

Incident ID	NRM2021348350
District RP	
Facility ID	
Application ID	

Remediation Plan

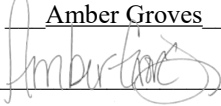
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Amber Groves Title: Remediation Coordinator
Signature:  Date: 10/13/2020
email: algroves@paalp.com Telephone: (575)200-5517

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Incident ID	NRM2021348350
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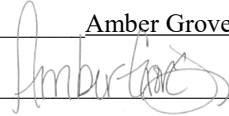
Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Amber Groves Title: Remediation Coordinator
Signature:  Date: 10/13/2020
email: algroves@paalp.com Telephone: (575)200-5517

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



October 14, 2020

New Mexico Oil Conservation Division
District 2
811 South First Street
Artesia, New Mexico 88210

To Whom It May Concern:

**Re: Site Characterization and Closure/Deferral Request Report
Mewbourne Wishbone 35-34 Tank Battery Release
Plains Pipeline, L.P.
NMOCD Tracking Number: NRM2021348350
P-35-T18S-R29E, Eddy County, New Mexico
SRS #2020-067**

1. Introduction

GHD Services, Inc. (GHD), on behalf of Plains Pipeline, L.P. (Plains), submits this Site Characterization and Closure Report to the New Mexico Oil Conservation Division (NMOCD) District 2 Office. This Site Characterization and Closure/Deferral Request Report provides documentation of delineation, sampling, analyses, and remedial activities in the affected areas at the Plains Mewbourne Wishbone 35-34 Tank Battery Release Site (Site). The Site is located in Unit Letter P Section 35 of Township 18 South and Range 29 East in Eddy County, New Mexico. The battery release site has a GPS coordinate of 32.698111°N latitude and 104.037722°W longitude. The releases occurred on land managed by the Bureau of Land Management (BLM). The site location is presented on Figure 1. The excavation and other site details are depicted on Figure 2.

2. Background Information

The release was discovered on July 28, 2020, and a Release Notification C-141 was submitted to the New Mexico Oil Conservation Division (NMOCD) and the Bureau of Land Management (BLM) on July 31, 2020. The release was due to a nipple and check valve failure on the Plains LACT Unit. The release was reported as fifteen (15) barrels (bbl) of oil with ten (10) bbl recovered. The Release Notification C-141 is attached in Appendix A.

3. Groundwater and Site Characterization

GHD characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, from New Mexico Administrative Code (NMAC) Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12). The release falls under the jurisdiction of the NMOCD District 2 in Artesia, New Mexico.

According to the site characterization evaluation, the area is in a low karst potential setting and no other receptor (water wells, playas, watercourse, wetlands, lakebeds or ordinance boundaries) were located within each specific boundaries or distance from the site. No groundwater data could be located within one-half mile of the site. There were four wells located less than three (3) miles of the site with depth to groundwater greater than 100 feet identified on the USGS website. A Google Earth image is provided in Appendix B depicting the location and distance of the wells according to the GPS coordinates provided by the USGS. The four (4) wells have depths to groundwater ranging from 101.22 feet below ground surface (bgs) to 205.41 feet bgs. The closest well to the site is approximately 1.57 miles southwest of the site and is USGS well 324139104034901, which had a depth to water of 205.42 on December 16, 2015. USGS depth to water information is provided in Appendix B. The site characterization documentation (Karst Potential, FEMA and Wetlands maps) are provided in Appendix B. The groundwater and closure criteria are listed below:

General Site Characterization and Groundwater:

Site Characterization	Average Groundwater Depth (ft.)
No Receptors	Undetermined

Delineation and Closure Criteria:

Table 1. Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29.12)

Constituent	Limit
Chloride	600 mg/kg
TPH (GRO+DRO+MRO)	100 mg/kg
TPH (GRO+DRO)	N/A
Benzene	10 mg/kg
BTEX	50 mg/kg

4. Soil Remediation, Waste Management and Site Restoration

Hand auger and confirmation samples mentioned below were taken to Eurofins Environmental Texting Xenco (Eurofins) in Carlsbad, New Mexico. All samples were analyzed for chloride by EPA Method 300, TPH by Method SW8015 Modified, and BTEX by EPA 8021B. All confirmation samples collected represented areas no greater than 200

square feet. Laboratory Analytical Reports and Chain-of-Custody Documentation are provided in Appendix C.

On July 29, 2020, GHD and Plains Contractor Gandy Corporation Oil Field Services (Gandy) mobilized to the Site to begin remediation activities. Gandy utilized a backhoe and hand tools to excavated impacted soil. GHD collected four (4) hand auger samples to assess the depth of impacts (HA1-1, HA1-3, HA2-2, and HA2-3). HA1-1 exhibited benzene concentrations above Table 1 Closure Criteria of 10 mg/kg. Soil samples HA1-1 and HA2-2 exhibited BTEX and TPH concentrations above Table 1 Closure Criteria of 50 mg/kg and 100 mg/kg, respectively. Soil samples HA1-3 and HA2-3 exhibited chloride, TPH, benzene, and BTEX concentrations below Table 1 Closure Criteria. These areas were later excavated.

On July 30 through August 4, 2020, fourteen (14) bottom hole confirmation samples and five (5) sidewall confirmation samples were collected from the excavation. Seven bottom hole confirmation samples, BH-Comp-1, BH-Comp-2, WT-Comp-2, T1-Comp-3, St-Comp-2, BH-Comp-5, and BH-Comp-4, exhibited TPH concentrations over Table 1 Closure Criteria. The areas represented by these samples were further excavated with the exception of the area represented by WT-Comp-2. All other samples exhibited chloride, TPH, benzene and BTEX concentrations below Table 1 Closure Criteria. All confirmation samples collected represented areas no greater than 200 square feet.

On August 19, 2020, GHD and Gandy mobilized back to the Site to further excavate in the areas represented by soil samples T1-Comp-3, St-Comp-2, BH-Comp-5, and BH-Comp-4. Access issues prevented further excavation in the area represented by BH-Comp-1 and BH-Comp-2 at this time. Subsequent to further excavation activities, four (4) bottom hole confirmation samples T1-Comp-3A, St-Comp-2A, BH-Comp-5A, and BH-Comp-4A and four sidewall confirmation samples SW-comp-1, MSW-Comp-2, WSW-Comp-2, and ESW-Comp-2 were collected. All samples exhibited chloride, TPH, benzene and BTEX concentrations below Table 1 Closure Criteria. All confirmation samples collected represented areas no greater than 200 square feet.

Additionally on August 19, 2020, it was decided that due to safety concerns the area represented by WT-Comp-2 could not be safely excavated any further because it was adjacent to the Plains equipment skid. During a walk through it was noted that the soils underneath the equipment skid were sluffing off into the five (5) foot excavation, indicated the foundation was unstable. Two (2) hand auger samples (HA3-6" and HA4-6") were collected from the excavation floor within the area represented by WT-Comp-2 to fully delineate the hydrocarbon impacts. Both samples exhibited chloride, TPH, benzene and BTEX concentrations below Table 1 Closure Criteria.

Subsequent to obtaining analytical results in the areas represented by T1-Comp-3, St-Comp-2, BH-Comp-5, and BH-Comp-4, Gandy backfilled the area with non-impacted imported material in order to obtain access to BH-Comp-1 and BH-Comp-2. On August 31, 2020, further excavation activities were conducted in this area. GHD collected two (2) soil samples BH-Comp-1A and BH-Comp-2A and one sidewall sample MSW-Comp-3 from areas representing 200 square feet or less. All samples exhibited chloride, TPH, benzene and

BTEX concentrations below Table 1 Closure Criteria. After obtaining analytical results on September 1, 2020, the remainder of the excavation was backfilled with non-impacted imported material.

On August 31 and September 1, 2020, approximately 634.88 tons of impacted soils were transported to a NMOCDC approved disposal facility. Prior to shipping the impacted soils to the landfill, GHD obtained regulatory approval via the successful processing of Form C-138 Request for Approval to Accept Solid Waste. Analytical reports for the non-exempt waste characterization are provided in Appendix C. The waste was approved for acceptance at the OCD-permitted (WM-1-035), Lea Land, LLC facility located at MM64, Highway 62/180 East, Carlsbad, NM, 88220. Copies of the C-138 and transportation manifest to Lea Land are provided Appendix D.

Pictures of the excavation are included in Appendix E – Photographic Log.


5. Closure/Deferral Requests

Site characterization, soil delineation and remediation activities for the July 28, 2020, Plains Mewbourne Wishbone 35-34 release have been performed in accordance to applicable NMOCDC guidance and regulations. Based upon supporting documentation provided in this report, GHD, on behalf of Plains, respectfully requests a deferral for remediation for the area adjacent to the Plains equipment skid represented by soil samples WT-Comp-2, HA3-6" and HA4-6". The requested deferral area is presented on Figures 2 through 4. Closure for the remaining remediated areas is also requested on behalf of Plains. Upon dismantling of the Plains equipment skid, the area represented by WT-Comp-2 will be addressed.

If you have any questions or comments concerning this Site Characterization and Closure Report, please do not hesitate to contact our Midland office at (432) 686-0086.

Sincerely,

GHD



Becky Haskell
Senior Project Manager



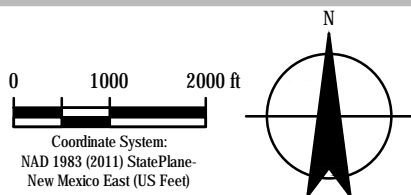
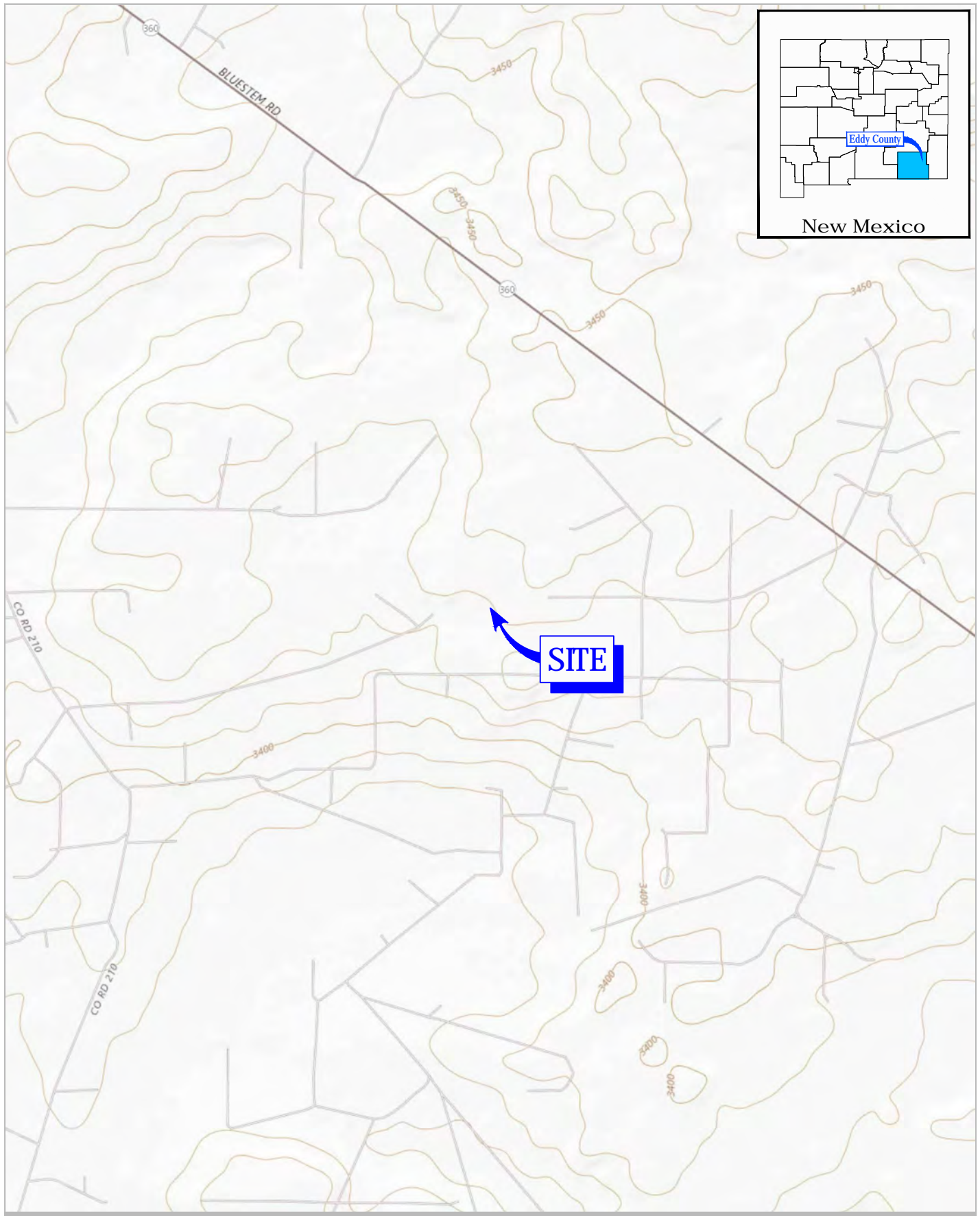
Thomas C. Larson, M.S.
Associate, Midland Operations Manager

Encl. Figure 1– Site Location Map
Figure 2 – Site Details
Figure 3 – Soil Analytical Results: Bottom Hole Confirmation Samples
Figure 4 – Soil Analytical Results: Sidewall Confirmation Samples
Table 1 – Soil Analytical Summary
Appendix A – Release Notification C-141
Appendix B – Site Characterization Documentation

Appendix C – Laboratory Analytical Reports and Chain-of-Custody Documentation
Appendix D – Waste Documentation
Appendix E – Photographic Log

cc: Amber Groves via email.

Figures

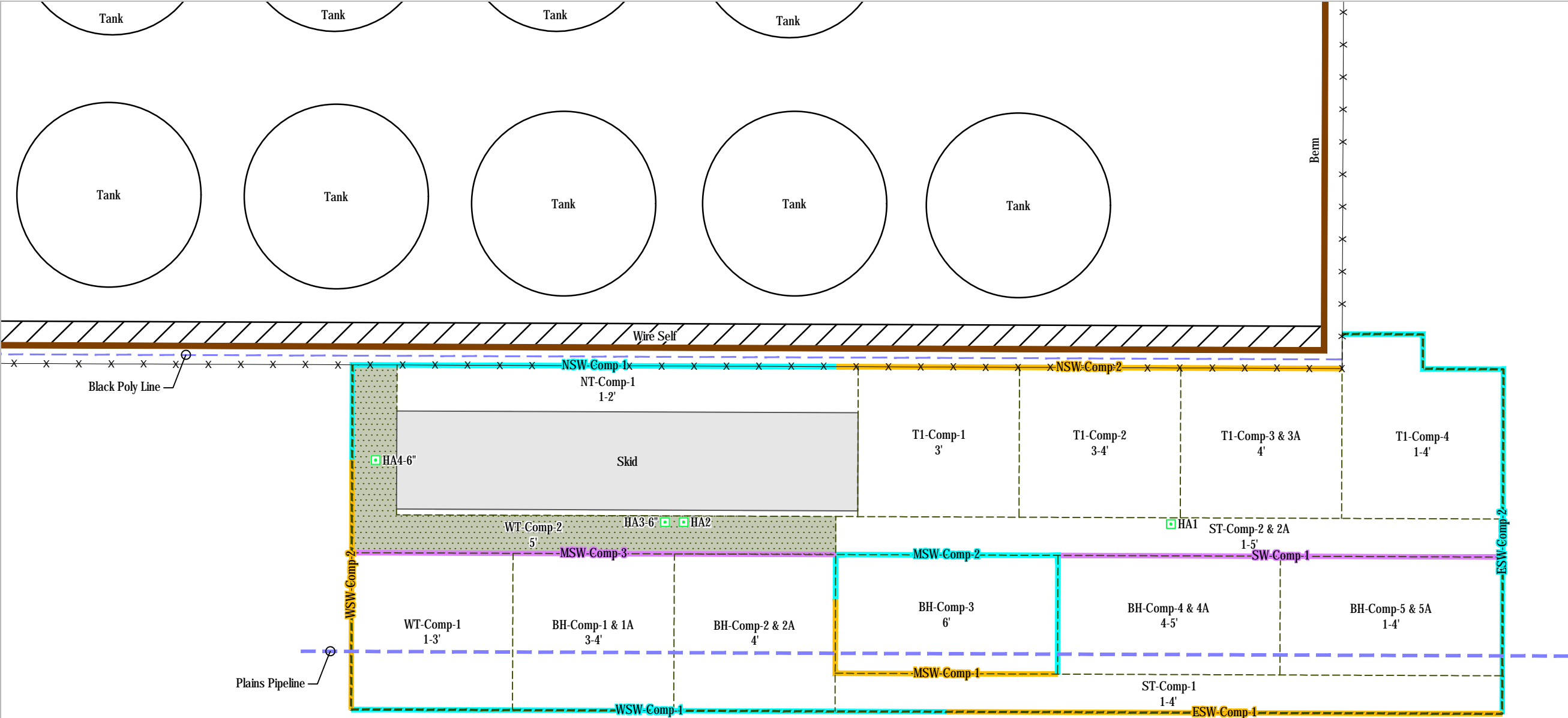


PLAINS PIPELINE L.P.
EDDY COUNTY, NEW MEXICO
MEWBOURNE WISHBONE 35-34

Project No. 11216569-02
Report No. 001
Date September 2020

SITE LOCATION MAP

FIGURE 1



LEGEND

- Hand Auger Location
- Indicates Side Wall Composite Sample
- Indicates Side Wall Composite Sample
- Indicates Side Wall Composite Sample
- Approximate Excavation Limits
- Requested Deferral Area
- Fence Line

- NOTES:**
1. All samples are 5 point composite samples except HA1, HA2, HA 3-6", and HA 4-6".
 2. Impacted soil to Lea Land, LLC.
 3. Confirmation samples collected every 200 square feet or less.

Approximate

0 5 10 ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

N

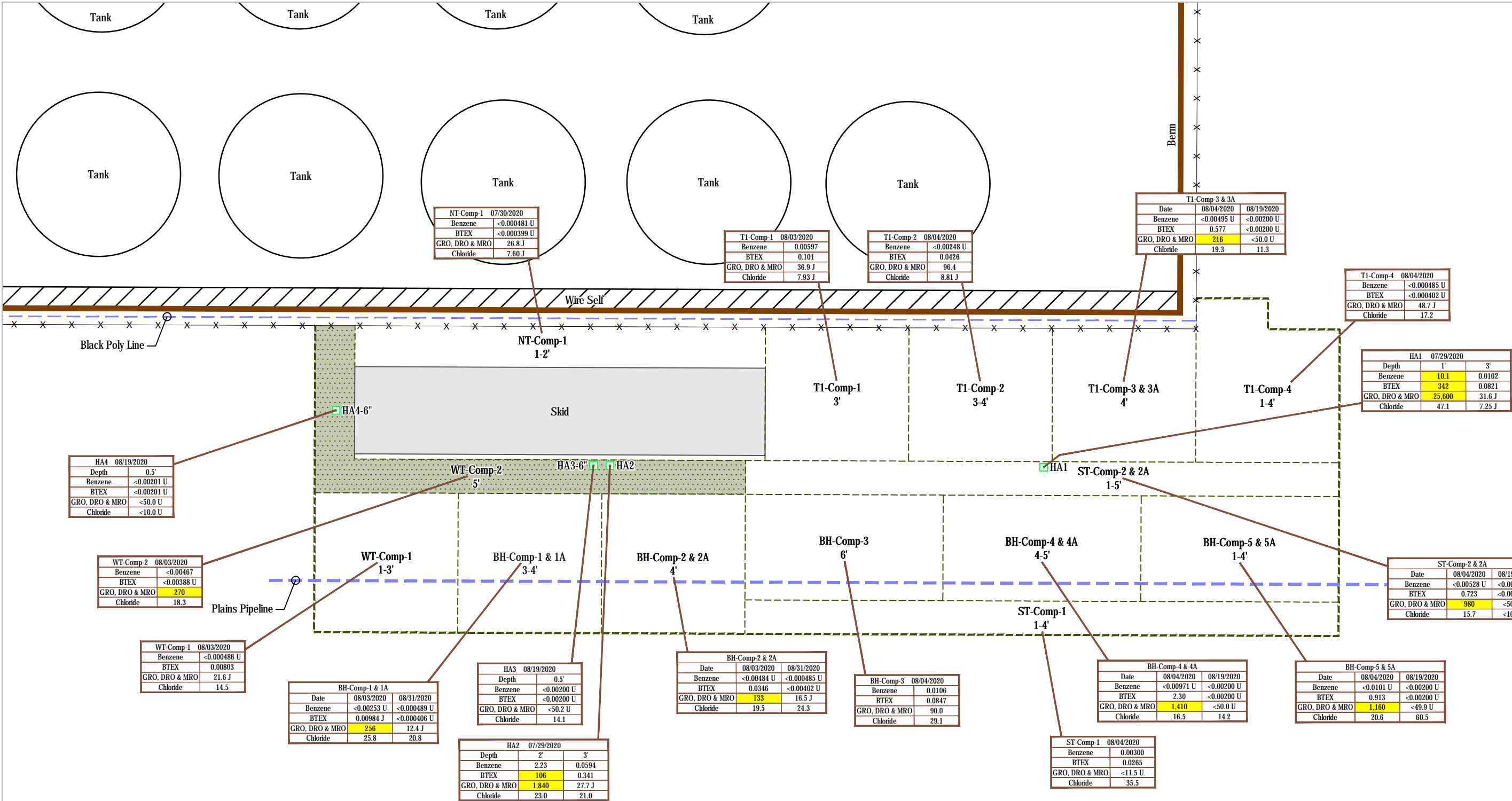


PLAINS PIPELINE L.P.
EDDY COUNTY, NEW MEXICO
MEWBOURNE WISHBONE 35-34
NMOCD TRACKING # NRM2021348350

Project No. 11216569-02
Report No. 001
Date October 2020

SITE DETAILS MAP

FIGURE 2



LEGEND

Hand Auger Location

Approximate Excavation Limits

Requested Deferral Area

Fence Line

Depth

Depth of Sample (ft)

BTEX

Benzene, Toluene, Ethylbenzene & Xylenes Concentration (mg/kg)

GRO

Gasoline Range Organics

DRO

Diesel Range Organics

MRO

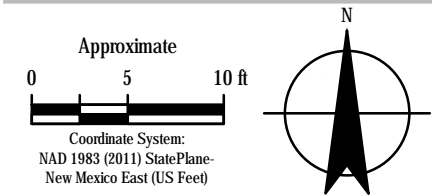
Mineral Oil Range Organics

J

Indicates Estimated Concentration

NOTES:

1. All samples are 5 point composite samples except HA1, HA2, HA 3-6", and HA 4-6".
2. Sample results are in milligram per kilogram (mg/kg).
3. Impacted soil to Lea Land, LLC.
4. Yellow highlighted cells indicate NMOCD exceedance.
5. Confirmation samples collected from areas representing 200 square feet or less.
6. See Table 1 for Comprehensive Analytical Results.

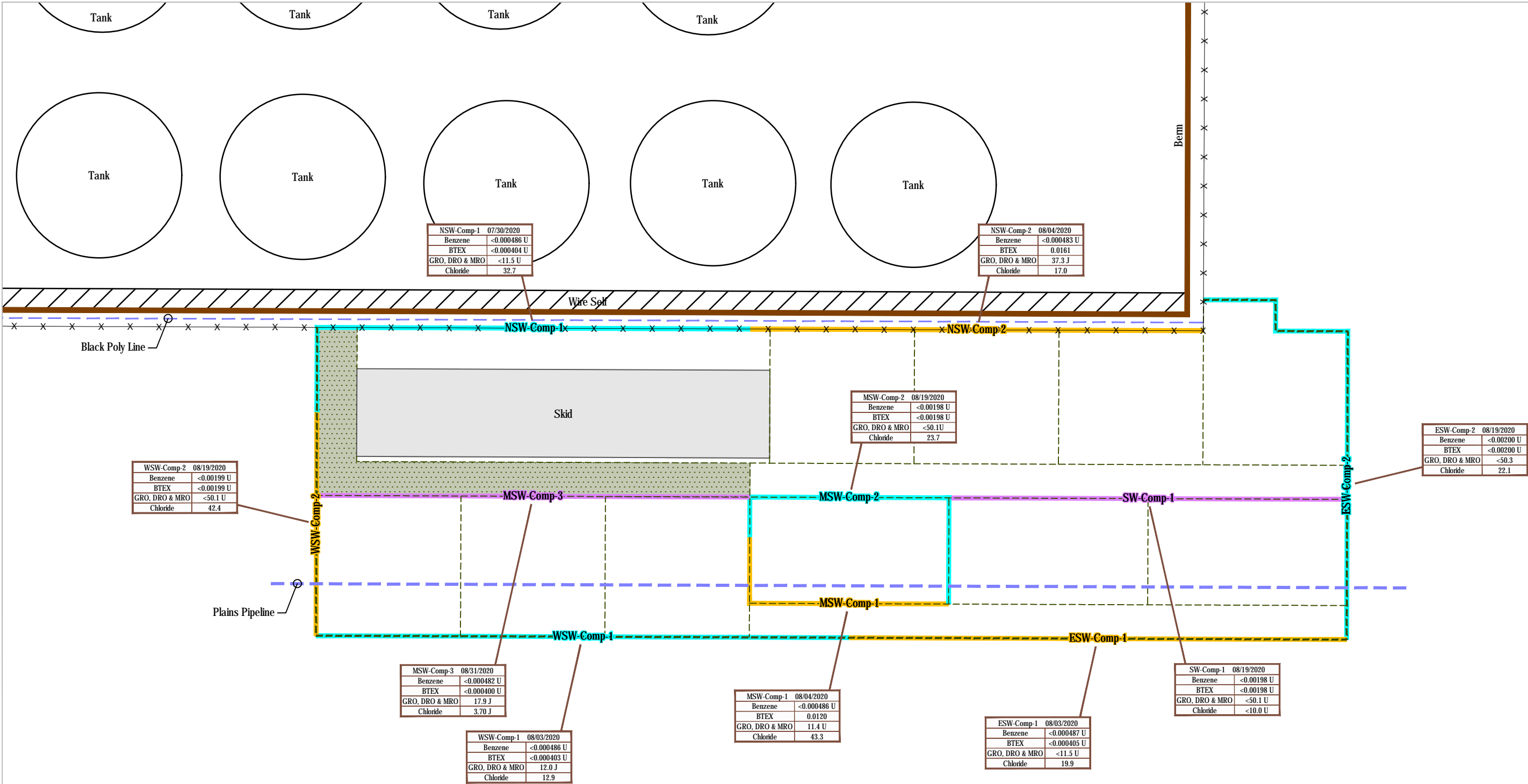


PLAINS PIPELINE L.P.
EDDY COUNTY, NEW MEXICO
MEWBOURNE WISHBONE 35-34
NMOCD TRACKING # NRM2021348350

SOIL ANALYTICAL RESULTS
BOTTOM HOLE CONFIRMATION SAMPLES

Project No. 11216569-02
Report No. 001
Date October 2020

FIGURE 3



LEGEND

Indicates Side Wall Composite Sample

Indicates Side Wall Composite Sample

Indicates Side Wall Composite Sample

Approximate Excavation Limits

Requested Deferral Area

Fence Line

Depth

Depth of Sample (ft)

BTEX

Benzene, Toluene, Ethylbenzene & Xylenes Concentration (mg/kg)

GRO

Gasoline Range Organics

DRO

Diesel Range Organics

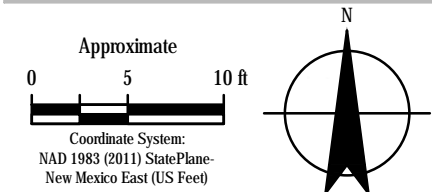
MRO

Mineral Oil Range Organics

J

Indicates Estimated Concentration

- NOTES:
1. All samples are 5 point composite samples except HA1, HA2, HA 3-6", and HA 4-6".
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PLAINS PIPELINE L.P.
EDDY COUNTY, NEW MEXICO
MEWBOURNE WISHBONE 35-34
NMOCD TRACKING # NRM2021348350

SOIL ANALYTICAL RESULTS
SIDEWALL CONFIRMATION SAMPLES

Project No. 11216569-02
Report No. 001
Date October 2020

FIGURE 4

Tables

Table 1
Soil Analytical Data Summary - Sampling Results
Mewbourne Wishbone 35 34 Release Site NRM2021348350
Plains Pipeline, L.P.
Eddy County, New Mexico

Page 1 of 2

Sample ID	Sample Date	Depth (inches or feet bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH				Chloride
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	GRO(C6-C10)	DRO(C10-C28)	MRO (C28-C35)	Total GRO/DRO/MRO	(mg/Kg)
			Table 1 Closure Criteria for Soils <50 feet Depth to Groundwater 19.15.29 NMAC									
			10 mg/Kg	---	---	---	50 mg/Kg	---	---	---	100 mg/Kg	600 mg/Kg
Hand Auger Samples												
HA1-1	7/29/20	1'	10.1	96.3	74.3	161	342	5,410	18,700	1,460	25,600	47.1
HA1-3	7/29/20	3'	0.0102	0.0299	0.0125	0.0295	0.0821	<13.9 U	18.9 J	12.7 J	31.6 J	7.25 J
HA2-2	7/29/20	2'	2.23	27.9	23.8	51.7	106	295	1,430	110 J	1,840	23.0
HA2-3	7/29/20	3'	0.0594	0.163	0.0412	0.0778	0.341	<13.9 U	16.2 J	11.5 J	27.7 J	21.0
*HA3-6"	8/19/20	6" (5.5')	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<50.2 U	<50.2 U	<50.2 U	<50.2 U	14.1
*HA4-6"	8/19/20	6" (5.5')	<0.00201 U	<0.00201 U	<0.00201 U	<0.00201 U	<0.00201 U	<50.0 U	<50.0 U	<50.0 U	<50.0 U	<10.0 U
Bottom Hole Confirmation Samples												
NT-Comp-1	7/30/20	1-2'	<0.000481 U	<0.00522 U	<0.00402 U	<0.000399 U	<0.000399 U	<13.9 U	26.8 J	<11.5 U	26.8 J	7.60 J
WT-Comp-1	8/3/20	1-3'	<0.000486 U	0.00273	0.00199 J	0.00331	0.00803	<13.9 U	21.6 J	<11.4 U	21.6 J	14.5
BH-Comp-1	8/3/20	3'	<0.00253 U	<0.00275 U	<0.00212 U	0.00984 J	0.00984 J	14.6 J	217	24.4 J	256	25.8
BH-Comp-1A	8/31/20	3-4'	<0.000489 U	<0.000532 U	<0.000409 U	<0.000406 U	<0.000406 U	<13.9 U	12.4 J	<11.4 U	12.4 J	20.8
BH-Comp-2	8/3/20	3'	<0.000484 U	0.00551	0.00752	0.0216	0.0346	<13.9 U	117	16.1 J	133	19.5
BH-Comp-2A	8/31/20	4'	<0.000485 U	<0.000527 U	<0.000405 U	<0.000402 U	<0.000402 U	<13.9 U	16.5 J	<11.5 U	16.5 J	24.3
WT-Comp-2	8/3/20	5'	<0.00467 U	<0.00507 U	<0.00391 U	<0.00388 U	<0.00388 U	<13.8 U	241	29.2 J	270	18.3
T1-Comp-1	8/3/20	3'	0.00597	0.0318	0.0173	0.0463	0.101	<13.9 U	22.8 J	14.1 J	36.9 J	7.93 J
T1-Comp-2	8/4/20	3-4'	<0.00248 U	<0.00269 U	0.0171	0.0255	0.0426	<13.9 U	96.4	<11.5 U	96.4	8.81 J
T1-Comp-3	8/4/20	3'	<0.00495 U	0.0351	0.332	0.210	0.577	<14.0 U	196	19.7 J	216	19.3
T1-comp-3A	8/19/20	4'	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<50.0 U	<50.0 U	<50.0 U	<50.0 U	11.3
T1-Comp-4	8/4/20	1-4'	<0.000485 U	<0.000527 U	<0.000405 U	<0.000402 U	<0.000402 U	<14.0 U	48.7 J	<11.5 U	48.7 J	17.2
St-Comp-1	8/4/20	1-4'	0.00300	0.0116	0.00341	0.00844	0.0265	<14.0 U	<11.5 U	<11.5 U	<11.5 U	35.5
St-Comp-2	8/4/20	3-4'	<0.00528 U	0.0911	0.157	0.475	0.723	36.0 J	860	84.3	980	15.7
ST-Comp-2A	8/19/20	1-5'	<0.00198 U	<0.00198 U	<0.00198 U	<0.00198 U	<0.00198 U	<50.0 U	<50.0 U	<50.0 U	<50.0 U	<10.1 U
BH-Comp-5	8/4/20	1-3'	<0.0101 U	0.0954	0.197	0.621	0.913	33.5 J	1,020	105	1,160	20.6
BH-Comp-5A	8/19/20	1-4'	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<49.9 U	<49.9 U	<49.9 U	<49.9 U	60.5
BH-Comp-4	8/4/20	3'	<0.00971 U	0.181	1.25	0.866	2.30	31.3 J	1,250	131	1,410	16.5
BH-Comp-4A	8/19/20	4-5'	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<50.0 U	<50.0 U	<50.0 U	<50.0 U	14.2
BH-Comp-3	8/4/20	6'	0.0106	0.0320	0.0165	0.0256	0.0847	<13.9 U	90.0	<11.5 U	90.0	29.1
Sidewall Confirmation Samples												
NSW-Comp-1	7/30/20	N/A	<0.000486 U	<0.000529 U	<0.000407 U	<0.000404 U	<0.000404 U	<13.9 U	<11.5 U	<11.5 U	<11.5 U	32.7
ESW-Comp-1	8/3/20	N/A	<0.000487 U	<0.000530 U	<0.000408 U	<0.000405 U	<0.000405 U	<14.0 U	<11.5 U	<11.5 U	<11.5 U	19.9
WSW-Comp-1	8/3/20	N/A	<0.000486 U	<0.000528 U	<0.000406 U	<0.000403 U	<0.000403 U	<13.9 U	12.0 J	<11.5 U	12.0 J	12.9
MSW-Comp-1	8/4/20	N/A	<0.000486 U	0.00487	<0.000406 U	0.00713	0.0120	<13.9 U	<11.5 U	<11.4 U	<11.4 U	43.3
NSW-Comp-2	8/4/20	N/A	<0.000483 U	0.00504	0.00543	0.00563	0.0161	<13.9 U	20.7 J	16.6 J	37.3 J	17.0
SW-comp-1	8/19/20	N/A	<0.00198 U	<0.00198 U	<0.00198 U	<0.00198 U	<0.00198 U	<50.1 U	<50.1 U	<50.1 U	<50.1 U	<10.0 U
MSW-Comp-2	8/19/20	N/A	<0.00198 U	<0.00198 U	<0.00198 U	<0.00198 U	<0.00198 U	<50.1 U	<50.1 U	<50.1 U	<50.1 U	23.7
WSW-Comp-2	8/19/20	N/A	<0.00199 U	<0.00199 U	<0.00199 U	<0.00199 U	<0.00199 U	<50.1 U	<50.1 U	<50.1 U	<50.1 U	42.4

Table 1
Soil Analytical Data Summary - Sampling Results
Mewbourne Wishbone 35 34 Release Site NRM2021348350
Plains Pipeline, L.P.
Eddy County, New Mexico

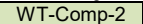
Page 2 of 2

Sample ID	Sample Date	Depth (inches or feet bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH				Chloride
								GRO(C6-C10)	DRO(C10-C28)	MRO (C28-C35)	Total GRO/DRO/MRO	
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
			Table I Closure Criteria for Soils <50 feet Depth to Groundwater 19.15.29 NMAC									
			10 mg/Kg	---	---	---	50 mg/Kg	---	---	---	100 mg/Kg	600 mg/Kg
ESW-Comp-2	8/19/20	N/A	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<50.3 U	<50.3 U	<50.3 U	<50.3 U	22.1
MSW-Comp-3	8/31/20	N/A	<0.000482 U	<0.000524 U	<0.000403 U	<0.000400 U	<0.000400 U	<13.9 U	17.9 J	<11.5 U	17.9 J	3.70 J

1. Values reported in mg/kg
2. < = Value Less than Reporting Limit (RL)
3. Bold Indicates Analyte Detected
4. BTEX analyses by EPA Method SW 8021B.

5. TPH analyses by EPA Method SW 8015 Mod.
6. GRO/DRO/MRO = Gasoline/Diesel/Motor Oil
7. Yellow shaded cells indicate analytical samples that exceed the NMOC 19.15.29.12 Table 1 Closure Criteria for the site.
8. J - the target analytes was positively identified below the quantitation limit and above the detection limit.

 Sample point excavated

 Deferral Area

Note: HA3-6" & HA4-6" were collected from the bottom of the excavation floor.

Appendices

Appendix A

Release Notification C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Plains Pipeline, L.P.	OGRID 713291
Contact Name Amber Groves	Contact Telephone 575-200-5517
Contact email algroves@paalp.com	Incident # (assigned by OCD)
Contact mailing address 3112 W. US Hwy 82, Lovington, NM 88260	

Location of Release Source

Latitude 32.698111

Longitude -104.037722

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Mewbourne Wishbone 35-34 Tank Battery	Site Type Pipeline
Date Release Discovered 7/28/2020 @ 10:40 AM	API# (if applicable)

Unit Letter	Section	Township	Range	County
P	35	18S	29E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 15 bbls	Volume Recovered (bbls) 10 bbls
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

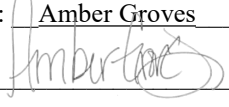
Nipple and check valve failure on LACT Unit.

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
Printed Name: <u>Amber Groves</u>	Title: <u>Remediation Coordinator</u>
Signature: <u></u>	Date: <u>7/31/2020</u>
email: <u>algroves@paalp.com</u>	Telephone: <u>(575)200-5517</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

Amber L Groves

From: David Guerrero Jr
Sent: Friday, July 31, 2020 9:06 AM
To: Amber L Groves
Cc: William M Gilliland, Jr.
Subject: Wishbone 35-34 Amount Lost

Amount of product lost, on the Wishbone 35-34 Release, was based off of inputting spill dimensions into a spill calculator. The spill area measured ~110'x30' with an average depth of 2", for a total of 15bbls.

Thank you,

DAVID GUERRERO JR
PLAINS ALL AMERICAN
DISTRICT MANAGER, PPN
(432) 202-9397 | (432) 758-8002
DGUERRERO@PAALP.COM





Appendix B


Site Characterization Documentation

Plains Mewbourne wishbone 35 34

32.69811 -104.037722

Legend

-  High
-  Low
-  Medium
-  Mewbourne Wishbone 35 34

 Plains Mewbourne Wishbone 35 34 Release Location



OSE Public Print



10/6/2020 1:28:14 PM

GIS WATERS PODs

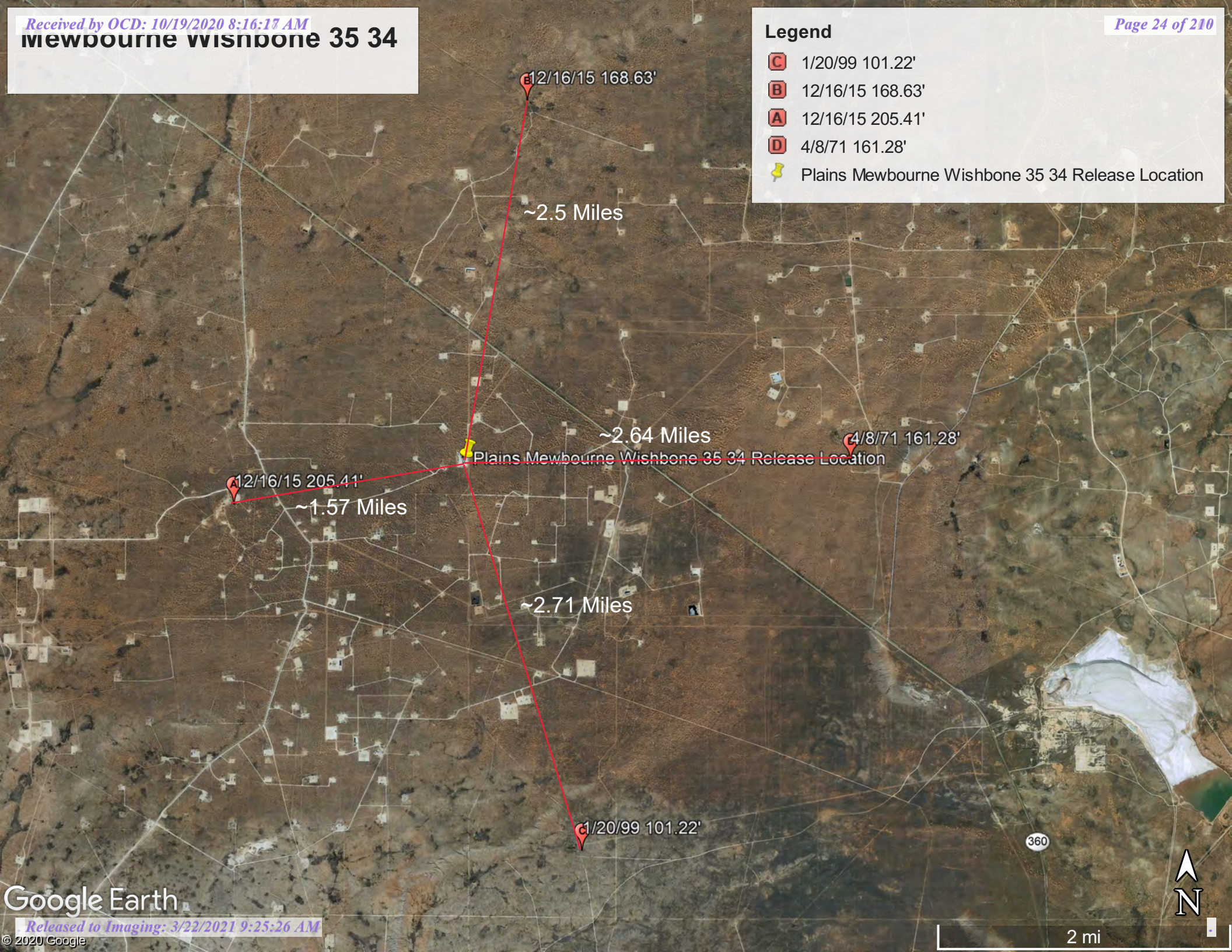
- Active
- OSE District Boundary

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user

Mewbourne Wishbone 35 34

Legend

- C 1/20/99 101.22'
- B 12/16/15 168.63'
- A 12/16/15 205.41'
- D 4/8/71 161.28'
- 📍 Plains Mewbourne Wishbone 35 34 Release Location





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Data Category:

Groundwater

▼


Geographic Area:

United States

▼

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Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 324139104034901

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 324139104034901 19S.29E.03.12344

Eddy County, New Mexico
Latitude 32°41'38.8", Longitude 104°03'52.2" NAD83
Land-surface elevation 3,421 feet above NAVD88
The depth of the well is 240 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1984-07-20		D	192.26			2		U		U	A
1994-03-11		D	189.96			2		S		U	A
1999-01-15		D	188.86			2		S	USGS	S	A
2015-12-16	11:20 MST	m	205.42			2	R	S	USGS	S	A

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Status	R	Site had been pumped recently.
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

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Agency code = usgs
site_no list =

- 324402104014701

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 324402104014701 18S.29E.24.14413

Eddy County, New Mexico
Latitude 32°44'01.5", Longitude 104°01'48.9" NAD83
Land-surface elevation 3,441 feet above NAVD88
The depth of the well is 202.00 feet below land surface.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
2015-12-16	10:30 MST	m	168.63			2			S	USGS	A
1994-03-30		D	159.96			2	Z		S		A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Status	Z	Other conditions existed that would affect the measured water level (explain in remarks).
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for USA: Water Levels

URL: [https://nwis.waterdata.usgs.gov/nwis/gwlevels?](https://nwis.waterdata.usgs.gov/nwis/gwlevels?site_no=324402104014701&agency_cd=USGS&format=html)



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site_no list =

- 323936104012601

Minimum number of levels = 1
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USGS 323936104012601 19S.29E.13.41224A

Eddy County, New Mexico
Latitude 32°39'36", Longitude 104°01'26" NAD27
Land-surface elevation 3,309 feet above NGVD29
The depth of the well is 120.00 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1990-09-20		D	101.40			2	Z	S			A
1994-03-18		D	99.83			2	Z	S			A
1999-01-20		D	101.22			2		S	USGS	S	A

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Status	Z	Other conditions existed that would affect the measured water level (explain in remarks).
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Data Category:	Geographic Area:	
Groundwater	United States	GO

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Agency code = usgs
site_no list =

- 324154103593301

Minimum number of levels = 1
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USGS 324154103593301 18S.30E.32.32422

Eddy County, New Mexico
Latitude 32°41'54", Longitude 103°59'33" NAD27
Land-surface elevation 3,374 feet above NAVD88
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1968-03-08		D	164.45			2		U		U	A
1971-04-08		D	161.28			2		U		U	A

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for USA: Water Levels
URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

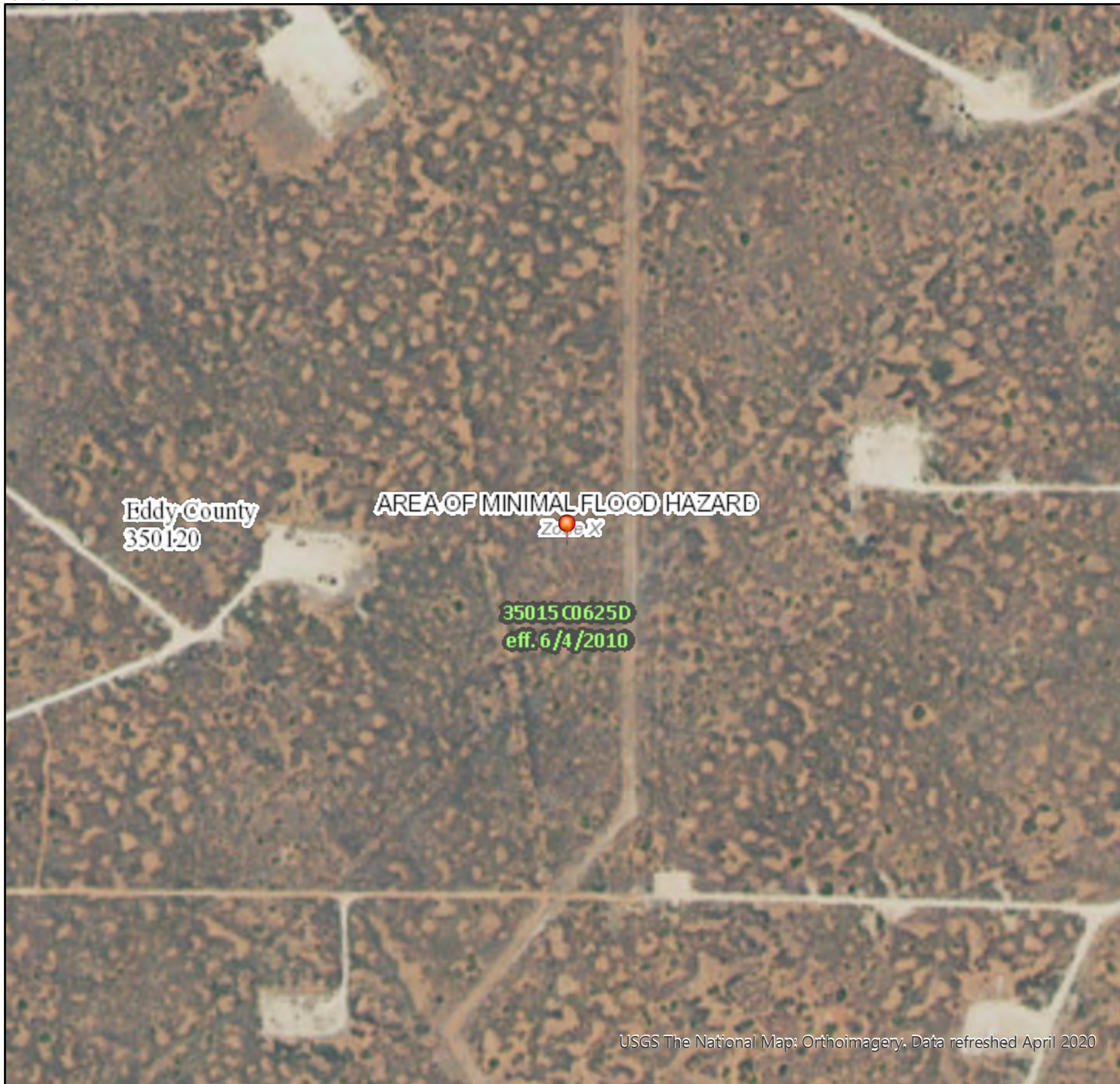


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0.29 0.27 nadww01

National Flood Hazard Layer FIRMMette



104°2'34"W 32°42'7"N



USGS The National Map: Orthoimagery. Data refreshed April 2020

0 250 500 1,000 1,500 2,000 Feet 1:6,000

Released to Imaging: 3/22/2021 9:25:26 AM

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

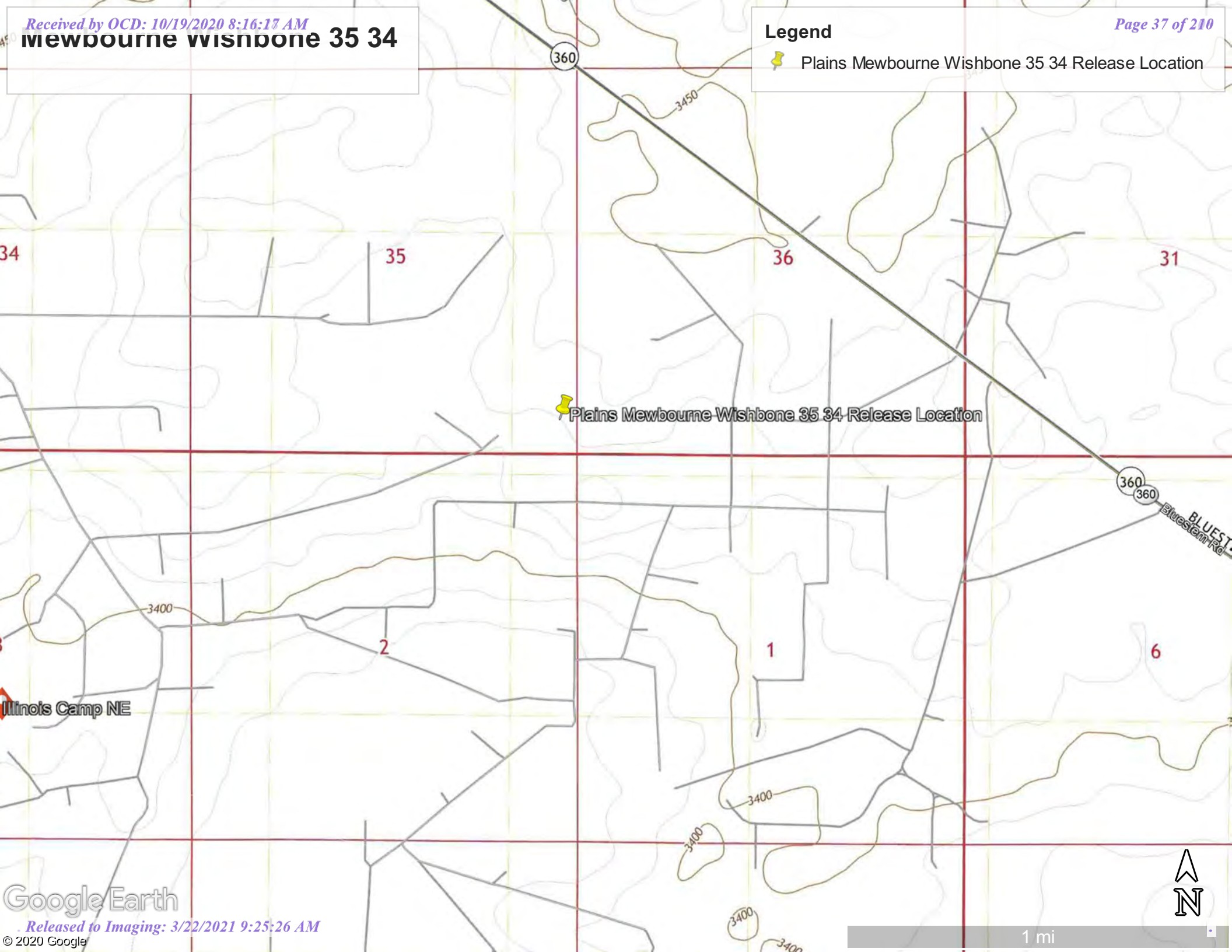
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/12/2020 at 4:00 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Mewbourne wishbone 35 34

Legend

-  Plains Mewbourne Wishbone 35 34 Release Location

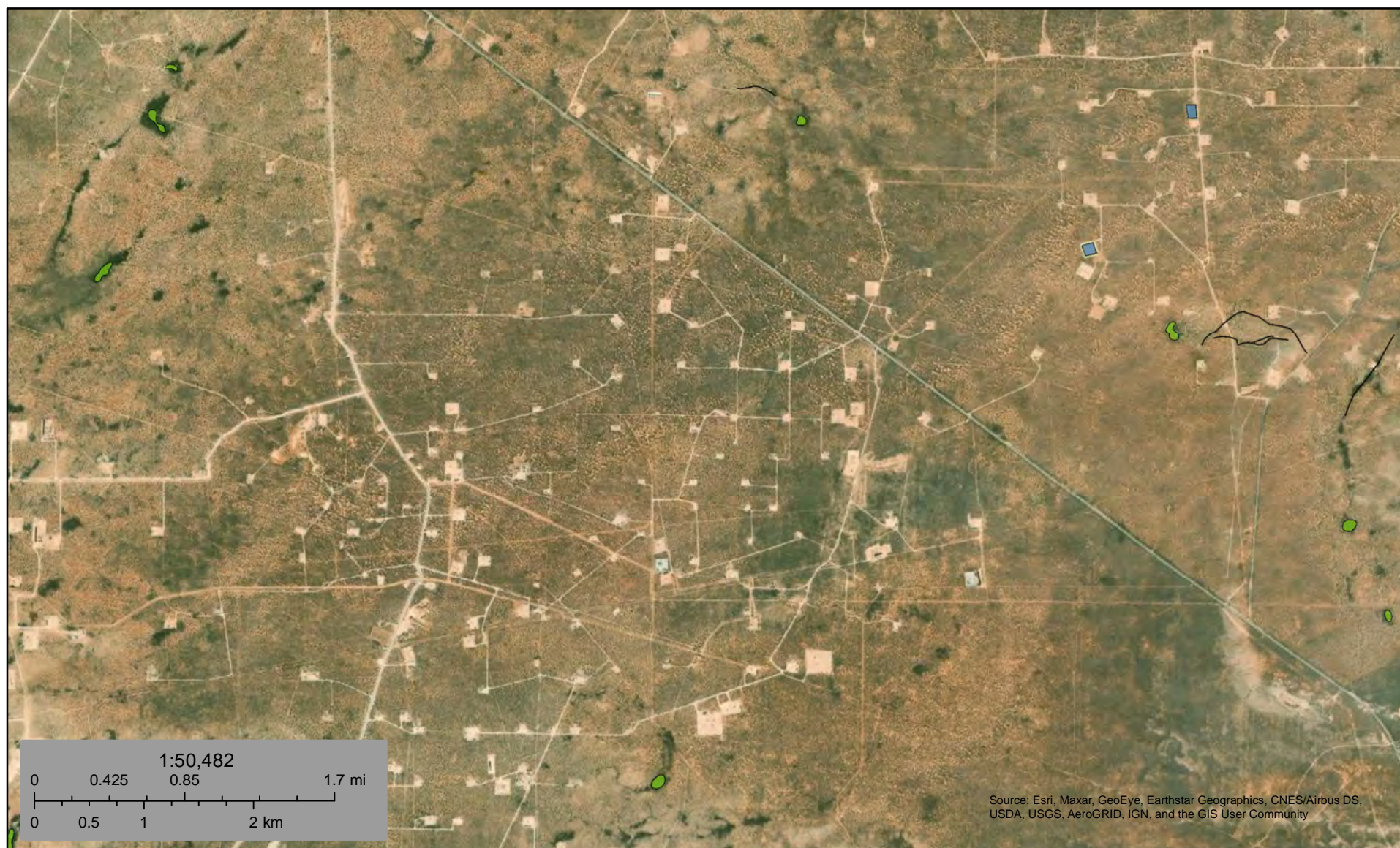




U.S. Fish and Wildlife Service

National Wetlands Inventory

Mewbourne Wishbone 35 34



August 12, 2020

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Appendix C

Laboratory Analytical Reports and Chain-of-Custody Documentation



Analytical Report 668533

for

GHD Services, INC- Midland

Project Manager: Becky Haskell

Plains Mewbourne Wishbone 35 34

11216569

08.11.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.11.2020

Project Manager: **Becky Haskell**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: Eurofins Xenco, LLC Report No(s): **668533**
Plains Mewbourne Wishbone 35 34
Project Address: Eddy County, New Mexico

Becky Haskell:

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 Eurofins Xenco, LLC Report Number(s) 668533. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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 Eurofins Xenco, LLC. 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. 668533 will be filed for 45 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Debbie Simmons
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 668533

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA1-1	S	07.29.2020 09:00	1 ft	668533-001
HA1-3	S	07.29.2020 09:15	3 ft	668533-002
HA2-2	S	07.29.2020 09:30	2 ft	668533-003
HA2-3	S	07.29.2020 09:45	3 ft	668533-004

**CASE NARRATIVE****Client Name: GHD Services, INC- Midland****Project Name: Plains Mewbourne Wishbone 35 34**Project ID: 11216569
Work Order Number(s): 668533Report Date: 08.11.2020
Date Received: 07.29.2020

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

08.11.20: revised report printed to correct Wishboone to Wishbone in the project name

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results

668533

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: HA1-1

Matrix: Soil

Sample Depth: 1 ft

Lab Sample Id: 668533-001

Date Collected: 07.29.2020 09:00

Date Received: 07.29.2020 12:28

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3132962

Date Prep: 07.29.2020 12:30

Prep seq: 7708307

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	47.1	9.98	0.353	mg/kg	07.29.2020 15:58		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3132966

Date Prep: 07.29.2020 17:00

Prep seq: 7708317

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	5410	502	139	mg/kg	07.29.2020 19:01		10
Diesel Range Organics (DRO)	C10C28DRO	18700	502	115	mg/kg	07.29.2020 19:01		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1460	502	115	mg/kg	07.29.2020 19:01		10
Total TPH	PHC635	25600		115	mg/kg	07.29.2020 19:01		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	89	70 - 135	%		

Analytical Method: BTEX by EPA 8021

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3132984

Date Prep: 07.29.2020 15:07

Prep seq: 7708310

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	10.1	1.01	0.245	mg/kg	07.29.2020 20:55		500
Toluene	108-88-3	96.3	1.01	0.267	mg/kg	07.29.2020 20:55		500
Ethylbenzene	100-41-4	74.3	1.01	0.205	mg/kg	07.29.2020 20:55		500
m_p-Xylenes	179601-23-1	113	2.02	0.381	mg/kg	07.29.2020 20:55		500
o-Xylene	95-47-6	48.3	1.01	0.204	mg/kg	07.29.2020 20:55		500
Xylenes, Total	1330-20-7	161		0.204	mg/kg	07.29.2020 20:55		
Total BTEX		342		0.204	mg/kg	07.29.2020 20:55		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	99	70 - 130	%		



Certificate of Analytical Results

668533

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: HA1-3

Matrix: Soil

Sample Depth: 3 ft

Lab Sample Id: 668533-002

Date Collected: 07.29.2020 09:15

Date Received: 07.29.2020 12:28

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3132962

Date Prep: 07.29.2020 12:30

Prep seq: 7708307

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	7.25	9.96	0.353	mg/kg	07.29.2020 16:14	J	1

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3132966

Date Prep: 07.29.2020 17:00

Prep seq: 7708317

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.2	13.9	mg/kg	07.29.2020 18:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	18.9	50.2	11.5	mg/kg	07.29.2020 18:00	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	12.7	50.2	11.5	mg/kg	07.29.2020 18:00	J	1
Total TPH	PHC635	31.6		11.5	mg/kg	07.29.2020 18:00	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	108	70 - 135	%		
o-Terphenyl	106	70 - 135	%		

Analytical Method: BTEX by EPA 8021

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3132984

Date Prep: 07.29.2020 15:07

Prep seq: 7708310

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.0102	0.00202	0.000489	mg/kg	07.29.2020 20:14		1
Toluene	108-88-3	0.0299	0.00202	0.000532	mg/kg	07.29.2020 20:14		1
Ethylbenzene	100-41-4	0.0125	0.00202	0.000409	mg/kg	07.29.2020 20:14		1
m_p-Xylenes	179601-23-1	0.0195	0.00403	0.000760	mg/kg	07.29.2020 20:14		1
o-Xylene	95-47-6	0.0100	0.00202	0.000406	mg/kg	07.29.2020 20:14		1
Xylenes, Total	1330-20-7	0.0295		0.000406	mg/kg	07.29.2020 20:14		
Total BTEX		0.0821		0.000406	mg/kg	07.29.2020 20:14		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	102	70 - 130	%		



Certificate of Analytical Results

668533

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: HA2-2

Matrix: Soil

Sample Depth: 2 ft

Lab Sample Id: 668533-003

Date Collected: 07.29.2020 09:30

Date Received: 07.29.2020 12:28

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3132962

Date Prep: 07.29.2020 12:30

Prep seq: 7708307

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	23.0	10.0	0.355	mg/kg	07.29.2020 16:20		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3132966

Date Prep: 07.29.2020 17:00

Prep seq: 7708317

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	295	251	69.6	mg/kg	07.29.2020 18:41		5
Diesel Range Organics (DRO)	C10C28DRO	1430	251	57.5	mg/kg	07.29.2020 18:41		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	110	251	57.4	mg/kg	07.29.2020 18:41	J	5
Total TPH	PHC635	1840		57.4	mg/kg	07.29.2020 18:41		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	115	70 - 135	%		
o-Terphenyl	107	70 - 135	%		

Analytical Method: BTEX by EPA 8021

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3132984

Date Prep: 07.29.2020 15:07

Prep seq: 7708310

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	2.23	1.01	0.245	mg/kg	07.29.2020 21:15		500
Toluene	108-88-3	27.9	1.01	0.267	mg/kg	07.29.2020 21:15		500
Ethylbenzene	100-41-4	23.8	1.01	0.205	mg/kg	07.29.2020 21:15		500
m_p-Xylenes	179601-23-1	33.7	2.02	0.381	mg/kg	07.29.2020 21:15		500
o-Xylene	95-47-6	18.0	1.01	0.204	mg/kg	07.29.2020 21:15		500
Xylenes, Total	1330-20-7	51.7		0.204	mg/kg	07.29.2020 21:15		
Total BTEX		106		0.204	mg/kg	07.29.2020 21:15		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	101	70 - 130	%		



Certificate of Analytical Results

668533

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: HA2-3

Matrix: Soil

Sample Depth: 3 ft

Lab Sample Id: 668533-004

Date Collected: 07.29.2020 09:45

Date Received: 07.29.2020 12:28

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3132962

Date Prep: 07.29.2020 12:30

Prep seq: 7708307

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	21.0	10.0	0.354	mg/kg	07.29.2020 16:25		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3132966

Date Prep: 07.29.2020 17:00

Prep seq: 7708317

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.2	13.9	mg/kg	07.29.2020 18:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	16.2	50.2	11.5	mg/kg	07.29.2020 18:20	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	11.5	50.2	11.5	mg/kg	07.29.2020 18:20	J	1
Total TPH	PHC635	27.7		11.5	mg/kg	07.29.2020 18:20	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	105	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3132984

Date Prep: 07.29.2020 15:07

Prep seq: 7708310

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.0594	0.00200	0.000486	mg/kg	07.29.2020 20:34		1
Toluene	108-88-3	0.163	0.00200	0.000528	mg/kg	07.29.2020 20:34		1
Ethylbenzene	100-41-4	0.0412	0.00200	0.000406	mg/kg	07.29.2020 20:34		1
m_p-Xylenes	179601-23-1	0.0588	0.00400	0.000754	mg/kg	07.29.2020 20:34		1
o-Xylene	95-47-6	0.0190	0.00200	0.000403	mg/kg	07.29.2020 20:34		1
Xylenes, Total	1330-20-7	0.0778		0.000403	mg/kg	07.29.2020 20:34		
Total BTEX		0.341		0.000403	mg/kg	07.29.2020 20:34		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	92	70 - 130	%		



Certificate of Analytical Results

668533

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **7708307-1-BLK** Matrix: Solid Sample Depth:
 Lab Sample Id: 7708307-1-BLK Date Collected: Date Received:
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Analyst: MAB % Moist: Tech: MAB
 Seq Number: 3132962 Date Prep: 07.29.2020 12:30
 Prep seq: 7708307

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.354	10.0	0.354	mg/kg	07.29.2020 12:42	U	1

Sample Id: **7708310-1-BLK** Matrix: Solid Sample Depth:
 Lab Sample Id: 7708310-1-BLK Date Collected: Date Received:
 Analytical Method: BTEX by EPA 8021 Prep Method: 5035A
 Analyst: MAB % Moist: Tech: MAB
 Seq Number: 3132984 Date Prep: 07.29.2020 15:07
 Prep seq: 7708310

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	07.29.2020 13:01	U	1
Toluene	108-88-3	<0.000528	0.00200	0.000528	mg/kg	07.29.2020 13:01	U	1
Ethylbenzene	100-41-4	<0.000406	0.00200	0.000406	mg/kg	07.29.2020 13:01	U	1
m_p-Xylenes	179601-23-1	<0.000754	0.00400	0.000754	mg/kg	07.29.2020 13:01	U	1
o-Xylene	95-47-6	<0.000403	0.00200	0.000403	mg/kg	07.29.2020 13:01	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	102	70 - 130	%		



Certificate of Analytical Results

668533

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: 7708317-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7708317-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3132966

Date Prep: 07.29.2020 13:00

Prep seq: 7708317

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.0	13.9	mg/kg	07.29.2020 12:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.0	11.5	mg/kg	07.29.2020 12:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.0	11.5	mg/kg	07.29.2020 12:35	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	100	70 - 135	%		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantitation limit and above the detection limit.
- 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.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 08112020

Work Orders : 668533

Project ID: 11216569

Lab Batch #: 3132984

Sample: 7708310-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.29.2020 13:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0303	0.0300	101	70-130	
4-Bromofluorobenzene	0.0305	0.0300	102	70-130	

Lab Batch #: 3132984

Sample: 7708310-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.29.2020 13:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0295	0.0300	98	70-130	
4-Bromofluorobenzene	0.0290	0.0300	97	70-130	

Lab Batch #: 3132984

Sample: 7708310-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.29.2020 13:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	70-130	
4-Bromofluorobenzene	0.0285	0.0300	95	70-130	

Lab Batch #: 3132984

Sample: 668503-008 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07.29.2020 14:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0282	0.0300	94	70-130	
4-Bromofluorobenzene	0.0274	0.0300	91	70-130	

Lab Batch #: 3132984

Sample: 668503-008 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07.29.2020 14:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0289	0.0300	96	70-130	
4-Bromofluorobenzene	0.0266	0.0300	89	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 08112020

Work Orders : 668533

Project ID: 11216569

Lab Batch #: 3132966

Sample: 7708317-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.29.2020 12:35

SURROGATE RECOVERY 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	49.9	50.0	100	70-135	

Lab Batch #: 3132966

Sample: 7708317-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.29.2020 12:55

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	56.9	50.0	114	70-135	

Lab Batch #: 3132966

Sample: 7708317-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.29.2020 13:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	131	100	131	70-135	
o-Terphenyl	57.0	50.0	114	70-135	

Lab Batch #: 3132966

Sample: 668503-008 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07.29.2020 13:56

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	54.6	50.2	109	70-135	

Lab Batch #: 3132966

Sample: 668503-008 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07.29.2020 14:16

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.8	123	70-135	
o-Terphenyl	54.1	49.9	108	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



BS / BSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 668533

Project ID: 11216569

Analyst: MAB

Date Prepared: 07.29.2020

Date Analyzed: 07.29.2020

Lab Batch ID: 3132984

Sample: 7708310-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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	<0.000486	0.100	0.104	104	0.100	0.101	101	3	70-130	35	
Toluene	<0.000528	0.100	0.0978	98	0.100	0.0944	94	4	70-130	35	
Ethylbenzene	<0.000406	0.100	0.103	103	0.100	0.0993	99	4	71-129	35	
m_p-Xylenes	<0.000754	0.200	0.210	105	0.200	0.205	103	2	70-135	35	
o-Xylene	<0.000403	0.100	0.105	105	0.100	0.102	102	3	71-133	35	

Analyst: MAB

Date Prepared: 07.29.2020

Date Analyzed: 07.29.2020

Lab Batch ID: 3132962

Sample: 7708307-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	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											
Chloride	<0.354	250	269	108	250	265	106	1	90-110	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 668533

Project ID: 11216569

Analyst: DTH

Date Prepared: 07.29.2020

Date Analyzed: 07.29.2020

Lab Batch ID: 3132966

Sample: 7708317-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<13.9	1000	1070	107	1000	1090	109	2	70-135	35	
Diesel Range Organics (DRO)	<11.5	1000	1120	112	1000	1130	113	1	70-135	35	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 668533

Lab Batch ID: 3132984

Date Analyzed: 07.29.2020

Reporting Units: mg/kg

QC- Sample ID: 668503-008 S

Date Prepared: 07.29.2020

Report Date: 08112020

Project ID: 11216569

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000484	0.0996	0.116	116	0.100	0.115	115	1	70-130	35	
Toluene	<0.000526	0.0996	0.108	108	0.100	0.110	110	2	70-130	35	
Ethylbenzene	<0.000405	0.0996	0.114	114	0.100	0.112	112	2	71-129	35	
m_p-Xylenes	<0.000751	0.199	0.230	116	0.200	0.228	114	1	70-135	35	
o-Xylene	<0.000401	0.0996	0.112	112	0.100	0.114	114	2	71-133	35	

Lab Batch ID: 3132962

Date Analyzed: 07.29.2020

Reporting Units: mg/kg

QC- Sample ID: 668503-001 S

Date Prepared: 07.29.2020

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	24.6	199	231	104	200	232	104	0	90-110	20	

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, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 668533

Lab Batch ID: 3132962

Date Analyzed: 07.29.2020

Reporting Units: mg/kg

QC- Sample ID: 668533-001 S

Date Prepared: 07.29.2020

Report Date: 08112020

Project ID: 11216569

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	47.1	200	245	99	198	243	99	1	90-110	20	

Lab Batch ID: 3132966

QC- Sample ID: 668503-008 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07.29.2020

Date Prepared: 07.29.2020

Analyst: DTH

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY 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
Gasoline Range Hydrocarbons (GRO)	<13.9	1000	1030	103	998	1030	103	0	70-135	35	
Diesel Range Organics (DRO)	<11.5	1000	1070	107	998	1070	107	0	70-135	35	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Setting the Standard since 1990

Stafford, Texas (281-240-4200)

Dallas Texas (214-902-0300)

Service Center - San Antonio, Texas (210-509-3334)

www.xenco.com

Odessa, Texas (432-563-1800)

Morcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

668533

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes	
Company Name / Branch: GHD Midland		Project Name/Number: Plains Mewbourne Wapbourne 35.24 / 11216569		Xenoco Quote #		Xenoco Job #	
Company Address: 2135 S. Loop 250 West Midland TX		Project Location: Eddy County, New Mexico		Hold (if GRO + DRO is Greater than 1,000 mg/kg in sample HA2-2, run HA2-3 for TPH, BTEX & Chloride).			
Email: becky.haskell@ghd.com glenn.quinney@ghd.com tom.larson@ghd.com		Phone No: (432)665-0965		Invoice To: Camille Bryant Plains All American Pipeline #10 Delta Drive Suite 558 E Midland, TX 79705 PO Number: NA			
Project Contact: Becky Haskell / Glenn Quinney							
Sampler's Name: Glenn Quinney							

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	CI	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH By 8015 Mod (GRO, DRO & MRO)	BTEX 8021 B	Chloride 300	Field Comments
1	HA1-1	1'	7/29/2020	9:00	S	1									X	X	X	
2	HA1-3	3'	7/29/2020	9:15	S	1									X	X	X	
3	HA2-2	2'	7/29/2020	9:30	S	1									X	X	X	
4	HA2-3	3'	7/29/2020	9:45	S	1									X		X	
5																		
6																		
7																		
8																		
9																		
10																		

<input type="checkbox"/> Same Day TAT <input checked="" type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 3 Day EMERGENCY		<input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level III Std QC+ Forms <input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> TRRP Checklist	<input type="checkbox"/> Level IV (Full Data Pkg /raw data) <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> UST / RG -411	Hold HA2-3, if GRO + DRO => 1,000 mg/kg in sample HA2-2 run HA2-3 for TPH, BTEX & Chloride. If GRO + DRO =< 1,000 mg/kg in sample HA2-2 don't run sample HA2-3.
---	--	---	---	---

TAT Starts Day received by Lab, if received by 5:00 pm		Report MDLs and J values.		No SOW for this project - Direct bill to Plains	
Relinquished by Sampler:	DATE TIME: 7/29/2020 12:28	Received By:	DATE TIME:	Received By:	DATE TIME:
Relinquished by:	DATE TIME:	Received By:	DATE TIME:	Received By:	DATE TIME:
Relinquished by:	DATE TIME:	Received By:	DATE TIME:	Received By:	DATE TIME:

On Ice	Cooler Temp.	Thermo, Corr. Factor
<input checked="" type="checkbox"/>	68/50	-0.2

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 07.29.2020 12.28.00 PM

Work Order #: 668533

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

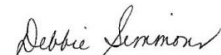
Checklist completed by:



Elizabeth McClellan

Date: 07.29.2020

Checklist reviewed by:



Debbie Simmons

Date: 07.30.2020



Analytical Report 668668

for

GHD Services, INC- Midland

Project Manager: Becky Haskell

Plains Mewbourne Wishbone 35 34

11216569

08.11.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.11.2020

Project Manager: **Becky Haskell**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: Eurofins Xenco, LLC Report No(s): **668668**
Plains Mewbourne Wishbone 35 34
Project Address: Eddy County, New Mexico

Becky Haskell:

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 Eurofins Xenco, LLC Report Number(s) 668668. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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 Eurofins Xenco, LLC. 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. 668668 will be filed for 45 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Debbie Simmons
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 668668

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
NSW-Comp-1	S	07.30.2020 10:30		668668-001
NT-Comp-1	S	07.30.2020 10:40		668668-002

**CASE NARRATIVE*****Client Name: GHD Services, INC- Midland******Project Name: Plains Mewbourne Wishbone 35 34***Project ID: 11216569
Work Order Number(s): 668668Report Date: 08.11.2020
Date Received: 07.30.2020

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

08.11.20: revised report printed to correct Wishboone to Wishbone in the project name

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results

668668

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: NSW-Comp-1

Matrix: Soil

Sample Depth:

Lab Sample Id: 668668-001

Date Collected: 07.30.2020 10:30

Date Received: 07.30.2020 12:58

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133046

Date Prep: 07.30.2020 16:00

Prep seq: 7708394

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	32.7	10.0	0.355	mg/kg	07.30.2020 17:36		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133130

Date Prep: 07.30.2020 15:15

Prep seq: 7708456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.2	13.9	mg/kg	07.30.2020 15:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.2	11.5	mg/kg	07.30.2020 15:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.2	11.5	mg/kg	07.30.2020 15:36	U	1
Total TPH	PHC635	<11.5		11.5	mg/kg	07.30.2020 15:36	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	96	70 - 135	%		

Analytical Method: BTEX by EPA 8021

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133119

Date Prep: 07.30.2020 16:06

Prep seq: 7708440

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	07.30.2020 18:56	U	1
Toluene	108-88-3	<0.000529	0.00200	0.000529	mg/kg	07.30.2020 18:56	U	1
Ethylbenzene	100-41-4	<0.000407	0.00200	0.000407	mg/kg	07.30.2020 18:56	U	1
m,p-Xylenes	179601-23-1	<0.000755	0.00401	0.000755	mg/kg	07.30.2020 18:56	U	1
o-Xylene	95-47-6	<0.000404	0.00200	0.000404	mg/kg	07.30.2020 18:56	U	1
Xylenes, Total	1330-20-7	<0.000404		0.000404	mg/kg	07.30.2020 18:56	U	
Total BTEX		<0.000404		0.000404	mg/kg	07.30.2020 18:56	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	97	70 - 130	%		



Certificate of Analytical Results

668668

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: NT-Comp-1

Matrix: Soil

Sample Depth:

Lab Sample Id: 668668-002

Date Collected: 07.30.2020 10:40

Date Received: 07.30.2020 12:58

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133046

Date Prep: 07.30.2020 16:00

Prep seq: 7708394

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	7.60	9.92	0.351	mg/kg	07.30.2020 17:43	J	1

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133130

Date Prep: 07.30.2020 15:15

Prep seq: 7708456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.2	13.9	mg/kg	07.30.2020 16:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	26.8	50.2	11.5	mg/kg	07.30.2020 16:37	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.2	11.5	mg/kg	07.30.2020 16:37	U	1
Total TPH	PHC635	26.8		11.5	mg/kg	07.30.2020 16:37	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133119

Date Prep: 07.30.2020 16:06

Prep seq: 7708440

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000481	0.00198	0.000481	mg/kg	07.30.2020 19:19	U	1
Toluene	108-88-3	<0.000522	0.00198	0.000522	mg/kg	07.30.2020 19:19	U	1
Ethylbenzene	100-41-4	<0.000402	0.00198	0.000402	mg/kg	07.30.2020 19:19	U	1
m,p-Xylenes	179601-23-1	<0.000746	0.00396	0.000746	mg/kg	07.30.2020 19:19	U	1
o-Xylene	95-47-6	<0.000399	0.00198	0.000399	mg/kg	07.30.2020 19:19	U	1
Xylenes, Total	1330-20-7	<0.000399		0.000399	mg/kg	07.30.2020 19:19	U	
Total BTEX		<0.000399		0.000399	mg/kg	07.30.2020 19:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	101	70 - 130	%		



Certificate of Analytical Results

668668

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **7708394-1-BLK** Matrix: Solid Sample Depth:
 Lab Sample Id: 7708394-1-BLK Date Collected: Date Received:
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Analyst: MAB % Moist: Tech: MAB
 Seq Number: 3133046 Date Prep: 07.30.2020 12:00
 Prep seq: 7708394

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.354	10.0	0.354	mg/kg	07.30.2020 11:59	U	1

Sample Id: **7708440-1-BLK** Matrix: Solid Sample Depth:
 Lab Sample Id: 7708440-1-BLK Date Collected: Date Received:
 Analytical Method: BTEX by EPA 8021 Prep Method: 5035A
 Analyst: MAB % Moist: Tech: MAB
 Seq Number: 3133119 Date Prep: 07.30.2020 16:06
 Prep seq: 7708440

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	07.30.2020 16:30	U	1
Toluene	108-88-3	<0.000528	0.00200	0.000528	mg/kg	07.30.2020 16:30	U	1
Ethylbenzene	100-41-4	<0.000406	0.00200	0.000406	mg/kg	07.30.2020 16:30	U	1
m_p-Xylenes	179601-23-1	<0.000754	0.00400	0.000754	mg/kg	07.30.2020 16:30	U	1
o-Xylene	95-47-6	<0.000403	0.00200	0.000403	mg/kg	07.30.2020 16:30	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	94	70 - 130	%		



Certificate of Analytical Results

668668

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: 7708456-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7708456-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133130

Date Prep: 07.30.2020 15:15

Prep seq: 7708456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.0	13.9	mg/kg	07.30.2020 10:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.0	11.5	mg/kg	07.30.2020 10:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.0	11.5	mg/kg	07.30.2020 10:10	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	97	70 - 135	%		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantitation limit and above the detection limit.
- 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.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 08112020

Work Orders : 668668

Project ID: 11216569

Lab Batch #: 3133119

Sample: 7708440-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.30.2020 16:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0296	0.0300	99	70-130	
4-Bromofluorobenzene	0.0282	0.0300	94	70-130	

Lab Batch #: 3133119

Sample: 7708440-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.30.2020 16:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	70-130	
4-Bromofluorobenzene	0.0305	0.0300	102	70-130	

Lab Batch #: 3133119

Sample: 7708440-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.30.2020 17:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

Lab Batch #: 3133119

Sample: 668668-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07.30.2020 17:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0299	0.0300	100	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

Lab Batch #: 3133119

Sample: 668668-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07.30.2020 18:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0304	0.0300	101	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 08112020

Work Orders : 668668

Project ID: 11216569

Lab Batch #: 3133130

Sample: 7708456-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.30.2020 10:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.0	100	98	70-135	
o-Terphenyl	48.7	50.0	97	70-135	

Lab Batch #: 3133130

Sample: 7708456-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.30.2020 10:31

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	51.8	50.0	104	70-135	

Lab Batch #: 3133130

Sample: 7708456-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07.30.2020 10:51

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	56.3	50.0	113	70-135	

Lab Batch #: 3133130

Sample: 668668-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07.30.2020 15:56

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	50.1	50.2	100	70-135	

Lab Batch #: 3133130

Sample: 668668-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07.30.2020 16:17

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.8	109	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



BS / BSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 668668

Project ID: 11216569

Analyst: MAB

Date Prepared: 07.30.2020

Date Analyzed: 07.30.2020

Lab Batch ID: 3133119

Sample: 7708440-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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	<0.000486	0.100	0.115	115	0.100	0.114	114	1	70-130	35	
Toluene	<0.000528	0.100	0.110	110	0.100	0.108	108	2	70-130	35	
Ethylbenzene	<0.000406	0.100	0.102	102	0.100	0.101	101	1	71-129	35	
m_p-Xylenes	<0.000754	0.200	0.207	104	0.200	0.204	102	1	70-135	35	
o-Xylene	<0.000403	0.100	0.102	102	0.100	0.101	101	1	71-133	35	

Analyst: MAB

Date Prepared: 07.30.2020

Date Analyzed: 07.30.2020

Lab Batch ID: 3133046

Sample: 7708394-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	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											
Chloride	<0.354	250	269	108	250	265	106	1	90-110	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 668668

Project ID: 11216569

Analyst: DTH

Date Prepared: 07.30.2020

Date Analyzed: 07.30.2020

Lab Batch ID: 3133130

Sample: 7708456-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<13.9	1000	983	98	1000	952	95	3	70-135	35	
Diesel Range Organics (DRO)	<11.5	1000	1010	101	1000	1050	105	4	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: Plains Mewbourne Wishbone 35 34

Work Order #: 668668

Lab Batch ID: 3133119

Date Analyzed: 07.30.2020

Reporting Units: mg/kg

Report Date: 08112020

Project ID: 11216569

QC- Sample ID: 668668-001 S

Date Prepared: 07.30.2020

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000487	0.100	0.127	127	0.100	0.124	124	2	70-130	35	
Toluene	<0.000530	0.100	0.123	123	0.100	0.123	123	0	70-130	35	
Ethylbenzene	<0.000408	0.100	0.112	112	0.100	0.110	110	2	71-129	35	
m_p-Xylenes	<0.000757	0.201	0.226	112	0.201	0.222	110	2	70-135	35	
o-Xylene	<0.000405	0.100	0.111	111	0.100	0.109	109	2	71-133	35	

Lab Batch ID: 3133046

Date Analyzed: 07.30.2020

Reporting Units: mg/kg

QC- Sample ID: 668618-002 S

Date Prepared: 07.30.2020

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	5140	200	5350	105	201	5340	100	0	90-110	20	

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, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 668668

Lab Batch ID: 3133046

Date Analyzed: 07.30.2020

Reporting Units: mg/kg

QC- Sample ID: 668741-001 S

Date Prepared: 07.30.2020

Report Date: 08112020

Project ID: 11216569

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	73.7	202	287	106	202	286	105	0	90-110	20	

Lab Batch ID: 3133130

QC- Sample ID: 668668-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07.30.2020

Date Prepared: 07.30.2020

Analyst: DTH

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY 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
Gasoline Range Hydrocarbons (GRO)	<13.9	1000	904	90	998	883	88	2	70-135	35	
Diesel Range Organics (DRO)	<11.5	1000	955	96	998	951	95	0	70-135	35	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Setting the Standard since 1990

Stafford, Texas (281-240-4200)

Dallas Texas (214-902-0300)

Service Center - San Antonio, Texas (210-509-3334)

www.xenco.com

Odessa, Texas (432-663-1800) Lakeland, Florida (863-646-8526)
Norcross, Georgia (770-449-8800) Tampa, Florida (813-620-2000)

Tampa, Florida (813-620-2000)

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: GHD/Midland				Project Name/Number: Plains Mewbourne Wishboone 35 34 / 11216569				Xenoco Job # 10181418							
Company Address: 2135 S. Loop 250 West Midland TX				Project Location: Plains Mewbourne Wishboone 35 34 / 11216569				Xenoco Quote #							
Email: becky.haskell@ghd.com Phone No: (432)250-7917				Invoice To: Eddy County, New Mexico											
glenn.quinney@ghd.com				Plains All American Pipeline											
aliquoyes@psaill.com				#10 Dista Drive Suite 550 E											
Project Contact: Becky Haskell / Glenn Quinney				Midland, TX 79705											
Sampler's Name Zach Comino				PO Number: NA											

No.	Field ID / Point of Collection	Collection			Number of preserved bottles										TPH By 8015 Mod (GRO, DRO & MRO)	BTEX 8021 B	Chloride 300	Field Comments
		Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE				
1	NSW-Comp-1		7/30/2020	10:30 AM	S	1									X	X		
2	NT-Comp-1		7/30/2020	10:00 AM	S	1									X	X		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)				Data Deliverable Information											
<input type="checkbox"/> Same Day TAT <input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 3 Day EMERGENCY				<input checked="" type="checkbox"/> 5-Day TAT <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> Contract TAT <input type="checkbox"/> TRRP Checklist											
TAT Starts Day received by Lab, if received by 5:00 pm				<div style="color: red;">Report MDLs and J values.</div> <div style="color: red;">Run TPH by 8015, BTEX 8021, and Chloride 300</div> <div>No SSOW for this project - Direct bill to Plains</div>											

Relinquished by Sampler:				SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY			
Relinquished by: <i>Zach Comino</i>		Date Time: 7/30/20 12:51		Received By: <i>Zach Comino</i>		Date Time: 7/30/20 12:51	
Relinquished by:		Date Time:		Received By:		Date Time:	
Relinquished by:		Date Time:		Received By:		Date Time:	
Custody Seal #		Preserved where applicable		On Ice		Cooler Temp.	
						Thermo, Corr. Factor	

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 07.30.2020 12.58.00 PM

Work Order #: 668668

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:


Checklist completed by:



Elizabeth McClellan

Date: 07.30.2020

Checklist reviewed by:



Debbie Simmons

Date: 07.31.2020



Analytical Report 669020

for

GHD Services, INC- Midland

Project Manager: Becky Haskell

Plains Mewbourne Wishbone 35 34

11216569

08.06.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.06.2020

Project Manager: **Becky Haskell**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: Eurofins Xenco, LLC Report No(s): **669020**
Plains Mewbourne Wishbone 35 34
Project Address: Eddy County, New Mexico

Becky Haskell:

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 Eurofins Xenco, LLC Report Number(s) 669020. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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 Eurofins Xenco, LLC. 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. 669020 will be filed for 45 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Debbie Simmons
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 669020****GHD Services, INC- Midland, Midland, TX**

Plains Mewbourne Wishbone 35 34

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WT-Comp-1	S	08.03.2020 07:10		669020-001
BH-Comp-1	S	08.03.2020 08:00		669020-002
BH-Comp-2	S	08.03.2020 08:30		669020-003
WT-Comp-2	S	08.03.2020 14:00		669020-004
T1-Comp-1	S	08.03.2020 14:10		669020-005
ESW-Comp-1	S	08.03.2020 06:30		669020-006
WSW-Comp-1	S	08.03.2020 06:40		669020-007
T1-Comp-2	S	08.04.2020 06:50		669020-008
T1-Comp-3	S	08.04.2020 07:00		669020-009
T1-Comp-4	S	08.04.2020 07:10		669020-010
St-Comp-1	S	08.04.2020 07:20		669020-011
St-Comp-2	S	08.04.2020 07:30		669020-012
BH-Comp-5	S	08.04.2020 07:40		669020-013
BH-Comp-4	S	08.04.2020 07:50		669020-014
BH-Comp-3	S	08.04.2020 08:00		669020-015
MSW-Comp-1	S	08.04.2020 08:10		669020-016
NSW-Comp-2	S	08.04.2020 08:20		669020-017

**CASE NARRATIVE*****Client Name: GHD Services, INC- Midland******Project Name: Plains Mewbourne Wishbone 35 34***Project ID: 11216569
Work Order Number(s): 669020Report Date: 08.06.2020
Date Received: 08.04.2020

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: WT-Comp-1

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-001

Date Collected: 08.03.2020 07:10

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	14.5	9.92	0.351	mg/kg	08.04.2020 15:16		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133532

Date Prep: 08.04.2020 12:30

Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	49.9	13.9	mg/kg	08.04.2020 13:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	21.6	49.9	11.4	mg/kg	08.04.2020 13:26	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.4	49.9	11.4	mg/kg	08.04.2020 13:26	U	1
Total TPH	PHC635	21.6		11.4	mg/kg	08.04.2020 13:26	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	08.04.2020 17:04	U	1
Toluene	108-88-3	0.00273	0.00200	0.000529	mg/kg	08.04.2020 17:04		1
Ethylbenzene	100-41-4	0.00199	0.00200	0.000407	mg/kg	08.04.2020 17:04	J	1
m,p-Xylenes	179601-23-1	0.00331	0.00401	0.000755	mg/kg	08.04.2020 17:04	J	1
o-Xylene	95-47-6	<0.000404	0.00200	0.000404	mg/kg	08.04.2020 17:04	U	1
Total Xylenes	1330-20-7	0.00331		0.000404	mg/kg	08.04.2020 17:04		
Total BTEX		0.00803		0.000404	mg/kg	08.04.2020 17:04		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	96	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: BH-Comp-1

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-002

Date Collected: 08.03.2020 08:00

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	25.8	10.0	0.354	mg/kg	08.04.2020 15:33		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133532

Date Prep: 08.04.2020 14:15

Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	14.6	50.2	13.9	mg/kg	08.04.2020 14:39	J	1
Diesel Range Organics (DRO)	C10C28DRO	217	50.2	11.5	mg/kg	08.04.2020 14:39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	24.4	50.2	11.5	mg/kg	08.04.2020 14:39	J	1
Total TPH	PHC635	256		11.5	mg/kg	08.04.2020 14:39		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00253	0.0104	0.00253	mg/kg	08.04.2020 19:52	U	5
Toluene	108-88-3	<0.00275	0.0104	0.00275	mg/kg	08.04.2020 19:52	U	5
Ethylbenzene	100-41-4	<0.00212	0.0104	0.00212	mg/kg	08.04.2020 19:52	U	5
m,p-Xylenes	179601-23-1	0.00984	0.0208	0.00393	mg/kg	08.04.2020 19:52	J	5
o-Xylene	95-47-6	<0.00210	0.0104	0.00210	mg/kg	08.04.2020 19:52	U	5
Total Xylenes	1330-20-7	0.00984		0.00210	mg/kg	08.04.2020 19:52	J	
Total BTEX		0.00984		0.00210	mg/kg	08.04.2020 19:52	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	105	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: BH-Comp-2

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-003

Date Collected: 08.03.2020 08:30

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	19.5	9.92	0.351	mg/kg	08.04.2020 15:39		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133532

Date Prep: 08.04.2020 14:15

Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.1	13.9	mg/kg	08.04.2020 14:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	117	50.1	11.5	mg/kg	08.04.2020 14:58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	16.1	50.1	11.5	mg/kg	08.04.2020 14:58	J	1
Total TPH	PHC635	133		11.5	mg/kg	08.04.2020 14:58		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	99	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000484	0.00199	0.000484	mg/kg	08.04.2020 17:26	U	1
Toluene	108-88-3	0.00551	0.00199	0.000526	mg/kg	08.04.2020 17:26		1
Ethylbenzene	100-41-4	0.00752	0.00199	0.000405	mg/kg	08.04.2020 17:26		1
m,p-Xylenes	179601-23-1	0.0144	0.00398	0.000751	mg/kg	08.04.2020 17:26		1
o-Xylene	95-47-6	0.00716	0.00199	0.000401	mg/kg	08.04.2020 17:26		1
Total Xylenes	1330-20-7	0.0216		0.000401	mg/kg	08.04.2020 17:26		
Total BTEX		0.0346		0.000401	mg/kg	08.04.2020 17:26		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	108	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: WT-Comp-2

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-004

Date Collected: 08.03.2020 14:00

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	18.3	10.0	0.355	mg/kg	08.04.2020 15:44		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133532

Date Prep: 08.04.2020 14:15

Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.8	49.9	13.8	mg/kg	08.04.2020 15:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	241	49.9	11.4	mg/kg	08.04.2020 15:19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	29.2	49.9	11.4	mg/kg	08.04.2020 15:19	J	1
Total TPH	PHC635	270		11.4	mg/kg	08.04.2020 15:19		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00467	0.0192	0.00467	mg/kg	08.04.2020 19:02	U	10
Toluene	108-88-3	<0.00507	0.0192	0.00507	mg/kg	08.04.2020 19:02	U	10
Ethylbenzene	100-41-4	<0.00391	0.0192	0.00391	mg/kg	08.04.2020 19:02	U	10
m,p-Xylenes	179601-23-1	<0.00725	0.0385	0.00725	mg/kg	08.04.2020 19:02	U	10
o-Xylene	95-47-6	<0.00388	0.0192	0.00388	mg/kg	08.04.2020 19:02	U	10
Total Xylenes	1330-20-7	<0.00388		0.00388	mg/kg	08.04.2020 19:02	U	
Total BTEX		<0.00388		0.00388	mg/kg	08.04.2020 19:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	91	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: T1-Comp-1

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-005

Date Collected: 08.03.2020 14:10

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	7.93	10.0	0.355	mg/kg	08.04.2020 15:50	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133532

Date Prep: 08.04.2020 14:15

Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.0	13.9	mg/kg	08.04.2020 15:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	22.8	50.0	11.5	mg/kg	08.04.2020 15:39	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	14.1	50.0	11.4	mg/kg	08.04.2020 15:39	J	1
Total TPH	PHC635	36.9		11.4	mg/kg	08.04.2020 15:39	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	91	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00597	0.00200	0.000486	mg/kg	08.05.2020 15:05		1
Toluene	108-88-3	0.0318	0.00200	0.000528	mg/kg	08.05.2020 15:05		1
Ethylbenzene	100-41-4	0.0173	0.00200	0.000406	mg/kg	08.05.2020 15:05		1
m,p-Xylenes	179601-23-1	0.0307	0.00400	0.000754	mg/kg	08.05.2020 15:05		1
o-Xylene	95-47-6	0.0156	0.00200	0.000403	mg/kg	08.05.2020 15:05		1
Total Xylenes	1330-20-7	0.0463		0.000403	mg/kg	08.05.2020 15:05		
Total BTEX		0.101		0.000403	mg/kg	08.05.2020 15:05		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	98	70 - 130	%		
4-Bromofluorobenzene	103	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: ESW-Comp-1

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-006

Date Collected: 08.03.2020 06:30

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	19.9	9.92	0.351	mg/kg	08.04.2020 16:07		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133532

Date Prep: 08.04.2020 14:15

Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.0	50.3	14.0	mg/kg	08.04.2020 15:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.3	11.5	mg/kg	08.04.2020 15:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.3	11.5	mg/kg	08.04.2020 15:59	U	1
Total TPH	PHC635	<11.5		11.5	mg/kg	08.04.2020 15:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000487	0.00201	0.000487	mg/kg	08.04.2020 18:11	U	1
Toluene	108-88-3	<0.000530	0.00201	0.000530	mg/kg	08.04.2020 18:11	U	1
Ethylbenzene	100-41-4	<0.000408	0.00201	0.000408	mg/kg	08.04.2020 18:11	U	1
m,p-Xylenes	179601-23-1	<0.000757	0.00402	0.000757	mg/kg	08.04.2020 18:11	U	1
o-Xylene	95-47-6	<0.000405	0.00201	0.000405	mg/kg	08.04.2020 18:11	U	1
Total Xylenes	1330-20-7	<0.000405		0.000405	mg/kg	08.04.2020 18:11	U	
Total BTEX		<0.000405		0.000405	mg/kg	08.04.2020 18:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	114	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: WSW-Comp-1

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-007

Date Collected: 08.03.2020 06:40

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	12.9	9.98	0.353	mg/kg	08.04.2020 16:12		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133532

Date Prep: 08.04.2020 14:15

Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.0	13.9	mg/kg	08.04.2020 16:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	12.0	50.0	11.5	mg/kg	08.04.2020 16:19	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.0	11.5	mg/kg	08.04.2020 16:19	U	1
Total TPH	PHC635	12.0		11.5	mg/kg	08.04.2020 16:19	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	08.04.2020 18:34	U	1
Toluene	108-88-3	<0.000528	0.00200	0.000528	mg/kg	08.04.2020 18:34	U	1
Ethylbenzene	100-41-4	<0.000406	0.00200	0.000406	mg/kg	08.04.2020 18:34	U	1
m,p-Xylenes	179601-23-1	<0.000754	0.00400	0.000754	mg/kg	08.04.2020 18:34	U	1
o-Xylene	95-47-6	<0.000403	0.00200	0.000403	mg/kg	08.04.2020 18:34	U	1
Total Xylenes	1330-20-7	<0.000403		0.000403	mg/kg	08.04.2020 18:34	U	
Total BTEX		<0.000403		0.000403	mg/kg	08.04.2020 18:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	70 - 130	%		
4-Bromofluorobenzene	100	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: T1-Comp-2

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-008

Date Collected: 08.04.2020 06:50

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	8.81	9.96	0.353	mg/kg	08.04.2020 16:18	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133532

Date Prep: 08.04.2020 14:15

Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.1	13.9	mg/kg	08.04.2020 16:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	96.4	50.1	11.5	mg/kg	08.04.2020 16:39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.1	11.5	mg/kg	08.04.2020 16:39	U	1
Total TPH	PHC635	96.4		11.5	mg/kg	08.04.2020 16:39		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	95	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00248	0.0102	0.00248	mg/kg	08.04.2020 20:37	U	5
Toluene	108-88-3	<0.00269	0.0102	0.00269	mg/kg	08.04.2020 20:37	U	5
Ethylbenzene	100-41-4	0.0171	0.0102	0.00207	mg/kg	08.04.2020 20:37		5
m,p-Xylenes	179601-23-1	0.0171	0.0204	0.00384	mg/kg	08.04.2020 20:37	J	5
o-Xylene	95-47-6	0.00842	0.0102	0.00206	mg/kg	08.04.2020 20:37	J	5
Total Xylenes	1330-20-7	0.0255		0.00206	mg/kg	08.04.2020 20:37		
Total BTEX		0.0426		0.00206	mg/kg	08.04.2020 20:37		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	107	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: T1-Comp-3

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-009

Date Collected: 08.04.2020 07:00

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	19.3	9.98	0.353	mg/kg	08.04.2020 16:23		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133532

Date Prep: 08.04.2020 14:15

Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.0	50.3	14.0	mg/kg	08.04.2020 17:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	196	50.3	11.5	mg/kg	08.04.2020 17:00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	19.7	50.3	11.5	mg/kg	08.04.2020 17:00	J	1
Total TPH	PHC635	216		11.5	mg/kg	08.04.2020 17:00		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00495	0.0204	0.00495	mg/kg	08.05.2020 17:43	U	10
Toluene	108-88-3	0.0351	0.0204	0.00538	mg/kg	08.05.2020 17:43		10
Ethylbenzene	100-41-4	0.332	0.0204	0.00414	mg/kg	08.05.2020 17:43		10
m,p-Xylenes	179601-23-1	0.138	0.0408	0.00769	mg/kg	08.05.2020 17:43		10
o-Xylene	95-47-6	0.0720	0.0204	0.00411	mg/kg	08.05.2020 17:43		10
Total Xylenes	1330-20-7	0.210		0.00411	mg/kg	08.05.2020 17:43		
Total BTEX		0.577		0.00411	mg/kg	08.05.2020 17:43		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	129	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: T1-Comp-4

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-010

Date Collected: 08.04.2020 07:10

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	17.2	9.96	0.353	mg/kg	08.04.2020 16:29		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133532

Date Prep: 08.04.2020 14:15

Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.0	50.3	14.0	mg/kg	08.04.2020 17:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	48.7	50.3	11.5	mg/kg	08.04.2020 17:20	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.3	11.5	mg/kg	08.04.2020 17:20	U	1
Total TPH	PHC635	48.7		11.5	mg/kg	08.04.2020 17:20	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000485	0.00200	0.000485	mg/kg	08.04.2020 19:30	U	1
Toluene	108-88-3	<0.000527	0.00200	0.000527	mg/kg	08.04.2020 19:30	U	1
Ethylbenzene	100-41-4	<0.000405	0.00200	0.000405	mg/kg	08.04.2020 19:30	U	1
m,p-Xylenes	179601-23-1	<0.000752	0.00399	0.000752	mg/kg	08.04.2020 19:30	U	1
o-Xylene	95-47-6	<0.000402	0.00200	0.000402	mg/kg	08.04.2020 19:30	U	1
Total Xylenes	1330-20-7	<0.000402		0.000402	mg/kg	08.04.2020 19:30	U	
Total BTEX		<0.000402		0.000402	mg/kg	08.04.2020 19:30	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	93	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: St-Comp-1

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-011

Date Collected: 08.04.2020 07:20

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	35.5	9.98	0.353	mg/kg	08.04.2020 16:35		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133557

Date Prep: 08.04.2020 12:30

Prep seq: 7708701

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.0	50.3	14.0	mg/kg	08.04.2020 13:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.3	11.5	mg/kg	08.04.2020 13:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.3	11.5	mg/kg	08.04.2020 13:26	U	1
Total TPH	PHC635	<11.5		11.5	mg/kg	08.04.2020 13:26	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00300	0.00202	0.000489	mg/kg	08.04.2020 22:51		1
Toluene	108-88-3	0.0116	0.00202	0.000532	mg/kg	08.04.2020 22:51		1
Ethylbenzene	100-41-4	0.00341	0.00202	0.000409	mg/kg	08.04.2020 22:51		1
m,p-Xylenes	179601-23-1	0.00586	0.00403	0.000760	mg/kg	08.04.2020 22:51		1
o-Xylene	95-47-6	0.00258	0.00202	0.000406	mg/kg	08.04.2020 22:51		1
Total Xylenes	1330-20-7	0.00844		0.000406	mg/kg	08.04.2020 22:51		
Total BTEX		0.0265		0.000406	mg/kg	08.04.2020 22:51		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	100	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **St-Comp-2**

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-012

Date Collected: 08.04.2020 07:30

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	15.7	10.1	0.356	mg/kg	08.04.2020 16:51		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133532

Date Prep: 08.04.2020 14:15

Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	36.0	49.8	13.8	mg/kg	08.04.2020 18:00	J	1
Diesel Range Organics (DRO)	C10C28DRO	860	49.8	11.4	mg/kg	08.04.2020 18:00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	84.3	49.8	11.4	mg/kg	08.04.2020 18:00		1
Total TPH	PHC635	980		11.4	mg/kg	08.04.2020 18:00		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00528	0.0217	0.00528	mg/kg	08.05.2020 00:20	U	11
Toluene	108-88-3	0.0911	0.0217	0.00574	mg/kg	08.05.2020 00:20		11
Ethylbenzene	100-41-4	0.157	0.0217	0.00442	mg/kg	08.05.2020 00:20		11
m,p-Xylenes	179601-23-1	0.289	0.0435	0.00819	mg/kg	08.05.2020 00:20		11
o-Xylene	95-47-6	0.186	0.0217	0.00438	mg/kg	08.05.2020 00:20		11
Total Xylenes	1330-20-7	0.475		0.00438	mg/kg	08.05.2020 00:20		
Total BTEX		0.723		0.00438	mg/kg	08.05.2020 00:20		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	98	70 - 130	%		
4-Bromofluorobenzene	106	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: BH-Comp-5

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-013

Date Collected: 08.04.2020 07:40

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	20.6	9.94	0.352	mg/kg	08.04.2020 16:57		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133557

Date Prep: 08.04.2020 14:15

Prep seq: 7708701

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	33.5	49.9	13.9	mg/kg	08.04.2020 14:39	J	1
Diesel Range Organics (DRO)	C10C28DRO	1020	49.9	11.4	mg/kg	08.04.2020 14:39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	105	49.9	11.4	mg/kg	08.04.2020 14:39		1
Total TPH	PHC635	1160		11.4	mg/kg	08.04.2020 14:39		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	107	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0101	0.0417	0.0101	mg/kg	08.05.2020 16:58	U	21
Toluene	108-88-3	0.0954	0.0417	0.0110	mg/kg	08.05.2020 16:58		21
Ethylbenzene	100-41-4	0.197	0.0417	0.00846	mg/kg	08.05.2020 16:58		21
m,p-Xylenes	179601-23-1	0.402	0.0833	0.0157	mg/kg	08.05.2020 16:58		21
o-Xylene	95-47-6	0.219	0.0417	0.00840	mg/kg	08.05.2020 16:58		21
Total Xylenes	1330-20-7	0.621		0.00840	mg/kg	08.05.2020 16:58		
Total BTEX		0.913		0.00840	mg/kg	08.05.2020 16:58		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	96	70 - 130	%		
4-Bromofluorobenzene	97	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: BH-Comp-4

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-014

Date Collected: 08.04.2020 07:50

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	16.5	9.98	0.353	mg/kg	08.04.2020 17:14		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133557

Date Prep: 08.04.2020 14:15

Prep seq: 7708701

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	31.3	50.3	14.0	mg/kg	08.04.2020 14:58	J	1
Diesel Range Organics (DRO)	C10C28DRO	1250	50.3	11.5	mg/kg	08.04.2020 14:58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	131	50.3	11.5	mg/kg	08.04.2020 14:58		1
Total TPH	PHC635	1410		11.5	mg/kg	08.04.2020 14:58		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	112	70 - 135	%		
o-Terphenyl	112	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00971	0.0400	0.00971	mg/kg	08.05.2020 17:20	U	20
Toluene	108-88-3	0.181	0.0400	0.0106	mg/kg	08.05.2020 17:20		20
Ethylbenzene	100-41-4	1.25	0.0400	0.00812	mg/kg	08.05.2020 17:20		20
m,p-Xylenes	179601-23-1	0.579	0.0800	0.0151	mg/kg	08.05.2020 17:20		20
o-Xylene	95-47-6	0.287	0.0400	0.00806	mg/kg	08.05.2020 17:20		20
Total Xylenes	1330-20-7	0.866		0.00806	mg/kg	08.05.2020 17:20		
Total BTEX		2.30		0.00806	mg/kg	08.05.2020 17:20		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	98	70 - 130	%		
4-Bromofluorobenzene	129	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: BH-Comp-3

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-015

Date Collected: 08.04.2020 08:00

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	29.1	9.96	0.353	mg/kg	08.04.2020 17:19		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133557

Date Prep: 08.04.2020 14:15

Prep seq: 7708701

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.2	13.9	mg/kg	08.05.2020 00:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	90.0	50.2	11.5	mg/kg	08.05.2020 00:45		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.2	11.5	mg/kg	08.05.2020 00:45	U	1
Total TPH	PHC635	90.0		11.5	mg/kg	08.05.2020 00:45		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	107	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.0106	0.00200	0.000486	mg/kg	08.04.2020 23:13		1
Toluene	108-88-3	0.0320	0.00200	0.000529	mg/kg	08.04.2020 23:13		1
Ethylbenzene	100-41-4	0.0165	0.00200	0.000407	mg/kg	08.04.2020 23:13		1
m,p-Xylenes	179601-23-1	0.0180	0.00401	0.000755	mg/kg	08.04.2020 23:13		1
o-Xylene	95-47-6	0.00763	0.00200	0.000404	mg/kg	08.04.2020 23:13		1
Total Xylenes	1330-20-7	0.0256		0.000404	mg/kg	08.04.2020 23:13		
Total BTEX		0.0847		0.000404	mg/kg	08.04.2020 23:13		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	98	70 - 130	%		
4-Bromofluorobenzene	107	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: MSW-Comp-1

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-016

Date Collected: 08.04.2020 08:10

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	43.3	9.98	0.353	mg/kg	08.04.2020 17:25		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133557

Date Prep: 08.04.2020 14:15

Prep seq: 7708701

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.0	13.9	mg/kg	08.05.2020 00:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.0	11.5	mg/kg	08.05.2020 00:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.4	50.0	11.4	mg/kg	08.05.2020 00:25	U	1
Total TPH	PHC635	<11.4		11.4	mg/kg	08.05.2020 00:25	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	08.04.2020 23:36	U	1
Toluene	108-88-3	0.00487	0.00200	0.000528	mg/kg	08.04.2020 23:36		1
Ethylbenzene	100-41-4	<0.000406	0.00200	0.000406	mg/kg	08.04.2020 23:36	U	1
m,p-Xylenes	179601-23-1	0.00452	0.00400	0.000754	mg/kg	08.04.2020 23:36		1
o-Xylene	95-47-6	0.00261	0.00200	0.000403	mg/kg	08.04.2020 23:36		1
Total Xylenes	1330-20-7	0.00713		0.000403	mg/kg	08.04.2020 23:36		
Total BTEX		0.0120		0.000403	mg/kg	08.04.2020 23:36		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	103	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: NSW-Comp-2

Matrix: Soil

Sample Depth:

Lab Sample Id: 669020-017

Date Collected: 08.04.2020 08:20

Date Received: 08.04.2020 10:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	17.0	9.96	0.353	mg/kg	08.04.2020 17:30		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3133557

Date Prep: 08.04.2020 14:15

Prep seq: 7708701

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.2	13.9	mg/kg	08.04.2020 15:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	20.7	50.2	11.5	mg/kg	08.04.2020 15:59	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	16.6	50.2	11.5	mg/kg	08.04.2020 15:59	J	1
Total TPH	PHC635	37.3		11.5	mg/kg	08.04.2020 15:59	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	100	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000483	0.00199	0.000483	mg/kg	08.04.2020 23:58	U	1
Toluene	108-88-3	0.00504	0.00199	0.000525	mg/kg	08.04.2020 23:58		1
Ethylbenzene	100-41-4	0.00543	0.00199	0.000404	mg/kg	08.04.2020 23:58		1
m,p-Xylenes	179601-23-1	0.00338	0.00398	0.000749	mg/kg	08.04.2020 23:58	J	1
o-Xylene	95-47-6	0.00225	0.00199	0.000401	mg/kg	08.04.2020 23:58		1
Total Xylenes	1330-20-7	0.00563		0.000401	mg/kg	08.04.2020 23:58		
Total BTEX		0.0161		0.000401	mg/kg	08.04.2020 23:58		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	70 - 130	%		
4-Bromofluorobenzene	127	70 - 130	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **7708699-1-BLK** Matrix: Solid Sample Depth:
 Lab Sample Id: 7708699-1-BLK Date Collected: Date Received:
 Analytical Method: TPH By SW8015 Mod Prep Method: 8015
 Analyst: DTH % Moist: Tech: DTH
 Seq Number: 3133532 Date Prep: 08.04.2020 12:30
 Prep seq: 7708699

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.0	13.9	mg/kg	08.04.2020 12:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.0	11.5	mg/kg	08.04.2020 12:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.0	11.5	mg/kg	08.04.2020 12:25	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	99	70 - 135	%		

Sample Id: **7708701-1-BLK** Matrix: Solid Sample Depth:
 Lab Sample Id: 7708701-1-BLK Date Collected: Date Received:
 Analytical Method: TPH By SW8015 Mod Prep Method: 8015
 Analyst: DTH % Moist: Tech: DTH
 Seq Number: 3133557 Date Prep: 08.04.2020 12:30
 Prep seq: 7708701

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.0	13.9	mg/kg	08.04.2020 12:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.0	11.5	mg/kg	08.04.2020 12:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.0	11.5	mg/kg	08.04.2020 12:25	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 135	%		
o-Terphenyl	108	70 - 135	%		



Certificate of Analytical Results

669020

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: 7708724-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7708724-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133569

Date Prep: 08.04.2020 13:00

Prep seq: 7708724

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	08.04.2020 14:38	U	1
Toluene	108-88-3	<0.000528	0.00200	0.000528	mg/kg	08.04.2020 14:38	U	1
Ethylbenzene	100-41-4	<0.000406	0.00200	0.000406	mg/kg	08.04.2020 14:38	U	1
m,p-Xylenes	179601-23-1	<0.000754	0.00400	0.000754	mg/kg	08.04.2020 14:38	U	1
o-Xylene	95-47-6	<0.000403	0.00200	0.000403	mg/kg	08.04.2020 14:38	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	95	70 - 130	%		

Sample Id: 7708728-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7708728-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133573

Date Prep: 08.04.2020 13:00

Prep seq: 7708728

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.354	10.0	0.354	mg/kg	08.04.2020 14:59	U	1



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantitation limit and above the detection limit.
- 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.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 08062020

Work Orders : 669020

Project ID: 11216569

Lab Batch #: 3133569

Sample: 7708724-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08.04.2020 14:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0296	0.0300	99	70-130	
4-Bromofluorobenzene	0.0284	0.0300	95	70-130	

Lab Batch #: 3133569

Sample: 7708724-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08.04.2020 15:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0306	0.0300	102	70-130	

Lab Batch #: 3133569

Sample: 7708724-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08.04.2020 15:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0299	0.0300	100	70-130	
4-Bromofluorobenzene	0.0309	0.0300	103	70-130	

Lab Batch #: 3133569

Sample: 669020-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08.04.2020 15:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0299	0.0300	100	70-130	
4-Bromofluorobenzene	0.0315	0.0300	105	70-130	

Lab Batch #: 3133569

Sample: 669020-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08.04.2020 16:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0350	0.0300	117	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 08062020

Work Orders : 669020

Project ID: 11216569

Lab Batch #: 3133532

Sample: 7708699-1-BLK / BLK

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 08.04.2020 12:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.3	100	96	70-135	
o-Terphenyl	49.4	50.0	99	70-135	

Lab Batch #: 3133532

Sample: 7708699-1-BKS / BKS

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 08.04.2020 12:46

SURROGATE RECOVERY 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	54.0	50.0	108	70-135	

Lab Batch #: 3133532

Sample: 7708699-1-BSD / BSD

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 08.04.2020 13:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	51.2	50.0	102	70-135	

Lab Batch #: 3133532

Sample: 669020-001 S / MS

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 08.04.2020 13:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.8	103	70-135	
o-Terphenyl	49.8	49.9	100	70-135	

Lab Batch #: 3133532

Sample: 669020-001 SD / MSD

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 08.04.2020 14:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	48.3	50.1	96	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 08062020

Work Orders : 669020

Project ID: 11216569

Lab Batch #: 3133557

Sample: 7708701-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08.04.2020 12:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 3133557

Sample: 7708701-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08.04.2020 12:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	131	100	131	70-135	
o-Terphenyl	60.1	50.0	120	70-135	

Lab Batch #: 3133557

Sample: 7708701-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08.04.2020 13:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	57.4	50.0	115	70-135	

Lab Batch #: 3133557

Sample: 669020-011 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08.04.2020 13:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	101	120	70-135	
o-Terphenyl	56.4	50.3	112	70-135	

Lab Batch #: 3133557

Sample: 669020-011 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08.04.2020 14:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	51.7	50.1	103	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



BS / BSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669020

Project ID: 11216569

Analyst: MAB

Date Prepared: 08.04.2020

Date Analyzed: 08.04.2020

Lab Batch ID: 3133569

Sample: 7708724-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [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	<0.000486	0.100	0.115	115	0.100	0.107	107	7	70-130	35	
Toluene	<0.000528	0.100	0.109	109	0.100	0.101	101	8	70-130	35	
Ethylbenzene	<0.000406	0.100	0.102	102	0.100	0.0946	95	8	71-129	35	
m,p-Xylenes	<0.000754	0.200	0.207	104	0.200	0.193	97	7	70-135	35	
o-Xylene	<0.000403	0.100	0.101	101	0.100	0.0941	94	7	71-133	35	

Analyst: MAB

Date Prepared: 08.04.2020

Date Analyzed: 08.04.2020

Lab Batch ID: 3133573

Sample: 7708728-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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											
Chloride	<0.354	250	269	108	250	268	107	0	90-110	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669020

Project ID: 11216569

Analyst: DTH

Date Prepared: 08.04.2020

Date Analyzed: 08.04.2020

Lab Batch ID: 3133532

Sample: 7708699-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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											
Gasoline Range Hydrocarbons (GRO)	<13.9	1000	925	93	1000	903	90	2	70-135	35	
Diesel Range Organics (DRO)	<11.5	1000	984	98	1000	958	96	3	70-135	35	

Analyst: DTH

Date Prepared: 08.04.2020

Date Analyzed: 08.04.2020

Lab Batch ID: 3133557

Sample: 7708701-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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											
Gasoline Range Hydrocarbons (GRO)	<13.9	1000	1060	106	1000	1020	102	4	70-135	35	
Diesel Range Organics (DRO)	<11.5	1000	1150	115	1000	1110	111	4	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: Plains Mewbourne Wishbone 35 34

Work Order #: 669020

Lab Batch ID: 3133569

Date Analyzed: 08.04.2020

Reporting Units: mg/kg

Report Date: 08062020

Project ID: 11216569

QC- Sample ID: 669020-001 S

Date Prepared: 08.04.2020

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000488	0.101	0.128	127	0.100	0.126	126	2	70-130	35	
Toluene	0.00273	0.101	0.124	120	0.100	0.122	119	2	70-130	35	
Ethylbenzene	0.00199	0.101	0.115	112	0.100	0.127	125	10	71-129	35	
m,p-Xylenes	0.00331	0.201	0.233	114	0.200	0.226	111	3	70-135	35	
o-Xylene	<0.000406	0.101	0.113	112	0.100	0.111	111	2	71-133	35	

Lab Batch ID: 3133573

Date Analyzed: 08.04.2020

Reporting Units: mg/kg

QC- Sample ID: 669020-001 S

Date Prepared: 08.04.2020

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 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
Chloride	14.5	199	217	102	199	217	102	0	90-110	20	

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, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries



Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669020

Lab Batch ID: 3133573

Date Analyzed: 08.04.2020

Reporting Units: mg/kg

QC- Sample ID: 669020-011 S

Date Prepared: 08.04.2020

Report Date: 08062020

Project ID: 11216569

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 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
Chloride	35.5	200	245	105	200	245	105	0	90-110	20	

Lab Batch ID: 3133532

QC- Sample ID: 669020-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08.04.2020

Date Prepared: 08.04.2020

Analyst: DTH

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY 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
Gasoline Range Hydrocarbons (GRO)	<13.9	998	834	84	1000	826	83	1	70-135	35	
Diesel Range Organics (DRO)	21.6	998	964	94	1000	908	89	6	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, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries



Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669020

Report Date: 08062020

Lab Batch ID: 3133557

Project ID: 11216569

Date Analyzed: 08.04.2020

QC- Sample ID: 669020-011 S

Batch #: 1 Matrix: Soil

Date Prepared: 08.04.2020

Analyst: DTH

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY 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
Gasoline Range Hydrocarbons (GRO)	<14.0	1010	993	98	1000	914	91	8	70-135	35	
Diesel Range Organics (DRO)	<11.5	1010	1080	107	1000	1000	100	8	70-135	35	

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

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

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, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

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 Dallas, Texas (214-902-0300)

Service Center - San Antonio, Texas (210-509-3334)

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Odessa, Texas (432-563-1800)

Norcross, Georgia (770-449-8800)

Lakeland, Florida (888-646-8526)
 Tampa, Florida (813-620-2000)

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes							
Company Name / Branch: GHDMidland Company Address: 2135 S. Loop 250 West Midland TX				Project Name/Number: Plains Mewbourne Washboone 35 34 / 11216569 Project Location: Eddy County, New Mexico Invoice To: Camille Bryant Plains All American Pipeline #10 Dista Drive Suite 550 E Midland, TX 79705 PO Number: NA				Xenco Quote # Xenco Job #				S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water W = Wipe O = Oil WW = Waste Water A = Air							
Email: becky.haskell@qnd.com glenn.quinney@qnd.com alqovese@psaap.com Project Contact: Becky Haskell / Glenn Quinney				Phone No: (432)250-7917 tom.larson@qnd.com															
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	TPH By 8015 Mod (GRO, DRO & MRO)	BTEX 8021 B	Chloride 300	Field Comments	
1	WT-Comp-1		8/3/20	0710	S	1									X	X	X		
2	BH-Comp-1		8/3/20	0500	S	1									X	X	X		
3	BH-Comp-2		8/3/20	0530	S	1									X	X	X		
4	WT-Comp-2		8/3/20	1400	S	1													
5	T1-Comp-1		8/3/20	1410	S	1													
6	ESW-Comp-1		8/4/20	0630	S	1													
7	WSW-Comp-1		8/4/20	0640	S	1													
8	T1-Comp-2		8/4/20	0650	S	1													
9	T1-Comp-3		8/4/20	0700	S	1													
10	T1-Comp-4		8/4/20	0710	S	1													
Turnaround Time (Business days)					Data Deliverable Information														
<input type="checkbox"/> Same Day TAT		<input checked="" type="checkbox"/> 5 Day TAT			<input type="checkbox"/> Level II Std QC										<input type="checkbox"/> Level IV (Full Data Pkg / raw data)				
<input type="checkbox"/> Next Day EMERGENCY		<input type="checkbox"/> 7 Day TAT			<input type="checkbox"/> Level III Std QC+ Forms										<input type="checkbox"/> TRRP Level IV				
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Contract TAT			<input type="checkbox"/> Level 3 (CLP Forms)										<input type="checkbox"/> UST / RG -411				
<input type="checkbox"/> 3 Day EMERGENCY					<input type="checkbox"/> TRRP Checklist														
TAT Starts Day received by Lab, if received by 5:00 pm																			
Report MDLs and J values.																			
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																			
Relinquished by Sampler:		Date Time:	8/4/20	1000	1	Received By:		8/4/20		2	Relinquished By:		8/4/20		3	Received By:		8/4/20	
Relinquished by:		Date Time:	8/4/20	1000	1	Received By:		8/4/20		2	Relinquished By:		8/4/20		3	Received By:		8/4/20	
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Relinquished by:		Date Time:	8/4/20	1000	1	Received By:		8/4/20		2	Relinquished By:		8/4/20		3	Received By:		8/4/20	
Relinquished by:		Date Time:	8/4/20	1000															

2 of 2

Setting the Standard since 1990
Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

Service Center - San Antonio, Texas (210-509-3334)

www.xenco.com

Odessa, Texas (432-563-1800)

Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)

Xenco Quote #

Xenco Job #

Tampa, Florida (813-620-2000)

Client / Reporting Information						Project Information						Analytical Information						Matrix Codes																																																																		
Company Name / Branch: GHD/Midland Company Address: 2135 S. Loop 250 West Midland TX						Project Name/Number: Plains Mewbourne Wishboone 35 34 / 11216569 Project Location:																																																																														
Email: becky.haskell@ghd.com glenn.quinney@ghd.com algroves@aapl.com tom.larson@ghd.com Phone No: (432)250-7917 Project Contact: Becky Haskell / Glenn Quinney Sampler's Name Zach Comino						Invoice To: Eddy County, New Mexico Carmille Bryant Plains All American Pipeline #10 Delta Drive Suite 550 E Midland, TX 79705 PO Number: NA																																																																														
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH By 8015 Mod (GRO, DRO & MRO)																																																																					
1/	St-Comp-1		8/4/20	0720	S	1								X	X	X	X	X																																																																		
2/	St-Comp-2			0730	S	1								X	X	X	X																																																																			
3/	BH-Comp-5			0740	S	1									X	X	X																																																																			
4/	BH-Comp-4			0750	S	1										X	X	X																																																																		
5/	BH-Comp-3			0800	S	1											X	X	X																																																																	
6/	MSW-Comp-1			0810	S	1											X	X	X																																																																	
7/	NSW-Comp-2			0820	S	1											X	X	X																																																																	
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Relinquished by: 5																	Date Time:																	Received By: 5																	Date Time:																	Received By: 5																
On Ice																	Cooler Temp.																	Thermo. Corr. Factor																																																		

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 08.04.2020 10.00.00 AM

Work Order #: 669020

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

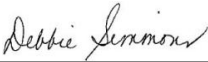
Checklist completed by:



Elizabeth McClellan

Date: 08.04.2020

Checklist reviewed by:



Debbie Simmons

Date: 08.05.2020



Analytical Report 669035

for

GHD Services, INC- Midland

Project Manager: Becky Haskell

Plains Mewbourne Wishbone 35 34

11216569

08.10.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.10.2020

Project Manager: **Becky Haskell**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: Eurofins Xenco, LLC Report No(s): **669035**
Plains Mewbourne Wishbone 35 34
Project Address: Eddy County, New Mexico

Becky Haskell:

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 Eurofins Xenco, LLC Report Number(s) 669035. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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 Eurofins Xenco, LLC. 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. 669035 will be filed for 45 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Debbie Simmons".

Debbie Simmons
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 669035

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WC-1	S	08.03.2020 07:00		669035-001

**CASE NARRATIVE****Client Name: GHD Services, INC- Midland****Project Name: Plains Mewbourne Wishbone 35 34**Project ID: 11216569
Work Order Number(s): 669035Report Date: 08.10.2020
Date Received: 08.04.2020

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None



Certificate of Analytical Results

669035

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: WC-1

Matrix: Soil

Sample Depth:

Lab Sample Id: 669035-001

Date Collected: 08.03.2020 07:00

Date Received: 08.04.2020 10:00

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3133577

Date Prep: 08.04.2020 15:33

Prep seq: 7708736

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	44.1	10.0	0.355	mg/kg	08.04.2020 18:38		1

Analytical Method: TCLP Metals by SW846 6010B

Prep Method: 3010A

Analyst: ANJ

% Moist:

Tech: ANJ

Seq Number: 3133828

Date Prep: 08.06.2020 08:35

Subcontractor: SUB: T104704215-20-36

Prep seq: 7708837

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	<0.0168	0.0500	0.0168	mg/L	08.06.2020 17:07	U	5
Barium	7440-39-3	0.644	0.0500	0.000700	mg/L	08.06.2020 17:07		5
Cadmium	7440-43-9	0.00261	0.0250	0.000656	mg/L	08.06.2020 17:07	J	5
Chromium	7440-47-3	0.00683	0.0500	0.00681	mg/L	08.06.2020 17:07	J	5
Lead	7439-92-1	<0.00916	0.0500	0.00916	mg/L	08.06.2020 17:07	U	5
Selenium	7782-49-2	<0.0278	0.100	0.0278	mg/L	08.06.2020 17:07	U	5
Silver	7440-22-4	<0.00802	0.100	0.00802	mg/L	08.06.2020 17:07	U	5

Analytical Method: TCLP Mercury by SW-846 1311/7470A

Prep Method: SW7470P

Analyst: ANJ

% Moist:

Tech: ANJ

Seq Number: 3133762

Date Prep: 08.06.2020 09:20

Subcontractor: SUB: T104704215-20-36

Prep seq: 7708817

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Mercury	7439-97-6	<0.000100	0.000200	0.000100	mg/L	08.06.2020 12:42	U	1

Analytical Method: Reactive Cyanide by SW 846-Section7.3.3

Prep Method: SW7.3.3.2P

Analyst: YAV

% Moist:

Tech: YAV

Seq Number: 3133787

Date Prep: 08.06.2020 13:00

Subcontractor: SUB: T104704215-20-36

Prep seq: 7708877

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Cyanide	57-12-5	<0.0117	0.0250	0.0117	mg/kg	08.06.2020 14:04	U+	5



Certificate of Analytical Results

669035

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: WC-1

Matrix: Soil

Sample Depth:

Lab Sample Id: 669035-001

Date Collected: 08.03.2020 07:00

Date Received: 08.04.2020 10:00

Analytical Method: Soil pH

Prep Method:

Analyst: KBU

% Moist:

Tech: KBU

Seq Number: 3133632

Date Prep:

Subcontractor: SUB: T104704215-20-36

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
pH	12408-02-5	8.25			SU	08.05.2020 14:16		
Soil pH meas. in water at	TEMP	25.9			Deg C	08.05.2020 14:16		1

Analytical Method: Flash Point (Closed Cup Tester)

Prep Method:

Analyst: LCH

% Moist:

Tech: LCH

Seq Number: 3133771

Date Prep:

Subcontractor: SUB: T104704215-20-36

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Flash Point		>180			Deg F	08.06.2020 10:23		1

Analytical Method: Reactive Sulfide by SW9034

Prep Method: SW7.3.4.2P

Analyst: LCH

% Moist:

Tech: LCH

Seq Number: 3133761

Date Prep: 08.06.2020 07:30

Subcontractor: SUB: T104704215-20-36

Prep seq: 7708861

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Reactive Sulfide	18496-25-8	10.0	25.0	0.500	mg/kg	08.06.2020 12:00	J	1

Analytical Method: Paint Filter Liquids Test

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 3134047

Date Prep:

Subcontractor: SUB: T104704400-20-20

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Paint Filter	PAIFILTER	PASS			PA/100mL	08.10.2020 10:00		1



Certificate of Analytical Results

669035

GHD Services, INC- Midland, Midland, TX
Plains Mewbourne Wishbone 35 34

Sample Id: **WC-1** Matrix: Soil Sample Depth:
Lab Sample Id: 669035-001 Date Collected: 08.03.2020 07:00 Date Received: 08.04.2020 10:00
Analytical Method: TPH by SW8015 Mod Prep Method: 8015
Analyst: DTH % Moist: Tech: DTH
Seq Number: 3133557 Date Prep: 08.04.2020 14:15
Prep seq: 7708701

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	366	251	69.6	mg/kg	08.04.2020 18:00		5
Diesel Range Organics (DRO)	C10C28DRO	2460	251	57.5	mg/kg	08.04.2020 18:00		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	223	251	57.4	mg/kg	08.04.2020 18:00	J	5
Total TPH	PHC635	3050		57.4	mg/kg	08.04.2020 18:00		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	112	70 - 135	%		
o-Terphenyl	107	70 - 135	%		

Analytical Method: TCLP BTEX by SW 8260B Prep Method: 5030B
Analyst: NAL % Moist: Tech: NAL
Seq Number: 3133860 Date Prep: 08.06.2020 13:00
Subcontractor: SUB: T104704215-20-36 Prep seq: 7708940

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00510	0.00500	0.00250	mg/L	08.06.2020 16:40		5

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	104	75 - 131	%		
1,2-Dichloroethane-D4	107	63 - 144	%		
Toluene-D8	104	80 - 117	%		
4-Bromofluorobenzene	95	74 - 124	%		



Certificate of Analytical Results

669035

GHD Services, INC- Midland, Midland, TX
Plains Mewbourne Wishbone 35 34

Sample Id: **7708701-1-BLK** Matrix: Solid Sample Depth:
Lab Sample Id: 7708701-1-BLK Date Collected: Date Received:
Analytical Method: TPH by SW8015 Mod Prep Method: 8015
Analyst: DTH % Moist: Tech: DTH
Seq Number: 3133557 Date Prep: 08.04.2020 12:30
Prep seq: 7708701

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.0	13.9	mg/kg	08.04.2020 12:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.0	11.5	mg/kg	08.04.2020 12:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.0	11.5	mg/kg	08.04.2020 12:25	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 135	%		
o-Terphenyl	108	70 - 135	%		

Sample Id: **7708736-1-BLK** Matrix: Solid Sample Depth:
Lab Sample Id: 7708736-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: MAB % Moist: Tech: MAB
Seq Number: 3133577 Date Prep: 08.04.2020 15:33
Prep seq: 7708736

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.354	10.0	0.354	mg/kg	08.04.2020 18:04	U	1

Sample Id: **7708817-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 7708817-1-BLK Date Collected: Date Received:
Analytical Method: TCLP Mercury by SW-846 1311/7470A Prep Method: SW7470P
Analyst: ANJ % Moist: Tech: ANJ
Seq Number: 3133762 Date Prep: 08.06.2020 09:20
Subcontractor: SUB: T104704215-20-36 Prep seq: 7708817

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Mercury	7439-97-6	<0.000100	0.000200	0.000100	mg/L	08.06.2020 14:47	U	1



Certificate of Analytical Results

669035

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **7708837-1-BLK** Matrix: Water Sample Depth:
 Lab Sample Id: 7708837-1-BLK Date Collected: Date Received:
 Analytical Method: TCLP Metals by SW846 6010B Prep Method: 3010A
 Analyst: ANJ % Moist: Tech: ANJ
 Seq Number: 3133828 Date Prep: 08.06.2020 08:35
 Subcontractor: SUB: T104704215-20-36 Prep seq: 7708837

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	<0.00336	0.0100	0.00336	mg/L	08.06.2020 15:47	U	1
Barium	7440-39-3	<0.000140	0.0100	0.000140	mg/L	08.06.2020 15:47	U	1
Cadmium	7440-43-9	<0.000131	0.00500	0.000131	mg/L	08.06.2020 15:47	U	1
Chromium	7440-47-3	<0.00136	0.0100	0.00136	mg/L	08.06.2020 15:47	U	1
Lead	7439-92-1	<0.00183	0.0100	0.00183	mg/L	08.06.2020 15:47	U	1
Selenium	7782-49-2	<0.00555	0.0200	0.00555	mg/L	08.06.2020 15:47	U	1
Silver	7440-22-4	<0.00160	0.0200	0.00160	mg/L	08.06.2020 15:47	U	1

Sample Id: **7708861-1-BLK** Matrix: Solid Sample Depth:
 Lab Sample Id: 7708861-1-BLK Date Collected: Date Received:
 Analytical Method: Reactive Sulfide by SW9034 Prep Method: SW7.3.4.2P
 Analyst: LCH % Moist: Tech: LCH
 Seq Number: 3133761 Date Prep: 08.06.2020 07:30
 Subcontractor: SUB: T104704215-20-36 Prep seq: 7708861

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Reactive Sulfide	18496-25-8	<0.500	25.0	0.500	mg/kg	08.06.2020 12:00	U	1

Sample Id: **7708877-1-BLK** Matrix: Solid Sample Depth:
 Lab Sample Id: 7708877-1-BLK Date Collected: Date Received:
 Analytical Method: Reactive Cyanide by SW 846-Section7.3.3 Prep Method: SW7.3.3.2P
 Analyst: YAV % Moist: Tech: YAV
 Seq Number: 3133787 Date Prep: 08.06.2020 13:00
 Subcontractor: SUB: T104704215-20-36 Prep seq: 7708877

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Cyanide	57-12-5	<0.0117	0.0250	0.0117	mg/kg	08.06.2020 13:43	U	1



Certificate of Analytical Results

669035

GHD Services, INC- Midland, Midland, TX
 Plains Mewbourne Wishbone 35 34

Sample Id: **7708940-1-BLK** Matrix: Water Sample Depth:
 Lab Sample Id: 7708940-1-BLK Date Collected: Date Received:
 Analytical Method: TCLP BTEX by SW 8260B Prep Method: 5030B
 Analyst: NAL % Moist: Tech: NAL
 Seq Number: 3133860 Date Prep: 08.06.2020 11:30
 Subcontractor: SUB: T104704215-20-36 Prep seq: 7708940

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00250	0.00500	0.00250	mg/L	08.06.2020 12:29	U	5

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	99	75 - 131	%		
1,2-Dichloroethane-D4	103	63 - 144	%		
Toluene-D8	105	80 - 117	%		
4-Bromofluorobenzene	97	74 - 124	%		



Certificate of Analytical Results 669035

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Type: Soil	Sample Date: 08.03.2020
Lab ID#: 669035-001	Sample Time: 07:00
Project Name: Plains Mewbourne Wishbone 35 34	Receiving Date: 08.04.2020
Project #: 11216569	Analysis Date: 08.06.2020
Project Location: Eddy County, New Mexico	Analysis Time: 13:23
Field Code: WC-1	

Analysis Description	Analysis Result pCi/G	Analysis Error +/- 2s	Analysis Result Bq/G	Analysis Error +/- 2s	Analysis Test Method	Analysis Technician	Flag
Radium-226	<1.18	N/A	<0.0437	N/A	E901.1	CHE	
Radium-228	<0.481	N/A	<0.0178	N/A	E901.1	CHE	
Lead-210	<1.29	N/A	<0.0476	N/A	E901.1	CHE	
Thorium-228	<2.34	N/A	<0.0865	N/A	E901.1	CHE	
Bismuth-214	<0.193	N/A	<0.00715	N/A	E901.1	CHE	
Pb-214	<0.177	N/A	<0.00655	N/A	E901.1	CHE	
Total Activity	<0.0314	N/A	<0.00116	N/A	E901.1	CHE	



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantitation limit and above the detection limit.
- 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.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 08102020

Work Orders : 669035

Project ID: 11216569

Lab Batch #: 3133860

Sample: 7708940-1-BKS / BKS

Batch: 1 **Matrix:** Water

Units: mg/L

Date Analyzed: 08.06.2020 10:16

SURROGATE RECOVERY STUDY

TCLP BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0498	0.0500	100	75-131	
1,2-Dichloroethane-D4	0.0489	0.0500	98	63-144	
Toluene-D8	0.0503	0.0500	101	80-117	
4-Bromofluorobenzene	0.0489	0.0500	98	74-124	

Lab Batch #: 3133860

Sample: 7708940-1-BSD / BSD

Batch: 1 **Matrix:** Water

Units: mg/L

Date Analyzed: 08.06.2020 10:38

SURROGATE RECOVERY STUDY

TCLP BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0475	0.0500	95	75-131	
1,2-Dichloroethane-D4	0.0482	0.0500	96	63-144	
Toluene-D8	0.0495	0.0500	99	80-117	
4-Bromofluorobenzene	0.0502	0.0500	100	74-124	

Lab Batch #: 3133860

Sample: 669100-001 S / MS

Batch: 1 **Matrix:** Soil

Units: mg/L

Date Analyzed: 08.06.2020 10:56

SURROGATE RECOVERY STUDY

TCLP BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0491	0.0500	98	75-131	
1,2-Dichloroethane-D4	0.0517	0.0500	103	63-144	
Toluene-D8	0.0497	0.0500	99	80-117	
4-Bromofluorobenzene	0.0512	0.0500	102	74-124	

Lab Batch #: 3133860

Sample: 669100-001 SD / MSD

Batch: 1 **Matrix:** Soil

Units: mg/L

Date Analyzed: 08.06.2020 11:14

SURROGATE RECOVERY STUDY

TCLP BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0488	0.0500	98	75-131	
1,2-Dichloroethane-D4	0.0471	0.0500	94	63-144	
Toluene-D8	0.0493	0.0500	99	80-117	
4-Bromofluorobenzene	0.0494	0.0500	99	74-124	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 08102020

Work Orders : 669035

Project ID: 11216569

Lab Batch #: 3133860

Sample: 7708940-1-BLK / BLK

Batch: 1 **Matrix:** Water

Units: mg/L

Date Analyzed: 08.06.2020 12:29

SURROGATE RECOVERY STUDY

TCLP BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0495	0.0500	99	75-131	
1,2-Dichloroethane-D4	0.0517	0.0500	103	63-144	
Toluene-D8	0.0527	0.0500	105	80-117	
4-Bromofluorobenzene	0.0484	0.0500	97	74-124	

Lab Batch #: 3133557

Sample: 7708701-1-BLK / BLK

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 08.04.2020 12:25

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 3133557

Sample: 7708701-1-BKS / BKS

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 08.04.2020 12:46

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	131	100	131	70-135	
o-Terphenyl	60.1	50.0	120	70-135	

Lab Batch #: 3133557

Sample: 7708701-1-BSD / BSD

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 08.04.2020 13:06

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	57.4	50.0	115	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 08102020

Work Orders : 669035

Project ID: 11216569

Lab Batch #: 3133557

Sample: 669020-011 S / MS

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 08.04.2020 13:46

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	101	120	70-135	
o-Terphenyl	56.4	50.3	112	70-135	

Lab Batch #: 3133557

Sample: 669020-011 SD / MSD

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 08.04.2020 14:07

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	51.7	50.1	103	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



BS / BSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669035

Project ID: 11216569

Analyst: MAB

Date Prepared: 08.04.2020

Date Analyzed: 08.04.2020

Lab Batch ID: 3133577

Sample: 7708736-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	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											
Chloride	<0.354	250	269	108	250	268	107	0	90-110	20	

Analyst: YAV

Date Prepared: 08.06.2020

Date Analyzed: 08.06.2020

Lab Batch ID: 3133787

Sample: 7708877-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Reactive Cyanide by SW 846-Section7.3.3	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											
Cyanide	<0.0583	20.0	3.09	15	20.0	3.17	16	3	5-40	20	

Analyst: LCH

Date Prepared: 08.06.2020

Date Analyzed: 08.06.2020

Lab Batch ID: 3133761

Sample: 7708861-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Reactive Sulfide by SW9034	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											
Reactive Sulfide	<0.500	50.0	48.0	96	50.0	44.0	88	9	30-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669035

Project ID: 11216569

Analyst: NAL

Date Prepared: 08.06.2020

Date Analyzed: 08.06.2020

Lab Batch ID: 3133860

Sample: 7708940-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TCLP BTEX by SW 8260B	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	<0.00250	0.250	0.209	84	0.250	0.209	84	0	66-142	20	

Analyst: ANJ

Date Prepared: 08.06.2020

Date Analyzed: 08.06.2020

Lab Batch ID: 3133762

Sample: 7708817-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TCLP Mercury by SW-846 1311/7470A	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											
Mercury <08/06/2020 14:49>	<0.000100	0.00200	0.00194	97	0.00200	0.00196	98	1	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669035

Project ID: 11216569

Analyst: ANJ

Date Prepared: 08.06.2020

Date Analyzed: 08.06.2020

Lab Batch ID: 3133828

Sample: 7708837-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TCLP Metals by SW846 6010B	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											
Arsenic	<0.00336	1.00	0.920	92	1.00	0.927	93	1	75-125	20	
Barium	<0.000140	1.00	0.970	97	1.00	0.989	99	2	75-125	20	
Cadmium	<0.000131	1.00	0.934	93	1.00	0.948	95	1	75-125	20	
Chromium	<0.00136	1.00	0.980	98	1.00	0.978	98	0	75-125	20	
Lead	<0.00183	1.00	1.00	100	1.00	0.992	99	1	75-125	20	
Selenium	<0.00555	1.00	0.931	93	1.00	0.936	94	1	75-125	20	
Silver	<0.00160	0.500	0.494	99	0.500	0.491	98	1	75-125	20	

Analyst: DTH

Date Prepared: 08.04.2020

Date Analyzed: 08.04.2020

Lab Batch ID: 3133557

Sample: 7708701-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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											
Gasoline Range Hydrocarbons (GRO)	<13.9	1000	1060	106	1000	1020	102	4	70-135	35	
Diesel Range Organics (DRO)	<11.5	1000	1150	115	1000	1110	111	4	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: Plains Mewbourne Wishbone 35 34

Work Order #: 669035

Lab Batch ID: 3133577

Date Analyzed: 08.04.2020

Reporting Units: mg/kg

QC- Sample ID: 669032-004 S

Date Prepared: 08.04.2020

Report Date: 08102020

Project ID: 11216569

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	177	199	382	103	200	384	104	1	90-110	20	

Lab Batch ID: 3133577

QC- Sample ID: 669080-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08.04.2020

Date Prepared: 08.04.2020

Analyst: MAB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	110	200	319	105	200	318	104	0	90-110	20	

Lab Batch ID: 3133860

QC- Sample ID: 669100-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08.06.2020

Date Prepared: 08.06.2020

Analyst: NAL

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TCLP BTEX by SW 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.0250	2.50	2.08	83	2.50	2.11	84	1	66-142	20	

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, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries



Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669035

Lab Batch ID: 3133762

Date Analyzed: 08.06.2020

Reporting Units: mg/L

QC- Sample ID: 669064-001 S

Date Prepared: 08.06.2020

Report Date: 08102020

Project ID: 11216569

Batch #: 1 Matrix: Soil

Analyst: ANJ

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TCLP Mercury by SW-846 1311/7470A 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
Mercury	<0.000100	0.00200	0.00190	95	0.00200	0.00185	93	3	75-125	20	

Lab Batch ID: 3133828

QC- Sample ID: 668766-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08.06.2020

Date Prepared: 08.06.2020

Analyst: ANJ

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TCLP Metals by SW846 6010B 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
Arsenic	<0.0168	5.00	5.02	100	5.00	5.18	104	3	75-125	20	
Barium	1.54	5.00	6.42	98	5.00	6.75	104	5	75-125	20	
Cadmium	<0.000656	5.00	5.03	101	5.00	5.21	104	4	75-125	20	
Chromium	<0.00681	5.00	5.11	102	5.00	5.23	105	2	75-125	20	
Lead	<0.00916	5.00	5.16	103	5.00	5.21	104	1	75-125	20	
Selenium	<0.0278	5.00	5.24	105	5.00	5.24	105	0	75-125	20	
Silver	<0.00802	2.50	2.66	106	2.50	2.69	108	1	75-125	20	

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, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries



Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669035

Lab Batch ID: 3133557

Date Analyzed: 08.04.2020

Reporting Units: mg/kg

QC- Sample ID: 669020-011 S

Date Prepared: 08.04.2020

Report Date: 08102020

Project ID: 11216569

Batch #: 1 Matrix: Soil

Analyst: DTH

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY 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
Gasoline Range Hydrocarbons (GRO)	<14.0	1010	993	98	1000	914	91	8	70-135	35	
Diesel Range Organics (DRO)	<11.5	1010	1080	107	1000	1000	100	8	70-135	35	

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

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

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, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Method Duplicate

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669035

Report Date: 08102020

Lab Batch #: 3133771

Project ID: 11216569

Date Analyzed: 08.06.2020 08:40

Date Prepared: 08.06.2020

Analyst: LCH

QC- Sample ID: 668737-001 D

Batch #: 1

Matrix: Oil

Reporting Units: Deg F

SAMPLE / SAMPLE DUPLICATE RECOVERY

Flash Point (Closed Cup Tester)	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Flash Point	<75	<75	0	25	

Lab Batch #: 3134047

Date Analyzed: 08.10.2020 10:00

Date Prepared: 08.10.2020

Analyst: WRU

QC- Sample ID: 669035-001 D

Batch #: 1

Matrix: Soil

Reporting Units: PA/100mL

SAMPLE / SAMPLE DUPLICATE RECOVERY

Paint Filter Liquids Test	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Paint Filter	PASS	PASS	NC	20	

Lab Batch #: 3133787

Date Analyzed: 08.06.2020 13:48

Date Prepared: 08.06.2020

Analyst: YAV

QC- Sample ID: 668519-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

Reactive Cyanide by SW 846-Section 7.3.3	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Cyanide	<0.0117	<0.0117	0	20	

Lab Batch #: 3133787

Date Analyzed: 08.06.2020 14:06

Date Prepared: 08.06.2020

Analyst: YAV

QC- Sample ID: 669040-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

Reactive Cyanide by SW 846-Section 7.3.3	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Cyanide	<0.0117	<0.0117	0	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit



Method Duplicate

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669035

Report Date: 08102020

Lab Batch #: 3133761

Project ID: 11216569

Date Analyzed: 08.06.2020 12:00

Date Prepared: 08.06.2020

Analyst: LCH

QC- Sample ID: 668519-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

Reactive Sulfide by SW9034	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Reactive Sulfide	20.0	20.0	0	20	J

Lab Batch #: 3133761

Date Analyzed: 08.06.2020 12:00

Date Prepared: 08.06.2020

Analyst: LCH

QC- Sample ID: 669040-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

Reactive Sulfide by SW9034	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Reactive Sulfide	<0.500	<0.500	0	20	

Lab Batch #: 3133632

Date Analyzed: 08.05.2020 14:16

Date Prepared: 08.05.2020

Analyst: KBU

QC- Sample ID: 669040-001 D

Batch #: 1

Matrix: Soil

Reporting Units: Deg C

SAMPLE / SAMPLE DUPLICATE RECOVERY

Soil pH	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Soil pH meas. in water at	25.3	25.1	1	25	

Lab Batch #: 3133632

Date Analyzed: 08.05.2020 14:16

Date Prepared: 08.05.2020

Analyst: KBU

QC- Sample ID: 669040-001 D

Batch #: 1

Matrix: Soil

Reporting Units: SU

SAMPLE / SAMPLE DUPLICATE RECOVERY

Soil pH	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
pH	6.46	6.47	0	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit



Method Duplicate

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 669035

Report Date: 08102020

Lab Batch #: 3133632

Project ID: 11216569

Date Analyzed: 08.05.2020 14:16

Date Prepared: 08.05.2020

Analyst: KBU

QC- Sample ID: 669036-002 D

Batch #: 2

Matrix: Soil

Reporting Units: Deg C

SAMPLE / SAMPLE DUPLICATE RECOVERY

Soil pH	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Soil pH meas. in water at	25.2	25.0	1	25	

Lab Batch #: 3133632

Date Analyzed: 08.05.2020 14:16

Date Prepared: 08.05.2020

Analyst: KBU

QC- Sample ID: 669036-002 D

Batch #: 2

Matrix: Soil

Reporting Units: SU

SAMPLE / SAMPLE DUPLICATE RECOVERY

Soil pH	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
pH	9.32	9.33	0	20	

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

009035

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Client / Reporting Information				Project Information				Analytical Information				Matrix Codes											
Company Name / Branch: GHD/Midland				Project Name/Number: Plains Newbourne Wishpoone 35 34 / 11216569																			
Company Address: 2135 S. Loop 250 West Midland TX				Project Location: Eddy County, New Mexico																			
Email: becky.haskell@ghd.com glenn.quinney@ghd.com alroves@psaap.com				Phone No: (432)250-7917 Invoice To: Camille Bryant Plains All American Pipeline #10 Dea Drive Suite 550 E Midland, TX 79705 PO Number: NA																			
Project Contact: Becky Haskell / Glenn Quinney																							
Sampler's Name Glenn Quinney																							
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH By 8015 Mod (GRO, DRO & MRO)	RCRA 8 TCLP Metals	Chloride 300	RCI	TCLP Benzene	Paint Filter Test	Norm	Field Comments	
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5				5				6				7				8				9			
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5				5				6				7				8				9			
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5				5				6				7				8				9			
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5				5				6				7				8				9			
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
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Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5				5				6				7				8				9			
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5				5				6				7				8				9			
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5				5				6				7				8				9			
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5				5				6				7				8				9			
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5				5																			

Inter-Office Shipment

IOS Number : **68192**

Date/Time: 08.04.2020

Created by: Elizabeth McClellan

Please send report to: Debbie Simmons

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 771175800884

E-Mail: debbie.simmons@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
669035-001	S	WC-1	08.03.2020 07:00	E901.1	Gamma Spectroscopy by E901.1	08.06.2020	01.30.2021	DES	TOTACTIVITY Y	
669035-001	S	WC-1	08.03.2020 07:00	SW9095	Paint Filter Liquids Test	08.06.2020	08.31.2020	DES	Paint Filter	

Inter Office Shipment or Sample Comments:

Relinquished By:



Elizabeth McClellan

Date Relinquished: 08.04.2020

Received By:



Brianna Teel

Date Received: 08.05.2020

Cooler Temperature: 0.2

Inter-Office Shipment

IOS Number : **68195**

Date/Time: 08.04.2020

Created by: Elizabeth McClellan

Please send report to: Debbie Simmons

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Houston**

Air Bill No.: 771175194168

E-Mail: debbie.simmons@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
669035-001	W	WC-1	08.03.2020 07:00	SW8260BTCLP	VOC TCLP List	HOLD	08.17.2020	DES	BZ CLBZ CTCL DCA12	
669035-001	W	WC-1	08.03.2020 07:00	SW8260BTX_TCLP	TCLP BTEX by SW 8260B	08.06.2020	08.17.2020	DES	BZ	
669035-001	W	WC-1	08.03.2020 07:00	SW6010BTCLP	TCLP Metals by SW846 6010B	08.06.2020	01.30.2021	DES	AG AS BA CD CR PB SE	
669035-001	W	WC-1	08.03.2020 07:00	SW7470A_TCLP	TCLP Mercury by SW-846 1311/7470A	08.06.2020	08.31.2020	DES	HG	
669035-001	S	WC-1	08.03.2020 07:00	SW1010	Flash Point (Closed Cup Tester)	08.06.2020	09.02.2020	DES	FLASHPT	
669035-001	S	WC-1	08.03.2020 07:00	SW9045C	Soil pH	08.06.2020	08.31.2020	DES		
669035-001	S	WC-1	08.03.2020 07:00	SW9012_RCI	Reactive Cyanide by SW 846-Section7.3	08.06.2020	08.17.2020	DES	CN	
669035-001	S	WC-1	08.03.2020 07:00	SW9034_RCI	Reactive Sulfide by SW9034	08.06.2020	08.17.2020	DES	RS	

Inter Office Shipment or Sample Comments:

Relinquished By:



Elizabeth McClellan

Date Relinquished: 08.04.2020

Received By:



Monica Benavides

Date Received: 08.05.2020

Cooler Temperature: 2.1

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 68192

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-8

Sent By: Elizabeth McClellan

Date Sent: 08.04.2020 12.24 PM

Received By: Brianna Teel

Date Received: 08.05.2020 10.59 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:



Brianna Teel

Date: 08.05.2020

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 68195

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Elizabeth McClellan

Date Sent: 08.04.2020 12.33 PM

Received By: Monica Benavides

Date Received: 08.05.2020 09.30 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:



Monica Benavides

Date: 08.05.2020

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 08.04.2020 10.00.00 AM

Work Order #: 669035

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6* Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes
	E300 and SW8015 kept in Carlsbad, SW9095 and E901.1 subbed to Midland. All other methods subbed to Stafford.
#18 Water VOC samples have zero headspace?	N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

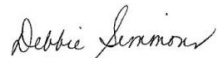
Checklist completed by:



Elizabeth McClellan

Date: 08.04.2020

Checklist reviewed by:



Debbie Simmons

Date: 08.05.2020

Certificate of Analysis Summary 670511



GHD Services, INC- Midland, Midland, TX

Project Name: Plains Mewbourne Wishbone 35 34

Project Id: 11216569
Contact: Becky Haskell
Project Location: Eddy County

Date Received in Lab: Wed 08.19.2020 15:10**Report Date:** 08.21.2020 16:45**Project Manager:** Debbie Simmons

<i>Analysis Requested</i>	<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	670511-001 HA3-6" SOIL 08.19.2020 08:45	670511-003 HA4-6" SOIL 08.19.2020 09:00	670511-005 T1-comp-3A SOIL 08.19.2020 10:50	670511-006 SW-comp-1 SOIL 08.19.2020 12:10	670511-007 BH-Comp-4A SOIL 08.19.2020 12:30	670511-008 BH-Comp-5A SOIL 08.19.2020 13:00
BTEX by EPA 8021B	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	08.20.2020 15:01 08.20.2020 18:41 mg/kg RL	08.20.2020 15:01 08.20.2020 19:26 mg/kg RL	08.20.2020 15:01 08.20.2020 20:11 mg/kg RL	08.20.2020 15:01 08.20.2020 20:33 mg/kg RL	08.20.2020 15:01 08.20.2020 20:55 mg/kg RL	08.20.2020 15:01 08.20.2020 21:18 mg/kg RL
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00401 0.00401	<0.00402 0.00402	<0.00399 0.00399	<0.00397 0.00397	<0.00399 0.00399	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	08.20.2020 12:36 08.20.2020 15:23 mg/kg RL	08.20.2020 12:36 08.20.2020 15:45 mg/kg RL	08.20.2020 12:36 08.20.2020 15:56 mg/kg RL	08.20.2020 12:36 08.20.2020 16:13 mg/kg RL	08.20.2020 12:36 08.20.2020 16:19 mg/kg RL	08.20.2020 12:36 08.20.2020 16:25 mg/kg RL
Chloride		14.1 9.94	<10.0 10.0	11.3 9.98	<10.0 10.0	14.2 9.90	60.5 9.94
TPH By SW8015 Mod	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	08.20.2020 12:30 08.20.2020 19:18 mg/kg RL	08.20.2020 12:30 08.20.2020 19:59 mg/kg RL	08.20.2020 12:30 08.20.2020 20:39 mg/kg RL	08.20.2020 12:30 08.20.2020 20:59 mg/kg RL	08.20.2020 12:30 08.20.2020 21:20 mg/kg RL	08.20.2020 12:30 08.20.2020 21:40 mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.1 50.1	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.1 50.1	<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.1 50.1	<50.0 50.0	<49.9 49.9
Total TPH		<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.1 50.1	<50.0 50.0	<49.9 49.9

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 670511

GHD Services, INC- Midland, Midland, TX

Project Name: Plains Mewbourne Wishbone 35 34

Project Id: 11216569
Contact: Becky Haskell
Project Location: Eddy County

Date Received in Lab: Wed 08.19.2020 15:10
Report Date: 08.21.2020 16:45
Project Manager: Debbie Simmons

<i>Analysis Requested</i>	<i>Lab Id:</i>	670511-009	670511-010	670511-011	670511-012		
	<i>Field Id:</i>	MSW-Comp-2	ST-Comp-2A	WSW-Comp-2	ESW-Comp-2		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	08.19.2020 13:15	08.19.2020 13:30	08.19.2020 13:50	08.19.2020 14:00		
BTEX by EPA 8021B	<i>Extracted:</i>	08.20.2020 15:01	08.20.2020 15:01	08.20.2020 15:01	08.20.2020 15:01		
	<i>Analyzed:</i>	08.20.2020 21:40	08.20.2020 22:03	08.20.2020 23:21	08.20.2020 23:43		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200		
Toluene		<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200		
Ethylbenzene		<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200		
m,p-Xylenes		<0.00396 0.00396	<0.00396 0.00396	<0.00398 0.00398	<0.00399 0.00399		
o-Xylene		<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200		
Total Xylenes		<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200		
Total BTEX		<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200		
Chloride by EPA 300	<i>Extracted:</i>	08.20.2020 12:36	08.20.2020 12:36	08.20.2020 12:36	08.20.2020 12:36		
	<i>Analyzed:</i>	08.20.2020 16:30	08.20.2020 16:36	08.20.2020 16:41	08.20.2020 16:58		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		23.7 9.98	<10.1 10.1	42.4 10.1	22.1 10.1		
TPH By SW8015 Mod	<i>Extracted:</i>	08.20.2020 12:30	08.20.2020 12:30	08.20.2020 12:30	08.20.2020 12:30		
	<i>Analyzed:</i>	08.20.2020 14:35	08.20.2020 15:36	08.20.2020 15:56	08.20.2020 16:16		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.0 50.0	<50.1 50.1	<50.3 50.3		
Diesel Range Organics (DRO)		<50.1 50.1	<50.0 50.0	<50.1 50.1	<50.3 50.3		
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.0 50.0	<50.1 50.1	<50.3 50.3		
Total TPH		<50.1 50.1	<50.0 50.0	<50.1 50.1	<50.3 50.3		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 670511

for

GHD Services, INC- Midland

Project Manager: Becky Haskell

Plains Mewbourne Wishbone 35 34

11216569

08.21.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.21.2020

Project Manager: **Becky Haskell**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: Eurofins Xenco, LLC Report No(s): **670511**
Plains Mewbourne Wishbone 35 34
Project Address: Eddy County

Becky Haskell:

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 Eurofins Xenco, LLC Report Number(s) 670511. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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 Eurofins Xenco, LLC. 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. 670511 will be filed for 45 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in cursive script that reads "Debbie Simmons".

Debbie Simmons
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 670511****GHD Services, INC- Midland, Midland, TX**

Plains Mewbourne Wishbone 35 34

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA3-6"	S	08.19.2020 08:45		670511-001
HA4-6"	S	08.19.2020 09:00		670511-003
T1-comp-3A	S	08.19.2020 10:50		670511-005
SW-comp-1	S	08.19.2020 12:10		670511-006
BH-Comp-4A	S	08.19.2020 12:30		670511-007
BH-Comp-5A	S	08.19.2020 13:00		670511-008
MSW-Comp-2	S	08.19.2020 13:15		670511-009
ST-Comp-2A	S	08.19.2020 13:30		670511-010
WSW-Comp-2	S	08.19.2020 13:50		670511-011
ESW-Comp-2	S	08.19.2020 14:00		670511-012
HA3-1'	S	08.19.2020 08:50		Not Analyzed
HA4-1'	S	08.19.2020 09:10		Not Analyzed



CASE NARRATIVE

Client Name: GHD Services, INC- Midland

Project Name: Plains Mewbourne Wishbone 35 34

Project ID: 11216569
Work Order Number(s): 670511

Report Date: 08.21.2020
Date Received: 08.19.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 670511

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **HA3-6"** Matrix: Soil Date Received: 08.19.2020 15:10
 Lab Sample Id: 670511-001 Date Collected: 08.19.2020 08:45
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.20.2020 12:36 Basis: Wet Weight
 Seq Number: 3135200

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.1	9.94	mg/kg	08.20.2020 15:23		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.20.2020 12:30 Basis: Wet Weight
 Seq Number: 3135203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.20.2020 19:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.20.2020 19:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.20.2020 19:18	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.20.2020 19:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.20.2020 19:18	
o-Terphenyl	84-15-1	101	%	70-135	08.20.2020 19:18	



Certificate of Analytical Results 670511

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **HA3-6"**
Lab Sample Id: 670511-001

Matrix: Soil
Date Collected: 08.19.2020 08:45

Date Received: 08.19.2020 15:10

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 15:01

Basis: Wet Weight

Seq Number: 3135191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.20.2020 18:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.20.2020 18:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.20.2020 18:41	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.20.2020 18:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.20.2020 18:41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.20.2020 18:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.20.2020 18:41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.20.2020 18:41		
4-Bromofluorobenzene	460-00-4	88	%	70-130	08.20.2020 18:41		



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GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **HA4-6"** Matrix: Soil Date Received: 08.19.2020 15:10
 Lab Sample Id: 670511-003 Date Collected: 08.19.2020 09:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.20.2020 12:36 Basis: Wet Weight
 Seq Number: 3135200

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	08.20.2020 15:45	U	1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.20.2020 12:30 Basis: Wet Weight
 Seq Number: 3135203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.20.2020 19:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.20.2020 19:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.20.2020 19:59	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.20.2020 19:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.20.2020 19:59	
o-Terphenyl	84-15-1	94	%	70-135	08.20.2020 19:59	



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GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **HA4-6"**
Lab Sample Id: 670511-003

Matrix: Soil
Date Collected: 08.19.2020 09:00

Date Received: 08.19.2020 15:10

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 15:01

Basis: Wet Weight

Seq Number: 3135191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.20.2020 19:26	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.20.2020 19:26	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.20.2020 19:26	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.20.2020 19:26	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.20.2020 19:26	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.20.2020 19:26	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.20.2020 19:26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.20.2020 19:26		
4-Bromofluorobenzene	460-00-4	88	%	70-130	08.20.2020 19:26		



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GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **T1-comp-3A**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-005

Date Collected: 08.19.2020 10:50

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 12:36

Basis: Wet Weight

Seq Number: 3135200

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.3	9.98	mg/kg	08.20.2020 15:56		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 08.20.2020 12:30

Basis: Wet Weight

Seq Number: 3135203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.20.2020 20:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.20.2020 20:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.20.2020 20:39	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.20.2020 20:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.20.2020 20:39	
o-Terphenyl	84-15-1	93	%	70-135	08.20.2020 20:39	



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GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **T1-comp-3A**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-005

Date Collected: 08.19.2020 10:50

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 15:01

Basis: Wet Weight

Seq Number: 3135191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.20.2020 20:11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.20.2020 20:11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.20.2020 20:11	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.20.2020 20:11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.20.2020 20:11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.20.2020 20:11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.20.2020 20:11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	08.20.2020 20:11		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.20.2020 20:11		



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GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **SW-comp-1**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-006

Date Collected: 08.19.2020 12:10

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 12:36

Basis: Wet Weight

Seq Number: 3135200

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	08.20.2020 16:13	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 08.20.2020 12:30

Basis: Wet Weight

Seq Number: 3135203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.20.2020 20:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.20.2020 20:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.20.2020 20:59	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.20.2020 20:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.20.2020 20:59	
o-Terphenyl	84-15-1	96	%	70-135	08.20.2020 20:59	



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Sample Id: **SW-comp-1**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-006

Date Collected: 08.19.2020 12:10

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 15:01

Basis: Wet Weight

Seq Number: 3135191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.20.2020 20:33	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.20.2020 20:33	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.20.2020 20:33	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.20.2020 20:33	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.20.2020 20:33	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.20.2020 20:33	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.20.2020 20:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.20.2020 20:33		
4-Bromofluorobenzene	460-00-4	93	%	70-130	08.20.2020 20:33		



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GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **BH-Comp-4A**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-007

Date Collected: 08.19.2020 12:30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 12:36

Basis: Wet Weight

Seq Number: 3135200

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.2	9.90	mg/kg	08.20.2020 16:19		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 08.20.2020 12:30

Basis: Wet Weight

Seq Number: 3135203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.20.2020 21:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.20.2020 21:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.20.2020 21:20	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.20.2020 21:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.20.2020 21:20	
o-Terphenyl	84-15-1	93	%	70-135	08.20.2020 21:20	



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GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **BH-Comp-4A**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-007

Date Collected: 08.19.2020 12:30

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 15:01

Basis: Wet Weight

Seq Number: 3135191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.20.2020 20:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.20.2020 20:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.20.2020 20:55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.20.2020 20:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.20.2020 20:55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.20.2020 20:55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.20.2020 20:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.20.2020 20:55		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.20.2020 20:55		



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GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **BH-Comp-5A**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-008

Date Collected: 08.19.2020 13:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 12:36

Basis: Wet Weight

Seq Number: 3135200

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	60.5	9.94	mg/kg	08.20.2020 16:25		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 08.20.2020 12:30

Basis: Wet Weight

Seq Number: 3135203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.20.2020 21:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.20.2020 21:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.20.2020 21:40	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.20.2020 21:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.20.2020 21:40	
o-Terphenyl	84-15-1	96	%	70-135	08.20.2020 21:40	



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GHD Services, INC- Midland, Midland, TX

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Sample Id: **BH-Comp-5A**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-008

Date Collected: 08.19.2020 13:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 15:01

Basis: Wet Weight

Seq Number: 3135191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.20.2020 21:18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.20.2020 21:18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.20.2020 21:18	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.20.2020 21:18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.20.2020 21:18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.20.2020 21:18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.20.2020 21:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	08.20.2020 21:18		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.20.2020 21:18		



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Plains Mewbourne Wishbone 35 34

Sample Id: **MSW-Comp-2** Matrix: Soil Date Received: 08.19.2020 15:10
 Lab Sample Id: 670511-009 Date Collected: 08.19.2020 13:15
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.20.2020 12:36 Basis: Wet Weight
 Seq Number: 3135200

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.7	9.98	mg/kg	08.20.2020 16:30		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.20.2020 12:30 Basis: Wet Weight
 Seq Number: 3135190

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.20.2020 14:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.20.2020 14:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.20.2020 14:35	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.20.2020 14:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.20.2020 14:35	
o-Terphenyl	84-15-1	102	%	70-135	08.20.2020 14:35	



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GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **MSW-Comp-2**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-009

Date Collected: 08.19.2020 13:15

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 15:01

Basis: Wet Weight

Seq Number: 3135191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.20.2020 21:40	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.20.2020 21:40	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.20.2020 21:40	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.20.2020 21:40	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.20.2020 21:40	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.20.2020 21:40	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.20.2020 21:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.20.2020 21:40		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.20.2020 21:40		



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Plains Mewbourne Wishbone 35 34

Sample Id: **ST-Comp-2A**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-010

Date Collected: 08.19.2020 13:30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 12:36

Basis: Wet Weight

Seq Number: 3135200

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.1	10.1	mg/kg	08.20.2020 16:36	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 08.20.2020 12:30

Basis: Wet Weight

Seq Number: 3135190

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.20.2020 15:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.20.2020 15:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.20.2020 15:36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.20.2020 15:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	08.20.2020 15:36	
o-Terphenyl	84-15-1	99	%	70-135	08.20.2020 15:36	



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GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **ST-Comp-2A**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-010

Date Collected: 08.19.2020 13:30

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 15:01

Basis: Wet Weight

Seq Number: 3135191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.20.2020 22:03	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.20.2020 22:03	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.20.2020 22:03	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.20.2020 22:03	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.20.2020 22:03	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.20.2020 22:03	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.20.2020 22:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	08.20.2020 22:03	
4-Bromofluorobenzene	460-00-4	80	%	70-130	08.20.2020 22:03	



Certificate of Analytical Results 670511

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **WSW-Comp-2** Matrix: Soil Date Received: 08.19.2020 15:10
 Lab Sample Id: 670511-011 Date Collected: 08.19.2020 13:50
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.20.2020 12:36 Basis: Wet Weight
 Seq Number: 3135200

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.4	10.1	mg/kg	08.20.2020 16:41		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.20.2020 12:30 Basis: Wet Weight
 Seq Number: 3135190

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.20.2020 15:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.20.2020 15:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.20.2020 15:56	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.20.2020 15:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.20.2020 15:56	
o-Terphenyl	84-15-1	102	%	70-135	08.20.2020 15:56	



Certificate of Analytical Results 670511

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **WSW-Comp-2**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-011

Date Collected: 08.19.2020 13:50

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 15:01

Basis: Wet Weight

Seq Number: 3135191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.20.2020 23:21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.20.2020 23:21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.20.2020 23:21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.20.2020 23:21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.20.2020 23:21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.20.2020 23:21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.20.2020 23:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	08.20.2020 23:21	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.20.2020 23:21	



Certificate of Analytical Results 670511

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **ESW-Comp-2**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-012

Date Collected: 08.19.2020 14:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 12:36

Basis: Wet Weight

Seq Number: 3135200

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.1	10.1	mg/kg	08.20.2020 16:58		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 08.20.2020 12:30

Basis: Wet Weight

Seq Number: 3135190

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.20.2020 16:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	08.20.2020 16:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.20.2020 16:16	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	08.20.2020 16:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	135	%	70-135	08.20.2020 16:16	
o-Terphenyl	84-15-1	125	%	70-135	08.20.2020 16:16	



Certificate of Analytical Results 670511

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **ESW-Comp-2**

Matrix: Soil

Date Received: 08.19.2020 15:10

Lab Sample Id: 670511-012

Date Collected: 08.19.2020 14:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.20.2020 15:01

Basis: Wet Weight

Seq Number: 3135191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.20.2020 23:43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.20.2020 23:43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.20.2020 23:43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.20.2020 23:43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.20.2020 23:43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.20.2020 23:43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.20.2020 23:43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.20.2020 23:43		
4-Bromofluorobenzene	460-00-4	87	%	70-130	08.20.2020 23:43		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantitation limit and above the detection limit.
- 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.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



GHD Services, INC- Midland

Plains Mewbourne Wishbone 35 34

Analytical Method: Chloride by EPA 300

Seq Number: 3135200

MB Sample Id: 7709862-1-BLK

Matrix: Solid

LCS Sample Id: 7709862-1-BKS

Prep Method: E300P

Date Prep: 08.20.2020

LCSD Sample Id: 7709862-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	264	106	267	107	90-110	1	20	mg/kg	08.20.2020 15:12	

Analytical Method: Chloride by EPA 300

Seq Number: 3135200

Parent Sample Id: 670511-001

Matrix: Soil

MS Sample Id: 670511-001 S

Prep Method: E300P

Date Prep: 08.20.2020

MSD Sample Id: 670511-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.1	199	224	105	224	105	90-110	0	20	mg/kg	08.20.2020 15:29	

Analytical Method: Chloride by EPA 300

Seq Number: 3135200

Parent Sample Id: 670511-011

Matrix: Soil

MS Sample Id: 670511-011 S

Prep Method: E300P

Date Prep: 08.20.2020

MSD Sample Id: 670511-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	42.4	200	248	103	247	102	90-110	0	20	mg/kg	08.20.2020 16:47	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3135190

MB Sample Id: 7709872-1-BLK

Matrix: Solid

LCS Sample Id: 7709872-1-BKS

Prep Method: SW8015P

Date Prep: 08.20.2020

LCSD Sample Id: 7709872-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1050	105	1060	106	70-135	1	35	mg/kg	08.20.2020 13:55	
Diesel Range Organics (DRO)	<50.0	1000	1090	109	1070	107	70-135	2	35	mg/kg	08.20.2020 13:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		125		124		70-135	%	08.20.2020 13:55
o-Terphenyl	94		111		108		70-135	%	08.20.2020 13:55

Analytical Method: TPH By SW8015 Mod

Seq Number: 3135203

MB Sample Id: 7709859-1-BLK

Matrix: Solid

LCS Sample Id: 7709859-1-BKS

Prep Method: SW8015P

Date Prep: 08.20.2020

LCSD Sample Id: 7709859-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	951	95	944	94	70-135	1	35	mg/kg	08.20.2020 13:55	
Diesel Range Organics (DRO)	<50.0	1000	986	99	979	98	70-135	1	35	mg/kg	08.20.2020 13:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		114		110		70-135	%	08.20.2020 13:55
o-Terphenyl	87		104		100		70-135	%	08.20.2020 13:55

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



GHD Services, INC- Midland

Plains Mewbourne Wishbone 35 34

Analytical Method: TPH By SW8015 Mod

Seq Number: 3135190

Matrix: Solid

Prep Method: SW8015P

Date Prep: 08.20.2020

MB Sample Id: 7709872-1-BLK

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.20.2020 13:34	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3135203

Matrix: Solid

Prep Method: SW8015P

Date Prep: 08.20.2020

MB Sample Id: 7709859-1-BLK

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.20.2020 13:34	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3135190

Matrix: Soil

Prep Method: SW8015P

Date Prep: 08.20.2020

Parent Sample Id: 670511-009

MS Sample Id: 670511-009 S

MSD Sample Id: 670511-009 SD

Parameter

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	979	98	1320	132	70-135	30	35	mg/kg	08.20.2020 14:55	
Diesel Range Organics (DRO)	<50.1	1000	980	98	1140	114	70-135	15	35	mg/kg	08.20.2020 14:55	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		84		70-135	%	08.20.2020 14:55
o-Terphenyl	105		109		70-135	%	08.20.2020 14:55

Analytical Method: TPH By SW8015 Mod

Seq Number: 3135203

Matrix: Soil

Prep Method: SW8015P

Date Prep: 08.20.2020

Parent Sample Id: 670474-001

MS Sample Id: 670474-001 S

MSD Sample Id: 670474-001 SD

Parameter

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	986	99	920	92	70-135	7	35	mg/kg	08.20.2020 14:55	
Diesel Range Organics (DRO)	<50.0	999	1030	103	973	97	70-135	6	35	mg/kg	08.20.2020 14:55	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		114		70-135	%	08.20.2020 14:55
o-Terphenyl	113		105		70-135	%	08.20.2020 14:55

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



GHD Services, INC- Midland
Plains Mewbourne Wishbone 35 34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135191

MB Sample Id: 7709856-1-BLK

Matrix: Solid

LCS Sample Id: 7709856-1-BKS

Prep Method: SW5035A

Date Prep: 08.20.2020

LCSD Sample Id: 7709856-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.109	109	0.113	113	70-130	4	35	mg/kg	08.20.2020 15:52	
Toluene	<0.00200	0.100	0.104	104	0.108	108	70-130	4	35	mg/kg	08.20.2020 15:52	
Ethylbenzene	<0.00200	0.100	0.0981	98	0.102	102	71-129	4	35	mg/kg	08.20.2020 15:52	
m,p-Xylenes	<0.00400	0.200	0.199	100	0.206	103	70-135	3	35	mg/kg	08.20.2020 15:52	
o-Xylene	<0.00200	0.100	0.0966	97	0.100	100	71-133	3	35	mg/kg	08.20.2020 15:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		101		70-130	%	08.20.2020 15:52
4-Bromofluorobenzene	86		87		88		70-130	%	08.20.2020 15:52

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135191

Parent Sample Id: 670511-001

Matrix: Soil

MS Sample Id: 670511-001 S

Prep Method: SW5035A

Date Prep: 08.20.2020

MSD Sample Id: 670511-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.123	123	0.122	122	70-130	1	35	mg/kg	08.20.2020 17:22	
Toluene	<0.00201	0.100	0.117	117	0.116	116	70-130	1	35	mg/kg	08.20.2020 17:22	
Ethylbenzene	<0.00201	0.100	0.109	109	0.108	108	71-129	1	35	mg/kg	08.20.2020 17:22	
m,p-Xylenes	<0.00402	0.201	0.221	110	0.220	110	70-135	0	35	mg/kg	08.20.2020 17:22	
o-Xylene	<0.00201	0.100	0.107	107	0.107	107	71-133	0	35	mg/kg	08.20.2020 17:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		70-130	%	08.20.2020 17:22
4-Bromofluorobenzene	87		91		70-130	%	08.20.2020 17:22

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

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 Stafford, Texas (281-240-4200)
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Norcross, Georgia (770-449-8800)

Lakeland, Florida (883-646-8526)
Tampa, Florida (813-620-2000)

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes	
Company Name / Branch: GHDMidland		Project Name/Number: Plains Newbourne Washboone 35 34 / 11216569		Invoice To: Eddy County, New Mexico Carmille Bryant Plains All American Pipeline #10 Dista Drive Suite 550 E Midland, TX 79705 PO Number: NA			
Company Address: 2135 S. Loop 250 West Midland TX		Project Location:		Xenco Quote #		Xenco Job #	
Email: becky.haskell@ghd.com glenn.guiney@ghd.com aliquoves@ghd.com		Phone No: (432)250-7917		670511			
Project Contact: Becky Haskell / Glenn Guiney							
Sampler's Name Zach Comino							

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH By 8015 Mod (GRO, DRO & MRO)	BTEX 8021 B	Chloride 300	Field Comments
1	HA3-6"		08/12/20	0645	S	1									X	X	X	
2	HA3-1'		08/12/20	0650	S	1									X	X	X	
3	HA4-6"		08/12/20	0700	S	1									X	X	X	
4	HA4-1'		08/12/20	0910	S	1									X	X	X	
5	T1-comp-3A		08/12/20	1050	S	1									X	X	X	
6	SW-comp-1		08/12/20	1210	S	1									X	X	X	
7	BH-comp-4A		08/12/20	1230	S	1									X	X	X	
8	BH-comp-5A		08/12/20	1300	S	1									X	X	X	
9	MSW-comp-2		08/12/20	1315	S	1									X	X	X	
10	ST-Comp-2A		08/12/20	1330	S	1									X	X	X	

<input type="checkbox"/> Same Day TAT <input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 3 Day EMERGENCY		<input checked="" type="checkbox"/> 5 Day TAT <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> Contract TAT <input type="checkbox"/> TRRP Checklist		<input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level III Std QC+ Forms <input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> TRRP Checklist		<input type="checkbox"/> Level IV (Full Data Pkg / raw data) <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> UST / RG -411	
TAT Starts Day received by Lab, if received by 5:00 pm				Report MDLs and J values.			
Relinquished by Sampler:				SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY			
Date Time:		Received By:		Date Time:		Received By:	
Relinquished by:		Date Time:		Received By:		Date Time:	
Relinquished by:		Date Time:		Received By:		Date Time:	
Custody Seal #		Preserved where applicable		On Ice		Cooler Temp. Thermo. Corr. Factor	
4		4		X		5.2/5.0 TMD007	
No SSOW for this project - Direct bill to Plains				Run TPH by 8015, BTEX 8021, and Chloride 300			

Setting the Standard since 1990

Stafford, Texas (281-240-4200)

Dallas Texas (214-902-0300)

Service Center - San Antonio, Texas (210-509-3334)

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Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: GHD/Midland				Project Name/Number: Plains Mewbourne Wishpoone 35 34 / 11216569				Invoice To: Carnille Bryant Plains All American Pipeline #10 Dista Drive Suite 550 E Midland, TX 79705 PO Number: NA				S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water W = Wipe O = Oil WW = Waste Water A = Air			
Company Address: 2135 S. Loop 250 West Midland TX				Project Location: Eddy County, New Mexico				Invoice To: Carnille Bryant Plains All American Pipeline #10 Dista Drive Suite 550 E Midland, TX 79705 PO Number: NA							
Email: becky.haskell@ghd.com glenn.quiney@ghd.com aliquotes@ghd.com Project Contact: Becky Haskell / Glenn Quiney Sampler's Name Zach Comino				Phone No: (432)250-7917 tom.larson@ghd.com											
No.				Field ID / Point of Collection				Collection				Number of preserved bottles			
				Sample Depth				Date				Time			
1				WSW-Comp-2				08/19/20				1550			
2				ESW-Comp-2				08/19/20				1400			
3															
4															
5															
6															
7															
8															
9															
10															
Turnaround Time (Business days)															
Same Day TAT				<input checked="" type="checkbox"/> 5 Day TAT											
Next Day EMERGENCY				<input type="checkbox"/> 7 Day TAT											
2 Day EMERGENCY				<input type="checkbox"/> Contract TAT											
3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist											
TAT Starts Day received by Lab, if received by 5:00 pm															
Relinquished by Sampler:				SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY											
1				Date Time:				Received By:				Relinquished By:			
3				Date Time:				Received By:				Relinquished By:			
5				Date Time:				Received By:				Relinquished By:			
On Ice				Cooler Temp.				Thermo. Corr. Factor							

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 08.19.2020 03.10.00 PM

Work Order #: 670511

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist

Comments

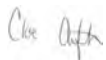
#1 *Temperature of cooler(s)?	5	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	Samples received in bulk containers.
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	No	
#18 Water VOC samples have zero headspace?	N/A	

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:


Checklist completed by:



Cloe Clifton

Date: 08.20.2020

Checklist reviewed by:



Debbie Simmons

Date: 08.21.2020



Analytical Report 671432

for

GHD Services, INC- Midland

Project Manager: Becky Haskell

Plains Mewbourne Wishbone 35 34

11216569

09.01.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



09.01.2020

Project Manager: **Becky Haskell**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: Eurofins Xenco, LLC Report No(s): **671432**
Plains Mewbourne Wishbone 35 34
Project Address: Midland, TX

Becky Haskell:

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 Eurofins Xenco, LLC Report Number(s) 671432. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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 Eurofins Xenco, LLC. 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. 671432 will be filed for 45 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in cursive script that reads "Debbie Simmons".

Debbie Simmons
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 671432

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MSW- Comp-3	S	08.31.2020 14:30		671432-001
BH- Comp-1A	S	08.31.2020 14:45		671432-002
BH- Comp-2A	S	08.31.2020 15:00		671432-003

**CASE NARRATIVE****Client Name: GHD Services, INC- Midland****Project Name: Plains Mewbourne Wishbone 35 34**Project ID: 11216569
Work Order Number(s): 671432Report Date: 09.01.2020
Date Received: 08.31.2020

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None



Certificate of Analytical Results

671432

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **MSW- Comp-3**

Matrix: Soil

Sample Depth:

Lab Sample Id: 671432-001

Date Collected: 08.31.2020 14:30

Date Received: 08.31.2020 15:47

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3136036

Date Prep: 08.31.2020 17:05

Prep seq: 7710556

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	3.70	10.0	0.354	mg/kg	08.31.2020 18:34	J	1

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3136042

Date Prep: 08.31.2020 16:40

Prep seq: 7710558

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.0	13.9	mg/kg	08.31.2020 16:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	17.9	50.0	11.5	mg/kg	08.31.2020 16:56	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.0	11.5	mg/kg	08.31.2020 16:56	U	1
Total TPH	PHC635	17.9		11.5	mg/kg	08.31.2020 16:56	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	103	70 - 135	%		



Certificate of Analytical Results

671432

GHD Services, INC- Midland, Midland, TX
Plains Mewbourne Wishbone 35 34

Sample Id: **MSW- Comp-3**

Matrix: Soil

Sample Depth:

Lab Sample Id: 671432-001

Date Collected: 08.31.2020 14:30

Date Received: 08.31.2020 15:47

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3136040

Date Prep: 08.31.2020 17:02

Prep seq: 7710552

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000482	0.00198	0.000482	mg/kg	08.31.2020 20:10	U	1
Toluene	108-88-3	<0.000524	0.00198	0.000524	mg/kg	08.31.2020 20:10	U	1
Ethylbenzene	100-41-4	<0.000403	0.00198	0.000403	mg/kg	08.31.2020 20:10	U	1
m,p-Xylenes	179601-23-1	<0.000748	0.00397	0.000748	mg/kg	08.31.2020 20:10	U	1
o-Xylene	95-47-6	<0.000400	0.00198	0.000400	mg/kg	08.31.2020 20:10	U	1
Total Xylenes	1330-20-7	<0.000400		0.000400	mg/kg	08.31.2020 20:10	U	
Total BTEX		<0.000400		0.000400	mg/kg	08.31.2020 20:10	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	108	70 - 130	%		



Certificate of Analytical Results

671432

GHD Services, INC- Midland, Midland, TX
Plains Mewbourne Wishbone 35 34

Sample Id: **BH- Comp-1A**

Matrix: Soil

Sample Depth:

Lab Sample Id: 671432-002

Date Collected: 08.31.2020 14:45

Date Received: 08.31.2020 15:47

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3136036

Date Prep: 08.31.2020 17:05

Prep seq: 7710556

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	20.8	10.0	0.354	mg/kg	08.31.2020 18:51		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3136042

Date Prep: 08.31.2020 16:40

Prep seq: 7710558

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	49.9	13.9	mg/kg	08.31.2020 17:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	12.4	49.9	11.4	mg/kg	08.31.2020 17:16	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.4	49.9	11.4	mg/kg	08.31.2020 17:16	U	1
Total TPH	PHC635	12.4		11.4	mg/kg	08.31.2020 17:16	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	100	70 - 135	%		
o-Terphenyl	106	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3136040

Date Prep: 08.31.2020 17:02

Prep seq: 7710552

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000489	0.00202	0.000489	mg/kg	08.31.2020 20:30	U	1
Toluene	108-88-3	<0.000532	0.00202	0.000532	mg/kg	08.31.2020 20:30	U	1
Ethylbenzene	100-41-4	<0.000409	0.00202	0.000409	mg/kg	08.31.2020 20:30	U	1
m,p-Xylenes	179601-23-1	<0.000760	0.00403	0.000760	mg/kg	08.31.2020 20:30	U	1
o-Xylene	95-47-6	<0.000406	0.00202	0.000406	mg/kg	08.31.2020 20:30	U	1
Total Xylenes	1330-20-7	<0.000406		0.000406	mg/kg	08.31.2020 20:30	U	
Total BTEX		<0.000406		0.000406	mg/kg	08.31.2020 20:30	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	101	70 - 130	%		



Certificate of Analytical Results

671432

GHD Services, INC- Midland, Midland, TX
Plains Mewbourne Wishbone 35 34

Sample Id: **BH- Comp-2A**

Matrix: Soil

Sample Depth:

Lab Sample Id: 671432-003

Date Collected: 08.31.2020 15:00

Date Received: 08.31.2020 15:47

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3136036

Date Prep: 08.31.2020 17:05

Prep seq: 7710556

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	24.3	9.98	0.353	mg/kg	08.31.2020 18:56		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3136042

Date Prep: 08.31.2020 16:40

Prep seq: 7710558

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.1	13.9	mg/kg	08.31.2020 17:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	16.5	50.1	11.5	mg/kg	08.31.2020 17:36	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.1	11.5	mg/kg	08.31.2020 17:36	U	1
Total TPH	PHC635	16.5		11.5	mg/kg	08.31.2020 17:36	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	104	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5035A

Analyst: MAB

% Moist:

Tech: MAB

Seq Number: 3136040

Date Prep: 08.31.2020 17:02

Prep seq: 7710552

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000485	0.00200	0.000485	mg/kg	08.31.2020 20:51	U	1
Toluene	108-88-3	<0.000527	0.00200	0.000527	mg/kg	08.31.2020 20:51	U	1
Ethylbenzene	100-41-4	<0.000405	0.00200	0.000405	mg/kg	08.31.2020 20:51	U	1
m,p-Xylenes	179601-23-1	<0.000752	0.00399	0.000752	mg/kg	08.31.2020 20:51	U	1
o-Xylene	95-47-6	<0.000402	0.00200	0.000402	mg/kg	08.31.2020 20:51	U	1
Total Xylenes	1330-20-7	<0.000402		0.000402	mg/kg	08.31.2020 20:51	U	
Total BTEX		<0.000402		0.000402	mg/kg	08.31.2020 20:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	98	70 - 130	%		
4-Bromofluorobenzene	103	70 - 130	%		



Certificate of Analytical Results

671432

GHD Services, INC- Midland, Midland, TX
 Plains Mewbourne Wishbone 35 34

Sample Id: **7710552-1-BLK** Matrix: Solid Sample Depth:
 Lab Sample Id: 7710552-1-BLK Date Collected: Date Received:
 Analytical Method: BTEX by EPA 8021B Prep Method: 5035A
 Analyst: MAB % Moist: Tech: MAB
 Seq Number: 3136040 Date Prep: 08.31.2020 17:02
 Prep seq: 7710552

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	08.31.2020 17:53	U	1
Toluene	108-88-3	<0.000528	0.00200	0.000528	mg/kg	08.31.2020 17:53	U	1
Ethylbenzene	100-41-4	<0.000406	0.00200	0.000406	mg/kg	08.31.2020 17:53	U	1
m,p-Xylenes	179601-23-1	<0.000754	0.00400	0.000754	mg/kg	08.31.2020 17:53	U	1
o-Xylene	95-47-6	<0.000403	0.00200	0.000403	mg/kg	08.31.2020 17:53	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	110	70 - 130	%		

Sample Id: **7710556-1-BLK** Matrix: Solid Sample Depth:
 Lab Sample Id: 7710556-1-BLK Date Collected: Date Received:
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Analyst: MAB % Moist: Tech: MAB
 Seq Number: 3136036 Date Prep: 08.31.2020 17:05
 Prep seq: 7710556

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.354	10.0	0.354	mg/kg	08.31.2020 18:17	U	1



Certificate of Analytical Results

671432

GHD Services, INC- Midland, Midland, TX

Plains Mewbourne Wishbone 35 34

Sample Id: **7710558-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7710558-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH by SW8015 Mod

Prep Method: 8015

Analyst: DTH

% Moist:

Tech: DTH

Seq Number: 3136042

Date Prep: 08.31.2020 15:40

Prep seq: 7710558

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.0	13.9	mg/kg	08.31.2020 13:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.0	11.5	mg/kg	08.31.2020 13:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.0	11.5	mg/kg	08.31.2020 13:15	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	72	70 - 135	%		
o-Terphenyl	74	70 - 135	%		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantitation limit and above the detection limit.
- 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.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 09012020

Work Orders : 671432

Project ID: 11216569

Lab Batch #: 3136040

Sample: 7710552-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08.31.2020 17:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0303	0.0300	101	70-130	
4-Bromofluorobenzene	0.0329	0.0300	110	70-130	

Lab Batch #: 3136040

Sample: 7710552-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08.31.2020 18:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0273	0.0300	91	70-130	

Lab Batch #: 3136040

Sample: 7710552-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08.31.2020 18:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0282	0.0300	94	70-130	
4-Bromofluorobenzene	0.0303	0.0300	101	70-130	

Lab Batch #: 3136040

Sample: 671432-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08.31.2020 18:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0282	0.0300	94	70-130	
4-Bromofluorobenzene	0.0295	0.0300	98	70-130	

Lab Batch #: 3136040

Sample: 671432-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08.31.2020 19:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0282	0.0300	94	70-130	
4-Bromofluorobenzene	0.0293	0.0300	98	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Report Date: 09012020

Work Orders : 671432

Project ID: 11216569

Lab Batch #: 3136042

Sample: 7710558-1-BLK / BLK

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 08.31.2020 13:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	71.8	100	72	70-135	
o-Terphenyl	37.2	50.0	74	70-135	

Lab Batch #: 3136042

Sample: 7710558-1-BKS / BKS

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 08.31.2020 13:35

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	58.4	50.0	117	70-135	

Lab Batch #: 3136042

Sample: 7710558-1-BSD / BSD

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 08.31.2020 13:56

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	58.1	50.0	116	70-135	

Lab Batch #: 3136042

Sample: 671408-001 S / MS

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 08.31.2020 16:16

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	99.9	126	70-135	
o-Terphenyl	63.2	50.0	126	70-135	

Lab Batch #: 3136042

Sample: 671408-001 SD / MSD

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 08.31.2020 16:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	57.5	50.2	115	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



BS / BSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 671432

Project ID: 11216569

Analyst: MAB

Date Prepared: 08.31.2020

Date Analyzed: 08.31.2020

Lab Batch ID: 3136040

Sample: 7710552-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [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	<0.000486	0.100	0.0976	98	0.100	0.100	100	2	70-130	35	
Toluene	<0.000528	0.100	0.0931	93	0.100	0.0981	98	5	70-130	35	
Ethylbenzene	<0.000406	0.100	0.0979	98	0.100	0.0978	98	0	71-129	35	
m,p-Xylenes	<0.000754	0.200	0.197	99	0.200	0.200	100	2	70-135	35	
o-Xylene	<0.000403	0.100	0.0972	97	0.100	0.103	103	6	71-133	35	

Analyst: MAB

Date Prepared: 08.31.2020

Date Analyzed: 08.31.2020

Lab Batch ID: 3136036

Sample: 7710556-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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											
Chloride	<0.354	250	266	106	250	269	108	1	90-110	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 671432

Project ID: 11216569

Analyst: DTH

Date Prepared: 08.31.2020

Date Analyzed: 08.31.2020

Lab Batch ID: 3136042

Sample: 7710558-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<13.9	1000	902	90	1000	889	89	1	70-135	35	
Diesel Range Organics (DRO)	<11.5	1000	1020	102	1000	1020	102	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: Plains Mewbourne Wishbone 35 34

Work Order #: 671432

Lab Batch ID: 3136040

Date Analyzed: 08.31.2020

Reporting Units: mg/kg

Report Date: 09012020

Project ID: 11216569

QC- Sample ID: 671432-001 S

Date Prepared: 08.31.2020

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000486	0.100	0.106	106	0.100	0.115	115	8	70-130	35	
Toluene	<0.000529	0.100	0.0999	100	0.100	0.107	107	7	70-130	35	
Ethylbenzene	<0.000407	0.100	0.100	100	0.100	0.111	111	10	71-129	35	
m,p-Xylenes	<0.000755	0.200	0.207	104	0.200	0.224	112	8	70-135	35	
o-Xylene	<0.000404	0.100	0.102	102	0.100	0.114	114	11	71-133	35	

Lab Batch ID: 3136036

Date Analyzed: 08.31.2020

Reporting Units: mg/kg

QC- Sample ID: 671432-001 S

Date Prepared: 08.31.2020

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 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
Chloride	3.70	200	204	100	200	204	100	0	90-110	20	

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, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries

Project Name: Plains Mewbourne Wishbone 35 34

Work Order #: 671432

Lab Batch ID: 3136036

Date Analyzed: 08.31.2020

Reporting Units: mg/kg

QC- Sample ID: 671436-006 S

Date Prepared: 08.31.2020

Report Date: 09012020

Project ID: 11216569

Batch #: 1 Matrix: Soil

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 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
Chloride	2420	200	2610	95	200	2600	90	0	90-110	20	

Lab Batch ID: 3136042

QC- Sample ID: 671408-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08.31.2020

Date Prepared: 08.31.2020

Analyst: DTH

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY 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
Gasoline Range Hydrocarbons (GRO)	<13.9	999	937	94	1000	886	89	6	70-135	35	
Diesel Range Organics (DRO)	<11.5	999	1050	105	1000	1010	101	4	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, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Setting the Standard since 1990

Stafford, Texas (281-240-4200)

Dallas Texas (214-902-0300)

Service Center - San Antonio, Texas (210-509-3334)

www.xenco.com

CHAIN OF CUSTODY

Page 1 of 1

Odessa, Texas (432-563-1800)

Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

Xenco Quote #

Xenco Job #

671432

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes									
Company Name / Branch: GHD/Midland				Project Name/Number: Plains Menbourne Wishbone 35 34 / 11216569																	
Company Address: 2135 S. Loop 250 West Midland TX				Project Location: Eddy County, New Mexico																	
Email: becky.haskell@ghd.com glenn.quinney@ghd.com aliquoves@ghd.com				Phone No: (432)250-7917 tom.larson@ghd.com				Invoice To: Carrille Bryant Plains All American Pipeline #10 Deata Drive Suite 550 E Midland, TX 79705 PO Number: NA													
Project Contact: Becky Haskell / Glenn Quinney																					
Samplers Name Zach Comino																					
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH By 8015 Mod (GRO, DRO & MRO)	BTEX 8021 B	Chloride 300	Field Comments			
1	MSW-Comp-3		08/31/20	1430	S	1									X	X	X				
2	BH-Comp-1A		08/31/20	1445	S	1									X	X	X				
3	BH-Comp-2A		08/31/20	1500	S	1									X	X	X				
4																					
5																					
6																					
7																					
8																					
9																					
10																					
Turnaround Time (Business days)																					
Same Day TAT		<input checked="" type="checkbox"/> 5 Day TAT		<input type="checkbox"/> 7 Day TAT																	
<input checked="" type="checkbox"/> Next Day EMERGENCY																					
<input type="checkbox"/> 2 Day EMERGENCY																					
<input type="checkbox"/> 3 Day EMERGENCY																					
TAT Starts Day received by Lab, if received by 5:00 pm																					
Relinquished by Sampler:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Date Time:		Received By:		Date Time:		Received By:			
1 Zach Comino		08/31/20 1545		1 Eric Liffen		2 15-47 / 08-31-20		2		2		2		2		2		2			
Relinquished by:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Date Time:		Received By:		Date Time:		Received By:			
3																					
Relinquished by:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Date Time:		Received By:		Date Time:		Received By:			
5																					

Report MDLs and J values.

Run TPH by 8015, BTEX 8021, and Chloride 300

No SSOW for this project - Direct bill to Plains

On Ice Cooler/Temp. Thermo. Corr. Factor

2.2/2.0 T-14-007

Field Comments

S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW = Ocean/Sea Water
W = Wipe
O = Oil
WW = Waste Water
A = Air

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 08.31.2020 03.47.00 PM

Work Order #: 671432

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist

Comments

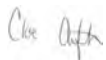
#1 *Temperature of cooler(s)?	2	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	Samples received in bulk containers.
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	No	
#18 Water VOC samples have zero headspace?	N/A	

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 08.31.2020

Checklist reviewed by:



Debbie Simmons

Date: 09.01.2020

Appendix D Waste Documentation

1625 N. French Dr., Hobbs, NM 88240
 District II
 811 S. First St., Artesia, NM 88210
 District III
 1000 Rio Brazos Road, Artec, NM 87410
 District IV
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
 Energy Minerals and Natural Resources

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

Form C-138
 Revised August 1, 2011

*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: Plains All American Pipeline #10 Desta Drive, Suite 550E Midland, TX 79705	
2. Originating Site: Plains Mewbourne Wishbone 35 34	
3. Location of Material (Street Address, City, State or U/LSTR): P-35-18S-29E Eddy County	
4. Source and Description of Waste:	
Estimated Volume 500	yd ³ / bbls Known Volume (to be entered by the operator at the end of the haul) yd ³ / bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS	
I, Rebecca Haskell, representative or authorized agent for Plains All American Pipeline do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)	
<input type="checkbox"/> 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: <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Per Load	
<input checked="" type="checkbox"/> 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)	
<input type="checkbox"/> MSDS Information <input checked="" type="checkbox"/> RCRA Hazardous Waste Analysis <input type="checkbox"/> Process Knowledge <input type="checkbox"/> Other (Provide description in Box 4)	
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS	
I, Rebecca Haskell, representative for Plains All American Pipeline do hereby certify that 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 Facility

Name and Facility Permit #: Lea Land, LLC Permit #: WM-I-035

Address of Facility: MM 64 Hwy 62/180 East, Carlsbad, NM 88220

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☒ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Saralyn Hall

TITLE: Marketing Manager

DATE: 8/24/20

SIGNATURE: 
 Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: 405-519-1187

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

Gandy
*388***NON-HAZARDOUS WASTE MANIFEST**

NO

1. PAGE ___ OF ___

2. TRAILER NO.

G

3. COMPANY NAME

Plains All American Pipeline

PHONE NO.

Plains Pipeline

4. ADDRESS

#10 Dests Drive, Suite 550 E

CITY

Midland

STATE

TX

ZIP

79705

5. PICK-UP DATE

8/31/2020

6. TNRCC ID. NO.

E

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non-Regulated Non-Hazardous Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol

11. TEXAS WASTE ID

N

a.

1

CAN

E

b.

R

c.

A

12. COMMENTS OR SPECIAL INSTRUCTIONS:

MEWECURNE WISHBONE 35.34 E 2 PM FED Com # 111,480

13. WASTE PROFILE NO.

T

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME: JOE ONTIVEROS

PHONE NO: 575-887-4048

24-HOUR EMERGENCY NO.

O

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.

R

PRINTED TYPED NAME

CO. MAN: REBECCA HASKELL

SIGNATURE

DATE

T

16. TRANSPORTER (1)

NAME:

GANDY OILFIELD

TEXAS ID. NO.

RICK DUNLAP

IN CASE OF EMERGENCY CONTACT:

(575) 396-4948

EMERGENCY PHONE:

17. TRANSPORTER (2)

NAME:

TEXAS ID. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

S

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED TYPED NAME

J. Jose Gonzalez

8/31/2020

SIGNATURE

J. Jose Gonzalez

DATE 8-31-20

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

DATE

DISPOSAL SITE

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO.

DATE 8/31/2020

TIME .45

11.

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

Gandys
218**NON-HAZARDOUS WASTE MANIFEST**

NO

1. PAGE ____ OF ____

2. TRAILER NO.

G

3. COMPANY NAME

Pains All American Pipeline

4. ADDRESS

#10 Dests Drive, Suite 550 E

5. PICK-UP DATE

9/31/2020

PHONE NO.

CITY

Midland

STATE

TX

ZIP

79705

6. TNRCC ID. NO.

E

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non-Regulated, Non-Hazardous Waste

8. CONTAINERS

No.

Type

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol

11. TEXAS

WASTE ID #

N

b. 41,280

E

c.

R

d. 42,880 43,420 43,020

A

12. COMMENTS OR SPECIAL INSTRUCTIONS:

WMSBONE 35.34 B 2 PM FED COM #1 H

13. WASTE PROFILE NO.

T

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME: JOE ONTIVEROS

PHONE NO. 575-887-4048

24-HOUR EMERGENCY NO.

O

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.

R

PRINTED TYPED NAME

CO-MAN: REBECCA HASKELL

SIGNATURE

DATE

T

16.

TRANSPORTER (1)

NAME:

GANDY OILFIELD

TEXAS ID. NO.

RICK DUNLAP

IN CASE OF EMERGENCY CONTACT:

(575) 396-4948

EMERGENCY PHONE:

S

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED TYPED NAME

Rudy Sanchez 2 8/31/2020

SIGNATURE

Rudy Sanchez

DATE 8/31/20

17.

TRANSPORTER (2)

NAME:

TEXAS ID. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

8/31/2020

TIME

9:00

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

Gandis

NON-HAZARDOUS WASTE MANIFEST

NO

1. PAGE ____ OF ____

2. TRAILER NO.

393

G

3. COMPANY NAME
Plains All American Pipeline4. ADDRESS
#10 Cresta Drive, Suite 550 E5. PICK-UP DATE
8/31/2020

PHONE NO.

CITY
MidlandSTATE
TXZIP
79705

6. TNRCC I.D. NO.

E

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7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non-Regulated, Non-Hazardous Waste

8. CONTAINERS

No.

Type

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol.

11. TEXAS

WASTE ID #

b. 4DLRD

c.

44,360 40,580 43,440

12. COMMENTS OR SPECIAL INSTRUCTIONS:

WISHBONE 35:34 B 2 PM FED COM #1 H

TC 119,000

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROSPHONE NO.
575-887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.

PRINTED TYPED NAME

CO. MAN: REBECCA HASKELL

SIGNATURE

DATE

16. TRANSPORTER (1)

NAME: GANDY OILFIELD

TEXAS I.D. NO.

RICK DUNLAP

IN CASE OF EMERGENCY CONTACT:

(575) 396-4048

EMERGENCY PHONE:

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED TYPED NAME

Margate Hf 2 8/31/2020

SIGNATURE

DATE

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

DATE

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CPL. NO.

DATE 8/31/2020

TIME

9:10

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

Gandys
383

NON-HAZARDOUS WASTE MANIFEST		NO	1. PAGE ___ OF ___	2. TRAILER NO. 383	
GENERATOR	3. COMPANY NAME Plains All American Pipeline		4. ADDRESS #10 Desta Drive, Suite 550 E		5. PICK-UP DATE 8/31/2020
	PHONE NO.		CITY Midland		6. TNRCC ID. NO.
			STATE TX		
			ZIP 79705		
E	7. NAME OR DESCRIPTION OF WASTE SHIPPED: Non-Regulated, Non-Hazardous Waste			8. CONTAINERS	9. TOTAL QUANTITY
				No.	Type
R	12. COMMENTS OR SPECIAL INSTRUCTIONS: WISHBONE 35:34 B 2 PM FED COM #1 H			13. WASTE PROFILE NO.	
	44,360 39,780 43,420				
	TO 127,560				
T	14. IN CASE OF EMERGENCY OR SPILL, CONTACT				
	NAME: JOE ONTIVEROS				
	PHONE NO. 575-887-4048				
	24-HOUR EMERGENCY NO.				
O	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.				
	PRINTED TYPED NAME CO. MAN: REBECCA HASKELL		SIGNATURE		
			DATE		
TRANSPORTER (1)	16. TRANSPORTER (1)		17. TRANSPORTER (2)		
	NAME: GANDY OILFIELD		NAME:		
	TEXAS ID. NO.		TEXAS ID. NO.		
	IN CASE OF EMERGENCY CONTACT: RICK DUNLAP (575) 396-4948		IN CASE OF EMERGENCY CONTACT:		
	EMERGENCY PHONE:		EMERGENCY PHONE:		
TRANSPORTER (2)	18. TRANSPORTER (1): Acknowledgment of receipt of material		19. TRANSPORTER (2): Acknowledgment of receipt of material		
	PRINTED TYPED NAME: Pete Kasmussen		PRINTED TYPED NAME:		
	SIGNATURE: [Signature]		SIGNATURE:		
	DATE: 8-31-20		DATE:		
DISPOSAL FACILITY	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS		
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
	AUTHORIZED SIGNATURE: Santos Gonzalez		CELL NO.		DATE: 8/31/2020
					TIME: 9:20

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

Gandys
218**NON-HAZARDOUS WASTE MANIFEST**

NO

1. PAGE ____ OF ____

2. TRAILER NO.

G

3. COMPANY NAME

Plains All American Pipeline

PHONE NO.

4. ADDRESS

#10 Desta Drive Suite 550 E

CITY
MidlandSTATE
TXZIP
79705

5. PICK-UP DATE

9/1/2020

6. TNRCC ID. NO.

E

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non-Regulated Non-Hazardous Waste

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8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt Vol

11. TEXAS WASTE ID

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LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

Gandys
214

NON-HAZARDOUS WASTE MANIFEST		NO	1. PAGE ___ OF ___	2. TRAILER NO. <i>214</i>	
GENERATOR'S CERTIFICATION	3. COMPANY NAME Plains All American Pipeline		4. ADDRESS #10 Dasta Drive, Suite 550 E		5. PICK-UP DATE 9/1/2020
	PHONE NO.		CITY Midland	STATE TX	ZIP 79705
	6. TNRCC I.D. NO.				
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS		9. TOTAL QUANTITY
	Non-Regulated, Non-Hazardous Waste		No.	Type	10. UNIT Wt/Vol.
RECEIVER'S CERTIFICATION	b. <i>53,160</i>				
	c. <i>46,120</i>				
	d. <i>46,620</i>				
	e. <i>45,480</i>				
	12. COMMENTS OR SPECIAL INSTRUCTIONS: WISHBONE 35.34 B 2 PM FED COM # 1 H		13. WASTE PROFILE NO.		
TRANSPORTER'S CERTIFICATION	14. IN CASE OF EMERGENCY OR SPILL, CONTACT				
	NAME JOE ONTIVEROS		PHONE NO. 575-887-4048		24-HOUR EMERGENCY NO.
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.				
	PRINTED TYPED NAME CO. MAN: REBECCA HASKELL		SIGNATURE		DATE
	16. TRANSPORTER (1)		17. TRANSPORTER (2)		
DISPOSAL FACILITY'S CERTIFICATION	NAME: GANDY OILFIELD		NAME:		
	TEXAS I.D. NO.		TEXAS I.D. NO.		
	IN CASE OF EMERGENCY CONTACT: RICK DUNLAP (575) 388-4945		IN CASE OF EMERGENCY CONTACT:		
	EMERGENCY PHONE:		EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material		19. TRANSPORTER (2): Acknowledgment of receipt of material		
PRINTED TYPED NAME <i>Willie Brown</i>		PRINTED TYPED NAME			
SIGNATURE <i>Willie Brown</i>		SIGNATURE			
DATE 9-1-20		DATE			
DISPOSAL FACILITY'S CERTIFICATION	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS		
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
	AUTHORIZED SIGNATURE <i>Santos Gonzalez</i>		CELL NO.		DATE 9/1/2020
					TIME 8:25

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 U.S. HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

Gandys
393

NON-HAZARDOUS WASTE MANIFEST

NO

1. PAGE ___ OF ___

2. TRAILER NO.

G

3. COMPANY NAME

Plains Air American Pipeline

4. ADDRESS

#10 Deste Drive, Suite 550 E

5. PICK-UP DATE

8/1/2020

PHONE NO.

CITY

Midland

STATE

TX

ZIP

79705

6. TNRCC I.D. NO.

E

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non-Regulated, Non-Hazardous Waste

8. CONTAINERS

No.

Type

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol

11. TEXAS

WASTE ID #

N

41,060

E

R

12. COMMENTS OR SPECIAL INSTRUCTIONS:

WISHBONE 35.34 B 2 PM FED COM #1 H

13. WASTE PROFILE NO.

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14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO.

575-887-4048

24-HOUR EMERGENCY NO.

O

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.

R

PRINTED TYPED NAME

CO. MAN: REBECCA HASKELL

SIGNATURE

DATE

T

16.

TRANSPORTER (1)

NAME:

GANDY OILFIELD

TEXAS I.D. NO.

RICK DUNLAP

IN CASE OF EMERGENCY CONTACT:

(575) 398-4948

EMERGENCY PHONE:

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

S

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED TYPED NAME

Margaret M. T. 8/1/2020

SIGNATURE

DATE

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

DATE

DISPOSAL SITE

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

TIME

Santos Gonzalez

8/1/2020

8:30

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

Gandus
383**NON-HAZARDOUS WASTE MANIFEST**

NO

1. PAGE ___ OF ___

2. TRAILER NO.

G

3. COMPANY NAME

Plains All American Pipeline

PHONE NO.

4. ADDRESS

#10 Dests Drive, Suite 550 E

CITY
MidlandSTATE
TXZIP
79705

5. PICK-UP DATE

9/1/2020

6. TNRCC I.D. NO.

E

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non-Regulated, Non Hazardous Waste

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8. CONTAINERS
No. Type9. TOTAL
QUANTITY10. UNIT
Wt/Vol11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS.

WMSHBONE 35:34 B 2 PM FED COM #1 H

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO.

575-887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.

PRINTED TYPED NAME

CO. MAN: REBECCA HASKELL

SIGNATURE

DATE

16.

TRANSPORTER (1)

NAME:

GANDY OILFIELD

TEXAS I.D. NO.

RICK DUNLAP

IN CASE OF EMERGENCY CONTACT:

(575) 386-4949

EMERGENCY PHONE:

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED TYPED NAME

Pete Kasmussen

SIGNATURE

Pete Kasmussen

DATE 9-1-20

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

DATE

19.

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos

CELL NO.

DATE

9/1/2020

TIME

8:45

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

Appendix E Photographic Log



Photo 1 – August 4, 2020 Initial Excavation.



Site Photograph
Plains Mewbourne Wishbone 35-34
Release Site.

GHD | Report for Plains | 11216569



Photo 2 August 19, 2020 View of foundation failing in the area of Sample WT-Comp-2.



Site Photograph
Plains Mewbourne Wishbone 35-34
Release Site.

GHD | Report for Plains | 11216569



Photo 3 August 19, 2020.



Site Photograph
Plains Mewbourne Wishbone 35-34
Release Site.

GHD | Report for Plains | 11216569



Photo 4 August 31, 2020.



Site Photograph
Plains Mewbourne Wishbone 35-34
Release Site.

GHD | Report for Plains | 11216569

Incident ID	NRM2021348350
District RP	
Facility ID	
Application ID	

Remediation Plan

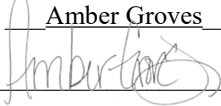
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Amber Groves Title: Remediation Coordinator
Signature:  Date: 10/13/2020
email: algroves@paalp.com Telephone: (575)200-5517

OCD Only

Received by: Robert Hamlet Date: 3/22/2021

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved

Signature: Robert Hamlet Date: 3/22/2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 10720

CONDITIONS OF APPROVAL

Operator:	PLAINS MARKETING L.P.	333 Clay St, Ste 1600	Houston, TX77002	OGRID:	34053	Action Number:	10720	Action Type:	C-141
-----------	-----------------------	-----------------------	------------------	--------	-------	----------------	-------	--------------	-------

OCD Reviewer	Condition
rhamlet	Plains requests deferral for remediation for the area adjacent to the Plains equipment skid represented by soil samples WT-Comp-2, HA3-6" and HA4-6". GHD and Plains do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The areas have been delineated and documented in the report. OCD approves this request. The Deferral Request and C-141 will be accepted for record and marked accordingly. Release remains as open environmental issue.