Form C-141
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State of New Mexico
Oil Conservation Division

Incident ID	NDHR1918362280
District RP	1RP-5597
Facility ID	fDHR1918362181
Application ID	pDHR1918361742

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	80 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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State of New Mexico
Oil Conservation Division

Incident ID	NDHR1918362280
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Amber Groves Title: Remediation Coordinator

Signature: Amber Groves Date: 12/19/2019

email: algroves@paalp.com Telephone: 575-200-5517

OCD Only

Received by: Cristina Eads Date: 02/24/2020

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State of New Mexico
Oil Conservation Division

Incident ID	NDHR1918362280
District RP	1RP-5597
Facility ID	fDHR1918362181
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Remediation Plan

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

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

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Amber Groves Title: Remediation Coordinator

Signature: Amber Groves Date: 12/19/2019

email: algroves@paalp.com Telephone: 575-200-5517

OCD Only

Received by: Cristina Eads Date: 02/24/2020

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

Signature: Cristina Eads Date: 02/24/2020

12600 WEST CO RD 91

MIDLAND, TX 79707

OFFICE: 432.653.4203

CHARACTERIZATION AND DELINEATION ACTIVITIES REPORT AND PROPOSED REMEDIATION AND SITE RESTORATION WORKPLAN

PLAINS PIPELINE, L.P.

FORMER ANDERSON RANCH STATION HISTORICAL

LEA COUNTY, NM

NMOCD INCIDENT #: 1RP-5597

SRS #: ANDERSON RANCH STATION HISTORICAL

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January 3, 2020

New Mexico Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

New Mexico State Land Office
Attn: Mr. Ryan Mann
914 N. Linam Street
Hobbs, New Mexico 88240

Re: **Characterization and Delineation Activities Report and Proposed Remediation and Site Restoration Workplan**

Former Anderson Ranch Station Historical

Unit Letter H, Section 23, Township 16S, Range 33E

GPS Coordinates: N 32.910198, W -103.627501

Lea County, New Mexico

NMOCD Incident #: 1RP-5597

1. Introduction

Dean Companies, Inc. (Dean) is pleased to present this Characterization and Delineation Activities Report and Proposed Remediation and Site Restoration Workplan on behalf of Plains Pipeline, L.P. (Plains) to document the results of field delineation activities that were conducted at the Former Anderson Ranch Station Historical Release site. The historical crude oil release is located off Hwy 82, approximately 8.69 miles northeast of Maljamar, New Mexico in Unit Letter H, Section 23, Township 16S and Range 33E. The GPS coordinates for the site are N 32.910198° and W -103.627501°. A “Site Location Map” is provided as Figure 1. This site is located on New Mexico State Trust Land.

2. Release Description and Response

During site reclamation activities, a historic crude oil impact was discovered at the Former Anderson Ranch Station Historical Release site. An unknown volume of crude was released with

no known recovery. The release affected an area measuring approximately one hundred fifteen (115) feet (ft.) in length by eighty (80) ft. in width with a maximum depth of four (4) ft below ground surface (bgs). On July 2, 2019, Plains submitted the C-141 Form to the NMOCD (Appendix A).

On August 26, 2019, Dean was assigned management responsibilities for impacted soil delineation, remediation, soil sampling, site restoration, and reporting activities by Plains.

3. NMOCD Regulatory Limits

New Mexico Oil Conservation Division (NMOCD) assessment and cleanup levels for hydrocarbon and saltwater releases are based on depth to groundwater and follow the criteria in the revised August 2018 Title 19 Chapter 15 Part 29 New Mexico Administrative Code (19.15.29 NMAC) regulations. Groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and the New Mexico Bureau of Geology & Mineral Resources (NMBGMR) were accessed to determine if any registered water wells were located near the site. The NMOSE data base listed two (2) registered water wells in Unit Letter H, Section 23, Township 16S, and Range 33E. Measured groundwater in the two wells is listed at depths of 80 feet below ground surface (bgs) for well L06072 and 160 feet bgs for well L06611. See Appendix B for the NMOSE water well data for the two wells near the site. 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 an unnamed draw located approximately 2.5 miles east to southeast of the 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 2 “Site Location Relative to Known Regional Karst Topography”. As outlined in 19.15.29.13 NMAC, reclamation of a site that is no longer in use will be restored to conditions that existed prior to release to a depth of four (4) ft. bgs. Restoration includes backfilling with locally sourced non-impacted soils from an off-site location, recontouring to surrounding topography to prevent ponding and erosion, and reseeding with native vegetations. Meeting the previous criteria, we have the following reclamation and remediation cleanup levels:

NMOCD reclamation levels to four (4) ft bgs:

- Chloride 600 mg/Kg
- TPH (Total) 100 mg/Kg
- Benzene 10 mg/Kg
- BTEX 50 mg/Kg

NMOCD remediation levels > four (4) ft bgs:

Chloride	20,000 mg/Kg
TPH (Total)	1,000 mg/Kg
TPH (GRO + DRO)	2,500 mg/Kg
Benzene	10 mg/Kg
BTEX	50 mg/Kg

4. Soil Assessment and Delineation Activities and Sample Analysis

Upon discovery of the release, an initial site investigation was conducted by Tasman Geosciences (Tasman) of Hobbs, New Mexico to determine reportable quantity. An excavator was utilized to install one trench (V-1) to a maximum depth of nineteen (19) ft. bgs along with four (4) additional trenches (N@10', S@10', E@10', and W@10') to depths of ten (10) ft. bgs. Soil samples in trench V-1 were collected at one (1) ft. intervals to a depth of nineteen (19) ft. bgs., field screened with a photoionization detector (PID), placed into laboratory provided sample containers, labeled, stored on ice, and transported under proper chain-of-custody documentation to Xenco Laboratories (Xenco) of Midland, Texas. In addition, soil samples from the four (4) additional horizontal delineation trenches were collected at ten (10) ft. bgs., along the presumed edges of the former tank battery, to verify the horizontal extent of the hydrocarbon and chloride impact. Soil samples were analyzed for total petroleum hydrocarbons (TPH) utilizing Method SW-846 8015M, benzene, toluene, ethylbenzene, and xylenes (BTEX) utilizing Method SW-846 8021B, and chlorides utilizing Method 300.0. See Figure 3 "Site Details and Confirmation Soil Sample Location Map" for trench and soil sample locations. Benzene and total BTEX concentrations were below the NMOCD reclamation/remediation standards of 10 milligrams per kilogram (mg/Kg) and 50 mg/Kg respectively, for all samples analyzed. TPH concentrations were above the NMOCD reclamation standards of 100 mg/Kg for TPH in all soil samples at depths of eight (8) ft. or less. The TPH concentrations on samples at four (4) or less feet bgs. ranged from 552.3 mg/Kg in soil sample V-1 @ 3' to 9,219 mg/Kg in soil sample V-1 @ 1 ft. bgs. The TPH concentrations only exceeded the NMOCD remediation standards in soil sample V-1 @ 3'. Chloride concentrations were below NMOCD reclamation standards of 600 mg/Kg for all samples analyzed. See Table 1 for analytical results. Laboratory reports containing analytical methods, results, and chain-of-custody documents are included in Appendix C. Soil impacts were vertically and horizontally delineated at the site.

5. Proposed Soil Remediation Plan

In order to obtain NMOCD reclamation and remediation cleanup standards and quality native vegetation growth at the site, Plains proposes to remove the top four (4) feet of soils within the former berm area. Based on soil sample analysis and visual field observations, Plains proposes to excavate the former tank battery location to dimensions of one hundred fifteen (115) feet (ft.) in length by eighty (80) ft. in width to a maximum depth of four (4) ft. bgs. The excavated stockpiles of hydrocarbon/chloride impacted soils will be stored on plastic awaiting final disposition. See Site Photographs in Appendix D. Upon completion of the excavation, confirmation bottom hole

and side wall composite samples (not exceeding 200 feet^2) will be collected and submitted to Cardinal Labs (Cardinal) of Hobbs, New Mexico for analysis of TPH, BTEX, and chlorides to verify the site has been remediated to levels below NMOCD reclamation cleanup to a depth of four (4) feet bgs and below NMOCD remediation standards for depths greater than four (4) ft bgs. Impacted soils will be transported offsite to an NMOCD approved disposal facility. Upon receiving requisite samples, the excavation will be backfilled and brought up to surface grade with locally sourced non-impacted soils from an off-site location.

6. Proposed Site Reclamation and Restoration Plan

Upon completion of the backfilling of the excavation, Plains proposes to reclaim the entire 1.1-acre site in accordance with 19.15.29.13 NMAC. The entire site will be brought up to grade with locally sourced non-impacted soils from an off-site location and recontoured to match the surrounding landscape. Erosion control methods will be implemented, as needed, to increase long term stability of the site. In late May to early June, or approximately 3 to 6 weeks after the last frost and prior to the beginning of the monsoon season, the site will be reseeded by mechanical means (seeder attachment) with New Mexico State Land Office (NMSLO) Seed Mix Shallow (SH) seed. See Appendix E for NMSLO approved seed mix requirements. The seed will be applied at a rate of 13 Pure Live Seed (PLS) per acre and drilled to a proper depth to insure good coverage and germination. In addition, the seed mixture shall be evenly and uniformly planted over the entire disturbed area. Should mechanical means not be feasible at the site, the seed will be broadcast with twice the amount of seed utilized and raked or dragged to cover seed. The extent of the proposed soil remediation area including extent of pad restoration is presented on Figure 4 “Proposed Site Remediation and Restoration Map”. An updated C-141 Remediation Form is attached to this report.

In order to avoid noxious weeds, all equipment utilized at the site will be cleaned prior to beginning of the project and placement of seed. Once a quarter, Plains will inspect the site to determine if any noxious weeds are present and to assess the growth of the seeded area. Any noxious weeds found at the site during the quarterly visits will be either mechanically removed or sprayed with appropriate chemicals as not to harm native grasses. The site will be continually monitored by Plains on a quarterly basis until desirable growth of native grasses is achieved. It is projected the soils remediation and site restoration activities will be completed within 90 days of approval by the NMOCD and NMSLO, with seeding taking place between May and June 2020.

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 Deans.

Sincerely,

Pheobe Nunez
Project Manager

Jeffrey Kindley, PG.
Professional Geologist

TABLE

Table 1. Chemistry Table

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

Plains Pipeline, L.P.

Former Anderson Ranch Station Historical

NMOCD Incidenet #: 1RP-5597

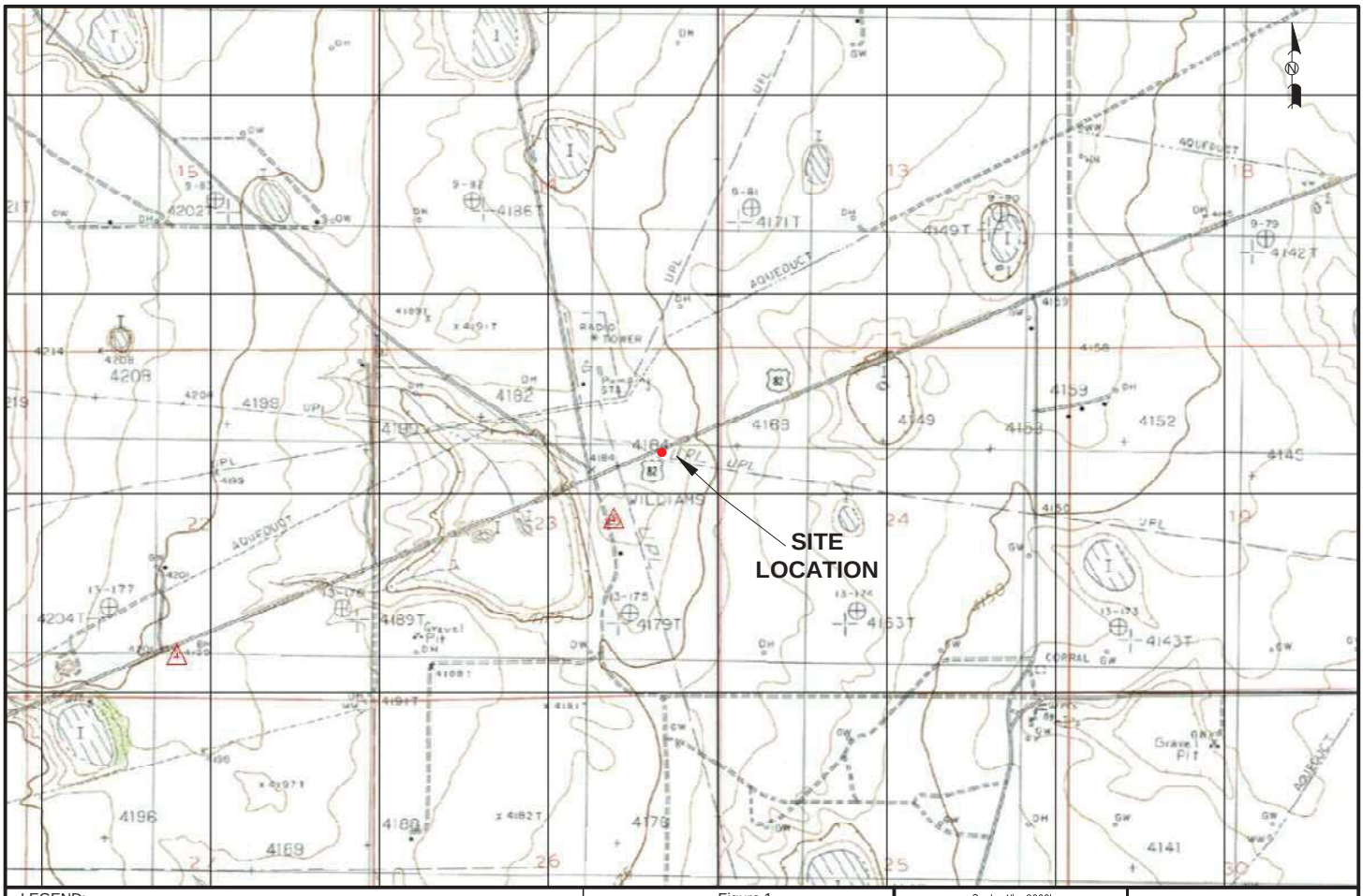
Lea County, NM

SAMPLE INFORMATION					METHODS: EPA SW 846-8021B, 5030					METHOD: E 300	METHODS: EPA SW 846-8015M				
SAMPLE IDENTIFICATION	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)
V-1 @ 1'	06/10/19	1 ft	GRAB	SOIL	0.00181	0.0018	0.00148	0.0541	0.05919	348	121	8,590	8,711	508	9,219
V-1 @ 2'	06/10/19	2 ft	GRAB	SOIL	<0.000386	0.000663	<0.000567	0.00218	0.002843	NA	35.9	522	557.9	30	587.9
V-1 @ 3'	06/10/19	3 ft	GRAB	SOIL	<0.000387	0.00112	<0.000568	0.00348	0.0046	NA	53.2	479	532.2	20.1	552.3
V-1 @ 4'	06/10/19	4 ft	GRAB	SOIL	<0.000386	0.00182	<0.000566	0.00409	0.00591	NA	30	702	732	33.3	765.3
V-1 @ 5'	06/10/19	5 ft	GRAB	SOIL	<0.000384	0.00142	<0.000564	<0.000344	0.00142	NA	18	665	683	27.4	710.4
V-1 @ 6'	06/10/19	6 ft	GRAB	SOIL	<0.000383	<0.000453	<0.000561	<0.000342	<0.000342	NA	14.1	438	452.1	22	474.1
V-1 @ 7'	06/10/19	7 ft	GRAB	SOIL	<0.000382	<0.000452	<0.000560	<0.000342	<0.000342	NA	9.87	83.6	93.47	17.7	111.17
V-1 @ 8'	06/10/19	8 ft	GRAB	SOIL	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	NA	<7.99	58.1	58.1	11.1	69.2
V-1 @ 9'	06/10/19	9 ft	GRAB	SOIL	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	NA	<8.00	28.9	28.9	<8.13	28.9
V-1 @ 10'	06/10/19	10 ft	GRAB	SOIL	<0.000383	<0.000453	<0.000561	<0.000342	<0.000342	NA	11.3	22.5	33.8	<8.12	33.8
V-1 @ 11'	06/12/19	11 ft	GRAB	SOIL	<0.000383	<0.000452	<0.000560	<0.000342	<0.000342	NA	11.5	56.4	67.9	16.7	84.6
V-1 @ 12'	06/12/19	12 ft	GRAB	SOIL	<0.000385	<0.000456	<0.000565	<0.000344	<0.000344	NA	8.62	64	72.62	15.9	88.52
V-1 @ 13'	06/12/19	13 ft	GRAB	SOIL	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	NA	12.6	71.2	83.8	11.7	95.5
V-1 @ 14'	06/12/19	14 ft	GRAB	SOIL	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	NA	10.9	58.8	69.7	12.5	82.2
V-1 @ 15'	06/12/19	15 ft	GRAB	SOIL	<0.000386	<0.000457	<0.000567	<0.000346	<0.000346	NA	10.4	58.3	68.7	11.9	80.6
V-1 @ 16'	06/12/19	16 ft	GRAB	SOIL	<0.000387	<0.000458	<0.000568	<0.000346	<0.000346	NA	10.9	9.85	20.75	<8.11	20.75
V-1 @ 17'	06/12/19	17 ft	GRAB	SOIL	<0.000388	<0.000459	<0.000569	<0.000347	<0.000347	NA	10.4	14.4	24.8	<8.12	24.8
V-1 @ 18'	06/12/19	18 ft	GRAB	SOIL	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	NA	11.7	9.13	20.83	<8.11	20.83
V-1 @ 19'	06/12/19	19 ft	GRAB	SOIL	<0.000385	0.000161	<0.000565	<0.000345	0.00161	8.75	11.6	9.1	20.7	<8.10	20.7
N @ 10'	06/13/19	10 ft	GRAB	SOIL	<0.000192	<0.000129	<0.0000955	<0.000229	<0.0000955	30.7	14.7	11.4	26.1	<8.12	26.1
S @ 10'	06/13/19	10 ft	GRAB	SOIL	<0.000191	<0.000128	<0.0000948	<0.000227	<0.0000948	7.98	14.4	13.8	28.2	<8.13	28.2
E @ 10'	06/13/19	10 ft	GRAB	SOIL	<0.000191	<0.000128	<0.0000946	<0.000227	<0.0000946	10.8	13.9	10.9	24.8	<8.11	24.8
W @ 10'	06/13/19	10 ft	GRAB	SOIL	<0.000194	<0.000130	<0.0000961	<0.000231	<0.0000961	2.12	13.2	10.2	23.4	<8.13	23.4
NMOCD Reclamation Standards to 4' bgs.					10	-	-	-	**50**	**600**	-	-	-	-	**100**
NMOCD Remediation Action Levels > 4' bgs					10	-	-	-	**50**	**20,000**	-	-	**1,000**	-	**2,500**

exceeds the NMOCD Reclamation Standards

exceeds NMOCD RAL

FIGURES



LEGEND:

Native Grassland

Tanks

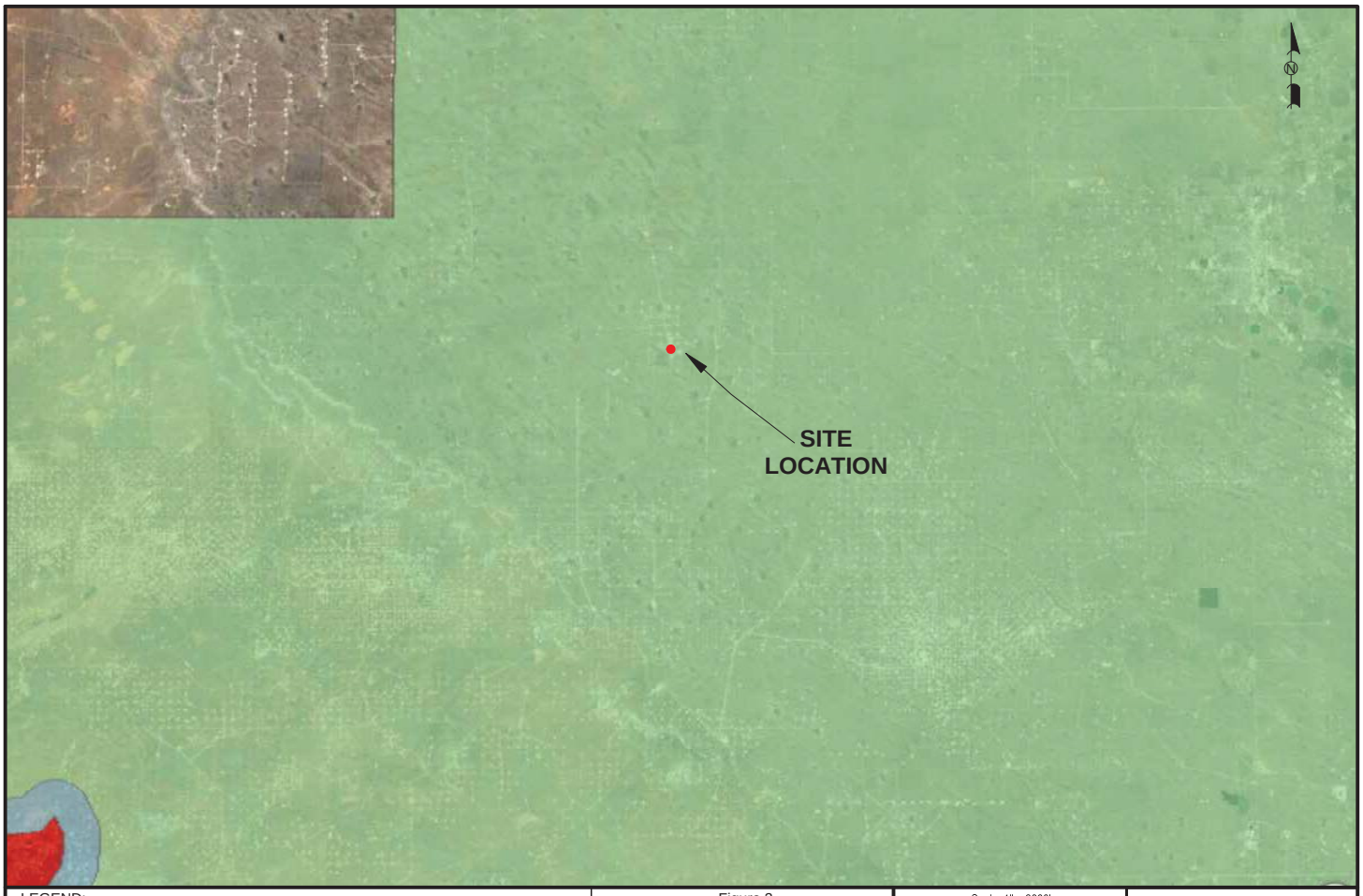
2000 1000 0 1000 2000

Distance in Feet

Figure 1
Site Location Map
Plains Pipeline, L.P.
Former Anderson Ranch Station Historical
Lea County, NM

Scale: 1" = 2000'
CAD By: NPC
Checked By: SR
Draft: December 11, 2019
Lat. N 32.910221° Long. W 103.627427°
Dean Job #PP-9077

DEAN



LEGEND:

- Low Potential Karst Topography
- Medium Potential Karst Topography
- High Potential Karst Topography

20000 10000 0 10000 20000

Distance in Feet

Figure 2
Site Location Relative to
Known Regional Karst Topography
Plains Pipeline, L.P.
Former Anderson Ranch Station Historical
Lea County, NM

Scale: 1" = 2000'
CAD By: NPC
Checked By: SR
Draft: December 26, 2019
Lat. N 32.910221° Long. W 103.627427°
Dean Job #PP-9077

DEAN

LEGEND:

- Impacted Area
- Trench Location and Confirmation Grab Soil Sample

Figure 3

Site Details & Confirmation
Soil Sample Location Map
Plains Pipeline, L.P.
Former Anderson Ranch Station Historical
Lea County, NM

Scale: 1" = 80
CAD By: NPC
Checked By: SR
Draft: December 11, 2019
Lat. N 32.910221° Long. W 103.627427°
Dean Job #PP-9077

DEAN

LEGEND:

- Proposed Soil Remediation Location
- Proposed Extent of Site Restoration

Figure 4

Proposed Soil Remediation and Site Restoration Map

Plains Pipeline, L.P.

Former Anderson Ranch Station Historical

Lea County, NM

Scale: 1" = 80
CAD By: NPC
Checked By: SR
Draft: December 11, 2019
Lat. N 32.910221° Long. W 103.627427°
Dean Job #PP-9077

DEAN

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	NDHR1918362280
District RP	1RP-5597
Facility ID	fDHR1918362181
Application ID	pDHR1918361742

Release Notification

Responsible Party

Responsible Party Plains Pipeline, L.P.	OGRID 713291
Contact Name Amber Groves	Contact Telephone 575-200-5517
Contact email algroves@paalp.com	Incident # *(assigned by OCD)*
Contact mailing address 1911 Connie Road, Carlsbad NM 88220	

Location of Release Source

Latitude 32.9102 Longitude -103.6275
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Former Anderson Ranch Station Historical	Site Type Former Station
Date Release Discovered 6/20/2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
H	23	16S	33E	Lea

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) Unknown	Volume Recovered (bbls) Unknown
☐ 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
Historical impact discovered during site reclamation activities.

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Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NDHR1918362280
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom?	

Initial Response

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

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

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Amber Groves Title: Remediation Coordinator

Signature: Amber Groves Date: 6/27/2019

email: algroves@paalp.com Telephone: 575-200-5517

OCD Only

Received by: Dylan Rose-Coss Date: 07/02/2019

APPENDIX B
NMOSE WATER WELL DATA

New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Twn	Rng	(NAD83 UTM in meters) X	Y
	L 06072	3	4		23	16S	33E	627969	3641236*

Driller License:	281	**Driller Company:**	PRUETT, OTIS H.		
Driller Name:					
Drill Start Date:	02/02/1967	**Drill Finish Date:**	02/04/1967	**Plug Date:**	
Log File Date:	06/30/1967	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	6.63	**Depth Well:**	163 feet	**Depth Water:**	80 feet

Water Bearing Stratifications:	Top	Bottom	Description
	95	163	Other/Unknown

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Twn	Rng	(NAD83 UTM in meters) X	Y
	L 06611	3	3	3	23	16S	33E	627063	3641121*

Driller License:	46	**Driller Company:**	ABBOTT BROTHERS COMPANY		
Driller Name:					
Drill Start Date:	11/17/1969	**Drill Finish Date:**	11/19/1969	**Plug Date:**	
Log File Date:	11/20/1969	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	7.00	**Depth Well:**	230 feet	**Depth Water:**	160 feet

Water Bearing Stratifications:	Top	Bottom	Description
	160	230	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	160	230

***UTM location was derived from PLSS - see Help**

APPENDIX C
LABORATORY ANALYTICAL REPORT

Analytical Report 627901

for

Tasman Geosciences, LLC

Project Manager: Zach Conder

Anderson Ranch Rec

28-JUN-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

Table of Contents

28-JUN-19

Project Manager: **Zach Conder**
Tasman Geosciences, LLC
2620 W. Marland Blvd.
Hobbs, NM 88240

Reference: XENCO Report No(s): **627901**
Anderson Ranch Rec
Project Address:

Zach Conder:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 627901. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 627901 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

John Builes
Project Manager

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

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 627901

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
N @ 10'	S	06-13-19 10:00	10 ft	627901-001
S @ 10'	S	06-13-19 11:00	10 ft	627901-002
E @ 10'	S	06-13-19 12:00	10 ft	627901-003
W @ 10'	S	06-13-19 13:00	10 ft	627901-004

CASE NARRATIVE

Client Name: Tasman Geosciences, LLC
Project Name: Anderson Ranch Rec

Project ID:
Work Order Number(s): *627901*

Report Date: *28-JUN-19*
Date Received: *06/17/2019*

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

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3092646 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 627897-001 S,627897-001 SD,627901-001,627901-002,627901-003,627901-004.
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected
Samples affected are: 627897-001 SD.

Batch: LBA-3093702 BTEX by SW 8260C
Surrogate 1,2-Dichloroethane-D4 recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 627901-004.

Certificate of Analytical Results
627901

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id: **N @ 10'** Matrix: Soil Sample Depth: 10 ft

Lab Sample Id: 627901-001 Date Collected: 06.13.19 10.00 Date Received: 06.17.19 07.25

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3092967 Date Prep: 06.19.19 09.10

Prep seq: 7680203

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**30.7**	5.02	0.862	mg/kg	06.19.19 15:22		1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3092646 Date Prep: 06.17.19 12.00

Prep seq: 7680153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**14.7**	15.0	7.99	mg/kg	06.18.19 00:08	J	1
Diesel Range Organics (DRO)	C10C28DRO	**11.4**	15.0	8.12	mg/kg	06.18.19 00:08	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	06.18.19 00:08	U	1
Total TPH	PHC635	**26.1**		7.99	mg/kg	06.18.19 00:08		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	138	70 - 135	%		**
o-Terphenyl	116	70 - 135	%		

Certificate of Analytical Results
627901

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id:	**N @ 10'**	Matrix:	Soil	Sample Depth:	10 ft
Lab Sample Id:	627901-001	Date Collected:	06.13.19 10.00	Date Received:	06.17.19 07.25
Analytical Method:	BTEX by SW 8260C			Prep Method:	5035A
Analyst:	SAD	% Moist:		Tech:	SAD
Seq Number:	3093702	Date Prep:	06.26.19 12.00		
Subcontractor:	SUB: T104704215-19-29	Prep seq:	7680828		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000192	0.00100	0.000192	mg/kg	06.26.19 13:39	U	1
Toluene	108-88-3	<0.000129	0.00100	0.000129	mg/kg	06.26.19 13:39	U	1
Ethylbenzene	100-41-4	<0.0000955	0.00100	0.0000955	mg/kg	06.26.19 13:39	U	1
m,p-Xylenes	179601-23-1	<0.000362	0.00200	0.000362	mg/kg	06.26.19 13:39	U	1
o-Xylene	95-47-6	<0.000229	0.00100	0.000229	mg/kg	06.26.19 13:39	U	1
Total Xylenes	1330-20-7	<0.000229		0.000229	mg/kg	06.26.19 13:39	U	
Total BTEX		<0.0000955		0.0000955	mg/kg	06.26.19 13:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	107	73 - 132	%		
1,2-Dichloroethane-D4	108	73 - 124	%		
Toluene-D8	93	69 - 124	%		
4-Bromofluorobenzene	91	58 - 152	%		

Certificate of Analytical Results
627901

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id: **S @ 10'** Matrix: Soil Sample Depth: 10 ft

Lab Sample Id: 627901-002 Date Collected: 06.13.19 11.00 Date Received: 06.17.19 07.25

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3092967 Date Prep: 06.19.19 09.10

Prep seq: 7680203

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**7.98**	4.97	0.853	mg/kg	06.19.19 15:44		1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3092646 Date Prep: 06.17.19 12.00

Prep seq: 7680153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**14.4**	15.0	8.00	mg/kg	06.18.19 00:33	J	1
Diesel Range Organics (DRO)	C10C28DRO	**13.8**	15.0	8.13	mg/kg	06.18.19 00:33	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.18.19 00:33	U	1
Total TPH	PHC635	**28.2**		8.00	mg/kg	06.18.19 00:33		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	154	70 - 135	%		**
o-Terphenyl	133	70 - 135	%		

Certificate of Analytical Results
627901

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id:	**S @ 10'**	Matrix:	Soil	Sample Depth:	10 ft
Lab Sample Id:	627901-002	Date Collected:	06.13.19 11.00	Date Received:	06.17.19 07.25
Analytical Method:	BTEX by SW 8260C			Prep Method:	5035A
Analyst:	SAD	% Moist:		Tech:	SAD
Seq Number:	3093702	Date Prep:	06.26.19 12.00		
Subcontractor:	SUB: T104704215-19-29	Prep seq:	7680828		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000191	0.000992	0.000191	mg/kg	06.26.19 14:04	U	1
Toluene	108-88-3	<0.000128	0.000992	0.000128	mg/kg	06.26.19 14:04	U	1
Ethylbenzene	100-41-4	<0.0000948	0.000992	0.0000948	mg/kg	06.26.19 14:04	U	1
m,p-Xylenes	179601-23-1	<0.000359	0.00198	0.000359	mg/kg	06.26.19 14:04	U	1
o-Xylene	95-47-6	<0.000227	0.000992	0.000227	mg/kg	06.26.19 14:04	U	1
Total Xylenes	1330-20-7	<0.000227		0.000227	mg/kg	06.26.19 14:04	U	
Total BTEX		<0.0000948		0.0000948	mg/kg	06.26.19 14:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	105	73 - 132	%		
1,2-Dichloroethane-D4	93	73 - 124	%		
Toluene-D8	96	69 - 124	%		
4-Bromofluorobenzene	97	58 - 152	%		

Certificate of Analytical Results
627901

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id: **E @ 10'** Matrix: Soil Sample Depth: 10 ft

Lab Sample Id: 627901-003 Date Collected: 06.13.19 12.00 Date Received: 06.17.19 07.25

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3092967 Date Prep: 06.19.19 09.10

Prep seq: 7680203

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**10.8**	4.97	0.853	mg/kg	06.19.19 15:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3092646 Date Prep: 06.17.19 12.00

Prep seq: 7680153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**13.9**	15.0	7.99	mg/kg	06.18.19 00:57	J	1
Diesel Range Organics (DRO)	C10C28DRO	**10.9**	15.0	8.11	mg/kg	06.18.19 00:57	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	06.18.19 00:57	U	1
Total TPH	PHC635	**24.8**		7.99	mg/kg	06.18.19 00:57		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	149	70 - 135	%		**
o-Terphenyl	133	70 - 135	%		

Certificate of Analytical Results
627901

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id:	**E @ 10'**	Matrix:	Soil	Sample Depth:	10 ft
Lab Sample Id:	627901-003	Date Collected:	06.13.19 12.00	Date Received:	06.17.19 07.25
Analytical Method:	BTEX by SW 8260C			Prep Method:	5035A
Analyst:	SAD	% Moist:		Tech:	SAD
Seq Number:	3093702	Date Prep:	06.26.19 12.00		
Subcontractor:	SUB: T104704215-19-29	Prep seq:	7680828		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000191	0.000990	0.000191	mg/kg	06.26.19 14:29	U	1
Toluene	108-88-3	<0.000128	0.000990	0.000128	mg/kg	06.26.19 14:29	U	1
Ethylbenzene	100-41-4	<0.0000946	0.000990	0.0000946	mg/kg	06.26.19 14:29	U	1
m,p-Xylenes	179601-23-1	<0.000358	0.00198	0.000358	mg/kg	06.26.19 14:29	U	1
o-Xylene	95-47-6	<0.000227	0.000990	0.000227	mg/kg	06.26.19 14:29	U	1
Total Xylenes	1330-20-7	<0.000227		0.000227	mg/kg	06.26.19 14:29	U	
Total BTEX		<0.0000946		0.0000946	mg/kg	06.26.19 14:29	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	101	73 - 132	%		
1,2-Dichloroethane-D4	111	73 - 124	%		
Toluene-D8	95	69 - 124	%		
4-Bromofluorobenzene	92	58 - 152	%		

Certificate of Analytical Results
627901

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id: **W @ 10'** Matrix: Soil Sample Depth: 10 ft

Lab Sample Id: 627901-004 Date Collected: 06.13.19 13.00 Date Received: 06.17.19 07.25

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3092967 Date Prep: 06.19.19 09.10

Prep seq: 7680203

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**2.12**	4.97	0.853	mg/kg	06.19.19 16:13	J	1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3092646 Date Prep: 06.17.19 12.00

Prep seq: 7680153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**13.2**	15.0	8.00	mg/kg	06.18.19 01:21	J	1
Diesel Range Organics (DRO)	C10C28DRO	**10.2**	15.0	8.13	mg/kg	06.18.19 01:21	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.18.19 01:21	U	1
Total TPH	PHC635	**23.4**		8.00	mg/kg	06.18.19 01:21		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	147	70 - 135	%		**
o-Terphenyl	116	70 - 135	%		

Certificate of Analytical Results
627901

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id:	**W @ 10'**	Matrix:	Soil	Sample Depth:	10 ft
Lab Sample Id:	627901-004	Date Collected:	06.13.19 13.00	Date Received:	06.17.19 07.25
Analytical Method:	BTEX by SW 8260C			Prep Method:	5035A
Analyst:	SAD	% Moist:		Tech:	SAD
Seq Number:	3093702	Date Prep:	06.26.19 12.00		
Subcontractor:	SUB: T104704215-19-29	Prep seq:	7680828		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000194	0.00101	0.000194	mg/kg	06.26.19 14:53	U	1
Toluene	108-88-3	<0.000130	0.00101	0.000130	mg/kg	06.26.19 14:53	U	1
Ethylbenzene	100-41-4	<0.0000961	0.00101	0.0000961	mg/kg	06.26.19 14:53	U	1
m,p-Xylenes	179601-23-1	<0.000364	0.00201	0.000364	mg/kg	06.26.19 14:53	U	1
o-Xylene	95-47-6	<0.000231	0.00101	0.000231	mg/kg	06.26.19 14:53	U	1
Total Xylenes	1330-20-7	<0.000231		0.000231	mg/kg	06.26.19 14:53	U	
Total BTEX		<0.0000961		0.0000961	mg/kg	06.26.19 14:53	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	103	73 - 132	%		
1,2-Dichloroethane-D4	128	73 - 124	%		**
Toluene-D8	95	69 - 124	%		
4-Bromofluorobenzene	93	58 - 152	%		

Certificate of Analytical Results
627901

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id: **7680153-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7680153-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3092646 Date Prep: 06.17.19 12.00

Prep seq: 7680153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.17.19 14:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	06.17.19 14:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.17.19 14:53	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	06.17.19 14:53	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	127	70 - 135	%		
o-Terphenyl	108	70 - 135	%		

Sample Id: **7680203-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7680203-1-BLK Date Collected: Date Received:

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3092967 Date Prep: 06.19.19 09.10

Prep seq: 7680203

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	06.19.19 09:18	U	1

Certificate of Analytical Results
627901

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id: **7680828-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7680828-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by SW 8260C Prep Method: 5035A

Analyst: SAD % Moist: Tech: SAD

Seq Number: 3093702 Date Prep: 06.26.19 11.00

Subcontractor: SUB: T104704215-19-29 Prep seq: 7680828

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000192	0.00100	0.000192	mg/kg	06.26.19 13:15	U	1
Toluene	108-88-3	<0.000129	0.00100	0.000129	mg/kg	06.26.19 13:15	U	1
Ethylbenzene	100-41-4	<0.0000955	0.00100	0.0000955	mg/kg	06.26.19 13:15	U	1
m,p-Xylenes	179601-23-1	<0.000362	0.00200	0.000362	mg/kg	06.26.19 13:15	U	1
o-Xylene	95-47-6	<0.000229	0.00100	0.000229	mg/kg	06.26.19 13:15	U	1
Total Xylenes	1330-20-7	<0.000229		0.000229	mg/kg	06.26.19 13:15	U	
Total BTEX		<0.0000955		0.0000955	mg/kg	06.26.19 13:15	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	89	73 - 132	%		
1,2-Dichloroethane-D4	100	73 - 124	%		
Toluene-D8	95	69 - 124	%		
4-Bromofluorobenzene	91	58 - 152	%		

Flagging Criteria

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

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Anderson Ranch Rec

Work Orders : 627901, **Project ID:**

Lab Batch #: 3093702 **Sample:** 7680828-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/26/19 10:50

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0458	0.0500	92	73-132	
1,2-Dichloroethane-D4	0.0486	0.0500	97	73-124	
Toluene-D8	0.0483	0.0500	97	69-124	
4-Bromofluorobenzene	0.0461	0.0500	92	58-152	

Lab Batch #: 3093702 **Sample:** 7680828-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/26/19 11:15

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0470	0.0500	94	73-132	
1,2-Dichloroethane-D4	0.0487	0.0500	97	73-124	
Toluene-D8	0.0488	0.0500	98	69-124	
4-Bromofluorobenzene	0.0472	0.0500	94	58-152	

Lab Batch #: 3093702 **Sample:** 627901-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/26/19 11:39

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0502	0.0500	100	73-132	
1,2-Dichloroethane-D4	0.0478	0.0500	96	73-124	
Toluene-D8	0.0487	0.0500	97	69-124	
4-Bromofluorobenzene	0.0476	0.0500	95	58-152	

Lab Batch #: 3093702 **Sample:** 627901-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/26/19 12:03

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0461	0.0500	92	73-132	
1,2-Dichloroethane-D4	0.0480	0.0500	96	73-124	
Toluene-D8	0.0493	0.0500	99	69-124	
4-Bromofluorobenzene	0.0467	0.0500	93	58-152	

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

Form 2 - Surrogate Recoveries

Project Name: Anderson Ranch Rec

Work Orders : 627901, **Project ID:**

Lab Batch #: 3093702 **Sample:** 7680828-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/26/19 13:15

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0447	0.0500	89	73-132	
1,2-Dichloroethane-D4	0.0500	0.0500	100	73-124	
Toluene-D8	0.0475	0.0500	95	69-124	
4-Bromofluorobenzene	0.0453	0.0500	91	58-152	

Lab Batch #: 3092646 **Sample:** 7680153-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/19 14:53

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	54.2	50.0	108	70-135	

Lab Batch #: 3092646 **Sample:** 7680153-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/19 15:17

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 3092646 **Sample:** 7680153-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/19 15:42

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	52.4	50.0	105	70-135	

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

Form 2 - Surrogate Recoveries

Project Name: Anderson Ranch Rec

Work Orders : 627901, **Project ID:**

Lab Batch #: 3092646 **Sample:** 627897-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/17/19 16:41

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	147	100	147	70-135	**
o-Terphenyl	63.2	50.0	126	70-135	

Lab Batch #: 3092646 **Sample:** 627897-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/17/19 17:06

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	151	99.9	151	70-135	**
o-Terphenyl	72.7	50.0	145	70-135	**

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

BS / BSD Recoveries

Project Name: Anderson Ranch Rec

Work Order #: 627901 **Project ID:**

Analyst: SAD **Date Prepared:** 06/26/2019 **Date Analyzed:** 06/26/2019

Lab Batch ID: 3093702 **Sample:** 7680828-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000192	0.0500	0.0538	108	0.0500	0.0428	86	23	62-132	25	
Toluene	<0.000129	0.0500	0.0512	102	0.0500	0.0423	85	19	66-124	25	
Ethylbenzene	<0.0000955	0.0500	0.0526	105	0.0500	0.0415	83	24	71-134	25	
m,p-Xylenes	<0.000362	0.100	0.106	106	0.100	0.0847	85	22	69-128	25	
o-Xylene	<0.000229	0.0500	0.0520	104	0.0500	0.0435	87	18	72-131	25	

Analyst: CHE **Date Prepared:** 06/19/2019 **Date Analyzed:** 06/19/2019

Lab Batch ID: 3092967 **Sample:** 7680203-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.858	250	243	97	250	243	97	0	90-110	20	

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

BS / BSD Recoveries

Project Name: Anderson Ranch Rec

Work Order #: 627901 **Project ID:**

Analyst: ARM **Date Prepared:** 06/17/2019 **Date Analyzed:** 06/17/2019

Lab Batch ID: 3092646 **Sample:** 7680153-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1020	102	1000	1030	103	1	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	988	99	1000	1050	105	6	70-135	20	

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

Form 3 - MS / MSD Recoveries

Project Name: Anderson Ranch Rec

Work Order # : 627901 **Project ID:**

Lab Batch ID: 3093702 **QC- Sample ID:** 627901-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/26/2019 **Date Prepared:** 06/26/2019 **Analyst:** SAD

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000193	0.0501	0.0452	90	0.0497	0.0405	81	11	62-132	25	
Toluene	<0.000130	0.0501	0.0416	83	0.0497	0.0387	78	7	66-124	25	
Ethylbenzene	<0.0000957	0.0501	0.0435	87	0.0497	0.0378	76	14	71-134	25	
m,p-Xylenes	<0.000362	0.100	0.0874	87	0.0994	0.0756	76	14	69-128	25	
o-Xylene	<0.000230	0.0501	0.0435	87	0.0497	0.0379	76	14	72-131	25	

Lab Batch ID: 3092967 **QC- Sample ID:** 627896-018 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/19/2019 **Date Prepared:** 06/19/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	181	251	422	96	251	422	96	0	90-110	20	

Lab Batch ID: 3092967 **QC- Sample ID:** 627901-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/19/2019 **Date Prepared:** 06/19/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	30.7	251	292	104	251	293	105	0	90-110	20	

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

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

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

Form 3 - MS / MSD Recoveries

Project Name: Anderson Ranch Rec

Work Order # : 627901 **Project ID:**

Lab Batch ID: 3092646 **QC- Sample ID:** 627897-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/17/2019 **Date Prepared:** 06/17/2019 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	12.9	1000	1200	119	999	1170	116	3	70-135	20	
Diesel Range Organics (DRO)	18.3	1000	1190	117	999	1150	113	3	70-135	20	

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

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

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

Chain of Custody

Work Order No: 607901

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) www.xenco.com Page _____ of _____

Project Manager:	ZACH CONDER	Bill to: (if different)	
Company Name:	TASMAN GEOSCIENCES	Company Name:	PLAINS AAPP
Address:	2620 W. MARLAND BLD	Address:	% AMBER GROVES
City, State ZIP:	HOBBS, NM 88240	City, State ZIP:	
Phone:	806-724-5943	Email:	ZCONDER@TASMAN-GEO.COM

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	ANDERSON RANCH REC	Turn Around	
Project Number:	SEE COMMENTS	Routine	☐
P.O. Number:		Rush:	
Sampler's Name:	BECKY GRIFFIN	Due Date:	

SAMPLE RECEIPT			
Temperature (°C):	6.2/0.0	Thermometer ID	R8
Received Intact:	Yes / No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	4

Temp Blank: Yes / No — Wet Ice: Yes / No

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	RCI	CHLORIDE 4500	TCLP BENZENE	TCLP RC PAB	NORM	PAINT FILTER	TPH	BTEX
N @ 10'	S	6-13-19	10:00	10FT			X					X	X
S @ 10'			11:00	10FT			X					X	X
E @ 10'			12:00	10FT			X					X	X
W @ 10'			1:00	10FT			X					X	X

Work Order Notes

[redacted]
ALGROVES@PAALP.COM
bgriffin@TASMAN-GEO.COM
bdennis@TASMAN-GEO.COM
ZCONDER@TASMAN-GEO.COM
TAT starts the day received by the lab, if received by 4:30pm

Sample Comments

SRS# - FORMER ANDERSON RANCH STATION HISTORICAL

ANALYSIS REQUEST

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Becky Griffin	Stephanie Rojas	6/14 12:59	2 Stephanie Rojas		6/14 1:36
3		6/17/19 0775	4		
5			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number : 42135

Date/Time:	06.24.2019 14:49	Created by:	Jessica Kramer	Please send report to:	John Builes
Lab# From:	**Midland**	Delivery Priority:		Address:	1211 W. Florida Ave
Lab# To:	**Houston**	Air Bill No.:	775553778262	E-Mail:	john.builes@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
627901-001	S	N @ 10'	06.13.2019 10:00	SW8260CBTEX	BTEX by SW 8260C	**06.21.2019**	**06.27.2019 10:00**	JHB	BZ BZME EBZ XYLENE	
627901-002	S	S @ 10'	06.13.2019 11:00	SW8260CBTEX	BTEX by SW 8260C	**06.21.2019**	**06.27.2019 11:00**	JHB	BZ BZME EBZ XYLENE	
627901-003	S	E @ 10'	06.13.2019 12:00	SW8260CBTEX	BTEX by SW 8260C	**06.21.2019**	**06.27.2019 12:00**	JHB	BZ BZME EBZ XYLENE	
627901-004	S	W @ 10'	06.13.2019 13:00	SW8260CBTEX	BTEX by SW 8260C	**06.21.2019**	**06.27.2019 13:00**	JHB	BZ BZME EBZ XYLENE	

Inter Office Shipment or Sample Comments:

Relinquished By: Jessica Kramer
Jessica Kramer

Date Relinquished: 06.24.2019

Received By: Ashly Kowalski

Date Received: 06.25.2019 09:40

Cooler Temperature: 0.6

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 42135

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : HOU-068

Sent By: Jessica Kramer **Date Sent:** 06.24.2019 02.49 PM

Received By: Ashly Kowalski **Date Received:** 06.25.2019 09.40 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: _____ Date: 06.25.2019

Ashly Kowalski

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tasman Geosciences, LLC

Date/ Time Received: 06/17/2019 07:25:00 AM

Work Order #: 627901

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambien

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	0
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 06/17/2019
Brianna Teel

Checklist reviewed by: Date: 06/18/2019
John Builes

Analytical Report 627903

for

Tasman Geosciences, LLC

Project Manager: Zach Conder

Anderson Ranch Rec

07.15.2019

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

07.15.2019

Project Manager: **Zach Conder**
Tasman Geosciences, LLC
2620 W. Marland Blvd.
Hobbs, NM 88240

Reference: XENCO Report No(s): **627903**
Anderson Ranch Rec
Project Address:

Zach Conder:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 627903. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 627903 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Julian Martinez
Midland Laboratory Director

A Small Business and Minority Company

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

Sample Cross Reference 627903

Tasman Geosciences, LLC, Hobbs, NM

Anderson Ranch Rec

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
V-1 @ 1'	S	06.10.2019 11:00	1 ft	627903-001
V-1 @ 2'	S	06.10.2019 11:10	2 ft	627903-002
V-1 @ 3'	S	06.10.2019 11:20	3 ft	627903-003
V-1 @ 4'	S	06.10.2019 11:30	4 ft	627903-004
V-1 @ 5'	S	06.10.2019 11:40	5 ft	627903-005
V-1 @ 6'	S	06.10.2019 11:50	6 ft	627903-006
V-1 @ 7'	S	06.10.2019 12:00	7 ft	627903-007
V-1 @ 8'	S	06.10.2019 12:10	8 ft	627903-008
V-1 @ 9'	S	06.10.2019 12:20	9 ft	627903-009
V-1 @ 10'	S	06.10.2019 12:30	10 ft	627903-010
V-1 @ 11'	S	06.12.2019 10:00	11 ft	627903-011
V-1 @ 12'	S	06.12.2019 10:10	12 ft	627903-012
V-1 @ 13'	S	06.12.2019 10:20	13 ft	627903-013
V-1 @ 14'	S	06.12.2019 10:30	14 ft	627903-014
V-1 @ 15'	S	06.12.2019 10:40	15 ft	627903-015
V-1 @ 16'	S	06.12.2019 10:50	16 ft	627903-016
V-1 @ 17'	S	06.12.2019 11:00	17 ft	627903-017
V-1 @ 18'	S	06.12.2019 11:10	18 ft	627903-018
V-1 @ 19'	S	06.12.2019 11:20	19 ft	627903-019

CASE NARRATIVE

Client Name: Tasman Geosciences, LLC

Project Name: Anderson Ranch Rec

Project ID:
Work Order Number(s): *627903*

Report Date: *07.15.2019*
Date Received: *06.17.2019*

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

Sample receipt non conformances and comments:

Spoke to Client to re-run sample 001 out of hold. Sample was overdiluted due to non-target analytes and the in hold run is not usable. - JB 06/25/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3093450 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 627903-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene, Ethylbenzene, Toluene, m_p-Xylenes , o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 627903-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3094170 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 627903-008,627903-019,627903-011,627903-012,627903-009.

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627903
Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 1'** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 627903-001 Date Collected: 06.10.2019 11:00 Date Received: 06.17.2019 07:25

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3092967 Date Prep: 06.19.2019 09:10

Prep seq: 7680203

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**348**	4.96	0.852	mg/kg	06.19.2019 16:28		1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**121**	74.8	39.9	mg/kg	07.01.2019 11:23	K	5
Diesel Range Organics (DRO)	C10C28DRO	**8590**	74.8	40.5	mg/kg	07.01.2019 11:23	K	5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**508**	74.8	40.5	mg/kg	07.01.2019 11:23	K	5
Total TPH	PHC635	**9220**		39.9	mg/kg	07.01.2019 11:23	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	81	70 - 135	%		
o-Terphenyl	143	70 - 135	%		**

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.00181**	0.00200	0.000386	mg/kg	06.25.2019 14:38	JK	1
Toluene	108-88-3	**0.00180**	0.00200	0.000457	mg/kg	06.25.2019 14:38	JK	1
Ethylbenzene	100-41-4	**0.00148**	0.00200	0.000566	mg/kg	06.25.2019 14:38	JK	1
m_p-Xylenes	179601-23-1	**0.0260**	0.00401	0.00102	mg/kg	06.25.2019 14:38	K	1
o-Xylene	95-47-6	**0.0281**	0.00200	0.000345	mg/kg	06.25.2019 14:38	K	1
Xylenes, Total	1330-20-7	**0.0541**		0.000345	mg/kg	06.25.2019 14:38	K	
Total BTEX		**0.0592**		0.000345	mg/kg	06.25.2019 14:38	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	91	70 - 130	%		
4-Bromofluorobenzene	105	70 - 130	%		

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Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 1' RE** Matrix: Soil Sample Depth: 1

Lab Sample Id: 627903-001 RE Date Collected: 06.10.2019 11:00 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**105**	74.7	39.9	mg/kg	06.18.2019 23:54	K	5
Diesel Range Organics (DRO)	C10C28DRO	**5490**	74.7	40.5	mg/kg	06.18.2019 23:54	K	5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**281**	74.7	40.5	mg/kg	06.18.2019 23:54	K	5
Total TPH	PHC635	**5880**		39.9	mg/kg	06.18.2019 23:54	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	114	70 - 135	%		
o-Terphenyl	128	70 - 135	%		

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Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 2'** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 627903-002 Date Collected: 06.10.2019 11:10 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**35.9**	14.9	7.97	mg/kg	07.01.2019 11:47	K	1
Diesel Range Organics (DRO)	C10C28DRO	**522**	14.9	8.10	mg/kg	07.01.2019 11:47	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**30.0**	14.9	8.10	mg/kg	07.01.2019 11:47	K	1
Total TPH	PHC635	**588**		7.97	mg/kg	07.01.2019 11:47	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	88	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	06.24.2019 19:05	UX	1
Toluene	108-88-3	**0.000663**	0.00201	0.000457	mg/kg	06.24.2019 19:05	JX	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	06.24.2019 19:05	UX	1
m_p-Xylenes	179601-23-1	**0.00218**	0.00402	0.00102	mg/kg	06.24.2019 19:05	JX	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	06.24.2019 19:05	UX	1
Xylenes, Total	1330-20-7	**0.00218**		0.000346	mg/kg	06.24.2019 19:05		
Total BTEX		**0.00284**		0.000346	mg/kg	06.24.2019 19:05		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	93	70 - 130	%		
4-Bromofluorobenzene	102	70 - 130	%		

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Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 2' RE** Matrix: Soil Sample Depth: 2

Lab Sample Id: 627903-002 RE Date Collected: 06.10.2019 11:10 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**76.7**	15.0	7.99	mg/kg	06.19.2019 00:18	K	1
Diesel Range Organics (DRO)	C10C28DRO	**564**	15.0	8.11	mg/kg	06.19.2019 00:18	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**25.1**	15.0	8.11	mg/kg	06.19.2019 00:18	K	1
Total TPH	PHC635	**666**		7.99	mg/kg	06.19.2019 00:18	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	140	70 - 135	%		*****
o-Terphenyl	98	70 - 135	%		

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Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 3'** Matrix: Soil Sample Depth: 3 ft

Lab Sample Id: 627903-003 Date Collected: 06.10.2019 11:20 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**53.2**	15.0	7.98	mg/kg	07.01.2019 12:59	K	1
Diesel Range Organics (DRO)	C10C28DRO	**479**	15.0	8.10	mg/kg	07.01.2019 12:59	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**20.1**	15.0	8.10	mg/kg	07.01.2019 12:59	K	1
Total TPH	PHC635	**552**		7.98	mg/kg	07.01.2019 12:59	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	87	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	06.24.2019 19:27	U	1
Toluene	108-88-3	**0.00112**	0.00201	0.000458	mg/kg	06.24.2019 19:27	J	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	06.24.2019 19:27	U	1
m_p-Xylenes	179601-23-1	**0.00348**	0.00402	0.00102	mg/kg	06.24.2019 19:27	J	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	06.24.2019 19:27	U	1
Xylenes, Total	1330-20-7	**0.00348**		0.000346	mg/kg	06.24.2019 19:27		
Total BTEX		**0.00460**		0.000346	mg/kg	06.24.2019 19:27		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	93	70 - 130	%		
4-Bromofluorobenzene	122	70 - 130	%		

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Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 3' RE** Matrix: Soil Sample Depth: 3

Lab Sample Id: 627903-003 RE Date Collected: 06.10.2019 11:20 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**55.3**	14.9	7.97	mg/kg	06.19.2019 01:30	K	1
Diesel Range Organics (DRO)	C10C28DRO	**295**	14.9	8.10	mg/kg	06.19.2019 01:30	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**11.1**	14.9	8.10	mg/kg	06.19.2019 01:30	JK	1
Total TPH	PHC635	**361**		7.97	mg/kg	06.19.2019 01:30	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	138	70 - 135	%		*****
o-Terphenyl	93	70 - 135	%		

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Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 4'** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 627903-004 Date Collected: 06.10.2019 11:30 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**30.0**	15.0	8.00	mg/kg	07.01.2019 13:23	K	1
Diesel Range Organics (DRO)	C10C28DRO	**702**	15.0	8.13	mg/kg	07.01.2019 13:23	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**33.3**	15.0	8.13	mg/kg	07.01.2019 13:23	K	1
Total TPH	PHC635	**765**		8.00	mg/kg	07.01.2019 13:23	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	87	70 - 135	%		
o-Terphenyl	86	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	06.24.2019 20:11	U	1
Toluene	108-88-3	**0.00182**	0.00200	0.000457	mg/kg	06.24.2019 20:11	J	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	06.24.2019 20:11	U	1
m_p-Xylenes	179601-23-1	**0.00409**	0.00401	0.00102	mg/kg	06.24.2019 20:11		1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	06.24.2019 20:11	U	1
Xylenes, Total	1330-20-7	**0.00409**		0.000345	mg/kg	06.24.2019 20:11		
Total BTEX		**0.00591**		0.000345	mg/kg	06.24.2019 20:11		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	107	70 - 130	%		

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Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 4' RE** Matrix: Soil Sample Depth: 4

Lab Sample Id: 627903-004 RE Date Collected: 06.10.2019 11:30 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**39.5**	15.0	7.98	mg/kg	06.19.2019 01:55	K	1
Diesel Range Organics (DRO)	C10C28DRO	**587**	15.0	8.10	mg/kg	06.19.2019 01:55	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**18.4**	15.0	8.10	mg/kg	06.19.2019 01:55	K	1
Total TPH	PHC635	**645**		7.98	mg/kg	06.19.2019 01:55	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	139	70 - 135	%		*****
o-Terphenyl	103	70 - 135	%		

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Anderson Ranch Rec

Sample Id: **V-1 @ 5'** Matrix: Soil Sample Depth: 5 ft

Lab Sample Id: 627903-005 Date Collected: 06.10.2019 11:40 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**18.0**	15.0	7.99	mg/kg	07.01.2019 13:47	K	1
Diesel Range Organics (DRO)	C10C28DRO	**665**	15.0	8.12	mg/kg	07.01.2019 13:47	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**27.4**	15.0	8.12	mg/kg	07.01.2019 13:47	K	1
Total TPH	PHC635	**710**		7.99	mg/kg	07.01.2019 13:47	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	83	70 - 135	%		
o-Terphenyl	85	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	06.24.2019 20:33	U	1
Toluene	108-88-3	**0.00142**	0.00200	0.000455	mg/kg	06.24.2019 20:33	J	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	06.24.2019 20:33	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	06.24.2019 20:33	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	06.24.2019 20:33	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	06.24.2019 20:33	U	
Total BTEX		**0.00142**		0.000344	mg/kg	06.24.2019 20:33	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	111	70 - 130	%		

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Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 5' RE** Matrix: Soil Sample Depth: 5

Lab Sample Id: 627903-005 RE Date Collected: 06.10.2019 11:40 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.2**	15.0	7.98	mg/kg	06.19.2019 02:19	K	1
Diesel Range Organics (DRO)	C10C28DRO	**543**	15.0	8.10	mg/kg	06.19.2019 02:19	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**21.4**	15.0	8.10	mg/kg	06.19.2019 02:19	K	1
Total TPH	PHC635	**582**		7.98	mg/kg	06.19.2019 02:19	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	128	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

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Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 6'** Matrix: Soil Sample Depth: 6 ft

Lab Sample Id: 627903-006 Date Collected: 06.10.2019 11:50 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**14.1**	15.0	7.98	mg/kg	07.01.2019 14:11	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**438**	15.0	8.10	mg/kg	07.01.2019 14:11	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**22.0**	15.0	8.10	mg/kg	07.01.2019 14:11	K	1
Total TPH	PHC635	**474**		7.98	mg/kg	07.01.2019 14:11	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	85	70 - 135	%		
o-Terphenyl	85	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	06.24.2019 20:55	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	06.24.2019 20:55	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	06.24.2019 20:55	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	06.24.2019 20:55	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	06.24.2019 20:55	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	06.24.2019 20:55	U	
Total BTEX		<0.000342		0.000342	mg/kg	06.24.2019 20:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	108	70 - 130	%		

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Anderson Ranch Rec

Sample Id: **V-1 @ 6' RE** Matrix: Soil Sample Depth: 6

Lab Sample Id: 627903-006 RE Date Collected: 06.10.2019 11:50 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.4**	15.0	8.00	mg/kg	06.19.2019 02:44	K	1
Diesel Range Organics (DRO)	C10C28DRO	**416**	15.0	8.13	mg/kg	06.19.2019 02:44	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**16.5**	15.0	8.13	mg/kg	06.19.2019 02:44	K	1
Total TPH	PHC635	**448**		8.00	mg/kg	06.19.2019 02:44	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	127	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

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Sample Id: **V-1 @ 7'** Matrix: Soil Sample Depth: 7 ft

Lab Sample Id: 627903-007 Date Collected: 06.10.2019 12:00 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**9.87**	14.9	7.97	mg/kg	07.01.2019 14:35	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**83.6**	14.9	8.10	mg/kg	07.01.2019 14:35	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**17.7**	14.9	8.10	mg/kg	07.01.2019 14:35	K	1
Total TPH	PHC635	**111**		7.97	mg/kg	07.01.2019 14:35	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	76	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	06.24.2019 21:17	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	06.24.2019 21:17	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	06.24.2019 21:17	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	06.24.2019 21:17	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	06.24.2019 21:17	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	06.24.2019 21:17	U	
Total BTEX		<0.000342		0.000342	mg/kg	06.24.2019 21:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	104	70 - 130	%		

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Sample Id: **V-1 @ 7' RE** Matrix: Soil Sample Depth: 7

Lab Sample Id: 627903-007 RE Date Collected: 06.10.2019 12:00 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**8.97**	15.0	7.99	mg/kg	06.19.2019 03:08	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**87.3**	15.0	8.12	mg/kg	06.19.2019 03:08	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	06.19.2019 03:08	UK	1
Total TPH	PHC635	**96.3**		7.99	mg/kg	06.19.2019 03:08	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	139	70 - 135	%		*****
o-Terphenyl	107	70 - 135	%		

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Sample Id: **V-1 @ 8'** Matrix: Soil Sample Depth: 8 ft

Lab Sample Id: 627903-008 Date Collected: 06.10.2019 12:10 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	07.01.2019 14:59	UK	1
Diesel Range Organics (DRO)	C10C28DRO	**58.1**	15.0	8.11	mg/kg	07.01.2019 14:59	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**11.1**	15.0	8.11	mg/kg	07.01.2019 14:59	JK	1
Total TPH	PHC635	**69.2**		7.99	mg/kg	07.01.2019 14:59	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	83	70 - 135	%		
o-Terphenyl	66	70 - 135	%		**

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	06.24.2019 21:39	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	06.24.2019 21:39	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	06.24.2019 21:39	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	06.24.2019 21:39	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	06.24.2019 21:39	U	1
Xylenes, Total	1330-20-7	<0.000345		0.000345	mg/kg	06.24.2019 21:39	U	
Total BTEX		<0.000345		0.000345	mg/kg	06.24.2019 21:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	105	70 - 130	%		

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Sample Id: **V-1 @ 8' RE** Matrix: Soil Sample Depth: 8

Lab Sample Id: 627903-008 RE Date Collected: 06.10.2019 12:10 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**9.42**	15.0	7.99	mg/kg	06.19.2019 03:33	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**72.1**	15.0	8.12	mg/kg	06.19.2019 03:33	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	06.19.2019 03:33	UK	1
Total TPH	PHC635	**81.5**		7.99	mg/kg	06.19.2019 03:33	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	145	70 - 135	%		*****
o-Terphenyl	81	70 - 135	%		

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Sample Id: **V-1 @ 9'** Matrix: Soil Sample Depth: 9 ft

Lab Sample Id: 627903-009 Date Collected: 06.10.2019 12:20 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	07.01.2019 15:23	UK	1
Diesel Range Organics (DRO)	C10C28DRO	**28.9**	15.0	8.13	mg/kg	07.01.2019 15:23	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	07.01.2019 15:23	UK	1
Total TPH	PHC635	**28.9**		8.00	mg/kg	07.01.2019 15:23	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	81	70 - 135	%		
o-Terphenyl	68	70 - 135	%		**

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	06.24.2019 22:01	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	06.24.2019 22:01	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	06.24.2019 22:01	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	06.24.2019 22:01	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	06.24.2019 22:01	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	06.24.2019 22:01	U	
Total BTEX		<0.000344		0.000344	mg/kg	06.24.2019 22:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	112	70 - 130	%		

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Sample Id: **V-1 @ 9' RE** Matrix: Soil Sample Depth: 9

Lab Sample Id: 627903-009 RE Date Collected: 06.10.2019 12:20 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	06.19.2019 03:57	UK	1
Diesel Range Organics (DRO)	C10C28DRO	**31.6**	15.0	8.11	mg/kg	06.19.2019 03:57	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	06.19.2019 03:57	UK	1
Total TPH	PHC635	**31.6**		7.99	mg/kg	06.19.2019 03:57	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	140	70 - 135	%		*****
o-Terphenyl	102	70 - 135	%		

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Sample Id: **V-1 @ 10'** Matrix: Soil Sample Depth: 10 ft

Lab Sample Id: 627903-010 Date Collected: 06.10.2019 12:30 Date Received: 06.17.2019 07:25

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3092967 Date Prep: 06.19.2019 09:10

Prep seq: 7680203

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**272**	4.96	0.852	mg/kg	06.19.2019 16:35		1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**11.3**	15.0	7.99	mg/kg	07.01.2019 15:47	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**22.5**	15.0	8.12	mg/kg	07.01.2019 15:47	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	07.01.2019 15:47	UK	1
Total TPH	PHC635	**33.8**		7.99	mg/kg	07.01.2019 15:47	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	79	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	06.24.2019 22:23	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	06.24.2019 22:23	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	06.24.2019 22:23	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	06.24.2019 22:23	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	06.24.2019 22:23	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	06.24.2019 22:23	U	
Total BTEX		<0.000342		0.000342	mg/kg	06.24.2019 22:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	96	70 - 130	%		
4-Bromofluorobenzene	110	70 - 130	%		

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Anderson Ranch Rec

Sample Id: **V-1 @ 10' RE** Matrix: Soil Sample Depth: 10

Lab Sample Id: 627903-010 RE Date Collected: 06.10.2019 12:30 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**8.88**	15.0	7.99	mg/kg	06.19.2019 04:22	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**26.8**	15.0	8.11	mg/kg	06.19.2019 04:22	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	06.19.2019 04:22	UK	1
Total TPH	PHC635	**35.7**		7.99	mg/kg	06.19.2019 04:22	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	155	70 - 135	%		*****
o-Terphenyl	97	70 - 135	%		

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Sample Id: **V-1 @ 11'** Matrix: Soil Sample Depth: 11 ft

Lab Sample Id: 627903-011 Date Collected: 06.12.2019 10:00 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**11.5**	15.0	7.98	mg/kg	07.01.2019 16:36	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**56.4**	15.0	8.10	mg/kg	07.01.2019 16:36	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**16.7**	15.0	8.10	mg/kg	07.01.2019 16:36	K	1
Total TPH	PHC635	**84.6**		7.98	mg/kg	07.01.2019 16:36	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	69	70 - 135	%		**

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	06.24.2019 22:45	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	06.24.2019 22:45	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	06.24.2019 22:45	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	06.24.2019 22:45	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	06.24.2019 22:45	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	06.24.2019 22:45	U	
Total BTEX		<0.000342		0.000342	mg/kg	06.24.2019 22:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	106	70 - 130	%		

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Sample Id: **V-1 @ 11' RE** Matrix: Soil Sample Depth: 11

Lab Sample Id: 627903-011 RE Date Collected: 06.12.2019 10:00 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.19.2019 05:11	UK	1
Diesel Range Organics (DRO)	C10C28DRO	**43.9**	15.0	8.13	mg/kg	06.19.2019 05:11	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.19.2019 05:11	UK	1
Total TPH	PHC635	**43.9**		8.00	mg/kg	06.19.2019 05:11	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	151	70 - 135	%		*****
o-Terphenyl	106	70 - 135	%		

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Anderson Ranch Rec

Sample Id: **V-1 @ 12'** Matrix: Soil Sample Depth: 12 ft

Lab Sample Id: 627903-012 Date Collected: 06.12.2019 10:10 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**8.62**	14.9	7.97	mg/kg	07.01.2019 17:00	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**64.0**	14.9	8.10	mg/kg	07.01.2019 17:00	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**15.9**	14.9	8.10	mg/kg	07.01.2019 17:00	K	1
Total TPH	PHC635	**88.5**		7.97	mg/kg	07.01.2019 17:00	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	67	70 - 135	%		**

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	06.25.2019 01:29	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	06.25.2019 01:29	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	06.25.2019 01:29	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	06.25.2019 01:29	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	06.25.2019 01:29	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	06.25.2019 01:29	U	
Total BTEX		<0.000344		0.000344	mg/kg	06.25.2019 01:29	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	100	70 - 130	%		

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Sample Id: **V-1 @ 12' RE** Matrix: Soil Sample Depth: 12

Lab Sample Id: 627903-012 RE Date Collected: 06.12.2019 10:10 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	06.19.2019 05:35	UK	1
Diesel Range Organics (DRO)	C10C28DRO	**48.0**	15.0	8.10	mg/kg	06.19.2019 05:35	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	06.19.2019 05:35	UK	1
Total TPH	PHC635	**48.0**		7.98	mg/kg	06.19.2019 05:35	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	134	70 - 135	%		
o-Terphenyl	89	70 - 135	%		

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Sample Id: **V-1 @ 13'** Matrix: Soil Sample Depth: 13 ft

Lab Sample Id: 627903-013 Date Collected: 06.12.2019 10:20 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**12.6**	15.0	7.99	mg/kg	07.01.2019 17:25	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**71.2**	15.0	8.11	mg/kg	07.01.2019 17:25	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**11.7**	15.0	8.11	mg/kg	07.01.2019 17:25	JK	1
Total TPH	PHC635	**95.5**		7.99	mg/kg	07.01.2019 17:25	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	79	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	06.25.2019 01:51	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	06.25.2019 01:51	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	06.25.2019 01:51	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	06.25.2019 01:51	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	06.25.2019 01:51	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	06.25.2019 01:51	U	
Total BTEX		<0.000344		0.000344	mg/kg	06.25.2019 01:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	101	70 - 130	%		

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Sample Id: **V-1 @ 13' RE** Matrix: Soil Sample Depth: 13

Lab Sample Id: 627903-013 RE Date Collected: 06.12.2019 10:20 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.19.2019 06:00	UK	1
Diesel Range Organics (DRO)	C10C28DRO	**55.5**	15.0	8.13	mg/kg	06.19.2019 06:00	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.19.2019 06:00	UK	1
Total TPH	PHC635	**55.5**		8.00	mg/kg	06.19.2019 06:00	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	145	70 - 135	%		*****
o-Terphenyl	105	70 - 135	%		

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Sample Id: **V-1 @ 14'** Matrix: Soil Sample Depth: 14 ft

Lab Sample Id: 627903-014 Date Collected: 06.12.2019 10:30 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**10.9**	15.0	7.99	mg/kg	07.01.2019 17:49	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**58.8**	15.0	8.12	mg/kg	07.01.2019 17:49	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**12.5**	15.0	8.12	mg/kg	07.01.2019 17:49	JK	1
Total TPH	PHC635	**82.2**		7.99	mg/kg	07.01.2019 17:49	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	74	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	06.25.2019 02:13	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	06.25.2019 02:13	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	06.25.2019 02:13	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	06.25.2019 02:13	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	06.25.2019 02:13	U	1
Xylenes, Total	1330-20-7	<0.000345		0.000345	mg/kg	06.25.2019 02:13	U	
Total BTEX		<0.000345		0.000345	mg/kg	06.25.2019 02:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	102	70 - 130	%		

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Sample Id: **V-1 @ 14' RE** Matrix: Soil Sample Depth: 14

Lab Sample Id: 627903-014 RE Date Collected: 06.12.2019 10:30 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	06.19.2019 06:25	UK	1
Diesel Range Organics (DRO)	C10C28DRO	**48.9**	15.0	8.10	mg/kg	06.19.2019 06:25	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	06.19.2019 06:25	UK	1
Total TPH	PHC635	**48.9**		7.98	mg/kg	06.19.2019 06:25	K	

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

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Sample Id: **V-1 @ 15'** Matrix: Soil Sample Depth: 15 ft

Lab Sample Id: 627903-015 Date Collected: 06.12.2019 10:40 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**10.4**	15.0	8.00	mg/kg	07.01.2019 18:14	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**58.3**	15.0	8.13	mg/kg	07.01.2019 18:14	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**11.9**	15.0	8.13	mg/kg	07.01.2019 18:14	JK	1
Total TPH	PHC635	**80.6**		8.00	mg/kg	07.01.2019 18:14	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	76	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	06.25.2019 02:35	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	06.25.2019 02:35	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	06.25.2019 02:35	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	06.25.2019 02:35	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	06.25.2019 02:35	U	1
Xylenes, Total	1330-20-7	<0.000346		0.000346	mg/kg	06.25.2019 02:35	U	
Total BTEX		<0.000346		0.000346	mg/kg	06.25.2019 02:35	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	103	70 - 130	%		

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Sample Id: **V-1 @ 15' RE** Matrix: Soil Sample Depth: 15

Lab Sample Id: 627903-015 RE Date Collected: 06.12.2019 10:40 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	06.19.2019 06:49	UK	1
Diesel Range Organics (DRO)	C10C28DRO	**47.5**	15.0	8.12	mg/kg	06.19.2019 06:49	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	06.19.2019 06:49	UK	1
Total TPH	PHC635	**47.5**		7.99	mg/kg	06.19.2019 06:49	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	145	70 - 135	%		*****
o-Terphenyl	96	70 - 135	%		

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Sample Id: **V-1 @ 16'** Matrix: Soil Sample Depth: 16 ft

Lab Sample Id: 627903-016 Date Collected: 06.12.2019 10:50 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**10.9**	15.0	7.99	mg/kg	07.01.2019 18:38	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**9.85**	15.0	8.11	mg/kg	07.01.2019 18:38	JK	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	07.01.2019 18:38	UK	1
Total TPH	PHC635	**20.8**		7.99	mg/kg	07.01.2019 18:38	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	77	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	06.25.2019 02:57	U	1
Toluene	108-88-3	<0.000458	0.00201	0.000458	mg/kg	06.25.2019 02:57	U	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	06.25.2019 02:57	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	06.25.2019 02:57	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	06.25.2019 02:57	U	1
Xylenes, Total	1330-20-7	<0.000346		0.000346	mg/kg	06.25.2019 02:57	U	
Total BTEX		<0.000346		0.000346	mg/kg	06.25.2019 02:57	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	105	70 - 130	%		

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Sample Id: **V-1 @ 16' RE** Matrix: Soil Sample Depth: 16

Lab Sample Id: 627903-016 RE Date Collected: 06.12.2019 10:50 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	06.19.2019 07:14	UK	1
Diesel Range Organics (DRO)	C10C28DRO	<8.11	15.0	8.11	mg/kg	06.19.2019 07:14	UK	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	06.19.2019 07:14	UK	1
Total TPH	PHC635	<7.99		7.99	mg/kg	06.19.2019 07:14	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	143	70 - 135	%		*****
o-Terphenyl	102	70 - 135	%		

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Sample Id: **V-1 @ 17'** Matrix: Soil Sample Depth: 17 ft

Lab Sample Id: 627903-017 Date Collected: 06.12.2019 11:00 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**10.4**	15.0	7.99	mg/kg	07.01.2019 19:03	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**14.4**	15.0	8.12	mg/kg	07.01.2019 19:03	JK	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	07.01.2019 19:03	UK	1
Total TPH	PHC635	**24.8**		7.99	mg/kg	07.01.2019 19:03	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	71	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	06.25.2019 03:19	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	06.25.2019 03:19	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	06.25.2019 03:19	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	06.25.2019 03:19	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	06.25.2019 03:19	U	1
Xylenes, Total	1330-20-7	<0.000347		0.000347	mg/kg	06.25.2019 03:19	U	
Total BTEX		<0.000347		0.000347	mg/kg	06.25.2019 03:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	105	70 - 130	%		

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Sample Id: **V-1 @ 17' RE** Matrix: Soil Sample Depth: 17

Lab Sample Id: 627903-017 RE Date Collected: 06.12.2019 11:00 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	06.19.2019 07:38	UK	1
Diesel Range Organics (DRO)	C10C28DRO	**17.8**	15.0	8.11	mg/kg	06.19.2019 07:38	K	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	06.19.2019 07:38	UK	1
Total TPH	PHC635	**17.8**		7.99	mg/kg	06.19.2019 07:38	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	140	70 - 135	%		*****
o-Terphenyl	94	70 - 135	%		

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Sample Id: **V-1 @ 18'** Matrix: Soil Sample Depth: 18 ft

Lab Sample Id: 627903-018 Date Collected: 06.12.2019 11:10 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**11.7**	15.0	7.99	mg/kg	07.01.2019 19:28	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**9.13**	15.0	8.11	mg/kg	07.01.2019 19:28	JK	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	07.01.2019 19:28	UK	1
Total TPH	PHC635	**20.8**		7.99	mg/kg	07.01.2019 19:28	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	82	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	06.25.2019 03:41	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	06.25.2019 03:41	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	06.25.2019 03:41	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	06.25.2019 03:41	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	06.25.2019 03:41	U	1
Xylenes, Total	1330-20-7	<0.000345		0.000345	mg/kg	06.25.2019 03:41	U	
Total BTEX		<0.000345		0.000345	mg/kg	06.25.2019 03:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	103	70 - 130	%		

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Sample Id: **V-1 @ 18' RE** Matrix: Soil Sample Depth: 18

Lab Sample Id: 627903-018 RE Date Collected: 06.12.2019 11:10 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.97	14.9	7.97	mg/kg	06.19.2019 08:02	UK	1
Diesel Range Organics (DRO)	C10C28DRO	**11.2**	14.9	8.10	mg/kg	06.19.2019 08:02	JK	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	14.9	8.10	mg/kg	06.19.2019 08:02	UK	1
Total TPH	PHC635	**11.2**		7.97	mg/kg	06.19.2019 08:02	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	140	70 - 135	%		*****
o-Terphenyl	94	70 - 135	%		

Certificate of Analytical Results
627903
Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 19'** Matrix: Soil Sample Depth: 19 ft

Lab Sample Id: 627903-019 Date Collected: 06.12.2019 11:20 Date Received: 06.17.2019 07:25

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3092967 Date Prep: 06.19.2019 09:10

Prep seq: 7680203

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**8.75**	4.99	0.857	mg/kg	06.19.2019 16:42		1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**11.6**	15.0	7.98	mg/kg	07.01.2019 19:52	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**9.10**	15.0	8.10	mg/kg	07.01.2019 19:52	JK	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	07.01.2019 19:52	UK	1
Total TPH	PHC635	**20.7**		7.98	mg/kg	07.01.2019 19:52	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	68	70 - 135	%		**

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3093450 Date Prep: 06.24.2019 22:00

Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	06.25.2019 04:03	U	1
Toluene	108-88-3	**0.00161**	0.00200	0.000456	mg/kg	06.25.2019 04:03	J	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	06.25.2019 04:03	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	06.25.2019 04:03	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	06.25.2019 04:03	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	06.25.2019 04:03	U	
Total BTEX		**0.00161**		0.000344	mg/kg	06.25.2019 04:03	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	105	70 - 130	%		

Certificate of Analytical Results
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Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **V-1 @ 19' RE** Matrix: Soil Sample Depth: 19

Lab Sample Id: 627903-019 RE Date Collected: 06.12.2019 11:20 Date Received: 06.17.2019 07:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**11.8**	15.0	7.99	mg/kg	06.19.2019 08:27	JK	1
Diesel Range Organics (DRO)	C10C28DRO	**11.8**	15.0	8.11	mg/kg	06.19.2019 08:27	JK	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	06.19.2019 08:27	UK	1
Total TPH	PHC635	**23.6**		7.99	mg/kg	06.19.2019 08:27	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	140	70 - 135	%		*****
o-Terphenyl	100	70 - 135	%		

Certificate of Analytical Results
627903
Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **7680203-1-BLK** Matrix: Solid Sample Depth:
Lab Sample Id: 7680203-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: CHE % Moist: Tech: CHE
Seq Number: 3092967 Date Prep: 06.19.2019 09:10
Prep seq: 7680203

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	06.19.2019 09:18	U	1

Sample Id: **7680687-1-BLK** Matrix: Solid Sample Depth:
Lab Sample Id: 7680687-1-BLK Date Collected: Date Received:
Analytical Method: BTEX by EPA 8021 Prep Method: 5030B
Analyst: DVM % Moist: Tech: DVM
Seq Number: 3093450 Date Prep: 06.24.2019 22:00
Prep seq: 7680687

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	06.24.2019 18:22	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	06.24.2019 18:22	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	06.24.2019 18:22	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	06.24.2019 18:22	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	06.24.2019 18:22	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	06.24.2019 18:22	U	
Total BTEX		<0.000344		0.000344	mg/kg	06.24.2019 18:22	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	96	70 - 130	%		
4-Bromofluorobenzene	80	70 - 130	%		

Certificate of Analytical Results
627903

Tasman Geosciences, LLC, Hobbs, NM
Anderson Ranch Rec

Sample Id: **7681186-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7681186-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3094170 Date Prep: 07.01.2019 08:00

Prep seq: 7681186

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	07.01.2019 10:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	07.01.2019 10:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	07.01.2019 10:12	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	07.01.2019 10:12	K	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	73	70 - 135	%		

Flagging Criteria

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

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Anderson Ranch Rec

Work Orders : 627903 **Project ID:**

Lab Batch #: 3093450 **Sample:** 7680687-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06.24.2019 17:33 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	70-130	
4-Bromofluorobenzene	0.0281	0.0300	94	70-130	

Lab Batch #: 3093450 **Sample:** 7680687-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06.24.2019 18:22 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0239	0.0300	80	70-130	

Lab Batch #: 3093450 **Sample:** 7680687-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06.24.2019 19:49 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0311	0.0300	104	70-130	

Lab Batch #: 3093450 **Sample:** 627903-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06.25.2019 05:09 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0341	0.0300	114	70-130	

Lab Batch #: 3093450 **Sample:** 627903-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06.25.2019 05:31 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	70-130	
4-Bromofluorobenzene	0.0334	0.0300	111	70-130	

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

Form 2 - Surrogate Recoveries

Project Name: Anderson Ranch Rec

Work Orders : 627903 **Project ID:**

Lab Batch #: 3094170 **Sample:** 7681186-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07.01.2019 10:12 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	36.6	50.0	73	70-135	

Lab Batch #: 3094170 **Sample:** 7681186-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07.01.2019 10:36 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.9	100	92	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

Lab Batch #: 3094170 **Sample:** 7681186-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07.01.2019 10:59 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.2	100	93	70-135	
o-Terphenyl	50.0	50.0	100	70-135	

Lab Batch #: 3094170 **Sample:** 627903-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07.01.2019 12:11 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.0	99.9	91	70-135	
o-Terphenyl	47.7	50.0	95	70-135	

Lab Batch #: 3094170 **Sample:** 627903-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07.01.2019 12:35 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.2	99.8	80	70-135	
o-Terphenyl	40.8	49.9	82	70-135	

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

BS / BSD Recoveries

Project Name: Anderson Ranch Rec

Work Order #: 627903 **Project ID:**

Analyst: DVM **Date Prepared:** 06.24.2019 **Date Analyzed:** 06.24.2019

Lab Batch ID: 3093450 **Sample:** 7680687-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000384	0.0998	0.100	100	0.0994	0.0911	92	9	70-130	35	
Toluene	<0.000455	0.0998	0.0994	100	0.0994	0.0895	90	10	70-130	35	
Ethylbenzene	<0.000564	0.0998	0.107	107	0.0994	0.0940	95	13	70-130	35	
m_p-Xylenes	<0.00101	0.200	0.216	108	0.199	0.190	95	13	70-130	35	
o-Xylene	<0.000344	0.0998	0.0989	99	0.0994	0.0888	89	11	70-130	35	

Analyst: CHE **Date Prepared:** 06.19.2019 **Date Analyzed:** 06.19.2019

Lab Batch ID: 3092967 **Sample:** 7680203-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.858	250	243	97	250	243	97	0	90-110	20	

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

BS / BSD Recoveries

Project Name: Anderson Ranch Rec

Work Order #: 627903 **Project ID:**

Analyst: ARM **Date Prepared:** 07.01.2019 **Date Analyzed:** 07.01.2019

Lab Batch ID: 3094170 **Sample:** 7681186-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1070	107	1000	1060	106	1	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1070	107	1000	1110	111	4	70-135	20	

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

Form 3 - MS / MSD Recoveries

Project Name: Anderson Ranch Rec

Work Order # : 627903 **Project ID:**

Lab Batch ID: 3093450 **QC- Sample ID:** 627903-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06.25.2019 **Date Prepared:** 06.24.2019 **Analyst:** DVM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000384	0.0998	0.0537	54	0.0994	0.0532	54	1	70-130	35	X
Toluene	0.000663	0.0998	0.0489	48	0.0994	0.0501	50	2	70-130	35	X
Ethylbenzene	<0.000564	0.0998	0.0477	48	0.0994	0.0503	51	5	70-130	35	X
m_p-Xylenes	0.00218	0.200	0.0334	16	0.199	0.0416	20	22	70-130	35	X
o-Xylene	<0.000344	0.0998	0.0514	52	0.0994	0.0518	52	1	70-130	35	X

Lab Batch ID: 3092967 **QC- Sample ID:** 627896-018 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06.19.2019 **Date Prepared:** 06.19.2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	181	251	422	96	251	422	96	0	90-110	20	

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

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

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

Form 3 - MS / MSD Recoveries

Project Name: Anderson Ranch Rec

Work Order # : 627903 **Project ID:**

Lab Batch ID: 3092967 **QC- Sample ID:** 627901-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06.19.2019 **Date Prepared:** 06.19.2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	30.7	251	292	104	251	293	105	0	90-110	20	

Lab Batch ID: 3094170 **QC- Sample ID:** 627903-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07.01.2019 **Date Prepared:** 07.01.2019 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	35.9	999	993	96	998	914	88	8	70-135	20	
Diesel Range Organics (DRO)	522	999	1480	96	998	1270	75	15	70-135	20	

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

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

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

XENCO LABORATORIES

Chain of Custody

Work Order No: 627903

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

www.xenco.com Page ____ of ____

Project Manager:	ZACH CONDER	Bill to: (if different)	
Company Name:	TASMAN GEOSCIENCES	Company Name:	PLAINS AAEP
Address:	2620 W. MARLAND BLD	Address:	% AMBER GROVES
City, State ZIP:	HOBBS, NM 88240	City, State ZIP:	
Phone:	806-724-5943	Email:	ZCONDER@TASMAN-GEO.COM

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

		Turn Around	
Project Name:	ANDERSON RANCH REC	Routine ☐	
Project Number:	SEE COMMENTS	Rush:	
P.O. Number:			
Sampler's Name:	BECKY GRIFFIN	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.2/0.0	Thermometer ID	R6
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	10

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	RCI	CHLORIDE 4500	TCLP BENZENE	TCLP RCRA 8	NORM	PAINT FILTER	TPH	BTEX							Sample Comments
V-1@1'	S	6-10-19	11:00	1FT	1		X					X	X							SRS# - FORMER
V-1@2'			11:10	2FT	1							X	X							ANDERSON
V-1@3'			11:20	3FT	1							X	X							RANCH STATION
V-1@4'			11:30	4FT	1							X	X							HISTORICAL
V-1@5'			11:40	5FT	1							X	X							
V-1@6'			11:50	6FT	1							X	X							
V-1@7'			12:00	7FT	1							X	X							
V-1@8'			12:10	8FT	1							X	X							
V-1@9'			12:20	9FT	1							X	X							
V-1@10'			12:30	10FT	1		X					X	X							

Work Order Notes

[redacted]
ALGROVES@PAALP.COM
bgriffin@TASMAN-GEO.COM
bdennis@TASMAN-GEO.COM
ZCONDER@TASMAN-GEO.COM

TAT starts the day recevied by the lab, if received by 4:30pm

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Becky Griffin	Stephanie Tegos	6/14 12:59	2 Stephanie Tegos		6/14 1:36
3	[signature]	6/17/19 0738	4		
5			6		

Revised Date 051418 Rev. 2018.1

Chain of Custody

Work Order No: 627903

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) www.xenco.com Page _____ of _____

Project Manager:	ZACH CONDER	Bill to: (if different)	
Company Name:	TASMAN GEOSCIENCES	Company Name:	PLAINS AAP
Address:	2620 W. MARLAND BLD	Address:	C/O AMBER GROVES
City, State ZIP:	HOBBS, NM 88240	City, State ZIP:	
Phone:	806-724-5943	Email:	ZCONDER@TASMAN-GEO.COM

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	ANDERSON RANCH REC	Turn Around	
Project Number:	SEE COMMENTS	Routine	☐
P.O. Number:		Rush:	
Sampler's Name:	BECKY GRIFFIN	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	3.8 / 0.0	Thermometer ID	R8	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.7	
Sample Custody Seals:	Yes No (N/A)	Total Containers:	9	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	RCI	CHLORIDE 4500	TCLP BENZENE	TCLP RCRA 8	NORM	PAINT FILTER	TPH	BTEX
V-1 @ 11'	S	6-12-19	10:00	11 FT								X	X
V-1 @ 12'			10:10	12 FT								X	X
V-1 @ 13'			10:20	13 FT								X	X
V-1 @ 14'			10:30	14 FT								X	X
V-1 @ 15'			10:40	15 FT								X	X
V-1 @ 16'			10:50	16 FT								X	X
V-1 @ 17'			11:00	17 FT								X	X
V-1 @ 18'			11:10	18 FT								X	X
V-1 @ 19'			11:20	19 FT			X					X	X

Work Order Notes

[redacted]
ALGROVES@PLAINSAAP.COM
BGRIFFIN@TASMAN-GEO.COM
DDENNIS@TASMAN-GEO.COM
ZCONDER@TASMAN-GEO.COM
TAT starts the day received by the lab, if received by 4:30pm

Sample Comments

SRS # - FORMER ANDERSON RANCH STATION HISTORICAL

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Becky Griffin	Stephanie Rojas	6/14 12:59	2 Stephanie Rojas		6/14 1:36
3		06/17/19	4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tasman Geosciences, LLC

Date/ Time Received: 06/17/2019 07:25:00 AM

Work Order #: 627903

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambien

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	0
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

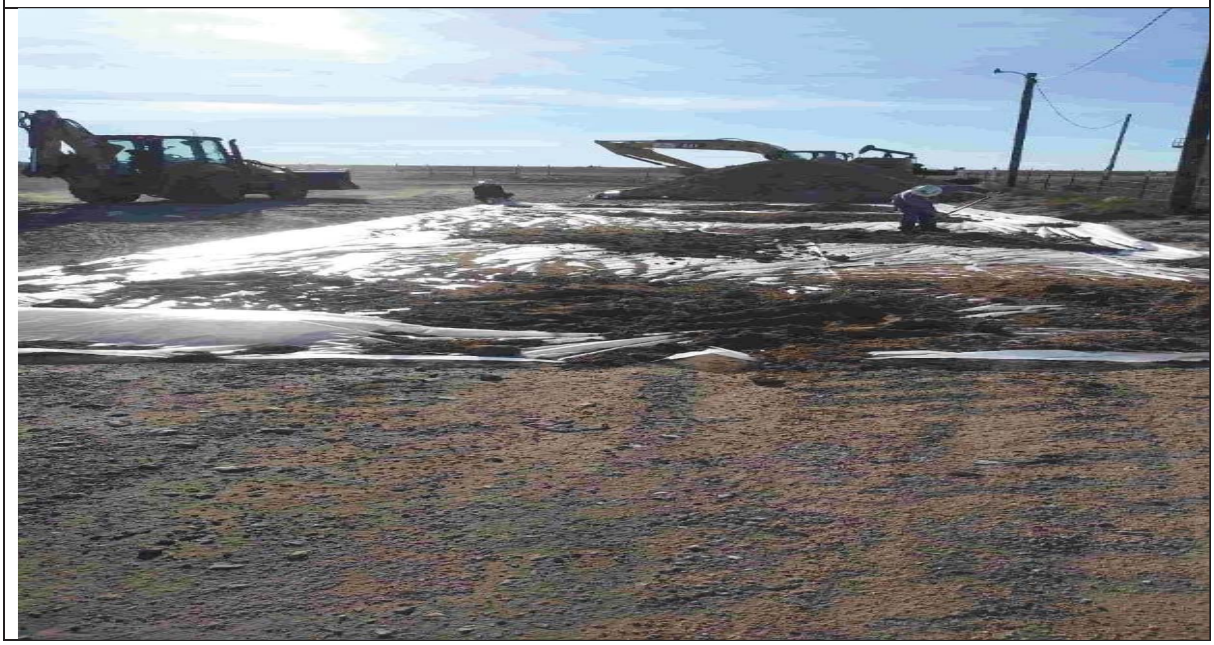
Checklist completed by: Brianna Teel Date: 06/17/2019
Brianna Teel

Checklist reviewed by: Date: 06/18/2019
John Builes

APPENDIX D
PHOTOGRAPHIC DOCUMENTATION

Photograph No 1.	
Date: November 25, 2019	Direction: South
Description: View of former tank battery area.	

Photograph No 2.	
Date: November 26, 2019	Direction: South
Description: View of plastic and stockpiled soils.	



Photograph No 3.	
Date: December 2, 2019	Direction: East
Description: View of excavation of former tank battery location.	

Photograph No 4.	
Date: December 5, 2019	Direction: West
Description: View of remediation activities and stockpile of hydrocarbon impacted soils.	

APPENDIX E

NEW MEXICO STATE LAND OFFICE SEED MIXTURE

NMSLO Seed Mix Shallow (SH)

SHALLOW (SH) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sideoats grama	**Vaughn, El Reno**	**4.0**	**F**
Blue grama	**Lovington, Hachita**	**3.0**	**D**
Little bluestem	**Pastura, Cimmaron**	**1.5**	**F**
Green sprangletop	**VNS, Southern**	**1.0**	**D**
Plains bristlegrass	**VNS, Southern**	**1.0**	**D**
Forbs:			
Firewheel (*Gaillardia*)	**VNS, Southern**	**1.0**	**D**
Shrubs:			
Fourwing saltbush	**Marana, Santa Rita**	**1.0**	**D**
Common winterfat	**VNS, Southern**	**0.5**	**F**
	Total PLS/acre	**13.0**	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box
VNS = Variety Not Stated, PLS = Pure Live Seed

- Seed mixes should be provided in bags separating seed types into the three categories: small (S), standard (D) and fluffy (F).
- VNS, Southern – Seed should be from a southern latitude collection of this species.
- Double seed application rate for broadcast or hydroseeding.
- If one species is not available, contact the SLO for an approved substitute; alternatively the SLO may require other species proportionately increased.
- Additional information on these seed species can be found on the USDA Plants Database website at http://plants.usda.gov.