Form C-141
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State of New Mexico
Oil Conservation Division

Incident ID	NRM1925327699
District RP	1RP-5648
Facility ID	fRM1925327165
Application ID	pRM1925255479

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Amber Groves Title: Remediation Coordinator

Signature: Amber Groves Date: 10/31/2019

email: algroves@paalp.com Telephone: 575-390-5517

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

November 11, 2019

Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Remediation Summary and Site Closure Report
Red Hills Station
API No. N/A
GPS: Latitude 32.06577 Longitude -103.66597
UL "N", Sec. 3, T26S, R32E
Lea County, NM
NMOCD Ref. No. 1RP-5648

Tasman Geosciences (Tasman), on behalf of Plains Pipeline, LP (Plains)., has prepared this Remediation Summary and Site Closure Report for the Release Site known as the Red Hills Station. Details of the release are summarized below:

RELEASE DETAILS			
Type of Release: Crude Oil		**Volume of Release:** 32 bbls	
		Volume Recovered: 15 bbls	
Source of Release: Crude Oil		**Date of Release:** 7/26/19	**Date of Discovery:** 7/26/19
Was Immediate Notice Given?	Yes	**If, YES, to Whom?**	NMOCD District I
Was a Watercourse Reached?	No	**If YES, Volume Impacting the Watercourse:**	N/A
Surface Owner: Federal		**Mineral Owner:**	Federal
Describe Cause of Problem and Remedial Action Taken:			
Crude oil release resulting from a broken nipple on the incoming meter skid.			

Site Characteristics and Sample Location Map are provided as Figure 1 and 2A/2B. General Site Photographs are provided as Appendix C. A Copy of the Initial Form C-141 is provided as Appendix D.

REGULATORY FRAMEWORK

Surface impacts from unauthorized releases of crude oil, gases, produced water, condensate or other oil field waste which occur during normal oilfield operations are generally regulated by the New Mexico Oil Conservation Division (NMOCD) in accordance with 19.15.29 of the New Mexico Administrative Code (NMAC). 19.15.29 NMAC establishes reporting, site assessment/characterization, remediation, closure, variance and enforcement procedures. Table I of 19.15.29.12 NMAC determines the closure criteria for soils impacted by a release based on the depth to groundwater and the following site characteristics:

Site Characteristics	
Approximate Depth to Groundwater	**~225 ft.**
Within 300 ft. of any continuously flowing or significant watercourse?	☐ Yes ☑ No
Within 200 ft. of any lakebed, sinkhole, or playa lake?	☐ Yes ☑ No
Within 300 ft. of an occupied permanent residence, school, hospital, or institution?	☐ Yes ☑ No
Within 500 ft. of a spring or private, domestic fresh water well?	☐ Yes ☑ No
Within 1,000 ft. of any fresh water well?	☐ Yes ☑ No
Within the incorporated municipal boundaries or within a municipal well field?	☐ Yes ☑ No
Within 300 ft. of a wetland?	☐ Yes ☑ No
Within the area overlying a subsurface mine?	☐ Yes ☑ No
Within an unstable area?	☐ Yes ☑ No
Within a 100-year floodplain?	☐ Yes ☑ No

A search of a groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) and United States Geological Service (USGS) was conducted to determine the average depth to groundwater within a one (1) mile radius of the Release Site and identify any registered water wells within a 1/2 mile of the Release Site. Due to none being identified by either resource, the approximate depth to groundwater was extrapolated from a depth to groundwater map titled "Lea Co. Depth to Ground Water" authored by a third party in 2005. Using the previous mentioned resource depth to ground water was estimated to be encountered at ~225 feet (ft.) below ground surface (bgs.). An exert of the third party map can be found as Appendix A.

Based on the approximate depth to groundwater and site characteristics, the NMOCD Closure Criteria are as follows:

Table I
Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
>100 feet	Chloride***	EPA 300.0/SM4500	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	TPH (GRO+DRO)	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

SITE DELINEATION

On 07/31/2019 Tasman personnel were on site to begin soil delineation of the accidental discharge. Four (4) verticals were installed at the site to determine the depth of impact within the Red Hills Facility. Soil samples collected were field tested for chlorides and hydrocarbons. Representative samples from each vertical were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX concentrations. Chloride concentrations ranged from 10.7 mg/kg in soil sample V-1 @ 1' to 9.17 mg/kg in soil sample V-2 @ 6", all exhibiting concentrations below NMOCD Closure Criteria. TPH concentrations ranged from ranging from 2,026 mg/kg in soil sample V-1 @ 6" to 13.3 mg/kg in soil sample V-2 @ 1'. BTEX Concentrations were below the NMOCD Closure Criteria in all of the submitted soil samples.

Areas outside of the Red Hills Station facility were impacted by overspray. During the initial response a third party scraped the top zero (0) to six (6) inches (in.) with mechanical equipment to prevent overspray from impacting soil further. On July 30, 2019, areas predominately vegetated were treated with Micro-Blaze. During additional delineation activities taking place on August 8, 2019, six (6) verticals were collected from the overspray area and field screened for chlorides and hydrocarbons. Representative samples from each vertical were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. A Sample Location Map overviewing the overspray area is included as Figure 2B. TPH, BTEX, and chloride concentrations in each of the submitted soil samples collected from the overspray area were below NMOCD Closure Criteria. Based on analytical results the overspray area was determined to need no further action.

A table summarizing laboratory analytical results from soil samples collected during the site delineation is provided below:

Concentrations of BTEX, TPH and/or Chloride in Soil											
				SW 846 8021B		SW 846 8015M Ext.					E 300
Sample ID	Date	Depth	Soil Status	Benzene (mg/kg)	BTEX (mg/kg)	GRO C_6-C_{10} (mg/kg)	DRO C_{10}-C_{28} (mg/kg)	GRO + DRO C_6-C_{28} (mg/kg)	ORO C_{28}-C_{35} (mg/kg)	TPH C_6-C_{35} (mg/kg)	Chloride (mg/kg)
V-1 @ 6"	7/31/2019	6"	Excavated	<0.008	0.078	10.0	1,740	**1,750**	276.0	2,026	-
V-1 @ 1'	7/31/2019	1'	In-Situ	<0.008	0.005	<9.93	21.9	21.9	<9.93	21.9	10.7
V-2 @ 6"	7/31/2019	6"	Excavated	<0.008	0.005	<10.0	13.7	13.7	<10.0	**13.7**	9.17
V-2 @ 1'	7/31/2019	1'	Excavated	<0.008	<0.004	<9.96	13.3	13.3	<9.96	13.3	-
V-3 @ 6"	7/31/2019	6"	Excavated	<0.008	0.012	<9.98	1,170	**1,170**	296	1,466	-
V-3 @ 1'	7/31/2019	1'	In-Situ	<0.008	<0.004	<10.0	61.8	61.8	29.6	91.4	10.1
V-4 @ 6"	7/31/2019	6"	Excavated	<0.008	0.005	12.0	<9.99	12.0	12.0	24.0	13.4
OS-01	8/2/2019	6"	In-Situ	<0.0003	<0.0003	<7.97	107	107	8.60	116	-
OS-02	8/2/2019	6"	In-Situ	<0.0003	<0.0003	<7.99	96.5	96.5	9.39	106	-
OS-03	8/2/2019	6"	In-Situ	<0.0003	<0.0003	<8.00	35.1	35.1	<8.13	35.1	-
OS-04	8/2/2019	6"	In-Situ	<0.0003	<0.0003	<7.97	34.9	34.9	<8.10	34.9	-
OS-05	8/2/2019	6"	In-Situ	<0.0003	<0.0003	<7.98	19.9	19.9	<8.10	19.9	-
OS-06	8/2/2019	6"	In-Situ	<0.0003	<0.0003	<7.99	33.9	33.9	<8.12	33.9	-
NMOCD Closure Criteria				10	50	-	-	1,000	-	2,500	20,000

Laboratory analytical reports are provided as Appendix B.

SUMMARY OF FIELD ACTIVITIES

Impacted soil within the release margins were excavated and temporarily stockpiled on-site, atop an impermeable liner, pending final disposition. The floor and sidewalls of the excavated area were advanced until laboratory analytical results from confirmation soil samples indicated TPH concentrations were below the NMOCD closure criteria. Upon excavating impacted soil from within the release margins to a depth of approximately zero (0) to six (6) inches (in.) bgs. (see Figure 2A), thirty-nine (39) confirmation composite soil samples were collected from the floor and sidewalls of the excavated area representing no more than 200 SqFt. The collected soil samples were submitted to the laboratory for analysis of TPH, BTEX, and chloride concentrations. Analytical results indicated that soil samples FL-3, FL-4, FL-6, FL-10, FL-15, FL-25, FL-27, FL-31, FL-34, and FL-36 exhibited TPH concentrations in exceedance of NMOCD closure criteria. The areas represented by these samples were excavated an additional six (6) in. bgs., and additional composite soil samples representing no more than 200 SqFt. were collected and submitted for analysis of TPH, BTEX, and chloride concentrations. These samples are denoted by the letter "b" following the name of the original soil sample representing that area (i.e. FL-3b) and subsequently the letter "c" in the case of soil sample FL-4. A Soil Sample Location Map is provided as Figures 2A. Upon receiving laboratory analytical data showing samples were below NMOCD closure criteria, impacted soil was transported under manifest to a NMOCD-approved disposal facility and the excavated area was backfilled with locally sourced, non-impacted "like" material. A table summarizing laboratory analytical results from confirmation soil samples is provided below:

Concentrations of Benzene, BTEX, and/or TPH in Soil											
				SW 846 8021B		SW 846 8015M Ext.					4500 C-B
Sample ID	Date	Depth	Soil Status	Benzene (mg/kg)	BTEX (mg/kg)	GRO C_6-C_{10} (mg/kg)	DRO C_{10}-C_{28} (mg/kg)	GRO + DRO C_6-C_{28} (mg/kg)	ORO C_{28}-C_{35} (mg/kg)	TPH C_6-C_{35} (mg/kg)	Chloride (mg/kg)
FL-1	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	175	175	43.1	218	41.5
FL-2	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	438	438	558	996	366
FL-3	8/16/2019	Surf. - 6"	Excavated	<0.0003	<0.0003	<15.0	1,970	**1,970**	421	**2,391**	296
FL-3b	9/19/2019	6"	In-Situ	<0.0003	<0.0003	<15.0	214	214	57.6	272	58.1
FL-4	8/16/2019	Surf. - 6"	Excavated	<0.0003	<0.0003	<15.0	2,230	**2,230**	507	**2,737**	87.3
FL-4b	9/19/2019	6"	Excavated	<0.0003	<0.0003	<15.0	1,040	**1,040**	178	1,218	74.5
FL-4c	10/10/2019	1'	In-Situ	<0.0003	<0.0003	10.9	50.1	61.0	<9.92	61.0	14.8
FL-5	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	101	101	25.5	127	38.8
FL-6	8/16/2019	Surf. - 6"	Excavated	<0.0003	<0.0003	<15.0	2,810	**2,810**	592	**3,402**	125
FL-6b	9/19/2019	6"	In-Situ	<0.0003	<0.0003	<15.0	189	189	30.2	219	3.31
FL-7	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	443	443	103	546	113
FL-8	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	417	417	94.4	511	45.9
FL-9	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	16.8	550	567	131	698	95.4
FL-10	8/16/2019	Surf. - 6"	Excavated	<0.0003	<0.0003	15.3	2,010	**2,025**	564	**2,589**	156
FL-10b	9/19/2019	6"	In-Situ	<0.0003	<0.0003	<15.0	175	175	27.9	203	17.8
FL-11	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	16.9	233	250	51.3	301	47.2
FL-12	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	74.7	74.7	<25.0	74.7	5.70
FL-13	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	453	453	99.6	553	51.6
FL-14	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	758	758	169	927	137
FL-15	8/16/2019	Surf. - 6"	Excavated	<0.0003	<0.0003	16.3	2,710	**2,726**	550	**3,276**	44.6
FL-15b	9/19/2019	6"	In-Situ	<0.0003	<0.0003	<15.0	812	812	116	928	8.5
FL-16	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	77.4	77.4	<25.0	77.4	3.39
FL-17	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	17.3	906	923	202	1,125	76.2
FL-18	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	147	147	32.5	180	71.9
FL-19	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	389	389	91.5	481	32.7
FL-20	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	359	359	87.4	446	90.5
FL-21	8/16/2019	1'	In-Situ	<0.0003	<0.0003	<15.0	141	141	33	174	5.98
FL-22	8/16/2019	2'	In-Situ	<0.0003	<0.0003	<15.0	127	127	27.6	155	5.73
FL-23	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	772	772	149	921	43.1
FL-24	8/16/2019	Surf. - 6"	In-Situ	<0.0003	0.0005	<15.0	630	630	118	748	13.3
FL-25	8/16/2019	Surf. - 6"	Excavated	<0.0003	<0.0003	<15.0	1,990	**1,990**	326	2,316	16.2
FL-25b	9/19/2019	6"	In-Situ	<0.0003	<0.0003	<15.0	239	239	29.5	269	6.10
FL-26	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	16.9	49.9	66.8	<25.0	66.8	7.41
FL-27	8/16/2019	Surf. - 6"	Excavated	<0.0003	<0.0003	<15.0	1,120	**1,120**	194	1,314	23.0
FL-27b	9/19/2019	6"	In-Situ	<0.0003	<0.0003	<15.0	64.8	64.8	<15.0	64.8	6.22
FL-28	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	798	798	130	928	9.23
FL-29	8/16/2019	6"	Excavated	<0.0003	0.0007	<15.0	1,070	**1,070**	177	1,247	24.5
FL-29b	9/19/2019	1'	In-Situ	<0.0003	0.0007	<15.0	748	748	142	890	10.7
FL-30	8/16/2019	6"	In-Situ	<0.0003	0.0006	16.7	872	889	168	1,057	30.6
FL-31	8/16/2019	6"	Excavated	0.0008	0.002	16.9	1,550	**1,567**	266	1,833	40.4
FL-31b	9/19/2019	1'	In-Situ	<0.0003	<0.0003	<15.0	188	188	27.8	216	19.9
FL-32	8/16/2019	6"	In-Situ	<0.0003	<0.0003	<15.0	95.7	95.7	<25.0	95.7	8.13
FL-33	8/16/2019	Surf. - 6"	In-Situ	0.0004	0.0009	15.0	769	784	153	937	28.5
FL-34	8/16/2019	Surf. - 6"	Excavated	<0.0003	0.0004	<15.0	1,130	**1,130**	156	1,286	41.0
FL-34b	9/19/2019	6"	In-Situ	<0.0003	0.0004	<15.0	54.0	54.0	<15.0	54.0	9.58
FL-35	8/16/2019	Surf. - 6"	In-Situ	0.001	0.002	19.9	536	556	102	658	52.9
FL-36	8/16/2019	Surf. - 6"	Excavated	<0.0003	0.0008	<15.0	1,610	**1,610**	238	1,848	344
FL-36b	9/19/2019	6"	In-Situ	<0.0003	0.0008	<15.0	49.4	**49.4**	<15.0	49.4	13.3
FL-37	8/16/2019	Surf. - 6"	In-Situ	<0.0003	<0.0003	<15.0	228	228	38.5	267	116
FL-38	8/16/2019	3'	In-Situ	<0.0003	<0.0003	<15.0	183	183	30.4	213	61.0
ESW @ 1.5'	8/16/2019	1.5'	In-Situ	<0.0003	<0.0003	<15.0	<25.0	<25.0	<25.0	<25.0	7.97
Closure Criteria				**10**	**50**	**-**	**-**	**1,000**	**-**	**2,500**	**20,000**

SITE CLOSURE REQUEST

Based on laboratory analytical results from soil samples collected during the final site assessment, impacted soil within the release margins has been determined to be remediated below the Table I of 19.15.29.12 NMAC Closure Criteria for soils impacted by the Release. Tasman on behalf of Plains, respectfully requests the NMOCD grant closure approval for the Red Hills Station which was discovered on June 26, 2019.

RESTORATION, RECLAMATION AND RE-VEGETATION

Areas affected by the Release and associated remediation activities were substantially restored to the condition which existed prior to the Release to the maximum extent practicable. Excavated areas were backfilled with locally sourced, non-impacted "like" material. The affected area was contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable.

If you have any questions, or if additional information is required, please feel free to contact Amber Groves or the undersigned by phone or email.

Respectfully,

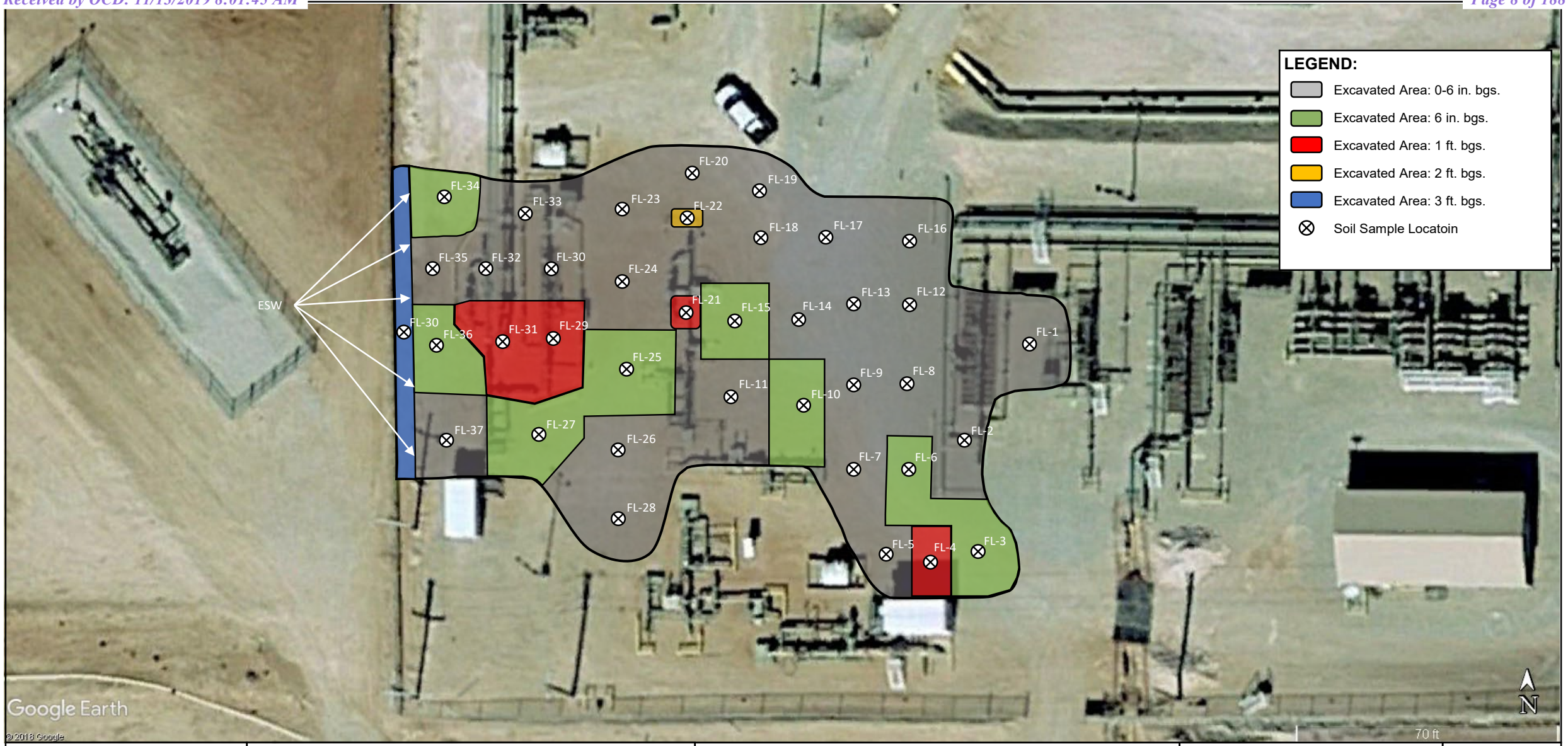
Zach Conder
Program Manager
zconder@tasman-geo.com
(806) 724-5943

Amber Groves
Environmental Coordinator
algroves@paalp.com
(575) 200-5517

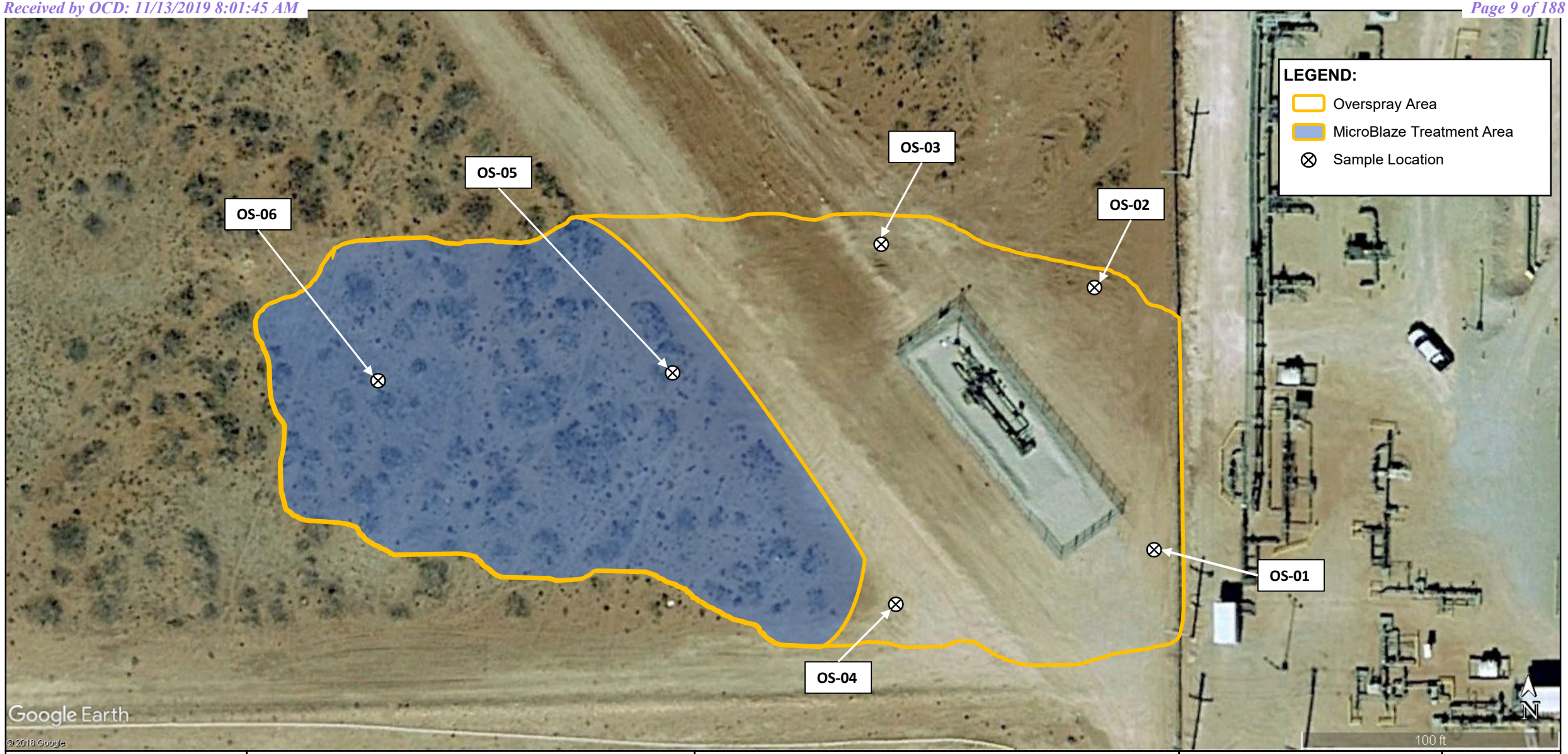
Attachments:

Figure 1:	Site Characteristics Map
Figure 2A:	Soil Sample Location Map (Facility)
Figure 2B:	Soil Sample Location Map (Overspray)
Appendix A:	Depth to Ground Water Information
Appendix B:	Laboratory Analytical Results
Appendix C:	Photo Documentation
Appendix D:	Initial C-141

Figures



DATE: Oct 2019 DESIGNED BY: BD DRAWN BY: BD	TASMAN GEOSCIENCES *Tasman Geosciences, Inc.* *2620 W. Marland Blvd.* *Hobbs, NM 88240*	**Plains Pipeline, LP** **Red Hills Station** GPS: 32.065588, -103.666546 UL "N" & "M", Section 3, Township 26 South, Range 32 East Lea County, New Mexico	Soil Sample Location Map (Facility)	**Figure 2A**



DATE: Oct 2019 DESIGNED BY: BD DRAWN BY: BD	TASMAN GEOSCIENCES *Tasman Geosciences, Inc.* *2620 W. Marland Blvd.* *Hobbs, NM 88240*	**Plains Pipeline, LP** **Red Hills Station** GPS: 32.065588, -103.666546 UL "N" & "M", Section 3, Township 26 South, Range 32 East Lea County, New Mexico	Soil Sample Location Map (Overspray)	**Figure 2B**

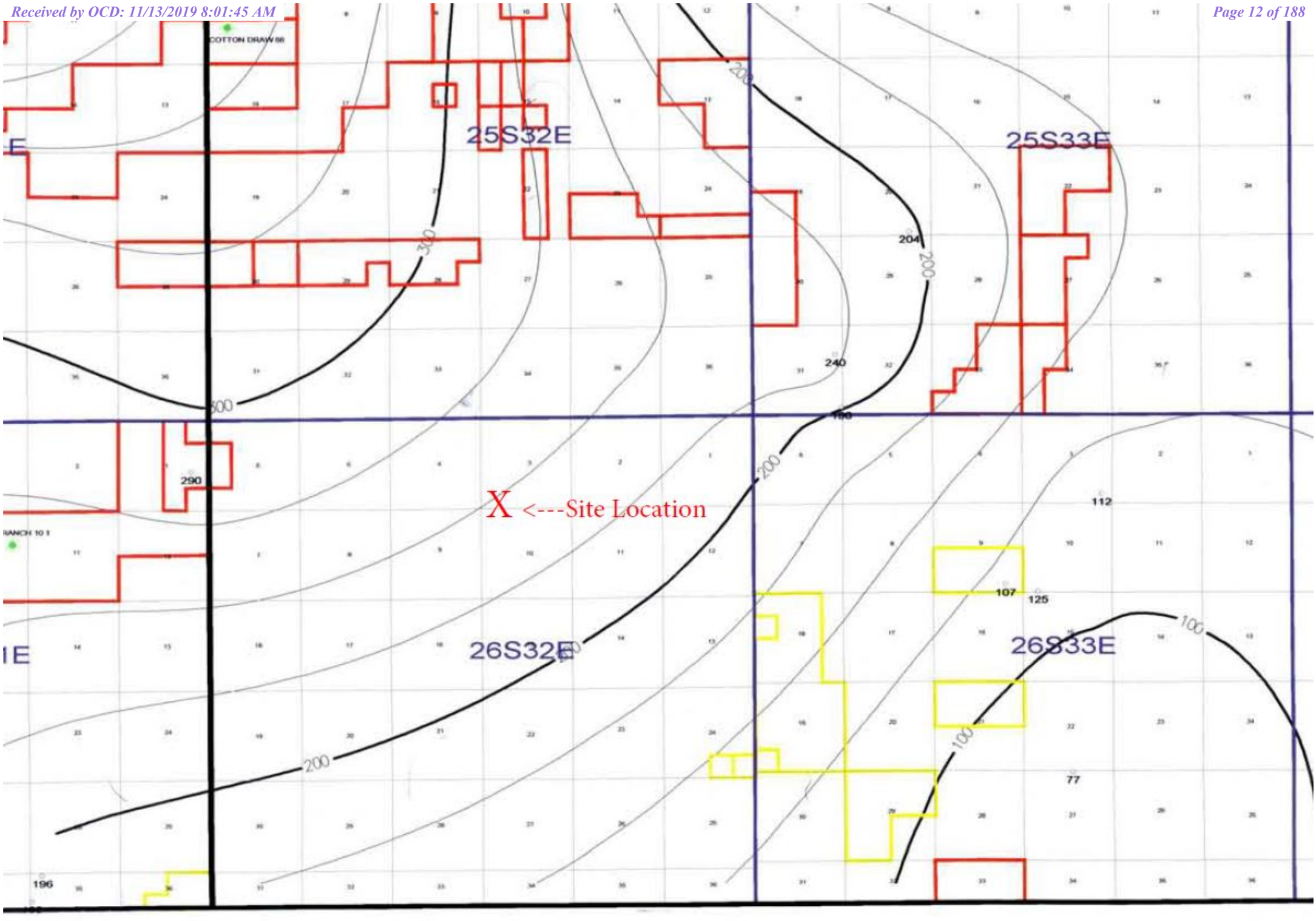
Appendix A:
Depth to Ground Water Information

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 625855.76 **Northing (Y):** 3548476.56 **Radius:** 1700


COTTON DRAW 66
25S32E
25S33E
26S32E
26S33E
X <---Site Location
300
200
204
240
290
112
107
125
100
77
196

Appendix B:
Laboratory Analytical Information

Analytical Report 632958

for

Tasman Geosciences, LLC

Project Manager: Zach Conder

Red Hills Station

Red Hills Station

08.14.2019

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

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)

08.14.2019

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

Reference: XENCO Report No(s): **632958**
Red Hills Station
Project Address: Lea Co. NM

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) 632958. 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. 632958 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

A Small Business and Minority Company

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

Sample Cross Reference 632958

Tasman Geosciences, LLC, Hobbs, NM

Red Hills Station

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
V-1 @ 6"	S	07.31.2019 00:00	6 In	632958-001
V-1 @ 1'	S	07.31.2019 00:00	1 ft	632958-002
V-2 @ 6"	S	07.31.2019 00:00	6 In	632958-003
V-2 @ 1'	S	07.31.2019 00:00	1 ft	632958-004
V-3 @ 6"	S	07.31.2019 00:00	6 In	632958-005
V-3 @ 1'	S	07.31.2019 00:00	1 ft	632958-006
V-4 @ 6"	S	07.31.2019 00:00	6 In	632958-007

CASE NARRATIVE

Client Name: Tasman Geosciences, LLC

Project Name: Red Hills Station

Project ID:	*Red Hills Station*	Report Date:	*08.14.2019*
Work Order Number(s):	*632958*	Date Received:	*08.02.2019*

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:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3097836 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results
632958
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

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

Lab Sample Id: 632958-001 Date Collected: 07.31.2019 00:00 Date Received: 08.02.2019 16:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ISU % Moist: Tech: ISU

Seq Number: 3098313 Date Prep: 08.09.2019 17:24

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683943

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**10.0**	50.0	9.99	mg/kg	08.09.2019 21:16	J	1
Diesel Range Organics (DRO)	C10C28DRO	**1740**	50.0	9.99	mg/kg	08.09.2019 21:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**276**	50.0	9.99	mg/kg	08.09.2019 21:16		1
Total TPH	PHC635	**2030**		9.99	mg/kg	08.09.2019 21:16		

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

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

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3097836 Date Prep: 08.07.2019 14:00

Prep seq: 7683757

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00819	0.0181	0.00819	mg/kg	08.08.2019 04:34	U	18
Toluene	108-88-3	**0.00906**	0.0181	0.00424	mg/kg	08.08.2019 04:34	J	18
Ethylbenzene	100-41-4	**0.0435**	0.0181	0.00558	mg/kg	08.08.2019 04:34		18
m_p-Xylenes	179601-23-1	**0.0254**	0.0362	0.00618	mg/kg	08.08.2019 04:34	J	18
o-Xylene	95-47-6	<0.00618	0.0181	0.00618	mg/kg	08.08.2019 04:34	U	18
Xylenes, Total	1330-20-7	**0.0254**		0.00618	mg/kg	08.08.2019 04:34		
Total BTEX		**0.0780**		0.00424	mg/kg	08.08.2019 04:34		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	101	68 - 120	%		
a,a,a-Trifluorotoluene	107	71 - 121	%		

Certificate of Analytical Results
632958
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

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

Lab Sample Id: 632958-002 Date Collected: 07.31.2019 00:00 Date Received: 08.02.2019 16:25

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

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3097636 Date Prep: 08.06.2019 12:16

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683600

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**10.7**	10.0	0.354	mg/kg	08.06.2019 13:03		1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ISU % Moist: Tech: ISU

Seq Number: 3098313 Date Prep: 08.09.2019 17:27

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683943

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.93	49.7	9.93	mg/kg	08.09.2019 21:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	**21.9**	49.7	9.93	mg/kg	08.09.2019 21:35	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.93	49.7	9.93	mg/kg	08.09.2019 21:35	U	1
Total TPH	PHC635	**21.9**		9.93	mg/kg	08.09.2019 21:35	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

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

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3097836 Date Prep: 08.07.2019 14:00

Prep seq: 7683757

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00803	0.0178	0.00803	mg/kg	08.08.2019 04:58	U	18
Toluene	108-88-3	**0.00533**	0.0178	0.00416	mg/kg	08.08.2019 04:58	J	18
Ethylbenzene	100-41-4	<0.00547	0.0178	0.00547	mg/kg	08.08.2019 04:58	U	18
m_p-Xylenes	179601-23-1	<0.00606	0.0355	0.00606	mg/kg	08.08.2019 04:58	U	18
o-Xylene	95-47-6	<0.00606	0.0178	0.00606	mg/kg	08.08.2019 04:58	U	18
Xylenes, Total	1330-20-7	<0.00606		0.00606	mg/kg	08.08.2019 04:58	U	
Total BTEX		**0.00533**		0.00416	mg/kg	08.08.2019 04:58	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	95	68 - 120	%		
a,a,a-Trifluorotoluene	96	71 - 121	%		

Certificate of Analytical Results
632958
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **V-2 @ 6''** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 632958-003 Date Collected: 07.31.2019 00:00 Date Received: 08.02.2019 16:25

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

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3097636 Date Prep: 08.06.2019 12:16

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683600

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**9.17**	9.96	0.353	mg/kg	08.06.2019 13:15	J	1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ISU % Moist: Tech: ISU

Seq Number: 3098313 Date Prep: 08.09.2019 17:30

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683943

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.1	10.0	mg/kg	08.09.2019 18:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	**13.7**	50.1	10.0	mg/kg	08.09.2019 18:41	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.0	50.1	10.0	mg/kg	08.09.2019 18:41	U	1
Total TPH	PHC635	**13.7**		10.0	mg/kg	08.09.2019 18:41	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

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

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3097836 Date Prep: 08.07.2019 14:00

Prep seq: 7683757

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00848	0.0188	0.00848	mg/kg	08.08.2019 05:22	U	19
Toluene	108-88-3	**0.00563**	0.0188	0.00439	mg/kg	08.08.2019 05:22	J	19
Ethylbenzene	100-41-4	<0.00578	0.0188	0.00578	mg/kg	08.08.2019 05:22	U	19
m_p-Xylenes	179601-23-1	<0.00640	0.0375	0.00640	mg/kg	08.08.2019 05:22	U	19
o-Xylene	95-47-6	<0.00640	0.0188	0.00640	mg/kg	08.08.2019 05:22	U	19
Xylenes, Total	1330-20-7	<0.00640		0.00640	mg/kg	08.08.2019 05:22	U	
Total BTEX		**0.00563**		0.00439	mg/kg	08.08.2019 05:22	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	100	68 - 120	%		
a,a,a-Trifluorotoluene	107	71 - 121	%		

Certificate of Analytical Results
632958
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

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

Lab Sample Id: 632958-004 Date Collected: 07.31.2019 00:00 Date Received: 08.02.2019 16:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ISU % Moist: Tech: ISU

Seq Number: 3098313 Date Prep: 08.09.2019 17:33

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683943

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.96	49.8	9.96	mg/kg	08.09.2019 19:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	**13.3**	49.8	9.96	mg/kg	08.09.2019 19:01	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.96	49.8	9.96	mg/kg	08.09.2019 19:01	U	1
Total TPH	PHC635	**13.3**		9.96	mg/kg	08.09.2019 19:01	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	106	70 - 135	%		

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

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3097836 Date Prep: 08.07.2019 14:00

Prep seq: 7683757

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00890	0.0197	0.00890	mg/kg	08.08.2019 05:46	U	20
Toluene	108-88-3	<0.00461	0.0197	0.00461	mg/kg	08.08.2019 05:46	U	20
Ethylbenzene	100-41-4	<0.00606	0.0197	0.00606	mg/kg	08.08.2019 05:46	U	20
m_p-Xylenes	179601-23-1	<0.00671	0.0394	0.00671	mg/kg	08.08.2019 05:46	U	20
o-Xylene	95-47-6	<0.00671	0.0197	0.00671	mg/kg	08.08.2019 05:46	U	20
Xylenes, Total	1330-20-7	<0.00671		0.00671	mg/kg	08.08.2019 05:46	U	
Total BTEX		<0.00461		0.00461	mg/kg	08.08.2019 05:46	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	103	68 - 120	%		
a,a,a-Trifluorotoluene	106	71 - 121	%		

Certificate of Analytical Results
632958
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **V-3 @ 6''** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 632958-005 Date Collected: 07.31.2019 00:00 Date Received: 08.02.2019 16:25

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ISU % Moist: Tech: ISU

Seq Number: 3098313 Date Prep: 08.09.2019 17:36

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683943

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.98	49.9	9.98	mg/kg	08.09.2019 19:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1170**	49.9	9.98	mg/kg	08.09.2019 19:20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**296**	49.9	9.98	mg/kg	08.09.2019 19:20		1
Total TPH	PHC635	**1470**		9.98	mg/kg	08.09.2019 19:20		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	84	70 - 135	%		

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

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3097836 Date Prep: 08.07.2019 14:00

Prep seq: 7683757

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00816	0.0181	0.00816	mg/kg	08.08.2019 06:09	U	18
Toluene	108-88-3	**0.0126**	0.0181	0.00422	mg/kg	08.08.2019 06:09	J	18
Ethylbenzene	100-41-4	<0.00556	0.0181	0.00556	mg/kg	08.08.2019 06:09	U	18
m_p-Xylenes	179601-23-1	<0.00616	0.0361	0.00616	mg/kg	08.08.2019 06:09	U	18
o-Xylene	95-47-6	<0.00616	0.0181	0.00616	mg/kg	08.08.2019 06:09	U	18
Xylenes, Total	1330-20-7	<0.00616		0.00616	mg/kg	08.08.2019 06:09	U	
Total BTEX		**0.0126**		0.00422	mg/kg	08.08.2019 06:09	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	92	68 - 120	%		
a,a,a-Trifluorotoluene	93	71 - 121	%		

Certificate of Analytical Results
632958
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

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

Lab Sample Id: 632958-006 Date Collected: 07.31.2019 00:00 Date Received: 08.02.2019 16:25

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

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3097636 Date Prep: 08.06.2019 12:16

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683600

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**10.1**	10.0	0.355	mg/kg	08.06.2019 13:27		1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ISU % Moist: Tech: ISU

Seq Number: 3098313 Date Prep: 08.09.2019 17:39

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683943

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.0	10.0	mg/kg	08.09.2019 19:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	**61.8**	50.0	10.0	mg/kg	08.09.2019 19:40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**29.6**	50.0	10.0	mg/kg	08.09.2019 19:40	J	1
Total TPH	PHC635	**91.4**		10.0	mg/kg	08.09.2019 19:40		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	111	70 - 135	%		

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

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3097836 Date Prep: 08.07.2019 14:00

Prep seq: 7683757

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00890	0.0197	0.00890	mg/kg	08.08.2019 06:34	U	20
Toluene	108-88-3	<0.00461	0.0197	0.00461	mg/kg	08.08.2019 06:34	U	20
Ethylbenzene	100-41-4	<0.00606	0.0197	0.00606	mg/kg	08.08.2019 06:34	U	20
m_p-Xylenes	179601-23-1	<0.00671	0.0394	0.00671	mg/kg	08.08.2019 06:34	U	20
o-Xylene	95-47-6	<0.00671	0.0197	0.00671	mg/kg	08.08.2019 06:34	U	20
Xylenes, Total	1330-20-7	<0.00671		0.00671	mg/kg	08.08.2019 06:34	U	
Total BTEX		<0.00461		0.00461	mg/kg	08.08.2019 06:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	89	68 - 120	%		
a,a,a-Trifluorotoluene	89	71 - 121	%		

Certificate of Analytical Results
632958
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **V-4 @ 6''** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 632958-007 Date Collected: 07.31.2019 00:00 Date Received: 08.02.2019 16:25

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

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3097636 Date Prep: 08.06.2019 12:16

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683600

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**13.4**	10.0	0.355	mg/kg	08.06.2019 14:03		1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ISU % Moist: Tech: ISU

Seq Number: 3098313 Date Prep: 08.09.2019 17:42

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683943

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.99	50.0	9.99	mg/kg	08.09.2019 19:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	**12.0**	50.0	9.99	mg/kg	08.09.2019 19:59	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.99	50.0	9.99	mg/kg	08.09.2019 19:59	U	1
Total TPH	PHC635	**12.0**		9.99	mg/kg	08.09.2019 19:59	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	95	70 - 135	%		
o-Terphenyl	107	70 - 135	%		

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

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3097836 Date Prep: 08.07.2019 14:00

Prep seq: 7683757

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00789	0.0175	0.00789	mg/kg	08.08.2019 06:57	U	17
Toluene	108-88-3	**0.00524**	0.0175	0.00408	mg/kg	08.08.2019 06:57	J	17
Ethylbenzene	100-41-4	<0.00538	0.0175	0.00538	mg/kg	08.08.2019 06:57	U	17
m_p-Xylenes	179601-23-1	<0.00595	0.0349	0.00595	mg/kg	08.08.2019 06:57	U	17
o-Xylene	95-47-6	<0.00595	0.0175	0.00595	mg/kg	08.08.2019 06:57	U	17
Xylenes, Total	1330-20-7	<0.00595		0.00595	mg/kg	08.08.2019 06:57	U	
Total BTEX		**0.00524**		0.00408	mg/kg	08.08.2019 06:57	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	97	68 - 120	%		
a,a,a-Trifluorotoluene	111	71 - 121	%		

Certificate of Analytical Results
632958
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **7683600-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7683600-1-BLK Date Collected: Date Received:

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

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3097636 Date Prep: 08.06.2019 12:16

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683600

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.354	10.0	0.354	mg/kg	08.06.2019 12:26	U	1

Sample Id: **7683757-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7683757-1-BLK Date Collected: Date Received:

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

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3097836 Date Prep: 08.07.2019 14:00

Prep seq: 7683757

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00904	0.0200	0.00904	mg/kg	08.07.2019 21:42	U	20
Toluene	108-88-3	<0.00468	0.0200	0.00468	mg/kg	08.07.2019 21:42	U	20
Ethylbenzene	100-41-4	<0.00616	0.0200	0.00616	mg/kg	08.07.2019 21:42	U	20
m_p-Xylenes	179601-23-1	<0.00682	0.0400	0.00682	mg/kg	08.07.2019 21:42	U	20
o-Xylene	95-47-6	<0.00682	0.0200	0.00682	mg/kg	08.07.2019 21:42	U	20
Xylenes, Total	1330-20-7	<0.00682		0.00682	mg/kg	08.07.2019 21:42	U	
Total BTEX		<0.00468		0.00468	mg/kg	08.07.2019 21:42	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	96	68 - 120	%		
a,a,a-Trifluorotoluene	98	71 - 121	%		

Certificate of Analytical Results
632958
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **7683943-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7683943-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ISU % Moist: Tech: ISU

Seq Number: 3098313 Date Prep: 08.09.2019 17:00

Subcontractor: SUB: T104704215-19-29 Prep seq: 7683943

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.0	10.0	mg/kg	08.09.2019 18:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<10.0	50.0	10.0	mg/kg	08.09.2019 18:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.0	50.0	10.0	mg/kg	08.09.2019 18:41	U	1
Total TPH	PHC635	<10.0		10.0	mg/kg	08.09.2019 18:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	84	70 - 135	%		
o-Terphenyl	92	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: Red Hills Station

Work Orders : 632958 **Project ID:** Red Hills Station

Lab Batch #: 3097836 **Sample:** 7683757-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.07.2019 20:05 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.109	0.100	109	68-120	
a,a,a-Trifluorotoluene	1.99	2.00	100	71-121	

Lab Batch #: 3097836 **Sample:** 7683757-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.07.2019 20:29 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.116	0.100	116	68-120	
a,a,a-Trifluorotoluene	2.17	2.00	109	71-121	

Lab Batch #: 3097836 **Sample:** 7683757-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.07.2019 21:42 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0958	0.100	96	68-120	
a,a,a-Trifluorotoluene	1.95	2.00	98	71-121	

Lab Batch #: 3097836 **Sample:** 632851-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.07.2019 22:31 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0946	0.100	95	68-120	
a,a,a-Trifluorotoluene	1.83	1.77	103	71-121	

Lab Batch #: 3097836 **Sample:** 632851-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.07.2019 22:55 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0923	0.100	92	68-120	
a,a,a-Trifluorotoluene	2.14	1.98	108	71-121	

* 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: Red Hills Station

Work Orders : 632958 **Project ID:** Red Hills Station

Lab Batch #: 3098313 **Sample:** 7683943-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.09.2019 18:41 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.7	100	84	70-135	
o-Terphenyl	46.0	50.0	92	70-135	

Lab Batch #: 3098313 **Sample:** 7683943-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.09.2019 19:01 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.1	100	96	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 3098313 **Sample:** 7683943-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.09.2019 19:20 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	100	96	70-135	
o-Terphenyl	48.6	50.0	97	70-135	

Lab Batch #: 3098313 **Sample:** 632906-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.09.2019 19:59 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.4	99.2	96	70-135	
o-Terphenyl	58.9	49.6	119	70-135	

Lab Batch #: 3098313 **Sample:** 632906-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.09.2019 20:18 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	98.9	101	70-135	
o-Terphenyl	64.0	49.5	129	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: Red Hills Station

Work Order #: 632958 **Project ID:** Red Hills Station

Analyst: MIT **Date Prepared:** 08.07.2019 **Date Analyzed:** 08.07.2019

Lab Batch ID: 3097836 **Sample:** 7683757-1-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	<0.00904	2.00	2.00	100	2.00	2.09	105	4	55-120	20	
Toluene	<0.00468	2.00	2.19	110	2.00	2.18	109	0	77-120	20	
Ethylbenzene	<0.00616	2.00	2.36	118	2.00	2.34	117	1	77-120	20	
m_p-Xylenes	<0.00682	4.00	4.54	114	4.00	4.49	112	1	78-120	20	
o-Xylene	<0.00682	2.00	2.21	111	2.00	2.20	110	0	78-120	20	

Analyst: JYM **Date Prepared:** 08.06.2019 **Date Analyzed:** 08.06.2019

Lab Batch ID: 3097636 **Sample:** 7683600-1-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	<0.354	100	105	105	100	105	105	0	80-120	20	

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

BS / BSD Recoveries

Project Name: Red Hills Station

Work Order #: 632958

Project ID: Red Hills Station

Analyst: ISU

Date Prepared: 08.09.2019

Date Analyzed: 08.09.2019

Lab Batch ID: 3098313

Sample: 7683943-1-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)	<10.0	1000	987	99	1000	994	99	1	70-135	35	
Diesel Range Organics (DRO)	<10.0	1000	972	97	1000	963	96	1	70-135	35	

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

Form 3 - MS / MSD Recoveries

Project Name: Red Hills Station

Work Order # : 632958 **Project ID:** Red Hills Station

Lab Batch ID: 3097836 **QC- Sample ID:** 632851-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.07.2019 **Date Prepared:** 08.07.2019 **Analyst:** MIT

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	<0.00800	1.77	1.62	92	1.98	1.83	92	12	54-120	25	
Toluene	0.00712	1.77	1.54	87	1.98	1.74	88	12	57-120	25	
Ethylbenzene	<0.00545	1.77	1.61	91	1.98	1.82	92	12	58-131	25	
m_p-Xylenes	<0.00604	3.54	3.11	88	3.97	3.49	88	12	62-124	25	
o-Xylene	<0.00604	1.77	1.57	89	1.98	1.78	90	13	62-124	25	

Lab Batch ID: 3097636 **QC- Sample ID:** 632958-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.06.2019 **Date Prepared:** 08.06.2019 **Analyst:** JYM

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	10.1	99.6	104	94	100	105	95	1	80-120	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: Red Hills Station

Work Order # : 632958

Project ID: Red Hills Station

Lab Batch ID: 3098313

QC- Sample ID: 632906-001 S

Batch #: 1

Matrix: Soil

Date Analyzed: 08.09.2019

Date Prepared: 08.09.2019

Analyst: ISU

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)	58.9	992	975	92	989	1020	97	5	70-135	35	
Diesel Range Organics (DRO)	4810	992	3860	0	989	4830	2	22	70-135	35	X

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.

632958

XENCO LABORATORIES

Chain of Custody

Work Order No: 632958

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 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701 www.xenco.com Page _____ of _____

Project Manager:	Zach Conder	Bill to: (if different)	Amber Groves
Company Name:	Tasman Geosciences	Company Name:	Plains Pipeline
Address:	2620 W. Marland Blvd.	Address:	
City, State ZIP:	Hobbs, NM 88240	City, State ZIP:	
Phone:		Email:	algroves@paalp.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:	Red Hills Station	Turn Around	
Project Number:		Routine ☑	
Project Location	Lea Co., NM	Rush:	
Sampler's Name:	B. Dennis	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temperature (°C):	Temp Blank: Yes No (Yes)	Wet Ice: (Yes) No	
Received Intact:	Blk 1.2 | 1.3	Thermometer ID	IR-5
Cooler Custody Seals:	(Yes) No	Correction Factor:	+0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	7

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH 8015 Ext	BTEX 8021	Chloride	Sample Comments
	V-1 @ 6"	S	7-31-19		6in			X	X		Email Results to:
	V-1 @ 1'				1Ft			X	X	X	zconder@tasman-geo.com
	V-2 @ 6"				6in			X	X	X	bdennis@tasman-geo.com
	V-2 @ 1'				1Ft			X	X		algroves@paalp.com
	V-3 @ 6"				6in			X	X		
	V-3 @ 1'				1ft			X	X	X	
	V-4 @ 6"				6in			X	X	X	
	~~BS~~ BD										

ANALYSIS REQUEST

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

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	Brenda Ward	8/2/19 16:25	2		
3			4		
5			6		

Revised Date 022619 Rev. 2019.1

Inter-Office Shipment

IOS Number : 45551

Date/Time: 08.05.2019 10:08
Lab# From: **Lubbock**
Lab# To: **Houston**
Created by: Brenda Ward
Delivery Priority:
Air Bill No.: 788932486883

Please send report to: John Builes
Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424
E-Mail: john.builes@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
632958-001	S	V-1 @ 6"	07.31.2019 00:00	SW8015MOD_NM	TPH by SW8015 Mod	08.08.2019	08.14.2019	JHB	PHCC10C28 PHCC28C35	
632958-002	S	V-1 @ 1'	07.31.2019 00:00	E300	Inorganic Anions by EPA 300/300.1	08.08.2019	08.28.2019	JHB	CL	
632958-002	S	V-1 @ 1'	07.31.2019 00:00	SW8015MOD_NM	TPH by SW8015 Mod	08.08.2019	08.14.2019	JHB	PHCC10C28 PHCC28C35	
632958-003	S	V-2 @ 6"	07.31.2019 00:00	E300	Inorganic Anions by EPA 300/300.1	08.08.2019	08.28.2019	JHB	CL	
632958-003	S	V-2 @ 6"	07.31.2019 00:00	SW8015MOD_NM	TPH by SW8015 Mod	08.08.2019	08.14.2019	JHB	PHCC10C28 PHCC28C35	
632958-004	S	V-2 @ 1'	07.31.2019 00:00	SW8015MOD_NM	TPH by SW8015 Mod	08.08.2019	08.14.2019	JHB	PHCC10C28 PHCC28C35	
632958-005	S	V-3 @ 6"	07.31.2019 00:00	SW8015MOD_NM	TPH by SW8015 Mod	08.08.2019	08.14.2019	JHB	PHCC10C28 PHCC28C35	
632958-006	S	V-3 @ 1'	07.31.2019 00:00	SW8015MOD_NM	TPH by SW8015 Mod	08.08.2019	08.14.2019	JHB	PHCC10C28 PHCC28C35	
632958-006	S	V-3 @ 1'	07.31.2019 00:00	E300	Inorganic Anions by EPA 300/300.1	08.08.2019	08.28.2019	JHB	CL	
632958-007	S	V-4 @ 6"	07.31.2019 00:00	E300	Inorganic Anions by EPA 300/300.1	08.08.2019	08.28.2019	JHB	CL	
632958-007	S	V-4 @ 6"	07.31.2019 00:00	SW8015MOD_NM	TPH by SW8015 Mod	08.08.2019	08.14.2019	JHB	PHCC10C28 PHCC28C35	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward
Brenda Ward

Date Relinquished: 08.05.2019

Received By: Ashly Kowalski

Date Received: 08.06.2019 09:15

Cooler Temperature: 3.5

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 45551

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

Sent By: Brenda Ward **Date Sent:** 08.05.2019 10.08 AM

Received By: Ashly Kowalski **Date Received:** 08.06.2019 09.15 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.5	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#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: 08.06.2019
Ashly Kowalski

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tasman Geosciences, LLC

Date/ Time Received: 08.02.2019 04.25.00 PM

Work Order #: 632958

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

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.3	
#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)?	**Yes**	Chlorides and TPH 8015 sent to Stafford
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 08.05.2019
Brenda Ward

Checklist reviewed by: Date: 08.06.2019
John Builes

Analytical Report 633309

for

Tasman Geosciences, LLC

Project Manager: Zach Conder

Red Hills Station

08.14.2019

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), North Carolina (681)

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)

08.14.2019

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

Reference: XENCO Report No(s): **633309**
Red Hills Station
Project Address: Lea Co. NM

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) 633309. 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. 633309 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

A Small Business and Minority Company

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

Sample Cross Reference 633309

Tasman Geosciences, LLC, Hobbs, NM

Red Hills Station

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
OS-01	S	08.02.2019 09:30	0.5	633309-001
OS-02	S	08.02.2019 09:35	0.5	633309-002
OS-03	S	08.02.2019 09:40	0.5	633309-003
OS-04	S	08.02.2019 09:45	0.5	633309-004
OS-05	S	08.02.2019 09:50	0.5	633309-005
OS-06	S	08.02.2019 09:55	0.5	633309-006

CASE NARRATIVE

Client Name: Tasman Geosciences, LLC

Project Name: Red Hills Station

Project ID:
Work Order Number(s): *633309*

Report Date: *08.14.2019*
Date Received: *08.07.2019*

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:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3098417 BTEX by EPA 8021

Surrogate 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 633701-001 S.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 633701-001 S,633309-002.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results
633309
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **OS-01** Matrix: Soil Sample Depth: 0.5

Lab Sample Id: 633309-001 Date Collected: 08.02.2019 09:30 Date Received: 08.07.2019 12:45

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3098093 Date Prep: 08.07.2019 15:00

Prep seq: 7683726

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	08.08.2019 01:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**107**	14.9	8.10	mg/kg	08.08.2019 01:57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**8.60**	14.9	8.10	mg/kg	08.08.2019 01:57	J	1
Total TPH	PHC635	**116**		7.97	mg/kg	08.08.2019 01:57		

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

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

Analyst: ALG % Moist: Tech: ALG

Seq Number: 3098417 Date Prep: 08.12.2019 10:00

Prep seq: 7684065

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	08.13.2019 10:22	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	08.13.2019 10:22	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	08.13.2019 10:22	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	08.13.2019 10:22	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	08.13.2019 10:22	U	1
Xylenes, Total	1330-20-7	<0.000345		0.000345	mg/kg	08.13.2019 10:22	U	
Total BTEX		<0.000345		0.000345	mg/kg	08.13.2019 10:22	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	105	70 - 130	%		
4-Bromofluorobenzene	101	70 - 130	%		

Certificate of Analytical Results
633309
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **OS-02** Matrix: Soil Sample Depth: 0.5

Lab Sample Id: 633309-002 Date Collected: 08.02.2019 09:35 Date Received: 08.07.2019 12:45

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3098093 Date Prep: 08.07.2019 15:00

Prep seq: 7683726

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	08.08.2019 02:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	**96.5**	15.0	8.12	mg/kg	08.08.2019 02:18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**9.39**	15.0	8.12	mg/kg	08.08.2019 02:18	J	1
Total TPH	PHC635	**106**		7.99	mg/kg	08.08.2019 02:18		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	84	70 - 135	%		
o-Terphenyl	73	70 - 135	%		

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

Analyst: ALG % Moist: Tech: ALG

Seq Number: 3098417 Date Prep: 08.12.2019 10:00

Prep seq: 7684065

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	08.13.2019 03:01	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	08.13.2019 03:01	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	08.13.2019 03:01	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	08.13.2019 03:01	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.13.2019 03:01	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.13.2019 03:01	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.13.2019 03:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	134	70 - 130	%		**

Certificate of Analytical Results
633309
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **OS-03** Matrix: Soil Sample Depth: 0.5

Lab Sample Id: 633309-003 Date Collected: 08.02.2019 09:40 Date Received: 08.07.2019 12:45

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3098093 Date Prep: 08.07.2019 15:00

Prep seq: 7683726

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	08.08.2019 02:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	**35.1**	15.0	8.13	mg/kg	08.08.2019 02:39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	08.08.2019 02:39	U	1
Total TPH	PHC635	**35.1**		8.00	mg/kg	08.08.2019 02:39		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	83	70 - 135	%		

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

Analyst: ALG % Moist: Tech: ALG

Seq Number: 3098417 Date Prep: 08.12.2019 10:00

Prep seq: 7684065

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	08.13.2019 03:21	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	08.13.2019 03:21	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	08.13.2019 03:21	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	08.13.2019 03:21	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	08.13.2019 03:21	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	08.13.2019 03:21	U	
Total BTEX		<0.000342		0.000342	mg/kg	08.13.2019 03:21	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	88	70 - 130	%		
4-Bromofluorobenzene	92	70 - 130	%		

Certificate of Analytical Results
633309
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **OS-04** Matrix: Soil Sample Depth: 0.5

Lab Sample Id: 633309-004 Date Collected: 08.02.2019 09:45 Date Received: 08.07.2019 12:45

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3098119 Date Prep: 08.08.2019 13:00

Prep seq: 7683829

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	08.10.2019 04:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**34.9**	14.9	8.10	mg/kg	08.10.2019 04:34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	14.9	8.10	mg/kg	08.10.2019 04:34	U	1
Total TPH	PHC635	**34.9**		7.97	mg/kg	08.10.2019 04:34		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	96	70 - 135	%		

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

Analyst: ALG % Moist: Tech: ALG

Seq Number: 3098417 Date Prep: 08.12.2019 10:00

Prep seq: 7684065

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	08.13.2019 03:41	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	08.13.2019 03:41	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	08.13.2019 03:41	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	08.13.2019 03:41	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.13.2019 03:41	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.13.2019 03:41	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.13.2019 03:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	70 - 130	%		
4-Bromofluorobenzene	117	70 - 130	%		

Certificate of Analytical Results
633309
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **OS-05** Matrix: Soil Sample Depth: 0.5

Lab Sample Id: 633309-005 Date Collected: 08.02.2019 09:50 Date Received: 08.07.2019 12:45

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3098119 Date Prep: 08.08.2019 13:00

Prep seq: 7683829

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	08.10.2019 04:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.9**	15.0	8.10	mg/kg	08.10.2019 04:53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	08.10.2019 04:53	U	1
Total TPH	PHC635	**19.9**		7.98	mg/kg	08.10.2019 04:53		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	96	70 - 135	%		

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

Analyst: ALG % Moist: Tech: ALG

Seq Number: 3098417 Date Prep: 08.12.2019 10:00

Prep seq: 7684065

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	08.13.2019 04:01	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	08.13.2019 04:01	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	08.13.2019 04:01	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	08.13.2019 04:01	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.13.2019 04:01	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.13.2019 04:01	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.13.2019 04:01	U	

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

Certificate of Analytical Results
633309
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **OS-06** Matrix: Soil Sample Depth: 0.5

Lab Sample Id: 633309-006 Date Collected: 08.02.2019 09:55 Date Received: 08.07.2019 12:45

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3098119 Date Prep: 08.08.2019 13:00

Prep seq: 7683829

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	08.10.2019 05:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**33.9**	15.0	8.12	mg/kg	08.10.2019 05:12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	08.10.2019 05:12	U	1
Total TPH	PHC635	**33.9**		7.99	mg/kg	08.10.2019 05:12		

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

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

Analyst: ALG % Moist: Tech: ALG

Seq Number: 3098417 Date Prep: 08.12.2019 10:00

Prep seq: 7684065

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	08.13.2019 04:22	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	08.13.2019 04:22	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	08.13.2019 04:22	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.13.2019 04:22	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	08.13.2019 04:22	U	1
Xylenes, Total	1330-20-7	<0.000343		0.000343	mg/kg	08.13.2019 04:22	U	
Total BTEX		<0.000343		0.000343	mg/kg	08.13.2019 04:22	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	124	70 - 130	%		

Certificate of Analytical Results
633309
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **7683726-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7683726-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3098093 Date Prep: 08.07.2019 15:00

Prep seq: 7683726

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	08.07.2019 17:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	08.07.2019 17:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	08.07.2019 17:57	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	08.07.2019 17:57	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	81	70 - 135	%		

Sample Id: **7683829-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7683829-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3098119 Date Prep: 08.08.2019 13:00

Prep seq: 7683829

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	08.09.2019 21:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	08.09.2019 21:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	08.09.2019 21:42	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	08.09.2019 21:42	U	

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

Certificate of Analytical Results
633309
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **7684065-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7684065-1-BLK Date Collected: Date Received:

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

Analyst: ALG % Moist: Tech: ALG

Seq Number: 3098417 Date Prep: 08.12.2019 10:00

Prep seq: 7684065

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	08.13.2019 01:20	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	08.13.2019 01:20	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	08.13.2019 01:20	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	08.13.2019 01:20	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.13.2019 01:20	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.13.2019 01:20	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.13.2019 01:20	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	91	70 - 130	%		
4-Bromofluorobenzene	120	70 - 130	%		

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: Red Hills Station

Work Orders : 633309 **Project ID:**

Lab Batch #: 3098417 **Sample:** 7684065-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.12.2019 11:39 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	70-130	
4-Bromofluorobenzene	0.0364	0.0300	121	70-130	

Lab Batch #: 3098417 **Sample:** 7684065-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.12.2019 11:59 **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	0.0374	0.0300	125	70-130	

Lab Batch #: 3098417 **Sample:** 7684065-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.13.2019 01:20 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	70-130	
4-Bromofluorobenzene	0.0360	0.0300	120	70-130	

Lab Batch #: 3098417 **Sample:** 633701-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.13.2019 12:19 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0203	0.0300	68	70-130	**
4-Bromofluorobenzene	0.109	0.0300	363	70-130	**

Lab Batch #: 3098093 **Sample:** 7683726-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.07.2019 17:57 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.0	100	96	70-135	
o-Terphenyl	40.4	50.0	81	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: Red Hills Station

Work Orders : 633309 **Project ID:**

Lab Batch #: 3098093 **Sample:** 7683726-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.07.2019 18:18 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.8	100	97	70-135	
o-Terphenyl	43.3	50.0	87	70-135	

Lab Batch #: 3098093 **Sample:** 7683726-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.07.2019 18:38 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	44.6	50.0	89	70-135	

Lab Batch #: 3098093 **Sample:** 633003-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.07.2019 19:20 **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	99.9	92	70-135	
o-Terphenyl	46.1	50.0	92	70-135	

Lab Batch #: 3098093 **Sample:** 633003-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.07.2019 19:40 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.8	99.8	91	70-135	
o-Terphenyl	41.7	49.9	84	70-135	

Lab Batch #: 3098119 **Sample:** 7683829-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.09.2019 21:42 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.2	100	90	70-135	
o-Terphenyl	45.9	50.0	92	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: Red Hills Station

Work Orders : 633309 **Project ID:**

Lab Batch #: 3098119 **Sample:** 7683829-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.09.2019 22:01 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	49.9	50.0	100	70-135	

Lab Batch #: 3098119 **Sample:** 7683829-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.09.2019 22:20 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 3098119 **Sample:** 633407-021 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.09.2019 22:57 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.7	116	70-135	
o-Terphenyl	50.5	49.9	101	70-135	

Lab Batch #: 3098119 **Sample:** 633407-021 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.09.2019 23:16 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.6	115	70-135	
o-Terphenyl	51.5	49.8	103	70-135	

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

BS / BSD Recoveries

Project Name: Red Hills Station

Work Order #: 633309 **Project ID:**

Analyst: ALG **Date Prepared:** 08.12.2019 **Date Analyzed:** 08.12.2019

Lab Batch ID: 3098417 **Sample:** 7684065-1-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	<0.000385	0.100	0.0962	96	0.100	0.0986	99	2	70-130	35	
Toluene	<0.000456	0.100	0.0952	95	0.100	0.0999	100	5	70-130	35	
Ethylbenzene	<0.000565	0.100	0.108	108	0.100	0.111	111	3	70-130	35	
m_p-Xylenes	<0.00101	0.200	0.221	111	0.200	0.227	114	3	70-130	35	
o-Xylene	<0.000344	0.100	0.107	107	0.100	0.111	111	4	70-130	35	

Analyst: ARM **Date Prepared:** 08.07.2019 **Date Analyzed:** 08.07.2019

Lab Batch ID: 3098093 **Sample:** 7683726-1-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	1080	108	1000	1190	119	10	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	943	94	1000	1030	103	9	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

BS / BSD Recoveries

Project Name: Red Hills Station

Work Order #: 633309

Project ID:

Analyst: ARM

Date Prepared: 08.08.2019

Date Analyzed: 08.09.2019

Lab Batch ID: 3098119

Sample: 7683829-1-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	1140	114	1000	1130	113	1	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1030	103	1000	1010	101	2	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 Recoveries

Project Name: Red Hills Station

Work Order #: 633309

Lab Batch #: 3098417

Project ID:

Date Analyzed: 08.13.2019 **Date Prepared:** 08.12.2019 **Analyst:** ALG

QC- Sample ID: 633701-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	0.0513	0.0994	0.0580	7	70-130	X
Toluene	1.46	0.0994	1.72	262	70-130	X
Ethylbenzene	0.0514	0.0994	0.0672	16	70-130	X
m_p-Xylenes	0.293	0.199	0.352	30	70-130	X
o-Xylene	0.211	0.0994	0.304	94	70-130	

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

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries

Project Name: Red Hills Station

Work Order # : 633309 **Project ID:**

Lab Batch ID: 3098093 **QC- Sample ID:** 633003-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.07.2019 **Date Prepared:** 08.07.2019 **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)	<7.99	999	1030	103	998	1010	101	2	70-135	20	
Diesel Range Organics (DRO)	9.09	999	989	98	998	920	91	7	70-135	20	

Lab Batch ID: 3098119 **QC- Sample ID:** 633407-021 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.09.2019 **Date Prepared:** 08.08.2019 **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)	<7.98	997	1170	117	996	1170	117	0	70-135	20	
Diesel Range Organics (DRO)	<8.10	997	1060	106	996	1080	108	2	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

Setting the Standard since 1990

CHAIN OF CUSTODY

Page 1 Of 1

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Job # 633309

Client / Reporting Information

Company Name / Branch: Plains All American Pipeline
Company Address:
Email: agroves@paalp.com; zconder@tasman-geo.com; bdennis@tasman-geo.com
Phone No:
Project Contact: Zach Conder
Samplers's Name: Nick Kopiasz

Project Information

Project Name/Number: Red Hills Station
Project Location: Lea Co, NM
Invoice To: PAALP C/O Amber Groves
Invoice:

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: TPH 8015 M Ext	BTEX 8021B	Field Comments
1	OS-01	0.5	8/2/2019	9:30	S	1								X	x	x	
2	OS-02	0.5	8/2/2019	9:35	S	1								X	x	x	
3	OS-03	0.5	8/2/2019	9:40	S	1								X	x	x	
4	OS-04	0.5	8/2/2019	9:45	S	1								X	x	x	
5	OS-05	0.5	8/2/2019	9:50	S	1								X	x	x	
6	OS-06	0.5	8/2/2019	9:55	S	1								X	x	x	
7																	
8																	
9																	
10																	

Data Deliverable Information

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] Contract TAT
- [ ] 3 Day EMERGENCY
- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] TRRP Checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

TAT Starts Day received by Lab, if received by 5:00 pm

Notes:

CJBryant@paalp.com zconder@tasman-geo.com
algroves@paalp.com
bdennis@tasman-geo.com

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		8/5/19 @1440		2	8-5-19	2 Brittany Cox
3	Relinquished by: Brittany Cox	Date Time: 8/6/19 @ 3:00	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: N Cooler Temp: 0.5 Thermo. Corr. Factor: 0.3

8/7/19 1120

Notice: 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 loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.


ORIGIN ID:HOBA (575) 392-7550
** MAIL SERVICES ETC, LLC
4008 N GRIMES
HOBBS, NM 88240
UNITED STATES US
SHIP DATE: 06AUG19
ACTWGT: 17.00 LB MAN
CAD: 0909328/CAFE3211
DIMS: 17x12x11 IN
BILL RECIPIENT
TO XENCO LABORATORIES HOLD FOR PICK UP
FEDEX EXPRESS SHIP CENTER
FEDEX SHIP CENTER
3600 COUNTY RD 1276 S
MIDLAND TX 79711
(432) 563-1800
REF:
INV:
PO:
DEPT:
FedEx Express
E
J181118060501uv
551C2/F551/184C
WED - 07 AUG HOLD
STANDARD OVERNIGHT
HLD
MAFA
TX-US LBB
TRK# 0201 4705 2521 4420
41 MAFA

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Plains All American EH&S

Date/ Time Received: 08.07.2019 12.45.58 PM

Work Order #: 633309

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.3
#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: 08.07.2019
Brianna Teel

Checklist reviewed by: Date: 08.09.2019
John Builes

Analytical Report 634691

for

Tasman Geosciences, LLC

Project Manager: Z Conder

Red Hills Station

08.28.2019

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), North Carolina (681)

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)

08.28.2019

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

Reference: XENCO Report No(s): **634691**
Red Hills Station
Project Address: Lea County, NM

Z 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) 634691. 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. 634691 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

A Small Business and Minority Company

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

Sample Cross Reference 634691

Tasman Geosciences, LLC, Hobbs, NM

Red Hills Station

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FL-1 @ 6"	S	08.16.2019 00:00	6 In	634691-001
FL-2 @ 6"	S	08.16.2019 00:00	6 In	634691-002
FL-3 @ 6"	S	08.16.2019 00:00	6 In	634691-003
FL-4 @ 6"	S	08.16.2019 00:00	6 In	634691-004
FL-5 @ 6"	S	08.16.2019 00:00	6 In	634691-005
FL-6 @ 6"	S	08.16.2019 00:00	6 In	634691-006
FL-7 @ 6"	S	08.16.2019 00:00	6 In	634691-007
FL-8 @ 6"	S	08.16.2019 00:00	6 In	634691-008
FL-9 @ 6"	S	08.16.2019 00:00	6 In	634691-009
FL-10 @ 6"	S	08.16.2019 00:00	6 In	634691-010
FL-11 @ 6"	S	08.16.2019 00:00	6 In	634691-011
FL-12 @ 6"	S	08.16.2019 00:00	6 In	634691-012
FL-13 @ 6"	S	08.16.2019 00:00	6 In	634691-013
FL-14 @ 6"	S	08.16.2019 00:00	6 In	634691-014
FL-15 @ 6"	S	08.16.2019 00:00	6 In	634691-015
FL-16 @ 6"	S	08.16.2019 00:00	6 In	634691-016
FL-17 @ 6"	S	08.16.2019 00:00	6 In	634691-017
FL-18 @ 6"	S	08.16.2019 00:00	6 In	634691-018
FL-19 @ 6"	S	08.16.2019 00:00	6 In	634691-019
FL-20 @ 6"	S	08.16.2019 00:00	6 In	634691-020
FL-21 @ 1'	S	08.16.2019 00:00	1 ft	634691-021
FL-22 @ 2'	S	08.16.2019 00:00	2 ft	634691-022
FL-23 @ 6"	S	08.16.2019 00:00	6 In	634691-023
FL-24 @ 6"	S	08.16.2019 00:00	6 In	634691-024
FL-25 @ 6"	S	08.16.2019 00:00	6 In	634691-025
FL-26 @ 6"	S	08.16.2019 00:00	6 In	634691-026
FL-27 @ 6"	S	08.16.2019 00:00	6 In	634691-027
FL-28 @ 6"	S	08.16.2019 00:00	6 In	634691-028
FL-29 @ 6"	S	08.16.2019 00:00	6 In	634691-029
FL-30 @ 6"	S	08.16.2019 00:00	6 In	634691-030
FL-31 @ 6"	S	08.16.2019 00:00	6 In	634691-031
FL-32 @ 6"	S	08.16.2019 00:00	6 In	634691-032
FL-33 @ 6"	S	08.16.2019 00:00	6 In	634691-033
FL-34 @ 6"	S	08.16.2019 00:00	6 In	634691-034
FL-35 @ 6"	S	08.16.2019 00:00	6 In	634691-035
FL-36 @ 6"	S	08.16.2019 00:00	6 In	634691-036
FL-37 @ 6"	S	08.16.2019 00:00	6 In	634691-037
FL-38 @ 3'	S	08.16.2019 00:00	3 ft	634691-038
ESW @ 1.5'	S	08.16.2019 00:00	1.5 ft	634691-039

CASE NARRATIVE

Client Name: Tasman Geosciences, LLC

Project Name: Red Hills Station

Project ID:
Work Order Number(s): *634691*

Report Date: *08.28.2019*
Date Received: *08.21.2019*

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:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099368 Inorganic Anions by EPA 300/300.1

Lab Sample ID 634691-032 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 634691-022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036, -037, -038, -039.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3099591 BTEX by EPA 8021

o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.

Samples in the analytical batch are: 634691-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020

Lab Sample ID 634691-001 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: 634691-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.

The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

CASE NARRATIVE

Client Name: Tasman Geosciences, LLC

Project Name: Red Hills Station

Project ID:
Work Order Number(s): *634691*

Report Date: *08.28.2019*
Date Received: *08.21.2019*

Batch: LBA-3099903 BTEX by EPA 8021
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Benzene, Ethylbenzene, Toluene, m_p-Xylenes , o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 634691-021, -022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036, -037, -038, -039

Lab Sample ID 634691-023 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: 634691-021, -022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036, -037, -038, -039.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits, therefore the data was accepted.

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Red Hills Station

Sample Id: **FL-1 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-001 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099237 Date Prep: 08.21.2019 12:45

Prep seq: 7684668

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**41.5**	4.97	0.853	mg/kg	08.21.2019 17:25		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 09:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	**175**	50.0	25.0	mg/kg	08.22.2019 09:00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**43.1**	50.0	25.0	mg/kg	08.22.2019 09:00	J	1
Total TPH	PHC635	**218**		15.0	mg/kg	08.22.2019 09:00		

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

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	08.24.2019 02:48	UX	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	08.24.2019 02:48	UX	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	08.24.2019 02:48	UX	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	08.24.2019 02:48	UX	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.24.2019 02:48	UXF	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.24.2019 02:48	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.24.2019 02:48	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	121	70 - 130	%		

Certificate of Analytical Results
634691
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **FL-2 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-002 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**366**	4.97	0.853	mg/kg	08.22.2019 09:19		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	08.22.2019 09:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	**438**	49.9	25.0	mg/kg	08.22.2019 09:58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**120**	49.9	25.0	mg/kg	08.22.2019 09:58		1
Total TPH	PHC635	**558**		15.0	mg/kg	08.22.2019 09:58		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	115	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	08.24.2019 03:09	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	08.24.2019 03:09	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	08.24.2019 03:09	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	08.24.2019 03:09	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	08.24.2019 03:09	U	1
Xylenes, Total	1330-20-7	<0.000347		0.000347	mg/kg	08.24.2019 03:09	U	
Total BTEX		<0.000347		0.000347	mg/kg	08.24.2019 03:09	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	114	70 - 130	%		

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Red Hills Station

Sample Id: **FL-3 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-003 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**296**	5.03	0.864	mg/kg	08.22.2019 09:38		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 10:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1970**	50.0	25.0	mg/kg	08.22.2019 10:18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**421**	50.0	25.0	mg/kg	08.22.2019 10:18		1
Total TPH	PHC635	**2390**		15.0	mg/kg	08.22.2019 10:18		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	116	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	08.24.2019 03:31	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	08.24.2019 03:31	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	08.24.2019 03:31	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	08.24.2019 03:31	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	08.24.2019 03:31	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	08.24.2019 03:31	U	
Total BTEX		<0.000342		0.000342	mg/kg	08.24.2019 03:31	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	103	70 - 130	%		
4-Bromofluorobenzene	129	70 - 130	%		

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Red Hills Station

Sample Id: **FL-4 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-004 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**87.3**	4.99	0.857	mg/kg	08.22.2019 09:45		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 10:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	**2230**	50.0	25.0	mg/kg	08.22.2019 10:37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**507**	50.0	25.0	mg/kg	08.22.2019 10:37		1
Total TPH	PHC635	**2740**		15.0	mg/kg	08.22.2019 10:37		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	86	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	08.24.2019 03:53	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	08.24.2019 03:53	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	08.24.2019 03:53	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	08.24.2019 03:53	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.24.2019 03:53	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.24.2019 03:53	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.24.2019 03:53	U	

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

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Red Hills Station

Sample Id: **FL-5 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-005 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**38.8**	4.97	0.853	mg/kg	08.22.2019 09:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	08.22.2019 10:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**101**	49.9	24.9	mg/kg	08.22.2019 10:57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**25.5**	49.9	24.9	mg/kg	08.22.2019 10:57	J	1
Total TPH	PHC635	**127**		15.0	mg/kg	08.22.2019 10:57		

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

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	08.24.2019 04:13	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	08.24.2019 04:13	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	08.24.2019 04:13	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.24.2019 04:13	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	08.24.2019 04:13	U	1
Xylenes, Total	1330-20-7	<0.000343		0.000343	mg/kg	08.24.2019 04:13	U	
Total BTEX		<0.000343		0.000343	mg/kg	08.24.2019 04:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	123	70 - 130	%		

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Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **FL-6 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-006 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**125**	5.04	0.865	mg/kg	08.22.2019 09:57		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	08.22.2019 11:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	**2810**	49.8	24.9	mg/kg	08.22.2019 11:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**592**	49.8	24.9	mg/kg	08.22.2019 11:16		1
Total TPH	PHC635	**3400**		14.9	mg/kg	08.22.2019 11:16		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	95	70 - 135	%		
o-Terphenyl	89	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	08.24.2019 04:34	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	08.24.2019 04:34	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	08.24.2019 04:34	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.24.2019 04:34	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	08.24.2019 04:34	U	1
Xylenes, Total	1330-20-7	<0.000343		0.000343	mg/kg	08.24.2019 04:34	U	
Total BTEX		<0.000343		0.000343	mg/kg	08.24.2019 04:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	120	70 - 130	%		

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Red Hills Station

Sample Id: **FL-7 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-007 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**113**	4.99	0.857	mg/kg	08.22.2019 10:16		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 15:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	**443**	50.0	25.0	mg/kg	08.22.2019 15:43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**103**	50.0	25.0	mg/kg	08.22.2019 15:43		1
Total TPH	PHC635	**546**		15.0	mg/kg	08.22.2019 15:43		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	112	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	08.24.2019 04:55	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	08.24.2019 04:55	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	08.24.2019 04:55	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	08.24.2019 04:55	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.24.2019 04:55	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.24.2019 04:55	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.24.2019 04:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	103	70 - 130	%		

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Sample Id: **FL-8 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-008 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**45.9**	4.97	0.853	mg/kg	08.22.2019 10:23		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 16:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	**417**	50.0	25.0	mg/kg	08.22.2019 16:02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**94.4**	50.0	25.0	mg/kg	08.22.2019 16:02		1
Total TPH	PHC635	**511**		15.0	mg/kg	08.22.2019 16:02		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	109	70 - 135	%		
o-Terphenyl	124	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	08.24.2019 05:16	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	08.24.2019 05:16	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	08.24.2019 05:16	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	08.24.2019 05:16	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	08.24.2019 05:16	U	1
Xylenes, Total	1330-20-7	<0.000345		0.000345	mg/kg	08.24.2019 05:16	U	
Total BTEX		<0.000345		0.000345	mg/kg	08.24.2019 05:16	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	98	70 - 130	%		
4-Bromofluorobenzene	120	70 - 130	%		

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Sample Id: **FL-9 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-009 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**95.4**	5.05	0.867	mg/kg	08.22.2019 10:29		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.8**	49.9	15.0	mg/kg	08.22.2019 16:21	J	1
Diesel Range Organics (DRO)	C10C28DRO	**550**	49.9	25.0	mg/kg	08.22.2019 16:21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**131**	49.9	25.0	mg/kg	08.22.2019 16:21		1
Total TPH	PHC635	**698**		15.0	mg/kg	08.22.2019 16:21		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	108	70 - 135	%		
o-Terphenyl	122	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	08.24.2019 05:37	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	08.24.2019 05:37	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	08.24.2019 05:37	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	08.24.2019 05:37	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	08.24.2019 05:37	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	08.24.2019 05:37	U	
Total BTEX		<0.000342		0.000342	mg/kg	08.24.2019 05:37	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	127	70 - 130	%		

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Sample Id: **FL-10 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-010 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**156**	4.95	0.850	mg/kg	08.22.2019 10:35		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.3**	50.0	15.0	mg/kg	08.22.2019 16:40	J	1
Diesel Range Organics (DRO)	C10C28DRO	**2010**	50.0	25.0	mg/kg	08.22.2019 16:40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**564**	50.0	25.0	mg/kg	08.22.2019 16:40		1
Total TPH	PHC635	**2590**		15.0	mg/kg	08.22.2019 16:40		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	115	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	08.24.2019 05:58	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	08.24.2019 05:58	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	08.24.2019 05:58	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.24.2019 05:58	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	08.24.2019 05:58	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	08.24.2019 05:58	U	
Total BTEX		<0.000342		0.000342	mg/kg	08.24.2019 05:58	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	122	70 - 130	%		

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Sample Id: **FL-11 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-011 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**47.2**	4.95	0.850	mg/kg	08.22.2019 10:41		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.9**	49.9	15.0	mg/kg	08.22.2019 17:18	J	1
Diesel Range Organics (DRO)	C10C28DRO	**233**	49.9	24.9	mg/kg	08.22.2019 17:18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**51.3**	49.9	24.9	mg/kg	08.22.2019 17:18		1
Total TPH	PHC635	**301**		15.0	mg/kg	08.22.2019 17:18		

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

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	08.24.2019 07:23	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	08.24.2019 07:23	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	08.24.2019 07:23	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.24.2019 07:23	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	08.24.2019 07:23	U	1
Xylenes, Total	1330-20-7	<0.000343		0.000343	mg/kg	08.24.2019 07:23	U	
Total BTEX		<0.000343		0.000343	mg/kg	08.24.2019 07:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	114	70 - 130	%		

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Sample Id: **FL-12 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-012 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**5.70**	4.95	0.850	mg/kg	08.22.2019 10:48		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 17:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	**74.7**	50.0	25.0	mg/kg	08.22.2019 17:38		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	50.0	25.0	mg/kg	08.22.2019 17:38	U	1
Total TPH	PHC635	**74.7**		15.0	mg/kg	08.22.2019 17:38		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	111	70 - 135	%		
o-Terphenyl	116	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	08.24.2019 07:43	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	08.24.2019 07:43	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	08.24.2019 07:43	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.24.2019 07:43	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	08.24.2019 07:43	U	1
Xylenes, Total	1330-20-7	<0.000343		0.000343	mg/kg	08.24.2019 07:43	U	
Total BTEX		<0.000343		0.000343	mg/kg	08.24.2019 07:43	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	70 - 130	%		
4-Bromofluorobenzene	97	70 - 130	%		

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Sample Id: **FL-13 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-013 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**51.6**	5.00	0.858	mg/kg	08.22.2019 11:07		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	08.22.2019 17:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**453**	49.8	24.9	mg/kg	08.22.2019 17:57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**99.6**	49.8	24.9	mg/kg	08.22.2019 17:57		1
Total TPH	PHC635	**553**		14.9	mg/kg	08.22.2019 17:57		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	122	70 - 135	%		
o-Terphenyl	129	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	08.24.2019 08:03	U	1
Toluene	108-88-3	<0.000458	0.00201	0.000458	mg/kg	08.24.2019 08:03	U	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	08.24.2019 08:03	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	08.24.2019 08:03	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	08.24.2019 08:03	U	1
Xylenes, Total	1330-20-7	<0.000346		0.000346	mg/kg	08.24.2019 08:03	U	
Total BTEX		<0.000346		0.000346	mg/kg	08.24.2019 08:03	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	118	70 - 130	%		

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Sample Id: **FL-14 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-014 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**137**	5.02	0.862	mg/kg	08.22.2019 11:13		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 18:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	**758**	50.0	25.0	mg/kg	08.22.2019 18:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**169**	50.0	25.0	mg/kg	08.22.2019 18:16		1
Total TPH	PHC635	**927**		15.0	mg/kg	08.22.2019 18:16		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	127	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	08.24.2019 08:23	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	08.24.2019 08:23	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	08.24.2019 08:23	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	08.24.2019 08:23	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	08.24.2019 08:23	U	1
Xylenes, Total	1330-20-7	<0.000345		0.000345	mg/kg	08.24.2019 08:23	U	
Total BTEX		<0.000345		0.000345	mg/kg	08.24.2019 08:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	117	70 - 130	%		

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Sample Id: **FL-15 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-015 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**44.6**	4.99	0.857	mg/kg	08.22.2019 11:32		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.3**	49.9	15.0	mg/kg	08.22.2019 18:35	J	1
Diesel Range Organics (DRO)	C10C28DRO	**2710**	49.9	24.9	mg/kg	08.22.2019 18:35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**550**	49.9	24.9	mg/kg	08.22.2019 18:35		1
Total TPH	PHC635	**3280**		15.0	mg/kg	08.22.2019 18:35		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	117	70 - 135	%		
o-Terphenyl	110	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	08.24.2019 08:44	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	08.24.2019 08:44	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	08.24.2019 08:44	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	08.24.2019 08:44	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.24.2019 08:44	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.24.2019 08:44	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.24.2019 08:44	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	122	70 - 130	%		

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Sample Id: **FL-16 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-016 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**3.39**	4.96	0.852	mg/kg	08.22.2019 11:38	J	1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 18:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**77.4**	50.0	25.0	mg/kg	08.22.2019 18:55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	50.0	25.0	mg/kg	08.22.2019 18:55	U	1
Total TPH	PHC635	**77.4**		15.0	mg/kg	08.22.2019 18:55		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	122	70 - 135	%		
o-Terphenyl	124	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	08.24.2019 09:04	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	08.24.2019 09:04	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	08.24.2019 09:04	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	08.24.2019 09:04	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.24.2019 09:04	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.24.2019 09:04	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.24.2019 09:04	U	

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

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Sample Id: **FL-17 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-017 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**76.2**	5.02	0.862	mg/kg	08.22.2019 11:45		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.3**	50.0	15.0	mg/kg	08.22.2019 19:14	J	1
Diesel Range Organics (DRO)	C10C28DRO	**906**	50.0	25.0	mg/kg	08.22.2019 19:14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**202**	50.0	25.0	mg/kg	08.22.2019 19:14		1
Total TPH	PHC635	**1130**		15.0	mg/kg	08.22.2019 19:14		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	112	70 - 135	%		
o-Terphenyl	130	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	08.24.2019 09:24	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	08.24.2019 09:24	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	08.24.2019 09:24	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	08.24.2019 09:24	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	08.24.2019 09:24	U	1
Xylenes, Total	1330-20-7	<0.000346		0.000346	mg/kg	08.24.2019 09:24	U	
Total BTEX		<0.000346		0.000346	mg/kg	08.24.2019 09:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	128	70 - 130	%		

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Sample Id: **FL-18 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-018 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**71.9**	5.00	0.858	mg/kg	08.22.2019 11:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 19:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	**147**	50.0	25.0	mg/kg	08.22.2019 19:33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**32.5**	50.0	25.0	mg/kg	08.22.2019 19:33	J	1
Total TPH	PHC635	**180**		15.0	mg/kg	08.22.2019 19:33		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	119	70 - 135	%		
o-Terphenyl	125	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	08.24.2019 09:44	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	08.24.2019 09:44	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	08.24.2019 09:44	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	08.24.2019 09:44	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	08.24.2019 09:44	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	08.24.2019 09:44	U	
Total BTEX		<0.000342		0.000342	mg/kg	08.24.2019 09:44	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	103	70 - 130	%		
4-Bromofluorobenzene	120	70 - 130	%		

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Sample Id: **FL-19 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-019 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**32.7**	5.00	0.858	mg/kg	08.22.2019 11:57		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	08.22.2019 19:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**389**	49.9	24.9	mg/kg	08.22.2019 19:53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**91.5**	49.9	24.9	mg/kg	08.22.2019 19:53		1
Total TPH	PHC635	**481**		15.0	mg/kg	08.22.2019 19:53		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	118	70 - 135	%		
o-Terphenyl	127	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	08.24.2019 10:04	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	08.24.2019 10:04	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	08.24.2019 10:04	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	08.24.2019 10:04	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.24.2019 10:04	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.24.2019 10:04	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.24.2019 10:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	70 - 130	%		
4-Bromofluorobenzene	118	70 - 130	%		

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Sample Id: **FL-20 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-020 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**90.5**	5.00	0.858	mg/kg	08.22.2019 12:04		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 20:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**359**	50.0	25.0	mg/kg	08.22.2019 20:12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**87.4**	50.0	25.0	mg/kg	08.22.2019 20:12		1
Total TPH	PHC635	**446**		15.0	mg/kg	08.22.2019 20:12		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	121	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000381	0.00198	0.000381	mg/kg	08.24.2019 10:24	U	1
Toluene	108-88-3	<0.000451	0.00198	0.000451	mg/kg	08.24.2019 10:24	U	1
Ethylbenzene	100-41-4	<0.000559	0.00198	0.000559	mg/kg	08.24.2019 10:24	U	1
m_p-Xylenes	179601-23-1	<0.00100	0.00396	0.00100	mg/kg	08.24.2019 10:24	U	1
o-Xylene	95-47-6	<0.000341	0.00198	0.000341	mg/kg	08.24.2019 10:24	U	1
Xylenes, Total	1330-20-7	<0.000341		0.000341	mg/kg	08.24.2019 10:24	U	
Total BTEX		<0.000341		0.000341	mg/kg	08.24.2019 10:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	103	70 - 130	%		
4-Bromofluorobenzene	122	70 - 130	%		

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Sample Id: **FL-21 @ 1'** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 634691-021 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099367 Date Prep: 08.21.2019 14:10

Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**5.98**	4.99	0.857	mg/kg	08.22.2019 12:10		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 21:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	**141**	50.0	25.0	mg/kg	08.22.2019 21:48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**33.3**	50.0	25.0	mg/kg	08.22.2019 21:48	J	1
Total TPH	PHC635	**174**		15.0	mg/kg	08.22.2019 21:48		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	106	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000389	0.00202	0.000389	mg/kg	08.23.2019 15:52	U	1
Toluene	108-88-3	<0.000460	0.00202	0.000460	mg/kg	08.23.2019 15:52	U	1
Ethylbenzene	100-41-4	<0.000570	0.00202	0.000570	mg/kg	08.23.2019 15:52	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00404	0.00102	mg/kg	08.23.2019 15:52	U	1
o-Xylene	95-47-6	<0.000348	0.00202	0.000348	mg/kg	08.23.2019 15:52	U	1
Xylenes, Total	1330-20-7	<0.000348		0.000348	mg/kg	08.23.2019 15:52	U	
Total BTEX		<0.000348		0.000348	mg/kg	08.23.2019 15:52	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	105	70 - 130	%		
4-Bromofluorobenzene	100	70 - 130	%		

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Sample Id: **FL-22 @ 2'** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 634691-022 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**5.73**	4.95	0.850	mg/kg	08.22.2019 12:48		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 22:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**127**	50.0	25.0	mg/kg	08.22.2019 22:46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**27.6**	50.0	25.0	mg/kg	08.22.2019 22:46	J	1
Total TPH	PHC635	**155**		15.0	mg/kg	08.22.2019 22:46		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	104	70 - 135	%		
o-Terphenyl	110	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	08.23.2019 16:12	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	08.23.2019 16:12	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	08.23.2019 16:12	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	08.23.2019 16:12	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.23.2019 16:12	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.23.2019 16:12	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.23.2019 16:12	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	103	70 - 130	%		
4-Bromofluorobenzene	104	70 - 130	%		

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Sample Id: **FL-23 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-023 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**43.1**	4.99	0.857	mg/kg	08.22.2019 13:07		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	08.22.2019 23:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	**772**	49.9	25.0	mg/kg	08.22.2019 23:06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**149**	49.9	25.0	mg/kg	08.22.2019 23:06		1
Total TPH	PHC635	**921**		15.0	mg/kg	08.22.2019 23:06		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	109	70 - 135	%		
o-Terphenyl	129	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	08.23.2019 16:32	UXF	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	08.23.2019 16:32	UXF	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	08.23.2019 16:32	UXXF	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.23.2019 16:32	UXXF	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	08.23.2019 16:32	UXF	1
Xylenes, Total	1330-20-7	<0.000343		0.000343	mg/kg	08.23.2019 16:32	U	
Total BTEX		<0.000343		0.000343	mg/kg	08.23.2019 16:32	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	70 - 130	%		
4-Bromofluorobenzene	106	70 - 130	%		

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Sample Id: **FL-24 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-024 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**13.3**	4.98	0.855	mg/kg	08.22.2019 13:13		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 23:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	**630**	50.0	25.0	mg/kg	08.22.2019 23:25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**118**	50.0	25.0	mg/kg	08.22.2019 23:25		1
Total TPH	PHC635	**748**		15.0	mg/kg	08.22.2019 23:25		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	118	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	08.23.2019 16:52	U	1
Toluene	108-88-3	**0.000572**	0.00201	0.000457	mg/kg	08.23.2019 16:52	J	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	08.23.2019 16:52	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	08.23.2019 16:52	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	08.23.2019 16:52	U	1
Xylenes, Total	1330-20-7	<0.000346		0.000346	mg/kg	08.23.2019 16:52	U	
Total BTEX		**0.000572**		0.000346	mg/kg	08.23.2019 16:52	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	106	70 - 130	%		
4-Bromofluorobenzene	111	70 - 130	%		

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Sample Id: **FL-25 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-025 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**16.2**	5.00	0.858	mg/kg	08.22.2019 13:23		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 23:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1990**	50.0	25.0	mg/kg	08.22.2019 23:44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**326**	50.0	25.0	mg/kg	08.22.2019 23:44		1
Total TPH	PHC635	**2320**		15.0	mg/kg	08.22.2019 23:44		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	118	70 - 135	%		
o-Terphenyl	129	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	08.23.2019 17:13	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	08.23.2019 17:13	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	08.23.2019 17:13	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	08.23.2019 17:13	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	08.23.2019 17:13	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	08.23.2019 17:13	U	
Total BTEX		<0.000342		0.000342	mg/kg	08.23.2019 17:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	70 - 130	%		
4-Bromofluorobenzene	109	70 - 130	%		

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Sample Id: **FL-26 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-026 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**7.41**	4.96	0.852	mg/kg	08.22.2019 13:29		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.9**	49.8	14.9	mg/kg	08.23.2019 00:03	J	1
Diesel Range Organics (DRO)	C10C28DRO	**49.9**	49.8	24.9	mg/kg	08.23.2019 00:03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	49.8	24.9	mg/kg	08.23.2019 00:03	U	1
Total TPH	PHC635	**66.8**		14.9	mg/kg	08.23.2019 00:03		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.00120**	0.00198	0.000382	mg/kg	08.23.2019 17:33	J	1
Toluene	108-88-3	**0.00141**	0.00198	0.000452	mg/kg	08.23.2019 17:33	J	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	08.23.2019 17:33	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	08.23.2019 17:33	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	08.23.2019 17:33	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	08.23.2019 17:33	U	
Total BTEX		**0.00261**		0.000342	mg/kg	08.23.2019 17:33		

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

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Sample Id: **FL-27 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-027 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**23.0**	5.03	0.864	mg/kg	08.22.2019 15:49		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.23.2019 00:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1120**	50.0	25.0	mg/kg	08.23.2019 00:23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**194**	50.0	25.0	mg/kg	08.23.2019 00:23		1
Total TPH	PHC635	**1310**		15.0	mg/kg	08.23.2019 00:23		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	104	70 - 135	%		
o-Terphenyl	128	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	08.23.2019 17:53	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	08.23.2019 17:53	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	08.23.2019 17:53	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.23.2019 17:53	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	08.23.2019 17:53	U	1
Xylenes, Total	1330-20-7	<0.000343		0.000343	mg/kg	08.23.2019 17:53	U	
Total BTEX		<0.000343		0.000343	mg/kg	08.23.2019 17:53	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	70 - 130	%		
4-Bromofluorobenzene	111	70 - 130	%		

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Sample Id: **FL-28 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-028 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**9.23**	4.99	0.857	mg/kg	08.22.2019 15:55		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.23.2019 00:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	**798**	50.0	25.0	mg/kg	08.23.2019 00:42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**130**	50.0	25.0	mg/kg	08.23.2019 00:42		1
Total TPH	PHC635	**928**		15.0	mg/kg	08.23.2019 00:42		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	105	70 - 135	%		
o-Terphenyl	123	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000381	0.00198	0.000381	mg/kg	08.23.2019 18:13	U	1
Toluene	108-88-3	<0.000451	0.00198	0.000451	mg/kg	08.23.2019 18:13	U	1
Ethylbenzene	100-41-4	<0.000559	0.00198	0.000559	mg/kg	08.23.2019 18:13	U	1
m_p-Xylenes	179601-23-1	<0.00100	0.00396	0.00100	mg/kg	08.23.2019 18:13	U	1
o-Xylene	95-47-6	<0.000341	0.00198	0.000341	mg/kg	08.23.2019 18:13	U	1
Xylenes, Total	1330-20-7	<0.000341		0.000341	mg/kg	08.23.2019 18:13	U	
Total BTEX		<0.000341		0.000341	mg/kg	08.23.2019 18:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	70 - 130	%		
4-Bromofluorobenzene	113	70 - 130	%		

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Sample Id: **FL-29 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-029 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**24.5**	4.96	0.852	mg/kg	08.22.2019 16:01		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	08.23.2019 01:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1070**	49.9	24.9	mg/kg	08.23.2019 01:02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**177**	49.9	24.9	mg/kg	08.23.2019 01:02		1
Total TPH	PHC635	**1250**		15.0	mg/kg	08.23.2019 01:02		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	125	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	08.23.2019 18:33	U	1
Toluene	108-88-3	**0.000752**	0.00200	0.000457	mg/kg	08.23.2019 18:33	J	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	08.23.2019 18:33	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	08.23.2019 18:33	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	08.23.2019 18:33	U	1
Xylenes, Total	1330-20-7	<0.000345		0.000345	mg/kg	08.23.2019 18:33	U	
Total BTEX		**0.000752**		0.000345	mg/kg	08.23.2019 18:33	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	70 - 130	%		
4-Bromofluorobenzene	112	70 - 130	%		

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Sample Id: **FL-30 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-030 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**30.6**	4.95	0.850	mg/kg	08.22.2019 16:08		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.7**	49.8	14.9	mg/kg	08.23.2019 01:21	J	1
Diesel Range Organics (DRO)	C10C28DRO	**872**	49.8	24.9	mg/kg	08.23.2019 01:21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**168**	49.8	24.9	mg/kg	08.23.2019 01:21		1
Total TPH	PHC635	**1060**		14.9	mg/kg	08.23.2019 01:21		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	112	70 - 135	%		
o-Terphenyl	129	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	08.23.2019 18:53	U	1
Toluene	108-88-3	**0.000622**	0.00201	0.000457	mg/kg	08.23.2019 18:53	J	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	08.23.2019 18:53	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	08.23.2019 18:53	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	08.23.2019 18:53	U	1
Xylenes, Total	1330-20-7	<0.000346		0.000346	mg/kg	08.23.2019 18:53	U	
Total BTEX		**0.000622**		0.000346	mg/kg	08.23.2019 18:53	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	70 - 130	%		
4-Bromofluorobenzene	106	70 - 130	%		

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Sample Id: **FL-31 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-031 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**40.4**	5.02	0.862	mg/kg	08.22.2019 16:14		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.9**	50.0	15.0	mg/kg	08.23.2019 02:00	J	1
Diesel Range Organics (DRO)	C10C28DRO	**1550**	50.0	25.0	mg/kg	08.23.2019 02:00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**266**	50.0	25.0	mg/kg	08.23.2019 02:00		1
Total TPH	PHC635	**1830**		15.0	mg/kg	08.23.2019 02:00		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	95	70 - 135	%		
o-Terphenyl	130	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.000878**	0.00200	0.000384	mg/kg	08.23.2019 20:12	J	1
Toluene	108-88-3	**0.00129**	0.00200	0.000455	mg/kg	08.23.2019 20:12	J	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	08.23.2019 20:12	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	08.23.2019 20:12	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.23.2019 20:12	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.23.2019 20:12	U	
Total BTEX		**0.00217**		0.000344	mg/kg	08.23.2019 20:12		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	97	70 - 130	%		

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Sample Id: **FL-32 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-032 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**8.13**	5.05	0.867	mg/kg	08.22.2019 16:20		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	08.23.2019 02:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	**95.7**	49.9	25.0	mg/kg	08.23.2019 02:19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	49.9	25.0	mg/kg	08.23.2019 02:19	U	1
Total TPH	PHC635	**95.7**		15.0	mg/kg	08.23.2019 02:19		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	108	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	08.23.2019 20:32	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	08.23.2019 20:32	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	08.23.2019 20:32	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	08.23.2019 20:32	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	08.23.2019 20:32	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	08.23.2019 20:32	U	
Total BTEX		<0.000342		0.000342	mg/kg	08.23.2019 20:32	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	105	70 - 130	%		

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Sample Id: **FL-33 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-033 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**28.5**	4.95	0.850	mg/kg	08.22.2019 16:39		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.0**	49.9	15.0	mg/kg	08.23.2019 02:39	J	1
Diesel Range Organics (DRO)	C10C28DRO	**769**	49.9	24.9	mg/kg	08.23.2019 02:39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**153**	49.9	24.9	mg/kg	08.23.2019 02:39		1
Total TPH	PHC635	**937**		15.0	mg/kg	08.23.2019 02:39		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	105	70 - 135	%		
o-Terphenyl	128	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.000428**	0.00199	0.000383	mg/kg	08.23.2019 20:52	J	1
Toluene	108-88-3	**0.000568**	0.00199	0.000454	mg/kg	08.23.2019 20:52	J	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	08.23.2019 20:52	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.23.2019 20:52	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	08.23.2019 20:52	U	1
Xylenes, Total	1330-20-7	<0.000343		0.000343	mg/kg	08.23.2019 20:52	U	
Total BTEX		**0.000996**		0.000343	mg/kg	08.23.2019 20:52	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	109	70 - 130	%		

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Sample Id: **FL-34 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-034 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**41.0**	5.05	0.867	mg/kg	08.22.2019 16:45		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	08.23.2019 02:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1130**	49.8	24.9	mg/kg	08.23.2019 02:58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**156**	49.8	24.9	mg/kg	08.23.2019 02:58		1
Total TPH	PHC635	**1290**		14.9	mg/kg	08.23.2019 02:58		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 135	%		
o-Terphenyl	127	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	08.23.2019 21:12	U	1
Toluene	108-88-3	**0.000497**	0.00199	0.000453	mg/kg	08.23.2019 21:12	J	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	08.23.2019 21:12	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.23.2019 21:12	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	08.23.2019 21:12	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	08.23.2019 21:12	U	
Total BTEX		**0.000497**		0.000342	mg/kg	08.23.2019 21:12	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	70 - 130	%		
4-Bromofluorobenzene	109	70 - 130	%		

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Sample Id: **FL-35 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-035 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**52.9**	4.98	0.855	mg/kg	08.22.2019 17:04		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**19.9**	50.0	15.0	mg/kg	08.23.2019 03:18	J	1
Diesel Range Organics (DRO)	C10C28DRO	**536**	50.0	25.0	mg/kg	08.23.2019 03:18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**102**	50.0	25.0	mg/kg	08.23.2019 03:18		1
Total TPH	PHC635	**658**		15.0	mg/kg	08.23.2019 03:18		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	107	70 - 135	%		
o-Terphenyl	114	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.00119**	0.00200	0.000385	mg/kg	08.23.2019 21:32	J	1
Toluene	108-88-3	**0.00143**	0.00200	0.000456	mg/kg	08.23.2019 21:32	J	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	08.23.2019 21:32	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	08.23.2019 21:32	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.23.2019 21:32	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.23.2019 21:32	U	
Total BTEX		**0.00262**		0.000344	mg/kg	08.23.2019 21:32		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	70 - 130	%		
4-Bromofluorobenzene	109	70 - 130	%		

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Sample Id: **FL-36 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-036 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**344**	24.9	4.27	mg/kg	08.22.2019 17:15		5

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	08.23.2019 03:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1610**	49.9	24.9	mg/kg	08.23.2019 03:37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**238**	49.9	24.9	mg/kg	08.23.2019 03:37		1
Total TPH	PHC635	**1850**		15.0	mg/kg	08.23.2019 03:37		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	128	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	08.23.2019 21:52	U	1
Toluene	108-88-3	**0.000805**	0.00199	0.000453	mg/kg	08.23.2019 21:52	J	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	08.23.2019 21:52	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.23.2019 21:52	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	08.23.2019 21:52	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	08.23.2019 21:52	U	
Total BTEX		**0.000805**		0.000342	mg/kg	08.23.2019 21:52	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	112	70 - 130	%		

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Sample Id: **FL-37 @ 6"** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 634691-037 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**116**	5.05	0.867	mg/kg	08.22.2019 17:21		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	08.23.2019 03:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**228**	49.9	25.0	mg/kg	08.23.2019 03:57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**38.5**	49.9	25.0	mg/kg	08.23.2019 03:57	J	1
Total TPH	PHC635	**267**		15.0	mg/kg	08.23.2019 03:57		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	120	70 - 135	%		
o-Terphenyl	127	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	08.23.2019 22:13	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	08.23.2019 22:13	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	08.23.2019 22:13	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	08.23.2019 22:13	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	08.23.2019 22:13	U	1
Xylenes, Total	1330-20-7	<0.000343		0.000343	mg/kg	08.23.2019 22:13	U	
Total BTEX		<0.000343		0.000343	mg/kg	08.23.2019 22:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	111	70 - 130	%		

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Sample Id: **FL-38 @ 3'** Matrix: Soil Sample Depth: 3 ft

Lab Sample Id: 634691-038 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**61.0**	5.05	0.867	mg/kg	08.22.2019 17:28		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	08.23.2019 04:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	**183**	49.8	24.9	mg/kg	08.23.2019 04:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**30.4**	49.8	24.9	mg/kg	08.23.2019 04:16	J	1
Total TPH	PHC635	**213**		14.9	mg/kg	08.23.2019 04:16		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	118	70 - 135	%		
o-Terphenyl	122	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	08.23.2019 22:33	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	08.23.2019 22:33	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	08.23.2019 22:33	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	08.23.2019 22:33	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	08.23.2019 22:33	U	1
Xylenes, Total	1330-20-7	<0.000347		0.000347	mg/kg	08.23.2019 22:33	U	
Total BTEX		<0.000347		0.000347	mg/kg	08.23.2019 22:33	U	

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

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Sample Id: **ESW @ 1.5'** Matrix: Soil Sample Depth: 1.5 ft

Lab Sample Id: 634691-039 Date Collected: 08.16.2019 00:00 Date Received: 08.21.2019 10:56

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3099368 Date Prep: 08.21.2019 14:20

Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**7.97**	5.05	0.867	mg/kg	08.22.2019 17:34		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.23.2019 04:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	50.0	25.0	mg/kg	08.23.2019 04:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	50.0	25.0	mg/kg	08.23.2019 04:36	U	1
Total TPH	PHC635	<15.0		15.0	mg/kg	08.23.2019 04:36	U	

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

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	08.23.2019 22:53	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	08.23.2019 22:53	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	08.23.2019 22:53	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	08.23.2019 22:53	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.23.2019 22:53	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.23.2019 22:53	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.23.2019 22:53	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	105	70 - 130	%		

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Sample Id: **7684668-1-BLK** Matrix: Solid Sample Depth:
Lab Sample Id: 7684668-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: CHE % Moist: Tech: CHE
Seq Number: 3099237 Date Prep: 08.21.2019 12:45
Prep seq: 7684668

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	08.21.2019 14:40	U	1

Sample Id: **7684682-1-BLK** Matrix: Solid Sample Depth:
Lab Sample Id: 7684682-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: CHE % Moist: Tech: CHE
Seq Number: 3099367 Date Prep: 08.21.2019 14:10
Prep seq: 7684682

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	08.22.2019 09:00	U	1

Sample Id: **7684683-1-BLK** Matrix: Solid Sample Depth:
Lab Sample Id: 7684683-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: CHE % Moist: Tech: CHE
Seq Number: 3099368 Date Prep: 08.21.2019 14:20
Prep seq: 7684683

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	08.22.2019 12:29	U	1

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Sample Id: **7684697-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7684697-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099456 Date Prep: 08.21.2019 13:00

Prep seq: 7684697

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 08:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	50.0	25.0	mg/kg	08.22.2019 08:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	50.0	25.0	mg/kg	08.22.2019 08:01	U	1
Total TPH	PHC635	<15.0		15.0	mg/kg	08.22.2019 08:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	105	70 - 135	%		
o-Terphenyl	107	70 - 135	%		

Sample Id: **7684703-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7684703-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3099458 Date Prep: 08.21.2019 15:00

Prep seq: 7684703

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	08.22.2019 20:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	50.0	25.0	mg/kg	08.22.2019 20:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	50.0	25.0	mg/kg	08.22.2019 20:50	U	1
Total TPH	PHC635	<15.0		15.0	mg/kg	08.22.2019 20:50	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	96	70 - 135	%		

Certificate of Analytical Results
634691
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **7684802-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7684802-1-BLK Date Collected: Date Received:

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099591 Date Prep: 08.22.2019 12:30

Prep seq: 7684802

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	08.24.2019 02:28	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	08.24.2019 02:28	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	08.24.2019 02:28	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	08.24.2019 02:28	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.24.2019 02:28	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.24.2019 02:28	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.24.2019 02:28	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	109	70 - 130	%		

Sample Id: **7684803-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7684803-1-BLK Date Collected: Date Received:

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3099903 Date Prep: 08.22.2019 16:00

Prep seq: 7684803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	08.23.2019 15:32	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	08.23.2019 15:32	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	08.23.2019 15:32	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	08.23.2019 15:32	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	08.23.2019 15:32	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	08.23.2019 15:32	U	
Total BTEX		<0.000344		0.000344	mg/kg	08.23.2019 15:32	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	94	70 - 130	%		

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: Red Hills Station

Work Orders : 634691 **Project ID:**

Lab Batch #: 3099591 **Sample:** 7684802-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.24.2019 01:05 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	70-130	
4-Bromofluorobenzene	0.0349	0.0300	116	70-130	

Lab Batch #: 3099591 **Sample:** 634691-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.24.2019 01:26 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0251	0.0300	84	70-130	
4-Bromofluorobenzene	0.0306	0.0300	102	70-130	

Lab Batch #: 3099591 **Sample:** 634691-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.24.2019 01:46 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	70-130	
4-Bromofluorobenzene	0.0389	0.0300	130	70-130	

Lab Batch #: 3099591 **Sample:** 7684802-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.24.2019 02:28 **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	0.0328	0.0300	109	70-130	

Lab Batch #: 3099591 **Sample:** 7684802-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.24.2019 12:45 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	70-130	
4-Bromofluorobenzene	0.0329	0.0300	110	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: Red Hills Station

Work Orders : 634691 **Project ID:**

Lab Batch #: 3099903 **Sample:** 7684803-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.23.2019 07:54 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0341	0.0300	114	70-130	

Lab Batch #: 3099903 **Sample:** 7684803-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.23.2019 14:13 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	70-130	
4-Bromofluorobenzene	0.0333	0.0300	111	70-130	

Lab Batch #: 3099903 **Sample:** 634691-023 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.23.2019 14:33 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	70-130	
4-Bromofluorobenzene	0.0330	0.0300	110	70-130	

Lab Batch #: 3099903 **Sample:** 634691-023 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.23.2019 14:53 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	70-130	
4-Bromofluorobenzene	0.0344	0.0300	115	70-130	

Lab Batch #: 3099903 **Sample:** 7684803-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.23.2019 15:32 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	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: Red Hills Station

Work Orders : 634691 **Project ID:**

Lab Batch #: 3099456 **Sample:** 7684697-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.22.2019 08:01 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	53.7	50.0	107	70-135	

Lab Batch #: 3099456 **Sample:** 7684697-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.22.2019 08:21 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	62.2	50.0	124	70-135	

Lab Batch #: 3099456 **Sample:** 7684697-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.22.2019 08:40 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	59.6	50.0	119	70-135	

Lab Batch #: 3099456 **Sample:** 634691-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.22.2019 09:19 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	99.7	121	70-135	
o-Terphenyl	56.8	49.9	114	70-135	

Lab Batch #: 3099456 **Sample:** 634691-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.22.2019 09:39 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	99.6	129	70-135	
o-Terphenyl	59.6	49.8	120	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: Red Hills Station

Work Orders : 634691 **Project ID:**

Lab Batch #: 3099458 **Sample:** 7684703-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.22.2019 20:50 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	100	94	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

Lab Batch #: 3099458 **Sample:** 7684703-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.22.2019 21:10 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	62.7	50.0	125	70-135	

Lab Batch #: 3099458 **Sample:** 7684703-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08.22.2019 21:29 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	59.5	50.0	119	70-135	

Lab Batch #: 3099458 **Sample:** 634691-021 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.22.2019 22:08 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.6	118	70-135	
o-Terphenyl	62.2	49.8	125	70-135	

Lab Batch #: 3099458 **Sample:** 634691-021 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08.22.2019 22:27 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.7	113	70-135	
o-Terphenyl	55.8	49.9	112	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: Red Hills Station

Work Order #: 634691 **Project ID:**

Analyst: KTL **Date Prepared:** 08.22.2019 **Date Analyzed:** 08.24.2019

Lab Batch ID: 3099591 **Sample:** 7684802-1-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	<0.000385	0.100	0.0989	99	0.100	0.104	104	5	70-130	35	
Toluene	<0.000456	0.100	0.0974	97	0.100	0.102	102	5	70-130	35	
Ethylbenzene	<0.000565	0.100	0.112	112	0.100	0.116	116	4	70-130	35	
m_p-Xylenes	<0.00101	0.200	0.222	111	0.200	0.235	118	6	70-130	35	
o-Xylene	<0.000344	0.100	0.107	107	0.100	0.113	113	5	70-130	35	

Analyst: KTL **Date Prepared:** 08.22.2019 **Date Analyzed:** 08.23.2019

Lab Batch ID: 3099903 **Sample:** 7684803-1-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	<0.000385	0.100	0.105	105	0.100	0.0969	97	8	70-130	35	
Toluene	<0.000456	0.100	0.104	104	0.100	0.0967	97	7	70-130	35	
Ethylbenzene	<0.000565	0.100	0.112	112	0.100	0.105	105	6	70-130	35	
m_p-Xylenes	<0.00101	0.200	0.219	110	0.200	0.206	103	6	70-130	35	
o-Xylene	<0.000344	0.100	0.114	114	0.100	0.107	107	6	70-130	35	

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

BS / BSD Recoveries

Project Name: Red Hills Station

Work Order #: 634691 **Project ID:**

Analyst: CHE **Date Prepared:** 08.21.2019 **Date Analyzed:** 08.21.2019

Lab Batch ID: 3099237 **Sample:** 7684668-1-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	266	106	250	260	104	2	90-110	20	

Analyst: CHE **Date Prepared:** 08.21.2019 **Date Analyzed:** 08.22.2019

Lab Batch ID: 3099367 **Sample:** 7684682-1-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	245	98	250	245	98	0	90-110	20	

Analyst: CHE **Date Prepared:** 08.21.2019 **Date Analyzed:** 08.22.2019

Lab Batch ID: 3099368 **Sample:** 7684683-1-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	248	99	250	248	99	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: Red Hills Station

Work Order #: 634691 **Project ID:**

Analyst: ARM **Date Prepared:** 08.21.2019 **Date Analyzed:** 08.22.2019

Lab Batch ID: 3099456 **Sample:** 7684697-1-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)	<15.0	1000	1090	109	1000	932	93	16	70-135	20	
Diesel Range Organics (DRO)	<25.0	1000	1080	108	1000	968	97	11	70-135	20	

Analyst: ARM **Date Prepared:** 08.21.2019 **Date Analyzed:** 08.22.2019

Lab Batch ID: 3099458 **Sample:** 7684703-1-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)	<15.0	1000	958	96	1000	937	94	2	70-135	20	
Diesel Range Organics (DRO)	<25.0	1000	999	100	1000	968	97	3	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: Red Hills Station

Work Order # : 634691 **Project ID:**

Lab Batch ID: 3099591 **QC- Sample ID:** 634691-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.24.2019 **Date Prepared:** 08.22.2019 **Analyst:** KTL

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	0.0373	37	0.0994	0.0489	49	27	70-130	35	X
Toluene	<0.000455	0.0998	0.0300	30	0.0994	0.0411	41	31	70-130	35	X
Ethylbenzene	<0.000564	0.0998	0.0266	27	0.0994	0.0375	38	34	70-130	35	X
m_p-Xylenes	<0.00101	0.200	0.0606	30	0.199	0.0722	36	17	70-130	35	X
o-Xylene	<0.000344	0.0998	0.0293	29	0.0994	0.0420	42	36	70-130	35	XF

Lab Batch ID: 3099903 **QC- Sample ID:** 634691-023 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.23.2019 **Date Prepared:** 08.22.2019 **Analyst:** KTL

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	<0.000383	0.0996	0.0614	62	0.100	0.0305	31	67	70-130	35	XF
Toluene	<0.000454	0.0996	0.0464	47	0.100	0.0206	21	77	70-130	35	XF
Ethylbenzene	<0.000563	0.0996	0.0330	33	0.100	0.0133	13	85	70-130	35	XF
m_p-Xylenes	<0.00101	0.199	0.0605	30	0.200	0.0239	12	87	70-130	35	XF
o-Xylene	<0.000343	0.0996	0.0325	33	0.100	0.0128	13	87	70-130	35	XF

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: Red Hills Station

Work Order # : 634691 **Project ID:**

Lab Batch ID: 3099237 **QC- Sample ID:** 634554-009 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.21.2019 **Date Prepared:** 08.21.2019 **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	1.01	250	252	100	250	251	100	0	90-110	20	

Lab Batch ID: 3099237 **QC- Sample ID:** 634653-024 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.21.2019 **Date Prepared:** 08.21.2019 **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	<0.858	250	280	112	250	264	106	6	90-110	20	X

Lab Batch ID: 3099367 **QC- Sample ID:** 634691-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.22.2019 **Date Prepared:** 08.21.2019 **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	366	249	592	91	249	590	90	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: Red Hills Station

Work Order # : 634691 **Project ID:**

Lab Batch ID: 3099367 **QC- Sample ID:** 634691-012 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.22.2019 **Date Prepared:** 08.21.2019 **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	5.70	248	246	97	248	247	97	0	90-110	20	

Lab Batch ID: 3099368 **QC- Sample ID:** 634691-022 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.22.2019 **Date Prepared:** 08.21.2019 **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	5.73	248	254	100	248	254	100	0	90-110	20	

Lab Batch ID: 3099368 **QC- Sample ID:** 634691-032 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.22.2019 **Date Prepared:** 08.21.2019 **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	8.13	253	298	115	253	297	114	0	90-110	20	X

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: Red Hills Station

Work Order # : 634691 **Project ID:**

Lab Batch ID: 3099456 **QC- Sample ID:** 634691-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.22.2019 **Date Prepared:** 08.21.2019 **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)	<15.0	997	941	94	996	990	99	5	70-135	20	
Diesel Range Organics (DRO)	175	997	1080	91	996	1140	97	5	70-135	20	

Lab Batch ID: 3099458 **QC- Sample ID:** 634691-021 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08.22.2019 **Date Prepared:** 08.21.2019 **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)	<14.9	996	1220	122	997	1050	105	15	70-135	20	
Diesel Range Organics (DRO)	141	996	1330	119	997	1220	108	9	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.

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San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
www.xenco.com

Phoenix, Arizona (480-355-0900)

Xenco Job # ~~634687~~ 634691 BT

Client / Reporting Information	Project Information
Company Name / Branch: Tasman Geosciences, LLC	Project Name/Number: Red Hills Station
Company Address: 2620 W Marland Bld. Hobbs, NM 8820	Project Location: Lea County, NM
Email: zconder@tasman-geo.com Phone No: 806-724-5943	Invoice To: PAALP C/O Amber Groves
Project Contact: Zach Conder	Invoice:
Samplers's Name: BD	

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

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015 M Ext	Chloride SM 4500	BTEX 8021B	RCI	TCLP RCRA8	NORM	Paint Filter	TCLP Benzene			Field Comments
1	FL-1@6"	6"	8/16/19		S																				
2	FL-2@6"														X	X	X								
3	FL-3@6"																								
4	FL-4@6"																								
5	FL-5@6"																								
6	FL-6@6"																								
7	FL-7@6"																								
8	FL-8@6"																								
9	FL-9@6"																								
10	FL-10@6"																								
11	FL-11@6"																								
12	FL-12@6"																								

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

Please email results to: zconder@tasman-geo.com
bgriffin@tasman-geo.com algroves@paalp.com
SylviaReynolds@DeanDiss.com bdennis@tasman-geo.com

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	8/20/19 14:04	1 Brittany Cox	2 Brittany Cox	8/20/19 12:56	[signature] 8/21/19
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: Y; Cooler Temp.: 0.5/0.3; Thermo. Corr. Factor; 1054
5		5			

Notice: 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 loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

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Page 2 of 4

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Midland, Texas (432-704-5251)
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Phoenix, Arizona (480-355-0900)

Xenco Job # ~~634687~~ 634691 BS

Client / Reporting Information
Company Name / Branch: Tasman Geosciences, LLC
Company Address: 2620 W Marland Bld. Hobbs, NM 8820
Email: zconder@tasman-geo.com
Phone No: 806-724-5943
Project Contact: Zach Conder
Samplers's Name: SD

Project Information
Project Name/Number: Red Hills Station
Project Location: Lea County, NM
Invoice To: PAALP C/O Amber Groves
Invoice:

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

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015 M Ext	Chloride SM 4500	BTEX 8021B	RCI	TCLP RCRA8	NORM	Paint Filter	TCLP Benzene	Field Comments
1	FL-13 @ 6"	6"	8/16/19		S																		
2	FL-14 @ 6"														X	X	X						
3	FL-15 @ 6"																						
4	FL-16 @ 6"																						
5	FL-17 @ 6"																						
6	FL-18 @ 6"																						
7	FL-19 @ 6"																						
8	FL-20 @ 6"																						
9	FL-21 @ 1'	1'																					
10	FL-22 @ 2'	2'																					
11	FL-23 @ 6"	6"																					
12	FL-24 @ 6"	6"																					

Turnaround Time (Business days)
- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information
- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:
Please email results to: zconder@tasman-geo.com, bgriffin@tasman-geo.com, algroves@paalp.com, bdennis@tasman-geo.com

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1 Relinquished by Sampler: [signature]	8/20/19 14:04	1 Brittany Cox	2 Brittany Cox	8-20-19 2:00	2 [signature] 8/21/19
3 Relinquished by:	Date Time:	3 Received By:	4 Relinquished By:	Date Time:	4 Received By:
5 Relinquished by:	Date Time:	5 Received By:	Custody Seal #	Preserved where applicable	On Ice: X; Cooler Temp.: 0.5/0.3; Thermo. Corr. Factor: 1054

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 loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.


4008 N GRIMES
HOBBS, NM 88240
UNITED STATES US
BILL RECIPIENT
TO XENCO LABORATORIES HOLD FOR PICK UP
FEDEX EXPRESS SHIP CENTER
FEDEX SHIP CENTER
3600 COUNTY RD 1276 S
MIDLAND TX 79711
(432) 563-1800
REF:
DEPT:
INV:
PO:
FedEx
Express
WED - 21 AUG HOLD
STANDARD OVERNIGHT
HLD
TRK# 0201 4705 2521 5460
MAFA
TX-US LBB
41 MAFA

Analytical Report 637816

for

Tasman Geosciences, LLC

Project Manager: Zach Conder

Red Hills Station

10.03.2019

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

10.03.2019

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

Reference: XENCO Report No(s): **637816**
Red Hills Station
Project Address: Lea County, NM

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) 637816. 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. 637816 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

A Small Business and Minority Company

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

Sample Cross Reference 637816

Tasman Geosciences, LLC, Hobbs, NM

Red Hills Station

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FL-3b	S	09.19.2019 00:00	6 In	637816-001
FL-4b	S	09.19.2019 00:00	6 In	637816-002
FL-6b	S	09.19.2019 00:00	6 In	637816-003
FL-10b	S	09.19.2019 00:00	6 In	637816-004
FL-15b	S	09.19.2019 00:00	6 In	637816-005
FL-25b	S	09.19.2019 00:00	6 In	637816-006
FL-27b	S	09.19.2019 00:00	6 In	637816-007
FL-29b	S	09.19.2019 00:00	1 ft	637816-008
FL-31b	S	09.19.2019 00:00	1 ft	637816-009
FL-34b	S	09.19.2019 00:00	6 In	637816-010
FL-36b	S	09.19.2019 00:00	6 In	637816-011

CASE NARRATIVE

Client Name: Tasman Geosciences, LLC

Project Name: Red Hills Station

Project ID:
Work Order Number(s): *637816*

Report Date: *10.03.2019*
Date Received: *09.24.2019*

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:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3102642 BTEX by EPA 8021

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Samples affected are: 7686825-1-BKS,637816-001 S,637816-001 SD,637816-005,637816-006,637816-007,637816-008,637816-009,637816-011,637816-002,637816-001,637816-004.

Benzene, Ethylbenzene, Toluene, m_p-Xylenes , o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 637816-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011

Lab Sample ID 637816-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene, Toluene, m_p-Xylenes , o-Xylene recovered below QC limits in the Matrix Spike.
Ethylbenzene 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: 637816-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits, therefore the data was accepted.

CASE NARRATIVE

Client Name: Tasman Geosciences, LLC

Project Name: Red Hills Station

Project ID:
Work Order Number(s): *637816*

Report Date: *10.03.2019*
Date Received: *09.24.2019*

Batch: LBA-3103171 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 637816-001 S,637816-001 SD,637816-007.
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 637816-006,637816-005,637816-007,637816-002.

Outlier/s are due to possible matrix interference.

Lab Sample ID 637816-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Diesel Range Organics (DRO) Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.
Samples in the analytical batch are: 637816-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011

Certificate of Analytical Results
637816
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **FL-3b** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 637816-001 Date Collected: 09.19.2019 00:00 Date Received: 09.24.2019 12:15

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3102369 Date Prep: 09.24.2019 16:10

Prep seq: 7686784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**58.1**	4.95	0.850	mg/kg	09.24.2019 22:44		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.02.2019 20:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	**214**	50.0	15.0	mg/kg	10.02.2019 20:15	F	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**57.6**	50.0	15.0	mg/kg	10.02.2019 20:15		1
Total TPH	PHC635	**272**		15.0	mg/kg	10.02.2019 20:15		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	110	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3102642 Date Prep: 09.25.2019 10:15

Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	09.26.2019 07:16	UXF	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	09.26.2019 07:16	UXF	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	09.26.2019 07:16	UXXF	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	09.26.2019 07:16	UFX	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	09.26.2019 07:16	UXF	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	09.26.2019 07:16	U	
Total BTEX		<0.000342		0.000342	mg/kg	09.26.2019 07:16	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	131	70 - 130	%		**

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Red Hills Station

Sample Id: **FL-4b** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 637816-002 Date Collected: 09.19.2019 00:00 Date Received: 09.24.2019 12:15

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3102369 Date Prep: 09.24.2019 16:10

Prep seq: 7686784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**74.5**	4.97	0.853	mg/kg	09.25.2019 00:59		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.02.2019 21:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1040**	50.0	15.0	mg/kg	10.02.2019 21:13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**178**	50.0	15.0	mg/kg	10.02.2019 21:13		1
Total TPH	PHC635	**1220**		15.0	mg/kg	10.02.2019 21:13		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	119	70 - 135	%		
o-Terphenyl	140	70 - 135	%		**

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3102642 Date Prep: 09.25.2019 10:15

Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	09.26.2019 07:37	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	09.26.2019 07:37	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	09.26.2019 07:37	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	09.26.2019 07:37	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	09.26.2019 07:37	U	1
Xylenes, Total	1330-20-7	<0.000343		0.000343	mg/kg	09.26.2019 07:37	U	
Total BTEX		<0.000343		0.000343	mg/kg	09.26.2019 07:37	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	138	70 - 130	%		**

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Red Hills Station

Sample Id: **FL-6b** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 637816-003 Date Collected: 09.19.2019 00:00 Date Received: 09.24.2019 12:15

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3102369 Date Prep: 09.24.2019 16:10

Prep seq: 7686784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**3.31**	5.02	0.862	mg/kg	09.25.2019 01:21	J	1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.02.2019 21:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	**189**	50.0	15.0	mg/kg	10.02.2019 21:33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**30.2**	50.0	15.0	mg/kg	10.02.2019 21:33	J	1
Total TPH	PHC635	**219**		15.0	mg/kg	10.02.2019 21:33		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	120	70 - 135	%		
o-Terphenyl	123	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3102642 Date Prep: 09.25.2019 10:15

Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	09.26.2019 07:57	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	09.26.2019 07:57	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	09.26.2019 07:57	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	09.26.2019 07:57	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	09.26.2019 07:57	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	09.26.2019 07:57	U	
Total BTEX		<0.000344		0.000344	mg/kg	09.26.2019 07:57	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	70 - 130	%		
4-Bromofluorobenzene	101	70 - 130	%		

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Sample Id: **FL-10b** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 637816-004 Date Collected: 09.19.2019 00:00 Date Received: 09.24.2019 12:15

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3102369 Date Prep: 09.24.2019 16:10

Prep seq: 7686784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**17.8**	5.00	0.858	mg/kg	09.25.2019 01:29		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.02.2019 21:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**175**	50.0	15.0	mg/kg	10.02.2019 21:52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**27.9**	50.0	15.0	mg/kg	10.02.2019 21:52	J	1
Total TPH	PHC635	**203**		15.0	mg/kg	10.02.2019 21:52		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	120	70 - 135	%		
o-Terphenyl	126	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3102642 Date Prep: 09.25.2019 10:15

Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	09.26.2019 08:17	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	09.26.2019 08:17	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	09.26.2019 08:17	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	09.26.2019 08:17	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	09.26.2019 08:17	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	09.26.2019 08:17	U	
Total BTEX		<0.000342		0.000342	mg/kg	09.26.2019 08:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	145	70 - 130	%		**

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Sample Id: **FL-15b** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 637816-005 Date Collected: 09.19.2019 00:00 Date Received: 09.24.2019 12:15

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3102369 Date Prep: 09.24.2019 16:10

Prep seq: 7686784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**8.50**	5.04	0.865	mg/kg	09.25.2019 01:36		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.02.2019 22:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	**812**	50.0	15.0	mg/kg	10.02.2019 22:11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**116**	50.0	15.0	mg/kg	10.02.2019 22:11		1
Total TPH	PHC635	**928**		15.0	mg/kg	10.02.2019 22:11		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	114	70 - 135	%		
o-Terphenyl	138	70 - 135	%		**

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3102642 Date Prep: 09.25.2019 10:15

Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	09.26.2019 08:37	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	09.26.2019 08:37	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	09.26.2019 08:37	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	09.26.2019 08:37	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	09.26.2019 08:37	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	09.26.2019 08:37	U	
Total BTEX		<0.000342		0.000342	mg/kg	09.26.2019 08:37	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	145	70 - 130	%		**

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Sample Id: **FL-25b** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 637816-006 Date Collected: 09.19.2019 00:00 Date Received: 09.24.2019 12:15

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3102369 Date Prep: 09.24.2019 16:10

Prep seq: 7686784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**6.10**	4.99	0.857	mg/kg	09.25.2019 01:44		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.02.2019 22:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	**239**	50.0	15.0	mg/kg	10.02.2019 22:30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**29.5**	50.0	15.0	mg/kg	10.02.2019 22:30	J	1
Total TPH	PHC635	**269**		15.0	mg/kg	10.02.2019 22:30		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	131	70 - 135	%		
o-Terphenyl	137	70 - 135	%		**

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3102642 Date Prep: 09.25.2019 10:15

Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	09.26.2019 08:57	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	09.26.2019 08:57	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	09.26.2019 08:57	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	09.26.2019 08:57	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	09.26.2019 08:57	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	09.26.2019 08:57	U	
Total BTEX		<0.000342		0.000342	mg/kg	09.26.2019 08:57	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	92	70 - 130	%		
4-Bromofluorobenzene	144	70 - 130	%		**

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Red Hills Station

Sample Id: **FL-27b** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 637816-007 Date Collected: 09.19.2019 00:00 Date Received: 09.24.2019 12:15

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3102369 Date Prep: 09.24.2019 16:10

Prep seq: 7686784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**6.22**	5.05	0.867	mg/kg	09.25.2019 01:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.02.2019 22:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	**64.8**	50.0	15.0	mg/kg	10.02.2019 22:50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	10.02.2019 22:50	U	1
Total TPH	PHC635	**64.8**		15.0	mg/kg	10.02.2019 22:50		

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

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3102642 Date Prep: 09.25.2019 10:15

Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	09.26.2019 09:17	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	09.26.2019 09:17	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	09.26.2019 09:17	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	09.26.2019 09:17	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	09.26.2019 09:17	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	09.26.2019 09:17	U	
Total BTEX		<0.000342		0.000342	mg/kg	09.26.2019 09:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	138	70 - 130	%		**

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Red Hills Station

Sample Id: **FL-29b** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 637816-008 Date Collected: 09.19.2019 00:00 Date Received: 09.24.2019 12:15

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3102369 Date Prep: 09.24.2019 16:10

Prep seq: 7686784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**10.7**	5.05	0.867	mg/kg	09.25.2019 01:59		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.02.2019 23:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	**748**	50.0	15.0	mg/kg	10.02.2019 23:09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**142**	50.0	15.0	mg/kg	10.02.2019 23:09		1
Total TPH	PHC635	**890**		15.0	mg/kg	10.02.2019 23:09		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	115	70 - 135	%		
o-Terphenyl	126	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3102642 Date Prep: 09.25.2019 10:15

Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	09.26.2019 09:37	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	09.26.2019 09:37	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	09.26.2019 09:37	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	09.26.2019 09:37	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	09.26.2019 09:37	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	09.26.2019 09:37	U	
Total BTEX		<0.000344		0.000344	mg/kg	09.26.2019 09:37	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	133	70 - 130	%		**

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Red Hills Station

Sample Id: **FL-31b** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 637816-009 Date Collected: 09.19.2019 00:00 Date Received: 09.24.2019 12:15

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3102369 Date Prep: 09.24.2019 16:10

Prep seq: 7686784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**19.9**	4.97	0.853	mg/kg	09.25.2019 02:06		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.02.2019 23:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	**188**	50.0	15.0	mg/kg	10.02.2019 23:28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**27.8**	50.0	15.0	mg/kg	10.02.2019 23:28	J	1
Total TPH	PHC635	**216**		15.0	mg/kg	10.02.2019 23:28		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	118	70 - 135	%		
o-Terphenyl	119	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3102642 Date Prep: 09.25.2019 10:15

Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	09.26.2019 09:58	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	09.26.2019 09:58	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	09.26.2019 09:58	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	09.26.2019 09:58	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	09.26.2019 09:58	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	09.26.2019 09:58	U	
Total BTEX		<0.000344		0.000344	mg/kg	09.26.2019 09:58	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	139	70 - 130	%		**

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Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **FL-34b** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 637816-010 Date Collected: 09.19.2019 00:00 Date Received: 09.24.2019 12:15

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3102565 Date Prep: 09.25.2019 11:00

Prep seq: 7686832

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**9.58**	5.00	0.858	mg/kg	09.25.2019 11:24		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.02.2019 23:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	**54.0**	50.0	15.0	mg/kg	10.02.2019 23:47		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	10.02.2019 23:47	U	1
Total TPH	PHC635	**54.0**		15.0	mg/kg	10.02.2019 23:47		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	127	70 - 135	%		
o-Terphenyl	125	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3102642 Date Prep: 09.25.2019 10:15

Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000381	0.00198	0.000381	mg/kg	09.26.2019 11:16	U	1
Toluene	108-88-3	<0.000451	0.00198	0.000451	mg/kg	09.26.2019 11:16	U	1
Ethylbenzene	100-41-4	<0.000559	0.00198	0.000559	mg/kg	09.26.2019 11:16	U	1
m_p-Xylenes	179601-23-1	<0.00100	0.00396	0.00100	mg/kg	09.26.2019 11:16	U	1
o-Xylene	95-47-6	<0.000341	0.00198	0.000341	mg/kg	09.26.2019 11:16	U	1
Xylenes, Total	1330-20-7	<0.000341		0.000341	mg/kg	09.26.2019 11:16	U	
Total BTEX		<0.000341		0.000341	mg/kg	09.26.2019 11:16	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	91	70 - 130	%		
4-Bromofluorobenzene	127	70 - 130	%		

Certificate of Analytical Results
637816
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **FL-36b** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 637816-011 Date Collected: 09.19.2019 00:00 Date Received: 09.24.2019 12:15

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

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3102565 Date Prep: 09.25.2019 11:00

Prep seq: 7686832

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**13.3**	5.02	0.862	mg/kg	09.25.2019 11:43		1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.03.2019 00:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	**49.4**	50.0	15.0	mg/kg	10.03.2019 00:25	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	10.03.2019 00:25	U	1
Total TPH	PHC635	**49.4**		15.0	mg/kg	10.03.2019 00:25	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	120	70 - 135	%		
o-Terphenyl	119	70 - 135	%		

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

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3102642 Date Prep: 09.25.2019 10:15

Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	09.26.2019 11:36	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	09.26.2019 11:36	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	09.26.2019 11:36	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	09.26.2019 11:36	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	09.26.2019 11:36	U	1
Xylenes, Total	1330-20-7	<0.000342		0.000342	mg/kg	09.26.2019 11:36	U	
Total BTEX		<0.000342		0.000342	mg/kg	09.26.2019 11:36	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	131	70 - 130	%		**

Certificate of Analytical Results
637816
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **7686784-1-BLK** Matrix: Solid Sample Depth:
Lab Sample Id: 7686784-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: CHE % Moist: Tech: CHE
Seq Number: 3102369 Date Prep: 09.24.2019 16:10
Prep seq: 7686784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	09.24.2019 22:22	U	1

Sample Id: **7686825-1-BLK** Matrix: Solid Sample Depth:
Lab Sample Id: 7686825-1-BLK Date Collected: Date Received:
Analytical Method: BTEX by EPA 8021 Prep Method: 5030B
Analyst: KTL % Moist: Tech: KTL
Seq Number: 3102642 Date Prep: 09.25.2019 10:15
Prep seq: 7686825

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	09.26.2019 06:36	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	09.26.2019 06:36	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	09.26.2019 06:36	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	09.26.2019 06:36	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	09.26.2019 06:36	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	09.26.2019 06:36	U	
Total BTEX		<0.000344		0.000344	mg/kg	09.26.2019 06:36	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	89	70 - 130	%		
4-Bromofluorobenzene	124	70 - 130	%		

Sample Id: **7686832-1-BLK** Matrix: Solid Sample Depth:
Lab Sample Id: 7686832-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: CHE % Moist: Tech: CHE
Seq Number: 3102565 Date Prep: 09.25.2019 11:00
Prep seq: 7686832

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	09.25.2019 11:04	U	1

Certificate of Analytical Results
637816
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **7687145-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7687145-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3103171 Date Prep: 09.27.2019 13:00

Prep seq: 7687145

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	10.02.2019 19:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	10.02.2019 19:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	10.02.2019 19:16	U	1
Total TPH	PHC635	<15.0		15.0	mg/kg	10.02.2019 19:16	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	91	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: Red Hills Station

Work Orders : 637816 **Project ID:**

Lab Batch #: 3102642 **Sample:** 7686825-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09.26.2019 03:32 **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	0.0400	0.0300	133	70-130	**

Lab Batch #: 3102642 **Sample:** 7686825-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09.26.2019 04:55 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	70-130	
4-Bromofluorobenzene	0.0367	0.0300	122	70-130	

Lab Batch #: 3102642 **Sample:** 637816-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09.26.2019 05:36 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	70-130	
4-Bromofluorobenzene	0.0406	0.0300	135	70-130	**

Lab Batch #: 3102642 **Sample:** 637816-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09.26.2019 05:56 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	70-130	
4-Bromofluorobenzene	0.0437	0.0300	146	70-130	**

Lab Batch #: 3102642 **Sample:** 7686825-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09.26.2019 06:36 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	70-130	
4-Bromofluorobenzene	0.0372	0.0300	124	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: Red Hills Station

Work Orders : 637816 **Project ID:**

Lab Batch #: 3103171 **Sample:** 7687145-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.02.2019 19:16 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.3	100	88	70-135	
o-Terphenyl	45.4	50.0	91	70-135	

Lab Batch #: 3103171 **Sample:** 7687145-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.02.2019 19:36 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	50.4	50.0	101	70-135	

Lab Batch #: 3103171 **Sample:** 7687145-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.02.2019 19:55 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	51.6	50.0	103	70-135	

Lab Batch #: 3103171 **Sample:** 637816-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.02.2019 20:34 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	156	100	156	70-135	**
o-Terphenyl	50.4	50.0	101	70-135	

Lab Batch #: 3103171 **Sample:** 637816-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.02.2019 20:54 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	149	100	149	70-135	**
o-Terphenyl	58.8	50.0	118	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: Red Hills Station

Work Order #: 637816 **Project ID:**

Analyst: KTL **Date Prepared:** 09.25.2019 **Date Analyzed:** 09.26.2019

Lab Batch ID: 3102642 **Sample:** 7686825-1-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	<0.000385	0.100	0.107	107	0.100	0.104	104	3	70-130	35	
Toluene	<0.000456	0.100	0.105	105	0.100	0.104	104	1	70-130	35	
Ethylbenzene	<0.000565	0.100	0.122	122	0.100	0.124	124	2	70-130	35	
m_p-Xylenes	<0.00101	0.200	0.254	127	0.200	0.257	129	1	70-130	35	
o-Xylene	<0.000344	0.100	0.127	127	0.100	0.122	122	4	70-130	35	

Analyst: CHE **Date Prepared:** 09.24.2019 **Date Analyzed:** 09.24.2019

Lab Batch ID: 3102369 **Sample:** 7686784-1-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	248	99	250	247	99	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: Red Hills Station

Work Order #: 637816 **Project ID:**

Analyst: CHE **Date Prepared:** 09.25.2019 **Date Analyzed:** 09.25.2019

Lab Batch ID: 3102565 **Sample:** 7686832-1-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	263	105	250	263	105	0	90-110	20	

Analyst: DVM **Date Prepared:** 09.27.2019 **Date Analyzed:** 10.02.2019

Lab Batch ID: 3103171 **Sample:** 7687145-1-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)	<15.0	1000	1020	102	1000	1050	105	3	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	914	91	1000	950	95	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: Red Hills Station

Work Order # : 637816 **Project ID:**

Lab Batch ID: 3102642 **QC- Sample ID:** 637816-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09.26.2019 **Date Prepared:** 09.25.2019 **Analyst:** KTL

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	<0.000388	0.101	0.0495	49	0.100	0.110	110	76	70-130	35	XF
Toluene	<0.000459	0.101	0.0247	24	0.100	0.0988	99	120	70-130	35	XF
Ethylbenzene	<0.000569	0.101	0.00500	5	0.100	0.0606	61	170	70-130	35	XF
m_p-Xylenes	<0.00102	0.202	0.0538	27	0.201	0.241	120	127	70-130	35	XF
o-Xylene	<0.000347	0.101	0.0295	29	0.100	0.121	121	122	70-130	35	XF

Lab Batch ID: 3102369 **QC- Sample ID:** 637497-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09.25.2019 **Date Prepared:** 09.24.2019 **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	380	252	617	94	252	616	94	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: Red Hills Station

Work Order # : 637816 **Project ID:**

Lab Batch ID: 3102369 **QC- Sample ID:** 637816-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09.24.2019 **Date Prepared:** 09.24.2019 **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	58.1	248	292	94	248	292	94	0	90-110	20	

Lab Batch ID: 3102565 **QC- Sample ID:** 637816-010 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09.25.2019 **Date Prepared:** 09.25.2019 **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	9.58	250	276	107	250	275	106	0	90-110	20	

Lab Batch ID: 3102565 **QC- Sample ID:** 637843-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09.25.2019 **Date Prepared:** 09.25.2019 **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	1160	253	1360	79	253	1350	75	1	90-110	20	X

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: Red Hills Station

Work Order # : 637816 **Project ID:**

Lab Batch ID: 3103171 **QC- Sample ID:** 637816-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10.02.2019 **Date Prepared:** 09.27.2019 **Analyst:** DVM

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)	<15.0	1000	1010	101	1000	1200	120	17	70-135	20	
Diesel Range Organics (DRO)	214	1000	968	75	1000	1190	98	21	70-135	20	F

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

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
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Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Job # 605781C

Client / Reporting Information

Company Name / Branch: Tasman Geosciences, LLC
Company Address: 2620 W Marland Bld. Hobbs, NM 8820
Email: zconder@tasman-geo.com
Phone No: 806-724-5943
Project Contact: Zach Conder
Samplers's Name: B. Dennis

Project Information

Project Name/Number: Red Hills Station
Project Location: Lea County, NM
Invoice To: PAALP C/O Amber Groves
Invoice:

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Preserved: HCl	Preserved: NaOH/Zn Acetate	Preserved: HNO3	Preserved: H2SO4	Preserved: NaOH	Preserved: NaHSO4	Preserved: MEOH	Preserved: NONE	Analytical: TPH 8015 M Ext	Analytical: Chloride SM 4500	Analytical: BTEX 8021B	Analytical: RCI	Analytical: TCLP RCRA8	Analytical: NORM	Analytical: Paint Filter	Analytical: TCLP Benzene	Field Comments
1	FL-3b	6"	9/19/2019		S	1									X	X	X						
2	FL-4b	6"	9/19/2019		S	1									X	X	X						
3	FL-6b	6"	9/19/2019		S	1									X	X	X						
4	FL-10b	6"	9/19/2019		S	1									X	X	X						
5	FL-15b	6"	9/19/2019		S	1									X	X	X						
6	FL-25b	6"	9/19/2019		S	1									X	X	X						
7	FL-27b	6"	9/19/2019		S	1									X	X	X						
8	FL-29b	1'	9/19/2019		S	1									X	X	X						
9	FL-31b	1'	9/19/2019		S	1									X	X	X						
10	FL-34b	6"	9/19/2019		S	1									X	X	X						
11	FL-36b	6"	9/19/2019		S	1									X	X	X						
12																							

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [X] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

Please email results to: zconder@tasman-geo.com
algroves@paalp.com
bdennis@tasman-geo.com

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler: 1	Date Time: 9/23/19 0940	Received By: 1 Brittany Cox	Relinquished By: 2 Brittany Cox	Date Time: 9/23/19 10:00	Received By: 2 9/24/19
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4 1215
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: Y Cooler Temp. -0.5 Thermo. Corr. Factor

Notice: 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 loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

ORIGIN ID:HOBA (575) 392-7550
MAIL SERVICES ETC, LLC
**
4008 N GRIMES
HOBBS, NM 88240
UNITED STATES US

BILL RECIPIENT

ACTWGT: 24.0
CAD: 9093928/CAFE3211
DIMS: 20x15x12 IN

TO XENCO LABORATORIES HOLD FOR PICK UP
FEDEX EXPRESS SHIP CENTER
FEDEX EXPRESS SHIP CENTER
3600 COUNTY ROAD 1276 SOUTH

MIDLAND TX 79711
(432) 563-1800

REF:
INV:
PO:
DEPT:

551C1/9D04/184C

FedEx Express

J181111806050101uv

TUE - 24 SEP HOLD
PRIORITY OVERNIGHT
HLD

MAFA
LBB
TX-US

4.1 MAFA

TRK# 4705 2521 7933
0201

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tasman Geosciences, LLC

Date/ Time Received: 09.24.2019 12.15.00 PM

Work Order #: 637816

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**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: 09.24.2019
Brianna Teel

Checklist reviewed by: Date: 09.26.2019
John Builes

Analytical Report 639679

for

Tasman Geosciences, LLC

Project Manager: Zach Conder

Red Hills Station

10.17.2019

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

10.17.2019

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

Reference: XENCO Report No(s): **639679**
Red Hills Station
Project Address: Lea County, NM

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) 639679. 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. 639679 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

A Small Business and Minority Company

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

Sample Cross Reference 639679

Tasman Geosciences, LLC, Hobbs, NM

Red Hills Station

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FL-4c @1'	S	10.10.2019 15:00		639679-001

CASE NARRATIVE

Client Name: Tasman Geosciences, LLC

Project Name: Red Hills Station

Project ID:
Work Order Number(s): *639679*

Report Date: *10.17.2019*
Date Received: *10.10.2019*

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:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3104132 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results
639679
Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **FL-4c @1'** Matrix: Soil Sample Depth:

Lab Sample Id: 639679-001 Date Collected: 10.10.2019 15:00 Date Received: 10.10.2019 16:30

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

Analyst: RNL % Moist: Tech: RNL

Seq Number: 3104159 Date Prep: 10.11.2019 10:15

Prep seq: 7688023

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**14.8**	25.0	0.572	mg/kg	10.14.2019 10:51	J	1

Analytical Method: TPH by SW8015 Mod Prep Method: 8015

Analyst: ISU % Moist: Tech: ISU

Seq Number: 3104485 Date Prep: 10.15.2019 11:33

Subcontractor: SUB: T104704215-19-30 Prep seq: 7688086

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**10.9**	49.6	9.92	mg/kg	10.15.2019 20:38	J	1
Diesel Range Organics (DRO)	C10C28DRO	**50.1**	49.6	9.92	mg/kg	10.15.2019 20:38		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.92	49.6	9.92	mg/kg	10.15.2019 20:38	U	1
Total TPH	PHC635	**61.0**		9.92	mg/kg	10.15.2019 20:38		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	109	70 - 135	%		

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

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3104132 Date Prep: 10.11.2019 10:40

Prep seq: 7687946

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00904	0.0200	0.00904	mg/kg	10.12.2019 03:17	U	20
Toluene	108-88-3	<0.00468	0.0200	0.00468	mg/kg	10.12.2019 03:17	U	20
Ethylbenzene	100-41-4	<0.00616	0.0200	0.00616	mg/kg	10.12.2019 03:17	U	20
m_p-Xylenes	179601-23-1	**0.0100**	0.0400	0.00682	mg/kg	10.12.2019 03:17	J	20
o-Xylene	95-47-6	<0.00682	0.0200	0.00682	mg/kg	10.12.2019 03:17	U	20
Xylenes, Total	1330-20-7	**0.0100**		0.00682	mg/kg	10.12.2019 03:17	J	
Total BTEX		**0.0100**		0.00468	mg/kg	10.12.2019 03:17	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	68	68 - 120	%		
a,a,a-Trifluorotoluene	79	71 - 121	%		

Certificate of Analytical Results
639679

Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id: **7687946-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7687946-1-BLK Date Collected: Date Received:

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

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3104132 Date Prep: 10.11.2019 10:40

Prep seq: 7687946

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00904	0.0200	0.00904	mg/kg	10.12.2019 01:17	U	20
Toluene	108-88-3	<0.00468	0.0200	0.00468	mg/kg	10.12.2019 01:17	U	20
Ethylbenzene	100-41-4	<0.00616	0.0200	0.00616	mg/kg	10.12.2019 01:17	U	20
m_p-Xylenes	179601-23-1	<0.00682	0.0400	0.00682	mg/kg	10.12.2019 01:17	U	20
o-Xylene	95-47-6	<0.00682	0.0200	0.00682	mg/kg	10.12.2019 01:17	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	83	68 - 120	%		
a,a,a-Trifluorotoluene	91	71 - 121	%		

Sample Id: **7688023-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7688023-1-BLK Date Collected: Date Received:

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

Analyst: RNL % Moist: Tech: RNL

Seq Number: 3104159 Date Prep: 10.11.2019 10:15

Prep seq: 7688023

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.572	25.0	0.572	mg/kg	10.14.2019 10:13	U	1

Certificate of Analytical Results
639679

Tasman Geosciences, LLC, Hobbs, NM
Red Hills Station

Sample Id:	**7688086-1-BLK**	Matrix:	Solid	Sample Depth:	
Lab Sample Id:	7688086-1-BLK	Date Collected:		Date Received:	
Analytical Method:	TPH by SW8015 Mod			Prep Method:	8015
Analyst:	ISU	% Moist:		Tech:	ISU
Seq Number:	3104485	Date Prep:	10.14.2019 15:05		
Subcontractor:	SUB: T104704215-19-30	Prep seq:	7688086		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.0	10.0	mg/kg	10.15.2019 10:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<10.0	50.0	10.0	mg/kg	10.15.2019 10:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.0	50.0	10.0	mg/kg	10.15.2019 10:55	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

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: Red Hills Station

Work Orders : 639679 **Project ID:**

Lab Batch #: 3104132 **Sample:** 7687946-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.11.2019 23:40 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0776	0.100	78	68-120	
a,a,a-Trifluorotoluene	1.68	2.00	84	71-121	

Lab Batch #: 3104132 **Sample:** 7687946-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.12.2019 00:04 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0793	0.100	79	68-120	
a,a,a-Trifluorotoluene	1.68	2.00	84	71-121	

Lab Batch #: 3104132 **Sample:** 7687946-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.12.2019 01:17 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0827	0.100	83	68-120	
a,a,a-Trifluorotoluene	1.81	2.00	91	71-121	

Lab Batch #: 3104132 **Sample:** 639685-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.12.2019 02:04 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0788	0.100	79	68-120	
a,a,a-Trifluorotoluene	1.83	2.00	92	71-121	

Lab Batch #: 3104132 **Sample:** 639685-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.12.2019 02:29 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0950	0.100	95	68-120	
a,a,a-Trifluorotoluene	2.06	2.00	103	71-121	

* 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: Red Hills Station

Work Orders : 639679 **Project ID:**

Lab Batch #: 3104485 **Sample:** 7688086-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.15.2019 10:55 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	100	98	70-135	
o-Terphenyl	50.2	50.0	100	70-135	

Lab Batch #: 3104485 **Sample:** 7688086-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.15.2019 17:49 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	100	99	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 3104485 **Sample:** 639761-021 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.15.2019 18:46 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	101	101	70-135	
o-Terphenyl	48.6	50.3	97	70-135	

Lab Batch #: 3104485 **Sample:** 639761-021 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.15.2019 19:05 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.7	100	99	70-135	
o-Terphenyl	46.8	50.1	93	70-135	

Lab Batch #: 3104485 **Sample:** 7688086-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.16.2019 12:34 **SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	54.9	50.0	110	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: Red Hills Station

Work Order #: 639679 **Project ID:**

Analyst: MIT **Date Prepared:** 10.11.2019 **Date Analyzed:** 10.11.2019

Lab Batch ID: 3104132 **Sample:** 7687946-1-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	<0.00904	2.00	1.76	88	2.00	1.74	87	1	55-120	20	
Toluene	<0.00468	2.00	1.78	89	2.00	1.71	86	4	77-120	20	
Ethylbenzene	<0.00616	2.00	1.89	95	2.00	1.83	92	3	77-120	20	
m_p-Xylenes	<0.00682	4.00	3.68	92	4.00	3.57	89	3	78-120	20	
o-Xylene	<0.00682	2.00	1.86	93	2.00	1.81	91	3	78-120	20	

Analyst: RNL **Date Prepared:** 10.11.2019 **Date Analyzed:** 10.14.2019

Lab Batch ID: 3104159 **Sample:** 7688023-1-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	<0.572	250	256	102	250	249	100	3	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: Red Hills Station

Work Order #: 639679 **Project ID:**

Analyst: ISU **Date Prepared:** 10.14.2019 **Date Analyzed:** 10.15.2019

Lab Batch ID: 3104485 **Sample:** 7688086-1-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)	<10.0	1000	1110	111	1000	1240	124	11	70-135	35	
Diesel Range Organics (DRO)	<10.0	1000	1150	115	1000	1250	125	8	70-135	35	

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

Form 3 - MS / MSD Recoveries

Project Name: Red Hills Station

Work Order # : 639679 **Project ID:**

Lab Batch ID: 3104132 **QC- Sample ID:** 639685-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10.12.2019 **Date Prepared:** 10.11.2019 **Analyst:** MIT

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	<0.00904	2.00	1.79	90	2.00	1.76	88	2	54-120	25	
Toluene	0.00600	2.00	1.78	89	2.00	1.79	89	1	57-120	25	
Ethylbenzene	<0.00616	2.00	1.78	89	2.00	1.91	96	7	58-131	25	
m_p-Xylenes	<0.00682	4.00	3.49	87	4.00	3.72	93	6	62-124	25	
o-Xylene	<0.00682	2.00	1.70	85	2.00	1.80	90	6	62-124	25	

Lab Batch ID: 3104159 **QC- Sample ID:** 639679-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10.14.2019 **Date Prepared:** 10.11.2019 **Analyst:** RNL

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	14.8	250	268	101	250	273	103	2	80-120	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: Red Hills Station

Work Order # : 639679 **Project ID:**

Lab Batch ID: 3104485 **QC- Sample ID:** 639761-021 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10.15.2019 **Date Prepared:** 10.14.2019 **Analyst:** ISU

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)	<10.1	1010	1130	112	1000	1090	109	4	70-135	35	
Diesel Range Organics (DRO)	<10.1	1010	1180	117	1000	1140	114	3	70-135	35	

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

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

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

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Job # 639679

Client / Reporting Information

Company Name / Branch: Tasman Geosciences, LLC
Company Address: 2620 W Marland Bld. Hobbs, NM 8820
Email: zconder@tasman-geo.com
Phone No: 806-724-5943
Project Contact: Zach Conder
Samplers's Name: B. Dennis

Project Information

Project Name/Number: Red Hills Station
Project Location: Lea County, NM
Invoice To: PAALP C/O Amber Groves
Invoice:

Matrix Codes

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

No.	Field ID / Point of Collection	Sample Depth (Collection)	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015 M Ext	Chloride SM 4500	BTEX 8021B	RCI	TCLP RCRA8	NORM	Paint Filter	TCLP Benzene			Field Comments
1	FL-4c @ 1'	1'	10/10/2019		S	1									X	X	X								
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

NAE

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] Contract TAT
- [x] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

Please email results to: zconder@tasman-geo.com
~~bgriffin@tasman-geo.com~~ algroves@paalp.com
Sylivia Reyndds @DeanDigs.com bdennis@tasman-geo.com

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler: [signature]	10-10-19 1615	1 [signature]	2		2
3 Relinquished by:	Date Time:	3 Received By:	4 Relinquished By:	Date Time:	4 Received By:
5 Relinquished by:	Date Time:	5 Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor: [illegible] 3.4 / 3.4

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 loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 49929

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

Sent By: Brenda Ward **Date Sent:** 10.11.2019 11.34 AM

Received By: Travis Simmons **Date Received:** 10.12.2019 09.45 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#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: Travis Simmons Date: 10.12.2019

Travis Simmons

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tasman Geosciences, LLC

Date/ Time Received: 10.10.2019 04.30.00 PM

Work Order #: 639679

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

Temperature Measuring device used : R4

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.4
#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)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 10.11.2019
Brenda Ward

Checklist reviewed by: Date: 10.11.2019
John Builes

Appendix C:
Photo Documentation

Plains Pipeline, LP
Red Hills Station
1RP-5648

Overspray Area scrapped to 0-6 in. bgs.

Overspray Area scrapped to 0-6 in. bgs.

Plains Pipeline, LP
Red Hills Station
1RP-5648

After Micro-Blaze Application

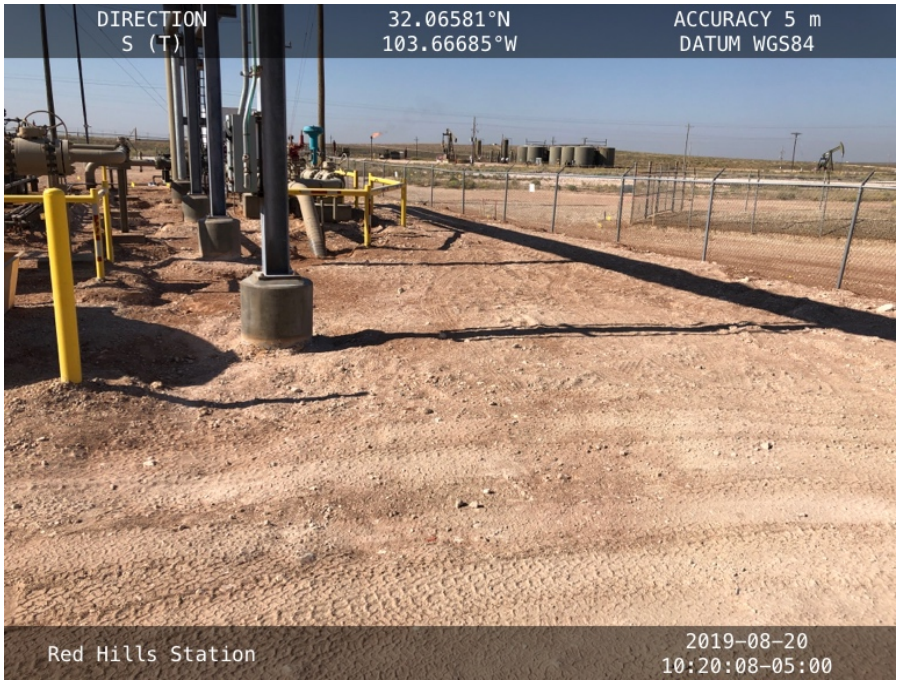
After Micro-Blaze Application

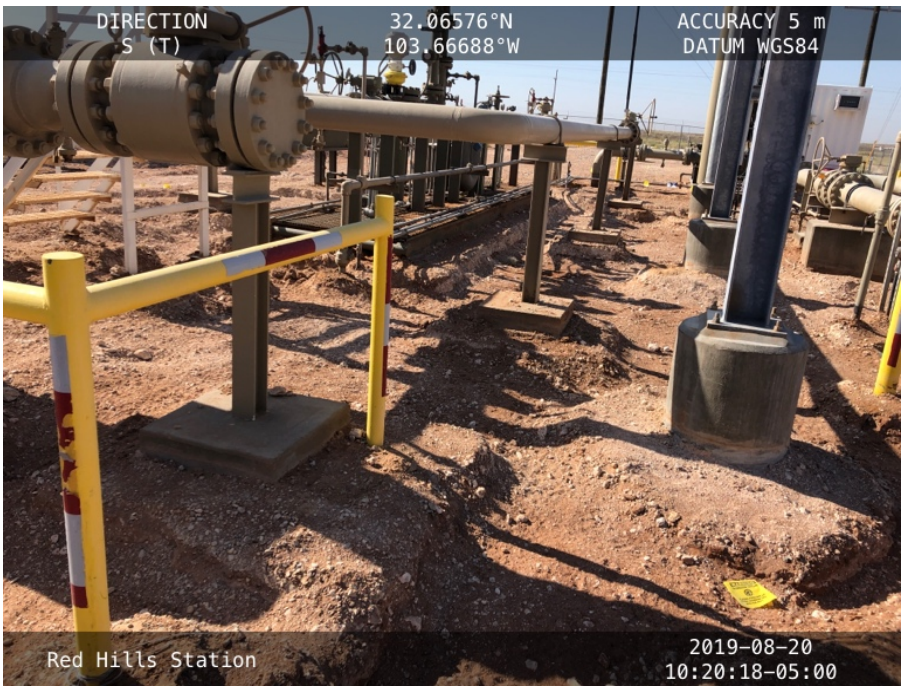
Plains Pipeline, LP
Red Hills Station
1RP-5648

Plains Pipeline, LP
Red Hills Station
1RP-5648

Plains Pipeline, LP
Red Hills Station
1RP-5648

Plains Pipeline, LP
Red Hills Station
1RP-5648





Plains Pipeline, LP
Red Hills Station
1RP-5648

Plains Pipeline, LP
Red Hills Station
1RP-5648

FL-27 Extended

FL-36 Extended

Plains Pipeline, LP
Red Hills Station
1RP-5648

FL-34 Extended

FL-25 Extended

Plains Pipeline, LP
Red Hills Station
1RP-5648

FL-10 Extended

FL-3 and FL-6 Extended

Plains Pipeline, LP
Red Hills Station
1RP-5648

FL-4 Extended

Backfilled Excavation – Facing West

Plains Pipeline, LP
Red Hills Station
1RP-5648

Backfilled Excavation – Facing North

Backfilled Excavation – Facing East

Plains Pipeline, LP
Red Hills Station
1RP-5648

Backfilled Excavation – Facing North

Backfilled Excavation – Facing West

Plains Pipeline, LP
Red Hills Station
1RP-5648

Backfilled Excavation – Facing South

Backfilled Excavation – Facing South

Plains Pipeline, LP
Red Hills Station
1RP-5648

Backfilled Excavation – Facing Southeast

Appendix D:
Initial C-141

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NRM1925327699
District RP	1RP-5648
Facility ID	fRM1925327165
Application ID	pRM1925255479

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 32.06577502 Longitude -103.66597233
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Red Hills Station	Site Type Facility
Date Release Discovered 7/26/2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
N	3	26S	32E	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) 32 bbls	Volume Recovered (bbls) 15 bbls
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Crude oil release as a result of a broken nipple on the incoming meter skid.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM1925327699
District RP	1RP-5648
Facility ID	fRM1925327165
Application ID	pRM1925255479

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? When and by what means (phone, email, etc)?
Voicemail to Dylan Rose-Coss on 7/26/2019 @ 11:51 AM by Amber Groves

Initial Response

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

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

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

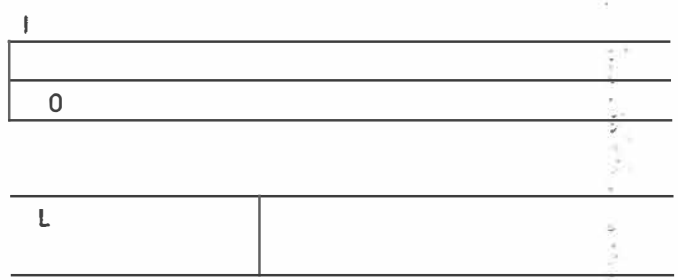
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see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

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

Printed Name: Amber Groves Title: Remediation Coordinator
Signature: Amber Groves Date: 7/30/2019
email: algroves@paalp.com Telephone: 575-200-5577

OCD Only

Received by: Ramona Marcus Date: 9/10/2019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