPLE | DUPLIC | ATE REC | OVERY |
| Inorganic Anions by EPA 300 | Parent Sample Result [A] | Sample Duplicate Result | RPD | Control Limits %RPD | Flag |
| Analyte | | [D] | | | |
| Chloride | ND | ND | NC | 20 | |
| Lab Batch #: 724278 | | | * | | |
| Date Analyzed: 06/03/2008 Date Pr | epared: 06/0 |)3/2008 | Analy | st: JLG | |
| QC- Sample ID: 305015-001 D | Satch #: 1 | | Matr | ix: Soil | |
| Reporting Units: | SAMPLE | / SAMPLE | DUPLIC | ATE REC | OVERY |
| Paint Filter Liquids Test by SW-9095 | Parent Sample Result [A] | Sample Duplicate Result {B] | RPD | Control Limits %RPD | Flag |
| Paint Eilter | ND | ND | NC | | |
| | | | I NC | | |
| Lab Batch #: 724739 | | 6/2009 | 4 | TTC | |
| Date Analyzed: 00/00/2008 Date Fr | epareu: 00/0 | 0/2008 | Analy | | |
| QC- Sample ID: 303299-001 D | SAMDIE | SAMDIE | | IX: Soil | OVEDV |
| | SAWIFLE | SAWIFLE | | ALE REU | |
| Percent Moisture | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Analyte | | [27] | | | |
| Percent Moisture | 0.523 | 0.546 |) 4 | 20 | |

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



• #



Project Name: Red Byrd # 4

Work Order #: 305015

| Lab Batch #: 724550 Date Analyzed: 06/10/2008 Date | Prepared: 06/1 | 0/2008 | Project I Analy | D: 2000-104 st: WRU | 179 |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------------------------------|---------------|
| QC- Sample ID: 305015-001 D | Batch #: | /SAMDI F | Matr | IX: Soil | OVEDV |
| Keporting Units: mg/kg | SAMPLE | / SAMPLE | DUPLIC | AIE REU | OVERT |
| Reactive Cyanide by EPA 9010 Analyte | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Cyanide | ND | ND | NC | 20 | |
| Lab Batch #: 724536 | | | | | |
| Date Analyzed: 06/05/2008 Date | Prepared: 06/0 |)5/2008 | Analy | st: WRU | |
| QC- Sample ID: 305015-001 D | Batch #: | l | Matr | ix: Soil | |
| Reporting Units: mg/kg | SAMPLE | / SAMPLE | DUPLIC | ATE REC | OVERY |
| Reactive Sulfide by SW 9030B | Parent Sample Result | Sample Duplicate Result | RPD | Control Limits %RPD | Flag |
| Analyte | | [B] | | | |
| Analyte Sulfide | ND | [B] ND | NC | 20 | |
| Analyte Sulfide Lab Batch #: 724274 Date Analyzed: 06/03/2008 Date QC- Sample ID: 305015-001 D | IA] ND Prepared: 06/0 Batch #: 1 | IB ND 03/2008 | NC Analy Matr | 20 st: JLG ix: Soil | |
| Analyte Sulfide Lab Batch #: 724274 Date Analyzed: 06/03/2008 Date QC- Sample ID: 305015-001 D Reporting Units: SU | IA] ND Prepared: 06/0 Batch #: 1 SAMPLE | [B] ND 03/2008 | NC Analy Matr DUPLIC | 20 st: JLG ix: Soil ATE REC | OVERY |
| Analyte Sulfide Lab Batch #: 724274 Date Analyzed: 06/03/2008 Date QC- Sample ID: 305015-001 D Reporting Units: SU Soil pH by EPA 9045C Analyte | IA] ND Prepared: 06/0 Batch #: 1 SAMPLE Parent Sample Result IA] | (B) ND 03/2008 / SAMPLE Sample Duplicate Result [B] | Analy Matr DUPLIC RPD | 20 st: JLG ix: Soil ATE RECO Control Limits %RPD | OVERY Flag |

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



A Xenco Company

Plains All American EH & S ATTN: Camille Reynolds 1301 S. CR 1150 Midland, TX 79706 FAX: 432-687-4914

Sample Type: Soil Sample Condition: Intact/ 5.5 deg C Lab ID # 305015-001 Project Name Red Byrd # 4 Project # 2000-10479 Project Location: None Given Sample Date: 05/30/08 Sample Time. 12:40 Receiving Date: 05/30/08 Analysis Date: 06/04/08 Analysis Time: 08:02 Field Code: LF Smpl

| Analysis Description | Analysis Results pCl/gm | Analysis Error +/ 2g | Analysis Results Bq/gm | Analysis Error +/- 2 0 | Analysis Test Method | Analysis Techniclan |
|-------------------------|-------------------------------|----------------------------|------------------------------|-----------------------------------------|----------------------------|------------------------|
| [| | | | | T | |
| Ra-226 | <6.40 | N/A | <0.24 | N/A | EPA 901.1M | IR |
| Ra-228 | <1.66 | N/A | <0.06 | N/A | EPA 901.1M | IR |
| Pb-210 | <5.63 | N/A | <0.21 | N/A | EPA 901.1M | IR |
| Th-228 | <14.58 | N/A | <0.54 | N/A | EPA 901.1M | IR |
| Total Activity | NSLF | N/A | NSLF | N/A | EPA 901.1M | IR |
| | | | | | | |
| Notes: NSLF - I | No Spectral Li | nes Found | | | | |
| | | | | | | |
| | | | | | | |

Quality Assurance Review

Environmental Lab of Texas assumes no liability for the use or interpretation of any analytical results other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

12600 West I-20 East, Odessa Texas 79765 P. (432) 563-1800 F. (432) 563-1713

Notes:

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Comments

- t
- 2. 3
- Soil and Sludge analysis results are reported on a wet basis or as received basis unless otherwise indicated The data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified Modified analysis procedures are procedures that are modified to meet certain specifications. An example would be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix. matrix
- 4
- matrix Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B. Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring decay chains and other prominent radioactive isotopes. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of isotopes that can isolely alpha or beta radiation. Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only). 5.
- 6 7 8
- All Gamma Spectroscopy was performed using high purity germanium detectors (HPGE).

Method References

- EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980 1
- ErA 800/4-80-052, resulted roccures to the Measurement of Rabioacovity in Drinking Water, Aug Standard Methods for the Examination of Water and Waste Water, 18th, 1992. EPA 80-846, Test Methods for Evaluating Solid Waste, Third Edition, (%86) (Updated through 1995) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983. 2. 3
- 4
- 5. . HASL 300

Definitions:

| i . | BDL | Analyte not detected because the value was below the detection limit. |
|------------|-----------------|----------------------------------------------------------------------------------------|
| 2 | ND | Not detected above the detection limit, |
| 3 | Detection Limit | The minimum amount of the analyte that can be detected utilizing the specific analysis |
| 4 | 8 | Method Blank |
| 5 | D | Method Duplicate |
| 6 | MS | Matrix Spike |
| 7. | S | Spike |
| 8. | RS | Reference Spike |
| 9. | SC | Subcontracted to qualified laboratory |
| 10. | NR | Not Referenced |
| 11. | N/A | Not applicable |
| 12. | MDA | Minimum detectable activity |
| | | |

Environmental Lab of Texas I, Ltd. assumes no liability for the use or interpretation of any analytical results other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the chent.

| ENVIRONMENTAL, GEOTECHNICAL AND CONSTRUCTION MATERIALS SERVICES | CHAIN OF CUSTODY RECORD |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TECHNOLOGIA Laboratory: ECC77 Address Consulting Engineera & Scientista Office Location Michand Contact: Phone: Phone: Phone: | Lab use only Due Date Term of coolers when rook ved (C) (5,5) Page of |
| Project Manager-1/2 1975 Smith PO/SO # 1949 3706 1 Sampler's Name Ch. 1976 Smith CAP112 Containers Project Name Project Name Project Name Notypo of Containers Notypo of | 1 人 人 Lub Sample (U (Lab Use Only) 子のテンパン - 0 人 |
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| T, - suudima Joor Rus | |
| Reference by (Signature) Date Time Received by (Signature) Date Time Reference by (Signature) Date Time Received by (Signature) Date Time Reference by (Signature) Date Time Received by (Signature) Date Time Reference by (Signature) Date Time Received by (Signature) Date Time | emil "=sult; to? Regnalds-Brjont |
| Relinquished by (Signature) Date Time Received by, (Signature) Date Time: Valix X WW Wastewater W Water S. Soil S. Soil L-Liqued A - Air Bag C. Charued tube VOA - 40 ml wal VGA - 40 ml wal MG - Amber for Glass + Litting Whater S. Soil on - Glass + Litting Po - Flastic or other | 1. Junited seals |
| Heuston Office Daths Office Fort Worth Office Austin Office 243 W. Sai, Binston Pley, N., Sait, O. 8901 Capital Investor Stats. 101 2003 Lamp (2018a) in 1913 Office 243 W. Sai, Binston Pley, N., Sait, O. 8901 Capital Investor Stats. 101 2003 Lamp (2018a) in 1913 Office 186 W. Sait, Binston Pley, N., Sait, O. 8901 Capital Investor Stats. 101 1913 Office 1914 Office 147 W. Sait, Binston Pley, N., Sait, O. 801 Capital Investor Stats. 101 1914 Office 1914 Office 147 U. Office 121 (Office Intel 2013) 121 (Office Intel 2013) 1857 2005000 Latos. 8, 268 Mol 2 1512 (42 Latos 10) | Atlenta Office 1* fr 31 Bix Circ String (10) Notross Generati (00) fr (10) (3) (4-2) (k) fr (10) (0) (0) |

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

| Client | Terracon / Plains |
|------------|-------------------|
| Date/ Time | 530.08 415 |
| Lab ID # | 305015 |
| Initials | al |

Sample Receipt Checklist

| | | | | Client in | itials |
|-----|--------------------------------------------------------|-------|----|--------------------------|--------|
| #1 | Temperature of container/ cooler? | Yes) | No | 5.5 °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? | Ves | No | Not Present | |
| #5 | Chain of Custody present? | Yes) | No | | |
| #6 | Sample instructions complete of Chain of Custody? | Yes | No | | |
| #7 | Chain of Custody signed when relinquished/ received? | Yes | No | | |
| #8 | Chain of Custody agrees with sample label(s)? | Yes) | No | ID written on Cont./ Lid | |
| #9 | Container label(s) legible and intact? | Yes' | No | Not Applicable | |
| #10 | Sample matrix/ properties agree with Chain of Custody? | Xes | No | | |
| #11 | Containers supplied by ELOT? | Yes | No | | |
| #12 | Samples in proper container/ bottle? | Yes | No | See Below | |
| #13 | Samples properly preserved? | Ves | No | See Below | |
| #14 | Sample bottles intact? | (es) | 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? | (res) | No | Not Applicable | |

Variance Documentation

| Contact | ····· | Contacted by: | Date/ Time- | |
|-------------------------|-------|---------------------------------------------------------------------------------|------------------------------------------|--|
| Regarding: | | | | |
| Corrective Action Taken | : | | | |
| Check all that Apply: | s | ee attached e-mail/ fax | | |
| | | ient understands and would like to pr poling process had begun shortly after | oceed with analysis ar sampling event | |

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Carrie Kelly

From: Sent: To: Subject: McDonaid, Clayton Alan [camcdonald@terracon.com] Monday, June 02, 2008 6 33 PM Carrie Kelly RE: Red Byrd #4

Carrie

Thank you for the heads up. We need to run all of the analysis listed ... Brent helped me with the required lab work. I am in houston but please call me in the mornng so that we can discuss and move forward.

Thanks again, Clay Mc 432-631-2205

From: Carrie Kelly [mailto:carrie.kelly@xenco.com] Sent: Man 6/2/2008 2:23 PM To: McDonald, Clayton Alan Subject: Red Byrd #4

Clay- I was out Friday so I am a little confused in trying to figure out what you wanted on your Red Byrd #4 COC?

On the COC it has Chloride, NORM, RCI, Total Metals, TCLP VOC, TCLP Semi-VOC, and paint filter; however, nothing is marked on the COC to actually run these tests.

Please let me know via phone or e-mail which tests you would like for us to run and we will get them started. Thanks!

1

Thanks- Carrie Kelly

Project Manager

Environmental Lab of Texas- A Xenco Company

12600 W. I-20 E.

Analytical Report 306047

for

PLAINS ALL AMERICAN EH&S

Project Manager: Camille Reynolds

Red Byrd # 4

2000-10479

24-JUN-08

E NVIRONMENTAL

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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 - Austin - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta



24-JUN-08



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

Reference: XENCO Report No: 306047 Red Byrd # 4 Project Address:

Camille Reynolds:

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 306047. 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. 306047 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 306047



PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd # 4

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|-----------------|--------------|---------------|
| CS-1 | S | Jun-17-08 15:00 | | 306047-001 |
| CS-2 | S | Jun-17-08 15:05 | | 306047-002 |
| CS-3 | S | Jun-17-08 15:10 | | 306047-003 |
| CS-4 | S | Jun-17-08 15:15 | | 306047-004 |



Project Id: 2000-10479

Certificate of Analysis Summary 306047

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd # 4

| Contact: Camille Reynolds | | | | Da | te Received in Lab: | Wed Jun-18-08 09:15 am |
|------------------------------------|------------|-----------------|-----------------|-----------------|-------------------------|------------------------|
| Project Location: | | | | | Report Date: | 24-JUN-08 |
| | | | | | Project Manager: | Brent Barron, II |
| | Lab Id: | 306047-001 | 306047-002 | 306047-003 | 306047-004 | |
| Amalusis Dequested | Field Id: | CS-1 | CS-2 | CS-3 | CS-4 | |
| Anuiysis Kequesieu | Depth: | | | | | |
| | Matrix: | SOIL | SOIL | SOIL | SOIL | |
| | Sampled: | Jun-17-08 15:00 | Jun-17-08 15:05 | Jun-17-08 15:10 | Jun-17-08 15:15 | |
| BTEX by EPA 8021B | Extracted: | Jun-20-08 10:05 | Jun-20-08 10:05 | Jun-20-08 10:05 | Jun-20-08 10:05 | |
| | Analyzed: | Jun-21-08 02:11 | Jun-21-08 02:35 | Jun-21-08 02:58 | Jun-21-08 03:22 | |
| | Units/RL: | mg/kg RL | mg/kg RL | mg/kg RL | mg/kg RL | |
| Benzene | | ND 0.0011 | ND 0.0011 | ND 0.0011 | ND 0.0011 | |
| Toluene | | ND 0.0022 | ND 0.0022 | ND 0.0023 | ND 0.0021 | |
| Ethylbenzene | | ND 0,0011 | ND 0.0011 | ND 0,0011 | ND 0.0011 | |
| m,p-Xylenes | | ND 0.0022 | ND 0.0022 | ND 0.0023 | ND 0.0021 | |
| o-Xylene | | ND 0.0011 | ND 0.0011 | ND 0.0011 | ND 0.0011 | |
| Total Xylenes | | ND | ND | ND | ND | |
| Total BTEX | | ND | ND | ND | ND | |
| Percent Moisture | Extracted: | | | | | |
| | Analyzed: | Jun-19-08 08:25 | Jun-19-08 08:25 | Jun-19-08 08:25 | Jun-19-08 08:25 | |
| | Units/RL: | % RL | % RL | % RL | % RL | |
| Percent Moisture | | 10.7 1.00 | 10.1 1.00 | 12.0 1.00 | 5.38 1.00 | |
| TPH by SW8015 Mod | Extracted: | Jun-18-08 14:30 | Jun-18-08 14.30 | Jun-18-08 14:30 | Jun-18-08 14:30 | |
| | Analyzed: | Jun-19-08 10:48 | Jun-19-08 11.44 | Jun-19-08 12:11 | Jun-19-08 12:39 | |
| | Units/RL: | mg/kg RL | mg/kg RL | mg/kg RL | mg/kg RL | |
| C6-C12 Gasoline Range Hydrocarbons | | ND 16.8 | ND 16.7 | ND 17.1 | ND 15.9 | |
| C12-C28 Diesel Range Hydrocarbons | | ND 16.8 | ND 16.7 | 24.1 17.1 | 19.9 15.9 | |
| C28-C35 Oil Range Hydrocarbons | | ND 16.8 | ND 16.7 | ND 17.1 | ND 15.9 | |
| Total TPH | | ND | ND | 24.1 | 19.9 | |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented Our liability is limited to the amount invoiced for this work order unless otherwise 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(PQL) and above the SQL(MDL).
- 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.
- * Outside XENCO'S scope of NELAC Accreditation

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Project Name: Red Byrd # 4

| ork Order #: 306047 | | | Project II | D: 2000-1047 | 9 | |
|---------------------------------------|--------------------------|------------------------|-----------------------|-----------------------|-------------------------|----------|
| Lab Batch #: 726132 | Sample: 306047-001 / SM | P Ba | tch: 1 Matri | ix: Soil | | |
| Units: mg/kg | | SU | RROGATE RI | ECOVERY | STUDY | |
| BTEX by H | EPA 8021B | Amount Found [A] | True Amount [B] | Recovery %R | Control Limits %R | Flags |
| Anal | lytes | | | [0] | | |
| 1,4-Difluorobenzene | | 0.0346 | 0.0300 | 115 | 80-120 | |
| 4-Bromofluorobenzene | | 0.0311 | 0.0300 | 104 | 80-120 | |
| Lab Batch #: 726132 | Sample: 306047-002 / SM | P Ba | tch: 1 Matri | ix: Soil | | |
| Units: mg/kg | | SU | RROGATE RI | ECOVERY | STUDY | |
| BTEX by I | EPA 8021B | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | | 0.0333 | 0.0300 | 111 | 80-120 | |
| A-Bromofluorobenzene | | 0.0312 | 0.0300 | 104 | 80-120 | |
| Lab Batch #: 726132 | Sample: 306047-003 / SM | P Ba | tch: 1 Matr | ix: Soil | | |
| Units: mg/kg SURROGATE RECOVERY STUDY | | | | | | |
| BTEX by EPA 8021B | | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | | 0.0340 | 0.0300 | 113 | 80-120 | |
| 4-Bromofluorobenzene | | 0.0316 | 0.0300 | 105 | 80-120 | |
| Lab Batch #: 726132 | Sample: 306047-004 / SM | P Ba | tch: 1 Matr | ix: Soil | 1 | |
| Units: mg/kg | - | SU | RROGATE R | ECOVERY | STUDY | |
| BTEX by I | EPA 8021B | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | | 0.0328 | 0.0300 | 109 | 80-120 | |
| 4-Bromofluorobenzene | | 0.0325 | 0.0300 | 108 | 80-120 | |
| Lab Batch #: 726132 | Sample: 511015-1-BKS/1 | BKS Rø | tch: 1 Matr | ix: Solid | L | <u> </u> |
| Units: mg/kg | SURROGATE RECOVERY STUDY | | | | | |
| BTEX by I | EPA 8021B | Amount Found | True Amount (B) | Recovery %R | Control Limits %R | Flag |
| Anal | lytes | [A] | [10] | [D] | | |
| Anal | lytes | [A] | 0.0300 | [D] 05 | 80-120 | |

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

*** Poor recoveries due to dilution





Project Name: Red Byrd # 4

| ork Order #: 306047 | | | Project II | D: 2000-1047 | 79 | | |
|----------------------|---------------------------------------|---------------------------------|-------------------------|------------------------|-------------------------|----------|--|
| Lab Batch #: 726132 | Sample: 511015-1-BLK/ | LK / BLK Batch: 1 Matrix: Solid | | | | | |
| Units: mg/kg | J | SURROGATE RECOVERY STUDY | | | | | |
| BTEX by l | EPA 8021B | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flag | |
| 1 4-Difluorobenzene | | 0.0336 | 0.0300 | 112 | 80-120 | | |
| 4-Bromofluorobenzene | | 0.0307 | 0.0300 | 102 | 80-120 | | |
| Lab Batch #: 726132 | Sample: 511015-1-BSD / | BSD Ba | tch: 1 Matri | ix: Solid | 1, | | |
| Units: mg/kg | translar. | SU | RROGATE RI | COVERY | STUDY | | |
| BTEX by I | EPA 8021B lvtes | Amount Found [A] | True Amount [B] | Recovery %R [D]` | Control Limits %R | Flage | |
| 1,4-Difluorobenzene | | 0.0267 | 0.0300 | 89 | 80-120 | | |
| 4-Bromofluorobenzene | | 0.0324 | 0.0300 | 108 | 80-120 | | |
| Lab Batch #: 726092 | Sample: 306047-001 / SM | IP Ba | tch: 1 Matri | ix: Soil | | | |
| Units: mg/kg | SURROGATE RECOVERY STUDY | | | | | | |
| TPH by SV | W8015 Mod | Amount Found [A] | True Amount [B] | Recovery %R | Control Limits %R | Flag | |
| Ana | lytes | | | ניטן | | | |
| 1-Chlorooctane | | 91.4 | 100 | 91 | 70-135 | | |
| o-Terpnenyi | | 51.3 | 50.0 | 103 | /0-135 | <u> </u> | |
| Lab Batch #: 726092 | Sample: 306047-001 S / N | AS Ba | tch: 1 Matri | ix: Soil | | | |
| Units: mg/kg | | SU | RROGATE KI | ECOVERY | STUDY | | |
| TPH by SV | W8015 Mod lytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flag | |
| 1-Chlorooctane | · · · · · · · · · · · · · · · · · · · | 98.4 | 100 | 98 | 70-135 | | |
| o-Terphenyl | | 55.0 | 50.0 | 110 | 70-135 | | |
| Lab Batch #: 726092 | Sample: 306047-001 SD / | MSD Ba | tch: ¹ Matri | ix: Soil | | | |
| Units: mg/kg | | SU | RROGATE RI | ECOVERY | STUDY | | |
| TPH by SV | W8015 Mod | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flag | |
| 1-Chlorooctane | · | 91.4 | 100 | 91 | 70-135 | | |
| | | 1 | | | 1 | | |

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

*** Poor recoveries due to dilution





Project Name: Red Byrd # 4

| ork Order #: 3 | 06047 | | Project II |): 2000-1047 | 79 | | | | | | | | |
|----------------|----------------------------------------|--------------------------|------------------------|-----------------------|-------------------------|----------|--|--|--|--|--|--|--|
| Lab Batch #: 7 | 26092 Sample: 306047-002 | / SMP Bat | ch: ¹ Matri | x: Soil | | | | | | | | | |
| Units: m | ng/kg | SUI | RROGATE RE | ECOVERY | STUDY | | | | | | | | |
| , | TPH by SW8015 Mod | Amount Found [A] | True Amount [B] | Recovery %R | Control Limits %R | Flags | | | | | | | |
| | Analytes | | | נען | | | | | | | | | |
| 1-Chlorooctane | | 87.8 | 100 | 88 | 70-135 | | | | | | | | |
| o-Terphenyl | | 49.3 | 50.0 | 99 | 70-135 | | | | | | | | |
| Lab Batch #: 7 | 26092 Sample: 306047-003 | / SMP Bat | ch: 1 Matri | x: Soil | | | | | | | | | |
| Units: n | ng/kg | SUI | RROGATE RE | ECOVERY | STUDY | | | | | | | | |
| | TPH by SW8015 Mod | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags | | | | | | | |
| 1-Chlorooctane | | 88.7 | 100 | 89 | 70-135 | | | | | | | | |
| o-Terphenyl | | 50.4 | 50.0 | 101 | 70-135 | <u> </u> | | | | | | | |
| | 26002 | | | [] | | | | | | | | | |
| Lab Batch #: / | 20092 Sample: 500047-004 | / SMP Bat | Ch: 1 Matri | X: SOIL | STUDY | | | | | | | | |
| | ig/ ng | | | | | | | | | | | | |
| | TPH by SW8015 Mod | Amount Found [A] | True Amount [B] | Recovery %R | Control Limits %R | Flags | | | | | | | |
| 1.611 | Analytes | | | | | | | | | | | | |
| 1-Chlorooctane | | 87.6 | 100 | 88 | 70-135 | | | | | | | | |
| o-Terpnenyl | | 49.0 | 50.0 | 98 | 70-135 | | | | | | | | |
| Lab Batch #: 7 | 26092 Sample: 510987-1-Bl | KS / BKS Bat | ch: 1 Matri | ix: Solid . | | | | | | | | | |
| Units: # | ng/kg | SUI | RROGATE RE | ECOVERY | STUDY | | | | | | | | |
| | TPH by SW8015 Mod Analytes | Amount Found / [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags | | | | | | | |
| 1-Chlorooctane | | 86.9 | 100 | 87 | 70-135 | | | | | | | | |
| o-Terphenyl | | 48.8 | 50.0 | 98 | 70-135 | <u></u> | | | | | | | |
| Lab Batch #: 7 | 26092 Sample: 510987-1-BI | LK/BLK Bat | ch: 1 Matri | x: Solid | • | | | | | | | | |
| Units: m | ng/kg | SUI | RROGATE RE | COVERY | STUDY | | | | | | | | |
| | TPH by SW8015 Mod Analytes | Amount Found [A] | True Amount {B} | Recovery %R [D] | Control Limits %R | Flags | | | | | | | |
| 1-Chlorooctane | ······································ | 81.4 | 100 | 81 | 70-135 | | | | | | | | |
| o-Terphenyl | | 46.7 | 50.0 | 93 | 70-135 | | | | | | | | |

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

*** Poor recoveries due to dilution



Form 2 - Surrogate Recoveries



Project Name: Red Byrd # 4

| Vork Order #: 3 Lab Batch #: 7 Units: 1 | 306047 726092 ng/kg | Sample: 510987-1-BSD / BSD | Ba SU | Project II atch: 1 Matri JRROGATE RI | D: 2000-1047 ix: Solid ECOVERY S |)479 Y STUDY | | | | | | | | |
|-----------------------------------------------|---------------------------|----------------------------|------------------------|--------------------------------------------|----------------------------------------|-------------------------|-------|--|--|--|--|--|--|--|
| | TPH by SW80 Analyte | 15 Mod | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags | | | | | | | |
| 1-Chlorooctane | | | 88.0 | 100 | 88 | 70-135 | | | | | | | | |
| o-Terphenyl | | | 48.8 | 50.0 | 98 | 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.



BS / BSD Recoveries



Project Name: Red Byrd # 4

| Work Order #: 306047 Analyst: SHE | Project ID: 2000-10479 Date Prepared: 06/20/2008 Date Analyzed: 06/21/2008 | | | | | | | | | | | | |
|-----------------------------------------|----------------------------------------------------------------------------------------------|-----------------------|---------------------------------|-----------------------------------------|-----------------------|-------------------------------------------|-------------------------------|----------|-------------------------|---------------------------|------|--|--|
| Lab Batch ID: 726132 Sample: 511015-1-1 | 3KS Batch #: 1 Matrix: Solid | | | | | | | | | | | | |
| Units: mg/kg | | BLAN | K /BLANK S | SPIKE / I | BLANK S | SPIKE DUPI | LICATE | RECOVE | RY STUD | Ŷ | | | |
| BTEX by EPA 8021B | Blank Sample Result [A] | Spike Added | Blank Spike Result | Blank Spike %R | Spike Added | Blank Spike Duplicate Besult (F) | Blk. Spk Dup. %R | RPD % | Control Limits %R | Control Limits %RPD | Flag | | |
| Analytes | | [2] | | | [E] | Kesun [F] | [0] | | | ļ | | | |
| Benzene | ND | 0.1000 | 0.1072 | 107 | 0.1 | 0.1125 | 113 | 5 | 70-130 | 35 | ļ | | |
| Toluene | ND | 0.1000 | 0.1025 | 103 | 0.1 | 0.1092 | 109 | 6 | 70-130 | 35 | ļ | | |
| Ethylbenzene | ND | 0.1000 | 0.1123 | 112 | 0.1 | 0.1203 | 120 | 7 | 71-129 | 35 | L | | |
| m,p-Xylenes | ND | 0.2000 | 0.2245 | 112 | 0.2 | 0.2416 | 121 | 7 | 70-135 | 35 | | | |
| o-Xylene | ND | 0.1000 | 0.1138 | 114 | 0.1 | ~ 0.1200 | 120 | 5 | 71-133 | 35 | | | |
| Analyst: ASA | D | ate Prepar | ed: 06/18/200 | I: 06/18/2008 Date Analyzed: 06/18/2008 | | | | | | | | | |
| Lab Batch ID: 726092 Sample: 510987-1-1 | -BKS Batch #: 1 Matrix: Solid | | | | | | | | | | | | |
| Units: ^{mg/kg} | | BLAN | K/BLANK S | SPIKE / I | BLANK S | SPIKE DUPI | LICATE | RECOVE | ERY STUD | PΥ | | | |
| TPH by SW8015 Mod Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag | | |
| C6-C12 Gasoline Range Hydrocarbons | ND | 1000 | 821 | 82 | 1000 | 828 | 83 | 1 | 70-135 | 35 | | | |
| C12-C28 Diesel Range Hydrocarbons | ND | 1000 | 807 | 81 | 1000 | 805 | 81 | 0 | 70-135 | 35 | | | |

Relative Percent Difference RPD = 200*[(D-F)/(D+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 #4



| Work Order #: 306047 | | | | | | Project II | D: 2000-1 | 0479 | | | | |
|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------|------------------|--------------|----------------------------|------------------|---------|-------------------|-------------------|------|--|
| Lab Batch ID: 726092 Q Date Analyzed: 06/19/2008 I | QC- Sample ID: 306047-001 S Batch #: 1 Matrix: Soil Date Prepared: 06/18/2008 Analyst: ASA | | | | | | | | | | | |
| Reporting Units: mg/kg | | M | ATRIX SPIK | E / MAT | RIX SPI | KE DUPLICA | TE REC | OVERY S | STUDY | | | |
| TPH by SW8015 Mod | Parent Sample Bosult | Spike | Spiked Sample Result | Spiked Sample | Spike | Duplicate Spiked Sample | Spiked Dup. | RPD | Control Limits | Control Limits | Flag | |
| Analytes | [A] | Added [B] | | %R [D] | Added [E] | Kesut [r] | %R [G] | 70 | 70R | %RPD | | |
| C6-C12 Gasoline Range Hydrocarbons | ND | 1120 | 967 | 86 | 1120 | 933 | 83 | 4 | 70-135 | 35 | | |
| C12-C28 Diesel Range Hydrocarbons | ND | 1120 | 953 | 85 | 1120 | 931 | 83 | 2 | 70-135 | 35 | | |

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

ND = Not Detected, J = Present Below Reporting Limut, 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 # 4

Work Order #: 306047

| Lab Batch #: 725843 Date Analyzed: 06/19/2008 QC- Sample ID: 306047-001 D | Date Prepared: () Batch #: | 06/19/2008 1 | Project I Analy Matr | D: 2000-104 st: IRO ix: Soil | 479 |
|---------------------------------------------------------------------------------|-------------------------------|------------------------------------|----------------------------|------------------------------------|-------|
| Reporting Units: % | SAMPI | LE / SAMPLE | DUPLIC | ATE REC | OVERY |
| Percent Moisture | Parent Sam Result [A] | pple Sample Duplicate Result | RPD | Control Limits %RPD | Flag |
| Analyte | | [B] | | | |
| Percent Moisture | 10.7 | 11.0 | 3 | 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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| Proj. | No. | <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u> | Proje | ct Ne | erne Q | J P | tand | <u>, k</u> | -Y | NoT | ype of C | ontain aler | era c | | k | ∛՝ | J, | | ' / | / | 1 | | | | | | | |
| Matrio | Date | Time | Com | Ģ | Identity | ing Manks of t | Sample(s) | E E | | VOA | MG | 250 | - P/0 | | Ind | | 7 / | | | / , | I_{\perp} | 1, | / | i ah i | Samole | liD (Larba) | ise Only | |
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Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

| Client. | Terracon / Plains |
|------------|-------------------|
| Date/ Time | 618.08 9.15 |
| Lab ID # · | 306047 |
| Initials | al |

Sample Receipt Checklist

| | | _ | | Client | t Initials |
|-----|--------------------------------------------------------|-------|----|--------------------------|------------|
| #1 | Temperature of container/ cooter? | (es) | No | 1.5 .0 | |
| #2 | Shipping container in good condition? | Kes | No | | |
| #3 | Custody Seals intact on shipping container/ cooler? | Yes | No | Not Present | |
| #4 | Custody Seals intact on sample bottles/ container? | (fes) | 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? | | No | | |
| #8 | Chain of Custody agrees with sample label(s)? | Kez | No | ID written on Cont / Lid | |
| #9 | Container label(s) legible and intact? | (eg | 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? | | No | See Below | |
| #13 | Samples properly preserved? | fes | 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? | feg | 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? | res | 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

APPENDIX D

Site Photographs

Plains Pipeline, L.P.

Red Byrd #4 – Monument Monument, Lea County, New Mexico SRS # 200-10479



Initial assessment photographs. Southeast corner looking north and Southeast corner looking west.

Plains Pipeline, L.P. Red Byrd #4 – Monument Monument, Lea County, New Mexico SRS # 200-10479



Plains Pipeline, L.P.

Red Byrd #4 – Monument Monument, Lea County, New Mexico SRS # 200-10479


Plains Pipeline, L.P. Red Byrd #4 – Monument Monument, Lea County, New Mexico SRS # 200-10479



Photographs of site delineation trenches. Trenches were approximately 24 inches wide and 24 inches below ground surface.

Red Byrd #4 – Monument Monument, Lea County, New Mexico SRS # 200-10479



Photographs of site delineation trenches. Trenches were approximately 24 inches wide and 24 inches below ground surface.

Red Byrd #4 – Monument Monument, Lea County, New Mexico SRS # 200-10479



Photographs of site excavation activities.

Red Byrd #4 – Monument Monument, Lea County, New Mexico SRS # 200-10479



Photographs of site excavation activities and transport of excavated material to Plains Lea Station Land Farm.

Plains Pipeline, L.P.

Red Byrd #4 – Monument Monument, Lea County, New Mexico SRS # 200-10479



Photographs of site restoration activities and excavation / transport of ambient soil from landowner approved area.

Red Byrd #4 – Monument Monument, Lea County, New Mexico SRS # 200-10479



Photographs of site following restoration activities.