State of New Mexico Energy Minerals and Natural Resources

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

Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action 1RP-2012 **OPERATOR** X Final Report Initial Report Name of Company **Plains Pipeline, LP** Contact **Jason Henry** Telephone No. (575) 441-1099 Address 2530 Hwy 214 - Denver City, Tx 79323 **Facility Name** Hugh Gathering Eubanks Discharge 4" Facility Type **Pipeline** Surface Owner Charlie Bettis Mineral Owner Lease No. LOCATION OF RELEASE Feet from the North/South Line Feet from the Unit Letter Section Township East/West Line County Range H 22 21S 37E Lea Latitude N 32.46682° Longitude W 103.14531° **NATURE OF RELEASE** Volume of Release 1940 bbls Volume Recovered 1280 bbls Type of Release **Crude Oil** Source of Release 4" steel pipeline Date and Hour of Occurrence Date and Hour of Discovery 11/23/2008 11/23/2008 08:00 If YES, To Whom? Was Immediate Notice Given? Yes No Not Required Larry Johnson By Whom? Daniel Bryant Date and Hour 11/24/2008 08:30 Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. □ Yes ⊠ No RECEIVED If a Watercourse was Impacted, Describe Fully.* JAN 12 2010 ÷ HOBBSOCD Describe Cause of Problem and Remedial Action Taken.* Thermal expansion behind a stuck brush pig caused a 4" pipeline to rupture along the pipe seam at a corroded soil air interface releasing crude oil. Pipeline was replaced on 11/24/2008. Throughput on the line is approximately 1774 bbls per day. Operating pressure of the pipeline is 90 psi. The pipeline was above ground at the release location. H2S content of the crude is less than 10 ppm. The gravity of the crude is 38.5. Describe Area Affected and Cleanup Action Taken.* Released crude oil collected in two low-lying areas impacting an area which measured approximately 500' X 300'. Please see the attached Terracon Soil Closure Compliance Report for details of remedial activities conducted at the site. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION lowson 2n/11A Signature: Approved by District Engly MRONMENTAL ENGINEER Printed Name: Jason Henry Approval Date: 1.12.10 Title: Remediation Coordinator **Expiration Date:** E-mail Address: jhenry@paalp.com Conditions of Approval: Attached Date: 01-12-2010 RP - 2012 Phone: (575) 441-1099 * Attach Additional Sheets If Necessary

Soil Closure Compliance Report

Hugh Gathering Eubanks Discharge 4" Unit Letter H, Section 22, Township 21 South, Range 37 East Plains Pipeline SRS Number 2008-311 New Mexico Oil Conservation Division Number 1RP-2012 Lea County, New Mexico

Terracon Project Number: A4087125

August 5, 2009

Prepared for:

Plains Pipeline, L.P. 2530 State Highway 214 Denver City, Texas 79323

Prepared by:



August 5, 2009

Plains Pipeline, L.P. 2530 State Highway 214 Denver City, Texas 79323 Attn: Mr. Jason Henry

Telephone: (575) 441-1099 Facsimile: (806) 592-8305

Re: Hugh Gathering Eubanks Discharge 4" Unit Letter H, Section 22, Township 21 South, Range 37 East Plains Pipeline SRS Number 2008-311 New Mexico Oil Conservation Division Number 1RP-2012 Lea County, New Mexico Terracon Project Number A4087125

Dear Mr. Henry:

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

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

Sincerely,

llerracon

Prepared by:

Catharine London

Senior Project Manager

Reviewed by:

Barrett W. Bole Senior Associate For Barrett W. Pole

Terracon Consultants, Inc. 24 Smith Road, Suite 261 Midland, Texas 79705 Phone 432.684 9600 Fax 432 684.9608

www.terracon.com

Consulting Engineers & Scientists

lerracon

TABLE OF CONTENTS

Page No.

1.0	INTRODUCTION	1
2.0	FIELD ACTIVITIÊS	4
3.0	FINDINGS AND CONCLUSIONS	6

LIST OF APPENDICES

Appendix A:	Figure 1- Topographic Map
	Figure 2 – Site Plan and Sample Location Map
Appendix B:	Tables
Appendix C:	Laboratory Data Sheets
Appendix D:	Site Photographs
Appendix E:	Regulatory Documents

Appendix F: CD of the Soil Closure Compliance Report

Soil Closure Compliance Report

Hugh Gathering Eubanks Discharge 4" Unit Letter H, Section 22, Township 21 South, Range 37 East Plains Pipeline SRS Number 2008-311 New Mexico Oil Conservation Division Number 1RP-2012 Lea County, New Mexico

Terracon Project Number A4087125

1.0 INTRODUCTION

The Hugh Gathering Eubanks Discharge 4" project site is located approximately 2.5 miles north of the intersection of Highway 137 and Highway 18, thence approximately 1.1 miles west on a gravel road, and thence approximately ½ mile south, near the town of Eunice in Lea County, New Mexico. The crude oil release was located on property owned by Mr. Charlie Bettis. The release was discovered on November 23, 2008, with a reported 1,940 barrels (bbls) of crude oil released. Approximately 1,280 bbls of crude oil was recovered by Plains. At the time of the discovery, the four-inch diameter pipeline had ruptured due to thermal expansion of a stuck brush pig along the pipe seam at a corroded soil air interface, causing the crude oil release. Plains notified the New Mexico Oil Conservation Division (OCD) by phone on November 23, 2008. The New Mexico OCD assigned the site a file number of 1RP-2012.

A visual site assessment was conducted on November 24, 2008 by Plains and Terracon representatives. The decision was made to conduct a limited site investigation using a backhoe, prior to remedial activities, in an effort to evaluate the vertical and horizontal extent of soil contamination. A utility locate call was placed to identify unknown utilities in the area and a backhoe and crew was scheduled.

1.1 Site Description

Site Name	Hugh Gathering Eubanks Discharge 4"
Site Location/GPS	The legal description of the site is the Unit Letter H, Section 22, Township 21 South, Range 37 East, Latitude/Longitude N 32.466267 / W 103.1445
General Site Description	The immediate area surrounding the pipeline right-of-way is native pasture land.

A topographic map is included as Figure 1; a Site Plan and Sample Locations map is included as Figure 2 in Appendix A.

Tferracon

Total Ranking Score = 20

Soil Closure Compliance Report Hugh Gathering Eubanks Discharge 4" Plains Pipeline SRS Number 2008-311 New Mexico Oil Conservation Division Number 1RP-2012 Terracon Project Number A4087125 August 5, 2008

1.2 Scope of Services

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

- Investigation and remediation of impacted soil;
- Subsequent to analytical data indicating adherence to New Mexico OCD closure requirements, backfill and site restoration; and
- Submittal of a Soil Closure Compliance Report detailing field activities, site maps and photographs.

1.3 Regulatory Framework

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

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

Depth to Ground Water <50 feet Ranking Score = 20 (As defined as vertical distance from lowermost contaminants to seasonal high water level). Groundwater was not encountered during excavation activities; confirmation soil samples were collected approximately four to 16 feet below ground surface (bgs). According to information obtained from the New Mexico Tech groundwater database groundwater at the site is approximately 53 feet bgs.

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

Terracon

Soil Closure Compliance Report Hugh Gathering Eubanks Discharge 4" Plains Pipeline SRS Number 2008-311 New Mexico Oil Conservation Division Number 1RP-2012 Terracon Project Number A4087125 August 5, 2008

Based on total ranking criteria of 20, the remediation levels are as follows:

Benzene = 10 parts per million (ppm) BTEX = 50 ppm TPH = 100 ppm

1.4 Standard of Care

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

1.5 Additional Scope Limitations

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

1.6 Reliance

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

Tlerracon

Soil Closure Compliance Report Hugh Gathering Eubanks Discharge 4" Plains Pipeline SRS Number 2008-311 New Mexico Oil Conservation Division Number 1RP-2012 Terracon Project Number A4087125 August 5, 2008

2.0 FIELD ACTIVITIES

2.1 Site Investigation

On November 24, 2008 a backhoe was transported to the site to begin site investigation of the vertical and horizontal extent of the impacted surface soil. The pipeline was located aboveground at the release location. The crude oil release collected in two low-lying areas impacting an area which measured approximately 500 feet by 300 feet at the site. A series of test trenches with total depths which ranged from eight to 13 feet bgs were advanced at the site. Based on a visual inspection of the trenches, it appeared the impact to surface soils ranged in depth from eight to 13 feet bgs. Confirmation soil samples were collected from the bottom of each of the test trenches and labeled T-1 (13'), T-2 (8') and T-2 (11'). The soil samples were placed in laboratory provided glass jars with a custody seal, placed on ice and relinquished to Xenco Laboratories, in Odessa, Texas for analysis of benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method 8021B, and total petroleum hydrocarbons (TPH), using EPA Method 8015M.

Laboratory results indicated TPH concentrations of 74.1 mg/kg in the soil sample T-2 (11') and 168.4 mg/kg and 14,410 mg/kg in soil samples T-1 (13') and T-2 (8'), respectively. BTEX constituents were not detected above laboratory reporting limits and/or New Mexico OCD remediation action levels in the soil samples collected from the trenches. The laboratory analytical reports and soil summary tables are included in Appendix B and C of this report.

2.2 Site Remediation

On November 24, 2008, an excavator, bulldozer, back-hoe and front-loader were mobilized to the site and excavation of the impacted soil commenced. Excavation activities continued through December 5, 2008. The excavation was divided into three sections (Section 1, Section 2, and Section 3). Section 1 was the western portion of the excavation, Section 2 was the center of the excavation and Section 3 was the eastern portion of the excavation. On December 8, 2008, December 10, 2008, and December 11, 2008, confirmation soil samples were collected from the bottom and side walls of the excavated area and labeled SEC.1 BH-1 through BH-3, SEC.1 SW-1 through SW-5, SEC.2 BH-9 and BH-10, and SEC.3 BH-4 through BH-8, and SEC.3 SW-6 through SW-10. The soil samples were placed in laboratory provided glass jars with a custody seal, placed on ice and relinquished to Xenco Laboratories, in Odessa, Texas for analysis of BTEX and TPH. With the exception of soil samples SEC.1 BH-2, SEC.1 BH-3 and SEC.1 BH-5, laboratory results indicated TPH, benzene and BTEX concentrations below laboratory detection limits and/or New Mexico OCD Remediation Action Levels in the soil confirmation samples collected on December 8, 2008, December 10, 2008 and December 11, 2008.

Terracon

Soil Closure Compliance Report Hugh Gathering Eubanks Discharge 4" Plains Pipeline SRS Number 2008-311 New Mexico Oil Conservation Division Number 1RP-2012 Terracon Project Number A4087125 August 5, 2008

A composite soil sample of the impacted material (Stock Pile 1) was collected on December 2, 2008, placed in laboratory provided glass jars with a custody seal, placed on ice and relinquished to Xenco Laboratories for analysis of toxicity characteristic leaching procedure (TCLP) semi-volatile organic compounds (SVOCs) using EPA Method 8270C, TCLP volatile organic analysis (VOA) using EPA Method 8260B, chloride using EPA Method 300, RCRA-8 Metals using Methods SW-846 6010B and 7471A, paint filter liquids test using Method SW-846 SW 9095, and percent moisture. Additionally, the sample was analyzed for naturally occurring radioactive materials (NORM). Laboratory results indicated the soil was acceptable to be transported to and remediated in a New Mexico OCD approved land farm.

On December 22, 2008, a composite soil sample (Stock Pile 1A) was collected from the stockpiled excavated materials at the site. The soil sample was analyzed for Flash Point using Method SW-846 1010, Reactive Cyanide using EPA Method 9010, Reactive Sulfide by Method SW 9030B and pH using EPA Method 9045C. The soil sample was placed in laboratory provided glass jars with a custody seal, placed on ice and relinquished to Xenco Laboratories for analysis. Laboratory results indicated that the flash point was >150 Degrees F, cyanide and sulfide were less than 50 mg/kg, and the soil had a pH of 7.65 pH units. The laboratory analytical reports and soil summary tables are included in Appendix B and C of this report.

TPH in the soil samples collected from SEC.1 BH-2, SEC.1 BH-3 and SEC. 1 BH-5 exceeded the New Mexico OCD remediation action level of 100 mg/kg. BTEX in the soil sample collected from SEC.3 BH-5 exceeded the New Mexico OCD remediation action level of 50 mg/kg. On December 22, 2008, a back-hoe was mobilized to the site and the areas that exceeded the New Mexico OCD remediation action levels were over excavated. Confirmation soil samples Sec. 1 BH-2A, Sec. 1 BH-3A, and Sec. 3 BH-5A were collected from the newly excavated areas. The soil samples were placed in laboratory provided glass jars with a custody seal, placed on ice and relinquished to Xenco Laboratories in Odessa, Texas, for analysis of TPH and BTEX. Laboratory results indicated TPH and BTEX concentrations below laboratory detection limits and/or New Mexico OCD remediation action levels in samples Sec. 1 BH-2A, Sec. 1 BH-3A, and Sec. 1 BH-5A. Laboratory analytical results and soil summary tables are included in Appendix B and C of this report.

2.2 Site Restoration

The site was fenced to prevent livestock from entering the excavation. Several remedial objectives were discussed from January 2009 until April 2009. Ultimately at the landowner's request, the excavated stockpile (approximately 7,280 cubic yards (yds³)) was transported it to the Plains Lea Station Land Farm for remediation. Site restoration was completed using ambient soil and caliche material provided by the landowner, Mr. Charlie Bettis. Approximately 4,466 yds³ of caliche and

7[erracon

Soil Closure Compliance Report Hugh Gathering Eubanks Discharge 4" Plains Pipeline SRS Number 2008-311 New Mexico Oil Conservation Division Number 1RP-2012 Terracon Project Number A4087125 August 5, 2008

3,304 yds³ ambient soil was transported to the excavation and used as backfill. Additionally approximately 400 bbls of water was used to compact the material into the excavation. A front end loader was utilized to backfill the excavated area and the site was restored as near possible to the surrounding topography during May 2009 and June 2009.

3.0 FINDINGS AND CONCLUSIONS

The Plains Pipeline, Hugh Gathering Eubanks Discharge 4" project site was investigated and remediated following the New Mexico OCD *Guidelines for Remediation of Leaks, Spills and Releases*, dated August 13, 1993. Based on a total ranking criteria of 20, the remediation levels were established as Benzene - 10 ppm, BTEX - 50 ppm and TPH - 100 ppm.

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

Terracon

Soil Closure Compliance Report Hugh Gathering Eubanks Discharge 4" Plains Pipeline SRS Number 2008-311 New Mexico Oil Conservation Division Number 1RP-2012 Terracon Project Number A4087125 August 5, 2008

DISTRIBUTION

Copy 1:	Mr. Larry Johnson New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division, District 1 1625 French Drive Hobbs, New Mexico 88240
Copy 2:	Mr. Jason Henry Plains Pipeline, L.P. 2530 State Highway 214 Denver City, Texas 79323 <u>jhenry@paalp.com</u>
Copy 3:	Mr. Jeff Dann Plains Pipeline, L.P. 333 Clay Street, Suite 1600 Houston, Texas 77002 jpdann@paalp.com
Copy 4:	Mr. Charlie Bettis P. O. Box 969 Eunice, New Mexico 88231 575-390-8111
Сору 5:	Ms. Catharine London Terracon Consultants 24 Smith Road, Suite 261 Midland, Texas 79705 <u>chlondon@terracon.com</u>

.

APPENDIX A

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





APPENDIX B

Tables

•

Table 1

CONCENTRATIONS OF TPH & BTEX IN SOIL

Plains Pipeline, L.P. Hugh Gathering Eubanks Discharge 4" SE 1/4 of NE 1/4 Section 22, Township 21S, Range 37E 2.5 Miles North of Eunice, Lea County, New Mexico New Mexico Oil Conservation Division Number 1RP-2012 Plains All American Pipeline Leak Number 2008-311 Terracon Project Number A4087125

All concentrations are in mg/kg

			l	EPA 8015	Modified				EPA Meth	od 8021B		
SAMPLE DATE	SAMPLE LOCATION	DEPTH (FEET)	ТРН С ₆ -С ₁₂	TPH >C ₁₂ -C ₂₈	ТРН С ₂₈ -С ₃₅	TPH Total	BENZENE	TOLUENE	ETHYL- BENZENE	M,P- XYLENES	O- XYLENES	BTEX
11/26/08		13	28.4	140	<16.6	168.4	<0.0055	0.0325	0.0819	0.2007	0 1458	0.4609
11/26/08	T-2 (8')	8	5,580	7,850	980	14,410	NA	NA	NA	NA	NA	NA
11/26/08	T-2 (11')	11	21.5	52.6	<18.7	74.1	0.0261	0.3677	0.4416	0.9571	0.4676	2.2601
12/08/08	SEC.1 BH-1	14	<17.6	<17.6	<17.6	<17.6	<0 0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0012
12/08/08	SEC.1 BH-2	14	222	934	122	1,278	<0.055	0.2634	0.8629	2.268	1.223	4.6173
12/22/08	Sec. 1 BH-2A	16	<16.4	<16.4	<16.4	<16.4	< 0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0011
12/08/08	SEC.1 BH-3	12	514	1,420	211	2,145	<0.0532	1.766	5.109	11.17	4.829	22.874
12/22/08	Sec. 1 BH-3A	14	<16.6	<16.6	<16.6	<16.6	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0011
12/08/08	SEC 1 SW-1	7	<15.2	19.2	<15.2	19.2	<0.001	0.0448	0.0794	0.152	0.0527	0.3289
12/08/08	SEC.1 SW-2	5	<15.2	<15.2	<15.2	<15.2	< 0.001	< 0.002	<0.001	< 0.002	<0 001	< 0.001
12/10/08	SEC.1 SW-3	65	<15.6	<15.6	<15.6	<15.6	< 0.001	<0.0021	0.0022	0.0027	0.0019	0.0068
12/10/08	SEC.1 SW-4	8	<15.5	<15.5	<15.5	<15.5	< 0.001	<0.0021	< 0.001	<0.0021	< 0.001	<0.001
12/10/08	SEC.1 SW-5	6.5	<15.5	<15.5	<15.5	<15.5	<0.001	< 0.0021	< 0.001	<0.0021	<0.001	<0.001
12/10/08	SEC.3 BH-4	12	<16 2	<16.2	<16.2	<16 2	<0.0011	<0.0022	< 0.0011	<0.0022	<0.0011	<0.0011
12/10/08	SEC.3 BH-5	12	1,150	1,950	260	3,360	0.2538	15 04	18.04	33 48	13.11	79.9238
12/22/08	Sec. 3 BH-5A	15	<16.4	<16.4	<16.4	<16.4	< 0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0011
12/10/08	SEC.3 BH-6	12	<17.7	<17.7	<17.7	<17.7	<0.0012	<0.0024	< 0.0012	<0.0024	<0.0012	< 0.0012
12/10/08	SEC.3 BH-7	16	<15.7	44.8	<15.7	44.8	< 0.001	0.0033	0.0015	0.0024	0.0012	0.0084
12/10/08	SEC.3 BH-8	15	<17.6	<17.6	<17.6	<17.6	< 0.0012	<0.0023	< 0.0012	<0.0023	< 0.0012	< 0.0012
12/10/08	SEC 3 SW-6	4	<15.9	<15.9	<15.9	<15.9	< 0.0011	<0.0021	< 0.0011	< 0.0021	< 0.0011	< 0.0011
12/10/08	SEC 3 SW-7	9	<15.7	<15 7	<15.7	<15.7	< 0.001	<0.0021	< 0.001	<0.0021	< 0.001	< 0.001
12/10/08	SEC.3 SW-8	8	<15 4	<15.4	<15.4	<15.4	<0.001	0.0022	0 0016	0.0032	0.0013	0 0083
12/10/08	SEC.3 SW-9	7	<15.9	<15.9	<15.9	<15.9	< 0.0011	<0 0021	< 0.0011	< 0.0021	<0.0011	<0.0011
12/10/08	SEC.3 SW-10	9	<15.5	<15.5	<15.5	<15.5	< 0.001	0.0024	0.0031	0.006	0 003	0.0145
12/11/08	SEC 2 BH-9	14	<16.4	<16.4	<16.4	<16.4	<0.0011	<0.0022	< 0.0011	<0.0022	<0.0011	<0.0011
12/11/08	SEC.2 BH-10	15	<17	32.4	<17	32.4	<0.0011	< 0.0023	< 0.0011	< 0.0023	0.0011	0.0011
										1		
New Mexi Ren	co Oil Conservat nediation Action	tion Division Levels	N/L	N/L	N/L	100	10	N/L	N/L	N/L	N/L	50

Concentrations in **BOLD** are above regulatory limits

N/A - Sample not analyzed for a particular constituent

N/L - Remediation Action Levels not listed for a particular constituent

Table 2

WASTE CHARACTERIZATION SOIL SAMPLE

Plains Pipeline, L.P. Hugh Gathering Eubanks Discharge 4" Unit Letter H, Section 22, Township 21S, Range 37E 2.5 Miles North of Eunice, Lea County, New Mexico New Mexico Oil Conservation Division Number 1RP-2012 Plains All American Pipeline Leak Number 2008-311 Terracon Project Number A4087125

Sample	Sample	Method SW-846 1010	Method EPA 9045C	Method EPA 9010	Method SW 9030B	
Date	Identification	lgnitability (°F)	pH (pH Units)	Reactive Cyanide (mg/kg)	Reactive Sulfide (mg/kg)	
12/22/08	Stock Pile 1A	>150	7.65	<50	<50	

Concentrations are noted in the table

Table 3

LAND FARM CHARACTERIZATION OF SOIL

Plains Pipeline, L.P. Hugh Gathering Eubanks Discharge 4" SE 1/4 of NE 1/4 Section 22, Township 21S, Range 37E 2.5 Miles North of Eunice, Lea County, New Mexico New Mexico Oil Conservation Division Number 1RP-2012 Plains All American Pipeline Leak Number 2008-311 Terracon Project Number A4087125

SAMPLE DATE	SAMPLE LOCATION	SAMPLE DEPTH (EFET)	None	EPA Method 300 (mg/kg)	EPA Method 8270C (mg/kg)	EPA Method 8260B (mg/kg)		SW-846 Methods 6010B and 7471A (mg/kg)						SW-9095 (Pass/Fail)	
		(1221)	Percent Moisture	Chloride	TCLP SVOCs	TCLP VOAs	Mercury	Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Paint Filter
12/02/08	Stock Pile 1	Composite	4 36	<5 23	All ND	ALL ND	<0 0082	1 69	29 2	<0 225	6 49	3 79	<0.45	<0 18	Pass
										1	r				1

All ND - None of the constituents analyzed exceeded laboratory reporting limits

APPENDIX C

Laboratory Data Sheets

.

Analytical Report 318990

for

PLAINS ALL AMERICAN EH&S

Project Manager: Daniel Bryant

Hugh Gathering, Eubanks Discharge 4" SRS # 2008-311

08-DEC-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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



08-DEC-08

nelaci

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

Reference: XENCO Report No: 318990 Hugh Gathering, Eubanks Discharge 4" Project Address: New Mexico

Daniel Bryant:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318990. 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. 318990 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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





Sample Cross Reference 318990

PLAINS ALL AMERICAN EH&S, Midland, TX

Hugh Gathering, Eubanks Discharge 4"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 (13')	S	Nov-26-08 13:10	13 - 13 ft	318990-001
T-2 (11')	S	Nov-26-08 12:20	11 - 11 ft	318990-002
T-2 (8')	S	Nov-26-08 12:25	8-8 ft	318990-003



Certificate of Analysis Summary 318990

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Hugh Gathering, Eubanks Discharge 4"



Project Id: SRS # 2008-311 Contact: Daniel Bryant Project Location: New Mexico

Date Received in Lab: Wed Nov-26-08 04:35 pm

Report Date: 08-DEC-08

								Project Manager:	Brent Barron, II	
	Lab Id:	318990-0	01	318990-0	02	318990-0	03			
Anglusis Deguasted	Field Id:	T-1 (13')		T-2 (11')	T-2 (8')				
Anulysis Kequesieu	Depth:	13-13 f	t l	11-11 ft	:	8-8 ft				
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Nov-26-08	13:10	Nov-26-08 1	2:20	Nov-26-08 1	2:25			
BTEX by EPA 8021B	Extracted:	Nov-28-08	08:20	Nov-28-08 0	8:20					
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	Analyzed:	Nov-28-08	15:49	Nov-28-08 1	6:11					
	Units/RL:	mg/kg	RL	mg/kg	RL					
Benzene		ND	0.0055	0.0261	0.0062					
Toluene		0.0325	0.0110	0.3677	0.0125					
Ethylbenzene		0.0819	0.0055	0.4416	0.0062					
m,p-Xylenes		0.2007	0.0110	0.9571	0.0125					
o-Xylene		0.1458	0.0055	0.4676	0.0062					
Total Xylenes		0.3465	0.0110	1.4247	0.0125					
Total BTEX		0.4609	0.0055	2.2601	0.0062					
Percent Moisture	Extracted:									
	Analyzed:	Dec-02-08	17:00	Dec-02-08 1	7:00	Dec-02-08 1	7:00			
	Units/RL:	%	RL	%	RL	%	RL	•		
Percent Moisture		9.43	1.00	19.78	1.00	7.76	1.00			
TPH By SW8015 Mod	Extracted:	Dec-02-08	07:00	Dec-02-08 0	7:00	Dec-02-08 0	07:00			
	Analyzed:	Dec-03-08	06:17	Dec-03-08 0	6:41	Dec-03-08 0	7:05			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
C6-C12 Gasoline Range Hydrocarbons		28.4	16.6	21.5	18.7	5580	163			
C12-C28 Diesel Range Hydrocarbons		140	16.6	52.6	18.7	7850	163			
C28-C35 Oil Range Hydrocarbons		ND	16.6	ND	18.7	980	163			
Total TPH		168.4	16.6	74.1	18.7	14410	163			

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

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

Brent Barron

Odessa Laboratory Director





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

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

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

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



Form 2 - Surrogate Recoveries

Project Name: Hugh Gathering, Eubanks Discharge 4"

Vork Orders : 318990,			Project ID	:: SRS # 200	8-311	
Lab Batch #: 741812 Samr	ple: 318486-002 S / MS	Bate	h: 1 Matriv	x: Soil		
Units: mg/kg		SUR	ROGATE RE	COVERY S	STUDY .	
BTEX by EPA 80211 Analytes	3 Amoun Found [A]	t L	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.3486		0.0300	1162	80-120	**
4-Bromofluorobenzene	0.0668		0.0300	223	80-120	**
Lab Batch #: 741812 Sam	ple: 318486-002 SD / MSD	Bate	h: 1 Matriy	x: Soil		
Units: mg/kg		SUR	ROGATE RE	COVERY S	STUDY	
BTEX by EPA 80211 Analytes	B Amoun Found [A]	.t	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	0.0306		0.0300	102	80-120	
4-Bromofluorobenzene	0.0315		0.0300	105	80-120	
Lab Batch #: 741812 Sam	nle: 318990-001 / SMP	Batc	h: 1 Matri	x: Soil		
Units: mg/kg		SUR	ROGATE RE	COVERY S	STUDY	·······
BTEX by EPA 80211	B Amoun Found [A]	. t I	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 4 Difluorohenzene	0.0354		0.0300	118	80-120	
4-Bromofluorobenzene	0.0516		0.0300	172	80-120	**
Lab Datab # 7/1/212 Som	+ _ 219000.002 / SMP		- 1 Matri	Soil		M
Lao Baich #: / 71012 Samp Unite: mg/kg	Je: 510770-002 / Sivia	SUR	DOCATE RE	COVERY	TINY	<u> </u>
BTEX by EPA 80211 Analytes	B Amoun Found [A]	it	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0373		0.0300	124	80-120	**
4-Bromofluorobenzene	0.0500		0.0300	167	80-120	**
Lab Batch #: 741812 Samy	ole: 520201-1-BKS / BKS	Batc	h: ¹ Matri	x: Solid		<u> </u>
Units: mg/kg		SUR	ROGATE RE	COVERY S	STUDY	
BTEX by EPA 80211 Analytes	B Amoun Found [A]	t	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272		0.0300	91	80-120	
4-Bromofluorobenzene	0.0254		0.0300	85	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.



Form 2 - Surrogate Recoveries

Project Name: Hugh Gathering, Eubanks Discharge 4"

Lab Batch # 741812	Sample: 520201-1-BLK / 3	BLK Bat	tch: 1 Matri	x: Solid								
Units: mg/kg	Sampe. Souser i Berry	SURROGATE RECOVERY STUDY										
BTEX by D	EPA 8021B lytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Difluorobenzene		0.0314	0.0300	105	80-120							
4-Bromofluorobenzene		0.0216	0.0300	72	80-120	**						
Lab Batch #: 741812	Sample: 520201-1-BSD / 1	BSD Bat	tch: 1 Matri	ix: Solid	********							
Units: mg/kg	-	SU	RROGATE RE	COVERY	STUDY							
BTEX by Ana	EPA 8021B lytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Difluorobenzene	-	0.0274	0.0300	91	80-120							
4-Bromofluorobenzene		0.0246	0.0300	82	80-120							
Lab Batch #: 742207	Sample: 318913-003 S / N	IS Bat	tch: [[] Matri	ix: Soil	·							
Units: mg/kg	-	SU	RROGATE RE	COVERY	STUDY							
TPH By SV	W8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1-Chlorooctane		114	100	114	70-135							
o-Terphenyl		61.2	50.0	122	70-135							
Lah Batch #: 742207		MSD Bat	tch: 1 Matri	ix: Soil	L							
Units: mg/kg	-	SU	RROGATE RI	COVERY	STUDY							
TPH By SV Ana	W8015 Mod lytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1-Chlorooctane		113	100	113	70-135							
o-Terphenyl		54.8	50.0	110	70-135							
Lab Batch #: 742207	Sample: 318990-001 / SM	P Ba	tch: ¹ Matri	ix: Soil								
Units: mg/kg		SU	RROGATE RF	COVERY	STUDY							
TPH By SV	W8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags						
Ana	lytes			լ լոյ								
Ana 1-Chlorooctane	lytes	99.4	100	99	70-135							

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

*** Poor recoveries due to dilution

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



Form 2 - Surrogate Recoveries

Project Name: Hugh Gathering, Eubanks Discharge 4"

/ork Orders : 318990	l,		Project II	D: SRS # 200	8-311						
Lab Batch #: 742207	Sample: 318990-002 / SM	P Ba	tch: ¹ Matri	ix: Soil							
Units: mg/kg		SU	RROGATE RI	ECOVERY	STUDY						
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
1.011	Analytes										
1-Chlorooctane		93.5	100 50.0	94	70-135						
		10.0	1								
Lab Batch #: 742207	Sample: 318990-003 / SM	P Ba	tch: 1 Matri	ix: Soil							
Units: mg/kg	· · · · · · · · · · · · · · · · · · ·	SURROGATE RECOVERY STUDY									
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
1-Chlorooctane	A THE REPORT OF A CONTRACT	132	100	132	70-135	.					
o-Terphenyl		51.9	50.0	104	70-135						
Lab Batch #: 742207	Sample: 520421-1-BKS /	BKS Ba	tch: 1 Matr	ix: Solid							
Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY						
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
1-Chlorooctane		108	100	108	70-135						
o-Terphenyl		54.3	50.0	109	70-135						
Lab Batch #: 742207	Sample: 520421-1-BLK /	BLK Ba	tch: 1 Matr	ix: Solid		L .					
Units: mg/kg	•	SU	RROGATE RI	ECOVERY	STUDY						
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
1-Chlorooctane		94.9	100	95	70-135						
o-Terphenyi		48.7	50.0	97	70-135						
Lab Batch #: 742207	Sample: 520421-1-BSD /	BSD Ra	tch: 1 Matri	ix: Solid							
Units: mg/kg	E	SU	RROGATE RI	ECOVERY	STUDY						
			f		Control						
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Limits %R	Flags					
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Limits %R	Flags					

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

*** Poor recoveries due to dilution

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





Project Name: Hugh Gathering, Eubanks Discharge 4"

Work Order #: 318990	_	_	- 11/00/000				Proj	ect ID: S	SRS # 2008	-311				
Analyst: ASA	Da	ate Prepar	ed: 11/28/200	38	Date Analyzed: 11/28/2008 Matrix: Solid									
Lab Batch ID: 741812 Sample: 520201-1-	3KS	Bate	h #: 1			Matrix: Solid								
Units: ^{mg/kg}		BLAN	K /BLANK S	SPIKE / F	BLANK S	PIKE DUP	LICATE I	RECOVE	ERY STUD	9Y				
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		נסן		נען		Kesun [r]	[0]							
Benzene	ND	0.1000	0.0958	96	0.1	0.0970	97	1	70-130	35				
Toluene	ND	0.1000	0.0881	88	0.1	0.0881	88	0	70-130	35				
Ethylbenzene	ND	0.1000	0.0855	86	0.1	0.0842	84	2	71-129	35				
m,p-Xylenes	ND	0.2000	0.1718	86	0.2	0.1680	84	2	70-135	35				
o-Xylene	ND	0.1000	0.0836	84	0.1	0.0818	82	2	71-133	35				
Analyst: BHW	D	ate Prepar	ed: 12/02/200	08	Date Analyzed: 12/03/2008									
Lab Batch ID: 742207 Sample: 520421-1-	BKS	Bate	h #: 1		Matrix: Solid									
Units: ^{mg/kg}		BLAN	K/BLANK	SPIKE / F	BLANK S	SPIKE DUP	LICATE 1	RECOVE	ERY STUE	γ				
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag			
C6-C12 Gasoline Range Hydrocarbons	ND	1000	879	88	1000	900	90	2	70-135	35				
C12-C28 Diesel Range Hydrocarbons	ND	1000	941	94	1000	960	96	2	70-135	35				

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



Form 3 - MS / MSD Recoveries

Project Name: Hugh Gathering, Eubanks Discharge 4"



Work Order #: 318990	Project ID: SRS # 2008-311														
Lab Batch ID: 741812 Date Analyzed: 11/28/2008	QC- Sample ID: Date Prepared:	318486- 11/28/2	-002 S 008	Ba An	tch #: alyst:	1 Matrix	k: Soil		×						
Reporting Units: mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY														
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag				
Analytes	[A]	[B]		[D]	[E]		[G]								
Benzene	ND	0.1270	0.2163	170	0.1270	0.1815	143	17	70-130	35	X				
Toluene	ND	0.1270	0.4314	340	0.1270	0.3048	240	34	70-130	35	Х				
Ethylbenzene	ND	0.1270	0.2357	186	0.1270	0.1344	106	55	71-129	35	XF				
m,p-Xylenes	ND	0.2540	0.4950	195	0.2540	0.2554	101	64	70-135	35	XF				
o-Xylene	ND	0.1270	0.3250	256	0.1270	0.1267	100	88	71-133	35	XF				
Lab Batch ID: 742207	QC- Sample ID:	318913-	-003 S	Ba	tch #:	1 Matrix	r: Soil								
Date Analyzed: 12/03/2008	Date Prepared:	12/02/20	008	An	alyst:	BHW									
Reporting Units: mg/kg		М	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE RECO	OVERY S	STUDY						
TPH By SW8015 Mod	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag				
Analytes	[A]	[B]	-	[D]	[E]		[G]								
C6-C12 Gasoline Range Hydrocarbons	ND	1000	890	89	1000	906	91	2	70-135	35					
C12-C28 Diesel Range Hydrocarbons	53.2	1000	945	89	1000	982	93	4	70-135	35					

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

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

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



Sample Duplicate Recovery



Project Name: Hugh Gathering, Eubanks Discharge 4"

Work Order #: 318990

Lab Batch #: 742132		Project I	D: SRS # 20	08-311
Date Analyzed: 12/02/2008	Date Prepared: 12/02/20)08 Analy	st: BEV	
QC- Sample ID: 318990-001 D	Batch #: 1	Matr	ix: Soil	
Reporting Units: %	SAMPLE / SA	MPLE DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample S Result D [A]	Sample uplicate RPD Result	Control Limits %RPD	Flag
Analyte		(B)		
Percent Moisture	. 9.43	7.61 21	20	F

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

		EN	VIRÓN	MENTAL	. GEQTE	CHNIC.	AL AN	b co	NSTR	ÚCTI	ION N	1ATE	RIM	.s sei	evic	εs					СН	AIN OF CUSTODY RECOF
Contraction Contra	Locatio Millar Millar Manag Marmo	g Engine n 24 S V TX ger B4 & R	mith 79 ore 4	Bole Name	Labo Add Con Pho PO/	tact: ress: tact: so #: pler's Sig	4-e	nc.	311				Anal Requ	YSIS	5		EL.	Steel 1 1 1 1 1 1		the First	- A MARTINE	Lab use only Due Date: S1 S1 S1 Temp of ecoders when received (C1, 2, 5) 1 2 3 Page 0
A40 Matra	8712 Date	Time	Hu	94 Gg	for in marks of	545 <u>7 D.</u> Sample(s)	an KS Schan I I E	् <i>4"</i> ष्टि	VOA		250	P/O	k	100		13	N		1		6	7
5	++===	1215	X	5/00	Kpile #	-1_	22	20		14	nd	4	4	44	4	7	4	4	¥	ł	1	Lab Sample ID (Lab Use Only)
15	1. 2.6/02	6 13/0		XT	-16	3')	13	13				1							V	1.		318556-001
15	11	1220		X T.	2 (1	15	11	11			\square	Щ	T	\Box			Ι	\Box	I	1.	\mathbb{T}	- 002-
אי¦_	_11	1225	$\left - \right $	<u>X T-</u>	2 (8	ť)	8	8			┝╌┤	4	+-	+	_		_	-	V	1	+	_ (03
							1											+		1		
$\left - \right $			┝┝		······	······••	+				$\left \right $			+		\rightarrow	-	+	┿	╉	+	
				-			1					-	1	\uparrow	1	\neg	+	╈	\dagger	\uparrow	T	
							1					-	1			+	-†-	+	1	\uparrow	\uparrow	
Turn en Reinte	ound time Jished by	(Signature)		0 25% Ru Date: 11/26	th 0.50 Tiong: 165	K Rush	Q 100 rved by	% Rus (Signa	ture)		ľ	ete:		Time:	N	OTES	In	roi	ce.	P	?/a,	ins
Helling	unaned by	(Signatule)		Late:	lime:	ABCA	ived by:	(ຮາງຄະ	aure)			219:		Fime:			SR	5	#)	201	98	-3//
Refinquished by (Signature)			Date:	Time:	Rece	ived by:	(Signa	ture)		1	ate:	1	Time:									
Relinqu	uished by	(Signature)		Date:		Pice	Ye	(Signa	ture)		1	ate; 26/-	1	Time; 22. J	1							
Matrix Contain	er VC	N - Waalawa NA - 40 ml vie	ter s	W - Wate A/G - Am	S-So ber/OrGiad	al SD-Si us1 Liter		250 ml -	d A Glass	- Air Ba wide mo	93 Juth	C - C P/O -	Plastic	tube or othe	SL	• skude	10	0	01			-
Houster 11555 C Housen (713) 69	Office Iny Road, Su , Datas 7704	nte 100 3 . . (713) 690-97	127	Dai 890 Dai (21)	las Offica 1 Carpenter Pi las, Texas 752 1) 630-1010	noewsy, Selb 47 Fax (214) 6:	: 100 10-7070		Fort 2601 Fort (\$17	Worth (Gravel) Worth, 1 268-86	Office Drive Texas 76 60 Fas	18 (817) ;	268 860	2		Austin 5307 la Austin (512) 4	Office dustri Texas 42-112	d Oaks 78735	Blvd.	# 160 #42.1	19.1	Midland Office 24 South Rd., # 261 Mulland, Texas 79703 (472) 684.9600 Fax (432) 684-96

.

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



Sample Receipt Checklist

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

Variance Documentation

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 319261

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Hugh Gathering Eubanks Discharge 4" 2008-311

12-DEC-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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



12-DEC-08



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

Reference: XENCO Report No: **319261 Hugh Gathering Eubanks Discharge 4**" Project Address:

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 319261. 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. 319261 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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



and and the second of the second of



Sample Cross Reference 319261

PLAINS ALL AMERICAN EH&S, Midland, TX

Hugh Gathering Eubanks Discharge 4"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id		
Stock Pile 1	S	Dec-02-08 12:35		319261-001		



Certificate of Analysis Summary 319261 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Hugh Gathering Eubanks Discharge 4"

2

Project Id: 2008-311 Contact: Jason Henry

Project Location:

Date Received in Lab: Dec-02-08 04:35 pm Report Date: 12-DEC-08

Project Manager:

Brent Barron, II

	Lab Id:	319261-0	01			
Analysis Requested	Field Id:	Stock Pile	:1			
	Depth:					
	Matrix:	SOIL				
	Sampled:	Dec-02-08 1	2:35			
TCLP SVOCe by FPA 8270C	Extracted:	Dec-09-08 (08:42			
	Analyzed:	Dec-09-08 1	13:18			
	Units/RL:	mg/L	RL		ł	
1,4-Dichlorobenzene		ND	0.020			
2,4-Dinitrotoluene		ND	0.020			
Hexachlorobenzene		ND	0.020			
Hexachlorobutadiene		ND	0.020			
Hexachloroethane		ND	0.020	,		
2-methylphenol		ND	0.020			
3&4-Methylphenol		ND	0.020			
Nitrobenzene		ND	0.020			
Pentachlorophenol	ND	0.020				
Pyridine		ND	0.020			
2,4,5-Trichlorophenol		ND	0.020			
2,4,6-Trichlorophenol		ND	0.020			
TCLP VOAs by EPA 8260B	Extracted:	Dec-09-08 15:10				
	Analyzed:	Dec-09-08 2	23:24		1	
	Units/RL:	mg/L	RL			
Benzene		ND	0.025			•
2-Butanone		ND	0.250			
Carbon Tetrachloride		ND	0.025			
Chlorobenzene		ND	0.025			
Chloroform		ND	0.025			
1,4-Dichlorobenzene		ND	0.025			
1,2-Dichloroethane		ND	0.025			
1,1-Dichloroethene		ND	0.025			
Tetrachloroethylene		ND	0.025			
Trichloroethene		ND	0.025			
Vinyl Chloride		ND	0.010			

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

Brent Barron

Odessa Laboratory Director

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


Since 1990

Certificate of Analysis Summary 319261 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Hugh Gathering Eubanks Discharge 4"

Project Id: 2008-311 Contact: Jason Henry

 Date Received in Lab:
 Dec-02-08 04:35 pm

 Report Date:
 12-DEC-08

 Project Manager:
 Brent Barron, II

Project Location:				Project Manager:	Brent Barron, II
	Lab Id:	319261-001			
Analysis Requested	Field Id:	Stock Pile 1			
	Depth:				
	Matrix:	SOIL		2	
	Sampled:	Dec-02-08 12:	35		
Anions by EPA 300	Extracted:				
	Analyzed:	Dec-04-08 10:	00		
	Units/RL:	mg/kg	RL		
Chloride		ND	5.23		
Mercury by SW 7471A	Extracted:	Dec-05-08 06:	50		
	Analyzed:	Dec-05-08 10:	16		
	Units/RL:	mg/kg	RL		
Mercury		ND 0	.0082		
Metals per ICP by SW846 6010B	Extracted:	Dec-04-08 10:	30		
	Analyzed:	Dec-05-08 10:	45		
	Units/RL:	mg/kg	RL		
Arsenic		1.69	0.450		
Barium		29.2	0.450		
Cadmium		ND	0.225		
Chromium		6.49	0.225		
Lead		3.79	0.541		<u> </u>
Selenium		ND	0.450		
Silver		ND	0.180		
Paint Filter Liquids Test by SW-	Extracted:				
9095	Analyzed:	Dec-03-08 13:	00		
	Units/RL:				
Paint Filter		PASS			
Percent Moisture	Extracted:				
	Analyzed:	Dec-03-08 17:	00		
	Units/RL:	%	RL		<u> </u>
Percent Moisture		4.36	1.00		

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

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

Brent Barron

Odessa Laboratory Director





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

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

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

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



Project Name: Hugh Gathering Eubanks Discharge 4"

Vork Orders : 319261,		Project II	D: 2008-311		
Lab Batch #: 742874 Sample: 319261	-001 / SMP Ba	tch: ¹ Matri	x: Soil		
Units: mg/L	SU	RROGATE RI	COVERY	STUDY	
TCLP SVOCs by EPA 8270C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.051	0.100	51	43-116	
2-Fluorophenol	0.012	0.100	12	21-100	**
Nitrobenzene-d5	0.061	0.100	61	35-114	
Phenol-d6	0.043	0.100	43	10-94	
Terphenyl-D14	0.060	0.100	60	33-141	
2,4,6-Tribromophenol	0.054	0.100	54	10-123	
Lab Batch #: 742874 Sample: 520739	-1-BKS / BKS Ba	tch: ¹ Matri	x: Water	······	
Units: mg/L	SU	RROGATE RI	COVERY	STUDY	
TCLP SVOCs by EPA 8270C	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			լոյ		
2-Fluorobiphenyl	0.086	0.100	86	43-116	
2-Fluorophenol	0.062	0.100	62	21-100	
Nitrobenzene-d5	0.088	0.100	88	35-114	
Phenol-d6	0.048	0.100	48	10-94	
Terphenyl-D14	0.095	0.100	95	33-141	
2,4,6-Tribromophenol	0.094	0.100	94	10-123	
Lab Batch #: 742874 Sample: 520739	-1-BLK / BLK Ba	tch: ¹ Matri	x: Water		
Units: mg/L	SU	RROGATE RI	ECOVERY	STUDY	
TCLP SVOCs by EPA 8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2. Ehorohinhenvl	0.100	0.100	100	42.116	
2-Fluoronhenol	0.100	0.100	100	43-116	
Nitrohenzene-d5	0.000	0.100	00	21-100	
Phenol-d6	0.049	0.100	90 <u>40</u>	10-04	<u></u>
Terphenyl-D14	0.104	0.100	104	33-141	
2,4,6-Tribromophenol	0.110	0.100	110	10-123	

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

*** Poor recoveries due to dilution

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



Project Name: Hugh Gathering Eubanks Discharge 4"

ork Orders : 319261,		•	Project II	D: 2008-311				
Lab Batch #: 742874	Sample: 520739-1-BSD /	BSD Ba	tch: 1 Matri	ix: Water				
Units: mg/L	-	SU	RROGATE RI	ROGATE RECOVERY STUDY				
TCLP SVOCs by E	PA 8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
2-Fluorobiphenyl	·····	0.085	0.100	85	43-116			
2-Fluorophenol		0.062	0.100	62 -	21-100			
Nitrobenzene-d5		0.088	0.100	88	35-114			
Phenol-d6		0.046	0.100	46	10-94	,		
Terphenyl-D14		0.093	0.100	93	33-141			
2,4,6-Tribromophenol		0.097	0.100	97	10-123			
Lab Batch #: 743339	Sample: 319261-001 / SM	IP Ba	tch: 1 Matri	ix: Soil				
Units: mg/L		SU	RROGATE RI	ECOVERY	STUDY			
TCLP VOAs by EP Analytes	A 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
4-Bromofluorobenzene	•	0.0505	0.0500	101	86-115			
Dibromofluoromethane		0.0495	0.0500	99	86-118			
1,2-Dichloroethane-D4	• • • • • • • • • • • • • • • • • • •	0.0483	0.0500	97	80-120			
Toluene-D8		0.0519	0.0500	104	88-110			
Lab Batch #: 743339	Sample: 521027-1-BKS /	BKS Ba	tch: 1 Matri	ix: Water	<u></u>			
Units: mg/L	-	SU	RROGATE RI	ECOVERY	STUDY			
TCLP VOAs by EP Analytes	A 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
4-Bromofluorobenzene		0.0501	0.0500	100	86-115			
Dibromofluoromethane		0.0460	0.0500	92	86-118			
		1	+		4			
1,2-Dichloroethane-D4		0.0462	0.0500	92	80-120			

** Surrogates outside limits; data and surrogates confirmed by reanalysis *** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Hugh Gathering Eubanks Discharge 4"

Work Orders :	319261,
---------------	---------

Project ID: 2008-311

K/DLK Ba	BLK Batch: 1 Matrix: Water								
SU	SURROGATE RECOVERY STUDY								
Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
		[0]		l					
0.0507	0.0500	101	86-115	l					
0.0498	0.0500	100	86-118	1					
0.0484	0.0500	97	80-120	1					
0.0516	0.0500	103	88-110						
	Amount Ba Amount Found [A] 0.0507 0.0498 0.0484 0.0516 0.0516	Amount True Found Image: Amount [A] [B] 0.0507 0.0500 0.0498 0.0500 0.0516 0.0500	Amount Found True Amount [A] Recovery [B] 0.0507 0.0500 101 0.0484 0.0500 100 0.0516 0.0500 103	Amount True Found True Amount Recovery (B] Control Ulimits 0.0507 0.0500 101 86-115 0.0498 0.0500 100 86-118 0.0516 0.0500 103 88-110					

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





Project Name: Hugh Gathering Eubanks Discharge 4"

Work Order #: 319261		Project ID: 2008-					
Lab Batch #: 742486	Sample: 742486	-1-BKS	Matri	x: Solid			
Date Analyzed: 12/04/2008	Date Prepared: 12/04/20	008	Analy	OR			
Reporting Units: mg/kg	Batch #: 1	BLANK /I	BLANK SPI	KE REC	OVERY	STUDY	
Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	
Chloride	ND	10.0	10.1	101	80-120		
Lab Batch #: 743339	Sample: 521027-	-1-BKS	Matri	x: Water			
Date Analyzed: 12/09/2008	Date Prepared: 12/09/2	008	Analy	st: JEA			
Reporting Units: mg/L	Batch #: 1	BLANK /	BLANK SPI	KE REC	OVERY	STUDY	
TCLP VOAs by EPA 8260B	Blank Result [A]	Spike Added [B]	Blank Spike Result ICl	Blank Spike %R IDI	Control Limits %R	Flags	
Dongono		0.050	0.050	100	66-142		
2-Butanone	ND	0.050	0.429	86	60-140		
Carbon Tetrachloride	ND	0.050	0.051	102	62-125		
Chlorobenzene	ND	0.050	0.051	102	60-133	1	
Chloroform	ND	0.050	0.047	94	74-125	1	
1,4-Dichlorobenzene	ND	0.050	0.051	102	75-125		
1,2-Dichloroethane	ND	0.050	0.045	90	68-127		
1,1-Dichloroethene	ND	0.050	0.049	98	59-172		
Tetrachloroethylene	ND	0.050	0.053	106	71-125		
Trichloroethene	ND	0.050	0.051	102	62-137		
Vinyl Chloride	ND	0.050	0:049	98	75-125		

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





Project Name: Hugh Gathering Eubanks Discharge 4"

Work Order #: 319261							Pro	ject ID: 2	2008-311		
Analyst: DAT	Da	ate Prepar	ed: 12/05/200)8			Date A	nalyzed: 1	2/05/2008		
Lab Batch ID: 742416 Sample:	520562-1-BKS	Batc	h #: 1				~	Matrix: S	Solid		
Units: ug/kg		BLAN	K/BLANK S	SPIKE / F	BLANK S	SPIKE DUPI	ICATE	RECOVE	ERY STUD	γ	
Mercury by SW 7471A	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Besult (F)	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		נטן				Kesun [F]	[0]				
Mercury	ND	166.7	164.7	99	166.7	166.5	100	1	75-125	25	
Analyst: DAT	Da	ate Prepar	ed: 12/04/200)8			Date A	nalyzed: 1	2/05/2008		
Lab Batch ID: 742575 Sample:	520506-1-BKS	Bate	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE	RECOVE	ERY STUD	γ	
Units: mg/kg Metals per ICP by SW846 601	0B Blank Sample Result [A]	BLAN Spike Added [B]	K /BLANK S Biank Spike Result (Cl	SPIKE / F Blank Spike %R (D)	Spike Added	Blank Blank Spike Duplicate Result (F)	JCATE Blk. Spk Dup. %R [G]	RECOVI	Control Limits %R	Control Limits %RPD	Flag
Units: ^{mg/kg} Metals per ICP by SW846 601 Analytes	0B Blank Sample Result [A]	BLAN Spike Added [B]	K /BLANK S Biank Spike Result [C]	SPIKE / I Blank Spike %R [D]	Spike Added [E]	Blank Blank Spike Duplicate Result [F]	JCATE Blk. Spk Dup. %R [G]	RECOVI	Control Limits %R	Y Control Limits %RPD	Flag
Units: mg/kg Metals per ICP by SW846 6010 Analytes Arsenic	0B Blank Sample Result [A] ND	BLAN Spike Added [B] 100	K /BLANK S Blank Spike Result [C] 103	SPIKE / H Blank Spike %R [D] 103	Spike Added [E] 100	Blank Spike Duplicate Result [F]	LICATE Blk. Spk Dup. %R [G] 101	RECOVE RPD %	Control Limits %R 75-125	Y Control Limits %RPD 30	Flag
Units: mg/kg Metals per ICP by SW846 6010 Analytes Arsenic Barium	0B Blank Sample Result [A] ND ND	BLAN Spike Added [B] 100 100	K /BLANK S Blank Spike Result [C] 103 100	SPIKE / I Blank Spike %R [D] 103 100	BLANK S Spike Added [E] 100 100	Blank Spike Duplicate Result [F] 101	JCATE Blk. Spk Dup. %R [G] 101 101	RECOVE RPD %	Control Limits %R 75-125 75-125	Control Limits %RPD 30 30	Flag
Units: mg/kg Metals per ICP by SW846 6010 Analytes Arsenic Barium Cadmium	0B Blank Sample Result [A] ND ND ND	BLAN Spike Added [B] 100 100	K /BLANK S Blank Spike Result [C] 103 100 98.4	Blank Spike %R [D] 103 100 98	3LANK S Spike Added [E] 100 100	Blank Spike Duplicate Result [F] 101 101 99.6	LICATE Blk. Spk Dup. %R [G] 101 101 100	RPD % 2 1 1 1	Control Limits %R 75-125 75-125 75-125	Control Limits %RPD 30 30 30	Flag
Units: mg/kg Metals per ICP by SW846 6010 Analytes Arsenic Barium Cadmium Chromium	0B Blank Sample Result [A] ND ND ND ND ND ND	BLAN Spike Added [B] 100 100 100	K /BLANK S Biank Spike Result [C] 103 100 98.4 113	Blank Spike %R [D] 103 100 98 113 113 103 113 103 </td <td>Spike Added [E] 100 100 100 100</td> <td>Blank Spike Duplicate Result [F] 101 101 99.6 110</td> <td>LICATE Bik. Spk Dup. %R [G] 101 101 100 110</td> <td>RPD % 2 1 1 3</td> <td>Control Limits %R 75-125 75-125 75-125 75-125</td> <td>Control Limits %RPD 30 30 30 30 30</td> <td>Flag</td>	Spike Added [E] 100 100 100 100	Blank Spike Duplicate Result [F] 101 101 99.6 110	LICATE Bik. Spk Dup. %R [G] 101 101 100 110	RPD % 2 1 1 3	Control Limits %R 75-125 75-125 75-125 75-125	Control Limits %RPD 30 30 30 30 30	Flag
Units: mg/kg Metals per ICP by SW846 6010 Analytes Arsenic Barium Cadmium Chromium Lead	0B Blank Sample Result [A] ND ND ND ND ND ND ND ND	BLAN Spike Added [B] 100 100 100 100	K /BLANK S Blank Spike Result [C] 103 100 98.4 113 101	SPIKE / I Blank Spike %R [D] 103 100 98 113 101	Spike Added [E] 100 100 100 100 100 100	Blank Spike Duplicate Result [F] 101 101 99.6 110 99.6	LICATE Blk. Spk Dup. %R [G] 101 101 100 110 100	RPD % 2 1 1 3 1 1	Control Limits %R 75-125 75-125 75-125 75-125 75-125	Control Limits %RPD 30 30 30 30 30 30 30	Flag
Units: mg/kg Metals per ICP by SW846 6010 Analytes Arsenic Barium Cadmium Chromium Lead Selenium	0B Blank Sample Result [A] ND ND ND ND ND ND ND ND	BLAN Spike Added [B] 100 100 100 100 100	K /BLANK S Biank Spike Result [C] 103 100 98.4 113 101 101	Blank Spike %R [D] 103 100 98 113 101 <th10< th=""> <th10< th=""></th10<></th10<>	Spike Added [E] 100 100 100 100 100 100 100 100	Blank Spike Duplicate Result [F] 101 99.6 110 99.6 100	LICATE Bik. Spk Dup. %R [G] 101 100 110 100 100 100	RPD % 2 1 1 3 1 1	Control Limits %R 75-125 75-125 75-125 75-125 75-125 75-125	Control Limits %RPD 30 30 30 30 30 30 30 30 30 30 30 30 30	Flag

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





Project Name: Hugh Gathering Eubanks Discharge 4"

Work Order #: 319261							Pro	ject ID: 2	2008-311		
Analyst: MAA	Da	ate Prepar	ed: 12/09/200	8			Date A	nalyzed: 1	2/09/2008		
Lab Batch ID: 742874 Sample: 520739-1-B	KS	Batc	h #: 1					Matrix: V	Water		
Units: mg/L		BLAN	K /BLANK S	SPIKE / E	BLANK S	PIKE DUPI	LICATE	RECOVE	ERY STUD	γ	
TCLP SVOCs by EPA 8270C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,4-Dichlorobenzene	ND	0.100	0.077	77	0.1	0.074	74	4	19-121	28	
2,4-Dinitrotoluene	ND	0.100	0.091	91	0.1	0.088	88	3	22-135	38	
Hexachlorobenzene	ND	0.100	0.083	83	0.1	0.084	84	1	46-133	25	
Hexachlorobutadiene	ND	0.100	0.082	82	0.1	0.082	82	0	44-125	25	
Hexachloroethane	ND	0.100	0.075	75	0.1	0.076	76	1	25-153	25	
2-methylphenol	ND	0.100	0.074	74	0.1	0.073	73	1	14-176	25	
3&4-Methylphenol	ND	0.200	0.155	78	0.2	0.148	74	5	14-176	25	
Nitrobenzene	ND	0.100	0.083	83	0.1	0.082	82	1	65-135	25	
Pentachlorophenol	ND	0.100	0.077	77	0.1	0.100	100	26	17-117	50	
Pyridine	ND	0.100	0.053	53	0.1	0.050	50	6	16-86	28	
2,4,5-Trichlorophenol	ND	0.100	0.082	82	0.1	0.081	81	1.	65-135	25	
2,4,6-Trichlorophenol	ND	0.100	0.082	82	0.1	0.079	79	4	65-135	25	

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



Work Order #: 319261

Form 3 - MS Recoveries



Project Name: Hugh Gathering Eubanks Discharge 4"

Lab Batch #: 742486			Pr	oject ID:	2008-311		
Date Analyzed: 12/04/2008 Date	ate Prepared:	12/04/2008		Analyst:			
QC- Sample ID: 319261-001 S	Batch #:	1		Matrix:	Soil		
Reporting Units: mg/kg	MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag	
Analytes	[A]	[B]					
Chloride	ND	20.9	22.1	106	80-120		

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



Form 3 - MS / MSD Recoveries

Project Name: Hugh Gathering Eubanks Discharge 4"



Work Order #: 319261	Project ID: 2008-311										
Lab Batch ID: 742416 Date Analyzed: 12/05/2008	QC- Sample ID: Date Prepared:	319303- 12/05/2	-001 S 008	Ba An	tch #: alyst:	1 Matri DAT	k: Soil				
Reporting Units: mg/kg		М	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Mercury by SW 7471A	Parent Sample Besult	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	[B]	[C]	[D]	E]	Kesun [r]	[G]	70	70 K	76KI D	
Mercury	0.0087	0.1287	0.1336	97	0.1299	0.1325	95	2	75-125	25	
Lab Batch ID: 742575 Date Analyzed: 12/05/2008	QC- Sample ID: Date Prepared:	319303- 12/04/2	-001 S	Ba An	tch #: alyst:	1 Matri : DAT	r: Soil				
				MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY							
Reporting Units: mg/kg		M	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Reporting Units: mg/kg Metals per ICP by SW846 6010B	Parent Sample	M Spike	ATRIX SPIK Spiked Sample Result	E / MAT Spiked Sample	RIX SPI Spike	KE DUPLICA Duplicate Spiked Sample	TE REC Spiked Dup.	OVERY : RPD	STUDY Control Limits	Control Limits	Flag
Reporting Units: mg/kg Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	M Spike Added [B]	ATRIX SPIKI Spiked Sample Result [C]	E / MAT Spiked Sample %R [D]	RIX SPI Spike Added [E]	KE DUPLICA Duplicate Spiked Sample Result [F]	TE REC Spiked Dup. %R [G]	OVERY : RPD %	STUDY Control Limits %R	Control Limits %RPD	Flag
Reporting Units: mg/kg Metals per ICP by SW846 6010B Analytes Arsenic	Parent Sample Result [A] 4.74	M Spike Added [B] 93.5	ATRIX SPIKI Spiked Sample Result [C] 89.7	E / MAT Spiked Sample %R [D] 91	Spike Added [E] 95.2	KE DUPLICA Duplicate Spiked Sample Result [F] 92.1	TE REC Spiked Dup. %R [G] 92	OVERY RPD %	STUDY Control Limits %R 75-125	Control Limits %RPD 30	Flag
Reporting Units: mg/kg Metals per ICP by SW846 6010B Analytes Arsenic Barium	Parent Sample Result [A] 4.74 43.8	M Spike Added [B] 93.5 93.5	ATRIX SPIKI Spiked Sample Result [C] 89.7 131	E / MAT Spiked Sample %R [D] 91 93	RIX SPI Spike Added [E] 95.2 95.2	KE DUPLICA Duplicate Spiked Sample Result [F] 92.1 132	TE REC Spiked Dup. %R [G] 92 93	OVERY RPD %	Control Limits %R 75-125 75-125	Control Limits %RPD 30 30	Flag
Reporting Units: mg/kg Metals per ICP by SW846 6010B Analytes Arsenic Barium Cadmium	Parent Sample Result [A] 4.74 43.8 ND	M Spike Added [B] 93.5 93.5 93.5	ATRIX SPIK Spiked Sample Result [C] 89.7 131 78.5	E / MAT Spiked Sample %R [D] 91 93 84	RIX SPI Spike Added [E] 95.2 95.2 95.2	KE DUPLICA Duplicate Spiked Sample Result [F] 92.1 132 79.3	TE REC Spiked Dup. %R [G] 92 93 83 83	OVERY : RPD % 1 0 1	STUDY Control Limits %R 75-125 75-125 75-125	Control Limits %RPD 30 30 30	Flag
Reporting Units: mg/kg Metals per ICP by SW846 6010B Analytes Arsenic Barium Cadmium Chromium	Parent Sample Result [A] 4.74 43.8 ND 46.5	M Spike Added [B] 93.5 93.5 93.5 93.5	ATRIX SPIKI Spiked Sample Result [C] 89.7 131 78.5 142	E / MAT Spiked Sample %R [D] 91 93 84 102	RIX SPI Spike Added [E] 95.2 95.2 95.2 95.2	KE DUPLICA Duplicate Spiked Sample Result [F] 92.1 132 79.3 137	TE REC Spiked Dup. %R [G] 92 93 83 95	OVERY : RPD % 1 0 1 7	Control Limits %R 75-125 75-125 75-125 75-125	Control Limits %RPD 30 30 30 30 30	Flag
Reporting Units: mg/kg Metals per ICP by SW846 6010B Analytes Arsenic Barium Cadmium Chromium Lead	Parent Sample Result [A] 4.74 43.8 ND 46.5 10.6	M Spike Added [B] 93.5 93.5 93.5 93.5 93.5	ATRIX SPIK Spiked Sample Result [C] 89.7 131 78.5 142 89.3	E / MAT Spiked Sample %R [D] 91 93 84 102 84	RIX SPI Spike Added [E] 95.2 95.2 95.2 95.2 95.2	KE DUPLICA Duplicate Spiked Sample Result [F] 92.1 132 79.3 137 92.6	TE RECC Spiked Dup. %R [G] 92 93 83 95 86	OVERY 3 RPD % 1 0 1 7 2	Control Limits %R 75-125 75-125 75-125 75-125 75-125 75-125	Control Limits %RPD 30 30 30 30 30 30	Flag
Reporting Units: mg/kg Metals per ICP by SW846 6010B Analytes Arsenic Barium Cadmium Chromium Lead Selenium	Parent Sample Result [A] 4.74 43.8 ND 46.5 10.6 0.487	M Spike Added [B] 93.5 93.5 93.5 93.5 93.5 93.5 93.5	ATRIX SPIK Spiked Sample Result [C] 89.7 131 78.5 142 89.3 84.7	E / MAT Spiked Sample %R [D] 91 93 84 102 84 90	RIX SPI Spike Added [E] 95.2 95.2 95.2 95.2 95.2 95.2 95.2	KE DUPLICA Duplicate Spiked Sample Result [F] 92.1 132 79.3 137 92.6 86.5	TE REC Spiked Dup. %R [G] 92 93 83 95 86 90	OVERY 3 RPD % 1 0 1 7 2 0	STUDY Control Limits % 75-125 75-125 75-125 75-125 75-125 75-125 75-125 75-125	Control Limits %RPD 30 30 30 30 30 30 30	Flag

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

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

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



Sample Duplicate Recovery



Project Name: Hugh Gathering Eubanks Discharge 4"

Work Order #: 319261

Lab Batch #: 742486			Project I	D: 2008-311	l
Date Analyzed: 12/04/2008 Date Pr	epared: 12/0	04/2008	Analy	st: LATCOF	ર
QC- Sample ID: 319261-001 D	Batch #: 1	L.	Matr	ix: Soil	
Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Anions by EPA 300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	ND	ND	NC	20	
Lab Batch #: 742667			_		
Date Analyzed: 12/03/2008 Date Pr	epared: 12/0)3/2008	Analy	st: BEV	
QC- Sample ID: 319261-001 D	Batch #: 1	l	Matr	ix: Soil	
Reporting Units:	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Paint Filter Liquids Test by SW-9095 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Paint Filter	ND	ND	NC		
Lab Batch #: 742247 Date Analyzed: 12/03/2008 Date Pr	epared: 12/0)3/2008	Analy	st: BEV	
Reporting Units: %	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Perent Sample	Sample		Control	
Analyte	Result [A]	Duplicate Result [B]	RPD	Limits %RPD	Flag
Percent Moisture	5.41	5.11	6	20	

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

Plains All American

ATTN: Jason Henry 1301 S. County Road 1150 Midland, TX 79706 FAX: 432-687-4914

Sample Type: Soil Sample Condition: Intact/ 5.0 degrees C Lab ID#: 319261-001 Project Name: Hugh Gathering Eubanks Discharge 4" Project # : 2008-311 Project Location: N/A

Sample Date: 12/02/08 Sample Time: 12:35 Receiving Date: 12/02/08 Analysis Date: 12/09/08 Field Code: Stock Pile 1

	iod Techniciar
Ra-226 8.60 2.64 0.32 0.10 EPA 90	1.1M JM
Ra-228 <0.11 N/A <0.01 N/A EPA 90	1.1M JM
Pb-210 <0.68 N/A <0.02 N/A EPA 90	1.1M JM
Th-228 <2.90 N/A <0.11 N/A EPA 90	1.1M JM
Total Activity 14.27 N/A 0.52 N/A EPA 90	1.1M JM
Notes:	

Quality Assurance Review

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

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

Notes:

Comments

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

Method References:

- 1 EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
- 2 Standard Methods for the Examination of Water and Waste Water, 18th, 1992.
- 3 EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
- 4 EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
- 5. HASL 300

Definitions

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

Environmental Lab of Texas 1, Ltd. assumes no liability for the use or interpretation of any analytical results other than the cost of the performent nealysis itself. Reproduction of this report in less than full requires the written consent of the client.

		ENV	/IRO	NM	ENTAL	GEOTEC	HNIC/	VL AN	D CO	NSTR	(UĆTÌ (ON N	4A1	TER1/	4.83	HERN	dees	3				C	HA	IN OF	CU	STOD	RECOR
	Fe					Labor Addre	atory:	Xe	<u>, n_c</u>	C			-	An/ Rec	ALYSI QUES	IS STEC	»//		L'YY	K	ž/k		/			ab use or ue Date. mp of coo	nty oters ed (C*). <
Office	Location	A4	Te.	100	on	Conta	ct: /	Sucre	. π	F.1	4		-			1		/ 🕅	/ч	/ \}	11	' /	'	(1-	5 3	1
1	i d la	ad ,	7	X		Phone	<u>. 4</u> 3	2 - 6	\$1	-76	ru		_			1	1	121	4	Y	N.	1	1	/	Pa	99	
Proje	ct Manag	er <u> </u>	в	<u>,/</u> e	·	PO/S)#:_	CC :	8-3	511			_			Γ.		3	X.	¥	<u>у</u> –	1	1	/			
Sempl	er's Name	(NK)	ĩκ			Samu	ere Sigi	Blute	3	Ę					L	ู้ ฟ		λ	Ľ		1	//	//	/			
Proj. N	Q.		Proje	ct Ne	une			Disk	4198	No/T	ipe of Co	onteine	n		\square	¥ 5	12	$\langle \rangle $	1	1	1	1					
<u>A40</u> Matsia	<u>\$712</u> Date	-S Time	Hu, Coe	Ģ	Gr. <u>A.e.</u> Identityk	<u>ing Eyb</u> 19 Marks of S	<u>ev/k;</u> 251ple(s)	1	25	5- VOA	NG	JA 250	25 P10		E	N.		3	X	I.I.	/ ,	/ ,	/	1	Č.	ka 175 /1 och	Line Onko
	12 2 04	12.21	Y	6	61.	U PI		<u>~ 0</u>			1.1				ই	え	77	75	F	\vdash	-+	-{	-1		37 (<u>/)</u> - (
~	13.500	11. 22			200	<u> 1/e</u>	1	+	 		+-+	+			4	7	40	r	\sim		+	-+	-+	1			
								+		-	$\left \right $	+			+	-+-	+-				-+	-+	-				
								+		<u> </u>			-		-+-	+	╈	+			+	-+	-				
								+	┼──							-+-	-	+			+	-+					
		·						+	+			-+	-		-+	+		+			-+	-+	+				
								-	+						-			+				-+	-+				
			\vdash		 			1	+-		++	+			+	+		+			-+	-+					
				•••••				-					~		+	+	+-					-+	+				
								+	+	┼──			-	-+		-+-	+	+			-+	-					
Turn a	round time	2CNo	erraa)	0	25% Rus	h 🗋 50%	Rusa	1 10	1 D% Rua	h	L			L		I	<u> </u>	1	L								-
Relin	uished by (Bignature)	-	1	Date:	Time: 16:35	Rece	wed by	: (Signa	ature)			Date	<u> </u>	Tim	19.	NOT	ES:	Fi	11	ŕ	7	7.6	,5			
Heling	lusined by (aignature)			1/418.	ilme:	Hece	wea by	(ອຍູກ	aure)		<u> </u>			1.47	re);									~~	. Ino.	، <u>م</u> در بن .
Reting	puished by (Signature)		ſ	Date:	Time:	Rece	ived by	: (Sign	ature)			Date	<u>ا</u> '	Tim	18:					~~l	1.11	e 2	3 3,40			
Relind	pashed by ((Signature)			Date:	Time:	Rece	ived by	: (Sign CL	Lit	m	17	Date 11	Un	Tim iU	18: 7)	<u> </u>	. دد ا	<u> </u>	<i>اللا</i> ر،	.4	~	<u>1'</u> 1.	ins			
Matrix Contai	WV ner VO	V - Wastowa A - 40 ml via	ter u		W - Water A/G - Amt	S - Soll Mar / Or Glass	SD - S 1 Liter	olid	L. Liqu 250 mi	id A Glass	- Air Ba wida mo	9 415h	C - P/C	Charco D - Plau	stic or e	se other_	SL·s	ludge		0.0					_		
Hotusto 11555 (Hotusto (713) 6	ni Office Clay Road, Su u. Texas 7704 90-8989 Fax	100 100 3 (713) 690-87	87		Dall 890) Dall (214	as Office Carpenter Fred as, Texas 75247 b) 630-1010 Fr	way, Suit a (214) 6	e 100 30-7070		For 260 For (\$17	Worth C Gravel I Worth, Ti Worth, Ti 268-860	office Drive baas 76 20 Fac	it 19 z (817	268-8	602		Au 530 Au (\$1	stin Of 17 Indus sun Te: 2) 442-	fice tris) O (as 78) 1122	nks Bh 135 Fax (5	nd. # 10 12) 442	50 2-3 [8]		M 24 M (4	idland Smith idland, 32) 684	Office Rd., # 261 Texas 797 1-9600 Fa	05 1x (432) 684-9608

.

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

_

Client [.]	Terraicon / Phins
Date/ Time.	12.2.03 16 35
Lab ID #	1051115
Initials	· 01

Sample Receipt Checklist

Client Initials

Date/ Time:

			Gildur Habe
Temperature of container/ cooler?	(Yes)	No	50.0
Shipping container in good condition?	Ves	No	
Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present
Chain of Custody present?	(es	No	
Sample instructions complete of Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished/ received?	(es)	No	
Chain of Custody agrees with sample label(s)?	(es)	No	ID written on Cont./ Ltd
Container label(s) legible and intact?	(es)	No	Not Applicable
Sample matrix/ properties agree with Chain of Custody?	(es)	No	
Containers supplied by ELOT?	(es)	No	
Samples in proper container/ bottle?	Yes	No	See Below
Samples properly preserved?	Yes	No	See Below
Sample bottles intact?	Yes	No	1
Preservations documented on Chain of Custody?	Yes)	No	
Containers documented on Chain of Custody?	8 es	No	
Sufficient sample amount for indicated test(s)?	Yes	No	See Below
All samples received within sufficient hold time?	Yes	No	See Below
Subcontract of sample(s)?	Yes	No	Not Applicable >
VOC samples have zero headspace?	Yes	No	Not Applicable
	Temperature of container/ cooler? Shipping container in good condition? Custody Seals intact on shipping container/ cooler? Custody Seals intact on sample bottles/ container? Chain of Custody present? Sample instructions complete of Chain of Custody? Chain of Custody signed when relinquished/ received? Chain of Custody signed when relinquished/ received? Container label(s) legible and intact? Sample matrix/ properties agree with Chain of Custody? Container supplied by ELOT? Samples in proper container/ bottle? Samples in proper container/ bottle? Samples bottles intact? Preservations documented on Chain of Custody? Containers documented on Chain of Custody? Containers documented on Chain of Custody? Sufficient sample amount for indicated test(s)? All samples received within sufficient hold time? Subcontract of sample(s)?	Temperature of container/ cooler? ??es) Shipping container in good condition? ??es) Custody Seals intact on shipping container/ cooler? Yes Custody Seals intact on sample bottles/ container? Yes Custody Seals intact on sample bottles/ container? Yes Chain of Custody present? Yes Chain of Custody signed when relinquished/ received? Yes Container label(s) legible and intact? Yes Container supplied by ELOT? Yes Samples in proper container/ bottle? Yes Samples in proper container/ bottle? Yes Samples bottles intact? Yes Containers documented on Chain of Custody? Yes Containers documented on Chain of Custody? Yes Containers documented on Chain of Custody? Yes Sufficient sample amount for indicated test(s)? Yes Subcontract of sample(s)? Yes Subcontract of sample(s)? Yes	Temperature of container/ cooler? Yes) No Shipping container in good condition? Yes No Custody Seals intact on shipping container/ cooler? Yes No Custody Seals intact on sample bottles/ container? Yes No Chain of Custody present? Yes No Sample instructions complete of Chain of Custody? Yes? No Chain of Custody signed when relinquished/ received? Yes? No Container label(s) legible and intact? Yes? No Container supplied by ELOT? Yes? No Samples in proper container/ bottle? Yes? No Samples bottles intact? Yes? No Containers documented on Chain of Custody? Yes? No Containers documented on Chain of Custody? Yes? No Sufficient sample amount for indicated test(s)? Yes? No Subcontra

Variance Documentation

Contact.

Regarding.

Corrective Action Taken:

Check all that Apply:

See attached e-mail/ fax

Contacted by:

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

Analytical Report 320213

7.8

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Hugh Gathering Eubank Discharge 4"

2008-311

17-DEC-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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



17-DEC-08



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

Reference: XENCO Report No: 320213 Hugh Gathering Eubank Discharge 4" Project Address:

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 320213. 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. 320213 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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



and an and the second state and the second the second the second state of the second second second second second



Sample Cross Reference 320213

PLAINS ALL AMERICAN EH&S, Midland, TX

Hugh Gathering Eubank Discharge 4"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SEC.1 BH-1	S	Dec-08-08 13:35		320213-001
SEC.1 BH-2	S ´	Dec-08-08 13:40		320213-002
SEC.1 BH-3	S	Dec-08-08 13:45		320213-003
SEC.1 SW-1	S	Dec-08-08 15:50		320213-004
SEC.1 SW-2	S	Dec-08-08 14:00		320213-005
SEC.1 SW-3	S	Dec-10-08 10:00		320213-006
SEC.1 SW-4	S	Dec-10-08 10:05		320213-007
SEC.1 SW-5	S	Dec-10-08 10:10		320213-008
SEC.3 BH-4	S	Dec-10-08 13:05		320213-009
SEC.3 BH-5	S	Dec-10-08 13:10		320213-010
SEC.3 BH-6	S	Dec-10-08 13:20		320213-011
SEC.3 BH-7	S	Dec-10-08 13:30		320213-012
SEC.3 BH-8	S	Dec-10-08 13:35		320213-013
SEC.3 SW-6	S	Dec-10-08 13:40		320213-014
SEC.3 SW-7	S	Dec-10-08 13:45		320213-015
SEC.3 SW-8	S	Dec-10-08 13:55		320213-016
SEC.3 SW-9	S	Dec-10-08 14:00		320213-017
SEC.3 SW-10	S	Dec-10-08 14:10		320213-018
SEC.2 BH-9	S	Dec-11-08 13:10		320213-019
SEC.2 BH-10	S	Dec-11-08 13:15		320213-020



Certificate of Analysis Summary 320213 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Hugh Gathering Eubank Discharge 4"



Date Received in Lab: Fri Dec-12-08 09:15 am

Contact: Jason Henry

Project Id: 2008-311

Project Location

roject Location:								Report	t Date:	17-DEC-08			
								Project Ma	nager:	Brent Barron	, II		
	Lab Id:	320213-0	01	320213-0	02	320213-	003	320213-	004	320213-	005	320213-0	006
Amahusia Dogwootad	Field Id:	SEC.1 BI	H-1	SEC.1 BI	H-2	SEC.1 E	H-3	SEC.1 S	W-1	SEC.1 S	W-2	SEC.1 S	W-3
Anuiysis Kequesieu	Depth:												
	Matrix:	SOIL		SOIL		SOII		SOIL		SOIL		SOIL	
	Sampled:	Dec-08-08	13:35	Dec-08-08	13:40	Dec-08-08	13:45	Dec-08-08	15:50	Dec-08-08	14:00	Dec-10-08	10:00
BTEX by EPA 8021B	Extracted:	Dec-12-08	15:00	Dec-12-08	15:45	Dec-12-08	15:45	Dec-12-08	15:00	Dec-12-08	15:00	Dec-12-08	15:00
DILA by LIN 0021B	Analyzed:	Dec-12-08	18:02	Dec-13-08 (06:16	Dec-13-08	07:03	Dec-12-08	18:26	Dec-12-08	18:49	Dec-12-08	19:13
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0012	ND	0.0550	ND	0.0532	ND	0.0010	ND	0.0010	ND	0.0010
Toluene		ND	0.0023	0 2634	0 1 1 0 0	1.766	0.1065	0.0448	0.0020	ND	0.0020	ND	0.0021
Ethylbenzene		ND	0.0012	0.8629	0.0550	5.109	0.0532	0.0794	0.0010	ND	0.0010	0.0022	0.0010
m,p-Xylenes		ND	0.0023	2.268	0.1100	11.17	0.1065	0.1520	0.0020	ND	0.0020	0.0027	0.0021
o-Xylene		ND	0.0012	1.223	0.0550	4.829	0.0532	0.0527	0.0010	ND	0.0010	0.0019	0.0010
Total Xylenes		ND	0.0023	3.491	0.1100	15.999	0.1065	0.2047	0.0020	ND	0.0020	0.0046	0.0021
Total BTEX		ND	0.0012	4.6173	0.0550	22.874	0.0532	0.3289	0.0010	ND	0.0010	0.0068	0.0010
Percent Moisture Extracted													
	Analyzed:	Dec-12-08	17:00	Dec-12-08 17:00		Dec-12-08 17:00		Dec-12-08 17:00		Dec-12-08 17:00		Dec-12-08 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		14.72	1.00	9.09	1.00	6.07	1.00	1.35	1.00	1.51	1.00	3.55	1.00
TPH By SW8015 Mod Extracted		Dec-15-08	14:30	Dec-15-08	14:30	Dec-15-08	14:30	Dec-15-08	14:30	Dec-15-08	14:30	Dec-15-08	14:30
	Analyzed:	Dec-16-08	10:31	Dec-16-08	10:57	Dec-16-08	11:23	Dec-16-08	11:49	Dec-16-08	12:14	Dec-16-08	12:39
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	17.6	222	16.5	514	16.0	ND	15.2	ND	15.2	ND	15.6
C12-C28 Diesel Range Hydrocarbons		ND	17.6	934	16.5	1420	16.0	19.2	15.2	ND	15.2	ND	15.6
C28-C35 Oil Range Hydrocarbons		ND	17.6	122	16.5	211	16.0	ND	15.2	ND	15.2	ND	15.6
Total TPH		ND	17.6	1278	16.5	2145	16.0	19.2	15.2	ND	15.2	ND	15.6

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 expressent 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 lability is limited to the amount invoiced for this work order unless otherwise agreed to in writing

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

Brent Barron

Odessa Laboratory Director



Certificate of Analysis Summary 320213 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Hugh Gathering Eubank Discharge 4"



Date Received in Lab: Fri Dec-12-08 09:15 am

Project Id: 2008-311

Contact: Jason Henry

roject Location:								Repor	t Date:	17-DEC-08			
								Project Ma	nager:	Brent Barron,	, II		
	Lab Id:	320213-0	007	320213-0	008	320213-	009	320213-	010	320213-0	011	320213-0	012
Analysis Requested	Field Id:	SEC.1 S	SEC.1 SW-4		SEC.1 SW-5		SEC.3 BH-4		H-5	SEC.3 B	H-6	SEC.3 BH-7	
Anulysis Requested	Depth:												
	Matrix:	SOIL		SOIL	SOIL		SOIL			SOIL		SOIL	
	Sampled:	Dec-10-08	10:05	Dec-10-08	10 [.] 10	Dec-10-08	13:05	Dec-10-08	13:10	Dec-10-08	13:20	Dec-10-08	13:30
BTEX by EPA 8021B	Extracted:	Dec-12-08	15:00	Dec-12-08	15:00	Dec-12-08	15:00	Dec-12-08	15:45	Dec-12-08	15:00	Dec-12-08	15:00
	Analyzed:	Dec-12-08	19:37	Dec-12-08	20:00	Dec-12-08	20:24	Dec-13-08	07:50	Dec-12-08	20:47	Dec-12-08	21:11
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0010	ND	0.0010	ND	0.0011	0.2538	0.0542	ND	0.0012	ND	0.0010
Toluene		ND	0.0021	ND	0.0021	ND	0.0022	15.04	0.1084	ND	0.0024	0.0033	0.0021
Ethylbenzene		ND	0.0010	ND	0.0010	ND	0.0011	18.04	0.0542	ND	0.0012	0.0015	0.0010
ı,p-Xylenes		ND	0.0021	ND	0.0021	ND	0.0022	33.48	0.1084	ND	0.0024	0.0024	0.0021
o-Xylene		ND	0.0010	ND	0.0010	ND	0.0011	13.11	0.0542	ND	0.0012	0.0012	0.0010
Total Xylenes		ND	0.0021	ND	0.0021	ND	0.0022	46.59	0.1084	ND	0.0024	0.0036	0.0021
Total BTEX		ND	0.0010	ND	0.0010	ND	0.0011	79.9238	0.0542	ND	0.0012	0.0084	0.0010
Percent Moisture	Extracted:												
	Analyzed:	Dec-12-08	17:00	/ Dec-12-08	17:00	Dec-12-08	17:00	Dec-12-08	17:00	Dec-12-08	17:00	Dec-12-08	17:00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		3.34	1.00	3.12	1.00	7.56	1.00	7 79	1.00	15.06	1.00	4.52	1.00
TPH By SW8015 Mod	Extracted:	Dec-15-08	14:30	Dec-15-08	14:30	Dec-15-08	14:30	Dec-15-08	14:30	Dec-15-08 14:30		Dec-15-08	14:30
	Analyzed:	Dec-16-08	13:03	Dec-16-08	13:27	Dec-16-08	13:50	Dec-16-08	14:14	Dec-16-08	15:02	Dec-16-08	15:25
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.5	ND	15.5	ND	16.2	1150	16.3	ND	17.7	ND	15.7
C12-C28 Diesel Range Hydrocarbons		ND	15.5	ND	15.5	ND	16.2	1950	16.3	ND	17.7	44.8	15.7
C28-C35 Oil Range Hydrocarbons		ND	15.5	ND	15.5	ND	16.2	260	16.3	ND	17.7	ND	15.7
Total TPH		ND	15.5	ND	15.5	ND	16.2	3360	16.3	ND	17.7	44.8	15.7

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

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

Brent Barron

Odessa Laboratory Director



Certificate of Analysis Summary 320213 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Hugh Gathering Eubank Discharge 4"



Date Received in Lab: Fri Dec-12-08 09:15 am

Contact: Jason Henry

Project Id: 2008-311

Project Location:

Project Location:								Report	Date:	17-DEC-08			
								Project Ma	nager:	Brent Barron,	п		
	Lab Id:	320213-0	013	320213-0)14	320213-	015	320213-	016	320213-0	017	320213-	D18
An abusis Downsorted	Field Id:	SEC.3 B	H-8	SEC.3 SV	W-6	SEC.3 S	W- 7	SEC.3 S	W-8	SEC.3 S	W-9	SEC.3 SV	W-10
Analysis Kequestea	Depth:										:		
	Matrix:	SOIL		SOIL		SOII		SOIL		SOIL	e .	SOIL	
	Sampled:	Dec-10-08	13:35	Dec-10-08	13:40	Dec-10-08	13:45	Dec-10-08	13:55	Dec-10-08	14:00	Dec-10-08	14:10
BTEX by EPA 8021B	Extracted:	Dec-12-08	15:00	Dec-12-08	15:00	Dec-12-08	15:00	Dec-12-08	15:00	Dec-12-08	15:00	Dec-12-08	15:00
	Analyzed:	Dec-12-08	21:35	Dec-12-08	22:46	Dec-12-08	23:09	Dec-12-08 23:33		Dec-12-08	23:57	Dec-13-08	00:21
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0012	ND	0.0011	ND	0.0010	ND	0.0010	ND	0.0011	ND	0.0010
Toluene		ND	0.0023	ND	0.0021	ND	0.0021	0.0022	0.0021	ND	0.0021	0.0024	0.0021
Ethylbenzene		ND	0.0012	ND	0.0011	ND	0.0010	0.0016	0.0010	ND	0.0011	0.0031	0.0010
m,p-Xylenes		ND	0.0023	ND	0.0021	ND	0.0021	0.0032	0.0021	ND	0.0021	0.0060	0.0021
o-Xylene		ND	0.0012	ND	0.0011	ND	0.0010	0.0013	0.0010	ND	0.0011	0.0030	0.0010
Total Xylenes		ND	0.0023	ND	0.0021	ND	0.0021	0.0045	0.0021	ND	0.0021	0.009	0.0021
Total BTEX		ND	0.0012	ND	0.0011	ND	0.0010	0.0083	0.0010	ND	0.0011	0.0145	0.0010
Percent Moisture	Extracted:												
·	Analyzed:	Dec-12-08	17:00	Dec-12-08 17:00		Dec-12-08 17.00		Dec-12-08 17:00		Dec-12-08 17:00		Dec-12-08 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		14.71	1.00	5.51	1.00	4.47	1.00	2.44	1.00	5.44	1.00	3.51	1.00
TPH By SW8015 Mod Extracted		Dec-15-08	14:30	Dec-15-08	14:30	Dec-15-08	14:30	Dec-15-08	14:30	Dec-15-08	14:30	Dec-15-08	14:30
	Analyzed:	Dec-16-08	15:48	Dec-16-08	16:12	Dec-16-08	16:34	Dec-16-08	16:57	Dec-16-08	17:21	Dec-16-08	17:44
	Units/RL;	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	17.6	ND	15.9	ND	15.7	ND	15.4	ND	15.9	ND	15.5
C12-C28 Diesel Range Hydrocarbons		ND	17.6	ND	15.9	ND	15.7	ND	15.4	ND	15.9	ND	15.5
C28-C35 Oil Range Hydrocarbons		ND	17.6	ND	15.9	ND	15.7	ND	15.4	ND	15.9	ND	15.5
Total TPH		ND	17.6	ND	15.9	ND	15.7	ND	15.4	ND	15.9	ND	15.5

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

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

Brent Barron

Odessa Laboratory Director



Project Location:

Project Id: 2008-311

Contact: Jason Henry

Certificate of Analysis Summary 320213 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Hugh Gathering Eubank Discharge 4"

Date Received in Lab: Fri Dec-12-08 09:15 am

Report Date: 17-DEC-08 Project Manager: Brent Barron, II

	Lab Id:	320213-0	19	320213-0	20		
Analysis Requested	Field Id:	SEC.2 BH	1-9	SEC.2 BH	-10		
Analysis Requesieu	Depth:						
	Matrix:	SOIL		SOIL			
	Sampled:	Dec-11-08 1	3:10	Dec-11-08 1	3:15		
BTEX by EPA 8021B	Extracted:	Dec-12-08 1	5:00	Dec-12-08 1	5:00		
, , , , , , , , , , , , , , , , , , ,	Analyzed:	Dec-13-08 0	0:44	Dec-13-08 0	1:08		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Benzene		ND	0.0011	ND	0.0011		
Toluene		ND	0.0022	ND	0.0023		
Ethylbenzene		ND	0.0011	ND	0.0011		
m,p-Xylenes		ND	0.0022	ND	0.0023		
o-Xylene		ND	0.0011	0.0011	0.0011		
Total Xylenes		ND	0.0022	0.0011	0.0023		
Total BTEX		ND	0.0011	0.0011	0.0011		
Percent Moisture	Extracted:						
	Analyzed:	Dec-12-08 1	7:00	Dec-12-08 1	7:00		
	Units/RL:	%	RL	%	RL		
Percent Moisture		8.36	1.00	11.66	1.00		
TPH By SW8015 Mod	Extracted:	Dec-15-08 1	4:30	Dec-15-08 1	4:30		
y	Analyzed:	Dec-16-08 1	8:07	Dec-16-08 1	8:30		
	Units/RL:	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		ND	16.4	ND	17.0		
C12-C28 Diesel Range Hydrocarbons		ND	16.4	32.4	17.0		
C28-C35 Oil Range Hydrocarbons		ND	16.4	ND	17.0		
Total TPH		ND	16.4	32.4	17.0		

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

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

Brent Barron

Odessa Laboratory Director





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

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

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

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



Project Name: Hugh Gathering Eubank Discharge 4"

Work Orders : 320213, Lab Batch #: 743466 Sample: 32021 Units: mg/kg	3-001 / SMP Ba	Project II atch: ¹ Matri JRROGATE RI): 2008-311 x: Soil COVERY S	STUDY				
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0.0348	0.0300	116	80-120				
4-Bromofluorobenzene	0.0109	0.0300	36	80-120	*			
Lab Batch #: 743466 Sample: 32021	3-004 / SMP Ba	tch: 1 Matri	x: Soil					
Units: mg/kg	SU	RROGATE RI	COVERY S	STUDY	· · · · · · · · ·			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0.0369	0.0300	123 、	80-120	*			
4-Bromofluorobenzene	0.0332	0.0300	111	80-120				
Lab Batch #: 743466 Sample: 32021	3-005 / SMP Ba	itch: 1 Matri	x: Soil					
Units: mg/kg	SU	RROGATE RI	COVERY S	STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes		0.0200	140					
1,4-Difluorobenzene	0.0356	0.0300	20	80-120	*			
	0.0114	0.0300	30 	80-120				
Lab Batch #: 743466 Sample: 32021	3-006 / SMP Ba	tch: 1 Matri	x: Soil					
Units: mg/kg	SU	RROGATE RE	ECOVERY S	STUDY				
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0.0345	0.0300	115	80-120				
4-Bromofluorobenzene	0.0258	0.0300	86	80-120				
Lab Batch #: 743466 Sample: 32021	3-006 S / MS Ba	tch: 1 Matri	x: Soil					
		SURROGATE RECOVERY STUDY						
Units: mg/kg	SU	RROGATE RI						
Units: mg/kg BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
Units: mg/kg BTEX by EPA 8021B Analytes 1,4-Difluorobenzene	Amount Found [A] 0.0331	True Amount [B]	Recovery %R [D] 110	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 / BAll results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Hugh Gathering Eubank Discharge 4"

Lah Batch #• 743466	Samples 320213-006	SD/MSD Pa	tch· 1 Mat	riv: Soil				
Lab Dattin #. 713/100	Sample: 520215-000	SD/MSD Ba	DDOCATE D	FCOVEDV	STUDY			
	<u></u>	50				Ŧ=		
BTEX by E	PA 8021B	Amount Found	Amount	Recovery	Control Limits			
		[A]	[B]	%R	%R			
Analy	tes			[D]				
1,4-Difluorobenzene		0.0343	0.0300	114	80-120	Γ		
4-Bromofluorobenzene		0.0255	0.0300	85	80-120			
Lab Batch #: 743466	Sample: 320213-007	/ SMP Ba	tch: 1 Mat	rix: Soit				
Units: mg/kg	•	SU	RROGATE R	ECOVERY	STUDY			
DTEV by F		Amount	True		Control	Г		
DIEA UY E	rA 0021D	Found	Amount	Recovery	Limits			
		[A]	[B]	%R	%R			
Analy	tes			[U]				
1,4-Difluorobenzene		0.0343	0.0300	114	80-120			
4-Bromofluorobenzene		0.0094	0.0300	31	80-120			
Lab Batch #: 743466	Sample: 320213-008	/ SMP Ba	tch: 1 Mat	rix: Soil				
Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY	_		
BTEX by E	PA 8021B	Amount	True		Control	Г		
		Found	Amount	Recovery	Limits			
Analy	tes	[A]	[B]	(D)	%K			
1.4-Difluorobenzene		0.0353	0.0300	118	80-120	┝		
4-Bromofluorobenzene		0.0160	0.0300	53	80-120	┢		
		(0)(D)				L		
Lab Batch #: 743400	Sample: 520213-009		SMP Batch: 1 Matrix: Soil					
Units: hig/kg		80	RROGATE R	ECOVERY		r		
BTEX by E	PA 8021B	Amount	True	Beerry	Control			
		[A]	[B]	%R	%R			
Analy	rtes			[D]				
1,4-Difluorobenzene		0.0348	0.0300	116	80-120	t		
4-Bromofluorobenzene	······································	0.0098	0.0300	33	80-120	t		
Lab Batch #: 743466	Sample: 320213-011	/ SMP Ba	tch: 1 Mati	ix: Soil	J	-		
Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY			
DTEV by F	DA 9031D	Amount	True	1	Control	F		
DIEA UY E	A OVAID	Found	Amount	Recovery	Limits			
A 1		[A]	[B]	%R וחו	%R			
Anaiy	Les			(10)		L		
1.4-Difluorobenzene		0.0345	0.0300	115	80-120			
	<u> </u>		· · · · · · · · · · · · · · · · · · ·			+		

نے

11 1

۱<u>۱</u>

** 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. ىك



Project Name: Hugh Gathering Eubank Discharge 4"

Vork Orders : 320213,	0212 012 / SMD	D -4-1	Project ID): 2008-311				
Lab Batch #: 745406 Sample: 52 Units: mg/kg	0213-0127 SMP	SUR	ROGATE RE	COVERY S	STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]		True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0382		0.0300	127	80-120	*		
4-Bromofluorobenzene	0.0235		0.0300	78	80-120	*		
Lab Batch #: 743466 Sample: 32	0213-013 / SMP	Bate	n: l Matri	x: Soil				
Units: mg/kg	· [SUR	ROGATE RE	COVERY S	STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]		True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0357	- †-	0.0300	119	80-120			
4-Bromofluorobenzene	0.0126		0.0300	42	80-120	*		
Lab Batch #: 743466 Sample: 32	20213-014 / SMP	Bate	h: 1 Matri	x: Soil	·			
Units: mg/kg		SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]		True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes				[0]				
4-Bromofluorobenzene	0.0342		0.0300	30	80-120	*		
	0.0030		0.0500		80-120	· · · · · ·		
Lab Batch #: 743406 Sample: 32	0213-015 / SMP	Batel	h: 1 Matri	x: Soil	TIDV			
BTEX by EPA 8021B Analytes	Amount [•] Found [A]		True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0347		0.0300	116	80-120			
4-Bromofluorobenzene	0.0116		0.0300	39	80-120	*		
Lab Batch #: 743466 Sample: 32	0213-016 / SMP	Batc	h: 1 Matri	x: Soil				
Units: mg/kg	[SUR	ROGATE RE	COVERY S	STUDY			
BTEX by EPA 8021B Analytes	Amound Found [A]		True Amount {B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0366		0.0200	100		*		
	0.0000	1	0.0300	122	80-120	•		

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Hugh Gathering Eubank Discharge 4"

Vork Orders : 320213,		Project II	2008-311		
Lab Batch #: 743466 Sample: 320213-017 / S	SMP Bat	ch: ¹ Matri	x: Soil		
Units: mg/kg	SUI	ROGATE RE	COVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	0.0269	0.0200	102	90.120	*
4-Bromofluorobenzene	0.0117	0.0300	39	80-120	*
Lab Batch #: 743466 Sample: 320213-018/5	l	ch: 1 Matri	x. Soil	L1	
Lab batch #: 743400 Sample: 520213-01875	SIII	ROGATE RI	X: SON	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0355	0.0300	118	80-120	<u></u>
4-Bromofluorobenzene	0.0199	0.0300	66	80-120	*
Lab Batch #: 743466 Sample: 320213-019/5	SMP Bat	ch: ¹ Matri	x: Soil		
Units: mg/kg	SUI	RROGATE RI	COVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 4-Difluorohenzene	0.0347	0.0300	116	80-120	
4-Bromofluorobenzene	0.0132	0.0300	44	80-120	*
Lab Batch #. 743466 Sample: 320213-020/S	MP Bat	ch· i Matri	x. Soil	L	
Lab Batch #: 743466 Sample: 320213-020 / S Units: mg/kg	SMP Bat	ch: ¹ Matri ROGATE RI	x: Soil	STUDY	
Lab Batch #: 743466 Sample: 320213-020 / S Units: mg/kg BTEX by EPA 8021B Analytes	SMP Bat SU Amount Found [A]	ch: ¹ Matri RROGATE RH True Amount [B]	x: Soil COVERY S Recovery %R [D]	STUDY Control Limits %R	Flags
Lab Batch #: 743466 Sample: 320213-020/5 Units: mg/kg BTEX by EPA 8021B Analytes 1,4-Difluorobenzene	SMP Bat SUI Amount Found [A] 0.0358	ch: 1 Matri RROGATE RH True Amount [B] 0.0300	x: Soil COVERY S Recovery %R [D] 119	STUDY Control Limits %R 80-120	Flags
Lab Batch #: 743466 Sample: 320213-020 / S Units: mg/kg BTEX by EPA 8021B Analytes 1,4-Difluorobenzene 4-Bromofluorobenzene	SMP Bat SUI Amount Found [A] 0.0358 0.0264	ch: 1 Matri RROGATE RH True Amount [B] 0.0300 0.0300	x: Soil COVERY S Recovery %R [D] 119 88	STUDY Control Limits %R 80-120 80-120	Flags
Lab Batch #: 743466 Sample: 320213-020 / S Units: mg/kg BTEX by EPA 8021B Analytes 1,4-Difluorobenzene 4-Bromofluorobenzene Lab Batch #: 743466 Sample: 521085-1-BKS	SMP Bat SUI Amount Found [A] 0.0358 0.0264	ch: 1 Matri RROGATE RI Amount [B] 0.0300 0.0300 ch: 1 Matri	x: Soil COVERY S Recovery %R [D] 119 88 x: Solid	STUDY Control Limits %R 80-120 80-120	Flags
Lab Batch #: 743466 Sample: 320213-020 / S Units: mg/kg BTEX by EPA 8021B Analytes 1,4-Difluorobenzene 4-Bromofluorobenzene Lab Batch #: 743466 Sample: 521085-1-BKS Units: mg/kg	SMP Bat SUI Amount Found [A] 0.0358 0.0264 S/ BKS Bate SUI	ch: 1 Matri RROGATE RI True Amount [B] 0.0300 0.0300 ch: 1 Matri RROGATE RE	x: Soil COVERY S Recovery %R [D] 119 88 x: Solid COVERY S	STUDY Control Limits %R 80-120 80-120 STUDY	Flags
Lab Batch #: 743466 Sample: 320213-020/5 Units: mg/kg BTEX by EPA 8021B Analytes 1,4-Difluorobenzene 4-Bromofluorobenzene Lab Batch #: 743466 Sample: 521085-1-BKS Units: mg/kg BTEX by EPA 8021B Analytes	SMP Bat SU Amount Found [A] 0.0358 0.0264 S/ BKS Bat SU Amount Found [A]	ch: 1 Matri RROGATE RI Amount [B] 0.0300 0.0300 ch: 1 Matri RROGATE RI True Amount [B]	x: Soil COVERY S Recovery %R [D] 119 88 x: Solid COVERY S Recovery %R [D]	STUDY Control Limits %R 80-120 80-120 80-120 STUDY Control Limits %R	Flags
Lab Batch #: 743466 Sample: 320213-020 / S Units: mg/kg BTEX by EPA 8021B Analytes 1,4-Difluorobenzene 4-Bromofluorobenzene Lab Batch #: 743466 Sample: 521085-1-BKS Units: mg/kg BTEX by EPA 8021B Analytes 1,4-Difluorobenzene	SMP Bat SWP Bat SU Amount Found [A] 0.0358 0.0264 SV SU Amount Found [A] 0.0306	ch: 1 Matri RROGATE RI True Amount [B] 0.0300 0.0300 ch: 1 Matri RROGATE RI True Amount [B] 0.0300	x: Soil COVERY S Recovery %R [D] 119 88 x: Solid COVERY S Recovery %R [D] 102	STUDY 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 / BAll results are based on MDL and validated for QC purposes.



Project Name: Hugh Gathering Eubank Discharge 4"

Vork Orders : 320213,		Project II	D: 2008-311					
Lab Batch #: 743466 Sample:	521085-1-BLK / BLK B	atch: 1 Matri	ix: Solid					
Units: mg/kg	S	URROGATE RI	ECOVERY	STUDY	<u> </u>			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0.0348	0.0300	116	80-120	<u> </u>			
4-Bromofluorobenzene	0.0094	0.0300	31	80-120	*			
Lab Batch #: 743466 Sample:	521085-1-BSD / BSD E	Batch: I Matri	ix: Solid					
Units: mg/kg	S	URROGATE RI	ECOVERY S	STUDY				
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	······			
4-Bromofluorobenzene	0.0238	0.0300	79	80-120	*			
Lab Batch #: 743473 Sample:	: 320213-002 / SMP	Batch: ¹ Matri	ix: Soil	<u></u>				
Units: mg/kg	S	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1.4-Difluorobenzene	0.0356	0.0300	119	80-120				
4-Bromofluorobenzene	0.0519	0.0300	173	80-120	*.			
Lab Batch #: 743473 Sample:	320213-003 / SMP	Batch: 1 Matri	ix: Soil	<u> </u>				
Units: mg/kg	S	URROGATE RI	ECOVERY S	STUDY				
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0.0398	0.0300	133	80-120	*			
4-Bromofluorobenzene	0.0703	0.0300	234	80-120	*			
Lab Batch #: 743473 Sample:	: 320213-010 / SMP	Batch: 1 Matr	ix: Soil	·				
Units: mg/kg	S	URROGATE RI	ECOVERY	STUDY				
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0.0466	0.0300	155	80-120	*			
4-Bromofluorobenzene	0.1136	0.0300	379	80-120	*			

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Hugh Gathering Eubank Discharge 4"

Work Orders : 320213,			Project II): 2008-311		
Lab Batch #: 743473	Sample: 521091-1-BKS /	BKS Bat	ch: 1 Matri	x: Solid		
Units: mg/kg		SU	RROGATE RE	COVERY	STUDY	
BTEX by EPA	A 8021B	Amount Found [A]	True Amount [B]	Recovery %R {D]	Control Limits %R	Flags
Allalyt		0.0202	0.0200		90.120	ļ
1,4-Difluorobenzene		0.0293	0.0300	98	80-120	
	~ • 521001 1 DI K /	DIV D		G_1;4	00 120	
Lab Batch #: /434/3	Sample: 321091-1-BLK/	BLK Bat	tch: I Matri	X: SONG		
Units: mg/kg		50	KKUGALE NE			
BTEX by EPA Analyte	4 8021B 28	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		0.0083	0.0300	28	80-120	*
Lab Batch #: 743473	Sample: 521091-1-BSD /	BSD Bat	tch: 1 Matri	x: Solid		
Units: mg/kg	SU	RROGATE RE	COVERY	STUDY		
BTEX by EPA	A 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Anaiyte	!S			 اما		
1,4-Difluorobenzene	<u>.</u>	0.0289	0.0300	96	80-120	
4-Bromonuorobenzene		0.0241	0.0300	80	80-120	
Lab Batch #: 743770	Sample: 320213-001 / SM	IP Bat	tch: 1 Matri	x: Soil		
Units: mg/kg		SU	RROGATE RE	COVERY	STUDY	
TPH By SW80)15 Mod es	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	·····	91.0	100	91	70-135	
o-Terphenyl	<u>,</u>	47.2	50.0	94	70-135	
Lab Batch #: 743770	Sample: 320213-002 / SN	IP Bat	tch: ¹ Matri	x: Soil		
Units: mg/kg		SU	RROGATE RE	COVERY	STUDY	
TPH By SW80 Analyte)15 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		93.5	100	94	70-135	
o-Terphenyl		53.4	50.0	107	70-135	
					ليب ويون ومصوف منها الم	<u> </u>

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

*** Poor recoveries due to dilution

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



Project Name: Hugh Gathering Eubank Discharge 4"

ork Orders :	320213,			Project II): 2008-311				
Lab Batch #:	743770	Sample: 320213-003 / SM	P Bat	tch: 1 Matri	ix: Soil				
Units: 1	mg/kg]	SU	RROGATE RI	COVERY	STUDY			
	TPH By SW801	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
	Analytes			120	100	70 100			
1-Chlorooctane			99.9	100	100	70-135			
0-Terphenyi			56.8	50.0	114	/0-135			
Lab Batch #:	743770	Sample: 320213-004 / SM	SMP Batch: 1 Matrix: Soil SUBROGATE RECOVERY STUDY						
Units:	пів/кg ————		50	KKUGATE KI					
	TPH By SW801 Analytes	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	••• <u></u>		90.0	100	90	70-135			
o-Terphenyl			45.4	50.0	91	70-135			
Lab Batch #:	743770	Sample: 320213-004 S / M	IS Bat	tch: 1 Matri	ix: Soil	·			
Units:	mg/kg	[SURROGATE RECOVERY STUDY						
	TPH By SW801 Analytes	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane			101	100	101	70-135	<u> </u>		
o-Terphenyl			48.3	50.0	97	70-135			
Lab Batch #:	743770	Sample: 320213-004 SD /	MSD Bat	ch: 1 Matri	ix: Soil				
Units:	mg/kg]	SU	RROGATE RI	COVERY	STUDY			
	TPH By SW801	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R D	Control Limits %R	Flags		
1-Chlorooctane			104	100	104	70-135	·		
o-Terphenyl			49.5	50.0	99	70-135			
Lah Ratch #•		Sample: 320213-005 / SM	P Bat	ch· Matri	ix. Soil	<u>}</u>			
Units:	mg/kg	Sample, 520215 000 / Bill	SU.	RROGATE RI	ECOVERY	STUDY	· · · · · · · · · · · · · · · · · · ·		
4 2 	TPH By SW801	5 Mod	Amount Found	True Amount	Recovery	Control Limits	Flags		
	Anglytag		[A]	[B]	[D]	%K	1		
1-Chlorooctane	Analytes		[A]	[B]	(D)	70.125			

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

*** Poor recoveries due to dilution

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



Project Name: Hugh Gathering Eubank Discharge 4"

Work Orders : 320213, Lab Batch #: 743770 Sample: 320213-006 / SMI	o Bat	Project II): 2008-311				
Units: mg/kg	SU	RROGATE RE	COVERY	STUDY			
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Allaly us	00.5	100	01	70.135			
o-Terphenyl	47.0	50.0	94	70-135	;		
L - L D. 4. L H. 742770 Somelar 320213.007 / SMI	 D	1 Motui	- Coil				
Lab Batch #: /43//0 Sample: 320213-00// Sivir		DDOCATE DI	X: SOIL	TIDV			
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	91.3	100	91	70-135			
o-Terphenyl	46.5	50.0	93	70-135			
Lab Batch #: 743770 Sample: 320213-008 / SMI	Ba	tch: 1 Matri	ix: Soil				
Units: mg/kg	SU	RROGATE RI	COVERY	STUDY			
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
I-Chlorooctane	90.2	100	90	70-135			
o-Terphenyl	45.9	50.0	92	70-135			
Lab Batch #: 743770 Sample: 320213-009 / SMI	MP Batch: 1 Matrix: Soil						
Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY			
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
			ļ	70.125			
1-Chlorooctane	89.8	100	90	1 10-135			
1-Chlorooctane o-Terphenyl	89.8	100 50.0	90 93	70-135			
1-Chlorooctane o-Terphenyl Lab Batch #: 743770 Sample: 320213-010 / SMI	89.8 46.4 Ba	100 50.0 tch: 1 Matri	90 93 ix: Soil	70-135 70-135			
1-Chlorooctane o-Terphenyl Lab Batch #: 743770 Sample: 320213-010 / SMI Units: mg/kg	89.8 46.4 Bai SU	100 50.0 tch: 1 Matri RROGATE RI	90 93 ix: Soil ECOVERY 5	70-135 70-135			
1-Chlorooctane o-Terphenyl Lab Batch #: 743770 Sample: 320213-010 / SMI Units: mg/kg TPH By SW8015 Mod Analytes	89.8 46.4 Bar SU Amount Found [A]	100 50.0 tch: 1 Matri RROGATE RI True Amount [B]	90 93 ix: Soil ECOVERY S Recovery %R [D]	70-135 70-135 STUDY Control Limits %R	Flags		
1-Chlorooctane o-Terphenyl Lab Batch #: 743770 Sample: 320213-010 / SMI Units: mg/kg TPH By SW8015 Mod Analytes 1-Chlorooctane	89.8 46.4 Bat SU Amount Found [A] 112	100 50.0 tch: 1 Matri RROGATE RI True Amount [B] 100	90 93 ix: Soil ECOVERY 1 Recovery %R [D] 112	70-135 70-135 STUDY Control Limits %R 70-135	Flags		

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Hugh Gathering Eubank Discharge 4"

Work Orders : 320213,		Project II	D: 2008-311					
Lab Batch #: 743770 Sample: 320213-011 /	SMP Bat	tch: ¹ Matr	ix: Soil					
Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes								
1-Chlorooctane	89.6	100	90	70-135				
o-lerphenyl	46.8	50.0	94	70-135				
Lab Batch #: 743770 Sample: 320213-012 /	SMP Batch: 1 Matrix: Soil							
Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	89.8	100	90	70-135				
o-Terphenyl	46.3	50.0	93	70-135				
Lab Batch #: 743770 Sample: 320213-013 /	SMP Batch: 1 Matrix: Soil							
Units: mg/kg SURROGATE RECOVERY STUDY								
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	90.1	100	90	70-135				
o-Terphenyl	46.8	50.0	94	70-135				
Lab Batch #: 743770 Sample: 320213-014 /	SMP Bat	MP Batch: 1 Matrix: Soil						
Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	89.9	100	90	70-135				
o-Terphenyl	46.6 ·	50.0	93	70-135	<u></u>			
Lab Batch #: 743770 Sample: 320213-015 /	SMP Bat	tch: 1 Matri	ix: Soil		-			
Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	89.4	100	89	70-135				
	07.4		l "	10-155				

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Hugh Gathering Eubank Discharge 4"

Vork Orders : 320213,			Project IF): 2008-311		
Lab Batch #: 743770 S:	ample: 320213-016 / SMP	Bat	ich: 1 Matri	x: Soil		
Units: mg/kg	Г	SU	RROGATE RF	COVERY f	STUDY	
TPH By SW8015 Manalytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 Chloroostana		04.4	100	04	70.135	t
o-Terphenyl		48.1	50.0	96	70-135	[
Lah Ratch #: 743770 S		Bat	tch: 1 Matri	iv: Soil	Lt	·
Units: mg/kg	mpic. 220212 citi	SU	RROGATE RF	COVERY !	STUDY	
TPH By SW8015 I Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
l-Chlorooctane		91.3	100	91	70-135	
o-Terphenyl		46.7	50.0	93	70-135	·
Lab Batch #: 743770 S	sample: 320213-018 / SMP	Bat	tch: 1 Matri	ix: Soil	<u> </u>	
Units: mg/kg		SU	RROGATE RF	COVERY	STUDY	
TPH By SW8015 J	Mod	Amount Found [A]	True Amount [B]	Recovery %R (D)	Control Limits %R	Flags
Chlorooctone		00.2	100	88	70.135	
o-Terphenyl		45.2	50.0	90	70-135	
Lah Ratch #. 743770 S		Ba	toh. Matri		L	
Units: mg/kg		SU	RROGATE RI	COVERY	STUDY	
TPH By SW8015	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		89.3	100	89	70-135	t
o-Terphenyl		46.3	50.0	93	70-135	l
Lab Batch #: 743770 S	iample: 320213-020 / SMP	Bat	tch: ¹ Matri	ix: Soil		
Units: mg/kg		SU	RROGATE RF	COVERY	STUDY	
TPH By SW8015 Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		89.7	100	90	70-135	<u> </u>
o-Terphenyl		46.6	50.0	93	70-135	İ
	مساحب مستخبص والمستخبص والمستخبص		<u> </u>	<u> </u>	المحصيصيك	<u></u>

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Hugh Gathering Eubank Discharge 4"

Work Orders: 320213,		Project ID: 2008-311							
Lab Batch #: 743770 Sample: 5212	297-1-BKS / BKS Bat	tch: 1 Matri	x: Solid						
Units: mg/kg	SU	RROGATE RI	ECOVERY S	STUDY					
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane	. 103	100	103	70-135					
o-Terphenyl	51.5	50.0	103	70-135					
Lab Batch #: 743770 Sample: 5212	297-1-BLK / BLK Bat	tch: 1 Matri	ix: Solid						
Units: mg/kg	ECOVERY STUDY								
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane	87.7	100	88	70-135					
o-Terphenyl	45.4	50.0	91	70-135					
Lab Batch #: 743770 Sample: 5212	297-1-BSD / BSD Bat	tch: 1 Matri	x: Solid						
Units: mg/kg	SU	RROGATE RI	ECOVERY S	STUDY					
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane	101	100	101	70-135	· · · · · ·				
o-Terphenyl	49.0	50.0	98	70-135					

** Surrogates outside limits; data and surrogates confirmed by reanalysis *** Poor recoveries due to dilution

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





Project Name: Hugh Gathering Eubank Discharge 4"

Work Order #: 320213			Project ID: 2008-311											
Analyst: ASA	D۶	ite Prepar	ed: 12/12/200	18			Date Ar	nalyzed: 1	2/12/2008					
Lab Batch ID: 743466 Sample: 521085-1	BKS	Batch	ı#: 1					Matrix: S	solid					
Units: mg/kg		BLAN	K /BLANK S	PIKE / B	LANK S	PIKE DUPI	JCATE J	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]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag			
Benzene	ND	0.1000	0.1006	101	0.1	0.0995	100	1	70-130	35				
Toluene	ND	0.1000	0.0926	93	0.1	0.0918	92	1	70-130	35				
Ethylbenzene	ND	0,1000	0.1002	100	0.1	0.0997	100	1	71-129	35				
m,p-Xylenes	ND	0.2000	0.2001	100	0.2	0.1999	100	0	70-135	35				
o-Xylene	ND	0.1000	0.0955	96	0.1	0.0952	95	0	71-133	35				
Analyst: ASA	Dr	ite Prepar	e d: 12/12/200	18			Date A	nalyzed: 1	2/13/2008					
Lab Batch ID: 743473 Sample: 521091-1	·BKS	Batch	1#: 1					Matrix: S	Solid					
Units: mg/kg		BLAN	K /BLANK S	PIKE / B	LANK S	PIKE DUPI	JCATE 1	RECOVE	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY					
DTEV by EDA 9031D		Name and Address of the Owner, where the	and the second se											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag			
Analytes Benzene	Blank Sample Result [A] ND	Spike Added [B] 0.1000	Blank Spike Result [C] 0.1110	Blank Spike %R [D] 111	Spike Added [E] 0.1	Blank Spike Duplicate Result [F] 0.1106	Blk. Spk Dup. %R [G] 111	RPD %	Control Limits %R 70-130	Control Limits %RPD 35	Flag			
Analytes Benzene Toluene	Blank Sample Result [A] ND ND	Spike Added [B] 0.1000 0.1000	Blank Spike Result [C] 0.1110 0.1013	Blank Spike %R [D] 111 101	Spike Added [E] 0.1 0.1	Blank Spike Duplicate Result [F] 0.1106 0.1007	Blk. Spk Dup. %R [G] 111 101	RPD %	Control Limits %R 70-130 70-130	Control Limits %RPD 35 35	Flag			
Analytes Benzene Toluene Ethylbenzene	Blank Sample Result [A] ND ND ND	Spike Added [B] 0.1000 0.1000 0.1000	Blank Spike Result [C] 0.1110 0.1013 0.1065	Blank Spike %R [D] 111 101 107	Spike Added [E] 0.1 0.1 0.1	Blank Spike Duplicate Result [F] 0.1106 0.1007 0.1061	Blk. Spk Dup. %R [G] 111 101 106	RPD %	Control Limits %R 70-130 70-130 71-129	Control Limits %RPD 35 35 35	Flag			
Analytes Analytes Benzene Toluene Ethylbenzene m,p-Xylenes	Blank Sample Result [A] ND ND ND ND	Spike Added [B] 0.1000 0.1000 0.1000 0.2000	Blank Spike Result [C] 0.1110 0.1013 0.1065 0.2138	Blank Spike %R [D] 111 101 107 107	Spike Added [E] 0.1 0.1 0.1 0.1 0.2	Blank Spike Duplicate Result [F] 0.1106 0.1007 0.1061 0.2122	Blk. Spk Dup. %R [G] 1111 101 106 106	RPD %	Control Limits %R 70-130 70-130 71-129 70-135	Control Limits %RPD 35 35 35 35 35	Flag			

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

-





Project Name: Hugh Gathering Eubank Discharge 4"

Work Order #: 320213 Analyst: BHW Lab Batch ID: 743770	Sample: 521297-1-BKS	Date Prepared: 12/15/2008 (S Batch #: 1 BLANK (BLANK SPIKE / BLAN				Project ID: 2008-311 Date Analyzed: 12/16/2008 Matrix: Solid						
Units: mg/kg		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
TPH By SW801 Analytes	5 Mod Blank Sample Resu [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
C6-C12 Gasoline Range Hydrocar	bons ND	1000	878	88	1000	876	88	0	70-135	35		
C12-C28 Diesel Range Hydrocarbo	ons ND	1000	937	94	1000	934	93	0	70-135	35		

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


Form 3 - MS / MSD Recoveries

Project Name: Hugh Gathering Eubank Discharge 4"



Work Order #: 320213						Project I	D: 2008-3	11			
Lab Batch ID: 743466 Q Date Analyzed: 12/13/2008 1	C- Sample ID: Date Prepared:	320213- 12/12/2	-006 S 008	Ba An	tch #: alyst:	1 Matri: ASA	k: Soil				
Reporting Units: mg/kg		М	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY S	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]		[D]	[E]		[G]				
Benzene	ND	0.1037	0.0815	79	0.1037	0.0816	79	0	70-130	35	
Toluene	ND	0.1037	0.0759	73	0.1037	0.0760	73	0	70-130	35	
Ethylbenzene	0.0022	0.1037	0.0775	73	0.1037	0.0766	72	1	71-129	35	
m,p-Xylenes	0.0027	0.2074	0.1554	74	0.2074	0.1534	73	1	70-135	35	
o-Xylene	0.0019	0.1037	0.0702	66	0.1037	0.0699	66	0	71-133	35	X
Lab Batch ID: 743770 Q Date Analyzed: 12/16/2008 1	C- Sample ID: Date Prepared:	320213- 12/15/20	-004 S 008	Ba An	tch #: alyst:	1 Matri : BHW	k: Soil				
Reporting Units: mg/kg		М	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY S	STUDY		
TPH By SW8015 Mod 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
C6-C12 Gasoline Range Hydrocarbons	ND	1010	856	85	1010	869	86	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	19.2	1010	942	91	1010	973	94	3	70-135	35	

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

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

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





Project Name: Hugh Gathering Eubank Discharge 4"

Work Order #: 320213

Lab Batch #: 743417				Project I	D: 2008-31	1
Date Analyzed: 12/12/2008	Date Pro	epared: 12/1	2/2008	Analy	st: BEV	
QC- Sample ID: 320202-001 D	E	Batch #: 1		Matr	ix: Soil	
Reporting Units: %		SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	<u>, , , , , , , , , , , , , , , , , , , </u>	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			[8]			
Percent Moisture		7.24	7.09	2	20	
Lab Batch #: 743418						
Date Analyzed: 12/12/2008	Date Pro	epared: 12/1	2/2008	Analy	st: BEV	
QC- Sample ID: 320213-019 D	B	Batch #: 1	1	Matr	ix: Soil	
Reporting Units: %		SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture		Parent Sample Result [A]	Sample Duplicate Result (B1	RPD	Control Limits %RPD	Flag
Апагусе			.~			
Percent Moisture		8.36	8.72	4	20	l

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

		ENV	IRON	ME.	NFAL.	GEOTEC	NICA	L AN	D CO	NSTR	UCTH	ON N	4AT	BRIZ	VES S	SERV	ACES				c	HAII	N OF	CUSTO	DY RECO	RD
٦				Bcte	ntists	Labon Addre	atory:_ ss:	X	5,1	<u>c</u> e			-	An/ Red	ALYS	IS STEC				//	Τ	\prod	\prod	Lab us Due Da Temp. o	e only ste 2 5 I coolers ceived (C*).	
Offic	e Location	A4				Conta	ot: <u>7</u>	+115	HB	. k						F	\sqrt{L}	γ,	[]	1	1			1 2	3 4	5
	1. 1 dis	1	<u>TX</u>			_ Phone	: 43	1-6	84.	·i(c	C					15	:///	'		/ /				Page_	/_d_2	2
Proje	ict Manag	er_BA	RRE	1	Del	e. po/so) #:	200	<u>· 8</u>	- 3	1/					16	[!]	1	1			1	/			
Samp	Ler's Name SEAn	CAR	łę K			Sample	r's Sign 	ane Z		<							~~/~~	/ /	/ /	/	/ /		7			
Proj I A 4	10371	Z5	Project	Nam 24	6 .;†	liening E	4 ban	Р. 14	scho yn s	No/7)	nne ci Ca 8 / 4/	z /	178 		1	12	1/	/	1		'/					
Matrix	Date	Time	Cole		dentilyin	g Maries of Se	imple(s)	Ceptil Ceptil	Depth	VQA	AG ILL	250 mi	P/0	1	17	42/				/	1	/	: طعا	Sample (D)	(Lab Use Only)	
5	12.8 :8	15:55	>	$\langle \cdot \rangle$	SEC.1	- BH I									XV	2				\uparrow	\square	Τ	32	0213	1	
4	(13:40		ŚĹ	SEC.	BH2									1	2				T			i		2	
4	2	13-15		(Se: 1	1 RH3								K	\mathbf{T}	ST				Τ					ತ	
\square	2	1350		Ц	Ser	1 500	1								ZĿ	5								_	ч	
	12.800	14'00		\sum	Sec	1.5-	2								Σ	<u>(</u>				Τ					5_	
\Box	17-16 68	10.00	- (\downarrow	Sui	1 50-	5								IJ	$\langle $									6	
4		10.05		4	SEC	1 54	4								7	Σ									<u>"1</u>	
\square	12-16 13	10 10		\sum	Sec	150	.5								X	X								1	<u> </u>	
\downarrow				11																						
<u> </u>				Y																						
Relin	stound time Glished by f	Biggenture)	nel	D2 12	5% Rust ate: -/2 08	Time: 9 / 5	Rush Receiv	0 102 90 by:	% Rual (Signa	ture)		1	Date:		Thr	18:	NOT	ES: > , //		1/2:0	<					<u></u>
Relin	quished by (Signature)		D	ate:	Time:	Raceh	ed by:	(Signa	ture)		1	Date:	1	Tin	10:	7	5. /' a	. 7	+	, t	J	5 50	n He	.NRY	
Retin	quished by (Signature)		D	ate:	Time:	Recen	ed by:	(Signa	ture)		6)ete:	1	Ππ	18:	17	7.05) (°	• • • •		-			,	
Reline	quished by (Signature)		D	ate:	Time:	Receiv	ed by:	(Signa W()	Te	, ,	12	間		Tim 1	10:		Jul	xls	5_0	5	Ç,	<u>, 15.</u>			
Matrix Contai	iner VO	í - Wastewai A - 40 mi via	êr	Ŵ	- Water G - Anto	S - Soil or / Or Glass	SD-No Uter	Nd L	- Liqui 50 ml -	d A Glass v	• Air Ba	g uth	C - (P/O	Charco - Plas	oaltub sic ore	e other_	8L - st	aga	0	01						
House 11555 House (713) 6	na Office Chy Rozd, Sui in, Texus 77043 90-8989 Fax	ie 100 (713) 690-871	p		Dalla 6901 Dalla (214)	s Office Carpenter Pree 4. Texas 75247 630-1010 Fai	way, Saite (214) 630	100		Fort 2601 Fort (817)	Worth C Gravel L Worth, Te) 268-850	MEne Drive Dras 76 D Fax	148	262-8	602	÷	Au 530 Au (512	indust Industr n. Tesa) 442-11	z ial Calis s 78735 22 Fau	Bivd. #	160	1	Mi 24 Mi (43	diand Offic Smith Rd., diand, Texus (2) 684-9600	261 :79705 Fix: (432) 684-1	9608

.

.

			63	(VIRO	NMI	ENTAL.	GEOTE	CHNIC	AL AN	se co	NSTR	UCTI	ом м	ATER	IALS	SER	VICE	S				С	HAI	N OF	cυ	STODY	RECO	AD
Consulti Consulti Office Locati <u>Minanda</u> Project Mark Sumpler's Nam General	Con Office L <u>F1, c</u> Project Sampler	Locatio Locatio Locatio A Manager Ta Name	ger <u>f</u> ac	TX TX ter	Sci E T	on entists	Labo Addr Cont Phor PO/S Samy	Hatory: ess: act: He: SO #: Here Sig	5.3- 6 2.00 mature,	EN EET 84- 5-	12 c 14 5/1	c c		Ai Ri		SIS STE	Sec. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.									ab use only ue Date: kmp of coole han received 2 3 uge Z	(C7): (C7): (0) 3	
AYCS7	Proj. No. AY	16871	25	Projec /44	ct Na -; /;	me L7,+t	HERin	E. (7 1).	u Bets. Schurge	-41	North	/ 41	- la,			$\widetilde{\mathbf{A}}_{\mathbf{N}}$	1		' /	' /	/	/	/					
Matrix Date	Matrix	Date	Time	CoEa	G í a b	Identifyin	g Marius of :	Sample(s	Depti	Cepth End	VOA	MG	250 Pr ni	0	/ĥ	12	' /	/	/	1	$\left \right $		/	Leb	Serry	te (D (Lanb U	se Only)	
4 12-1	41	12-1-1	3 13.0	1	\times	Sec.	3- 6H	14							X	×			1				Τ	32	C 2	-13 -	"	
44	1	1	131		(Sec.	3 AH	4							$\left c \right $	0							T		1		10	
ЦС	\Box		13:20		\sum	Sec	5 BH	6							$ \Sigma $	7.1	Τ								Τ		li	
\sum		\sum	13 30		\sum	54	3 FH	7							51	7T											12	
UT		\Box	13 55	-	Δ	Sec	5 BH	8							5	$\overline{\Lambda}$		1									13	
\sum	_)[1	13 10		\sum	See	3 54	ie (5	U	Τ								T		14	
$L \Box 7$			14:45	1_1	\Box	Sec.	5 56	7							171	31		Τ	Τ				T		T		15	
1/1	7	T	1554	:	21	500	5 54	8							1	5											16	
$\sqrt{5}$	\subseteq	5	17.00		S	SEL	s s₩	9						T	Ш	7		T		\square							17	
1777	7	7	14 10		C	Sec	3 54	ic						T	Y	X		1	1						1		14.	
Turn around Br	Turn area	ound time		lonnal	-	25% Rus	h 🗆 50 ⁴	Rush	C3 10	7% Rus	h		1.6				1					·						
Sea		Lac L		•) 	4	2.12.08	9 15		aved by	: (Signa	w/e)		04		Th	mi@:		£2.	1	5:1	1	Pla	ųin;	\$. /		
Landrieued p	ramqui		laignailun	9) 	'		T HTNO:	Hece	awed by:	: (Signa	(9) LUI		Da	80): 	n	me:			PI	ain a	5	Con	ta	et .	J4 5	on Ite	n R Y	
Relinquished b	Relinquis	uished by	(Signature	»)		Date:	Time.	Rece	wived by:	: (Signa	ture)		De	ite:)	Tu	me:			-									
Relinquished b	Relinqui	vished by	(Signaturi	9)	1	Date [.]	Time:	Rece	sived by	: (Signa VGU	iture) EX		2	2/14	та , ')'	me:	li	بانل	x15	5 ^	<i>ل</i> تح	cu	5	.dy	5	cuts.		
Matrix V Container V	Matrix Container	er VC	W - Waatow XA - 40 mi v	rater riat)	W - Water A/G - Amb	8 - Sol er / Or Glass	SD-1	Solid	L. Liquit 250 ml -	d A · Glass W	Air Ba	ց ։ ՍՄՈ	C - Cha P/O - Pi	noal tu astio or	de other	54. · s	ludge		0.0	1							
Houston Office 11555 Clay Road, 1 Houston, Texas 77 (713) 690-8989 F	Houston C 11555 Cla Houston, T (713) 690-	Office lay Road, St Texas 7704 0-8989 Fax	nite 100 13 x (713) 690-1	\$787		Dalls 8901 Dalls (214)	n Office Carpeater Fr 4. Texas 7524 630-1010	1000 an (214) 6	ke 100 530-7070		Fort 9 2601 Port 9 (817)	Worth C Gravel E Vorth, Ti 268-860	Mice Drive tras 7611 20 Fex (1	8 817) 268	-8602		Au 530 Au (51	stin Of 7 indu tun, Te: 2) 442-	fice strial O xas 7\$1 1122	halics Bit 735 Fan. (5	vd. # 1 12) 44	160 12-1181		Mi 24 Mi (43	idland Smith idland. 32) 66	Office Rd. # 261 Texas 79705 L-9600 Fax (432) 684-96	

•

		EN	VIRC	INM	EŃTAL	GE	OTECI	INICA	L AN	b co	NSTI	UCTI	ION	MА	'ERL	ALS.	SER'	VICES					c	CHAIN OF CUSTODY RECOR
Offic Proj Serre	Consultin Consultin De Locatio Locatio Location Consultant Bect Mana Reference Consultant Consultan	ng Engine on A4 ger BA	Proh	TT Naci Na			Labora Addres Contac Phone: PO/SO Semple	ntory:	XE ner	NС 2011 (84) 8-	0 <u>Bo</u> 96 311	1e 00	Conte		An Re	QUE	SIS STEI	(222)						Lab use only Due Date 2 Temp, of coolers when recarded (C/r) 1 2 3 4 5 Page 3 of 3
À.	0871	25	Hu	gh.	Gath	er.r	9 Eu.	brank	Pis	char	2	40	2 Ja	15		13	J.	¥ [1	1		/	/	
Matro	Oate	Time	DEP	a b	Identify	ing Ma	rics of Sai	nple(s)	Fage	집물	VOA	AG 11	250 ni	PKO		12	12	' [/	/	/ .	Ι,	/ ,	Leb Sample ID (Lab Use Only)
5	12-11-08	13.10		X	Sec.	Z. (SH-9	7								X	X		T				-	320213 - 19
5	12-11-02	13:15		X	Sec	Z. [34-10	>								X	X		Γ					1 20
																			Τ					
													Γ				Τ	Τ	Τ					
								5				Ţ				T		T						
										T		Τ	1						Τ					
Γ		Γ.,							1	1	1	[1						1	[
Turn Rešr	around time obished by	(Signature)	HETHE	· /	25% Ru Date: と / ス.0	ah k	C) 50% F	Recen	Q 100 wed by:	1% Rus (Signa	h sture)		Τ	Date	•	T	ne:	NOT	ES:		P	laiu	. 4	
Rear	quished by	(Signature)	-	Ť	Date:	1	Time:	Recen	ved by:	(Signa	uture)		1	Date	· Î	Th	no:	1	D D	· (') [7 1		1 JASON HEARY
Relir	iquished by	(Signature)	1		Date:	1	Time:	Recei	ved by:	: (Signi	ature)			Date		Ta	me:		r	14.1	50	en t	46.	r 39700 1- /
Reih	quished by	(Signature))		Date:	1	Time;	Receiv	ved by	(Signa	ature)			Date	1.15	Tir • 1	me.]	1	itie	k		215	s sale.
Mabri	t Vi	W - Wastewa	iter at		W - Wate	thar / O	8 - Soil Ir Glase 1	SD - So	Nice State	L : Llqu 250 ml	id A Glassa	- Alt El	ag awith	C P/	Char	cosi tu stic or	dber	SL·s	ludga	<u> </u>	0.0	(
House 11555 House (715)	tan Office Clay Road, S on, Texas 770 690-8989 Fa	uite 100 43 ux (713) 690-8	217		Dai 890 Dai (2)	iles Off 11 Carpt llas, Tex 4) 630-	ice inter Proew as 75247 1010 Fas	ray, Suite (214) 63	100		Fart 260 Fort (\$17	Worth Grave) Worth, 1 268-88	Office Drive Texas 7	6118	1) 268-1	8602		Au 530 Au (5)	rin Of 7 Indus tin, Te: 2) 442-	ice trial O m 787	aks Bly 35 Fax (5	rd. # 1	60 2-118	Midland Office 24 Smith Rd., # 261 Mulland, T2x8 79705 8) (432) 684-960 Fax (432) 684-963

•

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

Client [.]	Terracin/Plains
Date/ Time	12/12/08 945
Lab ID #	526213
Initials:	(111)
	3

Sample Receipt Checklist

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

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 321100

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Hugh Gathering Enbanks Discharge 4" 2008-311

29-DEC-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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



29-DEC-08



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

Reference: XENCO Report No: 321100 Hugh Gathering Enbanks Discharge 4" Project Address:

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 321100. 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. 321100 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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





Sample Cross Reference 321100

PLAINS ALL AMERICAN EH&S, Midland, TX

Hugh Gathering Enbanks Discharge 4"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sec. 1 BH-2A	S	Dec-22-08 12:05		321100-001
Sec. 3 BH-5A	S	Dec-22-08 14:40		321100-002
Sec. 1 BH-3A	S	Dec-22-08 15:55		321100-003



Project Location:

Project Id: 2008-311

Contact: Jason Henry

Certificate of Analysis Summary 321100 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Hugh Gathering Enbanks Discharge 4"



Date Received in Lab: Tue Dec-23-08 08:58 am

Report Date: 29-DEC-08

Report Date: 2

-								Project Manager:	Brent Barron, II	
	Lab Id:	321100-00	01	321100-0	02	321100-0	03			
Analysis Degracied	Field Id:	Sec. 1 BH-	2A	Sec. 3 BH-	-5A	Sec 1 BH	-3A			
Analysis Kequestea	Depth:									
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Dec-22-08 1	2:05	Dec-22-08 1	4:40	Dec-22-08	15:55			
BTEX by EPA 8021B	Extracted:	Dec-23-08 1	4:00	Dec-23-08 1	4:00	Dec-23-08	14:00			
,	Analyzed:	Dec-23-08 1	7:25	Dec-23-08 1	7:49	Dec-23-08	18:13			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		ND (0.0011	ND	0.0011	ND	0.0011			
Toluene		ND (0.0022	ND	0.0022	ND	0.0022			
Ethylbenzene		ND (0.0011	ND	0.0011	ND	0.0011			
m,p-Xylenes		ND (0.0022	ND	0.0022	ND	0.0022			
o-Xylene		ND	0.0011	ND	0.0011	ND	0.0011			
Total Xylenes		ND (0.0022	ND	0.0022	ND	0.0022			
Total BTEX		ND (0.0011	ND	0.0011	ND	0.0011			
Percent Moisture	Extracted:									
	Analyzed:	Dec-23-08 1	7:00	Dec-23-08 1	7:00	Dec-23-08	17:00			
	Units/RL:	%	RL	%	RL	%	RL			
Percent Moisture		8.35	1.00	9.58	1.00	8.72	1.00			
TPH By SW8015 Mod	Extracted:	Dec-24-08 1	0:00	Dec-24-08 1	0:00	Dec-24-08	10:00			
3	Analyzed:	Dec-24-08 1	3:25	Dec-24-08 1	3:50	Dec-24-08	14:15			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
C6-C12 Gasoline Range Hydrocarbons		ND	16.4	ND	16.6	ND	16.4			
C12-C28 Diesel Range Hydrocarbons		ND	16.4	ND	16.6	ND	16.4			
C28-C35 Oil Range Hydrocarbons		ND	16.4	ND	16.6	ND	16.4			
Total TPH		ND	16.4	ND	16.6	ND	16.4			

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

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

Brent Barron

Odessa Laboratory Director





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

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

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

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



Project Name: Hugh Gathering Enbanks Discharge 4"

Vork Orders : 321100,		1	Project II): 2008-311					
Lab Batch #: 744576	Sample: 321100-001 / SM	P Bat	tch: ¹ Matri	x: Soil					
Units: mg/kg		SU	RROGATE RE	COVERY	STUDY				
BTEX by EPA	8021B	Amount Found [A]	True Amount [B]	Recovery %R IDI	Control Limits %R	Flags			
Allaiyus	<u></u>			[¹]					
1,4-Ditluorobenzene	<u></u>	0.0292	0.0300	97	80-120	4.4			
4-Bromonuorobenzene		0.0152	0.0300	51	80-120	**			
Lab Batch #: 744576	Sample: 321100-001 S / N	MS Batch: 1 Matrix: Soil							
		SURROGATE RECOVERY STUDY							
BTEX by EPA Analytes	8021B	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		0.0269	0.0300	90	80-120				
Lab Batch #: 744576	Sample: 321100-001 SD /	MSD Ba	tch: 1 Matri	x: Soil	l				
Units: mg/kg	-	SU	RROGATE RE	COVERY	STUDY				
BTEX by EPA	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1 4 Diffuorohenzene		0.0258	0.0300	04	90.120				
4-Bromofluorobenzene		0.0238	0.0300	03 03	80-120				
		0.0277	0.0500		00-120				
Lab Batch #: 744576	Sample: 321100-002 / SM	P Bat	tch: 1 Matri	x: Soil					
Units: mg/kg		SU	RROGATE RE	COVERY	STUDY				
BTEX by EPA Analytes	8021B	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		0.0142	0.0300	47	80-120	**			
Lab Batch #: 744576	Sample: 321100-003 / SM	P Ba	tch: 1 Matri	x: Soil					
Units: mg/kg		SU	RROGATE RE	COVERY	STUDY				
BTEX by EPA Analytes	8021B	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		0.0217	0.0300	72	80-120	**			
			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.



Project Name: Hugh Gathering Enbanks Discharge 4"

Vork Orders : 321100,		Project II	D: 2008-311		
Lab Batch #: 744576 Sample: 521792-1-BKS /	BKS Ba	tch: 1 Matri	ix: Solid		
Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	<u> </u>
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		, 	լոյ		
1,4-Difluorobenzene	0.0251	0.0300	84	80-120	
4-Bromofluorobenzene	0.0257	0.0300	86	80-120	Ē
Lab Batch #: 744576 Sample: 521792-1-BLK	/ BLK Ba	tch: 1 Matri	ix: Solid		
Units: mg/kg	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0137	0.0300	46	80-120	**
Lab Batch #: 744576 Sample: 521792-1-BSD	/ BSD Ba	itch: 1 Matr	ix: Solid	<u>I</u>	
Units: mg/kg	SU	RROGATE RJ	ECOVERY !	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Апануцея	0.0060	2.0200	[¹]		
1,4-Difluorobenzene	0.0252	0.0300	84	80-120	l
4-Bromotiuorobenzene	0.0236	0.0300	80	80-120	L
Lab Batch #: 744836 Sample: 321100-001 / SN	MP Ba	tch: 1 Matri	ix: Soil		
Units: mg/kg	SU	RROGATE RF	ECOVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	50.4	50.0	101	70-135	
Lab Batch #: 744836 Sample: 321100-001 S /	MS Ba	itch: 1 Matri	ix: Soil	<u></u>	h
Units: mg/kg	SU	RROGATE RI	ECOVERY !	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Allalytes	115	100	115	70-135	
o-Terphenyl	54.5	50.0	109	70-135	
	UT10	50.0	107		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.



Project Name: Hugh Gathering Enbanks Discharge 4"

/ork Orders : 321100,		Project IJ	D: 2008-311							
Lab Batch #: 744836 Sample: 321100-001	SD / MSD Bat	tch: 1 Matri	ix: Soil							
Units: mg/kg	SU	RROGATE RJ	ECOVERY (STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes			נען		L					
1-Chlorooctane	114	100	114	70-135	I					
o-Terphenyl	56.9	50.0	114	70-135	L					
Lab Batch #: 744836 Sample: 321100-002	/ SMP Bat	tch: 1 Matri	ix: Soil							
Units: mg/kg		RROGATE KI	COVER1 a	STUDY						
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
1-Chlorooctane	98.5	100	99	70-135						
o-Terphenyl	49.3	50.0	99	70-135	[
Lab Batch #: 744836 Sample: 321100-003	, / SMP Bat	MP Batch: 1 Matrix: Soil								
Units: mg/kg	SU	RROGATE RI	ECOVERY (STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R (D)	Control Limits %R	Flags					
/\IIaIytcs		100	100	70.125	<u> </u>					
I-Chiorooctane	<u> </u>	50.0	100	70-135	 					
		JU.U	101	/0-135	<u> </u>					
Lab Batch #: 744836 Sample: 521969-1-B	KS/BKS Bat	tch: 1 Matri	ix: Solid							
Units: mg/kg	SU	RROGATE RI	ECOVERY N	STUDY						
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
1-Chlorooctane	115	100	115	70-135						
o-Terphenyl	55.4	50.0	111	70-135						
Lab Batch #: 744836 Sample: 521969-1-B	LK/BLK Bat	tch: 1 Matri	ix: Solid	<u></u>						
Units: mg/kg	SU	RROGATE RI	ECOVERY f	STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes		(ן ען ד	1 1	•					
Analytes 1-Chlorooctane	100	100	100	70-135						

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Project Name: Hugh Gathering Enbanks Discharge 4"

Work Orders: 321100,		Project ID: 2008-311								
Lab Batch #: 744836	Sample: 521969-1-BSD / E	ple: 521969-1-BSD / BSD Batch: 1 Matrix: Solid								
Units: mg/kg		SURROGATE RECOVERY STUDY								
TPH By SW801	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes				[D]						
1-Chlorooctane		118	100	118	70-135					
o-Terphenyl		55.8	50.0	112	70-135					

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



BS / BSD Recoveries



Project Name: Hugh Gathering Enbanks Discharge 4"

Work Order #: 321100							Proj	ject ID: 2	2008-311		
Analyst: ASA	Da	ate Prepar	ed: 12/23/200	8			Date A	nalyzed: 1	2/23/2008		
Lab Batch ID: 744576 Sample: 521792-1-E	KS	Batel	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK S	SPIKE / F	BLANK S	PIKE DUPI	LICATE	RECOVE	ERY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Besult (E)	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[D]	[C]	[0]	[E]	Kesun [r]	[0]				
Benzene	ND	0.1000	0.1060	106	0.1	0.1081	108	2	70-130	35	
Toluene	ND	0.1000	0.1007	101	0.1	0.1029	103	2	70-130	35	
Ethylbenzene	ND	0.1000	0.1035	104	0.1	0.1059	106	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2083	104	0.2	0.2129	106	2	70-135	35	
o-Xylene	ND	0.1000	0.0978	98	0.1	0.0998	100	2	71-133	35	
Analyst: BHW	Da	ate Prepar	ed: 12/24/200	8			Date A	nalyzed: 1	2/24/2008		
Lab Batch ID: 744836 Sample: 521969-1-E	KS	Bate	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK S	SPIKE / F	BLANK S	PIKE DUPI	LICATE	RECOVE	ERY STUD	Y	
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	978	98	1000	990	99	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1010	101	1000	1040	104	3	70-135	35	

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



Form 3 - MS / MSD Recoveries

Project Name: Hugh Gathering Enbanks Discharge 4"



Work Order #: 321100						Project II	D: 2008-3	11			
Lab Batch ID: 744576 Date Analyzed: 12/23/2008 Reporting Units: mg/kg	QC- Sample ID: Date Prepared:	321100 12/23/2	-001 S 008	Ba An E/MAT	tch #: alyst: BIX SPI	1 Matrix ASA KE DUPLICA	k: Soil	OVERV	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	ND	0.1091	0.0866	79	0.1091	0.0901	83	5	70-130	35	
Toluene	ND	0.1091	0.0804	74	0.1091	0.0850	78	5	70-130	35	
Ethylbenzene	ND	0.1091	0.0800	73	0.1091	0.0869	80	9	71-129	35	
m,p-Xylenes	ND	0.2182	0.1625	74	0.2182	0.1762	81	9	70-135	35	
o-Xylene	ND	0.1091	0.0744	68	0.1091	0.0813	75	10	71-133	35	X
Lab Batch ID: 744836 Date Analyzed: 12/24/2008 Reporting Units: mg/kg	QC- Sample ID: Date Prepared:	321100 12/24/2 N	-001 S 008 IATRIX SPIK	Ba An E / MAT	tch #: alyst: RIX SPI	1 Matrix BHW KE DUPLICA	k: Soil	OVERY	STUDY		
TPH By SW8015 Mod 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
C6-C12 Gasoline Range Hydrocarbons	ND	1090	1040	95	1090	1040	95	0	70-135	35	<u> </u>
C12-C28 Diesel Range Hydrocarbons	ND	1090	1080	99	1090	1100	101	2	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Hugh Gathering Enbanks Discharge 4"

Work Order #: 321100

Lab Batch #:	744580				Project I	D: 2008-311	l
Date Analyzed:	12/23/2008	Date Pro	e pared: 12/2	.3/2008	Analy	st: MOV	
QC- Sample ID:	321100-001 D	E	latch #: 1		Matr	ix: Soil	
Reporting Units:	%		SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
	Percent Moisture		Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
	Analyte			[B]			
Percent Moisture			8.35	8.38	0	20	

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

	ENVIRONMI	ENTÁL, GEOTÉ	CHNICAL /	AND CO	ISTRUCTIO	MATEI	HALS SERV	VICES			CHAIN OF CUSTODY RECORD
Consulting En Consulting En Office Location A Mill An Project Manager J Sempler's Name	Pojoci Na Projoci Na Projoci Na Projoci Na Projoci Na	Labo Addr Com Phor Ports Sam	bratory: X ress: tact: tact: so #: pler's Signatus pler's Signatus	Елі 484 484 484 411	5 	A F 		1.4(2)			Lab use only Due Date: Temp of coolers whan received (CP): / 0 " 1 2 3 4 5 Page / of /
AUC 87125 Matrix Date Tin	Hugh G G J	trathening E.	Semple(a)	13(4)75	-3/402 10 VOA ANG 20	50 P/O	EN STA	1	//		
5 12 20 10		1 0	6	8 8	14	4-4-	15757	-{-{-	{ 	++	Lab Sample ID (Lab Use Only)
5 13110 10		Sec. I. Kh	I A		╾┾╾┼╴	╶┼╌┽╼	13131		╄╌┠╍	+-+-	24100101
5 12 208 15	.55 X	Jec. J. M.	1.24		-+-+	++			┼╌┼╌	+ +	-02
14 - 10 15		Jeciun				++	tetet		++	┥╋	
╏╼┼╼╍┽╌╸							++++	╺┼╌┼╺		+	
							+++	++-	\dagger	+-+-	
						++	╈╋	-+		++-	
									$\uparrow \uparrow$		
						11					
							1 1 1				
Tan around time	2 Normal 🖸	25% Rosh Q 50	% Rush 🖸	100% Rush	A						
Relinquished by (Signa	ature)	22368 9 CC Date: Time:	Received	by: (Signal	ture)	Date:		NOTES:	Pleir	T	Incerce + CC
Relinquished by (Stand	veture) T	Date Tame	Becahad	hy (Since	hung)	Dater	Time		Le in	2/25	· · · · · · · · · · · · · · · · · · ·
Coldin			-						~ /	, i	ר /
Reimquished by (Sign:	uature)	Date Time:	Received	by: (Signal	ture)	Date:	Time:	4	itel	5/5.	unts
Mabrix WW - Wa Container VOA - 40	astewator) 0 m) vial	W - Water S - Sol A/G - Amber / Or Gites	I SD - Solid 6 1 Litter	L - Liquid 250 ml -	A - Air Bag Glass wids mouth	C - CH P/O - I	arcoal tube Plastic or other	SL · słudga	0-	C)i	
Houston Office 11555 Cray Road, State 100 Houston, Texas 77043 (713) 690-8989 Fax (713)	0 690-8787	Dalles Office 8901 Carpenter Fr Dallas, Texas 7524 (214) 630-1010	renway, Soite 100 47 Fax (214) 630-70	70	Fort Worth Off 2601 Gravel Driv Fon Worth, Texa (817) 265-8600	ce s 76118 Fax (817) 20	58-8602	Anstin Oi 5307 Indu Austus, Te (512) 442	fice strial Oaks ras 78735 -1122 Fax	Bivd. # 160 (512) 442-11	Hidiand Office 24 Smin Rd , # 261 Midland, Texas 19705 81 (432) 684-9600 Pax (432) 684-9608

.

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



Sample Receipt Checklist

				Client Initial
#1	Temperature of container/ cooler?	Yes	No	U°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?	d'es'	No	
#7	Chain of Custody signed when relinquished/ received?	Yes	No	
#8	Chain of Custody agrees with sample label(s)?	(es)	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	Yes	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	(es)	No	
#11	Containers supplied by ELOT?	(Yes)	No	
#12	Samples in proper container/ bottle?	Yes)	No	See Below
#13	Samples properly preserved?	Yes)	No	See Below
#14	Sample bottles intact?	Y65	No	1
#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)?	(es)	No	See Below
#18	All samples received within sufficient hold time?	(es)	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

Analytical Report 321116

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Hugh Gathering Eubanks Discharge 4" 2008-311

31-DEC-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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



31-DEC-08

F i

Ē

17



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

Reference: XENCO Report No: 321116 Hugh Gathering Eubanks Discharge 4" Project Address:

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 321116. 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. 321116 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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

Page 2 of 9



Sample Cross Reference 321116



PLAINS ALL AMERICAN EH&S, Midland, TX

Hugh Gathering Eubanks Discharge 4"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Stock Pile 1A	S	Dec-22-08 11:20		321116-001



Project Location:

Project Id: 2008-311

Contact: Jason Henry

Certificate of Analysis Summary 321116 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Hugh Gathering Eubanks Discharge 4"

Date Received in Lab: Tue Dec-23-08 08:58 am

Report Date: 31-DEC-08

Project Manager: Brent Barron, II

	Lab Id:	321116-001			
Amphysic Deguested	Field Id:	Stock Pile 1A			
Analysis Kequesteu	Depth:				
	Matrix:	SOIL			
	Sampled:	Dec-22-08 11:20			
Flash Point (CC) SW-846 1010	Extracted:				
	Analyzed:	Dec-30-08 14:50			
	Units/RL:	Deg F RL			
Flash Point		> 150 50.0			
Reactive Cyanide by EPA 9010	Extracted:				
	Analyzed:	Dec-29-08 11:40			
	Units/RL:	mg/kg RL			
Cyanide		ND 50.0			
Reactive Sulfide by SW 9030B	Extracted:				
, i i i i i i i i i i i i i i i i i i i	Analyzed:	Dec-29-08 12:52			
	Units/RL:	mg/kg RL	·		
Sulfide		ND 50.0			
Soil pH by EPA 9045C	Extracted:				
	Analyzed:	Dec-29-08 10:46			
	Units/RL:	SU RL			
рН		7.65			

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

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

Brent Barron

Odessa Laboratory Director





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

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

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

	Phone	Fax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
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 1-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116





Project Name: Hugh Gathering Eubanks Discharge 4"

Work Order #: 321116		Project ID: 2008-31						
Lab Batch #: 745104 Date Analyzed: 12/29/2008	Sa Date Prej	mple: 745104- pared: 12/29/2(
Reporting Units: mg/kg	Ba	itch #: 1	OVERY S	STUDY				
Reactive Cyanide by EPA 9010		Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags	
Analytes				[C]	[D]	ļ!	<u> </u>	
Cyanide		ND	5.00	6.45	129	57-93	Н	
Lab Batch #: 745108	Sa	Sample: 745108-1-BKS Matrix: Solid						
Date Analyzed: 12/29/2008	Date Prep	Date Prepared: 12/29/2008 Analyst: GAV						
Reporting Units: mg/kg	Ba	itch #: 1	BLANK /I	BLANK SPI	OVERY S	STUDY		
Reactive Sulfide by SW 9030B		Blank Result	Spike Added (B)	Blank Spike Result	Blank Spike % P	Control Limits %R	Flags	
Analytes		[A]	נען	[C]	[D]	/01		
Sulfide		ND	1000	1080 ·	108	60-120		

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



Sample Duplicate Recovery



Project Name: Hugh Gathering Eubanks Discharge 4"

Work Order #: 321116

Lab Batch #: 745115				Project I	D: 2008-311	l	
Date Analyzed: 12/30/2008	Date Pr	epared: 12/3	30/2008	Analy	st: WRU		
QC- Sample ID: 321116-001 D	E	atch #: 1	1	Matr	ix: Soil		
Reporting Units: Deg F		SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY	
Flash Point (CC) SW-846 1010		Parent Sample Result \[A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag	
Analyte			្រែ				
Flash Point		> 150	> 150	0	25		
Lab Batch #: 745104							
Date Analyzed: 12/29/2008	Date Pro	epared: 12/2	29/2008	Analy	st: WRU		
QC- Sample ID: 321116-001 D	E	atch #: 1	1	Matr	ix: Soil		
Reporting Units: mg/kg		SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY	
Reactive Cyanide by EPA 9010		Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag	
Analyte			[D]				
Cyanide		ND	ND	NC	20		
Lab Batch #: 745108						_	
Date Analyzed: 12/29/2008	Date Pro	e pared: 12/2	29/2008	Analy	st: GAV		
QC- Sample ID: 321116-001 D	B	atch #: 1	l	Matr	ix: Soil		
Reporting Units: mg/kg		SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY	
Reactive Sulfide by SW 9030B		Parent Sample Result [A]	Sample Duplicate Result (B]	RPD	Control Limits %RPD	Flag	
Ананую							
Sulfide		ND	ND	NC	20		
Lab Batch #: 744870							
Date Analyzed: 12/29/2008	Date Pr	epared: 12/2	29/2008	Analy	st: MOV		
QC- Sample ID: 321116-001 D	B	satch #: 1 Matrix: Soil					
Reporting Units: SU		SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY	
Soil pH by EPA 9045C		Parent Sample Result	Sample Duplicate Result	RPD	Control Limits %RPD	Flag	
Analyte		[A]	[B]				
Analyte pH		[A] 7.65	[B]	0	20		

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

		EN	VIRC). NM	ENTAL	GEOTI	echnic	AL AN	ið CO	NSTR	UCT	ION ¹	MAT	(ER	ALS	SEP	(VIC	es				I	Ç	CHA	IN OF CUSTODY RE	CORD
7	ſe	211	٥C		חכ	Lab Adr	voratory: dress:	XE1	<u>1': c</u>	·			_	An Re	IALYS IQUE	315 ESTE		7	7	7	7	T 	Τ/	Τ	Lab use only Due Date: Temp. of coolers	
	Densulting Location Location All All the Manager of Man	g Engines n A4 n 2, - ger <u>Bau</u> <u>Cracre</u> 7 5	Proj	77 301 N 9/.	entists <u>Kerk</u> ame Callet	_ Cor _ Phc _ PO Ser	11act: <u>/</u> ne: <u>/</u> <u>/SO #: _</u> nofere Sig <u>/ec_</u>	neturo Ais	17 184- 18- 14-	74 74 311		Dontain T z			Ŀ							 			when recend (Cr) 1 2 3 4 Page	1 1 1
Astrix	Date	Time	COE	G	Identilyir	ng Marks c	d Sample(s'		P E	. VON	AG	250	PXO	ĺ	\bigwedge	11			I_{\perp}	1	/	/	/	/	Leb Semple ID (Leb Use C	(miy)
																									31.11.0 - 2	
Num ar Reling	uished by	Bignature	lame)(쿠	25% Rus Date:	h QS I. Time	0% Rush e: Reci	aived by	7% Rusi n (Sign:	h ature)		T	Date		1	Ime:	N	OTE	<u>s:</u>	~			 		00	\neg
Relinq	uished by	(Signature)	<u>}</u>	+	77.25-L	7 4 66 Time	a: Recr	aived by	r: (Signu	ature)		+	2,22 Date	<u>,</u> ≹∕≋⊺	<u>0 क</u> ना	ime:	-		ţ	lei Li	65č 40	: 1њ	1 : #	ni- c .)	LEDA HEARY	
Reling	uished by ((Signature)	, 	1	Date:	Time	r: Rece	wed by:	: (Signa	sture)		7	Date:	ļ	Tr T	sne:]	(ι	. .]	[]	1.,	13	,		
Matrix	W	W - Wasiew	, sater		W - Water	r 8-f	Soil SD -	Solid	L-Ug	id /	- Air B		<u></u>	- Cha	nooal t	ube	í	, ~	lace dgs	<u>~</u>	- د ہ ہ	-• (a	5]
Jontain Houster 11555 (Hoese (713) (ar VO a Office Jay Road, Si a, Texas 770 90-8989 Fr	JA - 40 m) via arite 100 43 as (713) 690-1	al		A/G - Amb Ball B90 Dall (21	tor / Or Gia nas Office 1 Carpenter las, Texas 7: 4) 630-1010	Presway, Sa: 5247 5247 Fax (214)	tu 100 630-7070	250 ml -	Glass v Port 260) Fort (81'	Worth (Worth (Worth. 7) 268-8	Uffice Drive Texas 7 600 F	P/C 76118 5ax (81) - Pia	Listic or L-8602	r other		Austir 5307 (Ausur (512)	a Offic Industr n. Texr 442-1	x nal Or 13 787 122	eks Blv 35 Fax (5	vd.# :	160 42- <u>) 18</u>	11	Midiand Office 24 Smith Rd., # 261 Midhad, Texas 79705 (432) 684-9600 Fax (432)	684-9608

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

Cirent	Terracon [Plains
Date/ Time	12:23:03 333
Lab ID # ·	321116
Initials	<u>úL</u>

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	Tes	No	• · · · · ·
#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?	(es)	No	
#6	Sample instructions complete of Chain of Custody?	Nes	No	
#7	Chain of Custody signed when relinquished/ received?	Yes	No	
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont / Lid
#9	Container label(s) legible and intact?	Yes	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	Yes:	No	
#11	Containers supplied by ELOT?	Yes	No	
#12	Samples in proper container/ bottle?	Yes	No	See Below
#13	Samples properly preserved?	Yes	No	See Below
#14	Sample bottles intact?	¥98	No	
#15	Preservations documented on Chain of Custody?	Yes	No	
#16	Containers documented on Chain of Custody?	Yes	No	
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below
#18	All samples received within sufficient hold time?	Yes	No	See Below
#19	Subcontract of sample(s)?	Yes	No	-Not Applicable
#20	VOC samples have zero headspace?	Yes	No	< Not Applicable

Variance Documentation

Date/ Time

Contact.

Regarding.

Corrective Action Taken

Check all that Apply

See attached e-mail/ fax

Contacted by:

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

.

APPENDIX D

.

Site Photographs

Huge Gathering Eubanks Discharge 4" Plains SRS No. 2008-311 NMOCD Job No. 1RP- 2012 Terracon Project No. A4087131



Photo #1

View of oil-filled depressions, looking northwest.



Photo #3 View of depression following removal of free oil, looking northwest.



Photo #5 Soil removal activities.



Photo #2 View of oil recovery efforts, looking easterly.



Photo #4 Soil removal activities.



Photo #6

View of delineation test trenches.

lerracon

Huge Gathering Eubanks Discharge 4" Plains SRS No. 2008-311 NMOCD Job No. 1RP- 2012 Terracon Project No. A4087131



Photo #7 Continued excavation.



Photo #8 Continued excavation.



Photo #9

Continued excavation.



Photo #10 Continued excavation. Red circles denote sample collection locations.



Photo #11 View of bottom hole and sidewall sampling locations.



Photo #12 View of stockpile.

llerracon

Huge Gathering Eubanks Discharge 4" Plains SRS No. 2008-311 NMOCD Job No. 1RP- 2012 Terracon Project No. A4087131



Photo #13 View of stockpile and safety fencing.



Photo #14 View of backfill (topsoil) being delivered.



Photo #15

View of backfilling with caliche, overlayed by topsoil.



Photo #17 Final site restoration view.



Photo #16 Final

Final site restoration view.



Photo #18 Final site restoration view.

APPENDIX E

.

.

Regulatory Documents

- 4456-1999年 第4年2 × 1、2、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1		
<u>Instrict 1</u> 625 N. French Dr., Hobbs, NM 88240 State	e of New Mexico	Form C-14
istrict II Energy Mines Energy	rals and Natural Resources	Revised October 10, 200
istrict III Oil Coil	nservation Division	Submit 2 Copies to appropriat
istrict IV 1220 S	outh St. Francis Dr.	with Rule 116 on bac
220 S. St. Francis Dr., Santa Fe, NM 87505 Sant	a Fe, NM 87505	side of for
Release Notificat	tion and Corrective A	Action
	OPERATOR	Initial Report Final Rep
Name of Company Plains Pipeline, LP	Contact Jason Henr	1000
Facility Name Hugh Gathering Eubanks Discharge 4"	Facility Type Pipeline	-1099
Checking Datting		
Surface Owner Charlie Bettis Milleral Ow	ner	Lease No.
LOCAT	ION OF RELEASE	
H 22 21S 37E	vorin/South Line Feet from the	Lea
	<u></u>	
Latitude N 32.4	6682° Longitude W 103.1453	l°
NATU	RE OF RELEASE	
Type of Release Crude Oil	Volume of Release 1940	bbls Volume Recovered 1280 bbls
Source of Release 4" steel pipeline	Date and Hour of Occurren	Date and Hour of Discovery
Was Immediate Notice Given?	If YES, To Whom?	11/2//2000 00:00
🛛 Yes 🔲 No 🗌 Not Requ	ired Larry Johnson	
By Whom? Daniel Bryant		NO NO NO NO
Dy whom; Danet Bryan	Date and Hour 11/24/20	
Was a Watercourse Reached?	If YES, Volume Impacting	the Watercourse EC 0 4 2008
Was a Watercourse Reached? Yes No If a Watercourse was Impacted, Describe Fully.*	If YES, Volume Impacting	HORES 1018,1
Was a Watercourse Reached? □ Yes ⊠ No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* Thermal expansion behind a stuck brush pig caused a 4" pipeline to rwas replaced on 11/24/2008. Throughput on the line is approximatel above ground at the release location. H2S content of the crude is les	rupture along the pipe seam at a co ly 1774 bbls per day. Operating p s than 10 ppm. The gravity of the	Troded soil air interface releasing crude oil. Pipelin crude is 38.5.
Was a Watercourse Reached? □ Yes ⊠ No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* Thermal expansion behind a stuck brush pig caused a 4" pipeline to a was replaced on 11/24/2008. Throughput on the line is approximatel above ground at the release location. H2S content of the crude is les Describe Area Affected and Cleanup Action Taken.* . Released crude oil collected in two low-lying areas impacting an area applicable guidelines.	Tupture along the pipe seam at a co ly 1774 bbls per day. Operating p is than 10 ppm. The gravity of the a which measured approximately :	The Watercourse E C () 4 2008 HOREE () 4 2008 HOREE () 4 2008 HOREE () 4 2008 () 5 20 () 5
Was a Watercourse Reached? Yes If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* Thermal expansion behind a stuck brush pig caused a 4" pipeline to 1 was replaced on 11/24/2008. Throughput on the line is approximate above ground at the release location. H2S content of the crude is les Describe Area Affected and Cleanup Action Taken.* . Released crude oil collected in two low-lying areas impacting an areapplicable guidelines. I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain rele public health or the environment. The acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition, NMOCD acceptance of a C-141 report	a which measured approximately : e to the best of my knowledge and ease notifications and perform corr by the NMOCD marked as "Final rediate contamination that pose a the port does not relieve the operator of	The Watercourse E C () 4 2008 (ADDECE) () 4 2
Was a Watercourse Reached? Yes If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* Thermal expansion behind a stuck brush pig caused a 4" pipeline to the was replaced on 11/24/2008. Throughput on the line is approximated above ground at the release location. H2S content of the crude is less Describe Area Affected and Cleanup Action Taken.* Released crude oil collected in two low-lying areas impacting an area applicable guidelines. I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain rele public health or the environment. The acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition, NMOCD acceptance of a C-141 rep federal, state, or local laws and/or regulations.	rupture along the pipe seam at a co ly 1774 bbls per day. Operating p is than 10 ppm. The gravity of the a which measured approximately : e to the best of my knowledge and case notifications and perform corr by the NMOCD marked as "Final rediate contamination that pose a the cort does not relieve the operator of OUL COR	The Watercourse E C () 4 2008 A CORECT () 4 CORECT () 4 CORECT () 4 CORECT () 5 CORECT () 4 CORECT () 5 CORECT () 5 CORECT ()
Was a Watercourse Reached? Yes If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* Thermal expansion behind a stuck brush pig caused a 4" pipeline to 1 was replaced on 11/24/2008. Throughput on the line is approximate above ground at the release location. H2S content of the crude is les Describe Area Affected and Cleanup Action Taken.* Released crude oil collected in two low-lying areas impacting an area applicable guidelines. I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain rele public health or the environment. The acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition. NMOCD acceptance of a C-141 rep Geral, state, or local laws and/or regulations.	Date and Hour 11/24/2/2 If YES, Volume Impacting rupture along the pipe seam at a coll y 1774 bbls per day. Operating p is than 10 ppm. The gravity of the a which measured approximately for the provided and the perform corr by the NMOCD marked as "Final rediate contamination that pose a the port does not relieve the operator of the perform corr OIL CON	A control of the second
Was a Watercourse Reached? Yes If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* Thermal expansion behind a stuck brush pig caused a 4" pipeline to 1 was replaced on 11/24/2008. Throughput on the line is approximate: above ground at the release location. H2S content of the crude is les Describe Area Affected and Cleanup Action Taken.* Released crude oil collected in two low-lying areas impacting an area applicable guidelines. I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain rele public health or the environment. The acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition. NMOCD acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition. NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations. Signature: Date: Area Mary	Date and Hour 11/24/2/2 If YES, Volume Impacting rupture along the pipe seam at a coll 19 1774 bbls per day. Operating p is than 10 ppm. The gravity of the a which measured approximately for the perform corr by the NMOCD marked as "Final rediate contamination that pose a the perform corr OIL COP Approved by District Supervel	A control of the product of the prod
Was a Watercourse Reached? □ Yes ⊠ No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* Thermal expansion behind a stuck brush pig caused a 4" pipeline to 1 was replaced on 11/24/2008. Throughput on the line is approximate above ground at the release location. H2S content of the crude is les Describe Area Affected and Cleanup Action Taken.* Released crude oil collected in two low-lying areas impacting an areapplicable guidelines. I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain relepublic health or the environment. The acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition. NMOCD acceptance of a C-141 reprederal, state, or local laws and/or regulations. Signature: Dason Image: Dason Printed Name: Jason Henry	Date and Hour 11/24/2/2 If YES, Volume Impacting rupture along the pipe seam at a colly 19 1774 bbls per day. Operating p is than 10 ppm. The gravity of the a which measured approximately for the period of the period perform corr by the NMOCD marked as "Final rediate contamination that pose a the port does not relieve the operator of the period period period period period. OIL CON Approved by District Supervice	A construction of the provided area will be remediated per understand that pursuant to NMOCD rules and ective actions for releases which may endanger Report "does not relieve the operator of liability treat to ground water, surface water, human health of responsibility for compliance with any other INSERVATION DIVISION
Was a Watercourse Reached? Yes No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* Thermal expansion behind a stuck brush pig caused a 4" pipeline to the was replaced on 11/24/2008. Throughput on the line is approximate above ground at the release location. H2S content of the crude is less Describe Area Affected and Cleanup Action Taken.* Released crude oil collected in two low-lying areas impacting an area applicable guidelines. I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain rele public health or the environment. The acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition. NMOCD acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition. NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations. Signature: Dason Mary Printed Name: Jason Henry Title: Remediation Coordinator Environment	Date and Hour 11/24/2/2 If YES, Volume Impacting rupture along the pipe seam at a coll ly 1774 bbls per day. Operating p is than 10 ppm. The gravity of the a which measured approximately for the seam of the best of my knowledge and the seam of the best of my knowledge and the seam of the NMOCD marked as "Final hediate contamination that pose a the bort does not relieve the operator of the seam of th	A construction of the second s
Was a Watercourse Reached? □ Yes ⊠ No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* Thermal expansion behind a stuck brush pig caused a 4" pipeline to 1 was replaced on 11/24/2008. Throughput on the line is approximate above ground at the release location. H2S content of the crude is les Describe Area Affected and Cleanup Action Taken.* Released crude oil collected in two low-lying areas impacting an are applicable guidelines. I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain rele public health or the environment. The acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition. NMOCD acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition. NMOCD acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition. NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations. Signature: Jump Printed Name: Jason Henry Title: Remediation Coordinator E-mail Address: jhenry@paalp.com	Date and Hour 11/24/2/2 If YES, Volume Impacting rupture along the pipe seam at a colly 1y 1774 bbls per day. Operating p is than 10 ppm. The gravity of the a which measured approximately for the perform corr by the NMOCD marked as "Final mediate contamination that pose at the point does not relieve the operator of the perform corr OIL COI Approved by District Super Provide the performance of the performace of the performance of the performance of the performance of the	And the Watercourse E C () 4 2008 HOBEED 1018,1 perioded soil air interface releasing crude oil. Pipelin ressure of the pipeline is 90 psi. The pipeline was crude is 38.5. 500' X 300'. Impacted area will be remediated per understand that pursuant to NMOCD rules and ective actions for releases which may endanger Report" does not relieve the operator of liability breat to ground water, surface water, human health f responsibility for compliance with any other NSERVATION DIVISION Servation, Date: 2.4.09 Expiration, Date: 2.4.09
Was a Watercourse Reached? □ Yes ⊠ No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* Thermal expansion behind a stuck brush pig caused a 4" pipeline to 1 was replaced on 11/24/2008. Throughput on the line is approximate above ground at the release location. H2S content of the crude is les Describe Area Affected and Cleanup Action Taken.* Released crude oil collected in two low-lying areas impacting an are applicable guidelines. I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain rele public health or the environment. The acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition. NMOCD acceptance of a C-141 represent should their operations have failed to adequately investigate and rem or the environment. In addition. NMOCD acceptance of a C-141 represent should their operations have failed to adequately investigate and rem Signature: Describe Area Affected and/or regulations. Signature: Describe and/or regulations. Signature: Describe and Henry Title: Remediation Coordinator E-mail Address: jhenry@paalp.com Phone: (575) 441-1099	Date and Hour 11/24/2/2 If YES, Volume Impacting rupture along the pipe seam at a colly 19 1774 bbls per day. Operating p is than 10 ppm. The gravity of the a which measured approximately for the provention of the period	And the Watercourse EU () 4 2008 Watercourse EU () 4 2008 Watercours

19 ga - 16 harden.

and a second and a second and a second a se

臺灣的地域物質。2.2.2

V

District 1 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

Form C-138 Revised March 12, 2007

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 *Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address:
3112 West US Hwy. 82
Lovington, New Mexico 88260
2. Originating Site:
Hugh Gathering Eubanks Discharge 4-inch
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter H, Section 22, Township 21 South, Range 37 East
4. Source and Description of Waste: Hugh Gathering Eubanks Discharge 4-inch site Hydrocarbon impacted soils
Estimated Volume 8,000 yd ³ bbls Known Volume (to be entered by the operator at the end of the haul)
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, Jason Henry , representative or authorized agent for Plains Pipeline, L.P. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory datermination the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non- exempt waste. Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)
MSDS Information RCRA Hazardous Waste Analysis Process Knowledge Other (Provide description in Box 4) CENERATOR 10.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDEAPMS
GENERATOR 19.15,30.15 WASTE TESTING CERTIFICATION STATEMENT/FOR LANDFARMS
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter:
OCD Permitted Surface Waste Management Resilier
Name and Facility Permit #: Plains All American Lea Station Land Farm #GW-351
Address of Facility, NW. 4 of Section 28 Townshin 20 South Pange 37 Fast
Mothod of Transmost and/or Diversely
L Evaporation I injection I Treating Plant I Landfarm I Landfill Other
Waste Acceptance Status: Image: Approved Image: Description of the status of the stat
PRINT NAME: Jason Henry TITLE: Remediation Coordinator DATE: 05/05/2009
SIGNATURE: TELEPHONE NO.: 575-441-1099
Surface Waste Management Facility Authorized Agent


Ilea Station Land Farm PERMIT #GW-851

CERTIFICATE OF "NON-EXEMPT" WASTE STATUS

AND

TRANSPORTER MANIFEST AND CHAIN-OF-CUSTODY COMPANY PLAINS ALL AMERICAN PIPELINE

ORIGIN Unit Letter H, Section 22, Township 21 South, Range 37 East

Crude oil impacted soil from Hugh Gathering Eubanks Discharge 4-inch site.

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency (EPA) July 1988 Regulatory Determination and to my knowledge, this waste been characterized as "non-hazardous" pursuant to the provisions of EPA 40 CFR Part 261 Subpart C and has not been comingled with an EPA 40 CFR Part 261 Subpart D "Listed Waste." Likewise, this waste does not contain Naturally Occurring Radioactive Material (NORM) purusant to 20 NMAC 3.1 Subpart 1403 and contains no free liquid pursuant to the "paint filter test" EPA Method 9095A.

NORM EXPOSURE RATE: N/A µR/HR SEE EXEMPTION, ANALYTICAL DATA ATTACHED.

NMAC 20.3.14.1403 EXEMPTIONS:

For release for unrestricted use, persons who receive, possess, use, process, transfer, distribute, transport, store or dispose of NORM are exempt from the requirements of these regulations if: the NORM present is at concentrations of 30 picocuries per gram or less of radium 226, above background, or 150 picocuries per gram or less of any other NORM radionuclide, above background, in soil, in 15 cm layers, averaged over 100 square meters. Samples should be taken if gamma radiation readings (mR/hr) are equal to or exceed twice background readings when surveyed at a distance of 1 cm from the surface of the soil, in accordance with Department guidelines.

, THE UNDERSIGNED AGENT
EBY CERTIFY THAT, BASED ON
EMENT IS TRUE AND CORRECT.
JASON HENRY
REMEDIATION COORDINATOR
2530 STATE HWY. 214
DENVER CITY, TX 79323
Jason Hower
05/05/2009
ST AND CHAIN-OF-CUSTODY
Priver Signature:
ignature Date:
nt Signature:
ature Date:

APPENDIX F

CD of the Soil Closure Confirmation Report

.

.