

Form C-141

Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NDHR1921034782
District RP	1RP-5617
Facility ID	fDHR1921033990
Application ID	pDHR1921033352

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 GrovesTitle: Remediation CoordinatorSignature: Amber GrovesDate: 12/10/2019email: algroves@paulo.comTelephone: 505-200-5517**OCD Only**Received by: Cristina EadsDate: 02/20/2020

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: Cristina EadsDate: 02/20/2020Printed Name: Cristina EadsTitle: Environmental Specialist



12600 WEST CO RD 91

MIDLAND, TX 79707

OFFICE: 432.653.4203

SOIL REMEDIATION ACTIVITIES REPORT AND CLOSURE REQUEST

PLAINS PIPELINE, L.P.

HOBBS TO WASSON 6" PIPELINE RELEASE

LEA COUNTY, NM

NMOCD INCIDENT #: 1RP-5617

SRS #: 2019-080

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December 19, 2019

New Mexico Oil Conservation Service, District 1

1625 N. French Drive

Hobbs, New Mexico 88240

Re: **Soil Remediation Activities Report and Closure Request**

Hobbs to Wasson 6" Pipeline Release

Lea County, New Mexico

NMOCD Incident #: 1RP-5617

SRS #: 2019-080

1. Introduction

Dean Companies, Inc. (Dean) is pleased to present this Soil Remediation Activities Report and Closure Request on behalf of Plains Pipeline, L.P. (Plains) to document the field excavation activities that were conducted at the Hobbs to Wasson 6" Pipeline Release site. The crude oil release occurred off CR61 and Hwy 18, approximately 3.04 miles south of Hobbs in Lea County, New Mexico in Unit Letter K, Section 15, Township 19S and Range 38E. The GPS coordinates for the site are N 32.65850° and W -103.13840°. A "Site Location Map" is provided as Figure 1.

2. Release Description, Response, and Site Delineation

On July 3, 2019, a crude oil release occurred along the Hobbs to Wasson 6" pipeline and was attributed to a pipe left open during purging activities. Approximately ten (10) barrels (bbl) of crude oil was released with zero (0) barrels recovered for a net loss of ten (10) barrels of crude. The release affected an area measuring approximately one hundred forty (140) feet (ft.) in length by ten (10) ft to sixty-five (65) ft in width with a maximum depth of fourteen (14) ft below ground surface (bgs).

According to a report dated August 29, 2019, entitled "*Site Assessment Summary and Proposed Remediation Plan*", the site was initially delineated on July 11, 2019 by Tasman Geosciences of Hobbs, New Mexico. At that time, four (4) trenches were installed (V-1 through V-4) to a maximum depth of eleven (11) ft. bgs and samples were collected and submitted to Cardinal Labs of Hobbs, New Mexico (Cardinal) for analyses of total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and xylenes (BTEX), and Chlorides. Analytical results showed the site was impacted with TPH exceeding the NMOCD standards of 100 milligrams per kilogram (mg/Kg) to a depth of one (1) to five (5) feet bgs along with chlorides (>600 mg/Kg) which extended to depths of at least eleven (11) feet bgs (chlorides not vertically delineated during initial activities). All BTEX analysis were below NMOCD standards. In the report, Plains requested a variance for the chlorides which was approved by the NMOCD. See Appendix A for variance email from BLM. During delineation activities, hydrocarbon impacted soils in the vicinity of trenches V-3 and V-4 were subsequently removed to a depth one (1) ft. bgs and stockpiled on plastic at an adjacent well pad north of the site awaiting disposal. (See Figure 2 for location of previous excavation and initial trench locations). See August 29, 2019 report for initial analytical delineation results and details.

On August 26, 2019, Dean was assigned management responsibilities for impacted soil remediation, soil sampling, site restoration, and reporting activities by Plains. On July 16, 2019, Plains submitted a hard copy of the C-141 Form to the NMOCD (Appendix B).

3. NMOCD Regulatory Limits

NMOCD assessment and cleanup levels for hydrocarbon and saltwater releases are based on depth to groundwater and follow the criteria in the revised August 2018 Title 19 Chapter 15 Part 29 New Mexico Administrative Code (19.15.29 NMAC) regulations. Groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and the New Mexico Bureau of Geology & Mineral Resources (NMBGMR) were accessed to determine if any registered water wells were located near the site. Data collected from the two databases listed fifty-seven (57) registered water wells located within in Unit Letter K, Section 15, Township 19S, and Range 38E with measured groundwater depths ranging from 15 feet below ground surface (bgs) to 100 feet bgs with an average depth of 53 feet bgs. See Appendix C for the NMOSE water column/average depth to groundwater data near the site. As outlined in 19.15.29.12.B.(4) NMAC, the release occurs within 300 feet of an occupied permanent residence, within 500 feet of a spring or private, domestic water well, and within 1,000 feet of any fresh water well or spring. The nearest water body feature is Monument Draw located approximately 9.65 miles north to

northeast of the site. The site is not located within a known Bureau of Land Management (BLM) Karst topography region. Meeting the previous criteria, the NMOCD restoration and cleanup levels for soils impacted by hydrocarbons are as follows:

- Chloride 600 mg/Kg
- Total TPH (GRO + DRO +ORO) 100 mg/Kg
- Benzene 10 mg/Kg
- Total BTEX 50 mg/Kg

4. Soil Remediation Activities and Sample Analysis

As per the remediation workplan (August 29, 2019), Dean Personnel were onsite between September 4 and October 9, 2019, to conduct soil remediation activities at the release site. Utilizing a backhoe and hand digging, soils were excavated around the pipelines in the vicinity of trenches V-1 and V-2. During excavation activities, the soils were field screened utilizing both a photoionization detector (PID) and chloride test strips. Based on visual observations and field PID and chloride screening, the site was excavated to dimensions of approximately twenty (20) ft. to thirty-five (35) ft wide by eighty-five (85) ft long with depths ranging from five (5) to fourteen (14) ft bgs. The section of the release, previously excavated to the east, measured approximately one hundred ten (110) ft long by six (6) to twenty (20) ft wide and one (1) ft deep. Approximately 888 cubic yards of soil were removed from the excavation and stockpiled on plastic at a pad north of the site awaiting disposal.

On September 16, 2019, six (6) composite bottom hole soil samples (BH-1 @ 5', BH-2 @ 7', BH-3 @ 7', BH-4 @ 5', BH-5 @ 10' and BH-6 @ 14') along with ten (10) composite sidewall soil samples (WSW-1 @ 2.5', WSW-2 @ 3.5', WSW-3 @ 3.5', NSW-1 @ 2.5', NSW-4 @ 2.5', SSW-3 @ 3.5', SSW-6 @ 7', ESW-4 @ 2.5', ESW-5 @ 5' and ESW-6 @ 7') were collected at the site every two hundred (200) ft., placed into laboratory-provided sample containers, labeled, stored on ice, and transported under proper chain-of-custody documentation to Cardinal. Soil samples were analyzed for TPH utilizing Method SW-846 8015M, BTEX utilizing Method SW-846 8021B, and chlorides utilizing Method 4500-CL-B. See Figure 2 "Site Excavation Details and Confirmation Soil Sample Location Map" for sample locations. The TPH concentrations were below either method detection limits and/or NMOCD standards of 100 mg/Kg for all samples analyzed with the exception of wall soil sample NSW-4 @ 2.5' which exhibited a total TPH concentration of 168.8 mg/Kg. Chloride concentrations were below NMOCD standards of 600

mg/Kg with results ranging from 16 mg/kg in soil samples (BH-1 @ 5' and NSW-1 @ 2.5') to 224 mg/Kg in soil sample ESW-4 @ 2.5'. Benzene and total BTEX concentrations were below method limits for all samples analyzed. In addition, two (2) floor soil samples (FL-3 @ 3' and FL-10 @ 3.5') were collected from the base of the excavation and submitted for analysis of TPH. Both TPH sample results returned concentrations below method detection limits. On September 26, 2019, after additional soil excavation activities, a second wall soil sample (NSW-4A @ 2.5') was collected and submitted to the lab for TPH analysis. The TPH analytical concentrations were below method detection limits. Laboratory reports containing analytical methods, results, and chain-of-custody documents are included in Appendix D.

5. Conclusion and Closure Request

Upon collecting requisite confirmation soil samples, the excavated area was backfilled between October 2 and 9, 2019 with locally sourced non-impacted soils and brought to within a half a foot of grade. The top half foot was then backfilled with caliche road base material as a driveway for the landowner. Photo documentation detailing site activities is included in Appendix E. The 888 cubic yards of stockpiled hydrocarbon impacted soils from the excavation were transported offsite for disposal at J-L Landfarm in Hobbs, New Mexico. Based upon the analytical results of the confirmation soil samples collected from the base and side walls of the excavation, Plains believes the site has been remediated to within standards set by the NMOCD. As such, Plains respectfully requests that the NMOCD consider the site for closure. A C-141 closure is attached to the front of this report.

If you have any questions, or if additional information is required, please feel free to contact Ms. Amber Groves (email: ALGroves@paalp.com, cell: 575.200.7717) of Plains or Ms. Sylwia Reynolds (email: sylwiareynolds@deandigs.com, cell: 432.999.8675) or Jeff Kindley (email: jeffreykindley@deandigs.com, cell: 432.230.0920) of Deans.

Sincerely,



Sylwia Reynolds

Project Manager



Jeffrey Kindley, PG.

Professional Geologist

TABLE



Chemistry Table
Concentrations of TPH, BTEX and Chlorides in Soil
Plains Pipeline, L.P.
Hobbs to Wasson 6" Pipeline Release
NMOCD Incident #: 1RP-5617
SRS # 2019-080

Lea County, New Mexico

SAMPLE INFORMATION					TPH METHOD: 8015M				BTEX METHOD 8021B					CHLORIDES SM4500Cl-B (mg/kg)
SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH	SAMPLE METHOD	MATRIX	GRO C6-C10 (mg/kg)	DRO >C10-C28 (mg/kg)	ORO >C28-C36 (mg/kg)	TOTAL TPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	TOTAL BTEX (mg/kg)	
BH-1 @ 5'	09/16/19	5 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16
BH-2 @ 7'	09/16/19	7 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48
BH-3 @ 7'	09/16/19	7 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64
BH-4 @ 5'	09/16/19	5 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32
BH-5 @ 10'	09/16/19	10 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	160
BH-6 @ 14'	09/16/19	14 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80
WSW-1 @ 2.5'	09/16/19	2.5 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48
WSW-2 @ 3.5'	09/16/19	3.5 ft	Comp.	SOIL	<10.0	10.6	<10.0	10.6	<0.050	<0.050	<0.050	<0.150	<0.300	48
WSW-3 @ 3.5'	09/16/19	3.5 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48
NSW-1 @ 2.5'	09/16/19	2.5 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16
NSW-4 @ 2.5'	09/16/19	2.5 ft	Comp.	SOIL	<10.0	133	35.8	168.8	<0.050	<0.050	<0.050	<0.150	<0.300	80
NSW-4A @ 2.5'	09/26/19	2.5 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	NA	NA	NA	NA	NA	NA
SSW-3 @ 3.5'	09/16/19	3.5 ft	Comp.	SOIL	<10.0	15.9	<10.0	15.9	<0.050	<0.050	<0.050	<0.150	<0.300	64
SSW-6 @ 7'	09/16/19	7 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	160



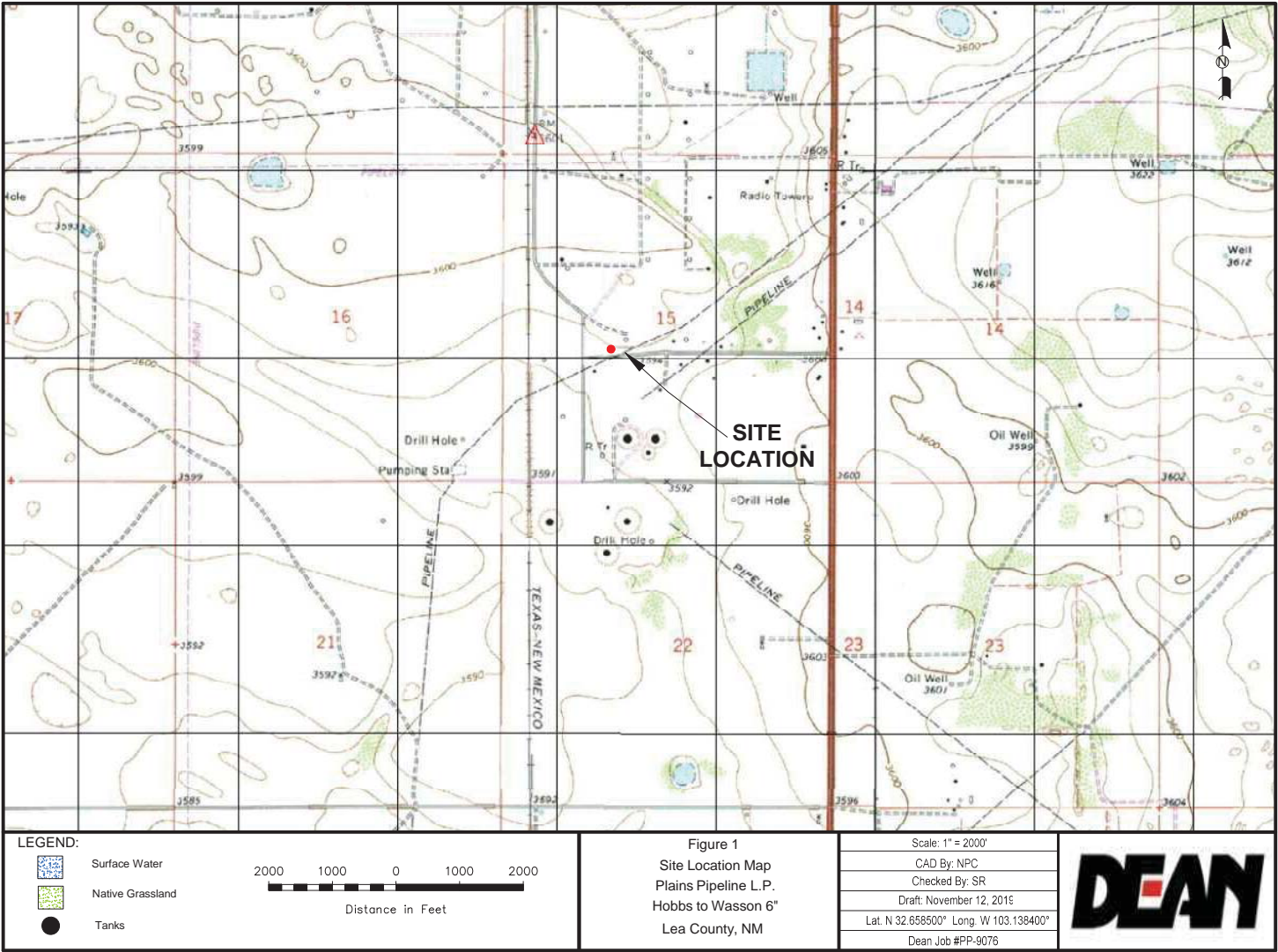
Chemistry Table
Concentrations of TPH, BTEX and Chlorides in Soil
Plains Pipeline, L.P.
Hobbs to Wasson 6" Pipeline Release
NMOCD Incident #: 1RP-5617
SRS # 2019-080

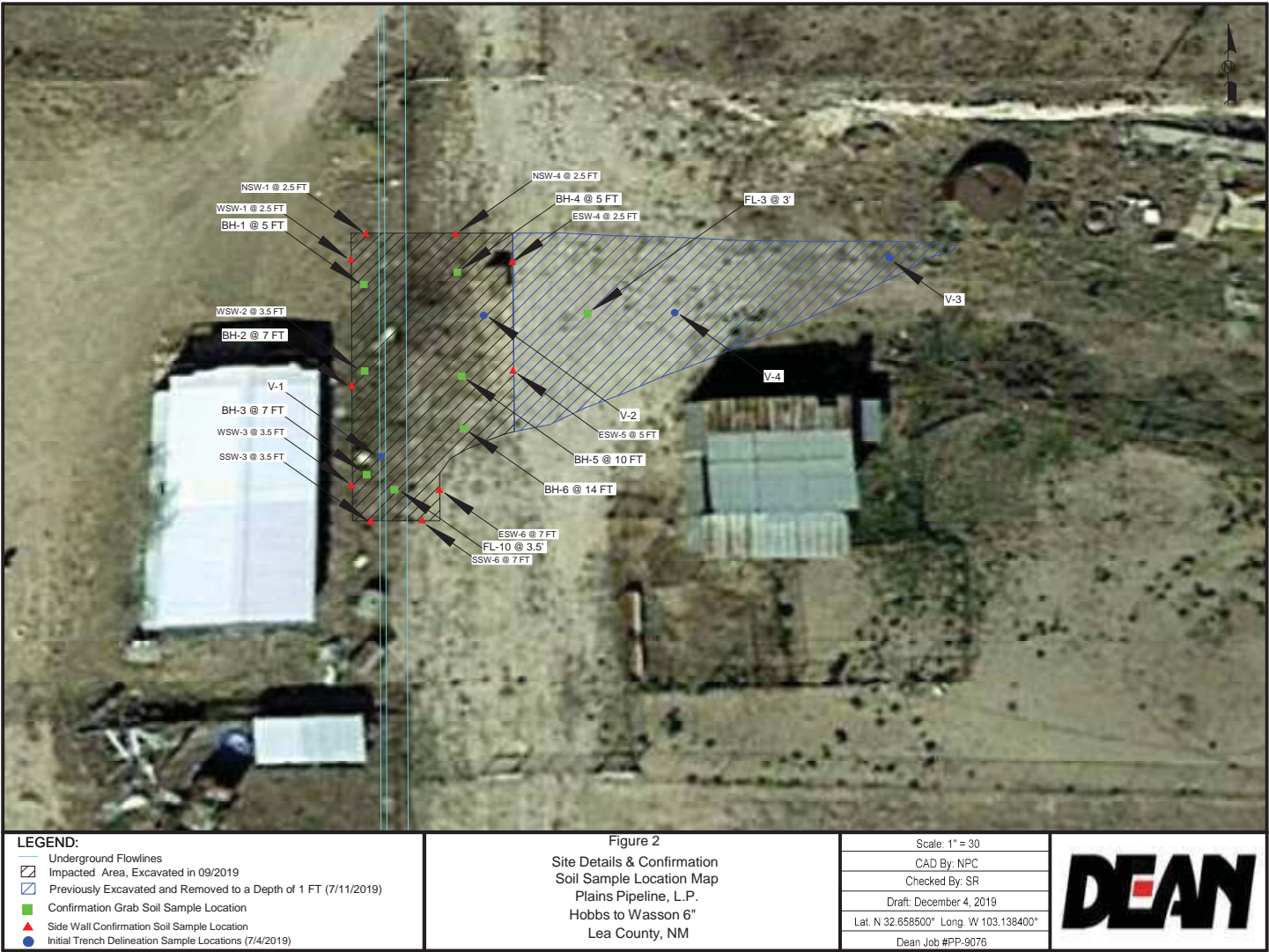
Lea County, New Mexico

SAMPLE INFORMATION					TPH METHOD: 8015M				BTEX METHOD 8021B					CHLORIDES SM4500Cl-B (mg/kg)
SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH	SAMPLE METHOD	MATRIX	GRO C6-C10 (mg/kg)	DRO >C10-C28 (mg/kg)	ORO >C28-C36 (mg/kg)	TOTAL TPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	TOTAL BTEX (mg/kg)	
ESW-4 @ 2.5'	09/16/19	2.5 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	224
ESW-5 @ 5'	09/16/19	5 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	160
ESW- 6 @ 7'	09/16/19	7 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	144
FL-3 @ 3'	09/16/19	3 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	NA	NA	NA	NA	NA	NA
FL-10 @ 3.5'	09/16/19	3.5 ft	Comp.	SOIL	<10.0	<10.0	<10.0	<10.0	NA	NA	NA	NA	NA	NA
NMOCD Closure Criteria for Soils					NA	NA	NA	100	10	NA	NA	NA	50	600

Soil excavated and place in stockpiled.

FIGURES





APPENDIX A
NMOCD VARIANCE EMAIL APPROVAL

⏪ Reply all ✓ 🗑 Delete 🗑 Junk Block ...

**Fw: Remediation Approval - Plains Pipeline - Hobbs to Wasson 6-inch -(1RP-5617)
7-3-2019**

JK

Jeff Kindley

Fri 12/13/2019 11:55 AM

To: Jeff Kindley ↗

👍 ⏪ ⏩ ➡ ...

From: "Hamlet, Robert, EMNRD" <Robert.Hamlet@state.nm.us>
Date: September 23, 2019 at 8:37:44 AM MDT
To: Amber L Groves <ALGroves@paalp.com>
Cc: "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Venegas, Victoria, EMNRD" <Victoria.Venegas@state.nm.us>
Subject: Remediation Approval - Plains Pipeline - Hobbs to Wasson 6-inch -(1RP-5617) 7-3-2019 [External]

Amber,

We have received your Workplan/Remediation Proposal for **1RP-5617 Hobbs to Wasson 6-inch**, thank you. This Workplan/Remediation proposal is approved. The variance is approved for the chloride concentrations in trench V-2 (7' to 11'), where the buried equipment and heater treater were found. Concentration of chloride were not found in any other part of the spill area, except where the heater treater was buried by the private land owner. Please enclose page 5 of the C-141, unless you are submitting a Remediation/Closure plan.

Please let me know if you have any further questions.

Regards,

Robert J Hamlet
State of New Mexico
Energy, Minerals, and Natural Resources
Oil Conservation Division
811 S. First St., Artesia NM 88210
(575) 748-1283
Robert.Hamlet@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

APPENDIX B
NMOCD C-141 FORM

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	NDHR1921034782
District RP	1RP-5617
Facility ID	fDHR1921033990
Application ID	pDHR1921033352

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 1911 Connie Road, Carlsbad NM 88220	

Location of Release Source

Latitude 32.65850

Longitude -103.13840

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Hobbs to Wasson 6"	Site Type Pipeline
Date Release Discovered 7/3/2019	API# (if applicable)

Unit Letter	Section	Township	Range	County
K	15	19S	38E	Lea

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

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) 10 bbls	Volume Recovered (bbls) 0 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

Crude oil release as a result of an open ended pipe during purging activities.

Form C-141

State of New Mexico
Oil Conservation Division

Page 2

Incident ID	NDHR1921034782
District RP	1RP-5617
Facility ID	fDHR1921033990
Application ID	pDHR1921033352

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

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: Amber Groves Title: Remediation Coordinator
 Signature: Amber Groves Date: 7/16/2019
 email: algroves@psa.td.com Telephone: 575-300-5517

OCD Only

Received by: Dylan Rose-Coss Date: 07/16/2019

APPENDIX C

**NEW MEXICO OFFICE OF STATE ENGINEER WATER
COLUMN/AVERAGE WATER DEPTH TO GROUNDWATER
DATA**



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)























(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	DepthWell	DepthWater	Water Column
L 02089		L	LE	4	4	4	15	19S	38E	675485	3614461*	83	49	34
L 02667		L	LE			4	15	19S	38E	675184	3614757*	106	70	36
L 02689		L	LE	4	4	4	15	19S	38E	675485	3614461*	83	49	34
L 03198		L	LE	4	2	3	15	19S	38E	674674	3614851*	100	15	85
L 03248		L	LE	4	4	4	15	19S	38E	675485	3614461*	123	48	75
L 03248	R	L	LE	4	4	4	15	19S	38E	675485	3614461*	123	48	75
L 03248 POD2	R	L	LE		3	4	15	19S	38E	674983	3614556*		42	
L 03248 POD4		L	LE	1	3	4	15	19S	38E	674882	3614655*	135	60	75
L 03248 POD5		L	LE		3	4	15	19S	38E	674983	3614556*	133	75	58
L 03248 POD6		L	LE			4	15	19S	38E	675184	3614757*	115	57	58
L 03248 S	R	L	LE		3	4	15	19S	38E	674983	3614556*	135	42	93
L 03575		L	LE	4	4	1	15	19S	38E	674667	3615254*	110	51	59
L 04107		L	LE	2	2	4	15	19S	38E	675478	3615064*	112	60	52
L 04489		L	LE	3	1	4	15	19S	38E	674876	3614857*	100	41	59
L 04539		L	LE	4	2	4	15	19S	38E	675478	3614864*	100	48	52
L 04622		L	LE	2	2	4	15	19S	38E	675478	3615064*	70	46	24
L 05013		L	LE		2	4	15	19S	38E	675379	3614965*	100	47	53
L 05408		L	LE	4	2	4	15	19S	38E	675478	3614864*	142	52	90
L 05725		L	LE	3	2	3	15	19S	38E	674474	3614851*	98	45	53
L 05725 POD2		L	LE	3	2	3	15	19S	38E	674474	3614851*	120	58	62
L 06101		L	LE			4	15	19S	38E	675184	3614757*	100	38	62
L 06101 POD2		L	LE			4	15	19S	38E	675184	3614757*	100	38	62
L 06733		L	LE	4	2	4	15	19S	38E	675478	3614864*	123	50	73
L 06759		L	LE				15	19S	38E	674781	3615145*	100	45	55
L 06792		L	LE	4	4	1	15	19S	38E	674667	3615254*	100	51	49
L 06858		L	LE		3	2	15	19S	38E	674971	3615361*	100	45	55
L 06922		L	LE	2	2	3	15	19S	38E	674674	3615051*	100	50	50
L 07357		L	LE		4	4	15	19S	38E	675386	3614562*	101		
L 07359		L	LE	1	1	1	15	19S	38E	674059	3615850*	117	57	60
L 07379		L	LE	3	2	4	15	19S	38E	675278	3614864*	120	44	76
L 07381		L	LE			4	15	19S	38E	675184	3614757*	100	50	50
L 07512		L	LE			4	15	19S	38E	675184	3614757*	100	32	68
L 07882		L	LE	1	1	4	15	19S	38E	674876	3615057*	100	32	68

L 08046		L		LE	4	4	2	15	19S	38E	675472	3615267*		130	58	72
L 08279		L		LE		4	3	15	19S	38E	674581	3614549*		130	58	72
L 08280		L		LE		3	4	15	19S	38E	674983	3614556*		130	58	72
L 08280	R	L		LE		3	4	15	19S	38E	674983	3614556*		130	58	72
L 08352		L		LE		4	4	15	19S	38E	675386	3614562*		118	50	68
L 08363		L		LE		3	4	15	19S	38E	674983	3614556*		130	58	72
L 09018		L		LE	4	1	4	15	19S	38E	675076	3614857*		100	32	68
L 09310		L		LE	4	1	4	15	19S	38E	675076	3614857*		120	58	62
L 09486		L		LE	4	2	3	15	19S	38E	674674	3614851*		132	74	58
L 09720		L		LE			4	15	19S	38E	675184	3614757*		100	65	35
L 09821		L		LE			4	15	19S	38E	675184	3614757*		100	51	49
L 09896		L		LE			4	15	19S	38E	675184	3614757*		100	38	62
L 10046		L		LE			4	15	19S	38E	675184	3614757*		120	70	50
L 10322		L		LE	4	2	4	15	19S	38E	675478	3614864*		133	44	89
L 10503		L		LE			4	15	19S	38E	675184	3614757*		100	70	30
L 11015		L		LE		3	4	15	19S	38E	674983	3614556*		120	45	75
L 12154 POD1		L		LE	2	3	3	15	19S	38E	674361	3614592		160		
L 12489 POD1		L		LE	1	4	4	15	19S	38E	675240	3614669		160	100	60
L 12601 POD1		L		LE	1	1	4	15	19S	38E	674891	3615131		140		
L 13172 POD1		L		LE	4	2	4	15	19S	38E	675585	3614786		141		
L 13653 POD1		L		LE	3	3	4	15	19S	38E	674807	3614391		140	75	65
L 13654 POD1		L		LE	3	3	4	15	19S	38E	674884	3614484		144	78	66
L 14155 POD1		L		LE	2	2	4	15	19S	38E	675487	3615136		150	80	70
L 14267 POD1		L		LE	3	1	4	15	19S	38E	674912	3614842		138	65	73

Average Depth to Water: **53 feet**Minimum Depth: **15 feet**Maximum Depth: **100 feet****Record Count:** 57**PLSS Search:****Section(s):** 15**Township:** 19S**Range:** 38E***UTM location was derived from PLSS - see Help**

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

12/2/19 3:18 PM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

APPENDIX D

LABORATORY ANALYTICAL RESULTS



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 20, 2019

SYLWIA REYNOLDS

DEAN

12600 W. COUNTY ROAD 91

MIDLAND, TX 79707

RE: HOBBS TO WASSON 6"

Enclosed are the results of analyses for samples received by the laboratory on 09/16/19 14:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DEAN
 SYLWIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received: 09/16/2019
 Reported: 09/20/2019
 Project Name: HOBBS TO WASSON 6"
 Project Number: PP-
 Project Location: PLAINS - LEA CO NM

Sampling Date: 09/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH - 1 @ 5' (H903186-01)

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77		
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38		
Total BTEX	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	09/17/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 81.0 % 41-142

Surrogate: 1-Chlorooctadecane 81.5 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: WSW - 1 @ 2.5' (H903186-02)

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77		
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38		
Total BTEX	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/17/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 74.0 % 41-142

Surrogate: 1-Chlorooctadecane 75.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: NSW - 1 @ 2.5' (H903186-03)

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77		
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38		
Total BTEX	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	09/17/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 85.4 % 41-142

Surrogate: 1-Chlorooctadecane 86.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: BH - 2 @ 7' (H903186-04)

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77		
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38		
Total BTEX	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/18/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 90.3 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: WSW - 2 @ 3.5' (H903186-05)

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77		
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38		
Total BTEX	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/18/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	10.6	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 94.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: BH - 3 @ 7' (H903186-06)

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77	
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/18/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 93.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.6 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: WSW - 3 @ 3.5' (H903186-07)

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77		
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38		
Total BTEX	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/18/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 75.5 % 41-142

Surrogate: 1-Chlorooctadecane 76.1 % 37.6-147

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: SSW - 3 @ 3.5' (H903186-08)

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77	
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/18/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	15.9	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 73.4 % 41-142

Surrogate: 1-Chlorooctadecane 75.8 % 37.6-147

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Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: BH - 4 @ 5' (H903186-09)

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77	
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/18/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 83.4 % 41-142

Surrogate: 1-Chlorooctadecane 86.7 % 37.6-147

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Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: ESW - 4 @ 2.5' (H903186-10)

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77	
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	09/18/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 83.8 % 41-142

Surrogate: 1-Chlorooctadecane 84.3 % 37.6-147

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Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received: 09/16/2019
 Reported: 09/20/2019
 Project Name: HOBBS TO WASSON 6"
 Project Number: PP-
 Project Location: PLAINS - LEA CO NM

Sampling Date: 09/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: NSW - 4 @ 2.5' (H903186-11)

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77	
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	09/18/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	133	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	35.8	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 84.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.4 % 37.6-147

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Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: BH - 5 @ 10' (H903186-12)

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77	
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/18/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 89.0 % 37.6-147

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Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: ESW - 5 @ 5' (H903186-13)

BTEX 8021B			mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77		
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38		
Total BTEX	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/18/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2019	ND	200	100	200	1.49	
DRO >C10-C28*	<10.0	10.0	09/18/2019	ND	196	98.0	200	0.0933	
EXT DRO >C28-C36	<10.0	10.0	09/18/2019	ND					

Surrogate: 1-Chlorooctane 84.6 % 41-142

Surrogate: 1-Chlorooctadecane 85.3 % 37.6-147

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Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: BH - 6 @ 14' (H903186-14)

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77	
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	09/18/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2019	ND	200	100	200	1.49	
DRO >C10-C28*	<10.0	10.0	09/18/2019	ND	196	98.0	200	0.0933	
EXT DRO >C28-C36	<10.0	10.0	09/18/2019	ND					

Surrogate: 1-Chlorooctane 88.7 % 41-142

Surrogate: 1-Chlorooctadecane 90.4 % 37.6-147

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Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: ESW - 6 @ 7' (H903186-15)

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	1.72	85.8	2.00	1.61		
Toluene*	<0.050	0.050	09/19/2019	ND	1.73	86.3	2.00	3.12		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.74	87.1	2.00	1.25		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.21	86.8	6.00	1.81		
Total BTEX	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	09/18/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2019	ND	200	100	200	1.49	
DRO >C10-C28*	<10.0	10.0	09/18/2019	ND	196	98.0	200	0.0933	
EXT DRO >C28-C36	<10.0	10.0	09/18/2019	ND					

Surrogate: 1-Chlorooctane 87.8 % 41-142

Surrogate: 1-Chlorooctadecane 87.8 % 37.6-147

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Analytical Results For:

DEAN
 SYLVIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: SSW - 6 @ 7' (H903186-16)

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	1.72	85.8	2.00	1.61	
Toluene*	<0.050	0.050	09/19/2019	ND	1.73	86.3	2.00	3.12	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.74	87.1	2.00	1.25	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.21	86.8	6.00	1.81	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.6 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/18/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2019	ND	200	100	200	1.49	
DRO >C10-C28*	<10.0	10.0	09/18/2019	ND	196	98.0	200	0.0933	
EXT DRO >C28-C36	<10.0	10.0	09/18/2019	ND					

Surrogate: 1-Chlorooctane 80.3 % 41-142

Surrogate: 1-Chlorooctadecane 82.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



ANALYSIS REQUEST

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TV	TPH (80)	Btex (80)	Chloride
H903186	BH-1 @ 5 ft																	
1	BH-1 @ 5 ft					X							9/11/17	10:00	X	X	X	
2	BH-1 @ 2.5 ft					X								10:15	X	X	X	
3	BH-1 @ 2.5 ft					X								10:30	X	X	X	
4	BH-2 @ 7 ft													10:45				
5	BH-2 @ 3.5 ft													11:00				
6	BH-3 @ 7 ft													11:15				
7	BH-3 @ 3.5 ft													11:30				
8	BH-3 @ 3.5 ft													11:45				
9	BH-4 @ 5 ft													12:00				
10	BH-4 @ 2.5 ft													12:15				

Add'l Phone #:

Time:	14:25	Received By:	Sawara Shigeharu
Date:			
Time:			
Delivered By: (Circle One)	4.6c	#97	Sample Condition
Sampler - UPS - Bus - Other:	Corrected 5.0c		Cool <input type="checkbox"/> Intact <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			CHECKED BY: (Initials)
			TO
REMARKS:			
algivirs @ pacip.com			
prebernina @ dandigs.com			
sylvia ryanold @ dandigs.com			



ANALYSIS REQUEST

[illegible]

Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #
---------------	------------------------------	-----------------------------	---------------

Delivered By: (Circle One) 4.66 #47		Sample Condition Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		CHECKED BY: (Initials) JS	
Sampler - UPS - Bus - Other: Constructed 5.06					
Relinquished By:		Time: 14:15 Date: 14:25		Received By:	
REMARKS: alvarez@pacp.com prebinner@denndis.com sjulavrymold@denndis.com					
Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone n.: Add'l Fax #:			



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 30, 2019

SYLWIA REYNOLDS

DEAN

12600 W. COUNTY ROAD 91

MIDLAND, TX 79707

RE: HOBBS TO WASSON 6"

Enclosed are the results of analyses for samples received by the laboratory on 09/27/19 12:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DEAN
 SYLWIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/27/2019	Sampling Date:	09/26/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	PP-9076	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: NSW - 4A @ 2.5' (H903325-01)

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/27/2019	ND	185	92.4	200	2.08	
DRO >C10-C28*	<10.0	10.0	09/27/2019	ND	178	88.9	200	3.40	
EXT DRO >C28-C36	<10.0	10.0	09/27/2019	ND					
Surrogate: 1-Chlorooctane	79.4 %	41-142							
Surrogate: 1-Chlorooctadecane	82.6 %	37.6-147							

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink that reads "Caley D. Keene".

Caley D. Keene, Lab Director/Quality Manager

CARDINAL
Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 18, 2019

SYLWIA REYNOLDS

DEAN

12600 W. COUNTY ROAD 91

MIDLAND, TX 79707

RE: HOBBS TO WASSON 6"

Enclosed are the results of analyses for samples received by the laboratory on 09/16/19 14:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Coley D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DEAN
 SYLWIA REYNOLDS
 12600 W. COUNTY ROAD 91
 MIDLAND TX, 79707
 Fax To:

Received:	09/16/2019	Sampling Date:	09/16/2019
Reported:	09/18/2019	Sampling Type:	Soil
Project Name:	HOBBS TO WASSON 6"	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PLAINS - LEA CO NM		

Sample ID: FL - 3 @ 3' (H903185-01)

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					
<hr/>									
Surrogate: 1-Chlorooctane	82.0 %	41-142							
Surrogate: 1-Chlorooctadecane	85.0 %	37.6-147							

Sample ID: FL - 10 @ 3.5' (H903185-02)

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	191	95.4	200	4.85	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	173	86.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					
Surrogate: 1-Chlorooctane	76.0 %	41-142							
Surrogate: 1-Chlorooctadecane	78.8 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Caley D. Keene".

Caley D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

APPENDIX E

PHOTOGRAPHIC DOCUMENTATION

Photograph No 1.

Date: September 10, 2019

Direction: West

Description: View of release area and excavation.

**Photograph No 2.**

Date: September 10, 2019

Direction: Southwest

Description: View of excavation beneath piping.



Photograph No 3.

Date: September 12, 2019

Direction: East

Description: View of excavation beneath piping

**Photograph No 4.**

Date: October 9, 2019

Direction: Southwest

Description: View of backfilled excavation in vicinity of trenches V-1 and V-2.



Photograph No 5.

Date: October 9, 2019

Direction: East

Description: View of backfilled excavation in vicinity of trenches V-3 and V-4.

**Photograph No 6.**

Date: October 9, 2019

Direction: Northwest

Description: View of backfilled excavation in vicinity of trench V-2.

