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Annual GW Mon. REPORTS



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APR - 1 2010 Environmental Bureau Oil Conservation Division

2009

ANNUAL MONITORING REPORT

RED BYRD #1 SE ¼ NE ¼ SECTION 1, TOWNSHIP 20 SOUTH, RANGE 36 EAST LATITUDE 32° 36' 10.15" NORTH, LONGITUDE 103° 18' 00.35" WEST LEA COUNTY, NEW MEXICO PLAINS SRS NUMBER: TNM RED BYRD #1 NMOCD REF: 1RP-0085

PREPARED FOR:



PLAINS MARKETING, L.P. 333 CLAY STREET, SUITE 1600 HOUSTON, TEXAS 77002

PREPARED BY:

BASIN ENVIRONMENTAL CONSULTING, LLC P. O. Box 381 Lovington, New Mexico 88260

March 2010

Curt D. Stanley

Project Manager

PLAINS ALL AMERICAN

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March 30, 2010

APR - 1 2010

Environmental Bureau Oil Conservation Division

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

Re: Plains All American – 2009 Annual Monitoring Reports 4 Sites in Lea County, New Mexico

1 Site in Eddy County, New Mexico

Dear Mr. Hansen:

Plains All American is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains All American actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring reports for the following sites:

Lovington Gathering WTI	1RP-838	Section 06, T17S, R37E, Lea County
Red Byrd #1	1R-0085	Section 01, T20S, R36E, Lea County
DCP Plant to Lea Sta. 6" #2	1R-2136	Section 31, T20S, R37E, Lea County
DCP Plant to Lea Sta. 6" Sec.31	1R-2166	Section 31, T20S, R37E, Lea County
Ballard Grayburg 5-Inch	2R-0053	Section 10, T18S, R29E, Eddy County

Basin Environmental Consulting, LLC (Basin) prepared these documents and has vouched for their accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the documents and interviewed Basin personnel in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Reports for the above facilities.

If you have any questions or require further information, please contact me at (575) 441-1099.

Sincerely,

Jason Henry ^V Remediation Coordinator Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM Enclosures

2530 State Hwy, 214 • Denver City, TX 79323 • (575)441-1099

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INTRODUCTION

On behalf of Plains Marketing, L.P. (Plains), Basin Environmental Consulting, LLC (Basin) is pleased to submit this Annual Monitoring Report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1 of each year. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2009 only. For reference, a Site Location Map is provided as Figure 1.

Groundwater monitoring was conducted during each quarter of 2009 to assess the levels and extent of dissolved phase constituents and Phase Separated Hydrocarbon (PSH). The groundwater monitoring events consisted of measuring static water levels in the monitor wells, checking for the presence of PSH and purging and sampling of each well exhibiting sufficient recharge. Monitor wells containing a thickness of PSH greater than 0.01 foot were not sampled.

SITE DESCRIPTION AND BACKGROUND INFORMATION

The site is located approximately four (4) miles southwest of the town of Monument, New Mexico in the SE 1/4 of the NE 1/4 of Section 1, Township 20 South, Range 36 East. Evidence of a historical release was brought to the attention of Enron Oil Trading and Transportation (EOTT) (who acquired the pipeline from Texas New Mexico Pipeline Company in 1999), by Mr. Red Byrd in January 2000. On January 1, 2009, Basin assumed oversight of groundwater daily operations, sampling and reporting at the release site.

Approximately 8,900 cubic yards of impacted soil was excavated, shredded and blended with nutrients. Approximately 3,700 cubic yards of the impacted soil was transported to Plains Lea Station to be used as berm material. On completion of excavation activities, confirmation soil samples were collected from the excavation and stockpiles. Review of analytical results indicated soil samples collected from the excavation were less than NMOCD regulatory standards. The excavation was backfilled with the blended soil and approximately 3,500 cubic yards of topsoil was transported onsite and the area was contoured to topographic grade.

At the Red Byrd #1 site, two areas of hydrocarbon impact related to the Plains pipeline have been identified. The first area of impact (Red Byrd#1) is the subject of this Annual Monitoring Report and is centered on and around monitor well MW-1. The soil issues at the Red Byrd #1 site have been have been remediated and groundwater monitoring and sampling are on going. The second area of impact (Red Byrd Ranch Historical – 1R 1299) related to the Plains pipeline is centered on monitor well MW-12.

In May 2008, Plains submitted a Site Investigation Report to the NMOCD. The Site Investigation Report documented the delineation and remediation activities to date at the site(s). In the report, Plains presented evidence indicating there are likely additional sources of dissolved phase contaminates (including petroleum hydrocarbons, chlorides, and total dissolved solids), which are or have contributed to the groundwater issues at the Red Byrd #1 site. These contaminates, outside of the Plains pipelines, have not been fully indentified.

On May 29, 2008, in correspondence to Plains, the NMOCD recommended the installation of one (1) monitor well (MW-19), located to the southeast of existing monitor well MW-15 to delineate the groundwater contaminant plume down gradient of monitor well MW-15. On July 15, 2008, Plains installed monitor well MW-19 to a depth of approximately forty-five (45) feet below ground surface (bgs).

On November 17, 2008, Plains assigned excavation oversight of the Red Byrd Ranch Historical release site to Basin. On December 10, 2008, Basin restarted excavation activities at the release site and on September 9, 2009 backfilling and restoration activities at the Red Byrd Ranch Historical release site were completed.

During the 1st quarter 2009 sampling event, additional groundwater samples were collected from each of the nineteen (19) on-site monitor wells and analyzed for concentrations of chloride and total dissolved solids (TDS). The analytical results indicated elevated TDS concentrations, in excess of 10,000 mg/L in fifteen (15) monitor wells, were present in the on-site monitor wells. Monitor wells located up gradient of the Red Byrd #1 and Red Byrd Ranch Historical releases exhibited elevated TDS concentrations, as well as monitor wells associated with the release(s). Based on the up gradient position of the monitor wells containing elevated TDS and the presence of numerous (20 plus) pipelines in the area, abandoned pits located northwest and south of the releases, numerous facility and drilling pads, production wells, a refinery and a chemical plant all within one half mile of the release site, indicates there are multiple potential responsible parties contributing to the area groundwater plume. The NMWQQC regulations state groundwater exhibiting a TDS in excess of 10,000 mg/L is not abatable.

On September 9, 2009, Plains requested NMOCD approval to plug and abandon monitor wells exhibiting TDS concentrations exceeding 10,000 mg/L (MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14, MW-15, MW-16, and MW-19). Plains requested, monitor wells associated with the ongoing groundwater issues at the Red Byrd Ranch Historical release (MW-6, MW-7, MW-11, MW-12, MW-17, and MW-18) be placed on semi-annual sampling schedule to monitor the Red Byrd Ranch Historical PSH plume. On October 2, 2009, Plains received correspondence form the NMOCD Santa Fe Office, indicating the NMOCD had approved the modified sampling schedule and proposed plugging of monitor wells. The correspondence indicated monitor wells MW-6, MW-7, MW-11, MW-12, MW-16, MW-17, MW-18 and MW-19 may be placed on a semi-annual sampling schedule and monitor wells MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14 and MW-15 may be plugged and abandoned.

In October 2009, a Red Byrd Ranch Historical Remediation Summary and Soil Closure Request was submitted to the NMOCD Santa Fe Office. On December 9, 2009, Plains received correspondence from the NMOCD Santa Fe Office, indicating the report was accepted and no further soil remediation was required at the site.

On October 29, 2009, monitor wells MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14 and MW-15 were plugged and abandoned by a State of New Mexico licensed water well driller, as approved by the NMOCD. Following the plugging activities, plugging reports were submitted to the NMOCD Santa Fe Office.

During the 1st, 2nd, and 3rd quarter sampling events, eighteen (18) monitor wells were located at the Red Byrd #1 site. Currently, a total of eight (8) monitor wells (MW-6, MW-7, MW-11, MW-12, MW-16, MW-17, MW-18 and MW-19) are located on the Red Byrd #1 site.

RECENT FIELD ACTIVITIES

Product Recovery Efforts

A measurable thickness of PSH was detected in monitor well MW-12 throughout the 2009 reporting period. The average PSH thickness reported in monitor well MW-12 during the reporting period was 1.60 feet. The maximum PSH thickness was 2.17 feet on February 20, 2009.

Groundwater Monitoring

Quarterly monitoring events for the reporting period were performed according to the following sampling schedule, which was approved by the NMOCD in correspondence dated April 28, 2004 and confirmed by NMOCD correspondence dated June 22, 2005.

1 st , 2 nd and 3 rd QUARTER 2009 NMOCD APPROVED SAMPLING SCHEDULE										
Location	Schedule	Location	Schedule	Location	Schedule					
MW-1	Quarterly	MW-8	Quarterly	MW-15	Quarterly					
MW-2	P&A 11/9/06	MW-9	Quarterly	MW-16	Quarterly					
MW-3	Quarterly	MW-10	Quarterly	MW-17	Quarterly					
MW-4	Quarterly	MW-11	Quarterly	MW-18	Quarterly					
MW-5	Quarterly	MW-12	Quarterly	MW-19	Quarterly					
MW-6	Quarterly	MW-13	Quarterly							
MW-7	Quarterly	MW-14	Quarterly							

NMOCD correspondence received on October 2, 2009, concerns the following modifications to the sampling schedule.

$4^{th} \mathbf{Q} \mathbf{U} \mathbf{A}$	4 th QUARTER 2009 and subsequent years NMOCD APPROVED SAMPLING SCHEDULE											
Location	Schedule	Location	Schedule	Location	Schedule							
MW-1	P&A 10/29/09	MW-8	P&A 10/29/09	MW-15	P&A 10/29/09							
MW-2	P&A 11/9/06	MW-9	P&A 10/29/09	MW-16	Semi-Annually							
MW-3	P&A 10/29/09	MW-10	P&A 10/29/09	MW-17	Semi-Annually							
MW-4	P&A 10/29/09	MW-11	Semi-Annually	MW-18	Semi-Annually							
MW-5	P&A 10/29/09	MW-12	Semi-Annually	MW-19	Semi-Annually							
MW-6	Semi-Annually	MW-13	P&A 10/29/09									
MW-7	Semi-Annually	MW-14	P&A 10/29/09									

The site monitor wells were gauged and sampled on February 27, June 24, September 9 and November 12, 2009. During each sampling event, sampled monitor wells were purged of a minimum of three well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos pump. Groundwater was allowed to recharge and samples were obtained using disposable Teflon samplers. Water samples were collected in clean glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of at a licensed disposal facility.

Locations of the monitor wells and the inferred groundwater gradient, which were constructed from measurements collected during the four quarterly monitoring events, are depicted on Figures 2A through 2D, the Inferred Groundwater Gradient Maps. Groundwater elevation data for 2009 is provided as Table 1.

The most recent Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.0035 feet/foot to the south southeast as measured between monitor well MW-18 and MW-16. This is consistent with data presented from earlier in the year. The corrected groundwater elevation has ranged between 3531.19 and 3535.27 feet above mean sea level, in monitor wells MW-19 on November 12, 2009 and MW-13 on February 26, 2009, respectively.

LABORATORY RESULTS

Groundwater samples were collected from groundwater monitor wells during the quarterly monitoring events were delivered to Xenco Laboratories, Odessa, Texas for determination of benzene, toluene, ethylbenzene and xylenes (BTEX) constituent concentrations by EPA Method SW846-8021b. Pursuant to an NMOCD request, the groundwater monitor wells were sampled annually for concentrations of Poly Aromatic Hydrocarbons (PAH) utilizing EPA Method SW 8270C. A summary of 2009 Concentrations of Benzene, BTEX, Chloride and TDS in Groundwater and Concentrations of Poly Aromatic Hydrocarbons in Groundwater are presented in Table 2 and Table 4, respectively. The laboratory reports are provided as Appendix A.

Monitor well MW-1 was sampled during the 1st, 2nd and 3rd quarters of 2009. Analytical results indicated benzene concentrations ranged from 0.285 mg/L during the 2nd quarter to 0.7952 mg/L during the 3rd quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard of 0.01 mg/L during the 1st, 2nd and 3rd quarters of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.004 mg/L during the 1st quarter of the reporting period. Toluene concentrations were less than the NMOCD regulatory standard of 0.75 mg/L during the 1st, 2nd and 3rd quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0425 mg/L during the 2nd quarter to 0.145 mg/L during the 3rd quarter of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard of 0.75 mg/L during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 2nd quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 2nd quarter to 0.1024 mg/L during the 3rd quarter of the reporting period. Total xylene concentrations were less than the laboratory MDL during the 3rd quarter to 0.1024 mg/L during the 3rd quarter of the reporting period. Total xylene concentrations were less than the laboratory MDL during the 2nd quarters of the reporting period. Total xylene concentrations were less than the laboratory MDL during the 3rd quarters of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard of 0.62 mg/L during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard of 0.62 mg/L during the 1st, 2nd and 3rd quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of chloride and TDS. The analytical results for chloride and TDS indicated concentrations of 7,440 mg/L and 11,200 mg/L, respectively. The TDS concentration exceeded the NMOCD regulatory standard of 10,000 mg/L, for abatable groundwater. As approved by the NMOCD Santa Fe Office, monitor well MW-1 was plugged and abandoned on October 29, 2009.

Monitor well MW-3 was sampled during the 1st, 2nd and 3rd quarters of 2009. Analytical results indicated benzene concentrations ranged from 0.1608 mg/L during the 2nd quarter to 0.5818

mg/L during the 1st quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Toluene concentrations were less than the laboratory MDL and the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Ethylbenzene concentrations ranged from 0.022 mg/L during the 2nd quarter to 0.0866 mg/L during the 1st quarter of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations ranged from 0.0714 mg/L during the 2nd quarter to 0.164 mg/L during the 1st quarter of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations ranged from 0.0714 mg/L during the 2nd quarter to 0.164 mg/L during the 1st quarter of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations ranged from 0.0714 mg/L during the 2nd quarter to 0.164 mg/L during the 1st quarter of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of TDS. The analytical results for TDS indicated a concentration of 13,400 mg/L. The TDS concentration exceeded the NMOCD regulatory standard for abatable groundwater. As approved by the NMOCD Santa Fe Office, monitor well MW-3 was plugged and abandoned on October 29, 2009.

Monitor well MW-4 was sampled during the 1st, 2nd and 3rd quarters of 2009. Analytical results indicated benzene concentrations ranged from less than the laboratory MDL during the 2nd quarter to 0.0235 mg/L during the 3rd quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 1st and 3rd quarters of the reporting period. Toluene concentrations ranged from 0.0033 mg/L during the 2nd quarter to 0.0176 mg/L during the 3rd quarter of the reporting period. Toluene concentrations were less than the NMOCD regulatory standard during the 2nd quarters of the reporting period. Ethylbenzene concentrations ranged from 0.027 mg/L during the 2nd quarter to 0.1089 mg/L during the 1st quarter of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations ranged from 0.0362 mg/L during the 2nd quarter to 0.1538 mg/L during the 3rd quarter of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarter to 0.1538 mg/L during the 3rd quarter of the reporting period. Total xylene concentrations ranged from 0.0362 mg/L during the 2nd quarter to 0.1538 mg/L during the 3rd quarter of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarter to 0.1538 mg/L during the 3rd quarter of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarter to 0.1538 mg/L during the 3rd quarter of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of TDS. The analytical results for TDS indicated a concentration of 11,300 mg/L. The TDS concentration exceeded the NMOCD regulatory standard for abatable groundwater. As approved by the NMOCD Santa Fe Office, monitor well MW-4 was plugged and abandoned on October 29, 2009.

Monitor well MW-5 was sampled during the 1st, 2nd and 3rd quarters of 2009. Analytical results indicated benzene concentrations ranged from 0.0063 mg/L during the 3rd quarter to 0.0254 mg/L during the 1st quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 1st quarter of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 1st quarter to 0.0062 mg/L during the 3rd quarter of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 1st quarter to 0.0062 mg/L during the 3rd quarter of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0107 mg/L during the 1st quarter of the reporting period. Ethylbenzene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0107 mg/L during the 1st quarter of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory moleculatory MDL during the 2nd and 3rd quarters to 0.0107 mg/L during the 1st quarter of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory moleculatory MDL during the 2nd and 3rd quarters to 0.0107 mg/L during the 1st quarter of the reporting period.

standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations ranged from 0.0665 mg/L during the 3rd quarter to 0.1028 mg/L during the 2nd quarter of 2009.Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of chloride and TDS. The analytical results for chloride and TDS indicated concentrations of 7,270 mg/L and 12,900 mg/L, respectively. The TDS concentration exceeded the NMOCD regulatory standard for abatable groundwater. As approved by the NMOCD Santa Fe Office, monitor well MW-5 was plugged and abandoned on October 29, 2009.

Monitor well MW-6 was sampled on a quarterly schedule during the 2009 reporting period. Analytical results indicated benzene concentrations ranged from 0.0287 mg/L during the 1st quarter to 0.5374 mg/L during the 3rd quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during all four (4) quarters of the reporting period. Toluene concentrations ranged from 0.0152 mg/L during the 4th quarter to 0.7818 mg/L during the 3rd quarter of the reporting period. Toluene concentrations were above the NMOCD regulatory standard during the 3rd quarter of the reporting period. Toluene concentrations were above the NMOCD regulatory standard during the 3rd quarter of the reporting period. Ethylbenzene concentrations ranged from 0.0028 mg/L during the 4th quarter to 0.0242 mg/L during the 2nd quarter of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Total xylene concentrations ranged from 0.0518 mg/L during the 1st quarter to 1.5516 mg/L during the 3rd quarter of the reporting period. Total xylene concentrations were above the NMOCD regulatory standard during the 3rd quarter of the reporting period. Total xylene concentrations were above the NMOCD regulatory standard during the 3rd quarter of the reporting period. Total xylene concentrations period. Total xylene concentrations period. Total xylene concentrations were above the NMOCD regulatory standard during the 3rd quarter of the reporting period. Total xylene concentrations were above the NMOCD regulatory standard during the 3rd quarter of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of TDS. The analytical results for TDS indicated a concentration of 14,600 mg/L. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-7 was sampled on a quarterly schedule during the 2009 reporting period. Analytical results indicated benzene concentrations ranged from 0.0011 mg/L during the 2nd quarter to 0.0051 mg/L during the 3rd quarter of 2009. Benzene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Toluene concentrations were less than the MDL and NMOCD regulatory standard for all four (4) quarters of the 2009 reporting period. Ethylbenzene concentrations ranged from less than the laboratory MDL during the 1st, 2nd, and 4th quarters to 0.0012 mg/L during the 3rd quarter of the reporting period. Ethylbenzene concentrations ranged from 0.0011 mg/L during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0011 mg/L during the 1st, 2nd, and 4th quarters to 0.0012 mg/L during the 3rd quarter of the reporting period. Ethylbenzene concentrations ranged from 0.0011 mg/L during the 2nd quarter to 0.0095 mg/L during the 3rd quarter of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Total xylene concentrations ranged from 0.0011 mg/L during the 2nd quarter to 0.0095 mg/L during the 3rd quarter of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of TDS. The analytical results for TDS indicated a concentration of 14,200 mg/L.

Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-8 was sampled during the 1st, 2nd and 3rd quarters of 2009. Analytical results indicated benzene concentrations ranged from 0.005 mg/L during the 2nd quarter to 0.0344 mg/L during the 1st quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 1st and 3rd quarters of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0026 mg/L during the 1st quarter of the reporting period. Toluene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Ethylbenzene concentrations ranged from less than the laboratory MDL during the 2nd quarter to 0.004 mg/L during the 1st quarter of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations were less than the NMOCD regulatory standard during the 3rd quarter to 0.0145 mg/L during the 3rd quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during the 3rd quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of chloride and TDS. The analytical results for chloride and TDS indicated concentrations of 7,630 mg/L and 11,900 mg/L, respectively. The TDS concentration exceeded the NMOCD regulatory standard for abatable groundwater. As approved by the NMOCD Santa Fe Office, monitor well MW-8 was plugged and abandoned on October 29, 2009.

Monitor well MW-9 was sampled during the 1st, 2nd and 3rd quarters of 2009. Analytical results indicated benzene concentrations ranged from 0.0011 mg/L during the 2nd quarter to 0.6513 mg/L during the 1st quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 1st and 3rd quarters of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0069 mg/L during the 1st quarter of the reporting period. Toluene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Ethylbenzene concentrations ranged from less than the laboratory MDL during the 2nd quarter to 0.0233 mg/L during the 1st quarter of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during MDL during the 2nd quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 2nd quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0352 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of TDS. The analytical results for TDS indicated a concentration of 10,300 mg/L. The TDS concentration exceeded the NMOCD regulatory standard for abatable groundwater. As approved by the NMOCD Santa Fe Office, monitor well MW-9 was plugged and abandoned on October 29, 2009.

Monitor well MW-10 was sampled during the 1^{st} , 2^{nd} and 3^{rd} quarters of 2009. Analytical results indicated benzene concentrations ranged from 0.0015 mg/L during the 3^{rd} quarter to 0.0816 mg/L during the 1^{st} quarter of 2009. Benzene concentrations were above the NMOCD regulatory

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standard during the 1st and 2nd quarters of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0046 mg/L during the 1st quarter of the reporting period. Toluene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Ethylbenzene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0078 mg/L during the 1st quarter of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0124 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations were less than the laboratory MDL during the 2nd and 3rd quarters to 0.0124 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of TDS. The analytical results for TDS indicated a concentration of 16,400 mg/L. The TDS concentration exceeded the NMOCD regulatory standard for abatable groundwater. As approved by the NMOCD Santa Fe Office, monitor well MW-10 was plugged and abandoned on October 29, 2009.

Monitor well MW-11 was sampled on a quarterly schedule during the 2009 reporting period. Analytical results indicated benzene concentrations ranged from 0.0089 mg/L during the 4th quarter to 0.432 mg/L during the 1st quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 1st, 2nd, and 3rd quarters of the reporting period. Toluene concentrations were less than the MDL and NMOCD regulatory standard for all four (4) quarters of the 2009 reporting period. Ethylbenzene concentrations ranged from less than the laboratory MDL during the 4th quarter to 0.0566 mg/L during the 1st quarter of the reporting period. Ethylbenzene concentrations ranged from less than the laboratory MDL during the 4th quarter to 0.0566 mg/L during the 1st quarter of the reporting period. Ethylbenzene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.027 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.027 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of chloride and TDS. The analytical results for chloride and TDS indicated concentrations of 6,670 mg/L and 10,600 mg/L, respectively. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-12 was monitored/sampled on a quarterly schedule during the 2009 reporting period. Monitor well MW-12 was not sampled during the first three quarters of the reporting period, due to the reported presence of PSH in the monitor well. PSH thicknesses of 1.54 feet, 1.82 feet and 1.61 feet were reported during the 1st, 2nd and 3rd quarters of 2009, respectively. Monitor well MW-12 was sampled during the 4th quarter of 2009 for BTEX, TPH and PAH. The analytical results of the groundwater collected from monitor well MW-12 indicated a benzene concentration of 0.0892 mg/L, a toluene concentration of less than the laboratory MDL of 0.0200 mg/L, a ethylbenzene concentration of 0.0112 mg/L and a total xylene concentration of 0.1691 mg/L during the 4th quarter of 2009. BTEX constituent concentrations were less than the NMOCD regulatory standard, with the exception of the benzene concentration, which exhibited a

concentration exceeding the NMOCD regulatory standard of 0.01 mg/L. Analytical results further indicated, a total TPH concentration of 700.3 mg/L.

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Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-13 was sampled during the 1st, 2nd and 3rd quarters of 2009. Analytical results indicated benzene, toluene, ethylbenzene and xylene concentrations were less than the laboratory MDL and the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of chloride and TDS. The analytical results for chloride and TDS indicated concentrations of 5,130 mg/L and 9,910 mg/L, respectively. As approved by the NMOCD Santa Fe Office, monitor well MW-13 was plugged and abandoned on October 29, 2009.

Monitor well MW-14 was sampled during the 1st, 2nd and 3rd quarters of 2009. Analytical results indicated benzene concentrations ranged from 0.0037 mg/L during the 2nd quarter to 0.0067 mg/L during the 1st quarter of 2009. Benzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 2nd quarter to 0.0033 mg/L during the 1st quarter of the reporting period. Toluene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0012 mg/L during the 2nd quarter to 0.0019 mg/L during the 3rd quarter of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0091 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0091 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of TDS. The analytical results for TDS indicated a concentration of 12,500 mg/L. The TDS concentration exceeded the NMOCD regulatory standard for abatable groundwater. As approved by the NMOCD Santa Fe Office, monitor well MW-14 was plugged and abandoned on October 29, 2009.

Monitor well MW-15 was sampled during the 1st, 2nd and 3rd quarters of 2009. Analytical results indicated benzene concentrations ranged from 0.6999 mg/L during the 2nd quarter to 0.9894 mg/L during the 3rd quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0034 mg/L during the 1st quarter of the reporting period. Toluene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarter to 0.1772 mg/L during the 3rd quarter of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Total xylene concentrations

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ranged from 0.0405 mg/L during the 2^{nd} quarter to 0.0776 mg/L during the 3^{rd} quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during the 1^{st} , 2^{nd} and 3^{rd} quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of TDS. The analytical results for TDS indicated a concentration of 10,700 mg/L. The TDS concentration exceeded the NMOCD regulatory standard for abatable groundwater. As approved by the NMOCD Santa Fe Office, monitor well MW-15 was plugged and abandoned on October 29, 2009.

Monitor well MW-16 was sampled on a quarterly schedule during the 2009 reporting period. Analytical results indicated benzene concentrations ranged from 0.014 mg/L during the 4th quarter to 0.2908 mg/L during the 1st quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during all four (4) quarters of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 2nd and 3rd quarters to 0.0053 mg/L during the 1st and 4th quarters of 2009. Toluene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0103 mg/L during the 4th quarter to 0.2225 mg/L during the 1st quarter of 2009. Ethylbenzene concentrations were less than the NMOCD regulatory standard during period. Total xylene concentrations ranged from 0.0566 mg/L during the 4th quarter to 0.6568 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during the 7th quarter to 0.6568 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during the 7th quarter to 0.6568 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during the 7th quarter to 0.6568 mg/L during the 2nd, 3rd and 4th quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of TDS. The analytical results for TDS indicated a concentration of 10,800 mg/L. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-17 was sampled on a quarterly schedule during the 2009 reporting period. Analytical results indicated benzene concentrations ranged from 0.0039 mg/L during the 4th quarter to 0.1962 mg/L during the 3rd quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 3rd and 4th quarters to 0.0046 mg/L during the 1st quarter of 2009. Toluene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0067 mg/L during the 2nd quarter to 0.0934 mg/L during the 3rd quarter of 2009. Ethylbenzene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 3rd quarter to 0.0934 mg/L during the 3rd quarter of 2009. Ethylbenzene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Total xylene concentrations ranged from 0.0021 mg/L during the 4th quarter to 0.0696 mg/L during the 3rd quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of chloride and TDS. The analytical results for chloride and TDS indicated concentrations of 5,460 mg/L and 7,200 mg/L, respectively. Analytical results indicate PAH

constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

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Monitor well MW-18 was sampled on a quarterly schedule during the 2009 reporting period. Analytical results indicated benzene concentrations ranged from 0.0013 mg/L during the 4th quarter to 0.0158 mg/L during the 3rd quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 3rd quarter of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 2nd and 4th quarters to 0.0073 mg/L during the 1st quarter of 2009. Toluene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from less than the laboratory MDL during the 4th quarter to 0.1158 mg/L during the 3rd quarter of 2009. Toluene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Ethylbenzene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 4th quarter to 0.0858 mg/L during the 3rd quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 4th quarter to 0.0858 mg/L during the 3rd quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of chloride and TDS. The analytical results for chloride and TDS indicated concentrations of 6,520 mg/L and 10,200 mg/L, respectively. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-19 was sampled on a quarterly schedule during the 2009 reporting period. Analytical results indicated benzene concentrations ranged from 0.0018 mg/L during the 2nd quarter to 0.0064 mg/L during the 4th quarter of 2009. Benzene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Toluene concentrations were less than the laboratory MDL and the NMOCD regulatory standard during all four (4) quarters of the reporting ranged from 0.0025 mg/L during the 4th quarter to 0.0878 mg/L during the 3rd quarter of 2009. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the 4th quarter to 0.0878 mg/L during the 3rd quarter of 2009. Ethylbenzene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 4th quarter to 0.0163 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period.

During the 1st quarter 2009 sampling event, groundwater samples were analyzed for concentrations of TDS. The analytical results for TDS indicated a concentration of 14,200 mg/L. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

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

SUMMARY

This report presents the results of monitoring activities for the 2009 annual monitoring period. Currently, there are eight (8) groundwater monitor wells (MW-6, MW-7, MW-11, MW-12, MW-16, MW-17, MW-18 and MW-19) on-site.

On October 29, 2009, monitor wells MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14 and MW-15 were plugged and abandoned by a State of New Mexico licensed water well driller, as approved by the NMOCD. Following the plugging activities, plugging reports were submitted to the NMOCD Santa Fe Office.

The most recent Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.0035 feet/foot to the south southeast.

A measurable thickness of PSH was detected in monitor well MW-12 throughout the 2009 reporting period. The average PSH thickness reported in monitor well MW-12 during the reporting period was 1.60 feet. The maximum PSH thickness was 2.17 feet on February 20, 2009.

During the reporting period approximately one hundred four (104) gallons of PSH was recovered from monitor well MW-12. Approximately 524 gallons of PSH has been recovered by manual recovery since project inception.

Review of laboratory analytical results generated from analysis of the groundwater samples obtained during the 2009 monitoring period indicates the benzene concentrations were above the NMOCD regulatory standard in two (2) of the eight (8) site monitor wells during the 4th quarter of the reporting period.

ANTICIPATED ACTIONS

PSH recovery will continue on a weekly schedule at monitor well MW-12. Recovered PSH will be disposed of at an NMOCD approved facility. Groundwater monitoring and sampling will continue in 2010. Annual Monitoring Report will be submitted to the NMOCD before April 1, 2011.

LIMITATIONS

Basin has prepared this Annual Monitoring Report to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin also notes that the facts and conditions

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referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

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

DISTRIBUTION

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Figures

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Tables

2009 GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P. RED BYRD #1 LEA COUNTY, NEW MEXICO NMOCD REFERENCE NUMBER 1R-0085

		TOPOF				CORRECTED
WELL	DATE	CASING	ДЕРТН ТО	ДЕРТН ТО	PSH	GROUND WATER
NUMBER	MEASURED	ELEVATION	PRODUCT	WATER	THICKNESS	ELEVATION
MW-1	01/06/09	3 567 59	-	33.56	0.00	3 534 03
MW-1	02/26/09	3.567.59	_	33.68	0.00	3.533.91
MW-1	03/31/09	3.567.59	-	33.80	0.00	3,533,79
MW-1	06/23/09	3.567.59	-	34.20	0.00	3.533.39
MW-1	07/14/09	3.567.59	-	34.06	0.00	3 533 53
MW-1	09/08/09	3.567.59	-	34.22	0.00	3,533,37
MW-1	10/29/09	Plugged and	Ahandoned		0.00	5,555,57
and the second		in the point of the second sec		R. CARLAND	and the second	
MW-2	11/09/06	Plugged and	Ahandoned	21 1 2 1 1 H 2 1 1 2 1 1 1 1 1 1 1 1 1 1		
	والمجارية والمحاوم والمحاوم والمحاوم	1489-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		1 All of the late	and the second	Carl Construction of the Construction of the
MW-3	01/06/09	3.567.55	-	33.27	0.00	3,534,28
MW-3	02/26/09	3.567.55	_	34.41	0.00	3.533.14
MW-3	03/31/09	3,567,55	_	33.53	0.00	3 534 02
MW-3	06/23/09	3,567,55		33.74	0.00	3 533 81
MW-3	07/14/09	3,567.55		33.79	0.00	3 533 76
MW-3	09/08/09	3.567.55		33.97	0.00	3 533 58
MW-3	10/29/09	Plugged and	Abandoned	5507	0.00	5,055,000
			ing a station of a	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	5 - 1 - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	the state of the s
MW-4	01/06/09	3 567 80	<u>-</u>	34.03	0.00	3 533 77
MW-4	02/26/09	3 567 80		34.14	0.00	3 533 66
MW-4	03/31/09	3 567 80	_	34.28	0.00	3 533 52
MW-4	06/23/09	3 567 80	-	34.46	0.00	3 533 34
MW-4	07/14/09	3 567 80		34 52	0.00	3 533 28
MW-4	09/08/09	3 567 80		34.71	0.00	3 533 09
MW-4	10/29/09	Plugged and	Abandoned	54.71	0.00	5,555.07
	10/25/05		Atoundoned		GALLAS MANY	
MW-5	01/06/09	3 569 50		34 77	0.00	3 534 73
MW-5	02/26/09	3 569 50		34.94	0.00	3 534 56
MW-5	03/31/09	3 569 50	-	35.05	0.00	3 534 45
MW-5	06/23/09	3 569 50	_	35.05	0.00	3 534 22
MW-5	07/14/09	3 569 50		35.20	0.00	3 534 18
MW-5	09/08/09	3,569.50	_	35.49	0.00	3 534 01
MW-5	10/29/09	Plugged and	Abandoned			5,00 101
and the second	5 FE 18			· · · · · · · · · · · · · · · · · · ·	Carrier part resulting	المراجعة المحافظ والمحافظ المحافظ المح
MW-6	01/06/09	-	_	20.25	0.00	-
MW-6	02/26/09	-	-	20.25	0.00	<u> </u>
MW-6	03/31/09	-	-	30.26	0.00	-
MW-6	06/23/09	-	-	30.41	0.00	-
MW-6	07/14/09	-	-	30.50	0.00	-
MW-6	09/08/09	-	-	37.50	0.00	-
MW-6	11/12/09	-	-	37.53	0.00	-
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MW-7	01/06/09	3,567.53	-	33.53	0.00	3,534.00
MW-7	02/26/09	3,567.53	-	33.68	0.00	3,533.85
MW-7	03/31/09	3,567.53	-	33.80	0.00	3,533,73
MW-7	06/23/09	3,567.53	-	33.98	0.00	3,533,55
MW-7	07/14/09	3,567.53	-	34.04	0.00	3,533,49
MW-7	09/08/09	3,567.53	-	34.22	0.00	3,533 31
MW-7	11/12/09	3,567.53	_	34,38	0.00	3,533.15
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2009 GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P. RED BYRD #1 LEA COUNTY, NEW MEXICO NMOCD REFERENCE NUMBER 1R-0085

1		TOP OF				CORRECTED
WELL	DATE	CASING	ДЕРТН ТО	DEPTH TO	PSH	GROUND WATER
NUMBER	MEASURED	ELEVATION	PRODUCT	WATER	THICKNESS	ELEVATION
					Arriver and Arriver	
MW-8	01/06/09	3,567.79	-	34.30	0.00	3,533.49
MW-8	02/26/09	3,567.79	-	34.43	0.00	3,533.36
MW-8	03/31/09	3,567.79	-	34.52	0.00	3,533.27
MW-8	06/23/09	3,567.79	-	34.71	0.00	3,533.08
MW-8	07/14/09	3,567.79	-	35.75	0.00	3,532.04
MW-8	09/08/09	3,567.79	-	34.91	0.00	3,532.88
MW-8	10/29/09	Plugged and	Abandoned			
					R. Mary	
MW-9	01/06/09	3,568.62	-	35.69	0.00	3,532.93
MW-9	02/26/09	3,568.62	-	35.81	0.00	3,532.81
MW-9	03/31/09	3,568.62	-	35.90	0.00	3,532.72
MW-9	06/23/09	3,568.62	-	36.10	0.00	3,532.52
MW-9	07/14/09	3,568.62	-	36.13	0.00	3,532.49
MW-9	09/08/09	3,568.62	-	36.32	0.00	3,532.30
MW-9	10/29/09	Plugged and	Abandoned	and the		,
						at is to the
MW-10	01/06/09	3,570.11	-	35.66	0.00	3,534.45
MW-10	02/26/09	3,570.11	-	35.79	0.00	3,534.32
MW-10	03/31/09	3,570.11	-	35.92	0.00	3,534.19
MW-10	06/23/09	3,570.11	-	36.11	0.00	3,534.00
MW-10	07/14/09	3,570.11	-	36.18	0.00	3,533.93
MW-10	09/08/09	3,570.11	-	36.35	0.00	3,533.76
MW-10	10/29/09	Plugged and	Abandoned			
	Martin States				20.22 · 2010	والمحالية المتعالية والمحالية والمحالية والمحالية والمحالية والمحالية والمحالية والمحالية والمحالية والمحالية
MW-11	01/06/09	3,567.96	-	33.77	0.00	3,534.19
MW-11	02/26/09	3,567.96	-	33.83	0.00	3,534.13
MW-11	03/31/09	3,567.96	-	33.94	0.00	3,534.02
MW-11	06/23/09	3,567.96	-	34.13	0.00	3,533.83
MW-11	07/14/09	3,567.96	-	34.20	0.00	3,533.76
MW-11	09/08/09	3,567.96	-	34.38	0.00	3,533.58
MW-11	11/12/09	3,567.96	-	34.54	0.00	3,533.42
	Sec. Sec. Str.		atori territori		STATE SALES	and the second sec
MW-12	01/11/08	Excavated a	round and cut do	wn MW-12	0.00	-
MW-12	01/06/09	-	19.61	21.70	2.09	-
MW-12	01/13/09	_	19.66	21.54	1.88	-
MW-12	01/22/09	-	19.70	21.49	1.79	-
MW-12	01/29/09	-	16.73	18.60	1.87	-
MW-12	02/03/09	_	16.76	18.39	1.63	-
MW-12	02/12/09	-	16.76	18.49	1.73	-
MW-12	02/20/09	-	16.29	18.46	2.17	-
MW-12	02/27/09	-	20.59	22.13	1.54	-
MW-12	03/12/09	-	20.64	22.53	1.89	-
MW-12	03/19/09	-	30.69	32.44	1.75	-
MW-12	03/24/09	-	30.70	32.58	1.88	-
MW-12	03/31/09	-	30.72	32.62	1.90	-
MW-12	04/07/09	-	30.73	32.37	1.64	-
MW-12	04/15/09	-	30.75	32.39	1.64	
MW-12	04/21/09	-	30.78	32.31	1.53	-
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2009 GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P. RED BYRD #1 LEA COUNTY, NEW MEXICO NMOCD REFERENCE NUMBER 1R-0085

		TOPOF				CORRECTED
WELL	DATE	CASING	DEPTH TO	DEPTH TO	PSH	GROUND WATER
NUMBER	MEASURED	ELEVATION	PRODUCT	WATER	THICKNESS	ELEVATION
MW-12	04/28/09	-	30.81	32.37	1.56	-
MW-12	05/05/09	-	30.81	32.38	1.57	_
MW-12	05/15/09	-	30.81	32.51	1.70	_
MW-12	05/19/09	-	30.86	32.39	1.53	-
MW-12	05/28/09	-	30.87	32.55	1.68	-
MW-12	06/01/09	-	31.90	32.46	0.56	-
MW-12	06/22/09	-	30.90	32.72	1.82	-
MW-12	06/23/09	-	30.90	32.72	1.82	-
MW-12	06/29/09	-	30.92	32.65	1.73	-
MW-12	07/08/09	-	31.05	32.17	1.12	-
MW-12	07/14/09	-	31.00	32.63	1.63	-
MW-12	07/27/09	-	36.94	38.45	1.51	-
MW-12	08/03/09	-	36.93	38.63	1.70	-
MW-12	08/11/09	-	36.97	38.66	1.69	-
MW-12	08/18/09	-	37.00	38.62	1.62	-
MW-12	08/28/09	-	37.02	38.70	1.68	_
MW-12	09/03/09	-	37.04	38.72	1.68	
MW-12	09/08/09	-	37.03	38.64	1.60	· · · · · · · · · · · · · · · · · · ·
MW-12	09/17/09		37.08	38.74	1.66	_
MW-12	09/22/09	_	37.12	38.68	1.56	
MW-12	10/01/09		37.12	38.74	1.50	
MW-12	10/06/09		37.15	38.77	1.03	-
MW-12	10/13/09		37.16	38.72	1.57	
MW-12	10/20/09		37.16	38.68	1.59	
MW-12	10/20/09		37.10	38.00	1.52	-
MW-12	11/03/09		37.19	38.67	1.55	
MW-12	11/10/00		37.25	38.02	1.45	-
MW-12	11/12/00		37.25	38.75	0.06	-
MW-12	11/17/09		37.25	38.62	1.31	
MW-12	11/24/09	_	37.31	38.64	1.31	
MW-12	12/08/09	_	37.34	38.04	1.50	-
MW-12 MW-12	12/17/09		37.20	38.01	1.00	-
MW-12	12/23/09		37.41	38.52	1.59	_
MW-12	12/29/09		37.30	38.96	1.11	
101 W - 12	12/2//0/	- Reference of the second second		50.90	1.27 3 - 1.481 (1.1483)	
MW-13	01/06/09	3 571 78	-	36.37	0.00	2 525 46
MW-13	07/26/00	3 571 78	-	36.52	0.00	3,535.40
MW-13	03/31/09	3 571 78		36.61	0.00	3 535 17
MW-13	06/23/09	3 571 78	-	37.85	0.00	3 533 03
MW-13	07/14/09	3 571 78		36.90	0.00	3 534 88
MW-13	00/08/00	3,571.78	-	37.12	0.00	3,534.00
MW-13	10/20/00	Plugged and	Abandoned	51.14	0.00	5,554.00
11114-13	10/27/07	r iuggeu allu	Avanuoneu	AC NOTING A	anton and a tak a taket	
MW 14	01/06/00	3 571 60	<u>n pa</u> ra na stranda d	37 /1	0.00	2 524 20
M3V 14	01/00/09	3,571.09	-	27.41	0.00	2,524.28
MW-14	02/20/09	2 571 60	-	27.27	0.00	2,524.12
NAVY 14	05/31/09	2,571.09	-	37.07	0.00	3,534.02
IVI W-14	00/23/09	3,571.69	-	57.87	0.00	3,533.82
MW-14	07/14/09	3,571.69	-	37.92	0.00	3,533.77
MW-14	09/08/09	3,5/1.69	-	38.11	0.00	3,533.58

2009 GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P. RED BYRD #1 LEA COUNTY, NEW MEXICO NMOCD REFERENCE NUMBER 1R-0085

		TOP OF				CORRECTED
WELL	DATE	CASING	ДЕРТН ТО	DEPTH TO	PSH	GROUND WATER
NUMBER	MEASURED	ELEVATION	PRODUCT	WATER	THICKNESS	ELEVATION
MW-14	10/29/09	Plugged and	Abandoned			
			4.1		And And And	and the second sec
MW-15	01/06/09	3,569.33		36.65	0.00	3,532.68
MW-15	02/26/09	3,569.33	-	36.14	0.00	3,533.19
MW-15	03/31/09	3,569.33	-	36.84	0.00	3,532.49
MW-15	06/23/09	3,569.33	-	37.01	0.00	3,532.32
MW-15	07/14/09	3,569.33	-	37.07	0.00	3,532.26
MW-15	09/08/09	3,569.33	-	37.32	0.00	3,532.01
MW-15	10/29/09	Plugged and	Abandoned			
	i the grade of the	a dia Garage and				and the second second
MW-16	01/06/09	3,568.89	-	36.15	0.00	3,532.74
MW-16	02/26/09	3,568.89	-	36.25	0.00	3,532.64
MW-16	03/31/09	3,568.89	-	36.35	0.00	3,532.54
MW-16	06/23/09	3,568.89	-	36.53	0.00	3,532.36
MW-16	07/14/09	3,568.89	-	36.60	0.00	3,532.29
MW-16	09/08/09	3,568.89	-	36.76	0.00	3,532.13
MW-16	11/12/09	3,568.89	_	36.94	0.00	3,531.95
	And the second strategies	Contract of the second	and the second	A STANDAR	S. Carlos S. S. S.	1. St. 1.
MW-17	01/06/09	3,569.66	-	35.90	0.00	3,533.76
MW-17	02/26/09	3,569.66	-	36.04	0.00	3,533.62
MW-17	03/31/09	3,569.66	-	36.15	0.00	3,533.51
MW-17	06/23/09	3,569.66	-	36.35	0.00	3,533.31
MW-17	07/14/09	3,569.66	-	36.42	0.00	3,533.24
MW-17	09/08/09	3,569.66	-	36.59	0.00	3,533.07
MW-17	11/12/09	3,569.66	-	36.74	0.00	3,532.92
		and a start of the				
MW-18	01/06/09	3,571.17	-	36.06	0.00	3,535.11
MW-18	02/26/09	3,571.17	-	36.26	0.00	3,534.91
MW-18	03/31/09	3,571.17	-	36.39	0.00	3,534.78
MW-18	06/23/09	3,571.17		36.64	0.00	3,534.53
MW-18	07/14/09	3,571.17	-	36.71	0.00	3,534.46
MW-18	09/08/09	3,571.17	-	36.88	0.00	3,534.29
MW-18	11/12/09	3,571.17	-	37.01	0.00	3,534.16
	States and the			and the second second		
MW-19	01/06/09	3,569.78	- '	37.87	0.00	3,531.91
MW-19	02/26/09	3,569.78	_	37.95	0.00	3,531.83
MW-19	03/31/09	3,569.78	-	38.03	0.00	3,531.75
MW-19	06/23/09	3,569.78	-	38.19	0.00	3,531.59
MW-19	07/14/09	3,569.78	-	38.24	0.00	3,531.54
MW-19	09/08/09	3,569.78	-	38.41	0.00	3,531.37
MW-19	11/12/09	3,569.78	-	38.59	0.00	3,531.19
. · · · · · · · · · · · · · · · · · · ·				~ 个人的对象	مىسىنى ئىلىغى بىر ئىلىن بىلىغ بى تىلىغ بىرى ئىلىغى بىرى ئىلىغى بىرى ئىلىغى بىرى ئىلىغى بىلىغ بىرى ئىلىغى بىلىغ مىلىغى ئىلىغى بىرى ئىلىغى بىرى ئىلىغى بىرى ئىلىغى بىرى ئىلىغى بىرى ئىلىغى بىلىغى بىلىغى بىلىغى بىرى ئىلىغى بىلى	Repair of Street

Elevations based on the North American Vertical Datum of 1929.

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CONCENTRATIONS OF BENZENE, BTEX, CHLORIDE AND TDS IN GROUNDWATER PLAINS MARKETING, L.P. RED BYRD #1 LEA COUNTY, NEW MEXICO PLAINS SRS NO: TNM-RED BYRD #1 NMOCD REF NO: 1RP-0085

		METHODS: EPA SW 846-8021B, 5030					EPA 300	SM2540C	
SAMPLE	SAMPLE	DENZENE	TOLUENE	ETHYL-	M,P-		TOTAL		TDO
LOCATION	DATE	BENZENE	TOLUENE	BENZENE	XYLENES	U-XTLENES	BTEX		
		(mg/L)	(mg/L)	(ma/L)	(ma/L)	(mg/L)	(ma/L)	(mg/L)	(mg/L)
MW-1	02/27/09	0.363	0.004	0.0555	0.0516	0.0015	0.4756	7,440	11.200
	06/24/09	0.285	<0.0500	0.0425	<0.0500	<0.0250	0.3275	-	-
	09/09/09	0 7952	<0.0400	0.145	0 1024	<0.0200	1 0426	-	-
	10/29/09	Plugged and	Abandoned	0.110	0.1021	0.0200			
a ser an se	10/20/00				122000	and the other services of	* WENCH FURTHER		
MW-3	02/27/09	0.5818	<0.0400	0.0866	0 164	<0.0200	0.8324		13 400
	06/24/09	0 1608	<0.0400	0.022	0.0714	<0.0200	0.0021	<u></u>	
	00/24/00	0.1000	<0.0400	0.022	0.137	<0.0200	0.0004	_	
	10/20/00	Plugged and		0.00	0.157	-0.0000	0.004	-	-
	10/23/03	i luggeu ali	Abandoneu	a.e. 1	Corporation of the Corporation	in the state of the	an an an		
	02/27/00	0.01	0.012	0 1090	0.10.11	0.0065	0.2415		11 200
10100-4	02/27/09	0.01	0.012	0.1069	0.1041	0.0065	0.2415	-	11,300
	06/24/09	<0.0010	0.0033	0.027	0.0351	0.0011	0.0665	-	-
	09/09/09	0.0235	0.0176	0.0968	0.1289	0.0249	0.2917		
	10/29/09	Plugged and	Abandoned					,	
	· · · · · · · · · · · · · · · · · · ·	1. The second		A'		San	to construct of	a start and	· · ·
MW-5	02/27/09	0.0254	<0.0200	0.0107	0.0819	<0.0100	0.118	7,270	12,900
	06/24/09	0.0065	0.0039	<0.0010	0.0461	0.0056	0.0621	-	-
	09/09/09	0.0063	0.0062	<0.0010	0.058	0.0085	0.079	-	-
	10/29/09	Plugged and	Abandoned						
		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -			the second states of the second				e sa
MW-6	2/27/2009	0.0287	0.0168	0.0038	0.0025	<0.0010	0.0518	-	14,600
	06/24/09	0.2292	0.21	0.0242	< 0.0400	0.0328	0.4962	-	-
	09/09/09	0.5374	0.7818	0.096	0.0832	0.0266	1.525	-	-
	11/12/09	0.0104	0.0152	0.0028	0.0033	0.0011	0.0328	_	-
المحمد أنرأ الم		and the second of			4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4				
MW-7	02/27/09	0.0039	< 0.0020	< 0.0010	<0.0020	0.0018	0.0057	-	14.200
	06/24/09	0.0011	< 0.0020	< 0.0010	<0.0020	<0.0010	0.0011	-	
	09/09/09	0.0051	<0.0020	0.0012	< 0.0020	0.0016	0.0079	-	-
	11/12/09	0.0046	<0.0020	<0.0010	<0.0020	<0.0010	0.0046	- I	-
	- de - 19	- 14	0.0020	0.0010	0.0020	0.0010	0.00.10	Contractory Sec.	
MW-8	02/27/09	0.0344	0.0026	0.004	0.0229	0.0049	0.0688	7 630	11 900
	06/24/09	0.005	<0.0020	<0.001	0.0033	<0.0010	0.0083		
	00/21/00	0.000	<0.0020	0.0010	0.0000	0.0010	0.0000		
	10/29/09	Plugged and	Abandoned	0.0020	0.0110	0.0002	0.004		
State of the	10/20/00	1 lagged and	a vibalita offica	10 C C C C C C C C C C C C C C C C C C C	1111 - 5 GALES	4 1. 1. MAR 1. 2.		Alter in these	
MW-9	02/27/09	0.6513	0.0069	0.0233	0.0163	0.0189	0 7167		10 300
	06/24/09	0.0010	<0.0000	<0.02.00	<0.0100	<0.0100	0.0011		10,000
	00/24/09	0.6048	<0.0020	0.0010	<0.0020		0.6258		
	10/29/09	Plugged and		0.021		<0.0200	0.0200	-	
	10/23/03	I lugget alk			1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The second	L V 10	and the state	· · · ·
MW-10	02/27/00	0.0816	0.0046	0.0078	0.0124	<0.0010	0 1064		16 400
10100-10	6/2//09	0.0656	<0.0040	<0.0070	<0.0124		0.1004		10,400
	0/2-4/09	0.0000	<0.0400	<0.0200	<0.0400	<0.0200	0.0000	-	-
	9/9/09	0.0015		<0.0010	<0.0020	<0.0010	0.0015	-	
	10/29/09	Fluggeu and	Abanuoneu		A STATE			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	· · · ·
	00/07/00	0 422	<0.0000	0.0500	0.007	40.0400	O EACO	0.070	10.000
1/1/1	02/27/09	0.432	<0.0200	0.0000	0.027	<0.0100	0.5156	0,670	10,600
	06/24/09	0.311	<0.0400	0.0326	<0.0400	<0.0200	0.3436		-
	09/09/09	0.0201	<0.0020	0.003	<0.0020	<0.0010	0.0231		
	11/12/09	0.0089	<0.0020	<0.0010	<0.0020	0.0017	0.0106	-	-
1		a sea survey of the						A WAY &	
MW-12	02/27/09			NOT SAMP	LED DUE TO I	PRESENCE OI	PSH		
	06/24/09			NOT SAMP	LED DUE TO I	PRESENCE OF	= PSH		
	09/09/09			NOT SAMP	LED DUE TO I	PRESENCE O	F PSH		
	11/12/09	0.0892	<0.0200	0.1112	0.1559	0.0132	0.3695	-	-

CONCENTRATIONS OF BENZENE, BTEX, CHLORIDE AND TDS IN GROUNDWATER PLAINS MARKETING, L.P. RED BYRD #1 LEA COUNTY, NEW MEXICO PLAINS SRS NO: TNM-RED BYRD #1 NMOCD REF NO: 1RP-0085

		METHODS: EPA SW 846-8021B, 5030						EPA 300	SM2540C
SAMPLE LOCATION	SAMPLE DATE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL- BENZENE (mg/L)	M,P- XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL BTEX (mg/L)	CHLORIDES (mg/L)	TDS (mg/L)
MW-13	02/27/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	5,130	9,910
	06/24/09	< 0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	-	-
	09/09/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	-	-
	10/29/09	Plugged and	Abandoned						
		이 가지 않는 것			والأستخاص والمرا	1997 - 1997 -	SANKE SK	· · · ·	· · ·
MW-14	02/27/09	0.0067	0.0033	0.0017	0.0045	0.0046	0.0208	-	12,500
	06/24/09	0.0037	<0.0020	0.0012	<0.0020	< 0.0010	0.0049	-	-
	09/09/09	0.004	0.0025	0.0019	<0.0020	< 0.0010	0.0084	-	-
	10/29/09	Plugged and	d Abandoned						
		and the second second			i yên în girtere		1		
MW-15	02/27/09	0.9456	0.0034	0.1223	0.0594	0.007	1.1377	-	10,700
	06/24/09	0.6999	<0.0200	0.0789	0.0405	< 0.0100	0.8193	-	-
	09/09/09	0.9894	<0.0400	0.1772	0.0776	< 0.0200	1.2442	-	-
	10/29/09	Plugged and	Abandoned						
	1.1.1		S. S. S. S. S.				and the second second	and the second	• • · · · · · ·
MW-16	02/27/09	0.2908	0.0053	0.2225	0.1248	0.0067	0.6501	· -	10,800
	06/24/09	0.128	< 0.0400	0.0916	0.0566	<0.0200	0.2762	-	-
	09/09/09	0.2128	< 0.0400	0.1666	0.0948	<0.0200	0.4742	-	-
	11/12/09	0.014	0.0053	0.0103	0.0086	0.0092	0.0474	-	-
a state of the second second		A. S. Source	ter a second		Sec. March	2012 18	St. 14. 4		
MW-17	02/27/09	0.1826	0.0046	0.0631	0.0596	0.0021	0.312	5,460	7,200
	06/24/09	0.0164	0.0025	0.0067	0.0049	0.0011	0.0316	-	-
	09/09/09	0.1962	< 0.0400	0.0934	0.0696	<0.0200	0.3592	-	-
	11/12/09	0.0039	<0.0020	0.0027	0.0021	<0.0010	0.0087	-	-
				1	S. S. S. Sandara	W Brand Stranger	WARA TARA DE	1	
MW-18	02/27/09	0.0077	0.0073	0.0322	0.0258	0.0053	0.0783	6,520	10,200
	06/24/09	0.0068	<0.0100	0.0445	0.0311	< 0.0050	0.0824	-	-
	09/09/09	0.0158	0.0053	0.1158	0.0858	<0.0010	0.2227	-	-
	11/12/09	0.0013	< 0.0020	< 0.0010	< 0.0020	<0.0010	0.0013	-	-
							Lat V Lata 1		
MW-19	02/27/09	0.0027	<0.0020	0.0252	0.0159	0.004	0.0478	-	14,200
	06/24/09	0.0018	<0.0020	0.0114	0.0067	0.0011	0.021	-	-
	09/09/09	0.0024	<0.0020	0.0878	0.0498	<0.0010	0.14	-	-
	11/12/09	0.0064	<0.0020	0.0025	< 0.0020	< 0.0010	0.0089	-	-
		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			an the grantes	「ことり時代日本」	s " s is so	12 M 130	
						the second s	the second s	the second s	A second second second second

Page 2 of 2

CONCENTRATIONS OF TPH IN GROUNDWATER

PLAINS MARKETING, L.P. RED BYRD #1 LEA COUNTY, NEW MEXICO PLAINS SRS NO: TNM-RED BYRD #1 NMOCD REF NO: 1RP-0385

		METHOD: EPA SW 846-8015 Modified								
SAMPLE LOCATION	SAMPLE DATE	GRO C ₆ -C ₁₂	DRO C ₁₂ -C ₂₈	ORO C ₂₈ -C ₃₅	TOTAL TPH C ₆ -C ₃₅					
		(ma/L)	(ma/L)	(mg/L)	(ma/L)					
MW-12	MW-12 11/12/09		420	21.3	700.3					
				a and the second						

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TABLE 4

CONCENTRATIONS OF POLY AROMATIC HYDROCARBONS IN GROUNDWATER

NMOCD REFERENCE NUMBER 1R-0085 LEA COUNTY, NEW MENICO PLAINS MARKETING, L.P. TNM Red Byrd #1

<0.050 <0.050 <0.100<0.005 <0.005 <0.005 <0.100 <0.050 <0.005 <0.050 <0.005 anaryq(bo-£,2,1 lonabni <0.100 <0.050 <0.005 <0.005 <0.005 <0.005 <0.005 <0.050 Fluorene <0.050 <0.005 <0.100 <0.050 <0.005 <0.005 <0.005 <0.005 Fluoranthene <0.005 <0.005 <0.005 <0.100 <0.050 <0.005 <0.050 <0.005 Dibenz[a,h]anthracene All water concentrations are reported in mg/L EPA SW846-8270C, 3510 <0.005 <0.005 <0.050 <0.005 <0.100 <0.050 <0.005 <0.005 Chrysene <0.005 100 <0.050 <0.005 <0.005 <0.005 <0.050 <0.005 Benzo[g,h,i]perylene 9. V <0.005 <0.005 <0.050 <0.005 100 <0.005 <0.050 <0.005 Benzo[k]fluoranthene 8 <0.005 <0.005 <0.005 <0.050 <0.005 <0.050 <0.005 100 Benzo|b|fluoranthene °. <0.005 <0.005 <0.005 <0.100 <0.005 <0.050 <0.005 <0.050 Benzola|pyrene <0.005 <0.005 <0.005 <0.005 100 <0.050 <0.050 <0.005 Benzo[a]anthracene 9. V <0.005 <0.005 <0.005 <0.050 <0.050 <0.005 <0.005 100 эпээвчата 9. V <0.005 <0.050 <0.005 <0.005 <0.005 <0.050 <0.005 100 onslythtensoA °.0 <0.005 <0.005 <0.050 <0.050 <0.100 <0.005 <0.005 <0.005 əuəyyyduuəəy SAMPLE 11/12/09 DATE 11/12/09 11/12/09 11/12/09 11/12/09 11/12/09 11/12/09 11/12/09 SAMPLE LOCATION - 16 - 17 - 18 MW - 19 MW - 12 9-MW - 7 MW - 1 MM MW. MW. MW

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Appendices

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Appendix A Laboratory Reports

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Analytical Report 326325

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PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd # 1

TNM-Red Byrd 1

06-MAR-09





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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



06-MAR-09

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

Reference: XENCO Report No: 326325 Red Byrd # 1 Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 326325. 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. 326325 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 326325

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd # 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-19	W	Feb-27-09 10:00		326325-001
MW-13	W	Feb-27-09 10:15		326325-002
MW-8	W	Feb-27-09 10:30		326325-003
MW-14	W	Feb-27-09 11:00		326325-004
MW-7	W	Feb-27-09 11:15		326325-005
MW-18	W	Feb-27-09 11:30		326325-006
MW-9	W	Feb-27-09 11:50		326325-007
MW-17	W	Feb-27-09 12:25		326325-008
MW-11	W	Feb-27-09 12:25		326325-009
MW-16	W	Feb-27-09 12:40		326325-010
MW-5	W	Feb-27-09 12:45		326325-011
MW-15	W	Feb-27-09 13:00		326325-012
MW-10	W	Feb-27-09 13:15		326325-013
MW-4	W	Feb-27-09 13:30		326325-014
MW-1	W	Feb-27-09 13:45		326325-015
MW-6	W	Feb-27-09 14:00		326325-016
MW-3	W	Feb-27-09 14:10		326325-017

Page 3 of 20

Certificate of Analysis Summary 326325 PLAINS ALL AMERICAN EH&S, Midland, TX Đ **O**C Ę

0 Project ld: TNM-Red Byrd 1

Contact: Jason Henry



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Date Received in Lab: Tue Mar-03-09 10:24 am

Project Name: Red Byrd #1

Report Date: 06-MAR-09

0.0010 0.0010 0.0010 0.0020 0.0010 0.0020 0.0010 Mar-03-09 11:00 Mar-03-09 15:36 Fcb-27-09 11:30 326325-006 WATER MW-18 0.0077 0.0258 0.0311 0.0073 0.0053 0.03220.0783 mg/L 0.0018 0.0010 0.0018 0.0010 0.0057 0.0010 z 0.0039 0.0010 ND 0.0020 ND 0.0010 ND 0.0020 Feb-27-09 11:15 Mar-03-09 11:00 Mar-03-09 15:16 326325-005 Brent Barron, II WATER MW-7 mg/L Project Manager: RL 0.0067 0.0010 0.0033 0.0020 0.0017 0.0010 0.0045 0.0020 0.0046 0.0010 0.0091 0.0010 0.0208 0.0010 Mar-03-09 14:10 Mar-03-09 11:00 Feb-27-09 11:00 326325-004 MW-14 WATER mg/L 0.0344 0.0010 0.0026 0.0020 0.0040 0.0010 0.0229 0.0020 0.0049 0.0010 0.0278 0.0010 0.0688 0.0010 Z Mar-03-09 13:49 Mar-03-09 11:00 Feb-27-09 10:30 326325-003 WATER MW-8 mg/L ND 0.0010 ND 0.0010 ND 0.0020 ND 0.0010 ND 0.0010 ND 0.0010 RL ND 0.0020 Feb-27-09 10:15 Mar-03-09 11:00 Mar-03-09 13:29 326325-002 WATER MW-13 mg/L 0.0199 0.0010 Z 0.0027 0.0010 ND 0.0020 0.0252 0.0010 0.0159 0.0020 0.0040 0.0010 0.0478 0.0010 Mar-03-09 11:00 Mar-03-09 13:08 Feb-27-09 10:00 326325-001 61-WM WATER mg/L Field Id: Extracted: Lab Id: Depth: Matrix: Sampled: Analyzed: Units/RL: **BTEX by EPA 8021B** Project Location: Lea County, NM Analysis Requested Total Xylenes Ethylbenzene m.p-Xylenes Total BTEX o-Xylenc Benzene Tolucne

RL

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

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Odessa Laboratory Director Brent Barron

PLAINS ALL AMERICAN EH&S, Midland, TX

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Date Received in Lab: Tue Mar-03-09 10:24 am Project Name: Red Byrd # 1

> Project Id: TNM-Red Byrd 1 Contact: Jason Henry

Report Date: 06-MAR-09

					Project Manager: 1	Srent Barron, II	
	Lab Id:	326325-007	326325-008	326325-009	326325-010	326325-011	326325-012
Andreito Barrented	Field Id:	6-WM	MW-17	II-MM	MW-16	MW-5	MW-15
naisanhay sustanuy	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Feb-27-09 11:50	Feb-27-09 12:25	Fcb-27-09 12:25	Feb-27-09 12:40	Fcb-27-09 12:45	Feb-27-09 13:00
RTFX hv FPA \$021B	Extracted:	Mar-03-09 11:00	Mar-03-09 11:00	Mar-03-09 11:00	Mar-03-09 11:00	Mar-03-09 11:00	Mar-03-09 11:00
	Analyzed:	Mar-03-09 16:38	Mar-03-09 17:19	Mar-03-09 17:40	Mar-03-09 18:00	Mar-03-09 18:21	Mar-03-09 18:41
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		0.6513 D 0.0100	0.1826 0.0010	0.4320 0.0100	0.2908 0.0010	0.0254 0.0100	0.9456 D 0.010
Toluene		0.0069 0.0020	0.0046 0.0020	ND 0.0200	0.0053 0.0020	ND 0.0200	0.0034 0.002
Ethylbenzene		0.0233 0.0010	0.0631 0.0010	0.0566 0.0100	0.2225 0.0010	0.0107 0.0100	0.1223 0.001
m,p-Xylenes		0.0163 0.0020	0.0596 0.0020	0.0270 0.0200	0.1248 0.0020	0.0819 0.0200	0.0594 0.002
o-Xylene		0.0189 0.0010	0.0021 0.0010	ND 0.0100	0.0067 0.0010	0010.0 GN	0.0070 0.0010
Total Xylenes		0.0352 0.0010	0.0617 0.0010	0.027 0.0100	0.1315 0.0010	0.0819 0.0100	0.0664 0.001
Total BTEX		0.7167 0.0010	0.312 0.0010	0.5156 0.0100	0.6501 0.0010	0.118 0.0100	1.1380 0.001

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Page 5 of 20



Project Name: Red Byrd # 1

Project Location: Lea County, NM Contact: Jason Henry

Project Id: TNM-Red Byrd 1

Date Received in Lab: Tue Mar-03-09 10:24 am Report Date: 06-MAR-09

					Project Manager: H	Srent Barron, Il	
	Lab Id:	326325-013	326325-014	326325-015	326325-016	326325-017	
Audicie Dannetad	Field Id:	MW-10	MW-4	I-WM	MW-6	MW-3	
nawanhay sistinuy	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	
	Sampled:	Feb-27-09 13:15	Feb-27-09 13:30	Feb-27-09 13:45	Fcb-27-09 14:00	Feb-27-09 14:10	
RTEX hv FPA 8021B	Extracted:	Mar-03-09 11:00	Mar-05-09 09:00	Mar-03-09 11:00	Mar-04-09 08:00	Mar-04-09 08:00	
	Analyzed:	Mar-03-09 19:22	Mar-05-09 17:25	Mar-03-09 20:03	Mar-04-09 10:10	Mar-04-09 10:30	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Benzene		0.0816 0.0010	0.0100 0.0050	0.3630 0.0010	0.0287 0.0010	0.5818 0.0200	
Toluene		0.0046 0.0020	0.0120 0.0100	0.0040 0.0020	0.0168 0.0020	ND 0.0400	
Ethylbenzene		0.0078 0.0010	0.1089 0.0050	0.0555 0.0010	0.0038 0.0010	0.0866 0.0200	
m,p-Xylenes		0.0124 0.0020	0.1041 0.0100	0.0516 0.0020	0.0025 0.0020	0.1640 0.0400	
o-Xylene		ND 0.0010	0.0065 0.0050	0.0015 0.0010	ND 0.0010	ND 0.0200	
Total Xylenes		0.0124 0.0010	0.1106 0.0050	0.0531 0.0010	0.0025 0.0010	0.164 0.0200	
Total BTEX		0.1064 0.0010	0.2415 0.0050	0.4756 0.0010	0.0518 0.0010	0.8324 0.0200	

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Odessa Laboratory Director Brent Barron all.



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

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



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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Vork Orders : 326325	, ,		Project II	: TNM-Red	Byrd 1	
Lab Batch #: 751455	Sample: 525791-1-BKS / B	KS Ba	tch: ¹ Matri	x: Water		
Units: mg/L	Date Analyzed: 03/03/09 10:34	SU	RROGATE RE	COVERY S	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			וען		
1,4-Difluorobenzene		0.0281	0.0300	94	80-120	
4-Bromofluorobenzene		0.0269	0.0300	90	80-120	
Lab Batch #: 751455	Sample: 525791-1-BSD / B	SD Ba	tch: 1 Matri	x: Water		
Units: mg/L	Date Analyzed: 03/03/09 10:55	SU	RROGATE RE	COVERY S	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0284	0.0300	95	80-120	
4-Bromofluorobenzene		0.0255	0.0300	85	80-120	
Lab Batch #: 751455	Sample: 525791-1-BLK / B	LK Ba	tch: 1 Matri	x: Water	11	
Units: mg/L	Date Analyzed: 03/03/09 11:36	SU	RROGATE RE	ECOVERY S	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	·	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene		0.0284	0.0300	95	80-120	
Lab Batch #: 751455	Sample: 326325-001 / SMP	Ba	tch: 1 Matri	x: Water	11	
Units: mg/L	Date Analyzed: 03/03/09 13:08	SU	RROGATE RI	ECOVERY	STUDY	
BTE		1				
	X by EPA 8021B	Amount Found [A]	True Amount B	Recovery %R [D]	Control Limits %R	Flags
14-Difluoroberzene	X by EPA 8021B Analytes	Amount Found [A]	True Amount B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene 4-Bromofluorobenzene	X by EPA 8021B Analytes	Amount Found [A] 0.0335 0.0327	True Amount B 0.0300 0.0300	Recovery %R [D] 112 109	Control Limits %R 80-120 80-120	Flags
1,4-Difluorobenzene 4-Bromofluorobenzene	X by EPA 8021B Analytes Sample: 326325-002 / SMP	Amount Found [A] 0.0335 0.0327	True Amount B 0.0300 0.0300 tch: Matri	Recovery %R [D] 112 109 iv: Water	Control Limits %R 80-120 80-120	Flags
1,4-Difluorobenzene 4-Bromofluorobenzene Lab Batch #: 751455	X by EPA 8021B Analytes Sample: 326325-002 / SMP Date Analyzed: 03/03/09 13:29	Amount Found [A] 0.0335 0.0327 Ba	True Amount B 0.0300 0.0300 tch: 1 Matri	Recovery %R [D] 112 109 ix: Water	Control Limits %R 80-120 80-120	Flags
1,4-Difluorobenzene 4-Bromofluorobenzene Lab Batch #: 751455 Units: mg/L BTE2	X by EPA 8021B Analytes Sample: 326325-002 / SMP Date Analyzed: 03/03/09 13:29 X by EPA 8021B Analytes	Amount Found [A] 0.0335 0.0327 Ba SU Amount Found [A]	True Amount B 0.0300 0.0300 tch: 1 Matri RROGATE RI True Amount [B]	Recovery %R [D] 112 109 ix: Water ECOVERY Recovery %R [D]	Control Limits %R 80-120 80-120 STUDY Control Limits %R	Flags
1,4-Difluorobenzene 4-Bromofluorobenzene Lab Batch #: 751455 Units: mg/L BTE2 1,4-Difluorobenzene	X by EPA 8021B Analytes Sample: 326325-002 / SMP Date Analyzed: 03/03/09 13:29 X by EPA 8021B Analytes	Amount Found [A] 0.0335 0.0327 Ba SU Amount Found [A] 0.0332	True Amount B 0.0300 0.0300 tch: 1 Matri RROGATE RI True Amount [B] 0.0300	Recovery %R [D] 112 109 ix: Water ECOVERY %R [D] 111	Control Limits %R 80-120 80-120 STUDY Control Limits %R 80-120	Flags

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Vork Orders : 326325	,		Project II	D: TNM-Red	Byrd I	
Lab Batch #: 751455	Sample: 326325-003 / SMP	Ba	tch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 03/03/09 13:49	SŪ	RROGATE RI	ECOVERY	STUDY	
BTE	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			<u>ן</u> טן		
1,4-Difluorobenzene		0.0340	0.0300	113	80-120	
4-Bromofluorobenzene		0.0335	0.0300	112	80-120	
Lab Batch #: 751455	Sample: 326325-004 / SMP	Ba	tch: Matr	ix: Water		
Units: mg/L	Date Analyzed: 03/03/09 14:10	SU	RROGATE RI	ECOVERY	STUDY	
BTEX	X 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		0.0382	0.0300	127	80-120	**
Lab Batch #: 751455	Sample: 326325-005 / SMP	Bat	tch: 1 Matri	ix: Water	1	
Units: mg/L	Date Analyzed: 03/03/09 15:16	SU	RROGATE RI	ECOVERY	STUDY	
втех	Amount Found	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes	[,,,]		(D)		
1,4-Difluorobenzene		0.0339	0.0300	113	80-120	
4-Bromofluorobenzene		0.0309	0.0300	103	80-120	
Lab Batch #: 751455	Sample: 326325-006 / SMP	Bat	tch: Matri	ix: Water		
Units: mg/L	Date Analyzed: 03/03/09 15:36	SU	RROGATE RI	ECOVERY	STUDY	
ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	-	0.0388	0.0300	129	80-120	**
4-Bromofluorobenzene		0.0358	0.0300	119	80-120	
Lab Batch #: 751455	Sample: 326325-007 / SMP	Bat	tch: Matri	x: Water		
Units: mg/L	Date Analyzed: 03/03/09 16:38	SU	RROGATE RI	ECOVERY	STUDY	
ΒΤΕλ	Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0362	0.0300	121	80-120	**
				1	1	

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

*** Poor recoveries due to dilution

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



Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Work Orders : 326325			Project II): TNM-Red	Byrd 1	
Lab Batch #: 751455	Sample: 326325-008 / SMP	Ba	tch: ¹ Matri	x: Water		
Units: mg/L	Date Analyzed: 03/03/09 17:19	SU	RROGATE RE	COVERY S	STUDY	
BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			וטן		
1,4-Difluorobenzene		0.0336	0.0300	112	80-120	
4-Bromofluorobenzene		0.0299	0.0300	100	80-120	
Lab Batch #: 751455	Sample: 326325-009 / SMP	Ba	tch: 1 Matri	x: Water		
Units: mg/L	Date Analyzed: 03/03/09 17:40	SU	RROGATE RE	ECOVERY S	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	-	0.0260	0.0300	87	80-120	
Lab Batch #• 751455	Sample: 326325-010 / SMP	Ra	tch: 1 Matri	x: Water		
Units: mg/L	Date Analyzed: 03/03/09 18:00	SU SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes					
1,4-Difluorobenzene		0.0282	0.0300	94	80-120	
4-Bromofluorobenzene		0.0263	0.0300	88	80-120	
Lab Batch #: 751455	Sample: 326325-011 / SMP	Ba	tch: 1 Matri	x: Water		
Units: mg/L	Date Analyzed: 03/03/09 18:21	SU	RROGATE RI	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0344	0.0300	115	80-120	
4-Bromofluorobenzene		0.0285	0.0300	95	80-120	
Lab Batch #: 751455	Sample: 326325-012 / SMP	Ba	tch: 1 Matr	ix: Water	•	
Units: mg/L	Date Analyzed: 03/03/09 18:41	SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	-	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene		0.0228	0.0300	76	80-120	**

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

*** Poor recoveries due to dilution

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Vork Orders : 326325	,		Project II	D: TNM-Red	Byrd 1	
Lab Batch #: 751455	Sample: 326325-013 / SMP	Ba	itch: ¹ Matri	ix: Water		
Units: mg/L	Date Analyzed: 03/03/09 19:22	SU	URROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Difluorobenzene	Analytes	0.0310	0.0300	106	80.120	
4-Bromofluorobenzene		0.0329	0,0300	110	80-120	
Lab Batch #: 751455	Sample: 326325-015 / SMP	Be	tch: Matri	l ix∙Water	l_, ,	
Units: mg/L	Date Analyzed: 03/03/09 20:03	SI	RROGATE RI	ECOVERY	STUDY	
BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes	0.0202	0.0200		00.120	
4-Bromofluorobenzene		0.0293	0.0300	98	80-120	
		0.0237	0.0300		80-120	
Lab Batch #: 751455	Sample: 326325-001 S / MS	Ba Ba	tch: Matri	ix: Water		.
Units: mg/L	Date Analyzed: 03/03/09 20:24	SL	RROGATE RI			
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0295	0.0300	98	80-120	
4-Bromofluorobenzene		0.0281	0.0300	94	80-120	
Lab Batch #: 751455	Sample: 326325-001 SD / N	ASD Ba	atch: 1 Matri	ix: Water		.
Units: mg/L	Date Analyzed: 03/03/09 20:45	SU	RROGATE RI	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	······	0.0278	0.0300	93	80-120	
Lab Batch #: 751501	Sample: 525822-1-BKS / B	KS Ba	atch: Matr	ix: Water		
Units: mg/L	Date Analyzed: 03/04/09 08:48	SU	JRROGATE RI	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0288	0.0300	96	80-120	<u> </u>
4-Bromofluorobenzene		0.0257	0.0300	86	80-120	

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Vork Orders : 326325	, ,		Project II	D: TNM-Red	Byrd 1	
Lab Batch #: 751501	Sample: 525822-1-BSD / B	SD Ba	tch: Matr	ix: Water		
Units: mg/L	Date Analyzed: 03/04/09 09:08	SL	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4 Diffuend		0.000	0.02.00			
1,4-Difuorobenzene		0.0289	0.0300	96	80-120	
4-Bromonuorobenzene		0.0200	0.0300	89	80-120	
Lab Batch #: 751501	Sample: 525822-1-BLK / B	LK Ba	tch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 03/04/09 09:29	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0317	0.0300	106	80-120	
4-Bromofluorobenzene		0.0282	0.0300	94	80-120	<u>.</u>
L	Samalar 226325 016 / SMP		taha l Matr	l		
	Date Analyzed: 03/04/00 10:10		IRROGATE P		STUDY	
BTE	X by EPA 8021B Analytes	Found [A]	Amount [B]	Recovery %R [D]	Limits %R	Flags
1,4-Difluorobenzene		0.0335	0.0300	112	80-120	
4-Bromofluorobenzene		0.0301	0.0300	100	80-120	1
Lab Batch #: 751501	Sample: 326325-017 / SMP	Ba	tch: 1 Matr	ix: Water		·
Units: mg/L	Date Analyzed: 03/04/09 10:30	SL	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0318	0.0300	106	80-120	
4-Bromofluorobenzene		0.0270	0.0300	90	80-120	
Lab Batch #: 751501	Sample: 326084-003 S / MS	S Ba	tch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 03/04/09 18:02	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount {B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0279	0.0300	93	80.120	
1					1 00/-1/1/	

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Work Orders : 326325	5,		Project II	D: TNM-Red	Byrd 1	
Lab Batch #: 751501	Sample: 326084-003 SD / N	ASD Ba	itch: 1 Matri	ix: Water		
Units: mg/L	Date Analyzed: 03/04/09 18:23	SL	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
14 Difluerabenzone	Analytes	0.0277	0.0200	02	80.120	
4-Bromofluorobenzene		0.0277	0.0300	86	80-120	
		0.0237	0.0500			
Lab Batch #: 751716	Sample: 525901-1-BKS / B	KS Ba	tch: Matr	ix: Water		
Units: mg/L	Date Analyzed: 03/05/09 13:33	SL	RROGATE R	ECOVERY		
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0277	0.0300	92	80-120	
4-Bromofluorobenzene		0.0249	0.0300	83	80-120	
Lab Batch #: 751716	Sample: 525901-1-BSD / B	SD Ba	teh: 1 Matr	ix: Water	·	1
Units: mg/L	Date Analyzed: 03/05/09 13:53	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0276	0.0300	92	80-120	
4-Bromofluorobenzene		0.0247	0.0300	82	80-120	
Lab Batch #: 751716	Sample: 525901-1-BLK / B	LK Ba	tch: Matr	ix: Water		
Units: mg/L	Date Analyzed: 03/05/09 14:36	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 4-Difluorobenzene		0.0308	0.0300	103	80-120	
4-Bromofluorobenzene		0.0279	0.0300	93	80-120	
L	Sample: 326325-007 / DI	Da	tch. Mote	iv: Water	L	I
Lau Daten #: /51/10	Date Analyzed: 03/05/09 16:44		IRROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0304	0.0300	101	80-120	
4-Bromofluorobenzene		0.0239	0.0300	80	80-120	

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Work Orders : 326325	` >		Project II	D:TNM-Red	Byrd I	
Lab Batch #: 751716	Sample: 326325-012 / DL	Ba	tch: ¹ Matr	ix: Water		
Units: mg/L	Date Analyzed: 03/05/09 17:04	SU	RROGATE R	ECOVERY	STUDY	
ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0312	0.0300	104	80-120	
4-Bromofluorobenzene		0.0260	0.0300	87	80-120	
Lab Batch #: 751716	Sample: 326325-014 / SMP	Ba	tch: Matr	ix: Water		
Units: mg/L	Date Analyzed: 03/05/09 17:25	SU	RROGATE R	ECOVERY	STUDY	
BTE	x by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flägs
1,4-Difluorobenzene		0.0394	0.0300	131	80-120	**
4-Bromofluorobenzene		0.0309	0.0300	103	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis *** Poor recoveries due to dilution Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries



Project Name: Red Byrd #1

Work Order #: 326325 Analyst: ASA

Lab Batch ID: 751455

Date Prepared: 03/03/2009 Batch #:]

Sample: 525791-1-BKS

Project ID: TNM-Red Byrd 1 Date Analyzed: 03/03/2009

Matrix: Water

Flag

Units: mg/L		BLAN	K /BLANK S	PIKE / B	LANK S	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	BIk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD
Benzene	QN	0.1000	0.1115	112	0.1	0.1046	105	6	70-125	25
Tolucnc	QN	0.1000	0.1114	111	0.1	0.1043	104	7	70-125	25
Sthylbenzene	QN	0.1000	0.1107	111	0.1	0.1026	103	~	71-129	25
n,p-Xylencs	ŊŊ	0.2000	0.2308	115	0.2	0.2146	107	7	70-131	25
)-Xvlene	ÚN	0.1000	0.1121	112	0.1	0 1044	104	7	71-133	25

Lab Batch ID: 751501 Analyst: ASA

Sample: 525822-1-BKS

Date Prepared: 03/04/2009 Batch #: 1

Date Analyzed: 03/04/2009 Matrix: Water **BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

Units: mg/L		BLANI	K /BLANK S	PIKE / B	LANK S	PIKE DUPL	ICATE	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike Dacult	Blank Spike 0. D	Spike Added	Blank Spike	Blk. Spk Dup. 2. D	RPD %	Control Limits 0.1D	Control Limits % DDD	Flag
Analytes	[V]	[B]		(D]	[E]	Dupincare Result [F]	(G]	/0	N 0/	/ IN9/	
Benzene	DN	0.1000	0.1007	101	0.1	0.1016	102	1	70-125	25	
Toluenc	ΟN	0.1000	0.1009	101	0.1	0.1017	102	1	70-125	25	
Ethylbenzene	ΟN	0.1000	0.1003	001	0.1	0.1020	102	2	71-129	25	
m,p-Xylcnes	QN	0.2000	0.2099	105	0.2	0.2133	107	2	70-131	25	
o-Xylene	DN	0.1000	0.1023	102	0.1	0.1049	105	3	71-133	25	-

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

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BS / BSD Recoveries



Project Name: Red Byrd #1

1

Work Order #: 326325 Analyst: ASA

Lab Batch ID: 751716

Date Prepared: 03/05/2009

Batch #:]

Sample: 525901-1-BKS

Project ID: TNM-Red Byrd 1 Date Analyzed: 03/05/2009

Matrix: Water

Units: mg/L		BLAN	K /BLANK S	PIKE / B	LANK S	PIKE DUPL	ICATE I	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[6]				
Benzene	QN	0.1000	0.0973	26	0.1	0.0921	92	5	70-125	25	
Tolucnc	ΟN	0.1000	0.0966	26	0.1	0.0911	91	9	70-125	25	
Ethylbenzene	QN	0.1000	0.0964	96	0.1	0.0907	91	6	71-129	25	
m.p-Xylencs	QN	0.2000	0.2019	101	0.2	0.1899	95	6	70-131	25	
o-Xylcne	ΩN	0.1000	0.0987	66	0.1	0.0933	93	9	71-133	25	

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

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Project Name: Red Byrd # 1

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Work Order #: 326325

Lab Batch ID: 751455 Date Analyzed: 03/03/2009

Batch #: 1 Matrix: Water Analyst: ASA

QC- Sample ID: 326325-001 S

Date Prepared: 03/03/2009

Project ID: TNM-Red Byrd 1

Reporting Units: mg/L		M	ATRIX SPIKI	(MATI	ALX SPIE	KE DUPLICAT	FE RECO	VERY	STUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	Added [B]		10]	Added [E]	Kesult [F]	10 [G]	%	%К	%KPD	
Benzene	0.0027	0.1000	0.0986	96	0.1000	0.0989	96	0	70-125	25	
Toluene	QN	0.1000	0.0956	96	0.1000	0.0954	95	0	70-125	25	
Ethylbenzene	0.0252	0.1000	6611.0	95	0.1000	0.1203	95	0	71-129	25	
m,p-Xylencs	0.0159	0.2000	0.2124	98	0.2000	0.2115	86	0	70-131	25	
o-Xylene	0.0040	0.1000	0.0949	91	0.1000	0.0962	92	-	71-133	25	
Lab Batch ID: 751501 Date Analyzed: 03/04/2009	QC- Sample ID: Date Prepared:	326084- 03/04/20	003 S 009	Bat Ans	ch #: lyst: /	l Matrix \SA	: Water				

Reporting Units: mg/L		M	ATRIX SPIKI	LTAM / 3	RLX SPH	KE DUPLICAT	FE RECO	VERY S	TUDY		
BTEX by EPA 8021B	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]	8.R [D]	Added [E]	Result [F]	% R [G]	%	%К	%RPD	D
Benzene	0.0987	0.1000	0.0987	0	0.1000	0.0971	0	2	70-125	25	×
Toluene	0.0967	0.1000	0.0967	0	0.1000	0.0952	0	2	70-125	25	х
Ethylbenzenc	0.0952	0.1000	0.0952	0	0.1000	0.0937	0	2	71-129	25	x
m,p-Xylenes	0.1997	0.2000	661.0	0	0.2000	0.1964	0	2	70-131	25	х
o-Xvlenc	0.0975	0.1000	5790.0	0	0.1000	0.0961	0	-	71-133	25	Х

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested. I = Interference, NA = Not ApplicableN = See Narrative. EQL = Estimated Quantitation Limit 0 Ø 0

Environmental Lab of Texas

1 TAT brebring × × × × × × ×z×z9zz# 6006-60g O NPDES ##1 22 'BP 'P ç. 0.0 0728 HA9 Phone: 432-563-1800 Fax: 432-563-1713 Птекр MAON CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST UPS OH i:DE Scirgade, Containers, Integrates, Scirgade, Containers, Integrates, VOCo, Frace of Handspace (Steps of Anniantical) Custode, seeks on incompare(s) Custode, seeks on consignet(s) Custode, seeks on consignet(s) Sambel France Of Deleveed Sampe Hand Deleveed Ty by Counser? UHFS OF ONES XBLE AS DESIGNED TO A BLE Y BOOM Temperature-Lippen Receipt; × × × × × Project #: TNM · Rod Byrd 1 PO #: PAA - Jason Henry aboratory Comments Project Loc: Lea County, NM Project Name: Red Byrd #1 X Standard នាន្តរាស្ត ALLER AB BE CO CLOPHED TO THE SE SAR LESP / CEC 164 (M.S. (C), BOA, AS (X .nN .gM .nO) anotao Report Format: 9001 x1 -Hd1 N.W. X804 X.3 12 Turne 1 are ગહા 1.614 GW GW MO MO GW ΒÖ GW S GW ow - cunv GW 212100 Sale Oato (Yadau (Sugary) cstanley@basinerw.com (n K)N 12600 West I-20 East Odassa, Texas 70765 1015-01 HORN '05'H revenue ton t HCA 1900 × × × × × × × × × × HNO' (505) 396-1429 ×× × × × × 2 \$334 10) 10 's ph ~ ~ ~ N -~ 2 1 Lan bered his Fax No: March Lance Reparts and 1100 1130 1150 1015 1225 1000 1030 1115 1240 1225 belanna2 eanit 83 broka Reprised by ELOR 91 OF 2/27/2009 2/27/2009 2/27/2009 2/27/2009 2/27/2009 2/27/2009 2/27/2009 2/27/2009 2/27/2009 2/27/2009 Received by: Received by: Bash Environmental Service Technologies, LLC belonne2 eteQ PAGE 5/3/69/1024 daga Quibna 2 rbgəQ grinnigoB Lovington, NM 83260 Qata オート Company Address: P. O. Box 301 (505) 441-2244 **Gurt Stantey** 376375 FIELD CODE MW-13 MW-18 71-WW MW-19 MW-14 MW-11 MW-16 MW-8 6-WW 7-WM Sample: Signatured Project Manager: Company Name City/State/Zip; Telephone No: Special Instructions: d neurod pho A posterior (lab use only) ORDER #: Se 50 ති 3 3 10 3 (Aluo een qej) # g

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

z z z z z S TAT brebnut2 ×× × × × × × Feels Lene Star O NPDES HAT HEU ç 0.0 0758 HAG Phone: 432-563-1800 Fax: 432-563-1713 Птяяр 11.9.0.1 DHA: 10, uPS D 10-24 Temperature Upon Racetat 0154 00318149 00000 4 RLEX 8500 × × × Laborationy Comments: Sample Containers VOCs Free of Handsmace? UCSs Free of Handsmace? Labels on containers? Custody spets on containers? × × Project #: TNM - Red Byrd 1 Custof Seats of Contail Custof Sasts of Contail ample Hand, Deliver PO 8: PAA - Jason Henry Project Loc: Les County, NM Project Name: Red Byrd #1 X Standard by Samplerit ais git of to bo all gA an seam 232/d53/845 'r05 (0) 100 (), en (Ca, Mg, Na, K) Report Format: 900i XI. 900s X1 'rid 1 inte ans: anus VISIOS 6 810 Hd. GW GW GW GW GW ΘW δ 0.M - 01010 33 09 un Outroud ~Au 220 Date 45)):9400 cstanlev@basinenv.com 9001 12600 West F20 East Odessa, Texas 79765 N²G²RN HORN 4'80' Ha 10c × ×× х × × × (505) 396-1429 'ONH 63 × × × × 2 e sontano.) to . a lat ~ ~ 2 64 2 transfer the Hyrologia Love Verper goman Fax No. 1315 1330 1410 1245 1345 1400 1300 beigmed emil 8 02 OF CLE YE BONDON ELO 2/27/2009 2/27/2009 2/27/2009 2/27/2009 2/27/2009 2/27/2009 2/27/2009 Received by: Received by: Basin Environmental Service Technologies, LLC beiqme2 ete0 PAGE 1024 ntqaQ Qabal 3 ជាជនថា ពួកកោរព្រួលឆ្ \$13/E2/ Lovington, NM 88260 0a%e Company Address: P. O. Box 301 (505) 441,224 326325 Curl Stanley FIELD CODE MW-15 S-WW MW-10 MVV-4 MW-1 9-WW MW-3 Sampler Signature Project Manager: Company Name City/State/Zip: Telephone No: poctal Instructions: 3 anquirehed by (And tase only) ORDER #: 9 00 5 3 5 1 (Aluo esn del) a B

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

Client:	Basin Env. Plains
Date/ Time:	3-3-09 10:24
Lab ID # 1	326325
Initials:	au

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Sample Receipt Checklist

Client initiate

Date/ Time;

#1	Temperature of container/ cooler?	(Yes)	No	50°0	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<not present=""></not>	
#4	Custody Seals intact on sample bottles/ container?	Yes,	No	Not Present	
#5	Chain of Custody present?	Yes)	No		
#6	Sample instructions complete of Chain of Custody?	Yes'	No		
#7	Chain of Custody signed when relinguished/ 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?	Ces	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	(es)	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable).	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: Regarding:

Corrective Action Taken:

Check all that Apply:

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See attached e-mail/ fax

Contacted by:

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

Analytical Report 326327

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd # 1

TNM-Red Byrd 1

09-MAR-09





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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



09-MAR-09

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

Reference: XENCO Report No: **326327 Red Byrd # 1** Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 326327. 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. 326327 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 326327

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd # 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-19	W	Feb-27-09 10:00		326327-001
MW-13	W	Feb-27-09 10:15		326327-002
MW-8	W	Feb-27-09 10:30		326327-003
MW-14	W	Feb-27-09 11:00		326327-004
MW-7	W	Feb-27-09 11:15		326327-005
MW-18	W	Feb-27-09 11:30		326327-006
MW-9	W	Feb-27-09 11:50		326327-007
MW-17	W	Feb-27-09 12:25		326327-008
MW-11	W	Feb-27-09 12:25		326327-009
MW-16	W	Feb-27-09 12:40		326327-010
MW-5	W	Feb-27-09 12:45		326327-011
MW-15	W	Feb-27-09 13:00		326327-012
MW-10	W	Feb-27-09 13:15		326327-013
MW-4	W	Feb-27-09 13:30		326327-014
MW-1	W	Feb-27-09 13:45		326327-015
MW-6	W	Feb-27-09 14:00		326327-016
MW-3	W	Feb-27-09 14:10		326327-017

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Project Id: TNM-Red Byrd 1 Contact: Jason Henry

Image: Section of Analysis Summary 326327 PLAINS ALL AMERICAN EH&S, Midland, TX



Date Received in Lab: Tue Mar-03-09 10:24 am Report Date: 09-MAR-09

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070334

Project Location: Lea County NM					keport Date:	79-MAK-09	
					Project Manager:]	Brent Barron, II	
	Lab Id:	326327-001	326327-002	326327-003	326327-004	326327-005	326327-006
And web Docusedad	Field Id:	01-WM	MW-13	MW-8	MW-14	MW-7	MW-18
naisanhay sistimuy	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Fcb-27-09 10:00	Feb-27-09 10:15	Feb-27-09 10:30	Feb-27-09 11:00	Feb-27-09 11:15	Feb-27-09 11:30
Anions by FPA 300	Extracted:						
	Analyzed:	Mar-06-09 03:36	Mar-03-09 11:41	Mar-03-09 11:41			Mar-03-09 11:41
	Units/RL:	mg/L RL	mg/L RL	mg/L RL			mg/L RL
Chloride		8530 250	5130 100	7630 100			6520 100
TDS by SM2540C	Extracted:						
	Analyzed:	Mar-03-09 16:18	Mar-03-09 16:18	Mar-03-09 16:18	Mar-03-09 16:18	Mar-03-09 16:18	Mar-03-09 16:18
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Total dissolved solids		14200 5.00	9910 5.00	11900 5.00	12500 5.00	14200 5.00	10200 5.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report repression the static adjactment of XENCO Laboratories. XENCO prehatorine statemes to responsibility and makes no warmany to the end use of the data hereby presented. Our tiability is limited to the amount invoiced for this work order taless otherwise agreed to in writing.

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Odessa Laboratory Director C Sitt

Cortificate of Analysis Summary 326327 PLAINS ALL AMERICAN EH&S, Midland, TX 0 E E 6 No.



Project Name: Red Byrd #1

Project Location: Lea County, NM Contact: Jason Henry

Project ld: TNM-Red Byrd 1

Date Received in Lab: Tue Mar-03-09 10:24 am Report Date: 09-MAR-09

		- 100 Million			Project Manager: 1	Brent Barron, II	
	Lab Id:	326327-007	326327-008	326327-009	326327-010	326327-011	326327-012
Analucie Docuordad	Field Id:	6-WM	MW-17	11-WM	MW-16	MW-5	MW-15
naisanhay sistimuy	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Feb-27-09 11:50	Feb-27-09 12:25	Feb-27-09 12:25	Fcb-27-09 12:40	Feb-27-09 12:45	Feb-27-09 13:00
Anions by FPA 300	Extracted:						
	Analyzed:		Mar-03-09 11:41	Mar-03-09 11:41		Mar-03-09 11:41	
	Units/RL:		mg/L RL	mg/L RL		mg/L RL	
Chloride			5460 100	6670 100		7270 100	
TDS by SM2540C	Extracted:						
	Anulyzed:	Mar-03-09 16:18	Mar-03-09 16:18	Mar-03-09 16:18	Mar-03-09 16:18	Mar-03-09 16:18	Mar-03-09 16:18
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Total dissolved solids		10300 5.00	7200 5.00	10600 5.00	10800 5.00	12900 5.00	10700 5.00

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

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Odessa Laboratory Director Brent Barron

Page 5 of 14



Project Name: Red Byrd # 1

Project Id: TNM-Red Byrd I Contact: Jason Henry ć . ,

Date Received in Lab: Tue Mar-03-09 10:24 am Report Date: 09-MAR-09

•						
					Project Manager:	Brent Barron, II
	Lab Id:	326327-013	326327-014	326327-015	326327-016	326327-017
Analysis Daniastad	Field Id:	01-WM	MW-4	I-WM	MW-6	MW-3
nawan haw sistimute	Depth:					
	Matrix:	WATER	WATER	WATER	WATER	WATER
	Sampled:	Feb-27-09 13:15	Feb-27-09 13:30	Fcb-27-09 13:45	Feb-27-09 14:00	Fcb-27-09 14:10
Anions by EPA 300	Extracted:					
	Analyzed:			Mar-03-09 11:41		
	Units/RL:			mg/L RL		
Chloride	-			7440 100		
TDS by SM2540C	Extracted:					
	Analyzed:	Mar-03-09 16:18	Mar-03-09 16:18	Mar-03-09 16:18	Mar-03-09 16:18	Mar-03-09 16:18
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Total dissolved solids		16400 5.00	11300 5.00	11200 5.00	14600 5.00	13400 5.00

This analytical report, and the entire data package it represents, has been trade for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data herdory presented Dur liability is timited to the anount invoked for this work order unless observice agreed to in virtues.

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Odessa Laboratory Director Brent Barron





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

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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116
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Project Name: Red Byrd # 1

Work Order #: 326327

Project	ID:
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TNM-Red Byrd 1

Lab Batch #: 751380 Date Analyzed: 03/03/2009	Sample: 751380 Date Prepared: 03/03/2	Matrix: Water Analyst: LATCOR					
Reporting Units: mg/L	Batch #: BLAN		LANK /BLANK SPIKE RECOVERY STUD				
Anions by EPA 300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags	
Analytes		[B]	[C]	%R [D]	%R		
Chloride	ND	10.0	10.8	108	90-110		
Lab Batch #: 751696	Sample: 751696	-1-BKS	Matri	ix: Water			
Date Analyzed: 03/06/2009	Date Prepared: 03/06/2	009	Analy	st: LATC	OR		
Reporting Units: mg/L	Batch #: 1	BLANK /BLANK SPIKE RECOVERY			COVERY S	STUDY	
Anions by EPA 300	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags	
Analytes			[C]	[D]			
Chloride	ND	10.0	9.28	93	90-110		

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

	Form 3 - MS F	Recover	ries))		OTEO IN
Coordonation Project 1	Name: Red Byrd #	ŧ 1				£∕∩€
Work Order #: 326327						
Lab Batch #: 751380			Pr	oject ID:	TNM-Red	Byrd I
Date Analyzed: 03/03/2009	Date Prepared:	03/03/2009		Analyst:	LATCOR	
QC- Sample ID: 326327-002 S	Batch #:	1		Matrix:	Water	
Reporting Units: mg/L	MAT	RIX / MA	TRIX SPIKE	RECO	VERY STU	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	5130	2000	7460	117	80-120	
Lab Batch #: 751696 Date Analyzed: 03/06/2009	Date Prepared:	03/06/2009		Analyst:	LATCOR	
QC- Sample ID: 326618-001 S	Batch #:	I		Matrix:	Water	
Reporting Units: mg/L	MAT	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chlorido	434	200	665	116	80-120	1

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Sample Duplicate Recovery



Project Name: Red Byrd #1

Work Order #: 326327

Lab Batch #: 751380 Date Analyzed: 03/03/2009	Date Pro	epared: 03/0	3/2009	Project I Analy	D: TNM-Re	:d Byrd I २
QC- Sample ID: 326327-002 D	D		SAMDLE		IX: Water	OVEDV
		SAMPLE	SAMPLE	DUPLIC	ALE REC	UVERY
Anions by EPA 300		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloridc		5130	5280	3	20	
Lab Batch #: 751696				I	L	1
Date Analyzed: 03/06/2009	Date Pro	epared: 03/0	6/2009	Analy	st: LATCO	ર
QC- Sample ID: 326618-001 D	В	atch #: 1		Matr	ix: Water	
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Anions by EPA 300		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride		434	414	5	20	
Lab Batch #: 751476						1
Date Analyzed: 03/03/2009	Date Pro	epared: 03/0	3/2009	Analy	st: WRU	
QC- Sample ID: 326237-002 D	B	latch #: l		Matr	ix: Water	
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC	ATE REC	ÓVERY
TDS by SM2540C Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids		524	592	12	30	

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

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

Client:	Proin Plains
Date/ Time	3.3.09. 10.24
Lab ID # ·	326327
initials.	al

Sample Receipt Checklist

#1	Temperature of container/ cooler?	(res)	No	50.0	
#2	Shipping container in good condition?	(res)	No		
¥3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not-Present)	
44	Custody Seals intact on sample bottles/ container?	Nes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	Nes	No		
#7	Chain of Custody signed when relinquished/ received?	Nes)	No:		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	(Yes'	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	Nes	No		
#16	Containers documented on Chain of Custody?	Ses'	No	1	
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Contact:

Date/ Time:

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

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Gracie Avalos

 From:
 Curt Stanley [cstanley@basinenv.com]

 Sent:
 Wednesday, March 04, 2009 5:57 PM

 To:
 Gracie Avalos

 Cc:
 Camille Bryant w/Basin; Jason Henry

 Subject:
 Re: WO 326327 / Red Byrd #1

Gracie,

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Please run chloride by E300 on MW-19

Thank you Curt Stanley

On Mar 4, 2009, at 4:05 PM, "Gracie Avalos" <gracie.avalos@xenco.com> wrote:

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

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<2009_326327_TNM-Red_Byrd_1.pdf>

3/5/2009

Analytical Report 336446

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd # 1 TNM_Red Byrd # 1

07-JUL-09





12600 West I-20 East Odessa, Texas 79765

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

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

> Arixona certification numbers: Houston, TX AZ0738

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

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

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

Reference: XENCO Report No: **336446 Red Byrd # 1** Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 336446. 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. 336446 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 336446

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd # 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-8	W	Jun-24-09 08:00		336446-001
MW-19	W	Jun-24-09 08:10		336446-002
MW-15	W	Jun-24-09 08:20		336446-003
MW-9	W	Jun-24-09 08:30		336446-004
MW-4	W	Jun-24-09 08:40		336446-005
MW-13	W	Jun-24-09 08:50		336446-006
MW-14	W	Jun-24-09 09:00		336446-007
MW-10	W	Jun-24-09 09:10		336446-008
MW-1	W	Jun-24-09 09:20		336446-009
MW-7	W	Jun-24-09 09:40		336446-010
MW-16	W	Jun-24-09 09:50		336446-011
MW-3	W	Jun-24-09 10:00		336446-012
MW-5	W	Jun-24-09 10:10		336446-013
MW-17	W	Jun-24-09 10:20		336446-014
MW-11	W	Jun-24-09 10:30		336446-015
MW-6	W	Jun-24-09 10:40		336446-016
MW-18	W	Jun-24-09 11:30		336446-017

CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S Project Name: Red Byrd # 1

Project ID:TNM_Red Byrd # 1Work Order Number:336446

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

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763989 BTEX-MTBE EPA 8021B SW8021BM

Batch 763989, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 336446-002.

4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 532811-1-BLK,336446-003. Matrix interferences is suspected.

Batch: LBA-764292 BTEX-MTBE EPA 8021B SW8021BM

Batch 764292, 4-Bromofluorobenzene recovered below QC limits QC Data not confirmed by reanalysis. Samples affected are: 532981-1-BLK.

Batch: LBA-764349 BTEX-MTBE EPA 8021B SW8021BM

Batch 764349, Toluene, o-Xylene recovered below QC limits in the Matrix Spike. Samples affected are: 336446-014, -008, -010, -011, -012, -016, -009, -015, 336446-014 S The Laboratory Control Sample for Toluene, o-Xylene is within laboratory Control Limits.

SW8021BM

Batch 764349, 1,4-Difluorobenzene recovered below QC limits . data not confirmed by reanalysis Samples affected are: 336446-011. Matrix interferences is suspected.

4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 533007-1-BLK,336446-004, 336446-010,336446-008,336446-009,336446-016,336446-011,336446-012,336446-015. Matrix interferences is suspected in sample surrogate failures.

CASE NARRATIVE



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Project ID: TNM_Red Byrd #1 Work Order Number: 336446

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

Batch: LBA-764532 BTEX-MTBE EPA 8021B SW8021BM

Batch 764532, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis Samples affected are: 336446-005,336446-007, 336446-013.

4-Bromofluorobenzene recovered below QC limits; QC Data not confirmed by re-analysis. Samples affected are: 533123-1-BLK

4-Bromofluorobenzene recovered above QC limits; QC data not confirmed by re-analysis. Matrix interferences is suspected; Sample Data confirmed by re-analysis. Sample affected are: 533123-1-BKS, 533123-1-BSD, 336617-004 S, 336617-004 SD, 336446-013

Control Con Project Id: TNM Red Byrd # 1

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Contact: Jason Henry

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd # 1

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Date Received in Lab: Thu Jun-25-09 09:05 am Report Date: 07-JUL-09

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Project Location : Les County NM					Report Date: (60-TDL-/L	
					Project Manager: 1	Brent Barron, II	
	Lab Id:	336446-001	336446-002	336446-003	336446-004	336446-005	336446-006
Auction Daniard	Field Id:	MW-8	MW-19	MW-15	6-WW	MW-4	MW-13
naisanhay sistinuy	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Jun-24-09 08:00	Jun-24-09 08:10	Jun-24-09 08:20	Jun-24-09 08:30	Jun-24-09 08:40	Jun-24-09 08:50
RTFX by FPA 8021B	Extracted:	Jul-01-09 15:45	Jun-27-09 09:00	Jun-27-09 09:00	Jun-27-09 09:00	Jul-02-09 17:15	Jul-02-09 17:15
	Analyzed:	Jul-01-09 20:50	Jun-30-09 02:44	Jun-30-09 04:32	Jul-01-09 12:34	Jul-03-09 19:29	Jul-03-09 19:51
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L F
Benzene		0.0050 0.0010	0.0018 0.0010	0.0010.0 9999 0.0100	0100.0 1100.0	0100.0 UN	0.0 UN
Toluene		ND 0.0020	ND 0.0020	ND 0.0200	ND 0.0020	0.0033 0.0020	0.0 UN
Ethylbenzene		ND 0.0010	0.0114 0.0010	0.0789 0.0100	ND 0.0010	0.0270 0.0010	ND 0.0
m,p-Xylenes		0.0033 0.0020	0.0067 0.0020	0.0405 0.0200	ND 0.0020	0.0351 0.0020	ND 0.0
o-Xylene		ND 0.0010	0.0011 0.0010	ND 0.0100	0100-0 QN	0.0011 0.0010	ND 0.0
Total Xylenes		0.0033 0.0010	0.0078 0.0010	0.0405 0.0100	0100.0 GN	0.0362 0.0010	ND 0.0
Total BTEX		0.0083 0.0010	0.021 0.0010	0.10.0 2618.0	0.0011 0.0010	0.0665 0.0010	ND 0.0

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 manufacient report represent: the best judgment of XENCO Laboratories. XENCO Laboratories assumes to responsibility and makes no warmany to the end use of the data herby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Odessa Laboratory Director Jel.

Certificate of Analysis Summary 336446 PLAINS ALL AMERICAN EH&S, Midland, TX Project Name: Red Byrd # 1 9..

of.

Project Id: TNM_Red Byrd #1

Contact: Jason Henry





Date Received in Lab: Thu Jun-25-09 09:05 am Report Date: 07-JUL-09

0.0200 0.0200 0.0400 RL Jun-27-09 09:00 Jun-24-09 10:00 Jul-01-09 14:43 336446-012 WATER MW-3 ΠN 0.0220 mg/L 0.1608 mg/L RL 0.1280 0.0200 ND 0.0400 Jun-24-09 09:50 Jun-27-09 09:00 Jul-01-09 14:21 Project Manager: Brent Barron, Il 336446-011 WATER MW-16 0.0011 0.0010 RL ND 0.0020 Jun-27-09 09:00 Jun-24-09 09:40 12:11 90-10-lnf 336446-010 WATER MW-7 mg/L mg/L RL 0.2850 0.0250 ND 0.0500 Jun-27-09 09:00 Jun-24-09 09:20 Jul-01-09 14:00 336446-009 WATER MW-1 z 0.0656 0.0200 ND 0.0400 ND 0.0200 Jun-24-09 09:10 Jun-27-09 09:00 Jul-01-09 13:38 336446-008 WATER 01-WM mg/L mg/L RL 0.0037 0.0010 0.0012 0.0010 ND 0.0020 Jul-02-09 17:15 Jun-24-09 09:00 Jul-03-09 20:56 336446-007 MW-14 WATER Field Id: Matrix: Depth: Extracted: Lab Id: Sampled: Analyzed: Units/RL: **BTEX by EPA 8021B** Project Location: Lea County, NM Analysis Requested

0.0400 0.0200 0.0200 0.0200

0.0714

0.0566 0.0400

ND 0.0200 0.0566 0.0200 0.2762 0.0200

ND 0.0010

ND 0.0250 ND 0.0250

ND 0.0500

ND 0.0400

ND 0.0200 ND 0.0200 0.0656 0.0200

ND 0.0010 ND 0.0010 0.0049 0.0010

Total Xylencs

o-Xylcne

Total BTEX

Ethylbenzene m,p-Xylenes

Benzene Toluene ND 0.0020

0.0011 0.0010

0.3275 0.0250

0.0916 0.0200

ND 0.0010 ND 0.0020 ND 0.0010

0.0425 0.0250

ΩN 0.0714

0.2542

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Odessa Laboratory Director Brent Barron



Project Id: TNM Red Byrd #1

Contact: Jason Henry

Certificate of Analysis Summary 336446 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd #1

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Date Received in Lab: Thu Jun-25-09 09:05 am 0-70L-70

0.0311 0.0100 R 0.0068 0.0050 ND 0.0100 0.0445 0.0050 ND 0.0050 0.0311 0.0050 0.0824 0.0050 Jul-03-09 23:48 Jun-24-09 11:30 Jul-02-09 17:15 336446-017 Brent Barron, II WATER MW-18 mg/L Project Manager: Report Date: ND 0.0400 0.2292 0.0200 0.2100 0.0400 0.0328 0.0200 0.4962 0.0200 R 0.0242 0.0200 0.0328 0.0200 Jun-24-09 10:40 Jun-27-09 09:00 Jul-01-09 16:53 336446-016 WATER MW-6 mg/L 0.3110 0.0200 ND 0.0400 RL ND 0.0400 0.0326 0.0200 ND 0.0200 ND 0.0200 0.3436 0.0200 Jul-01-09 16:30 Jun-27-09 09:00 Jun-24-09 10:30 336446-015 WATER II-WM mg/L mg/L RL 0.0164 0.0010 0.006 0.0010 0.0316 0.0010 0.0067 0.0010 0.0049 0.0020 0.0011 0.0010 0.0025 0.0020 Jun-24-09 10:20 Jun-27-09 09:00 Jul-01-09 12:12 336446-014 WATER MW-17 mg/L RL 0.0065 0.0010 0.0621 0.0010 ND 0.0010 0.0461 0.0020 0.0056 0.0010 0.0517 0.0010 0.0039 0.0020 Jul-02-09 17:15 Jul-03-09 21:17 Jun-24-09 10:10 336446-013 WATER MW-5 Lab Id: Field Id: Matrix: Depth: Extracted: Sampled: Analyzed: Units/RL: BTEX by EPA 8021B Project Location: Lea County, NM Analysis Requested Total Xylencs Ethylbenzene m,p-Xylenes Total BTEX o-Xylene Benzene Toluene

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Odessa Laboratory Director Brént Barron



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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 and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

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- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Work Orders : 336446), 0, 6229111 DKG / D		Project II	D: TNM_Rec	l Byrd # 1	
Lab Batch #: 703909	Sample: 332811-1-BKS7B Date Analyzed: 06/29/09 19:56		JRROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Anarytes					
1,4-Difluorobenzene		0.0291	0.0300	97	80-120	
4-Bromofluorobenzene		0.0329	0.0300	110	80-120	
Lab Batch #: 763989	Sample: 532811-1-BSD / B	SD Ba	atch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 06/29/09 20:18	SU	JRROGATE R	ECOVERY	STUDY	_
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	······································	0.0322	0.0300	107	80-120	
Lab Batch #. 763989	Sample: 532811-1-BLK / B		tch: Matr	iv. Water	1	
Units: mg/L	Date Analyzed: 06/29/09 21:01	ate Analyzed: 06/29/09 21:01 SURROGATE RECOVERY STUDY				
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0257	0.0300	86	80-120	
4-Bromofluorobenzene		0.0194	0.0300	65	80-120	*
Lab Batch #: 763989	Sample: 336446-002 / SMP	B	atch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 06/30/09 02:44	SU	JRROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0232	0.0300	77	80-120	*
4-Bromofluorobenzene	·	0.0247	0.0300	82	80-120	
Lab Batch #: 763989	Sample: 336446-003 / SMP	Ba	atch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 06/30/09 04:32	SU	URROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
I,4-Difluorobenzene	· · · · · · · · · · · · · · · · · · ·	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene		0.0194	0.0300	65	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Vork Orders : 336446	, Sampla, 336104-009 S / MS	B.	Project II	D:TNM_Rec	l Byrd # 1	
Units: mg/L	Date Analyzed: 06/30/09 05:15	SI	JRROGATE R	ECOVERY	STUDY	
BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes	0.0000			00.100	
1,4-Diffuorobenzene		0.0293	0.0300	98	80-120	
4-Bromorfuorobenzene		0.0309	0.0300	103	80-120	
Lab Batch #: 763989	Sample: 336104-009 SD / N	ISD B:	atch: [Matr	ix: Water		
Units: mg/L	Date Analyzed: 06/30/09 05:37	St	JRROGATE R	ECOVERY	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0294	0.0300	98	80-120	
4-Bromofluorobenzene		0.0322	0.0300	107	80-120	
Lah Batch #: 764292	Sample: 532981-1-BKS / B	KS B:	atch: 1 Matr	ix: Water		L
Units: mg/L	Date Analyzed: 07/01/09 19:03	SI	JRROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0295	0.0300	98	80-120	
4-Bromofluorobenzene		0.0308	0.0300	103	80-120	
Lab Batch #: 764292	Sample: 532981-1-BLK / B	LK Ba	atch: 1 Matr	ix: Water	A	
Units: mg/L	Date Analyzed: 07/01/09 19:46	SURROGATE RECOVERY STUDY				
ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0264	0.0300	88	80-120	
4-Bromofluorobenzene		0.0157	0.0300	52	80-120	*
Lab Batch #: 764292	Sample: 336446-001 / SMP	Ba	atch: Matr	ix: Water	•	
Units: mg/L	Date Analyzed: 07/01/09 20:50	SU	JRROGATE R	ECOVERY	STUDY	
втех	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	•	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene		0.0254	0.0300	85	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Work Orders : 336446	ő,	_	Project II	D: TNM_Ree	d Byrd # 1	
Lab Batch #: 704292	Sample: 336446-001 S7 MS	Ba Ba	IRROGATE RI	ix: Water	STUDY	
BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes					
1,4-Difluorobenzene		0.0269	0.0300	90	80-120	
4-Bromofluorobenzene		0.0332	0.0300	111	80-120	
Lab Batch #: 764292	Sample: 336446-001 SD / N	ISD Ba	itch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 07/01/09 21:33	SL	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	7 mary (CS	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	· · · · · · · · · · · · · · · · · · ·	0.0335	0.0300	112	80-120	
Lab Batch #: 764349	Sample: 533007-1-BKS/B	KS Ba	utch· l Matri	ix: Water	I	l
Units: mg/L	Linits: mg/l Date Analyzed: 07/01/09 10:04 SURROGATE RECOVERY STUDY					
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes					
1,4-Diffuorobenzene		0.0289	0.0300	96	80-120	
4-Bromofluorobenzene		0.0315	0.0300	105	80-120	
Lab Batch #: 764349	Sample: 533007-1-BSD / B	SD Ba	tch: 1 Matr	ix: Water	_	
Units: mg/L	Date Analyzed: 07/01/09 10:25	SU	RROGATE RI	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R D	Control Limits %R	Flags
1,4-Difluorobenzene		0.0298	0.0300	99	80-120	
4-Bromofluorobenzene		0.0308	0.0300	103	80-120	
Lab Batch #: 764349	Sample: 533007-1-BLK / B	LK Ba	tch: ¹ Matri	ix: Water		
Units: mg/L	Date Analyzed: 07/01/09 11:08	SU	IRROGATE RI	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	· · · · · · · · · · · · · · · · · · ·	0.0157	0.0300	52	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Work Orders : 336446, Project ID: TNM_Red Byrd # 1 Lab Batch #: 764349 Sample: 336446-010 / SMP Batch: 1 Matrix: Water						
Units: mg/L	Date Analyzed: 07/01/09 11:51	SU	JRROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 4-Difluorobenzene		0.0248	0.0300	83	80.120	
4-Bromofluorobenzene	·····	0.0248	0.0300	70	80-120	*
Lab Batch #: 764349	Sample: 336446-014 / SMP	D	hteh: 1 Matri	l iv: Water		L
Units: mg/L	Date Analyzed: 07/01/09 12:12	St	JRROGATE RI		STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	Anarytes	0.0263	0.0200	00	80.120	
4-Bromofluorobenzene		0.0283	0.0300	80	80-120	
	C 1 226446-004 / SMP	0.0237	0.0300	Watar	00 120	
Lab Batch #: 704349	Sample: 330440-0047 SMP	Batch: Matrix: Water				
Units: mg/L Date Analyzed: 07/01/09 12:34 SURROGATE RECOVERY STUDY						
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
1,4-Difluorobenzene		0.0259	0.0300	86	80-120	
4-Bromofluorobenzene		0.0175	0.0300	58	80-120	*
Lab Batch #: 764349	Sample: 336446-008 / SMP	Ba	atch: 1 Matri	x: Water		
Units: mg/L	Date Analyzed: 07/01/09 13:38	SU	JRROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0245	0.0300	82	80-120	
4-Bromofluorobenzene		0.0188	0.0300	63	80-120	*
Lab Batch #: 764349	Sample: 336446-009 / SMP	Ba	atch: 1 Matri	ix: Water		
Units: mg/L	Date Analyzed: 07/01/09 14:00	SL	JRROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0245	0.0300	82	80-120	· · ·
4-Bromofluorobenzene		0.0183	0.0300	61	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Vork Orders : 336446	, Sample: 336446-011 / SMP	Ra	Project II	D:TNM_Rec	l Byrd # 1	
Units: mg/L	Date Analyzed: 07/01/09 14:21	SU	RROGATE R	ECOVERY	STUDY	
BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			וטן		_
1,4-Difluorobenzene		0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene		0.0178	0.0300	59	80-120	*
Lab Batch #: 764349	Sample: 336446-012 / SMP	Ba	itch: I Matr	ix: Water		
Units: mg/L	Date Analyzed: 07/01/09 14:43	SL	JRROGATE R	ECOVERY	STUDY	
втех	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0252	0.0300	84	80-120	_
4-Bromofluorobenzene		0.0234	0.0300	78	80-120	*
Lab Batch #: 764349	Sample: 336446-015 / SMP	Ba	ntch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 07/01/09 16:30	SL	RROGATE R	ECOVERY	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	· · · · · · · · · · · · · · · · · · ·	0.0261 0.0300 87 80-120 0.0188 0.0300 63 80-120	.*			
Lab Batch #: 764349	Sample: 336446-016 / SMP	Ba	tch: 1 Matr	ix: Water		<u></u>
Units: mg/L	Date Analyzed: 07/01/09 16:53	SU	IRROGATE R	ECOVERY	STUDY	
BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
L4-Difluorobenzene		0.0246	0.0300	82	80-120	i
4-Bromofluorobenzene		0.0175	0.0300	58	80-120	*
Lab Batch #: 764349	Sample: 336446-014 S / MS	Ba	tch: 1 Matr	ix: Water	1	
Units: mg/L	Date Analyzed: 07/01/09 17:58	SU	RROGATE R	ECOVERY :	STUDY	
BTEX	C by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0257	0.0300	86	80-120	
		0.0201	0.0500	1 30	00 140	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Work Orders : 336446 Lab Batch #: 764349), Sample: 336446-014 SD / I	MSD B:	Project II atch: 1 Matr	D: TNM_Rec ix: Water	l Byrd # 1	
Units: mg/L	Date Analyzed: 07/01/09 18:20	SU	JRROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes					
1,4-Difluorobenzene		0.0261	0.0300	87	80-120	
4-Bromoffuorobenzene		0.0287	0,0300	96	80-120	
Lab Batch #: 764532	Sample: 533123-1-BKS / E	KS B:	atch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 07/03/09 10:33	SI	URROGATE R	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0315	0.0300	105	80-120	
4-Bromofluorobenzene		0.0366	0.0300	122	80-120	*
Lab Batch #: 764532	Sample: 533123-1-BSD / B	SD B:	atch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 07/03/09 10:53	SU	JRROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
1,4-Difluorobenzene		0.0315	0.0300	105	80-120	
4-Bromoffuorobenzene		0.0366	0.0300	122	80-120	*
Lab Batch #: 764532	Sample: 533123-1-BLK / B	LK Ba	atch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 07/03/09 16:18	SI	JRROGATE R	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
1.4-Difluorobenzene		0.0278	0.0300	93	80-120	
4-Bromofluorobenzene		0.0185	0.0300	62	80-120	.*
Lab Batch #: 764532	Sample: 336446-005 / SMF	Ba	atch: 1 Matr	ix: Water		
Units: mg/L	Date Analyzed: 07/03/09 19:29	SI	JRROGATE RI	ECOVERY	STUDY	
ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0215	0.0300	72	80-120	**
4-Bromofluorobenzene		0.0330	0.0300	110	80-120	-

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Work Orders : 336446 Lab Batch #: 764532	, Sample: 336446-006 / SMP	Ba	Project II atch: ¹ Matri	D:TNM_Rec ix: Water	l Byrd # 1	
Units: mg/L	Date Analyzed: 07/03/09 19:51	SU	JRROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorohenzene		0.0267	0.0300	80	80-120	
4-Bromofluorobenzene		0.0266	0.0300	89	80-120	
Lab Batch #: 764532	Sample: 336446-007 / SMP	Ra	l utch· 1 Matri	l v• Water		
Units: mg/L	Date Analyzed: 07/03/09 20:56	SU	JRROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	Trinity tes	0.0231	0.0300	77	80-120	**
4-Bromofluorobenzene		0.0282	0.0300	94	80-120	
Lab Batch #: 764537	Sample: 336446-013 / SMP	Da	tahi l Matri	w. Water		
Lab Batch #. 104352	Date Analyzed: 07/03/09 21:17		JRROGATE RI	ECOVERY	STUDY	- n - r
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4 Difluorabanzana	Analytes	0.0222	0.0200	70	80.120	**
4-Bromofluorobenzene		0.0233	0.0300	/8	80-120	**
Lab Batab # 764532	Samelar 236446 017 / SMP	0.0570		Wotor	00-120	
Lan Balch #: 704332	Date Analyzed: 07/03/09 23:48	Ba	RROGATE RI	COVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	·····	0.0251	0.0300	84	80-120	
4-Bromofluorobenzene		0.0260	0.0300	87	80-120	
Lab Batch #: 764532	Sample: 336617-004 S / MS	Ba	itch: 1 Matri	x: Water		
Units: mg/L	Date Analyzed: 07/04/09 00:30	SU	RROGATE RE	COVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I,4-Difluorobenzene		0.0314	0.0300	105	80-120	
4-Bromofluorobenzene		0.0371	0.0300	124	80-120	.*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Work Orders : 336446,

Vork Orders : 336446	, Samalar 236617 004 SD / M	(SD D-	Project I	D: TNM_Red	l Byrd # 1	
Units: mg/L	Date Analyzed: 07/04/09 00:52	SU Ba	RROGATE R	ECOVERY	STUDY	
втеу	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes					
1,4-Difluorobenzene		0.0314	0.0300	105	80-120	
4-Bromofluorobenzene		0.0371	0.0300	124	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



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Project Name: Red Byrd # 1

Work Order #: 336446

Project ID:

TNM_Red Byrd # 1

Lab Batch #: 764292 Date Analyzed: 07/01/2009	Sample: 532981 Date Prepared: 07/01/2	-1-BKS 009	Matri Analys	x: Water st: ASA		
Reporting Units: mg/L	Batch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY
BTEX by EPA 8021B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	ND	0.1000	0.1037	104	70-125	
Tolucne	ND	0.1000	0.1011	101	70-125	
Ethylbenzene	ND	0.1000	0.1065	107	71-129	
m,p-Xylenes	ND	0.2000	0.2143	107	70-131	
o-Xylene	ND	0.1000	0.1018	102	71-133	

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

BS / BSD Recoveries



Project Name: Red Byrd # 1

Work Order #: 336446 Analyst: ASA

Lab Batch ID: 763989

Sample: 532811-1-BKS

Batch #: 1

Date Prepared: 06/27/2009

Project ID: TNM_Red Byrd # 1 Date Analyzed: 06/29/2009 Matrix: Water

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Units: mg/L			BLAN	K /BLANK S	PIKE / E	LANK S	PIKE DUPL	ICATE I	RECOVE	RY STUD	Y	
BTEX by EPA	x 8021B	Blank ample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		[¥]	[8]	Result [C]	%R [D]	[E]	Duplicate Result [F]	6] 8	%	%R	%RPD	
Benzene		QN	0.1000	0.0956	96	0.1	0.1083	108	12	70-125	25	
Tolucne		ND	0.1000	0.0927	93	0.1	0.1055	106	13	70-125	25	
Ethylbenzene		ND	0.1000	0.0963	96	0.1	0.1103	011	14	71-129	25	
m,p-Xylenes		ND .	0.2000	0.1941	67	0.2	0.2210	111	13	70-131	25	
o-Xylcnc		ΟN	0.1000	0.0926	93	0.1	0.1055	106	13	71-133	25	
Analyst: ASA		Da	te Prepare	d: 06/27/200	6			Date Ar	alyzed: 0	7/01/2009		
Lab Batch ID: 764349	Sample: 533007-1-BK	S	Batch	#: 1					Matrix: V	Vater		

Units: mg/L		BLAN	K /BLANK S	PIKE / B	LANK S	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	:
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[<u>]</u>	Result [F]	<u>[</u>				
Bcnzene	QN	0.1000	0.0903	06	0.1	0.1084	108	18	70-125	25	
Toluene	DN	0.1000	0.0873	87	0.1	0.1051	105	19	70-125	25	
Ethylbenzene	QN	0.1000	0.0896	06	1'0	0.1083	801	19	71-129	25	
m,p-Xylcnes	DN	0.2000	0.1800	06	0.2	0.2160	108	18	70-131	25	
o-Xylcne	QN	0.1000	0.0868	87	0.1	0.1045	105	19	71-133	25	

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

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BS / BSD Recoveries



Project Name: Red Byrd #1

Work Order #: 336446 Analyst: BRB

Lab Batch ID: 764532

Date Prepared: 07/02/2009

Batch #: 1

Sample: 533123-1-BKS

Project ID: TNM_Red Byrd # 1 Date Analyzed: 07/03/2009

Matrix: Water

Flag

Units: mg/L		BLANI	K /BLANK S	PIKE / B	LANK S	PIKE DUPL	ICATE	RECOVE	RY STUD	Y
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD
Analytes		[B]	[c]	[0]	[E]	Result [F]	[0]			
Benzenc	ΟN	0.1000	0.1099	110	0.1	0.1082	108	2	70-125	25
Tolucne	ND	0.1000	0.1053	105	0.1	0.1041	104	-	70-125	25
Ethylbenzene	ND	0.1000	0.1187	611	0.1	0.1175	118	1	71-129	25
m,p-Xylenes	DN	0.2000	0.2425	121	0.2	0.2397	120	1	70-131	25
o-Xylene	DN	0.1000	0.1142	114	0.1	0.1132	113	-	71-133	25

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

 Image: Comparison of the second state of the seco



Project Name: Red Byrd # 1



Work Order #: 336446

Lab Batch ID: 763989

Date Analyzed: 06/30/2009 Reporting Units: mg/L

Project ID: TNM_Red Byrd # 1

QC- Sample ID: 336104-009 S Date Prepared: 06/27/2009

L

Matrix: Water ASA -Batch #: Analyst:

Reporting Units: mg/L		W	IATRIX SPIKI	TAM / 3	RLX SPII	KE DUPLICA	TE RECO	DVERY S	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	Q	0.1000	6960.0	97	0.1000	0.0993	66	2	70-125	25	
Toluene	QN	0.1000	0.0935	94	0.1000	0.0963	96	3	70-125	25	
Ethylbenzene	QN	0.1000	0.0955	96	0.1000	0.0993	66	4	71-129	25	
m,p-Xylencs	ND	0.2000	0.1821	16	0.2000	0.1908	95	5	70-131	25	
o-Xylene	ND	0.1000	0.0897	90	0.1000	0.0934	93	4	71-133	25	
Lab Batch ID: 764292 Date Analyzed: 07/01/2009	QC- Sample ID: Date Prepared:	336446 07/01/2	-001 S 009	Ba An	tch #: alyst: /	l Matrix ASA	k: Water				

Reporting Units: mg/L		M	ATRIX SPIKI	E / MATI	AIX SPIH	(E DUPLICA'	FE RECO	VERY S	TUDY		Γ
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0050	0.1000	0.0869	82	0.1000	0.0919	87	9	70-125	25	
Toluene	QN	0.1000	0.0778	78	0.1000	0.0820	82	5	70-125	25	
Ethylbenzene	DN	0.1000	0.0845	85	0.1000	0.0890	68	s	71-129	25	
m,p-Xylenes	0.0033	0.2000	0.1723	85	0.2000	0.1814	89	s	70-131	25	
o-Xvlenc	QN	0.1000	0.0782	78	0.1000	0.0833	83	9	71-133	25	

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

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

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

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Project Name: Red Byrd #1



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Project ID: TNM_Red Byrd # 1

Matrix: Water

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Batch #:

QC- Sample ID: 336446-014 S Date Prepared: 06/27/2009

Work Order #: 336446 Lab Batch ID: 764349 Date Analyzed: 07/01/2009

/2009 Analyst: ASA MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Reporting Units: mg/L		Z	IATRIX SPIK	E / MAT	RIX SPII	KE DUPLICA	TE REC	DVERY	STUDY		
BTEX by EPA 8021B	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]	<u>כ</u>	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	0.0164	0.1000	0.0893	73	0.1000	0.0977	81	6	70-125	25	
Toluenc	0.0025	0.1000	0.0716	69	0.1000	0.0792	17	10	70-125	25	×
Ethylbenzene	0.0067	0.1000	0.0796	73	0.1000	0.0884	82	10	71-129	25	
m,p-Xylenes	0.0049	0.2000	0.1492	72	0.2000	0.1662	81	н	161-07	25	
o-Xylene	0.0011	0.1000	0.0685	67	0.1000	0.0778	77	13	71-133	25	х
Lab Batch ID: 764532 Date Analyzed: 07/04/2009	QC- Sample ID: Date Prepared:	336617 07/02/2	-004 S 009	Ba An	tch #: alyst: I	1 Matrix 3RB	c: Water				

Reporting Units: mg/L		Z	ATRIX SPIK	E / MAT	RIX SPII	KE DUPLICA'	FE REC	DVERY S	TUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	QN	0.1000	0.0890	89	0.1000	0.0933	93	5	70-125	25	
Toluene	QN	0.1000	0.0850	85	0.1000	0.0893	89	5	70-125	25	
Ethylbenzene	QN	0.1000	0.0962	96	0.1000	0.1012	101	5	71-129	25	
m,p-Xylenes	ŊŊ	0.2000	0.1959	98	0.2000	0.2063	103	5	70-131	25	
0-Xvlenc	CIN	0 1000	0.0915	92	0.1000	0.0953	95	4	71-133	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit Õ ۲ Ò •

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India Lab of Texas International Lab of Texas International Lab of Texas International Lab of Texas International Laboration determine Bryant determine Bryant determine Bryant determine Bryant determine Bryant determine Bryant determine Bryant Date Stampled MW-13 MW-13 MW-13 MW-13 MW-13 MW-14 MW-13 MW-14 MW-13 MW-14 MW-15 MW-1	CF 17600 Meet L	Odessa, Texa)				ax No: (505) 396-1428	+mail: <u>cjbryant@bas</u>			Preservation &	4500 Pajd Filesad HCI MON X 21 HCI MON X 21		0 i x X	0 11× X	0 11X X	0 1 1 × 1	0 11× X	0 1 X X		0 11× X	0 [1] x [1]		normality	
Iental Lab of Texas Iager: Camile Bryant Iame Basin Environmental Sorvice Techn datess: 200 Pialine Hwy datess: 200 P			PAGE 01 OF 02	ologies, LLC			ŭ	L. Purselds.				beigmeß eisü	6/24/2009 80	8/24/2009 81	6/24/2009 82	6/24/2009 83	6/24/2009 84	6/24/2009 85	6/24/2009 50	6/24/2009 81	6/24/2009 92	8/24/2009 94		Received by:	Received by:
Iental Lab of Tex iager: Camile Brant lamo Basin Environmental servic datess: 2400 Pitatins Hwy datess: 2400 Pitatins Hwy datess: 2400 Pitatins Hwy be: Loningren. MM 64250 Pitating, Af. L. J. J. J. T. J.	(as		\setminus	* Techn				ن ب				Anding Depth Anding Depth Anding Depth				_			-					Time .	-Time
Intential La ager: Camille larne Basin En deress: 200 Pia deress: 200 Pia by: Loningre No: [273] 605 piaturo, LA Sy 3, 0, 4, MW44 MW	ub of Te)		Bryant	vironmental Servic	ns Hwy	n. NM 88260	-7210	Hulito	0 1)	د ۲۰	2													Velocity C	Date
	ental La		ager: Camille F	ame Basin En	ddress: 2800 Pial	p: Lovingto	Vo: <u>(575) 605</u>	SH Stran		2 2.5 1	テロのう	FIELD CODE	8-WM	MW-19	MW-15	8-WM	MW-4	-MW-13	MW-14	01-WW	MW-1	<i>1-W</i> M		2	k



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

Chent:	Bisin / Plains
Date/ Time:	6 23 09 9:05
Lab ID # ·	3360446
Initials:	aL

Sample Receipt Checklist

Cilent Initials Yes 4.6 ° Cl No #1 Temperature of container/ cooler? Yes No #2 Shipping container in good condition? Not Present #3 Custody Seals intact on shipping container/ cooler? No #4 Custody Seals intact on sample bottles/ container? YeD No Not Present Yes No #5 Chain of Custody present? Yes Yes Yes Yes Yes No #6 Sample instructions complete of Chain of Custody? No #7 Chain of Custody signed when relinquished/ received? #8 Chain of Custody agrees with sample label(s)? No ID written on Cont./ Lid #9 Container label(s) legible and intact? No Not Applicable #10 Sample matrix/ properties agree with Chain of Custody? No #11 Containers supplied by ELOT? No (Yes) Yas No See Below #12 Samples in proper container/ bottle? #13 Samples properly preserved? No See Balow (Yes (Yes No #14 Sample bottles intact? #15 Preservations documented on Chain of Custody? No #16 Containers documented on Chain of Custody? Yes No Yes #17 Sufficient sample amount for indicated test(s)? No See Below #18 All samples received within sufficient hold time? No ì See Below

		Variance Do	cumentation			
Contact:		Contacted by:			Date/ Time:	
Regarding:						
Corrective Action Taker	1.					is a second s
	4					
Check all that Apply:		See attached a-mail/ fax				
eneor an mars spyr		Client understands and v Cooling process had beg	vould like to proc jun shortly after	ceed with sampling	analysis event	

Analytical Report 344010

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd # 1 TNM-Red Byrd # 01

16-SEP-09





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00308), USDA (S-44102)

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

> Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX) Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX) Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)



16-SEP-09

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

Reference: XENCO Report No: **344010 Red Byrd # 1** Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 344010. 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. 344010 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 344010

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd # 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-17	W	Sep-09-09 09:15		344010-001
MW-6	W	Sep-09-09 09:30		344010-002
MW-11	W	Sep-09-09 09:45		344010-003
MW-3	W	Sep-09-09 10:00		344010-004
MW-7	W	Sep-09-09 10:15		344010-005
MW-13	W	Sep-09-09 10:45		344010-006
MW-14	W	Sep-09-09 11:00		344010-007
MW-10	W	Sep-09-09 11:15		344010-008
MW-5	W	Sep-09-09 12:00		344010-009
MW-4	W	Sep-09-09 12:20		344010-010
MW-8	W	Sep-09-09 12:35		344010-011
MW-19	W	Sep-09-09 12:40		344010-012
MW-15	W	Sep-09-09 13:00		344010-013
MW-9	W	Sep-09-09 13:15		344010-014
MW-16	W	Sep-09-09 13:30		344010-015
MW-1	W	Sep-09-09 13:45		344010-016
MW-18	W	Sep-09-09 14:00		344010-017

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CASE NARRATIVE



> Client Name: PLAINS ALL AMERICAN EH&S Project Name: Red Byrd # 1

Project ID:TNM-Red Byrd # 01Work Order Number:344010

Report Date: 16-SEP-09 Date Received: 09/10/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-772147 BTEX-MTBE EPA 8021B SW8021BM

Batch 772147, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by reanalysis. Samples affected are: 537626-1-BLK,344010-006,344010-008,344010-016,344010-004,344010-013,344010-014,344010-015,344010-003,344010-001. Matrix interference is suspected in sample surrogate failures.

SW8021BM

Batch 772147, Ethylbenzene recovered above QC limits in the Matrix Spike. Samples affected are: 344010-001, -006, -013, -008, -016, -003, -004, -014, -005, -015, -012. The Laboratory Control Sample for Ethylbenzene is within laboratory Control Limits

Batch: LBA-772402 BTEX-MTBE EPA 8021B SW8021BM

Batch 772402, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 344010-009,344010-017. Matrix interference is suspected in sample surrogate failures.
4-Bromofluorobenzene recovered below QC limits. Data confirmed by re-analysis. Samples affected are: 537770-1-BLK,344010-002.

CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S Project Name: Red Byrd # 1

Project ID:TNM-Red Byrd # 01Work Order Number:344010

Report Date: 16-SEP-09 Date Received: 09/10/2009

Batch: LBA-772616 BTEX-MTBE EPA 8021B SW8021BM

Batch 772616, Toluene recovered below QC limits in the Matrix Spike. Samples affected are: 344010-010, -011. The Laboratory Control Sample for Toluene is within laboratory Control Limits

SW8021BM

Batch 772616, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis Samples affected are: 344010-010,344010-011. 4-Bromofluorobenzene recovered below QC limits Sample Data confirmed by re-analysis. Samples affected are: 537875-1-BLK,344010-010. QC data not confirmed by reanalysis.

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PLAINS ALL AMERICAN EH&S, Midland, TX





Project Id: TNM-Red Byrd # 01 Project Location: Lea County, NM Contact: Jason Henry

Date Received in Lab: Thu Sep-10-09 09:15 am Report Date: 16-SEP-09

					Project Manager: E	srent Barron, II	
	Lab Id:	344010-001	344010-002	344010-003	344010-004	344010-005	344010-006
Analysis Dograd	Field Id:	MW-17	MW-6	II-WM	MW-3	MW-7	MW-13
naisanhay sistimuy	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Scp-09-09 09:15	Sep-09-09 09:30	Sep-09-09 09:45	Scp-09-09 10:00	Sep-09-09 10:15	Sep-09-09 10:45
BTEX by EPA 8021B	Extracted:	Sep-11-09 10:00	Sep-14-09 15:50	Sep-11-09 10:00	Sep-11-09 10:00	Sep-11-09 10:00	Sep-11-09 10:00
	Analyzed:	Sep-12-09 15:18	Sep-15-09 03:44	Sep-12-09 12:48	Sep-12-09 16:51	Sep-12-09 13:06	Sep-12-09 13:25
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		0.1962 0.0200	0.5374 0.0200	0.0201 0.0010	0.4070 0.0500	0.0051 0.0010	ND 0.0010
Toluene		ND 0.0400	0.7818 0.0400	ND 0.0020	ND 0.1000	ND 0.0020	ND 0.0020
Ethylbenzene		0.0934 0.0200	0.0960 0.0200	0.0030 0.0010	0.0505 0.0500	0.0012 0.0010	0100'0 QN
m,p-Xylenes		0.0696 0.0400	0.0832 0.0400	ND 0.0020	0.1370 0.1000	ND 0.0020	ND 0.0020
o-Xylene		ND 0.0200	0.0266 0.0200	0100 ^{.0} UN	ND 0.0500	0.0016 0.0010	ND 0.0010
Total Xylencs		0.0696 0.0200	0.1098 0.0200	ND 0.0010	0.1370 0.0500	0.0016 0.0010	0100.0 UN
Total BTEX		0.3592 0.0200	1.5250 0.0200	0.0231 0.0010	0.5945 0.0500	0.0079 0.0010	ND 0.0010

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and retuits expressed hroughout this analytical report represent the best judgment of XFNCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warramy 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.

Odessa Laboratory Manager Brent Barron, II

ACCONCERT Certificate of Analysis Summary 344010 PLAINS ALL AMERICAN EH&S, Midland, TX

100



Project Id: TNM-Red Byrd # 01 Contact: Jason Henry Project Location: Lea County, NM

Date Received in Lab: Thu Sep-10-09 09:15 am

Project Name: Red Byrd #1

Report Date: 16-SEP-09

					Project Manager: F	trent Barron, II	
	Lab Id:	344010-007	344010-008	344010-009	344010-010	344010-011	344010-012
Analysis Doguestad	Field Id:	MW-14	MW-10	MW-5	MW-4	8-WM	MW-19
naicanhay sistimur	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Sep-09-09 11:00	Scp-09-09 11:15	Sep-09-09 12:00	Sep-09-09 12:20	Scp-09-09 12:35	Sep-09-09 12:40
BTEX by EPA 8021B	Extracted:	Sep-14-09 15:50	Sep-11-09 10:00	Sep-14-09 15:50	Sep-15-09 14:00	Sep-15-09 14:00	Sep-11-09 10:00
	Analyzed:	Sep-15-09 00:04	Sep-12-09 13:44	Sep-15-09 00:22	Sep-15-09 14:34	Sep-15-09 15:11	Sep-12-09 14:22
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		0.0040 0.0010	0.0015 0.0010	0.0063 0.0010	0.0235 0.0050	0.0170 0.0010	0.0024 0.0010
Toluene		0.0025 0.0020	ND 0.0020	0.0062 0.0020	0.0176 0.0100	ND 0.0020	ND 0.002(
Ethylbenzene		0.0019 0.0010	ND 0.0010	ND 0.0010	0.0968 0.0050	0.0025 0.0010	0.0878 0.0010
m,p-Xylencs		ND 0.0020	ND 0.0020	0.0580 0.0020	0.1289 0.0100	0.0113 0.0020	0.0498 0.0020
o-Xylene		ND 0.0010	ND 0.0010	0.0085 0.0010	0.0249 0.0050	0.0032 0.0010	ND 0.0010
Total Xylenes		ND 0.0010	ND 0.0010	0.0665 0.0010	0.1538 0.0050	0.0145 0.0010	0.0498 0.0010
Total BTEX		0.0084 0.0010	0.0015 0.0010	0.0790 0.0010	0.2917 0.0050	0.0340 0.0010	0.1400 0.0010

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 maiytical in orthor 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.

Odessa Laboratory Manager Brent Barron, II

Correction Certificate of Analysis Summary 344010 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd #1



Project Id: TNM-Red Byrd # 01 Contact: Jason Henry Project Location: Lea County, NM

Date Received in Lab: Thu Sep-10-09 09:15 am

Report Date: 16-SEP-09

					Project Manager: E	rent Barron, II	
	Lab Id:	344010-013	344010-014	344010-015	344010-016	344010-017	
Analysis Domostad	Field Id:	MW-15	6-MM	MW-16	I-WM	MW-18	-
naican havr sistimut	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	
	Sampled:	Sep-09-09 13:00	Scp-09-09 13:15	Scp-09-09 13:30	Scp-09-09 13:45	Sep-09-09 14:00	
BTEX by EPA 8021B	Extracted:	Sep-11-09 10:00	Sep-11-09 10:00	Sep-11-09 10:00	Sep-11-09 10:00	Sep-14-09 15:50	
	Analyzed:	Sep-12-09 18:05	Sep-12-09 18:24	Sep-12-09 18:42	Sep-12-09 19:01	Sep-15-09 00:59	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Benzene		0.9894 0.0200	0.6048 0.0200	0.2128 0.0200	0.7952 0.0200	0.0158 0.0010	
Tolucne		ND 0.0400	ND 0.0400	ND 0.0400	ND 0.0400	0.0053 0.0020	
Ethylbenzene		0.1772 0.0200	0.0210 0.0200	0.1666 0.0200	0.1450 0.0200	0.1158 0.0010	
m,p-Xylenes		0.0776 0.0400	ND 0.0400	0.0948 0.0400	0.1024 0.0400	0.0858 0.0020	
o-Xylene		ND 0.0200	ND 0.0200	ND 0.0200	ND 0.0200	ND 0.0010	
Total Xylenes		0.0776 0.0200	ND 0.0200	0.0948 0.0200	0.1024 0.0200	0.0858 0.0010	
Total BTEX		1.2442 0.0200	0.6258 0.0200	0.4742 0.0200	1.0426 0.0200	0.2227 0.0010	
							1

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations multi-reptile expressed throughout his analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warmany 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.

Odessa Laboratory Manager Brent Barron, II



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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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



Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Work Orders : 344010, Project ID: TNM-Red Byrd # 01 Lab Batch #: 772147 Sample: 537626-1-BKS / BKS Batch: I Matrix: Water							
Units: mg/L	Date Analyzed: 09/12/09 11:32	SURROGATE RECOVERY STUDY					
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
14.0.0	Analytes	0.02.04			00.100		
4. Promofluorobenzene		0,0304	0.0300	101	80-120		
4-Bromorndorobenzene		0.0328	0.0300	109	80-120		
Lab Batch #: 772147	Sample: 537626-1-BSD / E	ISD Bate	ch: Matrix	Water	2 DUDV		
Units: mg/L	Date Analyzed: 09/12/09 11:51	SURROGATE RECOVERY STUDY					
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1.4-Difluorobenzene		0.0303	0.0300	101	80-120		
4-Bromofluorobenzene		0.0325	0.0300	108	80-120		
L	Sempler 537626-1-BLK / F	IK Bata	h. 1 Matrix	Water			
	Data Analyzed: 00/12/00 12:20	SUPPOCATE DECOVERV STUDY					
	Date Analyzed: 09/12/09 12:29						
BTE	Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1.4-Difluorobenzene		0.0263	0.0300	88	80.120		
4-Bromofluorobenzene		0.0199	0.0300	66	80-120	*	
L	Sampla: 344010-003 / SMI) Pate	h. 1 Motria	Water			
	Data A polymed: 00/12/00 12:48	SURROCATE RECOVERV STUDV					
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene		0.0268	0.0300	89	80-120		
4-Bromofluorobenzene		0.0198	0.0300	66	80-120	*	
Lab Batch #: 772147	Sample: 344010-005 / SMI	Bate	ch: 1 Matrix	:Water			
Units: mg/L	Date Analyzed: 09/12/09 13:06	SURROGATE RECOVERY STUDY					
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene	· · · · · · · · · · · · · · · · · · ·	0.0252	0.0300	84	80-120		
4-Bromofluorobenzene		0.0261	0.0300	87	80-120		

* Surrogate outside of Laboratory QC limits
 ** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.
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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Work Orders : 344010),		Project II	: TNM-Red	Byrd # 01	
Lab Batch #: //214/ Units: mg/L	Date Analyzed: 09/12/09 13:25	Bate	RROGATE RE		STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
LAD Querrhan	Analytes	0.00.50	0.0200	1-1	00.120	
4. Bromofluorobenzene		0.0259	0.0300	86	80-120	*
4-Bromondorobenzene		0.0231	0,0300		80-120	
Lab Batch #: 772147	Sample: 344010-008 / SMP	Bate	h: 1 Matrix:	Water		
Units: mg/L	Date Analyzed: 09/12/09 13:44	SU	RRUGATE RI	COVERY	STUDY	
BTEZ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0262	0.0300	87	80-120	
4-Bromofluorobenzene		0.0164	0.0300	55	80-120	*
Lab Batch #: 772147	Sample: 344010-012 / SMP	Batc	h: ^j Matrix:	Water		
Units: mg/L	Date Analyzed: 09/12/09 14:22	SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorohenzene	Analytes	0.0243	0.0200	<u> </u>	¥0.120	
4-Bromofluorobenzene		0.0321	0.0300	107	80-120	
L = F D=4=F #= 772147	Sec. 244010.001 / SMP	D-4-1		Water	00 120	
Lad Datch #: 772147	Date Analyzed: 09/12/09 15-18	SU	RROGATE RI		STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0250	0.0300	83	80-120	
4-Bromofluorobenzene		0.0222	0.0300	74	80-120	*
Lab Batch #: 772147	Sample: 344010-004 / SMP	Bate	h: 1 Matrix	Water		
Units: mg/L	Date Analyzed: 09/12/09 16:51	SU	RROGATE RI	ECOVERY	STUDY	• • • • • • • • • • • • • • • • • • • •
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0250	0.0300	83	80-120	
4-Bromofluorobenzene		0.0205	0.0300	68	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Work Orders : 344010	, Sample: 344010-013 / SMP	Poto	Project II	D: TNM-Red	Byrd # 01	
Units: mg/L	Date Analyzed: 09/12/09 18:05	SU	RROGATE RI	ECOVERY	STUDY	
ВТЕХ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes					
1,4-Difluorobenzene		0.0281	0.0300	94	80-120	
4-Bromofluorobenzene		0.0200	0.0300	67	80-120	*
Lab Batch #: 772147	Sample: 344010-014 / SMP	Bate	h: ¹ Matrix	:Water		
Units: mg/L	Date Analyzed: 09/12/09 18:24	SU	RROGATE RI	ECOVERY	STUDY	
BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0278	0.0300	93	80-120	
4-Bromofluorobenzene		0.0153	0.0300	51	80-120	*
Lab Batch #: 772147	Sample: 344010-015 / SMP	Batc	h: ¹ Matrix	:Water		
Units: mg/L	Date Analyzed: 09/12/09 18:42	SU	RROGATE RI	ECOVERY	STUDY	
ВТЕУ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 4-Difluorohenzene		0.0240	0.0300	80	80-120	
4-Bromofluorobenzene		0.0167	0.0300	56	80-120	*
Lab Batch #: 772147	 Sample: 344010-016 / SMP	Bate	h· Matrix	•Water		
Units: mg/L	Date Analyzed: 09/12/09 19:01	SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0268	0.0300	89	80-120	
4-Bromofluorobenzene		0.0225	0.0300	75	80-120	*
Lab Batch #: 772147	Sample: 344010-012 S / MS	Batc	h: I Matrix	:Water		
Units: mg/L	Date Analyzed: 09/12/09 19:57	SU	RROGATE RI	ECOVERY	STUDY	
ВТЕХ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0283	0.0300	94	80-120	
4-Bromofluorobenzene		0.0351	0.0300	117	80-120	

* Surrogate outside of Laboratory QC limits
 ** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Vork Orders : 344010	,		Project II	D: TNM-Red	Byrd # 01	
Lab Batch #: 772147	Sample: 344010-012 SD / N	ASD Bate	h: 1 Matrix	:Water	CTUDY C	
Units: mg/L	Date Analyzed: 09/12/09 20:16	50	RRUGATE RI	LCOVERY		
BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0283	0.0300	94	80-120	
4-Bromofluorobenzene		0.0345	0.0300	115	80-120	
Lab Batch #: 772402	Sample: 537770-1-BKS / B	KS Bate	h: i Matrix	:Water		
Units: mg/L	Date Analyzed: 09/14/09 22:50	SU	RROGATE R	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0303	0.0300	101	80-120	
4-Bromofluorobenzene		0.0324	0.0300	108	80-120	
Lab Batch #: 772402	Sample: 537770-1-BSD / B	SD Bate	h: Matrix	:Water	1	
Units: mg/L	Date Analyzed: 09/14/09 23:08	SU	RROGATE R	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0295	0.0300	98	80-120	
4-Bromofluorobenzene		0.0312	0.0300	104	80-120	
Lab Batch #: 772402	Sample: 537770-1-BLK / B	LK Bate	h: 1 Matrix	:Water	Ł	
Units: mg/L	Date Analyzed: 09/14/09 23:45	SU	RROGATE R	ECOVERY	STUDY	
втеу	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0267	0.0300	89	80-120	
4-Bromofluorobenzene		0.0189	0.0300	63	80-120	*
Lab Batch #: 772402	Sample: 344010-007 / SMP	Bate	h: 1 Matrix	Water	4	
Units: mg/L	Date Analyzed: 09/15/09 00:04	SU	RROGATE R	ECOVERY	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	· · · · · · · · · · · · · · · · · · ·	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene		0.0286	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits
 ** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Vork Orders : 344010 Lab Batch #: 772402	, Sample: 344010-009 / SMP	Bate	Project II): TNM-Red Water	Byrd # 01	
Units: mg/L	Date Analyzed: 09/15/09 00:22	SU	RROGATE RI	ECOVERY	STUDY	·
BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0205	0.0300	68	80-120	**
4-Bromofluorobenzene		0.0325	0.0300	108	80-120	
Lab Batch #: 772402	Sample: 344010-017 / SMP	Bate	h: 1 Matrix	Water		
Units: mg/L	Date Analyzed: 09/15/09 00:59	SU	RROGATE RI	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0219	0.0300	73	80-120	**
4-Bromofluorobenzene		0.0306	0.0300	102	80-120	
Lah Batch #: 772402	Sample: 344010-002 / SMP	Bate	h· l Matrix	Water		
Units: mg/L	Date Analyzed: 09/15/09 03:44	SU	RROGATE RI	ECOVERY	STUDY	
BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4 Diffuenchannana	Analytes	0.0246	0.0200		00.120	
4 Bromofluorobenzene		0.0246	0.0300	82	80-120	**
4-Bromoriaoroocnizene		0.0156	0.0300	52	80-120	**
Lab Batch #: 772616	Sample: 537875-1-BKS / BK	S Bate	h: 1 Matrix:	Water		
Units: mg/L	Date Analyzed: 09/15/09 10:56	SU	RROGATE RI	ECOVERY	STUDY	-
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0301	0.0300	100	80-120	
4-Bromofluorobenzene		0.0328	0.0300	109	80-120	
Lab Batch #: 772616	Sample: 537875-1-BSD / BS	D Bate	h: 1 Matrix:	Water		
Units: mg/L	Date Analyzed: 09/15/09 11:15	SU	RROGATE RI	ECOVERY	STUDY	
ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0295	0.0300	98	80-120	
4-Bromofluorobenzene		0.0225	0.0200	100	00.120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Work Orders : 344010), Sample: 537875-1-BLK / B	LK Bate	Project II): TNM-Red • Water	Byrd # 01	
Units: mg/L	Date Analyzed: 09/15/09 11:52	SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
14.510	Analytes					
1,4-Diffuorobenzene		0.0274	0.0300	91	80-120	
4-Bromofluorobenzene		0.0163	0.0300	54	80-120	*
Lab Batch #: 772616	Sample: 344010-010 / SMP	Bate	h: 1 Matrix	Water		
Units: mg/L	Date Analyzed: 09/15/09 14:34	SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found {A}	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0220	0.0300	73	80-120	**
4-Bromofluorobenzene		0.0188	0.0300	63	80-120	**
Lab Batch #: 772616	Sample: 344010-011 / SMP	Bate	h: 1 Matrix	Water		
Units: mg/L	Date Analyzed: 09/15/09 15:11	SU	RROGATE RI	ECOVERY	STUDY	••••
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			101		
1,4-Difluorobenzene		0.0220	0.0300	73	80-120	**
4-Bromofluorobenzene		0.0246	0.0300	82	80-120	
Lab Batch #: 772616	Sample: 344010-011 S / MS	Bate	h: 1 Matrix	Water		
Units: mg/L	Date Analyzed: 09/15/09 21:42	SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0250	0.0300	83	80-120	
4-Bromofluorobenzene		0.0305	0.0300	102	80-120	
Lab Batch #: 772616	Sample: 344010-011 SD / N	ISD Bate	h: 1 Matrix	Water		-
Units: mg/L	Date Analyzed: 09/15/09 22:00	SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0262	0.0300	87	80-120,	
4-Bromofluorobenzene		0.0325	0.0300	108	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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BS / BSD Recoveries



Project Name: Red Byrd # 1

Work Order #: 344010 Analyst: ASA

Lab Batch ID: 772147

Date Prepared: 09/11/2009

Batch #:]

Sample: 537626-1-BKS

Project ID: TNM-Red Byrd # 01 Date Analyzed: 09/12/2009

Matrix: Water

Units: mg/L			BLAN	V/BLANK S	PIKE / E	SLANK S	FIKE DUPI	JUATE 1	KECUVE	LKY SI UD	Y	
BTEX by EP.	A 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			[B]	[C]	[0]	[E]	Result [F]	<u>5</u>				
Benzene		QN	0.1000	0.1035	104	0.1	0.1035	104	0	70-125	25	
Toluenc		QN	0.1000	0.0984	86	0.1	0.0985	66	0	70-125	25	
Ethylbenzene		QN	0.1000	0.1108	111	0.1	0.1105	=	0	71-129	25	
m,p-Xylenes		QN	0.2000	0.2235	112	0.2	0.2254	113	-	70-131	25	
o-Xylene		DN	0.1000	0.1082	108	0.1	0.1075	108	-	71-133	25	
Analyst: ASA		Ds	te Prepare	ed: 09/14/200	6			Date Ar	alyzed: 0	9/14/2009		
Lab Batch ID: 772402	Sample: 537770-1-B	iKS	Batch	#: 1					Matrix: V	Vater		
Units: mg/L			BLANI	K /BLANK S	PIKE / E	LANKS	PIKE DUPI	ICATE I	RECOVE	CRY STUD	Y	Γ

Units: mg/L		BLAN	K /BLANK S	PIKE / B	LANK S	PIKE DUPL	ICATE	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duolicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]		[0]	[E]	Result [F]	[0]				
Benzene	QN	0.1000	0.1077	108	0.1	0.1011	101	9	70-125	25	
Tolucnc	QN	0.1000	0.1022	102	0.1	0.0957	96	7	70-125	25	
Ethylbenzene	DN	0.1000	0.1138	114	0.1	0.1062	106	7	71-129	25	
m,p-Xylenes	QN	0.2000	0.2306	115	0.2	0.2159	108	7	70-131	25	
o-Xylene	DN	0.1000	0.1105	111	0.1	0.1034	103	7	71-133	25	

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





Project Name: Red Byrd # 1

Work Order #: 344010 Analyst: ASA

Lab Batch ID: 772616

Date Prepared: 09/15/2009

Batch #: 1

Sample: 537875-1-BKS

Project ID: TNM-Red Byrd # 01 Date Analyzed: 09/15/2009

Matrix: Water

Units: mg/L		BLAN	A /BLANK S	PIKE / B	LANK S	FIKE DUPL	ICATE 1	KECOVE	KY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	<u>כ</u>				
Benzene	ND	0.1000	0.1046	105	0.1	0.1026	103	2	70-125	25	
Toluene	ΟN	0001.0	6660'0	100	0.1	0.0980	86	2	70-125	25	
Ethylbenzene	DN	0.1000	0.1119	112	0.1	0.1106	111	1	71-129	25	i
m,p-Xylcncs	DN	0.2000	0.2273	114	0.2	0.2251	113	1	70-131	25	
o-Xylene	ND	0.1000	0.1090	109	0,1	0.1075	108	1	71-133	25	i.

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





Work Order #: 344010

Date Analyzed: 09/12/2009 Lab Batch ID: 772147

Analyst: ASA Batch #: QC- Sample ID: 344010-012 S Date Prepared: 09/11/2009

Matrix: Water ----

Project ID: TNM-Red Byrd # 01

Reporting Units: mg/L		W	ATRIX SPIKI	E / MATI	RIX SPI	KE DUPLICA	FE REC	DVERY	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0024	0.1000	0.0908	88	0.1000	0.0841	82	8	70-125	25	
Tolucne	ND	0.1000	0.0863	86	0.1000	0.0799	80	8	70-125	25	
Ethylbenzene	0.0878	0.1000	0.2223	135	0.1000	0.2040	116	6	71-129	25	×
m,p-Xylencs	0.0498	0.2000	0.2713	111	0.2000	0.2492	100	8	70-131	25	
o-Xylene	ND	0.1000	0.0963	96	0.1000	0.0886	89	8	71-133	25	
Lab Batch ID: 772616 Date Analyzed: 09/15/2009	QC- Sample ID: Date Prepared:	344010- 09/15/2(-011 S 009	Bat Ans	tch #: alyst:	l Matriy ASA	c: Water				
Reporting Units: mg/L		M	ATRIX SPIKI	E / MATI	RIX SPII	KE DUPLICA	TE RECO	OVERY (STUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag

					11 10 010	AD DUT LICA	TE NEW	VENTO	1001		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R {G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0170	0.1000	0.0914	74	0.1000	0.0950	78	4	70-125	25	
Tolucne	ND	0.1000	0.0686	69	0.1000	0.0717	72	4	70-125	25	х
Ethylbenzene	0.0025	0.1000	0.0784	76	0.1000	0.0812	62	4	71-129	25	
m,p-Xylencs	0.0113	0.2000	0.1701	79	0.2000	0.1757	82	3	70-131	25	
o-Xylcnc	0.0032	0.1000	0.0739	12	0.1000	0.0799	17	8	71-133	25	

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

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

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

Environmental Lab of Texas

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Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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	r. Cut Stanley	Basin Environmental S	155: 2800 Plains Hwy		Lovington, NM 58260	[575] 441-2244	ure:		01011	PIELD CODE	MW-8	MW-19	MW-15	6-WW	MW-16	1-WM	MW-18	na se anna an an anna anna anna anna ann		101/0/	(part	Date
	Project Manager	Company Name	Conpany Addre	•	City/State/Zip:	Telephone No:	Sampler Signatu	b use only)	C Sider #: 31	(kiuo esu dat) k BAL	- 11	2		4	2	(o)			 icial Instructions:	A. Koho	inquished by	rquestred by

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In



Sample Receipt Checklist

				Cl	ient Initials
#1	Temperature of container/ cooler?	8es	No	4.6°C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#-4	Custody Seals intact on sample bottles/ container?	(YES)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample Instructions complete of Chain of Custody?	Nes)	No		
#7	Chain of Custody signed when relinguished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	Nes	No 1	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	Yes'	No	1	
#16	Containers documented on Chain of Custody?	(Yes)	No		*****
#17	Sufficient sample amount for indicated test(s)?	Ves	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	****

Variance Documentation ------

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

Analytical Report 352094

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd # 1 TNM-Red Byrd 01

20-NOV-09





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00308), USDA (S-44102)

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

> Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX) Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX) Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)



20-NOV-09

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

Reference: XENCO Report No: **352094 Red Byrd # 1** Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 352094. 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. 352094 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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Sample Cross Reference 352094

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd # 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-19	W	Nov-12-09 08:30		352094-001
MW-7	W	Nov-12-09 09:15		352094-002
MW-6	W	Nov-12-09 10:00		352094-003
MW-16	W	Nov-12-09 10:45		352094-004
MW-11	W	Nov-12-09 11:30		352094-005
MW-17	W	Nov-12-09 12:15		352094-006
MW-12	W	Nov-12-09 14:00		352094-007
MW-18	W	Nov-12-09 13:00		352094-008

CASE NARRATIVE



(Reports

Client Name: PLAINS ALL AMERICAN EH&S Project Name: Red Byrd # 1

Project ID: TNM-Red Byrd 01 Work Order Number: 352094 Report Date: 20-NOV-09 Date Received: 11/12/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-781720 TPH by SW8015 Mod SW8015MOD NM

Batch 781720, C12-C28 Diesel Range Hydrocarbons RPD was outside laboratory control limits. Samples affected are: 352094-007

Batch: LBA-782026 BTEX by EPA 8021 SW8021BM

Batch 782026, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 352094-005.

Batch: LBA-782173 SVOA PAHs List by SW-846 8270C Initial dilutions due to dark sample matrix and odor

Batch: LBA-782222 SVOAs by SW-846 8270C None

Batch: LBA-782521 BTEX by EPA 8021 SW8021BM

Batch 782521, Benzene recovered above QC limits in the Matrix Spike. Samples affected are: 352094-008, -007. The Laboratory Control Sample for Benzene is within laboratory Control Limits

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 Certificate of Analysis Summary 352094 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: TNM-Red Byrd 01 Contact: Jason Henry

Project Name: Red Byrd # 1 \$\text{ Variable Structure} \$21.5 pm \$\text{ Project Name: Red Byrd # 1 \$\text{ Date Received in Lab: Thu Nov-12-09 05:15 pm }\text{ Date Received in Lab Nov-12-09 05:15 pm }\text{

Report Date: 20-NOV-09

Project Location: Lea County, NM					Report Date: 2	60- AON-03	
					Project Manager: H	Srent Barron, II	
	Lab Id:	352094-001	352094-002	352094-003	352094-004	352094-005	352094-006
Andreis Dogustad	Field Id:	01-WM	MW-7	9-MM	MW-16	11-WM	MW-17
naisan haw sistimity	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Nov-12-09 08:30	Nov-12-09 09:15	Nov-12-09 10:00	Nov-12-09 10:45	Nov-12-09 11:30	Nov-12-09 12:15
BTEX by EPA 8021	Extracted:	Nov-16-09 17:00	Nov-16-09 17:00	Nov-16-09 17:00	Nov-16-09 17:00	Nov-16-09 17:00	Nov-16-09 17:00
	Analyzed:	Nov-17-09 02:04	Nov-17-09 02:25	Nov-17-09 02:46	Nov-17-09 03:06	Nov-17-09 03:27	Nov-17-09 04:29
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RI
Benzene		0.0064 0.0010	0.0046 0.0010	0.0104 0.0010	0.0140 0.0010	0.0089 0.0010	0.0039 0.001
Toluenc		BRL 0.0020	BRL 0.0020	0.0152 0.0020	0.0053 0.0020	BRL 0.0020	BRL 0.002
Ethylbenzene		0.0025 0.0010	BRL 0.0010	0.0028 0.0010	0.0103 0.0010	BRL 0.0010	0.0027 0.001
m,p-Xylencs		BRL 0.0020	BRL 0.0020	0.0033 0.0020	0.0086 0.0020	BRL 0.0020	0.0021 0.002
o-Xylene		BRL 0.0010	BRL 0.0010	0.0011 0.0010	0.0092 0.0010	0.0017 0.0010	BRL 0.001
Xylcncs, Total		BRL 0.0010	BRL 0.0010	0.0044 0.0010	0.0178 0.0010	0.0017 0.0010	0.0021 0.001
Total BTEX		0.0089 0.0010	0.0046 0.0010	0.0328 0.0010	0.0474 0.0010	0.0106 0.0010	0.0087 0.001

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Odessa Laboratory Manager Brent Barron, II

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1. 1 1. 1 1. 1 Project Id: TNM-Red Byrd 01

Contact: Jason Henry

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Red Byrd # 1

Date Received in Lab: Thu Nov-12-09 05:15 pm Report Date: 20-NOV-09

0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 R Nov-12-09 12:15 Nov-14-09 11:15 Nov-17-09 15:05 352094-006 WATER MW-17 BRL BRL BRL BRL BRL BRL 0.006 BRL m<u>e</u>/L 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 RL Nov-14-09 11:12 Nov-17-09 14:27 Nov-12-09 11:30 352094-005 Brent Barron, II WATER H-WM BRL mg/L 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 **Project Manager:** 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 RL Nov-17-09 15:43 Nov-12-09 10:45 Nov-14-09 11:09 352094-004 MW-16 WATER BRL mg/L 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 RL Nov-12-09 10:00 Nov-14-09 11:06 Nov-17-09 13:49 352094-003 WATER MW-6 BRL mg/L 0.005 0.005 0.005 0.005 RL 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 Nov-12-09 09:15 Nov-17-09 13:11 Nov-14-09 11:03 352094-002 WATER 7-WM BRL mg/L 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 R Nov-14-09 11:00 Nov-17-09 12:33 Nov-12-09 08:30 352094-00 MW-19 WATER BRL mg/L Lab Id: Field Id: Matrix: Depth: Sampled: Extracted: Analyzed Units/RL SUB: T104704215-08B-TX **SVOA PAHs List** Project Location: Lea County, NM Analysis Requested Indeno(1,2,3-c,d)Pyrene Dibenz(a,h)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(g,h,i)perylene I-Mcthylnaphthalcnc 2-Mcthylnaphthalcnc Benzo(a)anthracene Benzo(a)pyrene Acenaphthylene Accnaphthene Phenanthrene Fluoranthene Naphthalene Anthracene Chrysene Fluorene Pyrenc

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Odessa Laboratory Manager Brefit Barron,



 Image: Summary 352094

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd # 1



Project Id: TNM-Red Byrd 01 Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Thu Nov-12-09 05:15 pm

Report Date: 20-NOV-09

				Project Manager:	Brent Barron, II	
	Lab Id:	352094-007	352094-008			
Analysis Damastad	Field Id:	MW-12	MW-18			
naican hav sistimut	Depth:					
	Matrix:	WATER	WATER			
	Sampled:	Nov-12-09 14:00	Nov-12-09 13:00			
BTEX by EPA 8021	Extracted:	Nov-18-09 17:00	Nov-18-09 17:00			
	Analyzed:	Nov-19-09 06:05	Nov-19-09 06:26			
	Units/RL:	mg/L RL	mg/L RL			
Benzene		0.0892 0.0100	0.0013 0.0010			
Toluene		BRL 0.0200	BRL 0.0020			
Ethylbenzene		0.1112 0.0100	BRL 0.0010			
m,p-Xylencs		0.1559 0.0200	BRL 0.0020			
o-Xylcnc		0.0132 0.0100	BRL 0.0010			
Xylenes, Total		0.1691 0.0100	BRL 0.0010			
Total BTEX		0.3695 0.0100	0.0013 0.0010			

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Odessa Laboratory Manager Brefit Barron, II



Certificate of Analysis Summary 352094 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd #1



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Project Id: TNM-Red Byrd 01 Contact: Jason Henry

Thu Nov-12-09 05:15 pm 20-NOV-09 Date Received in Lab:

Report Date:

Project Manager: Brent Barron, II 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 z 0.050 Nov-18-09 11:44 Nov-12-09 13:00 Nov-17-09 10:00 352094-008 WATER MW-18 BRL mg/L 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 RL Nov-14-09 11:18 Nov-12-09 14:00 Nov-17-09 16:21 352094-007 MW-12 WATER BRL 0.173 BRL 0.370 BRL BRL BRL mg/L Units/RL: Field Id: Lab Id: Depth: Matrix: Extracted: Sampled: Analyzed: SUB: T104704215-08B-TX **SVOA PAHs List** Project Location: Lea County, NM Analysis Requested Indeno(1,2,3-c,d)Pyrene Dibenz(a,h)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene 1-Methylnaphthalene Bcnzo(g,h,i)perylene 2-Methylnaphthalcne Benzo(a)anthracene Accnaphthylenc Bcnzo(a)pyrene Acenaphthene Phenanthrene Fluoranthene Naphthalene Anthracene Chrysene Fluorene Pyrene

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Odessa Laboratory Manager Brent Barron, II

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PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: TNM-Red Byrd 01 Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Red Byrd # 1

Date Received in Lab: Thu Nov-12-09 05:15 pm Report Date: 20-NOV-09

					Project Manager	: Brent Barron, II	
	Lab Id:	352094-007		352094-008			
Analucio Daguardad	Field Id:	MW-12		MW-18			
naisanhay sistinuy	Depth:						
	Matrix:	WATER		WATER			
	Sampled:	Nov-12-09 14:	00	Nov-12-09 13:00			
TPH by SW8015 Mod	Extracted:	Nov-13-09 10:	:45				
	Analyzed:	Nov-14-09 12:	:43				
	Units/RL:	mg/L	RL				
C6-C12 Gasolinc Range Hydrocarbons		259	1.50				
C12-C28 Dicsel Range Hydrocarbons		420	1.50				
C28-C35 Oil Range Hydrocarbons		21.3	1.50				
Total TPH		700	1.50				

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Odessa Laboratory Manager Brefit Barron, II 10



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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Work Orders : 352094	l,		Project II	D: TNM-Red	Byrd 01	
Lab Batch #: 782026	Sample: 543367-1-BKS / E	SKS Bate	h: 1 Matrix	Water		
Units: mg/L	Date Analyzed: 11/16/09 22:57	SU	RROGATE R	ECOVERY	STUDY	
BTE	CX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			{D]		
1,4-Difluorobenzene		0.0296	0.0300	99	80-120	
4-Bromofluorobenzene		0.0311	0.0300	104	80-120	
Lab Batch #: 782026	Sample: 543367-1-BSD / E	SD Bate	h: ¹ Matrix	Water		
Units: mg/L	Date Analyzed: 11/16/09 23:18	SU	RROGATE RI	ECOVERY	STUDY	
BTE	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 4-Difluorobenzene		0.0302	0.0300	101	80.120	
4-Bromofluorobenzene		0.0302	0.0300	97	80-120	
	6 • • • • • • • • • • • • • • • • • • •	0.0272	0.0500	<u> </u>	00-120	
Lab Batch #: 782026	Sample: 543367-1-BLK / E	3LK Batch: Matrix: Water				
Units: mg/L	Date Analyzed: 11/17/09 00:00					
BTE	CX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 4-Difluorobenzene		0.0266	0.0300	89	80-120	
4-Bromofluorobenzene		0.0292	0.0300	97	80-120	
Lab Batch #: 782026	Sample: 352094-001 / SMI	D Bate	l	•Water		
Units: mg/L	Date Analyzed: 11/17/09 02:04	SU	RROGATE RI	ECOVERY	STUDY	
BTE	CX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	·	0.0256	0.0300	85	80-120	
4-Bromofluorobenzene		0.0286	0.0300	95	80-120	
Lab Batch #: 782026	Sample: 352094-002 / SMF	Batc	h: ¹ Matrix	:Water		
Units: mg/L	Date Analyzed: 11/17/09 02:25	SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0274	0.0300	91	80-120	
-					-	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Vork Orders : 352094	, Sample: 352094-003 / SMP	Pata	Project I	D: TNM-Red	Byrd 01	
Lab Batch #: 782020	Date Analyzed: 11/17/09 02:46	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0248	0.0300	83	80-120	
4-Bromofluorobenzene		0.0282	0.0300	94	80-120	
Lab Batch #: 782026	Sample: 352094-004 / SMP	Batc	h: Matrix	Water		
Units: mg/L	Date Analyzed: 11/17/09 03:06	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0246	0.0300	82	80-120	
4-Bromofluorobenzene		0.0298	0.0300	99	80-120	
Lab Batch #: 782026	Sample: 352094-005 / SMP	Bate	h· Matrix	•Water	1	
Units: mg/L	Date Analyzed: 11/17/09 03:27	SURROGATE RECOVERY STUDY				
BTE	X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene		0.0266	0.0300	89	80-120	
Lab Batch #: 782026	Sample: 352094-006 / SMP	Batc	h: Matrix	Water	L	
Units: mg/L	Date Analyzed: 11/17/09 04:29	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
140.0	Analytes	0.0250				
1,4-Dilluorobenzene		0.0250	0.0300	83	80-120	
4-Bromonuorobenzene		0.0271	0.0300	90	80-120	
Lab Batch #: 782026	Sample: 352059-001 S7 MS	Batch	h: Matrix	:Water	STUDY	
Units: mg/L	Date Analyzed: 11/17/09 07:55	50	KRUGATE R			
BTE	X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0272	0.0300	91	80-120	
4-Bromofluorobenzene		0.0282	0.0300	94	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

8 8 Surrogate Recovery [D] = 100 * A / B

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Vork Orders : 352094	4, Sample: 352059-001 SD /	MSD Batel	Project II	D: TNM-Red	Byrd 01	
Units: mg/L	Date Analyzed: 11/17/09 08:16	SU!	RROGATE R	ECOVERY	STUDY	
ВТІ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes		I	[D]		
1,4-Difluorobenzene		0.0278	0.0300	93	80-120	
4-Bromofluorobenzene		0.0297	0.0300	99	80-120	
Lab Batch #: 782521	Sample: 543676-1-BKS / P	3KS Batcl	h: 1 Matrix	Water		
Units: mg/L	Date Analyzed: 11/19/09 01:52	SUI	RROGATE RI	ECOVERY S	STUDY	
BTE	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0292	0.0300	97	80-120	<u> </u>
4-Bromofluorobenzene		0.0284	0.0300	95	80-120	<u> </u>
Lab Batch #: 782521	Sample: 543676-1-BSD / F	BSD Batcl	h: 1 Matrix	Water	<u> </u>	
Units: mg/L	Date Analyzed: 11/19/09 02:13	SUI	RROGATE R	ECOVERY !	STUDY	
BTEX by EPA 8021 Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0290	0.0300	97	80-120	
4-Bromofluorobenzene		0.0287	0.0300	96	80-120	[
Lab Batch #: 782521	Sample: 543676-1-BLK / F	L Batch	h: 1 Matrix	Water	L	· · · · · · · · · · · · · · · · · · ·
Units: mg/L	Date Analyzed: 11/19/09 02:56	SUI	RROGATE RI	ECOVERY !	STUDY	
BTE	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes		I	[D] /		1
1,4-Difluorobenzene		0.0264	0.0300	88	80-120	i
4-Bromofluorobenzene		0.0279	0.0300	93	80-120	
Lab Batch #: 782521	Sample: 352094-007 / SMF	» Batch	n: Matrix	:Water		
Lab Batch #: 782521 Units: mg/L	Sample: 352094-007 / SMF Date Analyzed: 11/19/09 06:05	Batch	1: Matrix RROGATE RI	: Water ECOVERY &	STUDY	
Lab Batch #: 782521 Units: mg/L BTE	Sample: 352094-007 / SMF Date Analyzed: 11/19/09 06:05 X by EPA 8021	P Batcl SUI Amount Found [A]	h: I Matrix RROGATE Ri True Amount [B]	: Water ECOVERY : Recovery %R	STUDY Control Limits %R	Flags
Lab Batch #: 782521 Units: mg/L BTE	Sample: 352094-007 / SMI Date Analyzed: 11/19/09 06:05 X by EPA 8021 Analytes	P Batcl SUI Amount Found [A]	h: 1 Matrix RROGATE R True Amount [B]	: Water ECOVERY : Recovery %R [D]	STUDY Control Limits %R	Flags

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Vork Orders : 352094	, Samalar 252004 008 / SMB	D-4	Project II	D: TNM-Red	Byrd 01	
Lad Batch #: 782321	Date Analyzed: 11/19/09 06:26	SU	RROGATE R	ECOVERY S	STUDY	
BTE	X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0265	0.0300	88	80-120	
4-Bromofluorobenzene		0.0299	0.0300	100	80-120	
Lab Batch #: 782521	Sample: 352163-001 S / MS	S Bate	:h: 1 Matrix	:Water		
Units: mg/L	Date Analyzed: 11/19/09 12:12	SU	JRROGATE R	ECOVERY	STUDY	
ВТЕ	X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0310	0.0300	103	80-120	
4-Bromofluorobenzene		0.0298	0.0300	99	80-120	
Lab Batch #: 782521	Sample: 352163-001 SD / N	ASD Bate	ch: Matrix	:Water		
Units: mg/L	Date Analyzed: 11/19/09 12:33	SURROGATE RECOVERY STUDY				
ВТЕ	X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0305	0.0300	102	80-120	
4-Bromofluorobenzene		0.0288	0.0300	96	80-120	
Lab Batch #: 782173	Sample: 543183-1-BLK / B	LK Bate	ch: ¹ Matrix	:Water		
Units: mg/L	Date Analyzed: 11/17/09 10:37	SU	RROGATE R	ECOVERYS	STUDY	
SVO	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.042	0.050	84	43-116	
2-Fluorophenol		0.030	0.050	60	21-100	
Nitrobenzene-d5		0.039	0.050	78	35-114	
Phenol-d6		0.020	0.050	40	10-94	
Terphenyl-D14		0.048	0.050	96	33-141	
2,4,6-Tribromophenol		0.035	0.050	70	10-123	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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Surrogate Recovery [D] = 100 * A / B



Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Work Orders : 352094	ł,		Project II): TNM-Red	Byrd 01	
Lab Batch #: 782173	Sample: 543183-1-BKS / B	KS Bate	ch: 1 Matrix	Water		
Units: mg/L	Date Analyzed: 11/17/09 11:15	l si	JRROGATE RI	ECOVERY	STUDY	
SV	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.043	0.050	86	43-116	
2-Fluorophenol		0.030	0.050	60	21-100	
Nitrobenzene-d5		0.042	0.050	84	35-114	
Phenol-d6		0.021	0.050	42	10-94	
Terphenyl-D14		0.049	0.050	98	33-141	
2,4,6-Tribromophenol		0.045	0.050	90	10-123	
Lab Batch #: 782173	Sample: 543183-1-BSD / B	SD Bate	h: 1 Matrix:	Water	·	
Units: mg/L	Date Analyzed: 11/17/09 11:54	SU	JRROGATE RE	ECOVERY	STUDY	
sv	OA PAHs List	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Límits %R	Flags
2-Eluorobiohenvl		0.046	0.050	02	42.116	
2-Fluorophenol		0.040	0.050	92	43-110	
Nitrobenzene-d5	·····	0.030	0.030		21-100	
Phenol-d6		0.043	0.050	54	10.04	
Terphenyl-D14		0.054	0.050	108	33 1/1	
2 4 6-Tribromophenol		0.050	0.050	100	10 123	
Leb Rotch #: 782173	Sample: 352004-001 / SMP	0.050	be 1 Matrix	Watar	10-125	
	Data Analyzed: 11/17/00.12.22		IRROCATE RE		STHDY	
Units: mg/L	Date Analyzed: 11/1//09 12:33					
SV	OA PAHs List 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		0.024	0.050	48	21-100	
Nitrobenzene-d5		0.040	0.050	80	35-114	<u> </u>
Phenol-d6		0.014	0.050	28	10-94	
Terphenyl-D14		0.049	0.050	98	33-141	
2,4,6-Tribromophenol		0.051	0.050	102	10-123	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Vork Orders : 352094	, Sample: 352094-002 / SMP	Rate	Project II	: TNM-Red	Byrd 01	
Units: mg/L	Date Analyzed: 11/17/09 13:11	SU	RROGATE RE	COVERY S	STUDY	
SV	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.044	0.050	88	43-116	
2-Fluorophenol		0.025	0.050	50	21-100	
Nitrobenzene-d5	· · ·	0.042	0.050	84	35-114	
Phenol-d6		0.013	0.050	26	10-94	
Terphenyl-D14		0.052	0.050	104	33-141	
2,4,6-Tribromophenol		0.054	0.050	108	10-123	
Lab Batch #: 782173	Sample: 352094-003 / SMP	Bate	h: 1 Matrix:	Water		
Units: mg/L	Date Analyzed: 11/17/09 13:49	st	RROGATE RE	ECOVERY S	STUDY	
SV	OA PAHs List	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
2-Fluorobiphenyl		0.044	0.050	88	43-116	
2-Fluorophenol		0.026	0.050	52	21-100	
Nitrobenzene-d5		0.043	0.050	86	35-114	
Phenol-d6		0.014	0.050	28	10-94	
Terphenyl-D14		0.052	0.050	104	33-141	
2,4,6-Tribromophenol		0.055	0.050	110	10-123	
Lab Batch #: 782173	Sample: 352094-005 / SMP	Bate	ch: 1 Matrix:	Water		
Units: mg/L	Date Analyzed: 11/17/09 14:27	sı	RROGATE RE	ECOVERY S	STUDY	
SV	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.040	0.050	80	43-116	
2-Fluorophenol		0.022	0.050 ·	44	21-100	
Nitrobenzene-d5		0.038	0.050	76	35-114	
Phenol-d6		0.012	0.050	24	10-94	
Terphenyl-D14		0.047	0.050	94	33-141	
2,4,6-Tribromophenol		0.048	0.050	96	10-123	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Vork Orders : 352094 Lab Batch #: 782173	, Sample: 352094-006 / SMP	Batc	Project II h: 1 Matrix:): TNM-Red Water	Byrd 01	
Units: mg/L	Date Analyzed: 11/17/09 15:05	SU	RROGATE RE	ECOVERY S	STUDY	
SV	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.043	0.050	86	43-116	
2-Fluorophenol		0.020	0.050	40	21-100	
Nitrobenzene-d5		0.041	0.050	82	35-114	
Phenol-d6		0.012	0.050	24	10-94	
Terphenyl-D14		0.052	0.050	104	33-141	
2,4,6-Tribromophenol		0.048	0.050	96	10-123	
Lab Batch #: 782173	Sample: 352094-004 / SMP	Bate	h: 1 Matrix:	Water	·	
Units: mg/L	Date Analyzed: 11/17/09 15:43	SU	RROGATER	ECOVERY	STUDY	
SV	OA PAHs List	Amount Found [A]	True Amount B]	Recovery %R	Control Limits %R	Flags
	Analytes			{D]		
2-Fluorobiphenyl		0.048	0.050	96	43-116	
2-Fluorophenol		0.029	0.050	58	21-100	
Nitrobenzene-d5		0.042	0.050	84	35-114	
Phenol-d6		0.014	0.050	28	10-94	_
Terphenyl-D14		0.052	0.050	104	33-141	
2,4,6-Tribromophenol		0.050	0.050	100	10-123	
Lab Batch #: 782173	Sample: 352094-007 / SMP	Bate	h: 1 Matrix:	Water		
Units: mg/L	Date Analyzcd: 11/17/09 16:21	SU	RROGATE RE	ECOVERY	STUDY	
SV	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.051	0.050	102	43-116	
2-Fluorophenol		0.031	0.050	62	21-100	
Nitrobenzene-d5		0.047	0.050	94	35-114	
Phenol-d6		0.023	0.050	46	10-94	
Terphenyl-D14		0.060	0.050	120	33-141	
2,4,6-Tribromophenol		0.047	0.050	94	10-123	,

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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Surrogate Recovery [D] = 100 * A / B

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Vork Orders : 352094 Lab Batch #: ⁷⁸²²²²	s, Sample: 543417-1-BLK / E	3LK Bate	Project II h: ¹ Matrix:): TNM-Red Water	Byrd 01	
Units: mg/L	Date Analyzed: 11/17/09 20:08	SU	RROGATE RE	ECOVERY	STUDY	
SV	OA PAHs List Analytes	Amount Found [A]	True Amount B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.038	0.050	76	43-116	
2-Fluorophenol		0.029	0.050	58	21-100	
Nitrobenzene-d5	Contract Difference of the second	0.036	0.050	72	35-114	
Phenol-d6		0.020	0.050	40	10-94	
Terphenyl-D14		0.047	0.050	94	33-141	
2,4,6-Tribromophenol		0.039	0.050	78	10-123	
Lab Batch #: 782222	Sample: 543417-1-BKS / E	BKS Bate	h: Matrix:	Water		
Units: mg/L	Date Analyzed: 11/17/09 20:46	SU	RROGATE RE	ECOVERY S	STUDY	
SVO	OA PAHs List	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
2-Fluorobiphenyl		0.040	0.050	80	43-116	
2-Fluorophenol		0.031	0.050	62	21-100	
Nitrobenzene-d5		0.039	0.050	78	35-114	
Phenol-d6		0.022	0.050		10-94	
Terphenyl-D14		0.047	0.050	94	33-141	
2,4,6-Tribromophenol		0.043	0.050	86	10-123	
Lab Batch #: 782222	Sample: 543417-1-BSD / B	SD Bate	h: 1 Matrix:	Water		
Units: mg/L	Date Analyzed: 11/17/09 21:24	SU	RROGATE RE	ECOVERY S	STUDY	
SV	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.040	0.050	80	43-116	
2-Fluorophenol		0.031	0.050	62	21-100	· · · · · · · · · · · · · · · · · · ·
Nitrobenzene-d5		0.039	0.050	78	35-114	
Phenol-d6		0.022	0.050	44	10-94	
Terphenyl-D14		0.047	0.050	94	33-141	
2,4,6-Tribromophenol		0.044	0.050	88	10-123	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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Surrogate Recovery [D] = 100 * A / B

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Vork Orders : 352094	l, Sampler 352094 008 / SMP	Data	Project If): TNM-Red	Byrd 01	
Lab Batch #: 782222	Date Analyzed: 11/18/09 11:44	SU	RROGATE RI	ECOVERY ?	STUDY	
SV	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.048	0.050	96	43-116	
2-Fluorophenol		0.026	0.050	52	21-100	
Nitrobenzene-d5		0.040	0.050	80	35-114	<u>-</u> .
Phenol-d6		0.014	0.050	28	10-94	
Terphenyl-D14		0.054	0,050	108	33-141	
2,4,6-Tribromophenol		0.050	0.050	100	10-123	
Lab Batch #: 781720	Sample: 543233-1-BKS / BI	KS Batc	h: 1 Matrix:	Water		
Units: mg/L	Date Analyzed: 11/14/09 03:36	SU	RROGATE RE	ECOVERY	STUDY	
ТРН	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Anarytes					
I-Chlorooctane			10.0	122	70-135	
o-terphenyl		5.95	5.00	119	70-135	
Lab Batch #: 781720 .	Sample: 543233-1-BSD / BS	SD Bate	h: Matrix	:Water		
Units: mg/L	Date Analyzed: 11/14/09 04:01	SU	RROGATE RE	COVERY S	STUDY	
ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		12.9	10.0	129	70-135	
o-Terphenyl		6.28	5.00	126	70-135	
Lab Batch #: 781720	Sample: 543233-1-BLK / BI	LK Batc	h: Matrix:	Water	·	
Units: mg/L	Date Analyzed: 11/14/09 04:28	SU	RROGATE RE	ECOVERY	STUDY	
ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		0.81	10.0		70.135	-
	I	2.01	10.0	20	10-155	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Work Orders : 352094 Lab Batch #: 781720	, Sample: 352094-007 / SMP	Batc	Project II h: ¹ Matrix): TNM-Red : Water	Byrd 01		
Units: mg/L	Date Analyzed: 11/14/09 12:43	SU	RROGATE RI	ECOVERY	STUDY		
ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
I-Chlorooctanc		11.8	10.0	118	70-135		
o-Terphenyl	_	6.42	5.00	128	70-135		
Lab Batch #: 781720	Sample: 352057-001 S / MS	Bate	h: ¹ Matrix	Water			
Units: mg/L	Date Analyzed: 11/14/09 13:09	SU	RROGATE RI	ECOVERY	STUDY		
ТРН	by SW8015 Mod Analytes	Amount Found A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctanc		12.4	10.0	124	70-135	 	
o-Terphenyl		6.09	5.00	122	70-135		

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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BS / BSD Recoveries

Project Name: Red Byrd #1

Work Order #: 352094 Lab Batch ID: 782026 Analyst: ASA

Date Prepared: 11/16/2009

Batch #: 1

Sample: 543367-1-BKS

Project ID: TNM-Red Byrd 01 Date Analyzed: 11/16/2009

Matrix: Water

Units: mg/L		BLANI	K /BLANK S	PIKE / B	LANK S	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
BTEX by EPA 8021	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[a]	[E]	Result [F]	[6]	-			
Benzene	<0100.0>	0.1000	0.0944	94	0.1	0.0945	95	0	70-125	25	
Tolucne	<0.0020	0.1000	0.0941	94	0.1	0.0946	95	_	70-125	25	
Ethylbenzene	<0.0010	0.1000	0.0923	92	0.1	0.0921	92	0	71-129	25	
m,p-Xylencs	<0.0020	0.2000	0.1978	66	0.2	0.1978	66	0	70-131	25	
o-Xylenc	<0.0010	0.1000	0.0992	66	0.1	0.0981	98	-	71-133	25	
A notivet: ASA	°U	te Prenari	od: 11/18/200	0			Date Ar	nalvzed: 1	1/19/2009		

Lab Batch ID: 782521 Analyst: AbA

Sample: 543676-1-BKS

Batch #: 1 wate Prepared:

Matrix: Water 5

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Units: mg/L		BLAN	K /BLANK S	PIKE / B	LANK S	PIKE DUPL	ICATE	RECOVE	RY STUD	Y	
BTEX by EPA 8021	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[8]		Inl	[E]	Kesun [r]	5				
Benzene	<0100.0>	0.1000	0.0933	63	0.1	0.0950	95	2	70-125	25	
Toluenc	<0.0020	0.1000	0.0938	94	0.1	0.0951	95	1	70-125	25	
Ethylbenzene	<0.0010	0.1000	0.0929	63	0.1	0.0940	94	-	71-129	25	
m,p-Xylenes	<0.0020	0.2000	0.2030	102	0.2	0.2049	102	-	70-131	25	
o-Xylenc	<0.0010	0.1000	0.0980	86	0.1	6660'0	100	2	71-133	25	

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

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BS / BSD Recoveries



Project Name: Red Byrd #1

Work Order #: 352094

Lab

Project ID: TNM-Red Byrd 01

Flag

Analyst: KAN	Da	te Prepare	ed: 11/14/200	6			Date Ar	nalyzed: 1	1/17/2009	
ab Batch ID: 782173 Sample: 543183-1-i	BKS	Batch	l :#					Matrix: V	Vater	
Units: mg/L		BLANI	K /BLANK S	PIKE / B	LANK S	PIKE DUPL	ICATE I	RECOVE	RY STUD	Y
SVOA PAHs List	Blank Sample Result [A]	Spike Added [B]	Błank 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
Attarytes Accaptition	<0.005	0.050	0.040	80	0.05	0.044	. 88	10	27-132	31
Accnaphthylcnc	<0.005	0.050	0.040	80	0.05	0.044	88	10	46-108	25
Anthracene	<0.005	0:050	0.040	80	0.05	0.044	88	10	47-145	25
Benzo(a)anthracene	<0.005	0.050	0.039	78	0.05	0.043	86	10	33-143	25
Benzo(a)pyrene	<0.005	0.050	0.042	84	0.05	0.045	96	7	65-135	25
Benzo(b)fluoranthene	<0.005	0.050	0.042	84	0.05	0.046	92	6	24-159	25
Benzo(k)fluoranthene	<0.005	0.050	0.041	82	0.05	0.045	90	6	25-125	25
Benzo(g,h,i)perylene	<0.005	0.050	0.048	96	0.05	0.051	102	9	65-135	25
Chrysene	<0.005	0.050	0.043	86	0.05	0.048	96	Ξ	65-135	25
Dibenz(a,h)anthracene	<0.005	0.050	0.044	88	0.05	0.047	94	7	50-125	25
Fluoranthene	<0.005	0.050	0.039	78	0.05	0.042	84	7	47-125	25
Fluorenc	<0.005	0.050	0.042	84	0.05	0.047	94	11	48-139	25
Indeno(1,2,3-c,d)Pyrene	<0.005	0.050	0.044	88	0.05	0.047	94	7	27-160	25
Naphthalcnc	<0.005	0.050	0.040	80	0.05	0.043	86	7	26-175	25
Phenanthrenc	<0.005	0.050	0.039	78	0.05	0.043	86	10	65-135	25
Pyrene	<0.005	0.050	0.046	92	0.05	0.052	104	12	23-152	31

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

BS / BSD Recoveries 0





Project Name: Red Byrd # 1

Work Order #: 352094 Lab Batch ID: 782222 Analyst: KAN

Units: mg/L

Date Prepared: 11/16/2009

Batch #: 1

Sample: 543417-1-BKS

Project ID: TNM-Red Byrd 01 Date Analyzed: 11/17/2009

Matrix: Water

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

SVOA PAHs List	Blank	Spike	Blank Â:	Blank G	Spike	Blank ĉ :	BIK. Spk	1	Control	Control
	Sample Result	Added	Spike	Spike	Added	Spike	Dup.	RPD	Limits	Limits
	[A]		Result	%R		Duplicate	%R	%	%R	%RPD
		[B]			[E]	Result [F]	[0]			
	<0.005	0.050	0.039	78	0.05	0.040	80	3	27-132	31

Flag

Analytes		[B]		D N	[E]	Dupincate Result [F]	1 <u>0</u>	0/	70K	WKLD	
Accnaphthene	<0.005	0.050	0.039	78	0.05	0.040	80	3	27-132	31	
Accnaphthylene	<0.005	0.050	0.039	78	0.05	0.040	80	3	46-108	25	
Anthracene	<0.005	0.050	0.039	78	0.05	0.040	80	3	47-145	25	
Benzo(a)anthracene	<0.005	0.050	0.039	78	0.05	0.040	80	3	33-143	25	
Benzo(a)pyrene	<0.005	0.050	0.041	82	0.05	0.042	84	2	65-135	25	
Benzo(b)fluoranthene	<0.005	0.050	0.043	86	0.05	0.043	86	0	24-159	25	
Benzo(k)fluoranthene	<0.005	0.050	0.041	82	0.05	0.040	80	2	25-125	25	
Benzo(g,h,i)perylene	<0.005	0.050	0.043	86	0.05	0.045	96	5	65-135	25	
Chrysene	<0.005	0.050	0.042	84	0.05	0.044	88	5	65-135	25	
Dibenz(a,h)anthracene	<0.005	0.050	0.041	82	0.05	0.043	86	5	50-125	25	
Fluoranthene	<0.005	0.050	0.037	74	0.05	0.038	76	3	47-125	25	
Fluorenc	<0.005	0.050	0,041	82	0.05	0.043	86	5	48-139	25	
Indeno(1,2,3-c,d)Pyrene	<0.005	0:050	0.041	82	0.05	0.042	84	2	27-160	25	
Naphthalene	<0.005	0.050	0.039	78	0.05	0.040	80	3	26-175	25	
Phenanthrene	<0.005	0.050	0.038	76	0.05	0.039	78	3	65-135	25	
Pyrenc	<0.005	0.050	0.047	94	0.05	0.048	96	2	23-152	31	

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

BS / BSD Recoveries





Project Name: Red Byrd # 1

Work Order #: 352094 Analyst: BEV

Lab Batch ID: 781720

Date Prepared: 11/13/2009 Batch #: 1

Sample: 543233-1-BKS

Project ID: TNM-Red Byrd 01 Date Analyzed: 11/14/2009

Matrix: Water

Units: mg/L		BLAN	K /BLANK S	PIKE / B	LANK S	PIKE DUPL	ICATE I	RECOVE	RY STUD	Y	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[v]	[B]	[C]	[D]	E	Dupiicate Result [F]	[G]	°,	70 K	%KFU	
C6-C12 Gasoline Range Hydrocarbons	<1.50	001	100	001	100	104	104	4	70-135	25	
C12-C28 Dicsel Range Hydrocarbons	<1.50	100	94.3	94	100	70.2	70	29	70-135	25	F

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



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Form 3 - MS Recoveries

Project Name: Red Byrd # 1



Work Order #: 352094

Lab Batch #: 781720

Project ID: TNM-Red Byrd 01 Analyst: BEV

Date Analyzed: 11/14/2009	Date Prepared: 11/13/2009	А	nalyst: B	EV	
QC- Sample ID: 352057-001 S	Batch #: 1	Г	Matrix: W	/ater	
Reporting Units: mg/L	MATRIX / MA	ATRIX SPIKE	RECO	VERY STU	DY
TPH by SW8015 Mod Analytes	Parent Sample Spike Result Added [A] [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
C6-C12 Gasoline Range Hydrocarbons	<5.00 100	104	104	70-135	
C12-C28 Diesel Range Hydrocarbons	<5.00 100	70.6	71	70-135	

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

BRL - Below Reporting Limit

and the
Concorder 9





Work Order #: 352094

Lab Batch ID: 782026

Date Analyzed: 11/17/2009 Reporting Units: mg/L

Project ID: TNM-Red Byrd 01

QC- Sample ID: 352059-001 S Date Prepared: 11/16/2009

Matrix: Water ASA -Analyst: Batch #:

Reporting Units: mg/L		Z	ATRIX SPIKI	E / MATI	RIX SPII	KE DUPLICA'	FE RECO	DVERY	STUDY		
BTEX by EPA 8021	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]	Ū	%R	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	<0.0010	0.1000	0.0879	88	0.1000	0.0846	85	4	70-125	25	
Toluene	<0.0020	0.1000	0.0879	88	0.1000	0.0842	84	4	70-125	25	
Ethylbenzene	<0.0010	0.1000	0.0837	84	0.1000	0.0806	81	4	71-129	25	
m,p-Xylencs	<0.0020	0.2000	0.1756	88	0.2000	0.1676	84	5	70-131	25	
o-Xylenc	<0.0010	0.1000	0.0882	88	0.1000	0.0856	86	3	71-133	25	
Lab Batch ID: 782521 Date Analyzed: 11/19/2009	QC- Sample ID: Date Prepared:	352163- 11/18/2	-001 S 009	Ba An	tch #: alyst:	l Matrix ASA	:: Water				

78252	11/19/2
Lab Batch ID:	Date Analyzed

Date Prepared: 11/18/2009

Reporting Units: mg/L		M	ATRIX SPIKI	E / MAT	RIX SPII	KE DUPLICAT	FE RECO	VERY S	STUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result {F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0019	0.1000	0.1301	128	0.1000	0.1147	113	13	70-125	25	×
Toluenc	0.0062	0.1000	0.1028	67	0.1000	0.0983	92	4	70-125	25	
Ethylbenzene	0.0020	0.1000	0.0889	87	0.1000	0.0879	86	_	71-129	25	
m,p-Xylencs	0.0043	0.2000	0.1916	94	0.2000	0.1899	93	-	70-131	25	
o-Xylenc	0.0029	0.1000	1660'0	96	0.1000	0.0961	93	m	71-133	25	

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

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

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

Final Ver. 1.000

		alle H- H de C. D-K=ynolos e-mail: <u>cstanley@basinenv.com</u> Analyze For:		Phone: 432-563-1 Phone: 432-5		A A	12600 West I-20 Mest I-20	Big by Consider Sampled Part No. Part No. Big by Time Sampled Part No. Part No.		Beginning Depth	Date	Basin Euri Stanli Ime Basin Envi Basin E
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Environmental Lab of Texas

Client:	Busin Plains
Date/ Time:	11/12/09 17:15
Lab ID # :	351094
Initials:	

Sample Receipt Checklist

				Clie	ent Initials
#1	Temperature of container/ cooler?	(Yes)	No	4.6_°C	
#2	Shipping container in good condition?	Tes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Xes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Ves	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#1 1	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	Tes	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:	C.Stan	itey Con	tacted by:	G. Avalos	Date/ Time:	11.13.09
Regarding:	<u>NW-18</u>	not listed	on loc	, but received	3×40ml voa W/HC	Land oni
1Lam	Oer.					
Corrective A	ction Taken:					
Check all the	at Apply:	See att	ached e-mail/	fax	,	

скал тат Арріу:

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 ee attached e-mail/ fax

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

Gracie Avalos

From:Curt Stanley [cdstanley@basin-consulting.com]Sent:Friday, November 13, 2009 3:11 PMTo:Gracie AvalosSubject:Re: WO 352094 / Red Byrd #1

Please add MW-18 and run for BTEX and PAH

Curt

On Nov 13, 2009, at 9:48 AM, "Gracie Avalos" <gracie.avalos@xenco.com> wrote:

Mr. Stanley,

The above mentioned project was dropped off yesterday evening in which 3 40-mL voas and a 1L glass amber have been received for MW-18 sampled 11/12/09 @ 13:00 with the same project name and #. Should these samples be added onto the chain of custody and analyzed or should we just hold for you. Please let me know as soon as you're able so that I may ship out the PAH if necessary.

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

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

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State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

			Rele	ease Notific	catio	n and Co	orrective A	ction			
						OPER A	ATOR	x In	itial Report		Final Report
Name of Co	mpany	Plains	Pipeline,	LP		Contact:	Camil	le Reynolds			
Address:	370	5 E. Hwy 158	8, Midlar	id, TX 79706		Telephone 1	No. 505-4	41-0965			
Facility Nar	ne:	Red By	rd # 1			Facility Typ	e: Steel	Pipeline		<u></u>	
Surface Ow	ner:	Red Byrd		Mineral C	Owner			Leas	e No.		
				LOCA	ATIO	N OF RE	LEASE				
Unit Letter	Section	Township	Range	Feet from the	North	South Line	Feet from the	East/West Lin	e County		
	<u> </u>	203	JOL:	ntitude 22° 26'	00.8"	N I ongitud	1020 17, 58 5	······································	Lea		. <u>.</u>
			Li	autuue <u>32 30</u>	09.0		<u>105 17 50.5</u>	<u></u>			
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Source of Re	ase:	Steel Pipeline				Date and H	Iour of Occurren	ce Date a	e Recovered	scoverv	
.jource of Re		Steer r ipenne		-		Date and I				scovery	
Was Immedia	ate Notice	Given? Y	es 🗌 Ì	No 🔲 Not Requ	uired	If YES, To	Whom?				
By Whom? Date and Hour											
Was a Water	course Rea	ched?		_		If YES, Vo	olume Impacting	the Watercourse			
			Yes L] No							
Describe Cau	ise of Prob	lem and Reme	lial Actio	n Taken.*							
Describe Are NOTE: Texa unavailable.	a Affected as-New Mo	and Cleanup A exico Pipeline	action Tal was the o	cen.* wner/operator o	f the p	ipeline system	at the time of t	he release, initia	l response inf	formati	on is
I hereby certi regulations al public health should their c or the enviror federal, state,	fy that the Il operators or the env operations inment, In or local la	information gi are required to ironment. The have failed to a addition, NMC ws and/or regu	ven above report ar acceptanc dequately CD accep lations.	is true and comp nd/or file certain r e of a C-141 report investigate and r otance of a C-141	elease ort by th emedia report	the best of my notifications a ne NMOCD m te contaminati does not reliev	knowledge and u nd perform corre arked as "Final F on that pose a the e the operator of	inderstand that p ctive actions for ceport" does not reat to ground wa responsibility fo	ursuant to NM eleases which elieve the ope ter, surface w r compliance v	OCD r n may en erator of ater, hu with any	ules and ndanger f liability man health y other
						OIL CONSERVATION DIVISION					
Signature:											
Printed Name		amille Reynold	s			Approved by	District Supervis	sor:			
l'itle:	Re	emediation Cod	ordinator			Approval Da	te:	Expiration	n Date:		
E-mail Addre	ess: cj	reynolds@paal	p.com			Conditions of	f Approval:		Attachec	1	
Date: 3/21/20	005		Phone:	(505)441-096	5						
Attach Addit	tional She	ets If Necess	ary		t						