Received by OCD: 6/16/2021 9:22:14 AM Form C-141 State of New Mexico

Oil Conservation Division

Incident ID	nAPP2036337003
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 co	onfirmed 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 heal	th, 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 Date: 06/16/2021					
email: <u>algroves@paalp.com</u>	Telephone: <u>575-200-5517</u>				
OCD Only					
Received by:	_ Date:				
Approved Approved with Attached Conditions of	f Approval Denied Deferral Approved				
Signature:	Date:				



12600 WEST CO RD 91 MIDLAND, TX 79707 OFFICE: 432.653.4203

# SOIL REMEDIATION ACTIVITIES REPORT AND DEFERRAL REQUEST

PLAINS PIPELINE, L.P.

COG SCREWDRIVER 24 FED COM 2H RELEASE

# EDDY COUNTY, NM

NMOCD INCIDENT #: nAPP2036337003

SRS #: 2020-095

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June 3, 2021

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

Re: Soil Remediation Activities Report and Deferral Request COG Screwdriver 24 Fed Com 2H Release Unit Letter P, Section 24, Township 19S, Range 31E GPS: N 32.640918°, W -103.814648° Eddy County, New Mexico NMOCD Incident #: nAPP2036337003 SRS #: 2020-095

### 1. Introduction

Dean Companies, Inc. (Dean) is pleased to present this Soil Remediation Activities Report and Deferral Request on behalf of Plains Pipeline, L.P. (Plains) to document the field soil remediation activities that were conducted at the COG Screwdriver 24 Fed Com 2 H Release site. The crude oil release occurred from a LACT unit, located approximately 28.64 miles northeast of Carlsbad, Eddy County, New Mexico in Unit Letter P, Section 24, Township 19S, and Range 31E. The GPS coordinates for the site is N 32.640918° and W -103.814648°. A "Site Location Map" is provided as Figure 1 and "Topographic Map" as Figure 2. The surface is owned by the Bureau of Land Management (BLM).

### 2. Release Description and Response

On December 22, 2020, a crude oil release occurred at the COG Screwdriver 24 Fed Com 2 H and was attributed to the center piston failure of the triplex pump on the LACT unit. Approximately twenty (20) barrels (bbls) of crude oil was released with two (2) bbls recovered for a net loss of eighteen (18) bbls of crude oil. The release was contained onsite adjacent to the LACT unit and under the producer's tank berm affecting an area measuring approximately fifty (50) feet (ft) in length by two

(2) to twenty (20) ft in width to an estimated maximum depth of seven (7) ft below ground surface (bgs).

On December 28, 2020, Dean was assigned management oversite responsibilities for impacted soil delineation, remediation, soil sampling, site restoration, and reporting activities by Plains. On December 28, 2020, Plains submitted the initial C-141 Form to the NMOCD (Appendix A).

### 3. NMOCD Regulatory Limits

NMOCD assessment and cleanup levels for hydrocarbon and produced water releases are based on depth to groundwater and follow the criteria in the revised August 2018 Title 19 Chapter 15 Part 29 New Mexico Administration Code (19.15.29 NMAC) regulations. Groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE), the New Mexico Bureau of Geology & Mineral Resources (NMBGMR), and The United States Geological Survey (USGS) were accessed to determine if any registered water wells in or near the site. One water well (CP 010640 POD1) was listed in the vicinity northeast of the site with groundwater reported at 102 feet bgs. See Appendix B for the NMOSE water well depth near site. In addition, according to the Bureau of Land Management (BLM) the site is located in an area of low potential karst topography. See Figure 3 "Site Location Relative to Known Regional Karst Topography". As outlined in 19.15.29.12.B. (4) NMAC, the release does not occur in referenced sensitive areas, with the nearest water body feature being the Pecos River located approximately 26.4 mile southwest of the site. Meeting the previous criteria, the NMOCD restoration and cleanup levels for soils impacted by hydrocarbons with low karst topography is as follows:

Chloride	20,000 mg/Kg
• TPH (Gro+Dro)	1,000 mg/Kg
Total TPH	2,500 mg/Kg
Benzene	10 mg/Kg
<ul> <li>Total BTEX</li> </ul>	50 mg/Kg

### 4. Soil Assessment Activities and Sample Analysis

On December 30, 2020 and January 4 through 5, 2021, Dean Personnel conducted soil assessment activities at the release site. A hand auger was utilized to collect soil samples from the site to determine depth of hydrocarbon and chloride impacts. Soil samples were collected at one (1) ft. intervals to a maximum depth of eleven (11) feet bgs or until refusal was encountered due to underlying limestone. Six (6) auger hole locations (AH-1, AH-2, AH-4, AH-5, AH-6 and AH-8) were

installed within the LACT unit, while seven (7) auger holes (AH-3, AH-7, AH-1H through AH-5H) were installed horizontally under the adjacent tank battery with collected soils placed into laboratoryprovided sample containers, labeled, stored on ice, and transported under proper chain-of-custody documentation to Permian Basin Environmental Labs (PBELAB) of Midland, Texas. Soil samples were analyzed for total petroleum hydrocarbons (TPH) utilizing Method SW-846 8015M, with select samples analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) utilizing Method SW-846 8021B, and chlorides utilizing Method E300.0. See Figure 4 "Site Details and Delineation Soil Sample Location Map". Benzene concentrations were above the NMOCD standards of 10 milligrams per kilogram (mg/Kg) for soil samples AH-1 @ 1' (276 mg/Kg), AH-1 @ 3' (46.5 mg/Kg), AH-1 @ 5' (296 mg/Kg), AH-1 @ 7' (217 mg/Kg) within the LACT unit and in AH-7 @ 1' (14.8 mg/Kg), and AH-7 @ 5' (55.5 mg/Kg) beneath the adjacent tank battery. All remaining soil samples were below the NMOCD standards of 10 mg/Kg Benzene. Total BTEX concentrations were above the NMOCD standards of 50 mg/Kg for soil samples AH-1 @ 1' (2,022 mg/kg), AH-1 @ 3' (940.5 mg/Kg), AH-1 @ 5' (1,901.9 mg/Kg), AH-1 @ 7' (1,222.3 mg/Kg) within the LACT unit and AH-2H @ 1' (2,574 mg/Kg), AH-7 @ 1' (164.6 mg/Kg, AH-7 @ 3' (176.73 mg/Kg), and AH-7 @ 5' (605.4 mg/Kg) beneath the adjacent tank battery. All remaining soil samples were below the NMOCD standards of 50 mg/Kg Total BTEX. The TPH (Gro + Dro) and Total TPH were above either or both the NMOCD standards of 1,000 mg/Kg (Gro + Dro) and 2,500 mg/Kg for Total TPH for soil samples AH-1 @ 1', AH-1 @ 3', AH-1 @ 5', AH-1 @ 7' within the LACT unit and AH-2H @ 1', AH-7 @ 1', AH-7 @ 3', and AH-7 @ 5' beneath the adjacent tank battery. The TPH (Gro + Dro) concentrations ranged from 1,319 mg/Kg for soil sample AH-3H @ 1' beneath the adjacent tank battery to 26,800 mg/Kg for soil sample AH-1 @ 1' within LACT unit, while Total TPH concentrations ranged from 7,573 mg/Kg for soil sample AH-7 @ 1' to 35,660 mg/Kg for soil sample AH-2H @ 1', both beneath the adjacent tank battery. All other remaining soil samples were below the NMOCD standards for TPH. Chloride concentrations were below the NMOCD standards of 20,000 mg/Kg for all soil samples analyzed and ranged from 1.06 mg/Kg for soil sample AH-4 @ 1' to 127 mg/Kg for soil sample AH-8 @ 1'. See Table 1 for delineation analytical results. Laboratory reports containing analytical methods, results, and chainof-custody documents are included in Appendix C. See site photographs documenting site conditions in Appendix D.

### 5. Soil Remediation Activities and Confirmation Soil Sampling

Between January 4 and March 31, 2021, third-party soil remediation activities were performed at the Screwdriver 24 Fed Com 2H Release site. Soil remediation commenced utilizing hand excavation of hydrocarbon impacted soils adjacent to the LACT unit and the onsite piping with the excavated

soils stockpiled on plastic. Final dimensions of the excavation were approximately thirty-five (35) ft. in length, by thirty-five (35) ft. in width to a depth of three (3) ft bgs. Approximately 40 cubic yards of soil were removed and stockpiled on plastic at the site.

Due to limited accessibility and to ensure structural integrity of the LACT unit, the site was excavated to a maximum depth of three (3) ft bgs (See site photograph 5 showing location of AH-1 and LACT area with remaining hydrocarbon impact for deferral). To ensure the integrity of the vibrating equipment within the LACT and prevent a possible collapse of soils around the unit the remaining four (4) ft of impacted soil in AH-1 were left in-situ along with the impacted soils on the west wall of excavation, which abuts against the producer's tank battery, and will be deferred until time of abandonment or replacement/upgrade of the LACT unit.

In addition, the hydrocarbons from the LACT unit release migrated beneath the adjacent lined steel berm of the producer's tank battery. (See photographs 3 and 4 showing liner, steel berm and location of hydrocarbons). Delineation of the hydrocarbons was performed adjacent and at an angle to the tank battery (denoted by AH-2H @ 1', AH-3H @ 1', and AH-7 @ 7'). Since it is not economically or technically feasible to remediate the soils with the existing equipment onsite, remediation of the remaining impacted soils will be deferred until time of abandonment or upgrade to the tank battery. See Figure 5 showing area of impact remaining within producer's tank battery for deferral.

On January 4, 2020, after initial excavation activities, one (1) composite five (5) point wall sample (NW-1) was collected within two hundred (200) square feet on the northern wall and submitted for analysis of TPH, BTEX, and Chlorides to PBELab. The analytical results were below the NMOCD standards for Benzene, BTEX, TPH, and Chlorides.

After further excavation on January 22, 2021, one (1) composite bottom hole (BH-2 @ 3') and two (2) composite five (5) point wall samples (SSW-1 and ESW-1) were collected within two hundred (200) square feet of each other from the bottom and two (2) side walls and submitted for analysis of TPH, BTEX, and Chlorides to PBELab. Soil sample SSW-1 exceeded the NMOCD standards for TPH (Gro + Dro) and Total TPH with concentrations of 3,510 mg/Kg and 4,054 mg/Kg, respectively. All other samples were below NMOCD standards for Benzene, BTEX, TPH, and Chlorides.

On February 23, 2021, after further excavation on the south wall, a five (5) point composite wall sample (SSW-1A) was collected within two hundred (200) square feet and submitted for analysis of TPH to the lab. The analytical result exceeded the NMOCD standard for TPH (Gro + Dro) with a concentration of 1,175.8 mg/Kg.

Additional excavation was performed along the south wall of the excavation and resampled on March 18, 2021. The five (5) point composite wall sample (SSW-1B) was submitted for analysis of TPH to the lab. The analytical result was below the NMOCD standard for TPH (Gro + Dro) with a concentration of 28.4 mg/Kg. See Figure 6 "Site Details & Confirmation Soil Sample Location Map" for soil sample location and Table 2 for confirmation analytical results.

### 6. Soil Disposal and Site Restoration

After collecting requisite samples from the LACT unit excavation, Plains was onsite in April to backfill the excavation with locally sourced non-impacted soils and the site brought up to grade. On June 7, 2021, approximately 40 cubic yards of hydrocarbon impacted soils were transported offsite for disposal at Lea Land, LLC in Carlsbad, New Mexico with waste manifests available upon request.

### 7. NMOCD Requested Extension

On April 7, 2021, Plains requested a 60-day extension for Plains nAPP2036337003 COG Screwdriver 24 Fed Com 2H. In an email dated April 8, 2021, the NMOCD approved the 60-day extension until June 7, 2021. See Appendix E for Extension Request and NMOCD Response.

### 8. Variance and Closure Request

Plains requests a variance to the current rule to include a deferral of cleanup/remediation for impacted soils remaining from 1 ft to 7 ft (denoted by auger holes AH-1 [ from 3 to 7' bgs], AH-2H [ at 1' bgs], AH-3H [ at 1' bgs] and AH-7 [ from 1' to 5' bgs]) beneath the producer's tank battery until time of abandonment, due to limited accessibility to impacted soils (i.e. lined tank battery, steel berm). In order to remediate the soils beneath the existing tank battery would require the producer to shut-in the associated pumpjacks, purge six (6) onsite 500-barrel tanks, removal of the six (6) tanks along with existing steel berm and poly liner at a substantial effort on the producer's part. In addition, Plains also request a variance to the current rule to include a deferral of cleanup/remediation of impacted soils remaining from 3 ft to 7 ft bgs (denoted by AH-1) within LACT unit due to limited accessibility and to ensure the structural integrity of the LACT unit until time of abandonment or upgrade to system. With the depth of groundwater at 102 ft bgs, Plains believes the remaining inaccessible hydrocarbon impacted soils is not likely to impact the underlying groundwater.

With completion of the vertical and horizontal delineation, remediation of accessible soils, and backfilling of the excavation with locally sourced non-impacted soils, Plains respectfully requests that the NMOCD consider the site for deferral. A C-141 deferral is attached to the front of this report.

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

Sincerely,

ylmic (luppeld) Sylwia Reynolds

Sylwia Reynolds Project Manager

Huy Kindley

Jeffrey Kindley, PG. Professional Geologist

# TABLES



#### **Chemistry Table 1**

Delineation - Concentrations of Benzene, BTEX, TPH, and Chlorides in Soil

#### Plains Pipeline, L.P.

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**COG Screwdriver Release** 

Eddy County, NM

	SAMPLE	INFORMATI	ON			METHODS	EPA SW 846-80	)21B, 5030		METHOD: E 300		METHOD	DS: EPA SW 84	6-8015M	
SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH	SAMPLE METHOD	MATRIX	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL- BENZENE (mg/kg)	XYLENE (mg/kg)	Total BTEX (mg/kg)	CHLORIDES (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	GRO +DRO (mg/kg)	ORO (mg/kg)	TOTAL TPH (mg/kg)
AH-1 @ 1'	12/30/20	1'	GRAB	SOIL	276	725	440	465	116	1.27	12,500	14,300	26,800	2,480	29,280
AH-1 @ 3'	12/30/20	3'	GRAB	SOIL	46.5	320	246	259	69	13.6	8,940	13,600	22 <i>,</i> 540	2,220	24,760
AH-1 @ 5'	12/30/20	5'	GRAB	SOIL	296	724	385	397	99.9	8.07	12,200	13,900	26,100	2,330	28,430
AH-1 @ 7'	12/30/20	7'	GRAB	SOIL	217	423	258	261	63.3	-	8,810	10,200	19,010	1,770	20,780
AH-1 @ 9'	12/30/20	9'	GRAB	SOIL	0.0411	0.0598	<0.0230	<0.0230	<0.0230	-	<28.7	71.3	71.3	<28.7	71.3
AH-1H @ 1'	01/04/21	1'	GRAB	SOIL	0.0262	0.290	0.372	0.83	1.5182	16.8	42.9	355	397.9	52.1	450
AH-1H @ 3'	01/04/21	3'	GRAB	SOIL	-	-	-	-	-	10.2	-	-	-	-	-
AH-2 @ 1'	01/04/21	1'	GRAB	SOIL	0.0157	0.0370	0.0152	0.02796	0.09586	47.2	<28.4	126	126	<28.4	126
AH-2 @ 3'	01/04/21	3'	GRAB	SOIL	-	-	-	-	-	14.0	-	-	-	-	-
AH-2 @ 5'	01/04/21	5'	GRAB	SOIL	-	-	-	-	-	16.6	-	-	-	-	-
AH-2H @ 1'	01/04/21	1'	GRAB	SOIL	324	918	509	823	2,574	112	16,800	16,400	33,200	2,460	35,660
AH-2H @ 3'	01/04/21	3'	GRAB	SOIL	0.0468	0.194	0.354	0.724	1.3188	6.48	104	402	506	58.3	564.3
AH-2H @ 5'	01/04/21	5'	GRAB	SOIL	-	-	-	-	-	11.7	-	-	-	-	-
AH-2H @ 7'	01/04/21	7'	GRAB	SOIL	-	-	-	-	-	14.6	-	-	-	-	-
AH-2H @ 9'	01/04/21	9'	GRAB	SOIL	-	-	-	-	-	7.30	-	-	-	-	-
AH-2H @ 11'	01/04/21	11'	GRAB	SOIL	-	-	-	-	-	9.95	-	-	-	-	-
AH-3 @ 1'	01/04/21	1'	GRAB	SOIL	0.174	1.94	3.53	7.14	12.784	92.7	131	499	630	61.1	691.1
AH-3 @ 3'	01/04/21	3'	GRAB	SOIL	-	-	-	-	-	46.1	-	-	-	-	-
AH-3H @ 1'	01/04/21	1'	GRAB	SOIL	0.208	4.23	6.29	12	22.728	54.4	355	964	1,319	129	1,448
AH-3H @ 3'	01/04/21	3'	GRAB	SOIL	-	-	-	-	-	26.4	<26.9	35.9	35.9	<26.9	35.9
AH-4 @ 1'	01/05/21	1'	GRAB	SOIL	0.0135	0.00984	0.00189	<0.00106	0.02523	1.06	<26.6	<26.6	<26.6	<26.6	<26.6
AH-4 @ 3'	01/05/21	3'	GRAB	SOIL	-	-	-	-	-	7.93	-	-	-	-	-
AH-4H @ 1'	01/05/21	1'	GRAB	SOIL	0.00225	0.00287	<0.00105	<0.00105	0.00512	43.5	<26.3	<26.3	<26.3	<26.3	<26.3



#### **Chemistry Table 1**

Delineation - Concentrations of Benzene, BTEX, TPH, and Chlorides in Soil

Plains Pipeline, L.P.

**COG Screwdriver Release** 

Eddy County, NM

	SAMPLE	INFORMATI	ON			METHODS	: EPA SW 846-80	)21B, 5030		METHOD: E 300		METHOD	DS: EPA SW 84	6-8015M	
SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH	SAMPLE METHOD	MATRIX	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL- BENZENE (mg/kg)	XYLENE (mg/kg)	Total BTEX (mg/kg)	CHLORIDES (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	GRO +DRO (mg/kg)	ORO (mg/kg)	TOTAL TPH (mg/kg)
AH-4H @ 3'	01/05/21	3'	GRAB	SOIL	-	-	-	-	-	75.3	-	-	-	-	-
AH-5 @ 1'	01/05/21	1'	GRAB	SOIL	0.0127	0.00944	0.00126	<0.00103	0.0234	12.1	<25.8	<25.8	<25.8	<25.8	<25.8
AH-5 @ 3'	01/05/21	3'	GRAB	SOIL	-	-	-	-	-	14.1	-	-	-	-	-
AH-5H @ 1'	01/05/21	1'	GRAB	SOIL	0.00205	0.00324	<0.00106	<0.00106	0.00529	24.6	<26.6	<26.6	<26.6	<26.6	<26.6
AH-5H @ 3'	01/05/21	3'	GRAB	SOIL	-	-	-	-	-	35.6	-	-	-	-	-
AH-6 @ 1'	01/05/21	1'	GRAB	SOIL	0.00889	0.00581	<0.00104	<0.00104	0.0147	41.2	<26.0	<26.0	<26.0	<26.0	<26.0
AH-6 @ 3'	01/05/21	3'	GRAB	SOIL	-	-	-	-	-	91.0	-	-	-	-	-
AH-7 @ 1'	01/05/21	1'	GRAB	SOIL	14.8	36.1	41.3	72.4	164.6	48.9	2,590	4,450	7,040	533	7,573
AH-7 @ 3'	01/05/21	3'	GRAB	SOIL	9.93	40.0	41.6	85.2	176.73	16.6	3,260	5,740	9,000	806	9 <i>,</i> 806
AH-7 @ 5'	01/05/21	5'	GRAB	SOIL	55.5	160	146	243.9	605.4	19.6	4,470	6,620	11,090	956	12,046
AH-7 @ 7'	01/05/21	7'	GRAB	SOIL	0.0124	0.293	0.410	0.896	1.6114	18.5	72.0	468	540	65.6	605.6
AH-7 @ 9'	01/05/21	9'	GRAB	SOIL	-	-	-	-	-	13.2	-	-	-	-	-
AH-7 @ 11'	01/05/21	11'	GRAB	SOIL	-	-	-	-	-	16.9	-	-	-	-	-
AH-8 @ 1'	01/05/21	1'	GRAB	SOIL	0.0568	0.238	0.357	0.64	1.2918	127	87.5	472	559.5	50.2	609.7
AH-8 @ 3'	01/05/21	3'	GRAB	SOIL	-	-	-	-	-	18.6	-	-	-	-	-
AH-8 @ 5'	01/05/21	5'	GRAB	SOIL	0.0355	0.0286	0.00905	0.01489	0.08804	6.19	<26.9	<26.9	<26.9	<26.9	<26.9
AH-8 @ 7'	01/05/21	7'	GRAB	SOIL	-	-	-	-	-	9.14	-	-	-	-	-
AH-8 @ 9'	01/05/21	9'	GRAB	SOIL	0.0130	0.0162	0.00335	0.00615	0.0387	7.35	<26.6	<26.6	<26.6	<26.6	<26.6
NMOCD Recomm	ended Reme	diation Acti	on Level		10	-	-	-	50	20,000	-	-	1,000	-	2,500

Exceeds NMOCD Recommended RAL

Soils permanently removed from the ground during excavation activities



#### **Chemistry Table 2**

Confirmation - Concentrations of Benzene, BTEX, TPH, and Chlorides in Soil

Plains Pipeline, L.P.

**COG Screwdriver Release** 

Eddy County, NM

SAMPLE INFORMATION					METHODS	EPA SW 846-80	21B, 5030		METHOD: E 300		METHOD	S: EPA SW 84	6-8015M		
SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH	SAMPLE METHOD	MATRIX	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL- BENZENE (mg/kg)	XYLENE (mg/kg)	Total BTEX (mg/kg)	CHLORIDES (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	GRO +DRO (mg/kg)	ORO (mg/kg)	TOTAL TPH (mg/kg)
BH-2 @ 3'	01/22/21	3'	GRAB	SOIL	<0.00109	<0.00109	<0.00109	<0.00217	<0.00109	16.3	<27.2	<27.2	<27.2	<27.2	<27.2
SSW-1	01/22/21	NA	GRAB	SOIL	0.00151	0.0303	0.0113	0.02591	0.06902	70.8	170	3,340	3,510	544	4,054
SSW-1A	02/23/21	NA	GRAB	SOIL	-	-	-	-	-	-	35.8	1,140	1,175.8	181	1,356.8
SSW-1B	03/18/21	NA	GRAB	SOIL	-	-	-	-	-	-	<25.3	28.4	28.4	<25.3	28.4
ESW-1	01/22/21	NA	GRAB	SOIL	0.00392	0.0146	0.00383	0.01628	0.03863	103	<25.3	44.6	44.6	<25.3	44.6
NW-1	01/05/21	NA	GRAB	SOIL	0.0463	0.00895	0.00154	< 0.00103	0.05679	56.8	<25.8	108	108	<25.8	108
NMOCD Recomm	ended Reme	diation Acti	on Level		10	-	-	-	50	20,000	-	-	1,000	-	2,500

Exceeds NMOCD Recommended RAL

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# **FIGURES**

Received by OCD: 6/16/2021 9:22:14 AM

Site Location Map Plains Pipeline LLC COG Screwdriver 24 Fed Com 2H Release PP-2180 GPS: 32.640918, -103.814648 Eddy County, NM

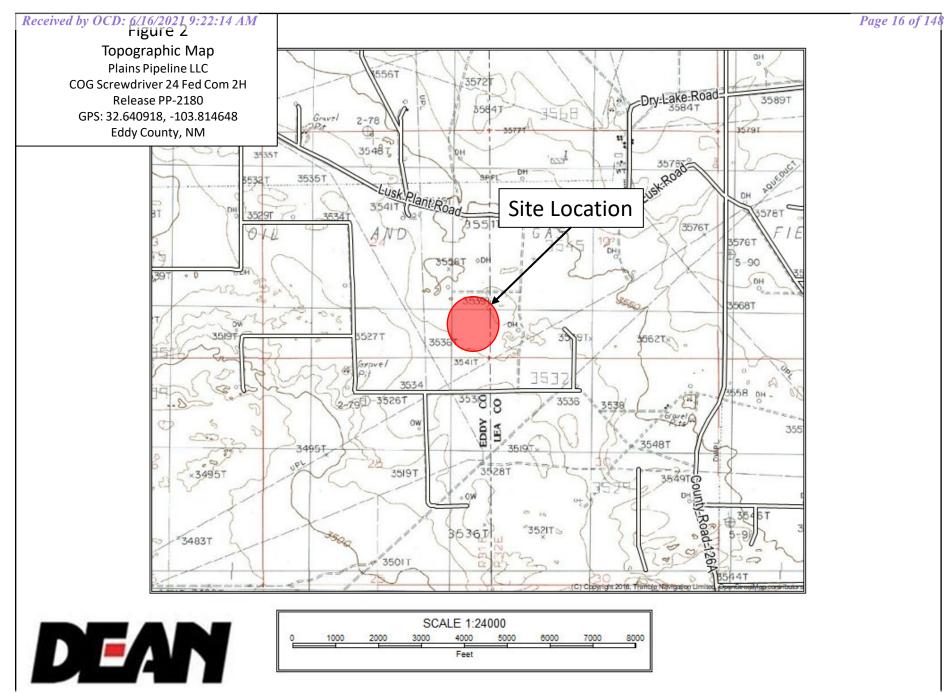
Site Location

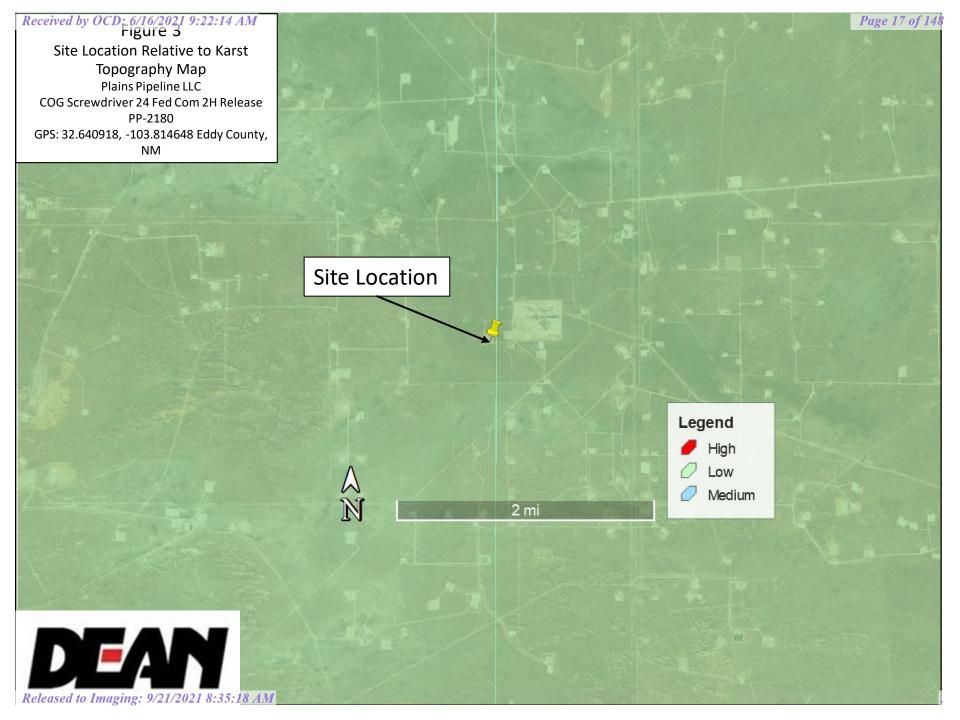
Page 15 of 148

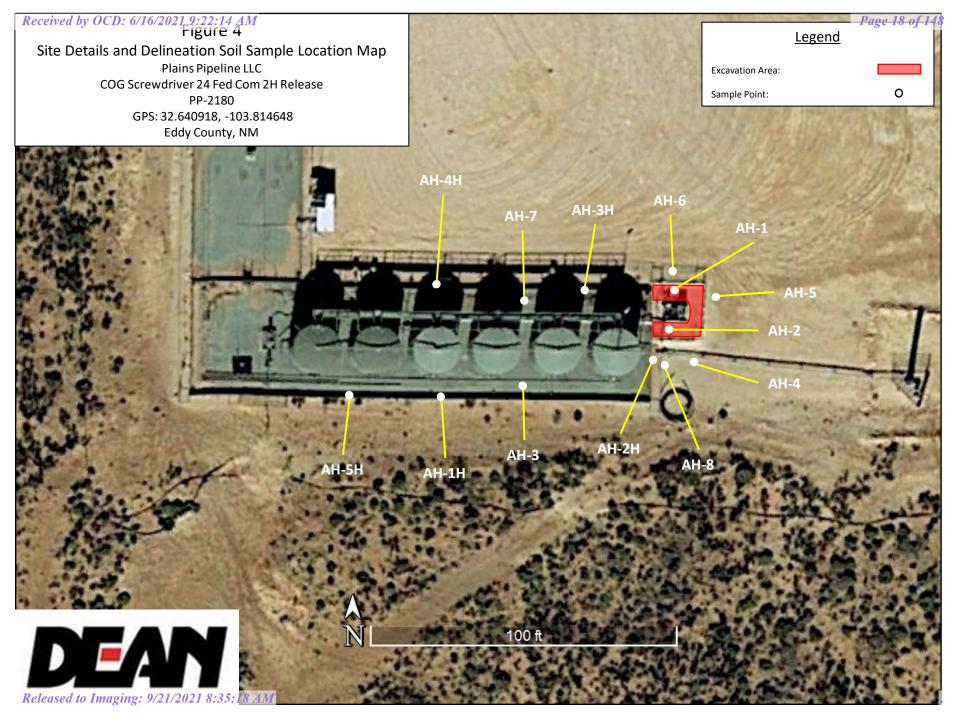


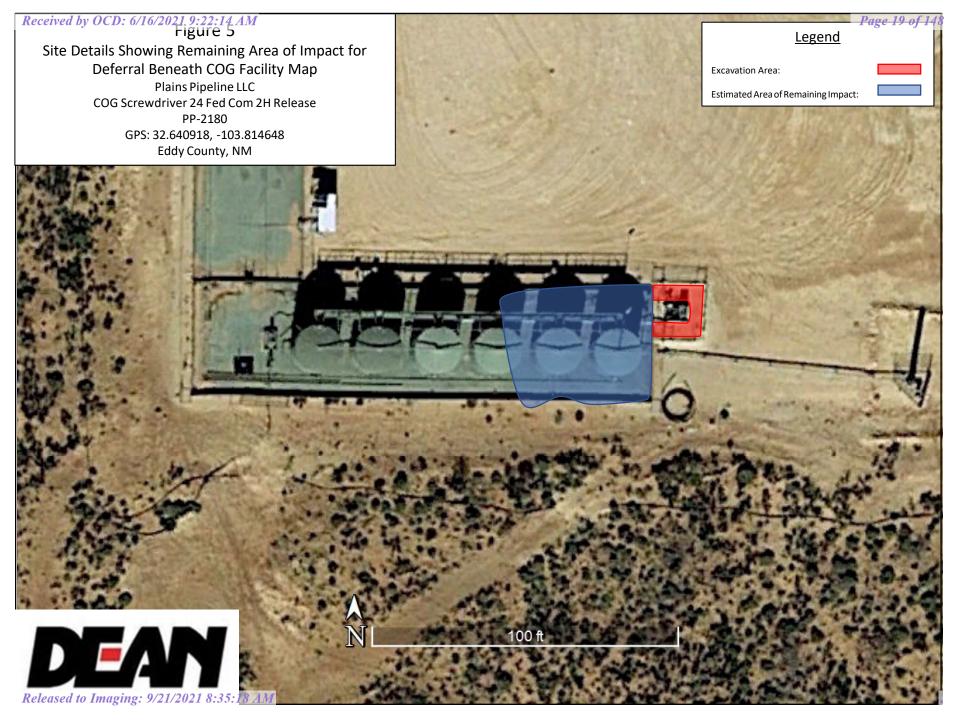
N

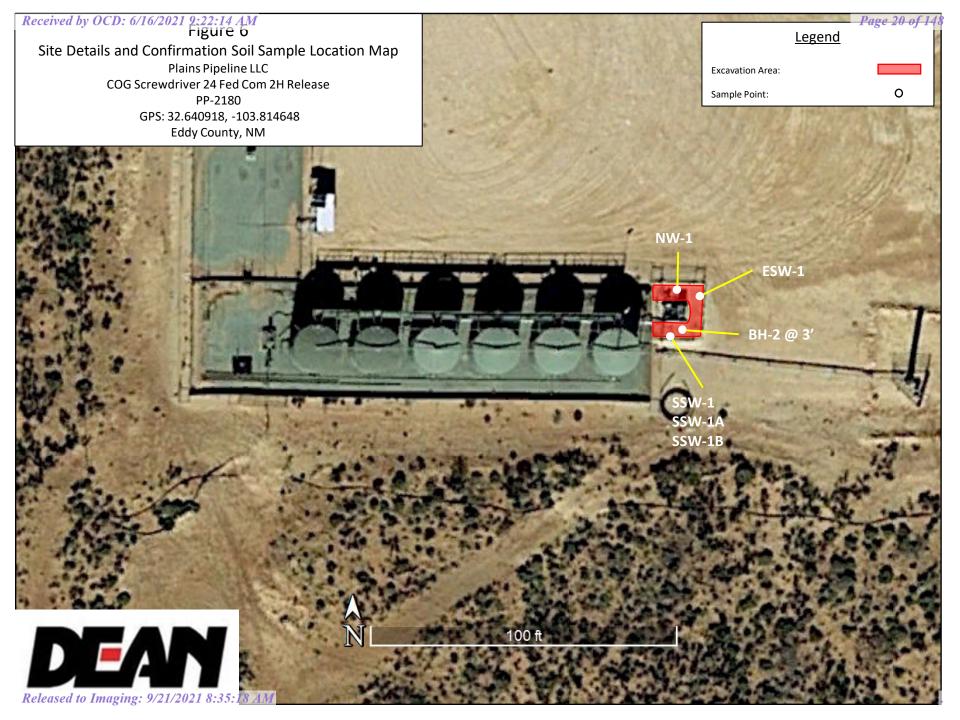
2 mi











# APPENDIX A 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	nAPP2036337003
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 <u>32.640918</u>

Longitude <u>-103.814648</u>

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Plains COG Screwdriver 24 Fed Com 2H	Site Type LACT Unit
Date Release Discovered 12/22/2020	API# (if applicable)

Unit Letter	Section	Township	Range	County
Р	24	19S	31E	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)

🔀 Crude Oil	Volume Released (bbls) 20 bbls	Volume Recovered (bbls) 2 bbls
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		
Center piston failure of	the triplex pump of the LACT Unit.	

Page 2

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?						
Yes No							
	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?						
Immediate notification give	ven via e-mail to Jim Griswold, Bradford Billings, Mike Bratcher, Cristina Eads, Robert Hamlet and Victoria						
Venegas on 12/22/2020.							
Initial Response							
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury							

 $\square$  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: <u>Amber Groves</u>	Title: <u>Remediation Coordinator</u>
Signature:	Date: <u>12/28/2020</u>
email: <u>algroves@paalp.com</u>	Telephone:(575)200-5517
OCD Only	
Received by:	Date:

## **Amber L Groves**

From:	David Guerrero Jr
Sent:	Monday, December 28, 2020 9:31 AM
То:	Amber L Groves
Cc:	Jose C DeLao
Subject:	COG Screwdriver Release Justification

Amount lost for the Screwdriver 24 Fed Com 2H release is approximately 20bbls of crude.

This is based on measurements of release area around the LACT skid and measurement estimates under the producer owned tank liner:

Based on Liquid Spill Calculator

- Average measurements of release area near LACT Skid: 15' x 16' x 1" (12x16x1x.015 = 3.6bbls)
- Average measurements of release under producer owned liner: 30' x 30' x 1" (30x30x1x.015 = 13.5bbls) Based on Soil Calculator
  - Average measurement of contaminated soil near LACT Skid: 15' x 16' x 1" @ a 20% Estimated Pore Space = 2.1 bbls.

Thank you,

## DAVID GUERRERO JR

PLAINS ALL AMERICAN DISTRICT MANAGER, PPN (432) 202–9397 | (432) 758–8002 DGUERRERO@PAALP.COM District I 1625 N. French Dr., Hobbs, NM 88240

District II

District IV

Phone:(575) 393-6161 Fax:(575) 393-0720

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

District III 1000 Rio Brazos Rd., Aztec, NM 87410 CONDITIONS

Action 13602

# State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS OF APPROVAL

Operator:				OGRID:	Action Number:	Action Type:
PLAINS MARKETING L.P.	333 Clay St, Ste 1600	Houston, TX77002		34053	13602	C-141
				•		
OCD Reviewer			Condition			
rmarcus			None			

# APPENDIX B NMOSE WATER LEVELS



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# New Mexico Office of the State Engineer Point of Diversion Summary

			(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 U		
Well Tag		<b>Number</b> 00640 POD1	Q64	Q16 2	<b>Q4</b> 2	<b>Sec</b> 19	<b>Tws</b> 19S	Rng 32E	<b>X</b> 612621	<b>Y</b> 3613280* 🥌	
Driller Lic Driller Na		882 FELKINS, LARRY	Drille	r Coi	npai	ıy:	LA	RRY'S I	DRILLING	& PUMP CO.	
Drill Start	Date:	02/08/1982	Drill H	Finisł	n Da	te:	0	2/09/19	82 PI	ug Date:	
Log File D	ate:	03/04/1982	PCW	Rcv ]	Date	:			Se	ource:	Shallow
Ритр Тур	e:		Pipe I	Disch	arge	Size	:		E	stimated Yield:	
<b>Casing Siz</b>	e:		Depth	Wel	l:		2	60 feet	D	epth Water:	102 feet

\*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.

5/10/21 11:51 AM

POINT OF DIVERSION SUMMARY

.

# APPENDIX C LABORATORY ANALYTICAL REPORTS

PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

## **Prepared for:**

Sylwia Reynolds Dean 12600 W County Rd 91 Midland, TX 79707

Project: COG Screwdriver Release Project Number: PP-2180 Location: Eddy County,NM

Lab Order Number: 0L30003



NELAP/TCEQ # T104704516-17-8

Report Date: 01/08/21

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-1 @ 1'	0L30003-01	Soil	12/30/20 08:45	12-30-2020 16:24
AH-1 @ 3'	0L30003-02	Soil	12/30/20 08:55	12-30-2020 16:24
AH-1 @ 5'	0L30003-03	Soil	12/30/20 09:05	12-30-2020 16:24
AH-1 @ 7'	0L30003-04	Soil	12/30/20 09:15	12-30-2020 16:24
AH-1 @ 9'	0L30003-05	Soil	12/30/20 09:25	12-30-2020 16:24

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

### AH-1 @ 1' 0L30003-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes			
	Perm	ian Basin F	Environmei	ntal Lab, I	L <b>.P.</b>							
BTEX by 8021B												
Benzene	276	1.11	mg/kg dry	1000	P1A0401	01/04/21	01/05/21	EPA 8021B				
Toluene	725	5.56	mg/kg dry	5000	P1A0401	01/04/21	01/06/21	EPA 8021B				
Ethylbenzene	440	1.11	mg/kg dry	1000	P1A0401	01/04/21	01/05/21	EPA 8021B				
Xylene (p/m)	465	2.22	mg/kg dry	1000	P1A0401	01/04/21	01/05/21	EPA 8021B				
Xylene (o)	116	1.11	mg/kg dry	1000	P1A0401	01/04/21	01/05/21	EPA 8021B				
Surrogate: 4-Bromofluorobenzene		109 %	80-1	80-120		01/04/21	01/05/21	EPA 8021B				
Surrogate: 1,4-Difluorobenzene		98.4 %	80-1	20	P1A0401	01/04/21	01/05/21	EPA 8021B				
General Chemistry Parameters by EP	A / Standard Method	s										
Chloride	1.27	1.11	mg/kg dry	1	P0L3102	12/31/20	01/04/21	EPA 300.0				
% Moisture	10.0	0.1	%	1	P0L3104	12/31/20	12/31/20	ASTM D2216				
Total Petroleum Hydrocarbons C6-C3	5 by EPA Method 80	15M										
C6-C12	12500	278	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M				
>C12-C28	14300	278	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M				
>C28-C35	2480	278	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M				
Surrogate: 1-Chlorooctane		170 %	70-1	30	P0L3103	12/31/20	01/05/21	TPH 8015M	S-GC			
Surrogate: o-Terphenyl		129 %	70-1	30	P0L3103	12/31/20	01/05/21	TPH 8015M				
Total Petroleum Hydrocarbon C6-C35	29200	278	mg/kg dry	10	[CALC]	12/31/20	01/05/21	calc				

Permian Basin Environmental Lab, L.P.

Dean		Proj	Fax:						
12600 W County Rd 91		Project Num	ber: PP-218	0					
Midland TX, 79707		Project Mana	ger: Sylwia	Reynolds					
			H-1 @ 3'	••••					
		0L30	003-02 (So	11)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin H	Invironme	ntal Lab, 1	L. <b>P.</b>				
BTEX by 8021B									
Benzene	46.5	1.11	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B	
Toluene	320	1.11	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B	
Ethylbenzene	246	1.11	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B	
Xylene (p/m)	259	2.22	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B	
Xylene (0)	69.0	1.11	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		84.2 %	80-1	20	P1A0401	01/04/21	01/06/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		86.6 %	80-1	20	P1A0401	01/04/21	01/06/21	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Method	s							
Chloride	13.6	1.11	mg/kg dry	1	P0L3102	12/31/20	01/05/21	EPA 300.0	
% Moisture	10.0	0.1	%	1	P0L3104	12/31/20	12/31/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	15M							
C6-C12	8940	278	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M	
>C12-C28	13600	278	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M	
>C28-C35	2220	278	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M	
Surrogate: 1-Chlorooctane		164 %	70-1	30	P0L3103	12/31/20	01/05/21	TPH 8015M	S-GC
Surrogate: o-Terphenyl		129 %	70-1	30	P0L3103	12/31/20	01/05/21	TPH 8015M	
Total Petroleum Hydrocarbon	24700	278	mg/kg dry	10	[CALC]	12/31/20	01/05/21	calc	
C6-C35									

Dean	Project: COG Screwdriver Release									
12600 W County Rd 91	Project Num	ber: PP-218	0							
Midland TX, 79707	Project Mana	ger: Sylwia	Reynolds							
	A	H-1 @ 5'								
	0L30	003-03 (Soi	il)							
Analyte Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
Per	mian Basin H	Environmer	ntal Lab, 1	L. <b>P.</b>						
BTEX by 8021B										
Benzene 296	1.11	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B			
Toluene 724	5.56	mg/kg dry	5000	P1A0401	01/04/21	01/06/21	EPA 8021B			
Ethylbenzene 385	1.11	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B			
Xylene (p/m) 397	2.22	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B			
Xylene (0) 99.9	1.11	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B			
Surrogate: 1,4-Difluorobenzene	91.3 %	80-1	20	P1A0401	01/04/21	01/06/21	EPA 8021B			
Surrogate: 4-Bromofluorobenzene	94.4 %	80-1	20	P1A0401	01/04/21	01/06/21	EPA 8021B			
General Chemistry Parameters by EPA / Standard Metho	ods									
Chloride 8.07	1.11	mg/kg dry	1	P1A0502	01/05/21	01/05/21	EPA 300.0			
% Moisture 10.0	0.1	%	1	P0L3104	12/31/20	12/31/20	ASTM D2216			
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8	015M									
C6-C12 12200	278	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M			
>C12-C28 13900	278	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M			
>C28-C35 2330	278	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M			
Surrogate: 1-Chlorooctane	167 %	70-1	30	P0L3103	12/31/20	01/05/21	TPH 8015M	S-GC		
Surrogate: o-Terphenyl	126 %	70-1	30	P0L3103	12/31/20	01/05/21	TPH 8015M			
Total Petroleum Hydrocarbon 28400	278	mg/kg dry	10	[CALC]	12/31/20	01/05/21	calc			
C6-C35										

Dean			Fax:						
12600 W County Rd 91		Project Num	ber: PP-2180	)					
Midland TX, 79707			ger: Sylwia						
		•							
			H-1 @ 7'	N					
		0130	003-04 (Soi	1)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin I	Environmen	tal Lab, l	L <b>.P.</b>				
BTEX by 8021B									
Benzene	217	1.14	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B	
Toluene	423	5.68	mg/kg dry	5000	P1A0401	01/04/21	01/06/21	EPA 8021B	
Ethylbenzene	258	1.14	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B	
Xylene (p/m)	261	2.27	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B	
Xylene (o)	63.3	1.14	mg/kg dry	1000	P1A0401	01/04/21	01/06/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		95.6 %	80-1.	20	P1A0401	01/04/21	01/06/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		94.9 %	80-1.	20	P1A0401	01/04/21	01/06/21	EPA 8021B	
General Chemistry Parameters by EF	A / Standard Methods	ŝ							
% Moisture	12.0	0.1	%	1	P0L3104	12/31/20	12/31/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C3	35 by EPA Method 801	5M							
C6-C12	8810	284	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M	
>C12-C28	10200	284	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M	
>C28-C35	1770	284	mg/kg dry	10	P0L3103	12/31/20	01/05/21	TPH 8015M	
Surrogate: 1-Chlorooctane		148 %	70-1.	30	P0L3103	12/31/20	01/05/21	TPH 8015M	S-GC
Surrogate: o-Terphenyl		126 %	70-1.	30	P0L3103	12/31/20	01/05/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	20800	284	mg/kg dry	10	[CALC]	12/31/20	01/05/21	calc	

Permian Basin Environmental Lab, L.P.

Dean		Project: COG Screwdriver Release										
12600 W County Rd 91		-	ber: PP-2180									
Midland TX, 79707	]	Project Mana	ger: Sylwia I	Reynolds								
		A	H-1 @ 9'									
		0L30	003-05 (Soil	)								
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes			
	Perm	ian Basin F	Invironmen	tal Lab, 1	L. <b>P.</b>							
BTEX by 8021B												
Benzene	0.0411	0.0230	mg/kg dry	20	P1A0401	01/04/21	01/05/21	EPA 8021B				
Toluene	0.0598	0.0230	mg/kg dry	20	P1A0401	01/04/21	01/05/21	EPA 8021B				
Ethylbenzene	ND	0.0230	mg/kg dry	20	P1A0401	01/04/21	01/05/21	EPA 8021B				
Xylene (p/m)	ND	0.0460	mg/kg dry	20	P1A0401	01/04/21	01/05/21	EPA 8021B				
Xylene (o)	ND	0.0230	mg/kg dry	20	P1A0401	01/04/21	01/05/21	EPA 8021B				
Surrogate: 4-Bromofluorobenzene		<i>99.2 %</i>	80-12	20	P1A0401	01/04/21	01/05/21	EPA 8021B				
Surrogate: 1,4-Difluorobenzene		102 %	80-12	20	P1A0401	01/04/21	01/05/21	EPA 8021B				
General Chemistry Parameters by El	PA / Standard Methods	5										
% Moisture	13.0	0.1	%	1	P0L3104	12/31/20	12/31/20	ASTM D2216				
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 801	15M										
C6-C12	ND	28.7	mg/kg dry	1	P0L3103	12/31/20	01/05/21	TPH 8015M				
>C12-C28	71.3	28.7	mg/kg dry	1	P0L3103	12/31/20	01/05/21	TPH 8015M				
>C28-C35	ND	28.7	mg/kg dry	1	P0L3103	12/31/20	01/05/21	TPH 8015M				
Surrogate: 1-Chlorooctane		115 %	70-13	80	P0L3103	12/31/20	01/05/21	TPH 8015M				
Surrogate: o-Terphenyl		141 %	70-13	80	P0L3103	12/31/20	01/05/21	TPH 8015M	S-GC			
Total Petroleum Hydrocarbon C6-C35	71.3	28.7	mg/kg dry	1	[CALC]	12/31/20	01/05/21	calc				

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

		Reporting	<b>T</b> T <b>1</b> .	Spike	Source	NAPEC	%REC	222	RPD	<b>N</b> T - (	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch P1A0401 - General Preparation (GC	<u>(</u> )										
Blank (P1A0401-BLK1)				Prepared: 0	01/04/21 An	alyzed: 01	/05/21				
Benzene	ND	0.00100	mg/kg wet								
Toluene	ND	0.00100	"								
Ethylbenzene	ND	0.00100	"								
Xylene (p/m)	ND	0.00200	"								
Xylene (o)	ND	0.00100	"								
Surrogate: 1,4-Difluorobenzene	0.116		"	0.120		96.9	80-120				
Surrogate: 4-Bromofluorobenzene	0.105		"	0.120		87.1	80-120				
LCS (P1A0401-BS1)	Prepared: 01/04/21 Analyzed: 01/05/21										
Benzene	0.117	0.00100	mg/kg wet	0.100		117	70-130				
Toluene	0.105	0.00100	"	0.100		105	70-130				
Ethylbenzene	0.112	0.00100	"	0.100		112	70-130				
Xylene (p/m)	0.187	0.00200	"	0.200		93.3	70-130				
Xylene (o)	0.0914	0.00100	"	0.100		91.4	70-130				
Surrogate: 1,4-Difluorobenzene	0.132		"	0.120		110	80-120				
Surrogate: 4-Bromofluorobenzene	0.114		"	0.120		95.1	80-120				
LCS Dup (P1A0401-BSD1)	Prepared: 01/04/21 Analyzed: 01/05/21										
Benzene	0.102	0.00100	mg/kg wet	0.100		102	70-130	13.3	20		
Toluene	0.0892	0.00100	"	0.100		89.2	70-130	16.0	20		
Ethylbenzene	0.103	0.00100	"	0.100		103	70-130	8.71	20		
Xylene (p/m)	0.160	0.00200	"	0.200		80.2	70-130	15.1	20		
Xylene (o)	0.0810	0.00100	"	0.100		81.0	70-130	12.0	20		
Surrogate: 1,4-Difluorobenzene	0.128		"	0.120		107	80-120				
Surrogate: 4-Bromofluorobenzene	0.113		"	0.120		94.0	80-120				
Calibration Check (P1A0401-CCV2)				Prepared: 0	01/04/21 An	alyzed: 01	/06/21				
Benzene	0.117	0.00100	mg/kg wet	0.100		117	80-120				
Toluene	0.112	0.00100	"	0.100		112	80-120				
Ethylbenzene	0.117	0.00100	"	0.100		117	80-120				
Xylene (p/m)	0.197	0.00200	"	0.200		98.5	80-120				
Xylene (o)	0.103	0.00100	"	0.100		103	80-120				
Surrogate: 4-Bromofluorobenzene	0.115		"	0.120		95.6	75-125				
Surrogate: 1,4-Difluorobenzene	0.125		"	0.120		104	75-125				

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

# BTEX by 8021B - Quality Control

#### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1A0401 - General Preparation (GC)										

Matrix Spike (P1A0401-MS1)	Sour	ce: 0L30003	-05	Prepared:	01/04/21 An	alyzed: 0	1/05/21			
Benzene	2.63	0.0230	mg/kg dry	2.30	0.0411	112	80-120			
Toluene	2.75	0.0230	"	2.30	0.0598	117	80-120			
Ethylbenzene	2.65	0.0230	"	2.30	ND	115	80-120			
Xylene (p/m)	5.40	0.0460	"	4.60	ND	117	80-120			
Xylene (o)	2.71	0.0230	"	2.30	ND	118	80-120			
Surrogate: 4-Bromofluorobenzene	0.144		"	0.138		105	80-120			-
Surrogate: 1,4-Difluorobenzene	0.145		"	0.138		105	80-120			
Matrix Spike Dup (P1A0401-MSD1)	Sour	ce: 0L30003	-05	Prepared:	01/04/21 An	alyzed: 0	1/05/21			
Benzene	2.70	0.0230	mg/kg dry	2.30	0.0411	116	80-120	2.98	20	
Toluene	2.73	0.0230	"	2.30	0.0598	116	80-120	0.574	20	
Ethylbenzene	2.69	0.0230	"	2.30	ND	117	80-120	1.81	20	
Xylene (p/m)	5.37	0.0460	"	4.60	ND	117	80-120	0.581	20	
Xylene (o)	2.71	0.0230	"	2.30	ND	118	80-120	0.102	20	
Surrogate: 4-Bromofluorobenzene	0.157		"	0.138		114	80-120			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

## General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P0L3102 - *** DEFAULT PREP ***										
Blank (P0L3102-BLK1)				Prepared: 1	12/31/20 A	nalyzed: 01	/04/21			
Chloride	ND	1.00	mg/kg wet							
LCS (P0L3102-BS1)				Prepared: 1	12/31/20 A	nalyzed: 01	/04/21			
Chloride	408	1.00	mg/kg wet	400		102	90-110			
LCS Dup (P0L3102-BSD1)				Prepared: 1	12/31/20 A	nalyzed: 01	/04/21			
Chloride	407	1.00	mg/kg wet	400		102	90-110	0.216	20	
Calibration Check (P0L3102-CCV1)				Prepared: 1	12/31/20 A	nalyzed: 01	/04/21			
Chloride	21.5		mg/kg	20.0		108	90-110			
Calibration Check (P0L3102-CCV2)				Prepared: 1	12/31/20 A	nalyzed: 01	/04/21			
Chloride	21.1		mg/kg	20.0		105	90-110			
Calibration Check (P0L3102-CCV3)				Prepared: 1	12/31/20 A	nalyzed: 01	/05/21			
Chloride	20.7		mg/kg	20.0		104	90-110			
Matrix Spike (P0L3102-MS1)	Sou	rce: 0L29014	-04	Prepared: 1	12/31/20 A	nalyzed: 01	/04/21			
Chloride	5550	10.2	mg/kg dry	1020	4330	119	80-120			
Matrix Spike (P0L3102-MS2)	Sou	rce: 0L29015	-05	Prepared: 1	12/31/20 A	nalyzed: 01	/04/21			
Chloride	4110	30.9	mg/kg dry	3090	310	123	80-120			
Matrix Spike Dup (P0L3102-MSD1)	Sou	rce: 0L29014	-04	Prepared: 1	12/31/20 A	nalyzed: 01	/04/21			
Chloride	5560		mg/kg dry	1020	4330	121	80-120	0.259	20	
Matrix Spike Dup (P0L3102-MSD2)	Som	rce: 0L29015	-05	Prepared: 1	12/31/20 A	nalvzed: 01	/04/21			
Chloride	4250		mg/kg dry	3090	310	128	80-120	3.37	20	

Permian Basin Environmental Lab, L.P.

Dean 12600 W County Rd 91 Midland TX, 79707		Project N	umber: PP-	G Screwdriv 2180 wia Reynold					Fax:			
General Chen	•	ameters b ian Basin	•			-	lity Cont	trol				
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes		
Batch P0L3104 - *** DEFAULT PREP ***												
Blank (P0L3104-BLK1)				Prepared &	Analyzed:	12/31/20						
% Moisture	ND	0.1	%									
Duplicate (P0L3104-DUP1)	Sou	rce: 0L30003	6-04	Prepared &	Analyzed:	12/31/20						
% Moisture	11.0	0.1	%		12.0			8.70	20			
Batch P1A0502 - *** DEFAULT PREP ***												
Blank (P1A0502-BLK1)				Prepared &	Analyzed:	01/05/21						
Chloride	ND	1.00	mg/kg wet									
LCS (P1A0502-BS1)				Prepared &	Analyzed:	01/05/21						
Chloride	410	1.00	mg/kg wet	400		103	90-110					
LCS Dup (P1A0502-BSD1)				Prepared &	Analyzed:	01/05/21						
Chloride	409	1.00	mg/kg wet	400		102	90-110	0.242	20			
Calibration Check (P1A0502-CCV1)				Prepared &	Analyzed:	01/05/21						
Chloride	21.3		mg/kg	20.0	•	107	90-110					
Calibration Check (P1A0502-CCV2)				Prepared &	Analyzed:	01/05/21						
Chloride	20.6		mg/kg	20.0	2	103	90-110					
Calibration Check (P1A0502-CCV3)				Prepared &	z Analyzed:	01/05/21						
Chloride	21.0		mg/kg	20.0	,	105	90-110					
Matrix Spike (P1A0502-MS1)	Sou	rce: 0L30003	8-03	Prepared &	Analyzed:	01/05/21						
Chloride	608	1.11	mg/kg dry	556	8.07	108	80-120					

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

# General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1A0502 - *** DEFAULT PREP ***									
Matrix Spike (P1A0502-MS2)	Sourc	e: 1A04003-05	Prepared &	& Analyzed:	01/05/21				
Chloride	1260	1.03 mg/kg dry	515	890	71.6	80-120			QM-05
Matrix Spike Dup (P1A0502-MSD1)	Sourc	e: 0L30003-03	Prepared &	& Analyzed:	01/05/21				
Chloride	584	1.11 mg/kg dry	556	8.07	104	80-120	3.92	20	
Matrix Spike Dup (P1A0502-MSD2)	Sourc	e: 1A04003-05	Prepared &	& Analyzed:	01/05/21				
Chloride	1220	1.03 mg/kg dry	515	890	63.5	80-120	3.40	20	QM-05

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

#### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

#### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0L3103 - TX 1005										
Blank (P0L3103-BLK1)				Prepared:	12/31/20 A	nalyzed: 01	/04/21			
C6-C12	ND	25.0	mg/kg wet	1						
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0								
Surrogate: 1-Chlorooctane	114		"	100		114	70-130			
Surrogate: o-Terphenyl	67.1		"	50.0		134	70-130			S-GC
LCS (P0L3103-BS1)				Prepared: 1	12/31/20 A	nalyzed: 01	/04/21			
C6-C12	1070	25.0	mg/kg wet	1000		107	75-125			
>C12-C28	1220	25.0		1000		122	75-125			
Surrogate: 1-Chlorooctane	115		"	100		115	70-130			
Surrogate: o-Terphenyl	65.7		"	50.0		131	70-130			S-GC
LCS Dup (P0L3103-BSD1)				Prepared: 1	12/31/20 A	nalyzed: 01	/04/21			
C6-C12	1060	25.0	mg/kg wet	1000		106	75-125	0.781	20	
>C12-C28	1220	25.0		1000		122	75-125	0.0605	20	
Surrogate: 1-Chlorooctane	114		"	100		114	70-130			
Surrogate: o-Terphenyl	65.9		"	50.0		132	70-130			S-GC
Calibration Check (P0L3103-CCV1)				Prepared: 1	12/31/20 A	nalyzed: 01	/04/21			
C6-C12	540	25.0	mg/kg wet	500		108	85-115			
>C12-C28	564	25.0		500		113	85-115			
Surrogate: 1-Chlorooctane	112		"	100		112	70-130			
Surrogate: o-Terphenyl	65.7		"	50.0		131	70-130			S-GC
Calibration Check (P0L3103-CCV2)				Prepared: 1	12/31/20 A	nalyzed: 01	/05/21			
C6-C12	551	25.0	mg/kg wet	500		110	85-115			
>C12-C28	563	25.0		500		113	85-115			
Surrogate: 1-Chlorooctane	111		"	100		111	70-130			
Surrogate: o-Terphenyl	63.7		"	50.0		127	70-130			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

#### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

#### Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P0L3103 - TX 1005										
Calibration Check (P0L3103-CCV3)				Prepared:	12/31/20 A	nalyzed: 01	/05/21			
C6-C12	530	25.0	mg/kg wet	500		106	85-115			
>C12-C28	565	25.0	"	500		113	85-115			
Surrogate: 1-Chlorooctane	111		"	100		111	70-130			
Surrogate: o-Terphenyl	64.2		"	50.0		128	70-130			
Matrix Spike (P0L3103-MS1)	Sou	rce: 0L29015	-10	Prepared:	12/31/20 A	nalyzed: 01	/05/21			
C6-C12	1100	26.3	mg/kg dry	1050	ND	105	75-125			
>C12-C28	1270	26.3	"	1050	13.6	120	75-125			
Surrogate: 1-Chlorooctane	114		"	105		108	70-130			
Surrogate: o-Terphenyl	65.2		"	52.6		124	70-130			
Matrix Spike Dup (P0L3103-MSD1)	Sou	rce: 0L29015	-10	Prepared:	12/31/20 A	nalyzed: 01	/05/21			
C6-C12	1100	26.3	mg/kg dry	1050	ND	104	75-125	0.633	20	
>C12-C28	1270	26.3	"	1050	13.6	119	75-125	0.323	20	
Surrogate: 1-Chlorooctane	115		"	105		110	70-130			
Surrogate: o-Terphenyl	65.1		"	52.6		124	70-130			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

#### **Notes and Definitions**

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
ROI	Received on Ice
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
BULK	Samples received in Bulk soil containers
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:

Barron

Brent Barron, Laboratory Director/Technical Director

1/8/2021

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Date:

Dean	Project: COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number: PP-2180	
Midland TX, 79707	Project Manager: Sylwia Reynolds	

# Received by OCD: 6/16/2021 9:22:14 AM

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PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

# Prepared for:

Sylwia Reynolds Dean 12600 W County Rd 91 Midland, TX 79707

Project: COG Screwdriver Release Project Number: PP-2180 Location: Eddy County, NM

Lab Order Number: 1A06004



NELAP/TCEQ # T104704516-17-8

Report Date: 01/13/21

Fax:

Dean	Project:	COG Screwdriver Release
12600 W County Rd 91	Project Number:	PP-2180
Midland TX, 79707	Project Manager:	Sylwia Reynolds

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-1H @ 1'	1A06004-01	Soil	01/04/21 10:59	01-06-2021 15:58
AH-1H @ 3'	1A06004-02	Soil	01/04/21 11:05	01-06-2021 15:58
AH-2 @ 1'	1A06004-03	Soil	01/04/21 09:05	01-06-2021 15:58
AH-2 @ 3'	1A06004-04	Soil	01/04/21 09:15	01-06-2021 15:58
AH-2 @ 5'	1A06004-05	Soil	01/04/21 09:25	01-06-2021 15:58
AH-2H @ 1'	1A06004-06	Soil	01/04/21 13:09	01-06-2021 15:58
AH-2H @ 3'	1A06004-07	Soil	01/04/21 13:15	01-06-2021 15:58
AH-2H @ 5'	1A06004-08	Soil	01/04/21 13:19	01-06-2021 15:58
AH-2H @ 7'	1A06004-09	Soil	01/04/21 13:28	01-06-2021 15:58
AH-2H @ 9'	1A06004-10	Soil	01/04/21 13:34	01-06-2021 15:58
AH-2H @ 11'	1A06004-11	Soil	01/04/21 13:41	01-06-2021 15:58
AH-3 @ 1'	1A06004-12	Soil	01/04/21 13:10	01-06-2021 15:58
AH-3 @ 3'	1A06004-13	Soil	01/04/21 13:17	01-06-2021 15:58
AH-3H @ 1'	1A06004-14	Soil	01/04/21 13:54	01-06-2021 15:58
AH-3H @ 3'	1A06004-15	Soil	01/04/21 13:57	01-06-2021 15:58
AH-4 @ 1'	1A06004-16	Soil	01/05/21 10:13	01-06-2021 15:58
AH-4 @ 3'	1A06004-17	Soil	01/05/21 10:17	01-06-2021 15:58
AH-4H @ 1'	1A06004-18	Soil	01/05/21 11:44	01-06-2021 15:58
AH-4H @ 3'	1A06004-19	Soil	01/05/21 11:49	01-06-2021 15:58
AH-5 @ 1'	1A06004-20	Soil	01/05/21 10:24	01-06-2021 15:58
AH-5 @ 3'	1A06004-21	Soil	01/05/21 10:30	01-06-2021 15:58
AH-5H @ 1'	1A06004-22	Soil	01/05/21 12:55	01-06-2021 15:58
AH-5H @ 3'	1A06004-23	Soil	01/05/21 12:59	01-06-2021 15:58
AH-6 @ 1'	1A06004-24	Soil	01/05/21 10:37	01-06-2021 15:58
AH-6 @ 3'	1A06004-25	Soil	01/05/21 10:42	01-06-2021 15:58
AH-7 @ 1'	1A06004-26	Soil	01/05/21 10:52	01-06-2021 15:58
AH-7 @ 3'	1A06004-27	Soil	01/05/21 10:56	01-06-2021 15:58
AH-7 @ 5'	1A06004-28	Soil	01/05/21 11:00	01-06-2021 15:58
AH-7 @ 7'	1A06004-29	Soil	01/05/21 11:05	01-06-2021 15:58
AH-7 @ 9'	1A06004-30	Soil	01/05/21 11:13	01-06-2021 15:58
AH-7 @ 11'	1A06004-31	Soil	01/05/21 11:22	01-06-2021 15:58
AH-8 @ 1'	1A06004-32	Soil	01/05/21 13:13	01-06-2021 15:58
AH-8 @ 3'	1A06004-33	Soil	01/05/21 13:18	01-06-2021 15:58
AH-8 @ 5'	1A06004-34	Soil	01/05/21 13:22	01-06-2021 15:58

Dean	Project: COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number: PP-2180	
Midland TX, 79707	Project Manager: Sylwia Reynolds	

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-8 @ 7'	1A06004-35	Soil	01/05/21 13:28	01-06-2021 15:58
AH-8 @ 9'	1A06004-36	Soil	01/05/21 13:31	01-06-2021 15:58
NW-1	1A06004-37	Soil	01/05/21 14:00	01-06-2021 15:58

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

#### AH-1H @ 1' 1A06004-01 (Soil)

			004-01 (50	-)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
	Pern	nian Basin F	Invironmer	ital Lab, I	L <b>.P.</b>				
BTEX by 8021B									
Benzene	0.0262	0.0208	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Toluene	0.290	0.0208	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Ethylbenzene	0.372	0.0208	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Xylene (p/m)	0.663	0.0417	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Xylene (o)	0.167	0.0208	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		105 %	80-1	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		84.6 %	80-1	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
General Chemistry Parameters by EI	PA / Standard Method	S							
Chloride	16.8	1.04	mg/kg dry	1	P1A0701	01/07/21	01/07/21	EPA 300.0	
% Moisture	4.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C.	35 by EPA Method 80	15M							
C6-C12	42.9	26.0	mg/kg dry	1	P1A0704	01/07/21	01/08/21	TPH 8015M	
>C12-C28	355	26.0	mg/kg dry	1	P1A0704	01/07/21	01/08/21	TPH 8015M	
>C28-C35	52.1	26.0	mg/kg dry	1	P1A0704	01/07/21	01/08/21	TPH 8015M	
Surrogate: 1-Chlorooctane		98.0 %	70-1	30	P1A0704	01/07/21	01/08/21	TPH 8015M	
Surrogate: o-Terphenyl		105 %	70-1	30	P1A0704	01/07/21	01/08/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	450	26.0	mg/kg dry	1	[CALC]	01/07/21	01/08/21	calc	

Permian Basin Environmental Lab, L.P.

Dean		Proj	ect: COG S	crewdriver	Release			Fax:	
12600 W County Rd 91	]	Project Num	ber: PP-218	30					
Midland TX, 79707	Р	roject Mana	ger: Sylwia	Reynolds					
		AH	I-1H @ 3'	,					
1A06004-02 (Soil)									
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	an Basin F	Invironme	ntal Lab,	L.P.				
General Chemistry Parameters by	EPA / Standard Methods								
Chloride	10.2	1.03	mg/kg dry	1	P1A0701	01/07/21	01/07/21	EPA 300.0	
% Moisture	3.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	

Dean		Proj	Fax:						
12600 W County Rd 91		Project Num							
Midland TX, 79707		Project Mana	ger: Sylwia l	Reynolds					
			H-2 @ 1'						
		1A06	004-03 (Soi	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Per	mian Basin F	Environmen	tal Lab, l	L <b>.P.</b>				
BTEX by 8021B									
Benzene	0.0157	0.00114	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Toluene	0.0370	0.00114	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Ethylbenzene	0.0152	0.00114	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Xylene (p/m)	0.0216	0.00227	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Xylene (o)	0.00636	0.00114	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		88.3 %	80-12	20	P1A0803	01/08/21	01/11/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		98.7 %	80-12	20	P1A0803	01/08/21	01/11/21	EPA 8021B	
General Chemistry Parameters by EP	A / Standard Metho	ds							
Chloride	47.2	1.14	mg/kg dry	1	P1A0701	01/07/21	01/07/21	EPA 300.0	
% Moisture	12.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
<u>Total Petroleum Hydrocarbons C6-C3</u>	5 by EPA Method 8	015M							
C6-C12	ND	28.4	mg/kg dry	1	P1A0704	01/07/21	01/08/21	TPH 8015M	
>C12-C28	126	28.4	mg/kg dry	1	P1A0704	01/07/21	01/08/21	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1A0704	01/07/21	01/08/21	TPH 8015M	
Surrogate: 1-Chlorooctane		89.3 %	70-1.	30	P1A0704	01/07/21	01/08/21	TPH 8015M	
Surrogate: o-Terphenyl		97.7 %	70-1.	30	P1A0704	01/07/21	01/08/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	126	28.4	mg/kg dry	1	[CALC]	01/07/21	01/08/21	calc	

Dean 12600 W County Rd 91 Midland TX, 79707		Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds								
			H-2 @ 3' 004-04 (So	il)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Permia	an Basin E	nvironme	ntal Lab, l	L <b>.P.</b>					
General Chemistry Parameters	by EPA / Standard Methods									
Chloride % Moisture	14.0 7.0	1.08 0.1	mg/kg dry %	1 1	P1A0701 P1A0805	01/07/21 01/08/21	01/07/21 01/08/21	EPA 300.0 ASTM D2216		

Dean	Project: COG Screwdriver Release Fax:										
12600 W County Rd 91	]	Project Num	ber: PP-218	30							
Midland TX, 79707	Р	Project Manager: Sylwia Reynolds									
		A	H-2 @ 5'								
		1A06	004-05 (So	il)							
		Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	Perm	ian Basin F	Invironme	ntal Lab, I	L.P.						
General Chemistry Parameters by	v EPA / Standard Methods										
Chloride	16.6	1.09	mg/kg dry	1	P1A0701	01/07/21	01/07/21	EPA 300.0			
% Moisture	8.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216			

Dean			Fax:						
12600 W County Rd 91		Project Num							
Midland TX, 79707		Project Mana	ger: Sylwia	Reynolds					
			I-2H @ 1'						
		1A06	004-06 (Soi	il)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	nian Basin H	Environmer	ntal Lab, I	L. <b>P.</b>				
BTEX by 8021B									
Benzene	324	5.49	mg/kg dry	5000	P1A0803	01/08/21	01/11/21	EPA 8021B	
Toluene	918	5.49	mg/kg dry	5000	P1A0803	01/08/21	01/11/21	EPA 8021B	
Ethylbenzene	509	5.49	mg/kg dry	5000	P1A0803	01/08/21	01/11/21	EPA 8021B	
Xylene (p/m)	664	11.0	mg/kg dry	5000	P1A0803	01/08/21	01/11/21	EPA 8021B	
Xylene (0)	159	5.49	mg/kg dry	5000	P1A0803	01/08/21	01/11/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		103 %	80-1	20	P1A0803	01/08/21	01/11/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		93.4 %	80-1	20	P1A0803	01/08/21	01/11/21	EPA 8021B	
General Chemistry Parameters by EP	A / Standard Method	s							
Chloride	112	1.10	mg/kg dry	1	P1A0701	01/07/21	01/07/21	EPA 300.0	
% Moisture	9.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C3	<b>35 by EPA Method 80</b>	15M							
C6-C12	16800	275	mg/kg dry	10	P1A0704	01/07/21	01/08/21	TPH 8015M	
>C12-C28	16400	275	mg/kg dry	10	P1A0704	01/07/21	01/08/21	TPH 8015M	
>C28-C35	2460	275	mg/kg dry	10	P1A0704	01/07/21	01/08/21	TPH 8015M	
Surrogate: 1-Chlorooctane		160 %	70-1	30	P1A0704	01/07/21	01/08/21	TPH 8015M	S-GC
Surrogate: o-Terphenyl		99.8 %	70-1	30	P1A0704	01/07/21	01/08/21	TPH 8015M	
Total Petroleum Hydrocarbon	35600	275	mg/kg dry	10	[CALC]	01/07/21	01/08/21	calc	
C6-C35									

Dean 12600 W County Rd 91 Midland TX, 79707			Fax:						
		-	ger: Sylwia R H-2H @ 3'						
		1A06	004-07 (Soil	)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Per	mian Basin H	Environment	al Lab, l	L. <b>P.</b>				
BTEX by 8021B									
Benzene	0.0468	0.00105	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Toluene	0.194	0.00105	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Ethylbenzene	0.354	0.00105	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Xylene (p/m)	0.527	0.00211	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Xylene (o)	0.197	0.00105	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		89.6 %	80-12	0	P1A0803	01/08/21	01/11/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		71.4 %	80-12	0	P1A0803	01/08/21	01/11/21	EPA 8021B	S-GC
General Chemistry Parameters by EPA	A / Standard Metho	ds							
Chloride	6.48	1.05	mg/kg dry	1	P1A0701	01/07/21	01/07/21	EPA 300.0	
% Moisture	5.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C3	5 by EPA Method 8	015M							
C6-C12	104	26.3	mg/kg dry	1	P1A0704	01/07/21	01/08/21	TPH 8015M	
>C12-C28	402	26.3	mg/kg dry	1	P1A0704	01/07/21	01/08/21	TPH 8015M	
>C28-C35	58.3	26.3	mg/kg dry	1	P1A0704	01/07/21	01/08/21	TPH 8015M	
Surrogate: 1-Chlorooctane		96.0 %	70-13	0	P1A0704	01/07/21	01/08/21	TPH 8015M	
Surrogate: o-Terphenyl		99.3 %	70-13	0	P1A0704	01/07/21	01/08/21	TPH 8015M	
Total Petroleum Hydrocarbon	565	26.3	mg/kg dry	1	[CALC]	01/07/21	01/08/21	calc	
C6-C35									

Dean 12600 W County Rd 91 Midland TX, 79707	Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds									
			I-2H @ 5 004-08 (So							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Permi	an Basin F	Environme	ntal Lab, l	L.P.					
General Chemistry Parameters by	EPA / Standard Methods									
Chloride	11.7	1.06		1	P1A0701	01/07/21	01/07/21	EPA 300.0		
% Moisture	6.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216		

Dean 12600 W County Rd 91 Midland TX, 79707		Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds									
			H-2H @ 7 5004-09 (So								
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	Permi	an Basin I	Environme	ntal Lab, l	L. <b>P.</b>						
General Chemistry Parameters by I	EPA / Standard Methods										
Chloride	14.6	1.06	mg/kg dry	1	P1A0701	01/07/21	01/07/21	EPA 300.0			
% Moisture	6.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216			

Dean 12600 W County Rd 91 Midland TX, 79707	Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds									
			I-2H @ 9' 004-10 (So							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Permi	an Basin I	Environme	ntal Lab, l	L. <b>P.</b>					
General Chemistry Parameters by	EPA / Standard Methods									
Chloride	7.30	1.06	mg/kg dry	1	P1A0701	01/07/21	01/07/21	EPA 300.0		
% Moisture	6.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216		

Dean 12600 W County Rd 91 Midland TX, 79707	Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds									
		AH	-2H @ 11 5004-11 (So	•						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Perm	ian Basin I	Environme	ntal Lab, I	L.P.					
General Chemistry Parameters by	EPA / Standard Methods									
Chloride	9.95	1.09	mg/kg dry	1	P1A0701	01/07/21	01/07/21	EPA 300.0		
% Moisture	8.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216		

Dean			Fax:						
12600 W County Rd 91		Project Num	ber: PP-218	0					
Midland TX, 79707		Project Mana	ger: Sylwia	Reynolds					
		A	H-3 @ 1'						
		1A06	004-12 (So	il)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	ian Basin I	Environme	ntal Lab, l	L. <b>P.</b>				
BTEX by 8021B									
Benzene	0.174	0.0208	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Toluene	1.94	0.0208	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Ethylbenzene	3.53	0.0208	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Xylene (p/m)	5.55	0.0417	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Xylene (o)	1.59	0.0208	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		91.9 %	80-1	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		73.5 %	80-1	20	P1A0803	01/08/21	01/08/21	EPA 8021B	S-GC
General Chemistry Parameters by El	PA / Standard Method	S							
Chloride	92.7	1.04	mg/kg dry	1	P1A0702	01/07/21	01/07/21	EPA 300.0	
% Moisture	4.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 80	15M							
C6-C12	131	26.0	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C12-C28	499	26.0	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C28-C35	61.1	26.0	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: 1-Chlorooctane		99.5 %	70-1	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: o-Terphenyl		100 %	70-1	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Total Petroleum Hydrocarbon	691	26.0	mg/kg dry	1	[CALC]	01/07/21	01/09/21	calc	
C6-C35									

Dean 12600 W County Rd 91 Midland TX, 79707		Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds								
			H-3 @ 3' 004-13 (So	oil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Permi	an Basin F	Environme	ntal Lab, I	L. <b>P.</b>					
General Chemistry Parameters b	y EPA / Standard Methods									
Chloride % Moisture	46.1 4.0	1.04 0.1	mg/kg dry %	1 1	P1A0702 P1A0805	01/07/21 01/08/21	01/07/21 01/08/21	EPA 300.0 ASTM D2216		

Dean		Proj		Fax:					
12600 W County Rd 91		Project Num	ber: PP-218	0					
Midland TX, 79707		Project Mana	ger: Sylwia	Reynolds					
			I-3H @ 1'						
		1A06	004-14 (So	11)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin F	Environmei	ntal Lab, 1	L.P.				
BTEX by 8021B									
Benzene	0.208	0.0230	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Toluene	4.23	0.0230	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Ethylbenzene	6.29	0.0230	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Xylene (p/m)	9.24	0.0460	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Xylene (o)	2.76	0.0230	mg/kg dry	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		79.9 %	80-1	20	P1A0803	01/08/21	01/08/21	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		84.5 %	80-1	20	P1A0803	01/08/21	01/08/21	EPA 8021B	
General Chemistry Parameters by El	PA / Standard Method	ls							
Chloride	54.4	1.15	mg/kg dry	1	P1A0702	01/07/21	01/07/21	EPA 300.0	
% Moisture	13.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 80	15M							
C6-C12	355	28.7	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C12-C28	964	28.7	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C28-C35	129	28.7	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: 1-Chlorooctane		111 %	70-1	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: o-Terphenyl		105 %	70-1	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Total Petroleum Hydrocarbon	1450	28.7	mg/kg dry	1	[CALC]	01/07/21	01/09/21	calc	
C6-C35									

Dean		Proj	ect: COG S	crewdriver	Release			Fax:	
12600 W County Rd 91		Project Num	ber: PP-218	0					
Midland TX, 79707	]	Project Mana	ger: Sylwia	Reynolds					
		AF	I-3H @ 3'						
		1A06	004-15 (Soi	il)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Dorm	ian Basin H	nvironmor	ntal I ab	ID				
			Invironmen	itai Lad,	L.F.				
General Chemistry Parameters by EPA	/ Standard Method	S							
Chloride	26.4	1.08	mg/kg dry	1	P1A0702	01/07/21	01/07/21	EPA 300.0	
% Moisture	7.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	15M							
C6-C12	ND	26.9	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C12-C28	35.9	26.9	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: 1-Chlorooctane		93.8 %	70-1	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: o-Terphenyl		100 %	70-1	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	35.9	26.9	mg/kg dry	1	[CALC]	01/07/21	01/09/21	calc	

Dean		Fax:							
12600 W County Rd 91		Project Num	ber: PP-2180						
Midland TX, 79707		Project Mana	ger: Sylwia R	eynolds					
		A	H-4 @ 1'						
		1A06	004-16 (Soil)	)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin F	Invironment	al Lab, I	L. <b>P.</b>				
BTEX by 8021B									
Benzene	0.0135	0.00106	mg/kg dry	1	P1A0803	01/08/21	01/08/21	EPA 8021B	
Toluene	0.00984	0.00106	mg/kg dry	1	P1A0803	01/08/21	01/08/21	EPA 8021B	
Ethylbenzene	0.00189	0.00106	mg/kg dry	1	P1A0803	01/08/21	01/08/21	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1A0803	01/08/21	01/08/21	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1A0803	01/08/21	01/08/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		97.4 %	80-12	0	P1A0803	01/08/21	01/08/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		102 %	80-12	0	P1A0803	01/08/21	01/08/21	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Method	ls							
Chloride	ND	1.06	mg/kg dry	1	P1A0702	01/07/21	01/07/21	EPA 300.0	
% Moisture	6.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	)15M							
C6-C12	ND	26.6	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: 1-Chlorooctane		92.9 %	70-13	0	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: o-Terphenyl		99.4 %	70-13	0	P1A0705	01/07/21	01/09/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	01/07/21	01/09/21	calc	

Dean 12600 W County Rd 91 Midland TX, 79707		Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds								
			H-4 @ 3' 004-17 (So	il)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Permi	an Basin F	Cnvironme	ntal Lab, l	L.P.					
General Chemistry Parameters h	oy EPA / Standard Methods									
Chloride % Moisture	7.93 5.0	1.05 0.1	mg/kg dry %	1 1	P1A0702 P1A0805	01/07/21 01/08/21	01/07/21 01/08/21	EPA 300.0 ASTM D2216		

Dean 12600 W County Rd 91		Fax:							
Midland TX, 79707		Project Mana	ger: Sylwia	Reynolds					
		AF	H-4H @ 1'						
		1A06	004-18 (Soi	I)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin H	Environmen	ital Lab, I	L <b>.P.</b>				
BTEX by 8021B									
Benzene	0.00225	0.00105	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Toluene	0.00287	0.00105	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1A0803	01/08/21	01/11/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		99.5 %	80-1.	20	P1A0803	01/08/21	01/11/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		98.8 %	80-1.	20	P1A0803	01/08/21	01/11/21	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ls							
Chloride	43.5	1.05	mg/kg dry	1	P1A0702	01/07/21	01/07/21	EPA 300.0	
% Moisture	5.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 I	by EPA Method 80	)15M							
C6-C12	ND	26.3	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: 1-Chlorooctane		92.1 %	70-1.	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: o-Terphenyl		101 %	70-1.	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	01/07/21	01/09/21	calc	

Dean 12600 W County Rd 91		Project: COG Screwdriver Release Fax: Project Number: PP-2180									
Midland TX, 79707	Р	roject Manag	ger: Sylwia	Reynolds							
		AH	[-4H @ 3'	,							
		1A06	004-19 (So	il)							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
		an Basin E				110pureu	1 1100 200	meniou	110105		
General Chemistry Parameters by				,							
Chloride	75.3	1.12	mg/kg dry	1	P1A0702	01/07/21	01/07/21	EPA 300.0			
% Moisture	11.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216			

Dean 12600 W County Rd 91		5	ect: COG Sci ber: PP-2180		Release			Fax:	
Midland TX, 79707		Project Manag							
		A	H-5 @ 1'						
		1A06	004-20 (Soil	)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin F	Invironmen	tal Lab, I	L.P.				
BTEX by 8021B									
Benzene	0.0127	0.00103	mg/kg dry	1	P1A0803	01/08/21	01/08/21	EPA 8021B	
Toluene	0.00944	0.00103	mg/kg dry	1	P1A0803	01/08/21	01/08/21	EPA 8021B	
Ethylbenzene	0.00126	0.00103	mg/kg dry	1	P1A0803	01/08/21	01/08/21	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1A0803	01/08/21	01/08/21	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1A0803	01/08/21	01/08/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		99.5 %	80-12	0	P1A0803	01/08/21	01/08/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		95.8 %	80-12	0	P1A0803	01/08/21	01/08/21	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Method	s							
Chloride	12.1	1.03	mg/kg dry	1	P1A0702	01/07/21	01/08/21	EPA 300.0	
% Moisture	3.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	15M							
C6-C12	ND	25.8	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: 1-Chlorooctane		95.0 %	70-13	0	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: o-Terphenyl		104 %	70-13	0	P1A0705	01/07/21	01/09/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	01/07/21	01/09/21	calc	

Dean 12600 W County Rd 91 Midland TX, 79707		Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds								
			H-5 @ 3' 004-21 (So	il)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Permi	an Basin F	Cnvironme	ntal Lab, l	L.P.					
General Chemistry Parameters	by EPA / Standard Methods									
Chloride % Moisture	14.1 8.0	1.09 0.1	mg/kg dry %	1 1	P1A0702 P1A0805	01/07/21 01/08/21	01/08/21 01/08/21	EPA 300.0 ASTM D2216		

Dean	Project: COG Screwdriver Release Project Number: PP-2180									
12600 W County Rd 91 Midland TX, 79707		Project Numi Project Manaş								
			· ·							
			I-5H @ 1'							
		1A06	004-22 (Soil	)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Per	mian Basin E	nvironmen	tal Lab, l	L <b>.P.</b>					
BTEX by 8021B										
Benzene 0	.00205	0.00106	mg/kg dry	1	P1A0804	01/08/21	01/08/21	EPA 8021B		
Toluene 0	.00324	0.00106	mg/kg dry	1	P1A0804	01/08/21	01/08/21	EPA 8021B		
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1A0804	01/08/21	01/08/21	EPA 8021B		
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1A0804	01/08/21	01/08/21	EPA 8021B		
Xylene (o)	ND	0.00106	mg/kg dry	1	P1A0804	01/08/21	01/08/21	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		97.0 %	80-12	0	P1A0804	01/08/21	01/08/21	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		93.9%	80-12	0	P1A0804	01/08/21	01/08/21	EPA 8021B		
General Chemistry Parameters by EPA / Standa	rd Metho	ds								
Chloride	24.6	1.06	mg/kg dry	1	P1A0702	01/07/21	01/08/21	EPA 300.0		
% Moisture	6.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216		
Total Petroleum Hydrocarbons C6-C35 by EPA	Method 8	015M								
C6-C12	ND	26.6	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M		
>C12-C28	ND	26.6	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M		
>C28-C35	ND	26.6	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M		
Surrogate: 1-Chlorooctane		93.9 %	70-13	0	P1A0705	01/07/21	01/09/21	TPH 8015M		
Surrogate: o-Terphenyl		102 %	70-13	0	P1A0705	01/07/21	01/09/21	TPH 8015M		
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	01/07/21	01/09/21	calc		

Dean		Proj	ect: COG S	crewdriver	Release			Fax:	
12600 W County Rd 91	Ι	Project Num	per: PP-218	30					
Midland TX, 79707	Р	roject Manag	ger: Sylwia	Reynolds					
		AH	I-5H @ 3	,					
		1A06	004-23 (So	il)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Permi	an Basin E	nvironme	ntal Lab, I	L.P.				
General Chemistry Parameters by	EPA / Standard Methods								
Chloride	35.6	1.11	mg/kg dry	1	P1A0702	01/07/21	01/08/21	EPA 300.0	
% Moisture	10.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	

Dean	Project: COG Screwdriver Release Fax:									
12600 W County Rd 91		Project Num	ber: PP-2180							
Midland TX, 79707		Project Mana	ger: Sylwia R	eynolds						
		A	H-6 @ 1'							
		1A06	004-24 (Soil)							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Peri	nian Basin H	Environment	al Lab, I	L <b>.P.</b>					
BTEX by 8021B										
Benzene	0.00889	0.00104	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B		
Toluene	0.00581	0.00104	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B		
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B		
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B		
Xylene (o)	ND	0.00104	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		95.4 %	80-12	)	P1A0804	01/08/21	01/09/21	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		92.7 %	80-12	)	P1A0804	01/08/21	01/09/21	EPA 8021B		
General Chemistry Parameters by EPA	/ Standard Method	ls								
Chloride	41.2	1.04	mg/kg dry	1	P1A0702	01/07/21	01/08/21	EPA 300.0		
% Moisture	4.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216		
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	015M								
C6-C12	ND	26.0	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M		
>C12-C28	ND	26.0	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M		
>C28-C35	ND	26.0	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M		
Surrogate: 1-Chlorooctane		94.9 %	70-13	)	P1A0705	01/07/21	01/09/21	TPH 8015M		
Surrogate: o-Terphenyl		101 %	70-13	)	P1A0705	01/07/21	01/09/21	TPH 8015M		
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	01/07/21	01/09/21	calc		

Dean 12600 W County Rd 91 Midland TX, 79707		Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds								
			H-6 @ 3' 004-25 (So	il)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Permia	n Basin F	Cnvironme	ntal Lab, l	L <b>.P.</b>					
General Chemistry Parameters b	y EPA / Standard Methods									
Chloride % Moisture	91.0 7.0	1.08 0.1	mg/kg dry %	1 1	P1A0702 P1A0805	01/07/21 01/08/21	01/08/21 01/08/21	EPA 300.0 ASTM D2216		

Dean			Fax:						
12600 W County Rd 91		Project Num	ber: PP-218	0					
Midland TX, 79707	F	Project Mana	ger: Sylwia	Reynolds					
		Δ	H-7 @ 1'						
			004-26 (Soi	1)					
				,					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin I	Environmer	ital Lab, l	L.P.				
BTEX by 8021B				- )					
Brizene	14.8	0.115	mg/kg dry	100	P1A0804	01/08/21	01/09/21	EPA 8021B	
Toluene	36.1	0.115	mg/kg dry	100	P1A0804	01/08/21	01/09/21	EPA 8021B	
Ethylbenzene	41.3	0.115	mg/kg dry	100	P1A0804	01/08/21	01/09/21	EPA 8021B	
Xylene (p/m)	54.9	0.230	mg/kg dry	100	P1A0804	01/08/21	01/09/21	EPA 8021B	
Xylene (0)	17.5	0.115	mg/kg dry	100	P1A0804	01/08/21	01/09/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		91.8 %	80-1	20	P1A0804	01/08/21	01/09/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		68.1 %	80-1	20	P1A0804	01/08/21	01/09/21	EPA 8021B	S-GC
General Chemistry Parameters by EP	A / Standard Methods	s							
Chloride	48.9	1.15	mg/kg dry	1	P1A0702	01/07/21	01/08/21	EPA 300.0	
% Moisture	13.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C3	35 by EPA Method 801	5M							
C6-C12	2590	144	mg/kg dry	5	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C12-C28	4450	144	mg/kg dry	5	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C28-C35	533	144	mg/kg dry	5	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: 1-Chlorooctane		101 %	70-1	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: o-Terphenyl		102 %	70-1	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Fotal Petroleum Hydrocarbon C6-C35	7580	144	mg/kg dry	5	[CALC]	01/07/21	01/09/21	calc	

Dean	Project: COG Screwdriver Release Fax:										
12600 W County Rd 91		Project Num	ber: PP-2180	)							
Midland TX, 79707	I	Project Mana	ger: Sylwia	Reynolds							
		Δ	H-7 @ 3'								
			004-27 (Soi	I)							
		Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	Perm	ian Basin I	Environmen	ital Lab, l	L <b>.P.</b>						
BTEX by 8021B											
Benzene	9.93	0.105	mg/kg dry	100	P1A0804	01/08/21	01/09/21	EPA 8021B			
Toluene	40.0	0.105	mg/kg dry	100	P1A0804	01/08/21	01/09/21	EPA 8021B			
Ethylbenzene	41.6	0.105	mg/kg dry	100	P1A0804	01/08/21	01/09/21	EPA 8021B			
Xylene (p/m)	65.6	0.211	mg/kg dry	100	P1A0804	01/08/21	01/09/21	EPA 8021B			
Xylene (o)	19.6	0.105	mg/kg dry	100	P1A0804	01/08/21	01/09/21	EPA 8021B			
Surrogate: 4-Bromofluorobenzene		66.2 %	80-1.	20	P1A0804	01/08/21	01/09/21	EPA 8021B	S-GC		
Surrogate: 1,4-Difluorobenzene		88.6 %	80-1.	20	P1A0804	01/08/21	01/09/21	EPA 8021B			
General Chemistry Parameters by El	PA / Standard Methods	5									
Chloride	16.6	1.05	mg/kg dry	1	P1A0702	01/07/21	01/08/21	EPA 300.0			
% Moisture	5.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216			
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 801	15M									
C6-C12	3260	132	mg/kg dry	5	P1A0705	01/07/21	01/09/21	TPH 8015M			
>C12-C28	5740	132	mg/kg dry	5	P1A0705	01/07/21	01/09/21	TPH 8015M			
>C28-C35	806	132	mg/kg dry	5	P1A0705	01/07/21	01/09/21	TPH 8015M			
Surrogate: 1-Chlorooctane		108 %	70-1.	30	P1A0705	01/07/21	01/09/21	TPH 8015M			
Surrogate: o-Terphenyl		107 %	70-1.	30	P1A0705	01/07/21	01/09/21	TPH 8015M			
Total Petroleum Hydrocarbon	9800	132	mg/kg dry	5	[CALC]	01/07/21	01/09/21	calc			
C6-C35											

Dean		Fax:							
12600 W County Rd 91		Project Num	ber: PP-2180	)					
Midland TX, 79707	]	Project Mana	ger: Sylwia	Reynolds					
		A	H-7 @ 5'						
		1A06	004-28 (Soi	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin I	Environmen	tal Lab, I	L. <b>P.</b>				
BTEX by 8021B									
Benzene	55.5	0.538	mg/kg dry	500	P1A0804	01/08/21	01/11/21	EPA 8021B	
Toluene	160	0.538	mg/kg dry	500	P1A0804	01/08/21	01/11/21	EPA 8021B	
Ethylbenzene	146	0.538	mg/kg dry	500	P1A0804	01/08/21	01/11/21	EPA 8021B	
Xylene (p/m)	190	1.08	mg/kg dry	500	P1A0804	01/08/21	01/11/21	EPA 8021B	
Xylene (o)	53.9	0.538	mg/kg dry	500	P1A0804	01/08/21	01/11/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		97.4 %	80-1.	20	P1A0804	01/08/21	01/11/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		99.5 %	80-1.	20	P1A0804	01/08/21	01/11/21	EPA 8021B	
General Chemistry Parameters by El	PA / Standard Method	8							
Chloride	19.6	1.08	mg/kg dry	1	P1A0702	01/07/21	01/08/21	EPA 300.0	
% Moisture	7.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
<u>Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 80	15M							
C6-C12	4470	134	mg/kg dry	5	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C12-C28	6620	134	mg/kg dry	5	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C28-C35	956	134	mg/kg dry	5	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: 1-Chlorooctane		114 %	70-1.	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: o-Terphenyl		108 %	70-1.	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	12000	134	mg/kg dry	5	[CALC]	01/07/21	01/09/21	calc	

Dean			Fax:						
12600 W County Rd 91		Project Num	ber: PP-2180	)					
Midland TX, 79707		Project Mana	ger: Sylwia	Reynolds					
		Α	H-7 @ 7'						
			004-29 (Soi	I)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin H	Environmen	tal Lab, l	L.P.				
BTEX by 8021B									
Benzene	0.0124	0.00105	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Toluene	0.293	0.00105	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Ethylbenzene	0.410	0.00105	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Xylene (p/m)	0.663	0.00211	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Xylene (0)	0.233	0.00105	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		87.0 %	80-1.	20	P1A0804	01/08/21	01/09/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		65.6 %	80-1.	20	P1A0804	01/08/21	01/09/21	EPA 8021B	S-GC
General Chemistry Parameters by EPA /	Standard Method	ls							
Chloride	18.5	1.05	mg/kg dry	1	P1A0702	01/07/21	01/08/21	EPA 300.0	
% Moisture	5.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 I	oy EPA Method 80	)15M							
C6-C12	72.0	26.3	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C12-C28	468	26.3	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
>C28-C35	65.6	26.3	mg/kg dry	1	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: 1-Chlorooctane		98.6 %	70-1.	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Surrogate: o-Terphenyl		103 %	70-1.	30	P1A0705	01/07/21	01/09/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	606	26.3	mg/kg dry	1	[CALC]	01/07/21	01/09/21	calc	

Dean 12600 W County Rd 91 Midland TX, 79707		Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds									
			H-7 @ 9' 004-30 (So	il)							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	Perm	an Basin F	Invironme	ntal Lab, I	L.P.						
General Chemistry Parameters by	y EPA / Standard Methods										
Chloride	13.2	1.06	mg/kg dry	1	P1A0702	01/07/21	01/08/21	EPA 300.0			
% Moisture	6.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216			

Dean 12600 W County Rd 91 Midland TX, 79707		Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds									
			H-7 @ 11' 004-31 (So								
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	Permi	an Basin F	Invironme	ntal Lab, I	L.P.						
General Chemistry Parameters by	YEPA / Standard Methods										
Chloride	16.9	1.10	mg/kg dry	1	P1A0702	01/07/21	01/08/21	EPA 300.0			
% Moisture	9.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216			

Dean			Fax:						
12600 W County Rd 91		Project Num	ber: PP-2180	)					
Midland TX, 79707		Project Mana	ger: Sylwia I	Reynolds					
		A	H-8 @ 1'						
		1A06	004-32 (Soi	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin H	Environmen	tal Lab, l	L. <b>P.</b>				
BTEX by 8021B									
Benzene	0.0568	0.00105	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Toluene	0.238	0.00105	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Ethylbenzene	0.357	0.00105	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Xylene (p/m)	0.468	0.00211	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Xylene (o)	0.172	0.00105	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		73.6 %	80-12	20	P1A0804	01/08/21	01/09/21	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		94.5 %	80-12	20	P1A0804	01/08/21	01/09/21	EPA 8021B	
General Chemistry Parameters by El	PA / Standard Method	ls							
Chloride	127	1.05	mg/kg dry	1	P1A0802	01/08/21	01/08/21	EPA 300.0	
% Moisture	5.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 80	15M							
C6-C12	87.5	26.3	mg/kg dry	1	P1A0706	01/07/21	01/07/21	TPH 8015M	
>C12-C28	472	26.3	mg/kg dry	1	P1A0706	01/07/21	01/07/21	TPH 8015M	
>C28-C35	50.2	26.3	mg/kg dry	1	P1A0706	01/07/21	01/07/21	TPH 8015M	
Surrogate: 1-Chlorooctane		93.9 %	70-13	30	P1A0706	01/07/21	01/07/21	TPH 8015M	
Surrogate: o-Terphenyl		100 %	70-13	30	P1A0706	01/07/21	01/07/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	610	26.3	mg/kg dry	1	[CALC]	01/07/21	01/07/21	calc	

Dean 12600 W County Rd 91 Midland TX, 79707		Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds									
			H-8 @ 3' 004-33 (So	oil)							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	Permi	an Basin E	nvironme	ntal Lab, I	L. <b>P.</b>						
General Chemistry Parameters b	oy EPA / Standard Methods										
Chloride % Moisture	18.6 4.0	1.04 0.1	mg/kg dry %	1 1	P1A0802 P1A0805	01/08/21 01/08/21	01/08/21 01/08/21	EPA 300.0 ASTM D2216			

Dean			Fax:						
12600 W County Rd 91		5	ber: PP-2180						
Midland TX, 79707		Project Mana	ger: Sylwia R	eynolds					
		A	H-8 @ 5'						
		1A06	004-34 (Soil	)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin H	Environment	al Lab, l	L <b>.P.</b>				
BTEX by 8021B									
Benzene	0.0355	0.00108	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Toluene	0.0286	0.00108	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Ethylbenzene	0.00905	0.00108	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Xylene (p/m)	0.0103	0.00215	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Xylene (o)	0.00459	0.00108	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		93.6 %	80-12	0	P1A0804	01/08/21	01/09/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		89.8 %	80-12	0	P1A0804	01/08/21	01/09/21	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Method	S							
Chloride	6.19	1.08	mg/kg dry	1	P1A0802	01/08/21	01/08/21	EPA 300.0	
% Moisture	7.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	15M							
C6-C12	ND	26.9	mg/kg dry	1	P1A0706	01/07/21	01/08/21	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1A0706	01/07/21	01/08/21	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1A0706	01/07/21	01/08/21	TPH 8015M	
Surrogate: 1-Chlorooctane		97.5 %	70-13	0	P1A0706	01/07/21	01/08/21	TPH 8015M	
Surrogate: o-Terphenyl		107 %	70-13	0	P1A0706	01/07/21	01/08/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	01/07/21	01/08/21	calc	
•									

Dean 12600 W County Rd 91 Midland TX, 79707		Project:COG Screwdriver ReleaseFax:Project Number:PP-2180Project Manager:Sylwia Reynolds									
<u></u>			H-8 @ 7' 004-35 (So	il)							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	Permi	an Basin F	Cnvironme	ntal Lab, I	L <b>.P.</b>						
General Chemistry Parameters	by EPA / Standard Methods										
Chloride % Moisture	9.14 5.0	1.05 0.1	mg/kg dry %	1 1	P1A0802 P1A0805	01/08/21 01/08/21	01/08/21 01/08/21	EPA 300.0 ASTM D2216			

Dean 12600 W County Rd 91			Fax:						
Midland TX, 79707		Project Mana	ger: Sylwia R	eynolds					
			H-8 @ 9'						
<b></b>		1A06	004-36 (Soil)	)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin F	Invironment	al Lab, l	L. <b>P.</b>				
BTEX by 8021B									
Benzene	0.0130	0.00106	mg/kg dry	1	P1A0804	01/08/21	01/11/21	EPA 8021B	
Toluene	0.0162	0.00106	mg/kg dry	1	P1A0804	01/08/21	01/11/21	EPA 8021B	
Ethylbenzene	0.00335	0.00106	mg/kg dry	1	P1A0804	01/08/21	01/11/21	EPA 8021B	
Xylene (p/m)	0.00464	0.00213	mg/kg dry	1	P1A0804	01/08/21	01/11/21	EPA 8021B	
Xylene (o)	0.00151	0.00106	mg/kg dry	1	P1A0804	01/08/21	01/11/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		96.8 %	80-12	0	P1A0804	01/08/21	01/11/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		85.3 %	80-12	0	P1A0804	01/08/21	01/11/21	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Method	ls							
Chloride	7.35	1.06	mg/kg dry	1	P1A0802	01/08/21	01/08/21	EPA 300.0	
% Moisture	6.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	15M							
C6-C12	ND	26.6	mg/kg dry	1	P1A0706	01/07/21	01/08/21	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1A0706	01/07/21	01/08/21	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1A0706	01/07/21	01/08/21	TPH 8015M	
Surrogate: 1-Chlorooctane		102 %	70-13	0	P1A0706	01/07/21	01/08/21	TPH 8015M	
Surrogate: o-Terphenyl		113 %	70-13	0	P1A0706	01/07/21	01/08/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	01/07/21	01/08/21	calc	

Dean 12600 W County Rd 91 Midland TX, 70707		Project Num		)	Release			Fax:	
Midland TX, 79707		Project Mana	ger: Syrwia	Reynoids					
			NW-1						
		1A06	004-37 (Soi	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin H	Environmer	ital Lab, l	L.P.				
BTEX by 8021B									
Benzene	0.0463	0.00103	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Toluene	0.00895	0.00103	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Ethylbenzene	0.00154	0.00103	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1A0804	01/08/21	01/09/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		92.9 %	80-1	20	P1A0804	01/08/21	01/09/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		97.2 %	80-1	20	P1A0804	01/08/21	01/09/21	EPA 8021B	
<u>General Chemistry Parameters by E</u>	PA / Standard Metho	ls							
Chloride	56.8	1.03	mg/kg dry	1	P1A0802	01/08/21	01/08/21	EPA 300.0	
% Moisture	3.0	0.1	%	1	P1A0805	01/08/21	01/08/21	ASTM D2216	
<u>Total Petroleum Hydrocarbons C6-C</u>	C35 by EPA Method 80	)15M							
C6-C12	ND	25.8	mg/kg dry	1	P1A0706	01/07/21	01/08/21	TPH 8015M	
>C12-C28	108	25.8	mg/kg dry	1	P1A0706	01/07/21	01/08/21	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1A0706	01/07/21	01/08/21	TPH 8015M	
Surrogate: 1-Chlorooctane		96.4 %	70-1	30	P1A0706	01/07/21	01/08/21	TPH 8015M	
Surrogate: o-Terphenyl		106 %	70-1	30	P1A0706	01/07/21	01/08/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	108	25.8	mg/kg dry	1	[CALC]	01/07/21	01/08/21	calc	

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

Permian Basin Environmental Lab, L.P.

					-					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Kesuit	Liiiit	Units	Level	Kesun	70KEC	Linits	KFD	Liiiit	Notes
Batch P1A0803 - General Preparation (GC)										
Blank (P1A0803-BLK1)				Prepared &	Analyzed:	01/08/21				
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	0.111		"	0.120		92.4	80-120			
Surrogate: 1,4-Difluorobenzene	0.108		"	0.120		90.2	80-120			
LCS (P1A0803-BS1)				Prepared &	Analyzed:	01/08/21				
Benzene	0.110	0.00100	mg/kg wet	0.100		110	70-130			
Toluene	0.110	0.00100	"	0.100		110	70-130			
Ethylbenzene	0.112	0.00100	"	0.100		112	70-130			
Xylene (p/m)	0.235	0.00200	"	0.200		117	70-130			
Xylene (o)	0.118	0.00100	"	0.100		118	70-130			
Surrogate: 4-Bromofluorobenzene	0.113		"	0.120		93.8	80-120			
Surrogate: 1,4-Difluorobenzene	0.113		"	0.120		93.9	80-120			
LCS Dup (P1A0803-BSD1)				Prepared &	Analyzed:	01/08/21				
Benzene	0.106	0.00100	mg/kg wet	0.100		106	70-130	3.44	20	
Toluene	0.103	0.00100	"	0.100		103	70-130	6.08	20	
Ethylbenzene	0.103	0.00100	"	0.100		103	70-130	8.03	20	
Xylene (p/m)	0.234	0.00200	"	0.200		117	70-130	0.397	20	
Xylene (o)	0.119	0.00100	"	0.100		119	70-130	0.278	20	
Surrogate: 4-Bromofluorobenzene	0.109		"	0.120		91.0	80-120			
Surrogate: 1,4-Difluorobenzene	0.107		"	0.120		89.2	80-120			
Calibration Check (P1A0803-CCV1)				Prepared &	Analyzed:	01/08/21				
Benzene	0.103	0.00100	mg/kg wet	0.100		103	80-120			
Toluene	0.102	0.00100	"	0.100		102	80-120			
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120			
Xylene (p/m)	0.235	0.00200	"	0.200		118	80-120			
Xylene (o)	0.114	0.00100	"	0.100		114	80-120			
Surrogate: 1,4-Difluorobenzene	0.108		"	0.120		90.3	75-125			
Surrogate: 4-Bromofluorobenzene	0.108		"	0.120		89.9	75-125			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

### Permian Basin Environmental Lab, L.P.

		D (			0		N/DEC		DDD	
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1A0803 - General Preparation (GC)										
Calibration Check (P1A0803-CCV2)				Prepared &	& Analyzed:	01/08/21				
Benzene	0.109	0.00100	mg/kg wet	0.100		109	80-120			
Toluene	0.110	0.00100	"	0.100		110	80-120			
Ethylbenzene	0.105	0.00100	"	0.100		105	80-120			
Xylene (p/m)	0.236	0.00200	"	0.200		118	80-120			
Xylene (o)	0.116	0.00100	"	0.100		116	80-120			
Surrogate: 1,4-Difluorobenzene	0.119		"	0.120		99.1	75-125			
Surrogate: 4-Bromofluorobenzene	0.114		"	0.120		95.0	75-125			
Calibration Check (P1A0803-CCV3)				Prepared 8	& Analyzed:	01/08/21				
Benzene	0.111	0.00100	mg/kg wet	0.100		111	80-120			
Toluene	0.117	0.00100		0.100		117	80-120			
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120			
Xylene (p/m)	0.237	0.00200	"	0.200		119	80-120			
Xylene (o)	0.119	0.00100	"	0.100		119	80-120			
Surrogate: 1,4-Difluorobenzene	0.112		"	0.120		93.4	75-125			
Surrogate: 4-Bromofluorobenzene	0.118		"	0.120		98.2	75-125			
Matrix Spike (P1A0803-MS1)	Sou	irce: 1A06004	1-20	Prepared 8	& Analyzed:	01/08/21				
Benzene	0.0901	0.00103	mg/kg dry	0.103	0.0127	75.1	80-120			QM-07
Toluene	0.0996	0.00103	"	0.103	0.00944	87.5	80-120			
Ethylbenzene	0.111	0.00103	"	0.103	0.00126	107	80-120			
Xylene (p/m)	0.207	0.00206	"	0.206	0.00107	99.7	80-120			
Xylene (o)	0.101	0.00103	"	0.103	ND	98.2	80-120			
Surrogate: 4-Bromofluorobenzene	0.204		"	0.124		165	80-120			S-GC
Surrogate: 1,4-Difluorobenzene	0.117		"	0.124		94.2	80-120			
Matrix Spike Dup (P1A0803-MSD1)	Sou	ırce: 1A06004	-20	Prepared 8	& Analyzed:	01/08/21				
Benzene	0.0801	0.00103	mg/kg dry	0.103	0.0127	65.4	80-120	13.9	20	QM-07
Toluene	0.0799	0.00103		0.103	0.00944	68.3	80-120	24.6	20	QM-07
Ethylbenzene	0.0897	0.00103		0.103	0.00126	85.8	80-120	21.7	20	QM-07
Xylene (p/m)	0.174	0.00206		0.206	0.00107	83.6	80-120	17.5	20	
Xylene (o)	0.0857	0.00103		0.103	ND	83.1	80-120	16.6	20	
Surrogate: 1,4-Difluorobenzene	0.113		"	0.124		91.4	80-120			
Surrogate: 4-Bromofluorobenzene	0.122		"	0.124		98.5	80-120			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1A0804 - General Preparation (GC)	)									
Blank (P1A0804-BLK1)				Prepared &	Analyzed:	01/08/21				
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	0.115		"	0.120		95.9	80-120			
Surrogate: 1,4-Difluorobenzene	0.110		"	0.120		91.5	80-120			
LCS (P1A0804-BS1)				Prepared &	Analyzed:	01/08/21				
Benzene	0.103	0.00100	mg/kg wet	0.100		103	70-130			
Toluene	0.101	0.00100	"	0.100		101	70-130			
Ethylbenzene	0.102	0.00100	"	0.100		102	70-130			
Xylene (p/m)	0.230	0.00200	"	0.200		115	70-130			
Xylene (o)	0.116	0.00100	"	0.100		116	70-130			
Surrogate: 1,4-Difluorobenzene	0.110		"	0.120		91.7	80-120			
Surrogate: 4-Bromofluorobenzene	0.118		"	0.120		98.0	80-120			
LCS Dup (P1A0804-BSD1)				Prepared &	Analyzed:	01/08/21				
Benzene	0.0947	0.00100	mg/kg wet	0.100		94.7	70-130	8.52	20	
Toluene	0.0921	0.00100	"	0.100		92.1	70-130	8.95	20	
Ethylbenzene	0.106	0.00100	"	0.100		106	70-130	3.49	20	
Xylene (p/m)	0.208	0.00200	"	0.200		104	70-130	9.88	20	
Xylene (o)	0.105	0.00100	"	0.100		105	70-130	10.1	20	
Surrogate: 1,4-Difluorobenzene	0.115		"	0.120		95.6	80-120			
Surrogate: 4-Bromofluorobenzene	0.123		"	0.120		103	80-120			
Calibration Check (P1A0804-CCV1)				Prepared &	Analyzed:	01/08/21				
Benzene	0.111	0.00100	mg/kg wet	0.100		111	80-120			
Toluene	0.117	0.00100	"	0.100		117	80-120			
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120			
Xylene (p/m)	0.237	0.00200	"	0.200		119	80-120			
Xylene (o)	0.119	0.00100	"	0.100		119	80-120			
Surrogate: 4-Bromofluorobenzene	0.118		"	0.120		98.2	75-125			
Surrogate: 1,4-Difluorobenzene	0.112		"	0.120		93.4	75-125			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

Permian	Basin	Environmenta	l Lab,	L.P.
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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1A0804 - General Preparation (GC)										
Calibration Check (P1A0804-CCV2)				Prepared: (	01/08/21 Ar	nalyzed: 01	/09/21			
Benzene	0.107	0.00100	mg/kg wet	0.100		107	80-120			
Toluene	0.114	0.00100	"	0.100		114	80-120			
Ethylbenzene	0.114	0.00100		0.100		114	80-120			
Xylene (p/m)	0.231	0.00200		0.200		116	80-120			
Xylene (o)	0.119	0.00100		0.100		119	80-120			
Surrogate: 1,4-Difluorobenzene	0.117		"	0.120		97.3	75-125			
Surrogate: 4-Bromofluorobenzene	0.109		"	0.120		90.8	75-125			
Calibration Check (P1A0804-CCV3)				Prepared: (	01/08/21 Ar	nalyzed: 01	/09/21			
Benzene	0.109	0.00100	mg/kg wet	0.100		109	80-120			
Toluene	0.111	0.00100	"	0.100		111	80-120			
Ethylbenzene	0.109	0.00100	"	0.100		109	80-120			
Xylene (p/m)	0.239	0.00200		0.200		120	80-120			
Xylene (o)	0.120	0.00100		0.100		120	80-120			
Surrogate: 1,4-Difluorobenzene	0.108		"	0.120		90.4	75-125			
Surrogate: 4-Bromofluorobenzene	0.113		"	0.120		94.2	75-125			
Matrix Spike (P1A0804-MS1)	Sou	ırce: 1A06004	-21	Prepared: (	01/08/21 Ar	nalyzed: 01	/09/21			
Benzene	0.0860	0.00109	mg/kg dry	0.109	0.0179	62.6	80-120			QM-07
Toluene	0.0932	0.00109	"	0.109	0.0103	76.2	80-120			QM-07
Ethylbenzene	0.105	0.00109	"	0.109	0.00120	95.7	80-120			
Xylene (p/m)	0.194	0.00217	"	0.217	0.00109	88.5	80-120			
Xylene (o)	0.0933	0.00109		0.109	ND	85.8	80-120			
Surrogate: 4-Bromofluorobenzene	0.312		"	0.130		239	80-120			S-GC
Surrogate: 1,4-Difluorobenzene	0.125		"	0.130		95.5	80-120			
Matrix Spike Dup (P1A0804-MSD1)	Sou	ırce: 1A06004	-21	Prepared: (	01/08/21 Ar	nalyzed: 01	/09/21			
Benzene	0.0865	0.00109	mg/kg dry	0.109	0.0179	63.1	80-120	0.827	20	QM-07
Toluene	0.0911	0.00109		0.109	0.0103	74.3	80-120	2.55	20	QM-07
Ethylbenzene	0.102	0.00109		0.109	0.00120	93.2	80-120	2.68	20	
Xylene (p/m)	0.192	0.00217		0.217	0.00109	88.0	80-120	0.566	20	
Xylene (o)	0.0955	0.00109		0.109	ND	87.8	80-120	2.35	20	
Surrogate: 1,4-Difluorobenzene	0.124		"	0.130		95.4	80-120			
Surrogate: 4-Bromofluorobenzene	0.131		"	0.130		100	80-120			

Permian Basin Environmental Lab, L.P.

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Midland TX, 79707	Project Manager:	Sylwia Reynolds		

#### Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1A0701 - *** DEFAULT PREP ***										
Blank (P1A0701-BLK1)				Prepared &	Analyzed:	01/07/21				
Chloride	ND	1.00	mg/kg wet							
LCS (P1A0701-BS1)				Prepared &	Analyzed:	01/07/21				
Chloride	412	1.00	mg/kg wet	400		103	90-110			
LCS Dup (P1A0701-BSD1)				Prepared &	Analyzed:	01/07/21				
Chloride	417	1.00	mg/kg wet	400		104	90-110	1.37	20	
Calibration Check (P1A0701-CCV1)				Prepared &	Analyzed:	01/07/21				
Chloride	20.9		mg/kg	20.0		105	90-110			
Calibration Check (P1A0701-CCV2)				Prepared &	Analyzed:	01/07/21				
Chloride	20.5		mg/kg	20.0		102	90-110			
Calibration Check (P1A0701-CCV3)				Prepared &	Analyzed:	01/07/21				
Chloride	20.9		mg/kg	20.0		104	90-110			
Matrix Spike (P1A0701-MS1)	Sour	ce: 1A04003	-15	Prepared &	Analyzed:	01/07/21				
Chloride	2940	5.15	mg/kg dry	515	2430	98.6	80-120			
Matrix Spike (P1A0701-MS2)	Sour	ce: 1A06004	-02	Prepared &	Analyzed:	01/07/21				
Chloride	525	1.03	mg/kg dry	515	10.2	100	80-120			
Matrix Spike Dup (P1A0701-MSD1)	Sour	ce: 1A04003	-15	Prepared &	Analyzed:	01/07/21				
Chloride	2970	5.15	mg/kg dry	515	2430	104	80-120	0.979	20	
Matrix Spike Dup (P1A0701-MSD2)	Sour	ce: 1A06004	-02	Prepared &	Analyzed:	01/07/21				
Chloride	535	1.03	mg/kg dry	515	10.2	102	80-120	1.78	20	

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
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Midland TX, 79707	Project Manager:	Sylwia Reynolds		

#### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1A0702 - *** DEFAULT PREP ***	result	Dinit	Cinto	Lever	result	, vite e	Linits	IU D	Linit	110105
Blank (P1A0702-BLK1)				Prepared &	& Analyzed:	01/07/21				
Chloride	ND	1.00	mg/kg wet							
LCS (P1A0702-BS1)				Prepared &	& Analyzed:	01/07/21				
Chloride	411	1.00	mg/kg wet	400		103	90-110			
LCS Dup (P1A0702-BSD1)				Prepared 8	& Analyzed:	01/07/21				
Chloride	412	1.00	mg/kg wet	400		103	90-110	0.333	20	
Calibration Check (P1A0702-CCV1)				Prepared &	& Analyzed:	01/07/21				
Chloride	20.9		mg/kg	20.0		104	90-110			
Calibration Check (P1A0702-CCV2)				Prepared: (	01/07/21 Ai	nalyzed: 01	/08/21			
Chloride	21.4		mg/kg	20.0		107	90-110			
Calibration Check (P1A0702-CCV3)				Prepared: (	01/07/21 Ai	nalyzed: 01	/08/21			
Chloride	21.3		mg/kg	20.0		106	90-110			
Matrix Spike (P1A0702-MS1)	Sour	rce: 1A06004	-12	Prepared &	& Analyzed:	01/07/21				
Chloride	637	1.04	mg/kg dry	521	92.7	104	80-120			
Matrix Spike (P1A0702-MS2)	Sour	rce: 1A06004	-22	Prepared: (	01/07/21 Ai	nalyzed: 01	/08/21			
Chloride	589	1.06	mg/kg dry	532	24.6	106	80-120			
Matrix Spike Dup (P1A0702-MSD1)	Sour	rce: 1A06004	-12	Prepared &	& Analyzed:	01/07/21				
Chloride	626	1.04	mg/kg dry	521	92.7	102	80-120	1.74	20	
Matrix Spike Dup (P1A0702-MSD2)	Sour	rce: 1A06004	-22	Prepared: (	01/07/21 Ai	nalyzed: 01	/08/21			
Chloride	577	1.06	mg/kg dry	532	24.6	104	80-120	2.07	20	

Permian Basin Environmental Lab, L.P.

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Midland TX, 79707	Project Manager:	Sylwia Reynolds		

#### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1A0802 - *** DEFAULT PREP ***										
Blank (P1A0802-BLK1)				Prepared 8	د Analyzed:	01/08/21				
Chloride	ND	1.00	mg/kg wet							
LCS (P1A0802-BS1)				Prepared 8	د Analyzed:	01/08/21				
Chloride	411	1.00	mg/kg wet	400		103	90-110			
LCS Dup (P1A0802-BSD1)				Prepared &	analyzed:	01/08/21				
Chloride	405	1.00	mg/kg wet	400		101	90-110	1.48	20	
Calibration Check (P1A0802-CCV1)				Prepared &	analyzed:	01/08/21				
Chloride	21.4		mg/kg	20.0		107	90-110			
Calibration Check (P1A0802-CCV2)				Prepared: (	01/08/21 Ai	nalyzed: 01	/11/21			
Chloride	21.7		mg/kg	20.0		108	90-110			
Calibration Check (P1A0802-CCV3)				Prepared: (	01/08/21 Ai	nalyzed: 01	/11/21			
Chloride	21.4		mg/kg	20.0		107	90-110			
Matrix Spike (P1A0802-MS1)	Sou	rce: 1A06004	-32	Prepared &	analyzed:	01/08/21				
Chloride	646	1.05	mg/kg dry	526	127	98.7	80-120			
Matrix Spike (P1A0802-MS2)	Sou	rce: 1A08003	-03	Prepared: (	01/08/21 Ai	nalvzed: 01	/09/21			
Chloride	7900		mg/kg dry	1050	7130	73.2	80-120			QM-05
Matrix Spike Dup (P1A0802-MSD1)	Som	rce: 1A06004	-32	Prepared &	k Analyzed:	01/08/21				
Chloride	647		mg/kg dry	526	127	98.7	80-120	0.0684	20	
Matrix Spike Dup (P1A0802-MSD2)	Sou	rce: 1A08003	-03	Prenared (	01/08/21 Ai	nalvzed: 01	/09/21			
Chloride	7730		mg/kg dry	1050	7130	56.9	80-120	2.19	20	OM-05

Permian Basin Environmental Lab, L.P.

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#### Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1A0805 - *** DEFAULT PREP ***										
Blank (P1A0805-BLK1)				Prepared &	Analyzed:	01/08/21				
% Moisture	ND	0.1	%							
Blank (P1A0805-BLK2)				Prepared &	Analyzed:	01/08/21				
% Moisture	ND	0.1	%							
Blank (P1A0805-BLK3)				Prepared &	Analyzed:	01/08/21				
% Moisture	ND	0.1	%							
Duplicate (P1A0805-DUP1)	Sou	rce: 1A06004-	10	Prepared &	Analyzed:	01/08/21				
% Moisture	6.0	0.1	%		6.0			0.00	20	
Duplicate (P1A0805-DUP2)	Sou	rce: 1A06004-	20	Prepared &	Analyzed:	01/08/21				
% Moisture	4.0	0.1	%		3.0			28.6	20	
Duplicate (P1A0805-DUP3)	Sou	rce: 1A06004-	35	Prepared &	Analyzed:	01/08/21				
% Moisture	5.0	0.1	%		5.0			0.00	20	
Duplicate (P1A0805-DUP4)	Sou	rce: 1A07001-	03	Prepared &	Analyzed:	01/08/21				
% Moisture	27.0	0.1	%		27.0			0.00	20	

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#### Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1A0704 - TX 1005										
Blank (P1A0704-BLK1)				Prepared: (	01/07/21 Ai	nalyzed: 01	/08/21			
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	88.2		"	100		88.2	70-130			
Surrogate: o-Terphenyl	46.4		"	50.0		92.8	70-130			
LCS (P1A0704-BS1)				Prepared: (	01/07/21 Ai	nalyzed: 01	/08/21			
C6-C12	959	25.0	mg/kg wet	1000		95.9	75-125			
>C12-C28	1070	25.0	"	1000		107	75-125			
Surrogate: 1-Chlorooctane	113		"	100		113	70-130			
Surrogate: o-Terphenyl	52.0		"	50.0		104	70-130			
LCS Dup (P1A0704-BSD1)				Prepared: (	01/07/21 Ai	nalyzed: 01	/08/21			
C6-C12	958	25.0	mg/kg wet	1000		95.8	75-125	0.0282	20	
>C12-C28	1070	25.0	"	1000		107	75-125	0.0915	20	
Surrogate: 1-Chlorooctane	115		"	100		115	70-130			
Surrogate: o-Terphenyl	53.0		"	50.0		106	70-130			
Calibration Check (P1A0704-CCV1)				Prepared: (	01/07/21 Ai	nalyzed: 01	/08/21			
C6-C12	486	25.0	mg/kg wet	500		97.3	85-115			
>C12-C28	542	25.0		500		108	85-115			
Surrogate: 1-Chlorooctane	102		"	100		102	70-130			
Surrogate: o-Terphenyl	49.0		"	50.0		98.0	70-130			
Calibration Check (P1A0704-CCV2)				Prepared: (	)1/07/21 Ai	nalyzed: 01	/08/21			
C6-C12	452	25.0	mg/kg wet	500		90.3	85-115			
>C12-C28	486	25.0		500		97.2	85-115			
Surrogate: 1-Chlorooctane	95.0		"	100		95.0	70-130			
Surrogate: o-Terphenyl	45.1		"	50.0		90.1	70-130			

Permian Basin Environmental Lab, L.P.

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#### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Kesuit	Limit	Units	Level	Kesun	70KEC	Limits	KPD	Limit	Notes
Batch P1A0704 - TX 1005										
Matrix Spike (P1A0704-MS1)	Sourc	ce: 1A06004	<b>I-11</b>	Prepared: (	01/07/21 Ai	nalyzed: 01	/08/21			
C6-C12	985	27.2	mg/kg dry	1090	14.1	89.3	75-125			
>C12-C28	1100	27.2	"	1090	139	87.9	75-125			
Surrogate: 1-Chlorooctane	122		"	109		112	70-130			
Surrogate: o-Terphenyl	55.7		"	54.3		103	70-130			
Matrix Spike Dup (P1A0704-MSD1)	Sourc	e: 1A06004	<b>I-11</b>	Prepared: (	01/07/21 Ai	nalyzed: 01	/08/21			
C6-C12	948	27.2	mg/kg dry	1090	14.1	85.9	75-125	3.83	20	
>C12-C28	1040	27.2	"	1090	139	83.2	75-125	5.53	20	
Surrogate: 1-Chlorooctane	121		"	109		111	70-130			
Surrogate: o-Terphenyl	54.7		"	54.3		101	70-130			
Batch P1A0705 - TX 1005										
Blank (P1A0705-BLK1)				Prepared: (	01/07/21 Ai	nalyzed: 01	/09/21			
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	97.9		"	100		97.9	70-130			
Surrogate: o-Terphenyl	51.1		"	50.0		102	70-130			
LCS (P1A0705-BS1)				Prepared: (	01/07/21 Ai	nalyzed: 01	/09/21			
C6-C12	919	25.0	mg/kg wet	1000		91.9	75-125			
>C12-C28	1010	25.0	"	1000		101	75-125			
Surrogate: 1-Chlorooctane	124		"	100		124	70-130			
Surrogate: o-Terphenyl	54.2		"	50.0		108	70-130			
LCS Dup (P1A0705-BSD1)				Prepared: (	01/07/21 Ai	nalyzed: 01	/09/21			
C6-C12	925	25.0	mg/kg wet	1000		92.5	75-125	0.651	20	
>C12-C28	1020	25.0	"	1000		102	75-125	0.420	20	
Surrogate: 1-Chlorooctane	127		"	100		127	70-130			
Surrogate: o-Terphenyl	57.9		"	50.0		116	70-130			

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#### Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1A0705 - TX 1005										
Calibration Check (P1A0705-CCV1)				Prepared: (	01/07/21 At	nalyzed: 01	/08/21			
C6-C12	453	25.0	mg/kg wet	500		90.6	85-115			
>C12-C28	479	25.0	"	500		95.9	85-115			
Surrogate: 1-Chlorooctane	109		"	100		109	70-130			
Surrogate: o-Terphenyl	52.4		"	50.0		105	70-130			
Calibration Check (P1A0705-CCV2)				Prepared: (	01/07/21 At	nalyzed: 01	/09/21			
C6-C12	451	25.0	mg/kg wet	500		90.1	85-115			
>C12-C28	476	25.0	"	500		95.3	85-115			
Surrogate: 1-Chlorooctane	110		"	100		110	70-130			
Surrogate: o-Terphenyl	53.0		"	50.0		106	70-130			
Calibration Check (P1A0705-CCV3)				Prepared: (	01/07/21 At	nalyzed: 01	/09/21			
C6-C12	445	25.0	mg/kg wet	500		89.1	85-115			
>C12-C28	495	25.0	"	500		99.0	85-115			
Surrogate: 1-Chlorooctane	110		"	100		110	70-130			
Surrogate: o-Terphenyl	52.0		"	50.0		104	70-130			
Matrix Spike (P1A0705-MS1)	Sour	ce: 1A06004	4-31	Prepared: (	01/07/21 At	nalyzed: 01	/09/21			
C6-C12	991	27.5	mg/kg dry	1100	18.9	88.4	75-125			
>C12-C28	1200	27.5	"	1100	114	99.1	75-125			
Surrogate: 1-Chlorooctane	126		"	110		115	70-130			
Surrogate: o-Terphenyl	56.5		"	54.9		103	70-130			
Matrix Spike Dup (P1A0705-MSD1)	Sour	ce: 1A06004	4-31	Prepared: (	01/07/21 At	nalyzed: 01	/09/21			
C6-C12	954	27.5	mg/kg dry	1100	18.9	85.1	75-125	3.88	20	
>C12-C28	1150	27.5	"	1100	114	93.9	75-125	5.31	20	
Surrogate: 1-Chlorooctane	121		"	110		110	70-130			
Surrogate: o-Terphenyl	51.7		"	54.9		94.1	70-130			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

#### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1A0706 - TX 1005										
Blank (P1A0706-BLK1)				Prepared &	Analyzed:	01/07/21				
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	105		"	100		105	70-130			
Surrogate: o-Terphenyl	57.6		"	50.0		115	70-130			
LCS (P1A0706-BS1)				Prepared &	Analyzed:	01/07/21				
C6-C12	1010	25.0	mg/kg wet	1000		101	75-125			
>C12-C28	1020	25.0		1000		102	75-125			
Surrogate: 1-Chlorooctane	122		"	100		122	70-130			
Surrogate: o-Terphenyl	63.6		"	50.0		127	70-130			
LCS Dup (P1A0706-BSD1)				Prepared &	Analyzed:	01/07/21				
C6-C12	1010	25.0	mg/kg wet	1000		101	75-125	0.123	20	
>C12-C28	1030	25.0	"	1000		103	75-125	0.810	20	
Surrogate: 1-Chlorooctane	127		"	100		127	70-130			
Surrogate: o-Terphenyl	64.4		"	50.0		129	70-130			
Calibration Check (P1A0706-CCV1)				Prepared &	Analyzed:	01/07/21				
C6-C12	503	25.0	mg/kg wet	500		101	85-115			
>C12-C28	481	25.0		500		96.2	85-115			
Surrogate: 1-Chlorooctane	112		"	100		112	70-130			
Surrogate: o-Terphenyl	60.3		"	50.0		121	70-130			
Calibration Check (P1A0706-CCV2)				Prepared &	Analyzed:	01/07/21				
C6-C12	473	25.0	mg/kg wet	500		94.6	85-115			
>C12-C28	454	25.0	"	500		90.9	85-115			
Surrogate: 1-Chlorooctane	107		"	100		107	70-130			
Surrogate: o-Terphenyl	56.0		"	50.0		112	70-130			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

## Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1A0706 - TX 1005										
Matrix Spike (P1A0706-MS1)	Sour	ce: 1A06000	5-03	Prepared: (	01/07/21 A	nalyzed: 01	/08/21			
C6-C12	1000	130	mg/kg dry	1040	98.6	86.9	75-125			
>C12-C28	3050	130	"	1040	2850	18.7	75-125			QM-0.
Surrogate: 1-Chlorooctane	102		"	104		97.4	70-130			
Surrogate: o-Terphenyl	50.6		"	52.1		97.1	70-130			
Matrix Spike Dup (P1A0706-MSD1)	Sour	ce: 1A06000	5-03	Prepared: (	01/07/21 A	nalyzed: 01	/08/21			
C6-C12	988	130	mg/kg dry	1040	98.6	85.4	75-125	1.71	20	
>C12-C28	3060	130	"	1040	2850	20.0	75-125	6.79	20	QM-0
Surrogate: 1-Chlorooctane	96.7		"	104		92.8	70-130			
Surrogate: o-Terphenyl	47.3		"	52.1		90.9	70-130			

I	Dean	Project:	COG Screwdriver Release	Fax:
1	2600 W County Rd 91	Project Number:	PP-2180	
N	Aidland TX, 79707	Project Manager:	Sylwia Reynolds	

#### **Notes and Definitions**

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
ROI	Received on Ice
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
BULK	Samples received in Bulk soil containers
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:

nen Barron

1/13/2021

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Brent Barron, Laboratory Director/Technical Director

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Date:

Dean	Project: COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number: PP-2180	
Midland TX, 79707	Project Manager: Sylwia Reynolds	

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

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Lone grave z z z z z z z z z z z z z z z z z z z	1.5	ЪГ					Ĥ	+	<u>├</u>		ŕ		ŕ	+	f	+					5		1		EAS	C1
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Receiv Reling			6/16/2 greate	<u>021</u> * Run	<u>9:22</u> 8	:14 2	41 28	2	24	25	20	22	22	12	LAB # (lab use only)	ORD	(lab us					••		Page	e <u>103 of 1</u>
Relinquished by:	Relinquished by:	Relinquished by: U. I. M. J. R. Delle	greater. If Benzene PPM is greater than or equal to 10 and 50 for total BTEX, run deeper auger hole. If Chloride Concentrations are greater than or equal to 20,000 mg/kg, run deeper samples.	Special Instructions: * Run deeper sample for each auger ho	9 AH-7 @ 9	AH-7 @ 7	S AH-7 @ 5	AH-7 @ 3'	AH-7 @ 1'	3 AH-6 @ 3	AH-6 @ 1'	AH-5H @	AH-5H @	AH-5 @ 3'	FIELD CODE	ORDER # Allood	(lab use only)	Sampler Signature:			City/State/Zip:	Company Address:	Company Name	Project Manager:	DIBIDIDAIB
Date	'Date	1)6/a	or equal to 10 and 5	le if TPH DRO/GRO		-			-			ω		-		1A Obooch		Robert Belloc	0250-002-204	1000 000 001	Midland TX 79707	12600 WCR 91	Dean	Sylwia Reynolds	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Permian 1400 Ra
		5	1 for t	Conce	9 FT	7 FT	5 FT	3 FT	1 FT	3 FT	1 FT	3 FT	1 FT	3 FT	Beginning Depth	]				ر ا	07	1		3	USTC
Time	Time	5:58	total BT	entratio	9 FT	- 7 FT	5 FT	3 FT	- 1 FT	- 3 FT	1 FT	- 3FT		- 3 FT	Ending Depth	1									DYR
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merved by: Munu	Received by:		un deeper a	e equal to or	01/05/21	01/05/21	01/05/21	01/05/21	01/05/21	01/05/21	01/05/21	01/05/21	01/05/21	01/05/21	Date Sampled				ľ						RD AND A
una Bledson			uger hole. If C	greater than 1	11:13AM	11:05AM	11:00AM	10:56AM	10:52AM	10:42AM	10:37AM	12:59PM	12:55PM	10:30AM	Time Sampled			e-mail:		Fay No.					NAL YSIS RE
P			hlorid	000											Field Filtered		<u></u>	1/0	1					Miniain, Texas	<i>QUEST</i> Permian Basin En 1400 Rankin Hwy
			e C	ng/l		5	1						1	1	Total #. of Containers		ayla	effki V	:					ļ	iian Rat
			once	Kga	×	×	×	×	×	×	×	×	×	×	HNO <sub>3 250,ml</sub> Poly	Pre	anlo	sylwiareynolo ieffkindlev@o						g	<i>QUEST</i> Permian Basin Er 1400 Rankin Hwy
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			are	otal											NaOH	tion & # of Containers	kaylanlongee@deanequip.com	<u>ieffkindlev@deandigs.com</u>							vironmental Lab, LP /
		ļ	grea	ΓPH					ļ						Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Conta	lequ	India	.						Intal
NI			tert	is 2,	ļ	ļ	ļ			<b> </b>			ļ		None 1L Poly	ners	lip.c	m <u>us</u> .c							Lab
1/6/2	Date		Date Date	500			┼──						+		NaOH/ZnAc DW=Drinking Water SL=Sludge		0m	0m	1					I	Ļ
		· · ·	or equ	mg/kg											GW = Groundwater S=Soil/Solid NP≂Non-Potable Specify Othe	d Matrij		100	9	Report Format-	WORK ORDER #:			P	·
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<b>N</b>	ne	1	อี			1	1		×		×	$\vdash$	×	$\mathbf{T}$	BTEX 8021 B	-		ves	beth	Ima	RDE	Project Loc: Eddy County, New Mexico	Project #: PP-2180	:t Na	
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Eng.	d De اer/C	ls or	ontai of He	taine					ļ			┝	–					Ana	Indic	Standard		ount		RE	hon
Temperature Upon Receipt: Received: 399 °C Adjusted: 999 °C F	Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS	Custody seals on container(s) Custody seals on cocler(s)	Labels on container(s) VOCs Free of Headspace? Jabels on container(s)	Lat 0 Sample Containers Intact?				┠╌┼					+		PAINT FILTER	· · · · · · · · ·	`	Analvze	15. CC			, Ne		P	Phone: 432-686-7235
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Recei	ived by		6/16/2021 Run 20,00	9:2	2:14	4 <u>1</u> 2)	S S	35	လွ		8	2	LAB # (lab use only)	ORD	(lab us						Pag	ge 104 of 148
Kelinquisned by:	Relinquished by:	Relinguished by:	Special Instructions: * Run deeper sample for each auge greater. If Benzene PPM is greater 20,000 mg/kg, run deeper samples					<u>_N</u>						ORDER #:	(lab use only)	Sample	Telephone No:	City/State/Zip:	Compar	Compar	Project I	AR A
		Bel	ns: PPM is g deepersa											1A06004		Sampler Signature	ne No:	te/Zip:	Company Address:	Company Name	Project Manager:	YEA
		log .	h auger ho reater thar imples.			NM-1	AH-8 @ 9	AH-8 @ 7	AH-8 @ 5	AH-8 @ 3'	AH-8 @ 1'	AH-7 @ 11'	FIELD CODE	<b>4</b>		<u>.</u>			<u>v</u>			JU.
			ie if TPH							3		1	m					Mic			S	Q
	Date	621	H DRO/GRO al to 10 and													Robert Belloc	432-230-0920	Midland TX 79707	12600 WCR 91	Dean	Sylwia Reynolds	HAIN OF C
		15:58	) Concei 50 for to				9 FT	7 FT	5 FT	3 FT	1 FT	11 FT	Beginning Depth	]	۰.	°	0	707	91		ds	USTO
	Time	জ	ntrations				9 FT	7 FT	5 FT	3 FT	- 1 - 1 - 다	11 17	Ending Depth									DY RE
Juna	Received by:		s are equal to X, run deeper			01/05/21	01/05/21	01/05/21	01/05/21	01/05/21	01/05/21	01/05/21	Date Sampled									CORD AND
Munabledroe			Special Instructions: * Run deeper sample for each auger hole if TPH DRO/GRO Concentrations are equal to or greater than 1,000 mg/Kg and/or if total TPH is 2,500 mg/kg or greater. If Benzene PPM is greater than or equal to 10 and 50 for total BTEX, run deeper auger hole. If Chloride Concentrations are greater than or equal to 20,000 mg/kg, run deeper samples.			2:00PM	1:31PM	1:28PM	1:22PM	1:18PM	1:13PM	11:22AM	Time Sampled			- e-mail:	- Fax No:					CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Permian 1400 Ra Midland
C			1,000 Chlorid						<u> </u>				Field Filtered		1							ÉQUI Perr 1400 Midl
			le Co		+					<u></u>	<u> -</u>		Total #, of Containers	+	kaylanlongee@deanequip.com	sylwiareynolds@deandigs. ieffkindlev@deandigs.com						<i>QUEST</i> Permian Basin Environ 1400 Rankin Hwy Midland, Texas 79701
			Kg a	-	++	×	×	×	×	×	×	×	HNO <sub>3 250,ml</sub> Poly	Pre	anlo	iare						Bas
			nd/o		+		-		┼──			┢──	HCI	Preservatio	nge							
			ions		1-1		1	1	1		<u> </u>	$\uparrow$	H <sub>2</sub> SO <sub>4</sub>		0	ds@						iviro 1 7970
			are										NaOH	9 9	lean	ndia						1 nme
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			ter ti	-				<b> </b>	<u> </u>			_	None 1L Poly	ners	io.c							Lab
<u>refall</u>	Date		500 1an (			_	1		+				NaOH/ZnAc	┢┥	mo	mc	l	1	<b>I</b> .	1	1	- 5
			mg/kg ( )r equa										GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	3		<u> </u> <u>0</u>	Report Format:	WORK ORDER #:	Ŧ		Pro	
15:58	Time		d d				The second						TPH TX1005 EXT (TEXA	S)		algroves@paalp.com	ort Format: X Standard	OR	Project Loc: Eddy County, New Mexico	Pr	oject	
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PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

## **Prepared for:**

Sylwia Reynolds Dean 12600 W County Rd 91 Midland, TX 79707

Project: COG Screwdriver Release Project Number: PP-2180 Location: Eddy County, NM

Lab Order Number: 1A22020



NELAP/TCEQ # T104704516-17-8

Report Date: 01/29/21

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-2 @ 3'	1A22020-01	Soil	01/22/21 13:26	01-22-2021 16:29
SSW-1	1A22020-02	Soil	01/22/21 13:30	01-22-2021 16:29
ESW-1	1A22020-03	Soil	01/22/21 13:45	01-22-2021 16:29

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

#### BH-2 @ 3' 1A22020-01 (Soil)

1A22020-01 (S0II)										
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note	
	Perr	nian Basin H	Environmei	ital Lab, I	L <b>.P.</b>					
BTEX by 8021B										
Benzene	ND	0.00109	mg/kg dry	1	P1A2705	01/27/21	01/27/21	EPA 8021B		
Toluene	ND	0.00109	mg/kg dry	1	P1A2705	01/27/21	01/27/21	EPA 8021B		
Ethylbenzene	ND	0.00109	mg/kg dry	1	P1A2705	01/27/21	01/27/21	EPA 8021B		
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P1A2705	01/27/21	01/27/21	EPA 8021B		
Xylene (o)	ND	0.00109	mg/kg dry	1	P1A2705	01/27/21	01/27/21	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		88.5 %	80-120		P1A2705	01/27/21	01/27/21	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		91.4 %	6 80-120		P1A2705	01/27/21	01/27/21	EPA 8021B		
General Chemistry Parameters by EPA /	Standard Method	ls								
Chloride	16.3	1.09	mg/kg dry	1	P1A2609	01/26/21	01/28/21	EPA 300.0		
% Moisture	8.0	0.1	%	1	P1A2401	01/24/21	01/25/21	ASTM D2216		
<u>Total Petroleum Hydrocarbons C6-C35 b</u>	y EPA Method 80	)15M								
C6-C12	ND	27.2	mg/kg dry	1	P1A2507	01/25/21	01/26/21	TPH 8015M		
>C12-C28	ND	27.2	mg/kg dry	1	P1A2507	01/25/21	01/26/21	TPH 8015M		
>C28-C35	ND	27.2	mg/kg dry	1	P1A2507	01/25/21	01/26/21	TPH 8015M		
Surrogate: 1-Chlorooctane		108 %	70-1	30	P1A2507	01/25/21	01/26/21	TPH 8015M		
Surrogate: o-Terphenyl		118 %	70-1	30	P1A2507	01/25/21	01/26/21	TPH 8015M		
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	01/25/21	01/26/21	calc		

Permian Basin Environmental Lab, L.P.

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Dean 12600 W County Rd 91 Midland TX, 79707		Project: COG Screwdriver Release Project Number: PP-2180 Project Manager: Sylwia Reynolds						Fax:	
			SSW-1 020-02 (Soi	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin H	Environmen	tal Lab, I	L. <b>P.</b>				
BTEX by 8021B									
Benzene	0.00151	0.00102	mg/kg dry	1	P1A2705	01/27/21	01/27/21	EPA 8021B	
Toluene	0.0303	0.00102	mg/kg dry	1	P1A2705	01/27/21	01/27/21	EPA 8021B	
Ethylbenzene	0.0113	0.00102	mg/kg dry	1	P1A2705	01/27/21	01/27/21	EPA 8021B	
Xylene (p/m)	0.0212	0.00204	mg/kg dry	1	P1A2705	01/27/21	01/27/21	EPA 8021B	
Xylene (o)	0.00471	0.00102	mg/kg dry	1	P1A2705	01/27/21	01/27/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		87.4 %	80-12	20	P1A2705	01/27/21	01/27/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		92.4 %	80-12	20	P1A2705	01/27/21	01/27/21	EPA 8021B	
General Chemistry Parameters by EP	A / Standard Method	s							
Chloride	70.8	1.02	mg/kg dry	1	P1A2609	01/26/21	01/28/21	EPA 300.0	
% Moisture	2.0	0.1	%	1	P1A2401	01/24/21	01/25/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C3	5 by EPA Method 80	15M							
C6-C12	170	25.5	mg/kg dry	1	P1A2507	01/25/21	01/26/21	TPH 8015M	
>C12-C28	3340	25.5	mg/kg dry	1	P1A2507	01/25/21	01/26/21	TPH 8015M	
>C28-C35	544	25.5	mg/kg dry	1	P1A2507	01/25/21	01/26/21	TPH 8015M	
Surrogate: 1-Chlorooctane		112 %	70-1.	30	P1A2507	01/25/21	01/26/21	TPH 8015M	
Surrogate: o-Terphenyl		123 %	70-1.	30	P1A2507	01/25/21	01/26/21	TPH 8015M	
Total Petroleum Hydrocarbon	4060	25.5	mg/kg dry	1	[CALC]	01/25/21	01/26/21	calc	
C6-C35									

Dean 12600 W County Rd 91 Midland TX, 79707		5	ect: COG Sc ber: PP-2180 ger: Sylwia F	1	Release			Fax:	
			ESW-1 020-03 (Soil	)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin H	Environmen	tal Lab, l	L. <b>P.</b>				
BTEX by 8021B									
Benzene	0.00392	0.00101	mg/kg dry	1	P1A2705	01/27/21	01/28/21	EPA 8021B	
Toluene	0.0146	0.00101	mg/kg dry	1	P1A2705	01/27/21	01/28/21	EPA 8021B	
Ethylbenzene	0.00383	0.00101	mg/kg dry	1	P1A2705	01/27/21	01/28/21	EPA 8021B	
Xylene (p/m)	0.0132	0.00202	mg/kg dry	1	P1A2705	01/27/21	01/28/21	EPA 8021B	
Xylene (o)	0.00308	0.00101	mg/kg dry	1	P1A2705	01/27/21	01/28/21	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		91.2 %	80-12	20	P1A2705	01/27/21	01/28/21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		95.3 %	80-12	20	P1A2705	01/27/21	01/28/21	EPA 8021B	
General Chemistry Parameters by EP	PA / Standard Method	ls							
Chloride	103	1.01	mg/kg dry	1	P1A2609	01/26/21	01/28/21	EPA 300.0	
% Moisture	1.0	0.1	%	1	P1A2401	01/24/21	01/25/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C3	35 by EPA Method 80	15M							
C6-C12	ND	25.3	mg/kg dry	1	P1A2507	01/25/21	01/26/21	TPH 8015M	
>C12-C28	44.6	25.3	mg/kg dry	1	P1A2507	01/25/21	01/26/21	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1A2507	01/25/21	01/26/21	TPH 8015M	
Surrogate: 1-Chlorooctane		113 %	70-13	80	P1A2507	01/25/21	01/26/21	TPH 8015M	
Surrogate: o-Terphenyl		124 %	70-13	80	P1A2507	01/25/21	01/26/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	44.6	25.3	mg/kg dry	1	[CALC]	01/25/21	01/26/21	calc	

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Thatye	Result	Liint	Cints	Lever	Result	Juice	Linits	KI D	Linit	Hotes
Batch P1A2705 - General Preparation (GC)										
Blank (P1A2705-BLK1)				Prepared &	Analyzed:	01/27/21				
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	0.112		"	0.120		93.3	80-120			
Surrogate: 4-Bromofluorobenzene	0.107		"	0.120		89.0	80-120			
LCS (P1A2705-BS1)				Prepared &	Analyzed:	01/27/21				
Benzene	0.105	0.00100	mg/kg wet	0.100	-	105	70-130			
Toluene	0.107	0.00100	"	0.100		107	70-130			
Ethylbenzene	0.107	0.00100	"	0.100		107	70-130			
Xylene (p/m)	0.236	0.00200	"	0.200		118	70-130			
Xylene (o)	0.110	0.00100	"	0.100		110	70-130			
Surrogate: 1,4-Difluorobenzene	0.117		"	0.120		97.4	80-120			
Surrogate: 4-Bromofluorobenzene	0.107		"	0.120		89.3	80-120			
LCS Dup (P1A2705-BSD1)				Prepared &	Analyzed:	01/27/21				
Benzene	0.101	0.00100	mg/kg wet	0.100		101	70-130	4.49	20	
Toluene	0.103	0.00100	"	0.100		103	70-130	3.73	20	
Ethylbenzene	0.106	0.00100	"	0.100		106	70-130	1.66	20	
Xylene (p/m)	0.225	0.00200	"	0.200		113	70-130	4.79	20	
Xylene (o)	0.104	0.00100	"	0.100		104	70-130	5.50	20	
Surrogate: 4-Bromofluorobenzene	0.105		"	0.120		87.5	80-120			
Surrogate: 1,4-Difluorobenzene	0.118		"	0.120		98.7	80-120			
Calibration Check (P1A2705-CCV1)				Prepared &	Analyzed:	01/27/21				
Benzene	0.108	0.00100	mg/kg wet	0.100	-	108	80-120			
Toluene	0.103	0.00100	"	0.100		103	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.232	0.00200	"	0.200		116	80-120			
Xylene (o)	0.110	0.00100	"	0.100		110	80-120			
Surrogate: 1,4-Difluorobenzene	0.111		"	0.120		92.6	75-125			
Surrogate: 4-Bromofluorobenzene	0.102		"	0.120		85.2	75-125			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

### BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyta	Darrelt	Reporting	I le !	Spike Level	Source	0/DEC	%REC	RPD	RPD Limit	Notes
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1A2705 - General Preparation (GC)										
Calibration Check (P1A2705-CCV2)				Prepared &	Analyzed:	01/27/21				
Benzene	0.106	0.00100	mg/kg wet	0.100		106	80-120			
Toluene	0.115	0.00100	"	0.100		115	80-120			
Ethylbenzene	0.112	0.00100	"	0.100		112	80-120			
Xylene (p/m)	0.236	0.00200	"	0.200		118	80-120			
Xylene (o)	0.119	0.00100	"	0.100		119	80-120			
Surrogate: 1,4-Difluorobenzene	0.114		"	0.120		94.9	75-125			
Surrogate: 4-Bromofluorobenzene	0.110		"	0.120		91.4	75-125			
Calibration Check (P1A2705-CCV3)				Prepared: (	01/27/21 A	nalyzed: 01	/28/21			
Benzene	0.103	0.00100	mg/kg wet	0.100		103	80-120			
Toluene	0.114	0.00100	"	0.100		114	80-120			
Ethylbenzene	0.118	0.00100	"	0.100		118	80-120			
Xylene (p/m)	0.237	0.00200	"	0.200		118	80-120			
Xylene (o)	0.120	0.00100		0.100		120	80-120			
Surrogate: 4-Bromofluorobenzene	0.109		"	0.120		91.1	75-125			
Surrogate: 1,4-Difluorobenzene	0.112		"	0.120		93.2	75-125			
Matrix Spike (P1A2705-MS1)	Sou	rce: 1A22020	-01	Prepared: (	01/27/21 A	nalyzed: 01	/28/21			
Benzene	0.0836	0.00109	mg/kg dry	0.109	ND	76.9	80-120			QM-0
Toluene	0.0933	0.00109	"	0.109	ND	85.9	80-120			
Ethylbenzene	0.100	0.00109	"	0.109	ND	92.1	80-120			
Xylene (p/m)	0.196	0.00217	"	0.217	ND	90.2	80-120			
Xylene (o)	0.104	0.00109		0.109	ND	95.4	80-120			
Surrogate: 1,4-Difluorobenzene	0.127		"	0.130		97.2	80-120			
Surrogate: 4-Bromofluorobenzene	0.135		"	0.130		104	80-120			
Matrix Spike Dup (P1A2705-MSD1)	Sou	ırce: 1A22020	-01	Prepared: (	01/27/21 A	nalyzed: 01	/28/21			
Benzene	0.0857	0.00109	mg/kg dry	0.109	ND	78.8	80-120	2.44	20	QM-0
Toluene	0.0947	0.00109	"	0.109	ND	87.1	80-120	1.43	20	
Ethylbenzene	0.0983	0.00109	"	0.109	ND	90.5	80-120	1.84	20	
Xylene (p/m)	0.195	0.00217	"	0.217	ND	89.5	80-120	0.751	20	
Xylene (o)	0.103	0.00109		0.109	ND	95.2	80-120	0.252	20	
Surrogate: 4-Bromofluorobenzene	0.128		"	0.130		98.2	80-120			
Surrogate: 1,4-Difluorobenzene	0.132		"	0.130		101	80-120			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1A2401 - *** DEFAULT PREP ***										
Blank (P1A2401-BLK1)				Prepared: 0	1/24/21 A	Analyzed: 01	/25/21			
% Moisture	ND	0.1	%							
Blank (P1A2401-BLK2)				Prepared: 0	1/24/21 A	Analyzed: 01	/25/21			
% Moisture	ND	0.1	%							
Blank (P1A2401-BLK3)				Prepared: 0	1/24/21 A	Analyzed: 01	/25/21			
% Moisture	ND	0.1	%							
Blank (P1A2401-BLK4)				Prepared: 0	1/24/21 A	Analyzed: 01	/25/21			
% Moisture	ND	0.1	%							
Blank (P1A2401-BLK5)				Prepared: 0	01/24/21 A	Analyzed: 01	/25/21			
% Moisture	ND	0.1	%							
Blank (P1A2401-BLK6)				Prepared: 0	01/24/21 A	Analyzed: 01	/25/21			
% Moisture	ND	0.1	%							
Blank (P1A2401-BLK7)				Prepared: 0	1/24/21 A	Analyzed: 01	/25/21			
% Moisture	ND	0.1	%							
Duplicate (P1A2401-DUP1)	Sou	rce: 1A22004-	05	Prepared: 0	01/24/21 A	Analyzed: 01	/25/21			
% Moisture	6.0	0.1	%		7.0			15.4	20	
Duplicate (P1A2401-DUP2)	Sou	rce: 1A22005-	08	Prepared: 0	01/24/21 A	Analyzed: 01	/25/21			
% Moisture	7.0	0.1	%		6.0			15.4	20	
Duplicate (P1A2401-DUP3)	Sou	rce: 1A22006-	15	Prepared: 0	1/24/21	Analyzed: 01	/25/21			
% Moisture	18.0	0.1	%		17.0			5.71	20	

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1A2401 - *** DEFAULT PREP ***										
Duplicate (P1A2401-DUP4)	Sou	rce: 1A22007-	08	Prepared: (	)1/24/21 A	Analyzed: 01/	/25/21			
% Moisture	9.0	0.1	%		7.0			25.0	20	R
Duplicate (P1A2401-DUP5)	Sou	rce: 1A22008-	12	Prepared: (	)1/24/21 A	Analyzed: 01/	/25/21			
% Moisture	7.0	0.1	%		7.0			0.00	20	
Duplicate (P1A2401-DUP6)	Sou	rce: 1A22008-	22	Prepared: (	)1/24/21 <i>A</i>	Analyzed: 01/	/25/21			
% Moisture	9.0	0.1	%		8.0			11.8	20	
Duplicate (P1A2401-DUP7)	Sou	rce: 1A22009-	09	Prepared: (	)1/24/21 <i>A</i>	Analyzed: 01/	/25/21			
% Moisture	7.0	0.1	%		7.0			0.00	20	
Duplicate (P1A2401-DUP8)	Sou	rce: 1A22010-	01	Prepared: (	)1/24/21 A	Analyzed: 01/	/25/21			
% Moisture	6.0	0.1	%		6.0			0.00	20	
Duplicate (P1A2401-DUP9)	Sou	rce: 1A22013-	05	Prepared: (	)1/24/21 A	Analyzed: 01/	/25/21			
% Moisture	4.0	0.1	%		4.0			0.00	20	
Duplicate (P1A2401-DUPA)	Sou	rce: 1A22016-	04	Prepared: (	)1/24/21 A	Analyzed: 01/	/25/21			
% Moisture	18.0	0.1	%		19.0			5.41	20	
Duplicate (P1A2401-DUPB)	Sou	rce: 1A22018-	04	Prepared: (	)1/24/21 A	Analyzed: 01/	25/21			
% Moisture	11.0	0.1	%	1	12.0			8.70	20	
Duplicate (P1A2401-DUPC)	Sou	rce: 1A22018-	14	Prepared: (	)1/24/21 <i>A</i>	Analyzed: 01/	/25/21			
% Moisture	6.0	0.1	%	1	6.0	,		0.00	20	
Duplicate (P1A2401-DUPD)	Sou	rce: 1A22019-	11	Prenared (	)1/24/21	Analyzed: 01/	25/21			
% Moisture	9.0	0.1	%	- reparedi (	9.0			0.00	20	

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result		%REC Limits	RPD	RPD Limit	Notes
Batch P1A2609 - *** DEFAULT PREP ***										
Blank (P1A2609-BLK1)				Prepared: (	01/26/21	Analyzed: 01	/27/21			
Chloride	ND	1.00	mg/kg wet							
LCS (P1A2609-BS1)				Prepared: (	01/26/21	Analyzed: 01	/27/21			
Chloride	387	1.00	mg/kg wet	400		96.8	90-110			
LCS Dup (P1A2609-BSD1)				Prepared: (	01/26/21	Analyzed: 01	/27/21			
Chloride	386	1.00	mg/kg wet	400		96.5	90-110	0.295	20	
Calibration Check (P1A2609-CCV1)				Prepared: (	01/26/21	Analyzed: 01	/27/21			
Chloride	19.4		mg/kg	20.0		96.9	90-110			
Calibration Check (P1A2609-CCV2)				Prepared: (	01/26/21	Analyzed: 01	/28/21			
Chloride	19.9		mg/kg	20.0		99.7	90-110			
Calibration Check (P1A2609-CCV3)				Prepared: (	01/26/21	Analyzed: 01	/28/21			
Chloride	20.0		mg/kg	20.0		100	90-110			
Matrix Spike (P1A2609-MS1)	Sou	rce: 1A22008	8-25	Prepared: (	01/26/21	Analyzed: 01	/27/21			
Chloride	2470	5.32	mg/kg dry	532	2000	89.4	80-120			
Matrix Spike (P1A2609-MS2)	Sou	rce: 1A22016	6-07	Prepared: (	01/26/21	Analyzed: 01	/28/21			
Chloride	3700	11.0	mg/kg dry	1100	2830	79.2	80-120			QM-05
Matrix Spike Dup (P1A2609-MSD1)	Sou	rce: 1A22008	8-25	Prepared: (	01/26/21	Analyzed: 01	/27/21			
Chloride	2510		mg/kg dry	532	2000	96.0	80-120	1.41	20	
Matrix Spike Dup (P1A2609-MSD2)	Sou	rce: 1A22016	5-07	Prepared (	)1/26/21	Analyzed: 01	/28/21			
Chloride	3740		mg/kg dry	1100	2830	82.7	80-120	1.05	20	

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

### Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1A2507 - TX 1005										
Blank (P1A2507-BLK1)				Prepared &	Analyzed:	01/25/21				
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0								
Surrogate: 1-Chlorooctane	99.9		"	100		99.9	70-130			
Surrogate: o-Terphenyl	54.0		"	50.0		108	70-130			
LCS (P1A2507-BS1)				Prepared &	Analyzed:	01/25/21				
C6-C12	820	25.0	mg/kg wet	1000		82.0	75-125			
>C12-C28	862	25.0	"	1000		86.2	75-125			
Surrogate: 1-Chlorooctane	111		"	100		111	70-130			
Surrogate: o-Terphenyl	54.5		"	50.0		109	70-130			
LCS Dup (P1A2507-BSD1)				Prepared &	Analyzed:	01/25/21				
C6-C12	836	25.0	mg/kg wet	1000		83.6	75-125	1.92	20	
>C12-C28	864	25.0	"	1000		86.4	75-125	0.200	20	
Surrogate: 1-Chlorooctane	115		"	100		115	70-130			
Surrogate: o-Terphenyl	56.9		"	50.0		114	70-130			
Calibration Check (P1A2507-CCV1)				Prepared &	Analyzed:	01/25/21				
C6-C12	459	25.0	mg/kg wet	500	<b>·</b>	91.7	85-115			
>C12-C28	525	25.0		500		105	85-115			
Surrogate: 1-Chlorooctane	98.1		"	100		98.1	70-130			
Surrogate: o-Terphenyl	50.4		"	50.0		101	70-130			
Calibration Check (P1A2507-CCV2)				Prepared: (	)1/25/21 Ai	nalyzed: 01	/26/21			
C6-C12	440	25.0	mg/kg wet	500		88.0	85-115			
>C12-C28	435	25.0	"	500		87.1	85-115			
Surrogate: 1-Chlorooctane	104		"	100		104	70-130			
Surrogate: o-Terphenyl	53.6		"	50.0		107	70-130			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1A2507 - TX 1005							10.6 (0.1			
Duplicate (P1A2507-DUP1)	Source	e: 1A22016	-10	Prepared: 0	01/25/21 Ai	nalyzed: 01	/26/21			
C6-C12	19.2	27.5	mg/kg dry		38.9			68.0	20	R3
>C12-C28	50.1	27.5	"		449			160	20	R3
Surrogate: 1-Chlorooctane	126		"	110		115	70-130			
Surrogate: o-Terphenyl	68.7		"	54.9		125	70-130			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

#### **Notes and Definitions**

ROI	Received on Ice
R3	The RPD exceeded the acceptance limit due to sample matrix effects.
R2	The RPD exceeded the acceptance limit.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
BULK	Samples received in Bulk soil containers
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:

un Barron

1/29/2021

Brent Barron, Laboratory Director/Technical Director

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Date:

Dean	Project: COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number: PP-2180	
Midland TX, 79707	Project Manager: Sylwia Reynolds	

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

Received by:	ed by Relinquished by:	Religivished by: Karlin Hallel	Special Instructions: Run deeper sample for each auger hole if TPH DRO/GRO Concentrations are equal to or greater than 1,000 mg/Kg and/or if total TPH is 2,500 mg/kg or Greater. If Benzene PPM is greater than or equal to 10 and 50 for total BTEX, run deeper auger hole. If Chloride Concentrations are greater than or equal to 220,000 mg/kg, run deeper samples.	9-22						3 ESW-1	2 SSM-1	1 6ff-2 @ 3'	LAB # (lab use only) FIELD CODE	ORDER # 14 22020	(iab use only)		Sampler Signature:	Telephone No:	City/State/Zip:	Company Address:	Company Name	Project Manager:	ge 119 of 148 PBBLAB
Date	Dâte	Date Date	f TPH DRO/GRO ( equal to 10 and 5(														Robert Belloc	432-230-0920	Midland TX 79707	12600 WCR 91	Dean	Sylwia Reynolds	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Permian 1400 Ra Midland
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Temperature Upon Receipt Received: 5,3 °C Fac Adjusted: 5,3 °C Fac	Sample Hand Delivered by Sampler/Client Rep. 7 by Courier? UPS	Labels on container(s) Custody seals on container(s) Custody seals on cooler(s)	Laboratory Comments: Sample Containers Intart? VOCs Free of Headspace?										PAINT FILTER	<u>.</u>		Analyze For:	elizabethstuart@deandigs.com algroves@paalp.com	řď		Eddy County, New Mexico		Ĩ	Phone: 432-686-7235
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PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

### Prepared for:

Sylwia Reynolds Dean 12600 W County Rd 91 Midland, TX 79707

Project: COG Screwdriver Release Project Number: PP-2180 Location: Eddy County, NM

Lab Order Number: 1B24001



NELAP/TCEQ # T104704516-17-8

Report Date: 03/02/21

Dean	Project: COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number: PP-2180	
Midland TX, 79707	Project Manager: Sylwia Reynolds	

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SSW-1A	1B24001-01	Soil	02/23/21 10:25	02-23-2021 16:58

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

### SSW-1A 1B24001-01 (Soil)

		1824	001-01 (Soi	1)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Rasin F	Invironmen	tal Lah	I. P				
	I CI III	lan Dasin I	invir onnien	ital Laby	L/•I •				
<b>General Chemistry Parameters by EP</b>	A / Standard Methods	8							
% Moisture	3.0	0.1	%	1	P1B2505	02/25/21	02/25/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C3	5 by EPA Method 801	5M							
C6-C12	35.8	25.8	mg/kg dry	1	P1B2413	02/24/21	02/25/21	TPH 8015M	
>C12-C28	1140	25.8	mg/kg dry	1	P1B2413	02/24/21	02/25/21	TPH 8015M	
>C28-C35	181	25.8	mg/kg dry	1	P1B2413	02/24/21	02/25/21	TPH 8015M	
Surrogate: 1-Chlorooctane		86.9 %	70-1.	30	P1B2413	02/24/21	02/25/21	TPH 8015M	
Surrogate: o-Terphenyl		100 %	70-1.	30	P1B2413	02/24/21	02/25/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	1360	25.8	mg/kg dry	1	[CALC]	02/24/21	02/25/21	calc	

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

### Permian Basin Environmental Lab, L.P.

	Reporting			Spike Source			%REC RPD			
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1B2505 - *** DEFAULT PREP ***										
Blank (P1B2505-BLK1)				Prepared &	Analyzed:	02/25/21				
% Moisture	ND	0.1	%							
Blank (P1B2505-BLK2)	]		Prepared &	Analyzed:	02/25/21					
% Moisture	ND	0.1	%							
Duplicate (P1B2505-DUP1)	Sourc	e: 1B24007-	03	Prepared &	Analyzed:	02/25/21				
% Moisture	10.0	0.1	%		9.0			10.5	20	
Duplicate (P1B2505-DUP2)	Sourc	e: 1B24007-	13	Prepared &	Analyzed:	02/25/21				
% Moisture	8.0	0.1	%		9.0			11.8	20	
Duplicate (P1B2505-DUP3)	Sourc	e: 1B24007-	20	Prepared &	Analyzed:	02/25/21				
% Moisture	12.0	0.1	%		14.0			15.4	20	

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

### Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1B2413 - TX 1005										
Blank (P1B2413-BLK1)				Prepared: (	02/24/21 A	nalyzed: 02	/25/21			
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	88.7		"	100		88.7	70-130			
Surrogate: o-Terphenyl	48.5		"	50.0		97.0	70-130			
LCS (P1B2413-BS1)				Prepared: (	02/24/21 A	nalyzed: 02	/25/21			
C6-C12	853	25.0	mg/kg wet	1000		85.3	75-125			
>C12-C28	858	25.0	"	1000		85.8	75-125			
Surrogate: 1-Chlorooctane	127		"	100		127	70-130			
Surrogate: o-Terphenyl	51.7		"	50.0		103	70-130			
LCS Dup (P1B2413-BSD1)				Prepared: (	02/24/21 A	nalyzed: 02	/25/21			
C6-C12	852	25.0	mg/kg wet	1000		85.2	75-125	0.103	20	
>C12-C28	837	25.0	"	1000		83.7	75-125	2.51	20	
Surrogate: 1-Chlorooctane	125		"	100		125	70-130			
Surrogate: o-Terphenyl	50.1		"	50.0		100	70-130			
Calibration Blank (P1B2413-CCB1)				Prepared: (	02/24/21 A	nalyzed: 02	/25/21			
C6-C12	9.92		mg/kg wet							
>C12-C28	18.4		"							
Surrogate: 1-Chlorooctane	83.5		"	100		83.5	70-130			
Surrogate: o-Terphenyl	45.4		"	50.0		90.9	70-130			
Calibration Check (P1B2413-CCV1)				Prepared &	Analyzed:	02/24/21				
C6-C12	430	25.0	mg/kg wet	500		85.9	85-115			
>C12-C28	437	25.0		500		87.4	85-115			
Surrogate: 1-Chlorooctane	103		"	100		103	70-130			
Surrogate: o-Terphenyl	49.0		"	50.0		98.1	70-130			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

### Permian Basin Environmental Lab, L.P.

Analyte Batch P1B2413 - TX 1005	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Duplicate (P1B2413-DUP1)	Source	e: 1B24003-	-01	Prepared: 0	2/24/21 Ar	nalyzed: 02	/25/21			
C6-C12	1930	133	mg/kg dry		1990			3.38	20	
>C12-C28	10400	133	"		10500			1.12	20	
Surrogate: 1-Chlorooctane	138		"	106		129	70-130			
Surrogate: o-Terphenyl	57.7		"	53.2		108	70-130			

Permian Basin Environmental Lab, L.P.

### **Notes and Definitions**

Project Manager: Sylwia Reynolds

ROI	Received on Ice

Midland TX, 79707

Dean

- BULK Samples received in Bulk soil containers
- DET Analyte DETECTED
- Analyte NOT DETECTED at or above the reporting limit ND
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike
- Dup Duplicate

an Barron

Report Approved By:

Date:

3/2/2021

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Page 126 of 148

Project Manager:     Symia Reynolds       Company Name     Dean       Company Name     Dean       Company Name     12600 WCR 91       ChyState/Zip:     Midland TX 79707       Telephone No:     432:230-0920       Sampler Signature:     432:230-0920       ChyState/Zip:     Fax No:       Sampler Signature:     432:230-0920       ChyState/Zip:     Fax No:       Sampler Signature:     432:230-0920       Fax No:     Fax No:       Sampler Signature:     432:230-0920       Fax No:     Fax No:       Sampler Signature:     432:230-0920       Fax No:     Fax No:       Sampler Signature:     Sampler Signature:       Sampler Signature:<	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
Name     Dean       Name     Dean       Address:     12600 WCR 91       Address:     12600 WCR 91       No:     432-230-0920       No:     432-230-0920       Factor     Factor       Ignature:     Wildland TX 79707       No:     432-230-0920       Factor     Factor       Ignature:     Wildland TX 79707       Factor     Factor       Ignature:     Ignature       Ignature:     Ignature   <	CHAIN OF CUSTODY RECORD AND A
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PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

### Prepared for:

Sylwia Reynolds Dean 12600 W County Rd 91 Midland, TX 79707

Project: COG Screwdriver Release Project Number: PP-2180 Location: Eddy County, NM

Lab Order Number: 1C22012



NELAP/TCEQ # T104704516-17-8

Report Date: 03/26/21

Dean	Project: COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number: PP-2180	
Midland TX, 79707	Project Manager: Sylwia Reynolds	

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SSW-1B	1C22012-01	Soil	03/18/21 08:34	03-19-2021 16:59

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

### SSW-1B

		1C22	012-01 (Soi	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin H	Environmen	tal Lab, I	L <b>.P.</b>				
General Chemistry Parameters by EPA	A / Standard Methods	8							
% Moisture	1.0	0.1	%	1	P1C2306	03/23/21	03/23/21	ASTM D2216	
Total Petroleum Hydrocarbons C6-C3	5 by EPA Method 801	5M							
C6-C12	ND	25.3	mg/kg dry	1	P1C2408	03/24/21	03/25/21	TPH 8015M	
>C12-C28	28.4	25.3	mg/kg dry	1	P1C2408	03/24/21	03/25/21	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1C2408	03/24/21	03/25/21	TPH 8015M	
Surrogate: 1-Chlorooctane		94.7 %	70-1.	30	P1C2408	03/24/21	03/25/21	TPH 8015M	
Surrogate: o-Terphenyl		92.4 %	70-1.	30	P1C2408	03/24/21	03/25/21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	28.4	25.3	mg/kg dry	1	[CALC]	03/24/21	03/25/21	calc	

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1C2306 - *** DEFAULT PREP ***										
Blank (P1C2306-BLK1)				Prepared &	& Analyzed:	: 03/23/21				
% Moisture	ND	0.1	%							
Blank (P1C2306-BLK2)				Prepared &	& Analyzed:	: 03/23/21				
% Moisture	ND	0.1	%							
Blank (P1C2306-BLK3)				Prepared &	& Analyzed:	: 03/23/21				
% Moisture	ND	0.1	%							
Blank (P1C2306-BLK4)				Prepared &	& Analyzed:	: 03/23/21				
% Moisture	ND	0.1	%							
Blank (P1C2306-BLK5)				Prepared &	k Analyzed:	: 03/23/21				
% Moisture	ND	0.1	%							
Blank (P1C2306-BLK6)				Prepared &	& Analyzed:	: 03/23/21				
% Moisture	ND	0.1	%							
Blank (P1C2306-BLK7)				Prepared &	& Analyzed:	: 03/23/21				
% Moisture	ND	0.1	%							
Blank (P1C2306-BLK8)				Prepared &	& Analyzed:	: 03/23/21				
% Moisture	ND	0.1	%							
Blank (P1C2306-BLK9)				Prepared &	analyzed:	: 03/23/21				
% Moisture	ND	%								
Duplicate (P1C2306-DUP1)	icate (P1C2306-DUP1) Source: 1C22001-10				k Analyzed:	: 03/23/21				
% Moisture	6.0	0.1	%		6.0			0.00	20	

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1C2306 - *** DEFAULT PREP ***										
Duplicate (P1C2306-DUP2)	Sou	rce: 1C22001-	20	Prepared &	Analyzed:	03/23/21				
% Moisture	12.0	0.1	%		12.0			0.00	20	
Duplicate (P1C2306-DUP3)	Sou	rce: 1C22002-	11	Prepared &	Analyzed:	03/23/21				
% Moisture	10.0	0.1	%		11.0			9.52	20	
Duplicate (P1C2306-DUP4)	Sou	rce: 1C22003-	10	Prepared 8	Analyzed:	03/23/21				
% Moisture	14.0	0.1	%		14.0			0.00	20	
Duplicate (P1C2306-DUP5)	Sou	rce: 1C22004-	05	Prepared &	Analyzed:	03/23/21				
% Moisture	12.0	0.1	%		9.0			28.6	20	R
Duplicate (P1C2306-DUP6)	Sou	rce: 1C22005-	03	Prepared & Analyzed: 03/23/21						
% Moisture	1.0	0.1	%	2.0				66.7	20	R
Duplicate (P1C2306-DUP7)	Source: 1C22007-13 Prepared & Analyzed: 03/23/21									
% Moisture	13.0	0.1	%		11.0			16.7	20	
Duplicate (P1C2306-DUP8)	Sou	rce: 1C22009-	02	Prepared 8	Analyzed:	03/23/21				
% Moisture	ND	0.1	%		ND				20	
Duplicate (P1C2306-DUP9)	Sou	rce: 1C22011-	01	Prepared 8	Analyzed:	03/23/21				
% Moisture	5.0	0.1	%		5.0			0.00	20	
Duplicate (P1C2306-DUPA)	Sou	rce: 1C22016-	06	Prepared &	Analyzed:	03/23/21				
% Moisture	12.0	0.1	%		12.0			0.00	20	
Duplicate (P1C2306-DUPB)	Sou	rce: 1C22021-	08	Prepared &	Analyzed:	03/23/21				
% Moisture	ND	0.1	%		ND				20	

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### Permian Basin Environmental Lab, L.P.

		Reporting	Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1C2306 - *** DEFAULT PREP ***										
Duplicate (P1C2306-DUPC)	Sour	ce: 1C22021-	Prepared &	Analyzed:	03/23/21					
% Moisture	ND	0.1	%		ND				20	
Duplicate (P1C2306-DUPD)	Sour	ce: 1C22021-	33	Prepared &	Analyzed:	03/23/21				
% Moisture	ND	0.1	%		ND				20	
Duplicate (P1C2306-DUPE)	Sour	ce: 1C22021-	43	Prepared &	Analyzed:	03/23/21				
% Moisture	ND	ND 0.1 % ND						20		
Duplicate (P1C2306-DUPF)	Sour	ce: 1C22021-	58	Prepared &	Analyzed:	03/23/21				
% Moisture	ND	0.1	%		ND				20	
Duplicate (P1C2306-DUPG)	Sour	ce: 1C22021-	Prepared &	Analyzed:	03/23/21					
% Moisture	1.0 0.1 %				2.0			66.7	20	F

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

### Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P1C2408 - TX 1005										
Blank (P1C2408-BLK1)				Prepared: (	)3/24/21 At	nalyzed: 03	/25/21			
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	89.0		"	100		89.0	70-130			
Surrogate: o-Terphenyl	45.5		"	50.0		91.0	70-130			
LCS (P1C2408-BS1)				Prepared: (	)3/24/21 Ai	nalyzed: 03	/25/21			
C6-C12	983	25.0	mg/kg wet	1000		98.3	75-125			
>C12-C28	978	25.0	"	1000		97.8	75-125			
Surrogate: 1-Chlorooctane	97.8		"	100		97.8	70-130			
Surrogate: o-Terphenyl	49.1		"	50.0		98.3	70-130			
LCS Dup (P1C2408-BSD1)				Prepared: (	)3/24/21 Ai	nalyzed: 03	/25/21			
C6-C12	993	25.0	mg/kg wet	1000		99.3	75-125	1.02	20	
>C12-C28	969	25.0	"	1000		96.9	75-125	0.953	20	
Surrogate: 1-Chlorooctane	96.4		"	100		96.4	70-130			
Surrogate: o-Terphenyl	47.9		"	50.0		95.8	70-130			
Calibration Check (P1C2408-CCV1)				Prepared: (	)3/24/21 Ai	nalyzed: 03	/25/21			
C6-C12	479	25.0	mg/kg wet	500		95.9	85-115			
>C12-C28	526	25.0	"	500		105	85-115			
Surrogate: 1-Chlorooctane	110		"	100		110	70-130			
Surrogate: o-Terphenyl	47.8		"	50.0		95.5	70-130			
Calibration Check (P1C2408-CCV2)				Prepared: (	)3/24/21 Ai	nalyzed: 03	/26/21			
C6-C12	426	25.0	mg/kg wet	500		85.2	85-115			
>C12-C28	428	25.0	"	500		85.6	85-115			
Surrogate: 1-Chlorooctane	91.1		"	100		91.1	70-130			
Surrogate: o-Terphenyl	40.1		"	50.0		80.1	70-130			

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:	
12600 W County Rd 91	Project Number:	PP-2180		
Midland TX, 79707	Project Manager:	Sylwia Reynolds		

### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

### Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch P1C2408 - TX 1005											
Calibration Check (P1C2408-CCV3)				Prepared: (	)3/24/21 A	nalyzed: 03	/26/21				
C6-C12	470	25.0	mg/kg wet	500		94.0	85-115				
>C12-C28	523	25.0	"	500		105	85-115				
Surrogate: 1-Chlorooctane	108		"	100		108	70-130				
Surrogate: o-Terphenyl	47.5		"	50.0		95.1	70-130				
Matrix Spike (P1C2408-MS1)	Sou	rce: 1C22021	1-06	Prepared: (	03/24/21 A	nalyzed: 03	/26/21				
C6-C12	895	25.0	mg/kg dry	1000	ND	89.5	75-125				
>C12-C28	925	25.0	"	1000	21.6	90.4	75-125				
Surrogate: 1-Chlorooctane	120		"	100		120	70-130				
Surrogate: o-Terphenyl	45.6		"	50.0		91.1	70-130				
Matrix Spike Dup (P1C2408-MSD1)	Sou	rce: 1C22021	1-06	Prepared: (	)3/24/21 A	nalyzed: 03	/26/21				
C6-C12	936	25.0	mg/kg dry	1000	ND	93.6	75-125	4.46	20		
>C12-C28	952	25.0	"	1000	21.6	93.0	75-125	2.86	20		
Surrogate: 1-Chlorooctane	127		"	100		127	70-130				
Surrogate: o-Terphenyl	48.5		"	50.0		97.0	70-130				

Permian Basin Environmental Lab, L.P.

Dean	Project:	COG Screwdriver Release	Fax:
12600 W County Rd 91	Project Number:	PP-2180	
Midland TX, 79707	Project Manager:	Sylwia Reynolds	

### **Notes and Definitions**

ROI	Received on Ice

- R2 The RPD exceeded the acceptance limit.
- BULK Samples received in Bulk soil containers
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike
- Dup Duplicate

Sun Barron

Report Approved By:

3/26/2021

Date:

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

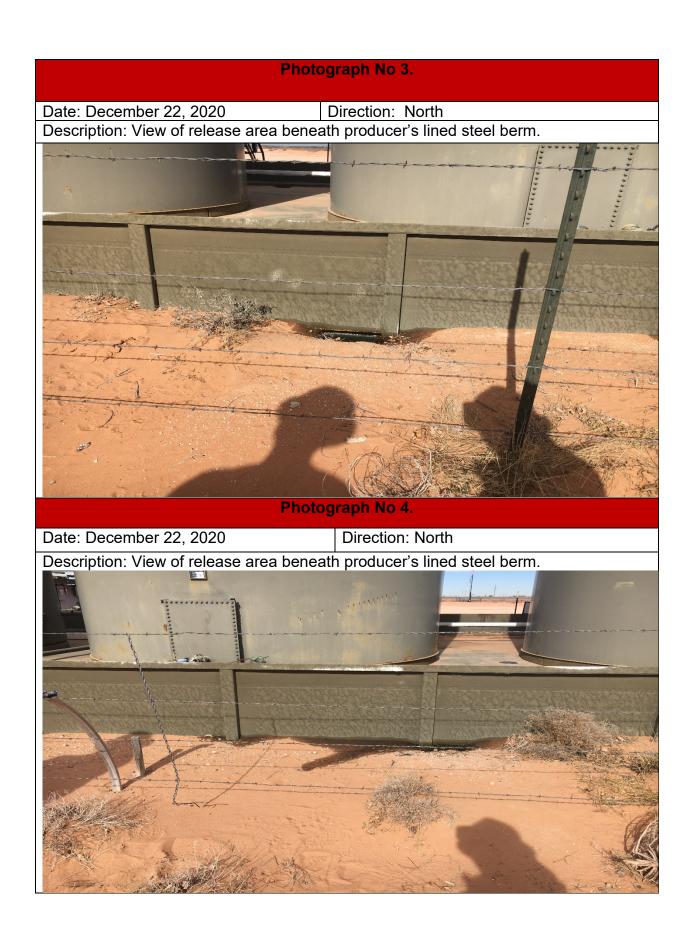
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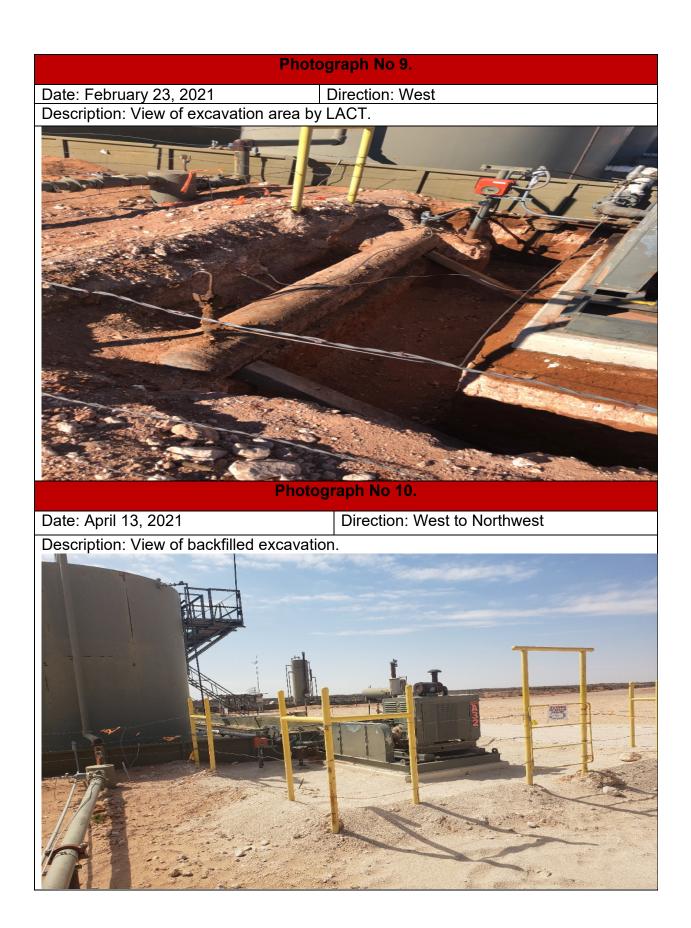
# APPENDIX D PHOTOGRAPHIC DOCUMENTATION











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# APPENDIX E EXTENSION REQUEST AND NMOCD RESPONSE

From:	Hamlet, Robert, EMNRD
То:	Amber L Groves
Cc:	<u>Billings, Bradford, EMNRD; Bratcher, Mike, EMNRD; Camille J Bryant; Bratcher, Mike, EMNRD; Eads, Cristina,</u> EMNRD; Hensley, Chad, EMNRD
Subject:	(Extension Approval) NAPP2036337003 Plains COG Screwdriver 24 Fed Com 2H
Date:	Thursday, April 8, 2021 8:46:00 AM

RE: Incident #NAPP2036337003

### Amber,

Plains request for an extension to **June 7th, 2021** is approved. Remediation activities has been completed and extensive delineation conducted under the producers tank battery. Plains is currently in the process of writing a closure/deferral request and has submitted data to the producer pending a response.

Robert Hamlet • Environmental Specialist - Advanced Environmental Bureau EMNRD - Oil Conservation Division 811 S. First Street | Artesia, NM 88210 575.909.0302 | robert.hamlet@state.nm.us http://www.emnrd.state.nm.us/OCD/



From: Amber L Groves <ALGroves@paalp.com>
Sent: Wednesday, April 7, 2021 1:25 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Venegas, Victoria, EMNRD
<Victoria.Venegas@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>
Cc: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Bratcher, Mike, EMNRD
<mike.bratcher@state.nm.us>; Camille J Bryant <CJBryant@paalp.com>
Subject: [EXT] nAPP2036337003 Plains COG Screwdriver 24 Fed Com 2H

Good Afternoon,

Plains would like to respectfully request a 60 day extension for nAPP2036337003 Plains COG Screwdriver 24 Fed Com 2H. Remediation activities have been completed and extensive delineation conducted under the producers tank battery this release impacted. Plains is currently in the process of writing a closure/deferral request and has submitted data to the producer pending a response. Please feel free to give me a call at (575)200-5517 should you have any questions.

Thank you,

Amber L. Groves Remediation Coordinator Plains All American 3112 W. US Hwy 82 Lovington, NM 88260 575-200-5517

Attention:

The information contained in this message and/or attachments is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. If you received this in error, please contact the Plains Service Desk at 713-646-4444 and delete the material from any system and destroy any copies.

This footnote also confirms that this email message has been scanned for Viruses and Content and cleared.

Received by OCD: 6/16/2021 9:22:14 AM Form C-141 State of New Mexico

Oil Conservation Division

Page 147 of 148

Incident ID	nAPP2036337003
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)

<b>Deferral Requests Only:</b> Each of the following items must be co	onfirmed as part of any request for de	eferral 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: <u>Amber Groves</u>	Title: <u>_Remediation Coordinator</u>						
Signature:	Date: <u>06/16/2021</u>						
email: <u>algroves@paalp.com</u>	Telephone: <u>575-200-5517</u>						
OCD Only							
Received by: <u>Robert Hamlet</u>	Date:9/21/2021						
Approved Approved with Attached Conditions of	f Approval Denied	X Deferral Approved					
Signature: Robert Hamlet	Date: 9/21/2021						

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

Operator:	OGRID:
PLAINS MARKETING L.P.	34053
333 Clay St, Ste 1600	Action Number:
Houston, TX 77002	32294
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
	Plains deferral requests to complete final remediation for impacted soils remaining from 1 ft to 7 ft (denoted by auger holes AH-1 [from 3 to 7' bgs], AH-2H [ at 1' bgs], AH-3H [ at 1' bgs] and AH-7 [from 1' to 5' bgs]) beneath the producer's tank battery until time of abandonment, due to limited accessibility to impacted soils (i.e. lined tank battery, steel berm). Plains also request a variance to include a deferral of cleanup/remediation of impacted soils remaining from 3 ft to 7 ft bgs (denoted by AH-1) within LACT unit due to limited accessibility and to ensure the structural integrity of the LACT unit until time of abandonment or upgrade to system. At this time, OCD approves the request. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue. This is a Federal site and will require like approval from BLM.	9/21/2021

CONDITIONS

Action 32294