SITE INFORMATION

Report Type: Work Plan 1RP-3231 / NTO1422438684

General Site Information:						
Site:	**MCA 1-A Header Release**					
Company:	**ConocoPhillips**					
Section, Township and Range	**Unit Letter G**	**Sec. 30**	**T 17S**	**R 32 E**		
Lease Number:	**Associated API No. 30-025-06115**					
County:	**Lea**					
GPS:	**32.806853°**			**-103.802790°**		
Surface Owner:	**Federal**					
Mineral Owner:	**Federal**					
Directions:	Depart from Maljamar (Hwy 82/Maljamar Road). Head south on Maljamar Road for 4.62 miles. Turn right onto NM-529, and head west for 2.54 miles. Turn right onto lease road, and head north for 0.53 miles. Turn right and head east for 165 feet. Arrive at location.					

Release Data:		
Date Released:	3/14/2012	
Type Release:	Produced Water/Oil	
Source of Contamination:	Transite Production Line	
Fluid Released:	47 bbls	
Fluids Recovered:	0 bbls	

Official Communication:			
Name:	Marvin Soriwei		Christian M. Llull
Company:	Conoco Phillips - RMR		Tetra Tech
Address:	935 N. Eldridge Pkwy.		8911 North Capital of Texas Highway
			Building 2, Suite 2310
City:	Houston, Texas 77079		Austin, Texas
Phone number:	(832) 486-2730		(512) 338-2861
Fax:			
Email:	marvin.soriwei@conocophillips.com		christian.llull@tetratech.com

Site Characterization	
Shallowest Depth to Groundwater:	*78' below surface*
Impact to groundwater or surface water:	*No*
Extents within 300 feet of a watercourse:	*No*
Extents within 200 feet of lakebed, sinkhole, or playa la	*No*
Extents within 300 feet of an occupied structure:	*No*
Extents within 500 horizontal feet of a private water wel	*No*
Extents within 1000 feet of any water well or spring:	*No*
Extents within incorporated municipal well field:	*No*
Extents within 300 feet of a wetland:	*No*
Extents overlying a subsurface mine:	*No*
Karst Potential:	*Low*
Extents within a 100-year floodplain:	*No*
Impact to areas not on a production site:	*No*

Recommended Remedial Action Levels (RRALs)				
Benzene	***Total BTEX***	***TPH (GRO+DRO)***	***TPH (GRO+DRO+MRO)***	***Chlorides***
10 mg/kg	*50 mg/kg*	*1,000 mg/kg*	*2,500 mg/kg*	*10,000 mg/kg*

TETRA TECH

November 24, 2020

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

Re: Release Characterization and Remediation Work Plan
ConocoPhillips
MCA 1-A Header Release
Unit Letter G, Section 30, Township 17 South, Range 32 East
Lea County, New Mexico
1RP-3231
Incident ID# NTO1422438684

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a release that occurred from a 6" transite production line northeast of the Maljamar Cooperative Agreement (MCA) 1-A Header. The release footprint is located in Public Land Survey System (PLSS) Unit Letter G, Section 30, Township 17 South, Range 32 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.806853°, -103.802790°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Appendix A), the release was discovered on March 14, 2012. The release occurred as the result of a failed 6" transite production line and reportedly encompassed an area of 2,125 square feet. Approximately 30 barrels (bbls) of produced water and 17 bbls of oil were released, of which 0 bbls of fluid were reported recovered. The New Mexico Oil Conservation District (NMOCD) received the C-141 report form for the release on August 12, 2014. The release was subsequently assigned the Remediation Permit (RP) number 1RP-3231. The incident ID for this release is NTO1422438684.

SITE CHARACTERIZATION

A site characterization was performed and no watercourses, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, playa lakes, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.0029 New Mexico Administrative Code (NMAC). The Site is in an area of low karst potential.

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are no water wells located within an 800-meter (approximately ½-mile) radius of the release location. However, there are two water wells within a 3,000 meter radius with an average depth to groundwater at 78 feet below ground surface (bgs). The site characterization data is included in Appendix B.

REGULATORY FRAMEWORK

Based upon the release footprint and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action

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levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

Based on the site characterization, the RRALs for the Site are as follows:

Constituent	RRAL
Chloride (0-4 ft bgs)	600 mg/kg
Chloride (>4 ft bgs)	10,000 mg/kg
TPH	2,500 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

PREVIOUS ASSESSMENTS AND REPORTING

The release was previously assessed by Diamondback Disposal Services, Inc. (Diamondback) in June and October 2012 and Rice Environmental Consulting & Safety (RECS) in June 2014. Based on the results of the above-mentioned site assessments, RECS submitted a Corrective Action Plan (CAP) to NMOCD and the Bureau of Land Management (BLM) on behalf of COP on August 13, 2014. The CAP was approved by the NMOCD and BLM via email on August 13, 2014. The CAP and approval emails are included in Appendix C. The analytical results associated with the sampling events conducted by Diamondback and RECS are summarized in Table 1. The sample locations are shown on Figure 3.

ADDITIONAL SITE ASSESSMENT

In order to confirm the results of the previous soil investigations performed by Diamondback and RECS, Tetra Tech personnel conducted an additional soil investigation on July 29 and August 13, 2020 on behalf of COP. A total of two (2) borings (BH-1 and BH-2) were installed within the release extent to depths of 27 and 30 ft. bgs using an air rotary drilling rig in July 2020. Additionally, in August 2020, six (6) borings (H 20-1 through H 20-6) were installed around the perimeter of the release extent to a depth of 4 ft. bgs to horizontally delineate the release using a hand auger. Figure 4 depicts the approximate release extent and both the July and August 2020 soil boring locations. Boring logs from the July and August 2020 assessment activities are included in Appendix D.

A total of forty (40) samples were collected from the eight (8) borings and submitted to Pace Analytical National Center for Testing & Innovation (Pace) in Nashville, Tennessee to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B.

SUMMARY OF SAMPLING RESULTS

Results from the July and August 2020 soil sampling event are summarized in Table 2. The analytical results associated with BH-1 and BH-2 sample locations confirmed the results of the previous soil investigations. The analytical results from the samples collected from these locations were over applicable RRALs for chloride and TPH near the surface within the release footprint. The results associated with perimeter sample locations H-20-1 through H-20-6 were below Site RRALs for chloride, TPH and BTEX. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix E.

REMEDIATION WORK PLAN

in accordance with the approved CAP and based on the analytical results from the additional assessment, COP proposes to remove the impacted material within the release extent as shown in Figure 5. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 4 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the Site RRALs. The central portion of the release extent that contains steel surface lines will be hand-dug to a depth of 4 feet or the maximum extent practicable and heavy equipment will come no more than 3 ft from any pressurized lines.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Confirmation bottom and sidewall samples will be collected for verification of remedial activities, and analyzed for TPH, BTEX, and chlorides. In accordance with the previously approved 2014 CAP, a 20-mil reinforced poly liner will be installed and properly seated at the base of the excavation. Once analytical results are received, NMOCD will be notified and the excavation will then be backfilled with clean material to surface grade. The estimated volume of material to be remediated is approximately 535 cubic yards.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, COP proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 6. Eight (8) confirmation floor samples and thirteen (13) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 3,600 square feet.

These confirmation sidewall and floor samples will be representative of no more than approximately 500 square feet of excavated area. Confirmation samples will be sent to Pace Laboratories for analysis of TPH (Method 8015 modified), BTEX (Method 8260B), and chloride (USEPA Method 300.0). Once results are received, NMOCD will be notified and the excavation will then be backfilled with clean material to surface grade.

SITE RECLAMATION AND RESTORATION PLAN

Post-remediation, the backfilled areas will be seeded (in the next first favorable growing season) to aid in revegetation. Based on the soils at the site, the New Mexico State Land Office (NMSLO) Sandy (S) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

Site inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the NMSLO will be contacted to determine an effective method for eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate. The NMSLO seed mixture details and corresponding pounds pure live seed per acre are included in Appendix F. Final reclamation will create a landform that approximates and blends in with the surrounding landform, while controlling erosion.

CONCLUSION

ConocoPhillips proposes to begin remediation activities at the Site within 120 days of NMOCD plan approval. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling will be submitted to NMOCD. If you have any questions concerning the soil assessment or the proposed remediation activities for the Site, please call me at (512) 338-2861 or Greg at (432) 682-4559.

Sincerely,
Tetra Tech, Inc.

Christian M. Llull, P.G.
Project Manager

Greg W. Pope, P.G.
Program Manager

cc: Mr. Marvin Soriwei, RMR – ConocoPhillips
Mr. Charles Beauvais, GPBU - ConocoPhillips

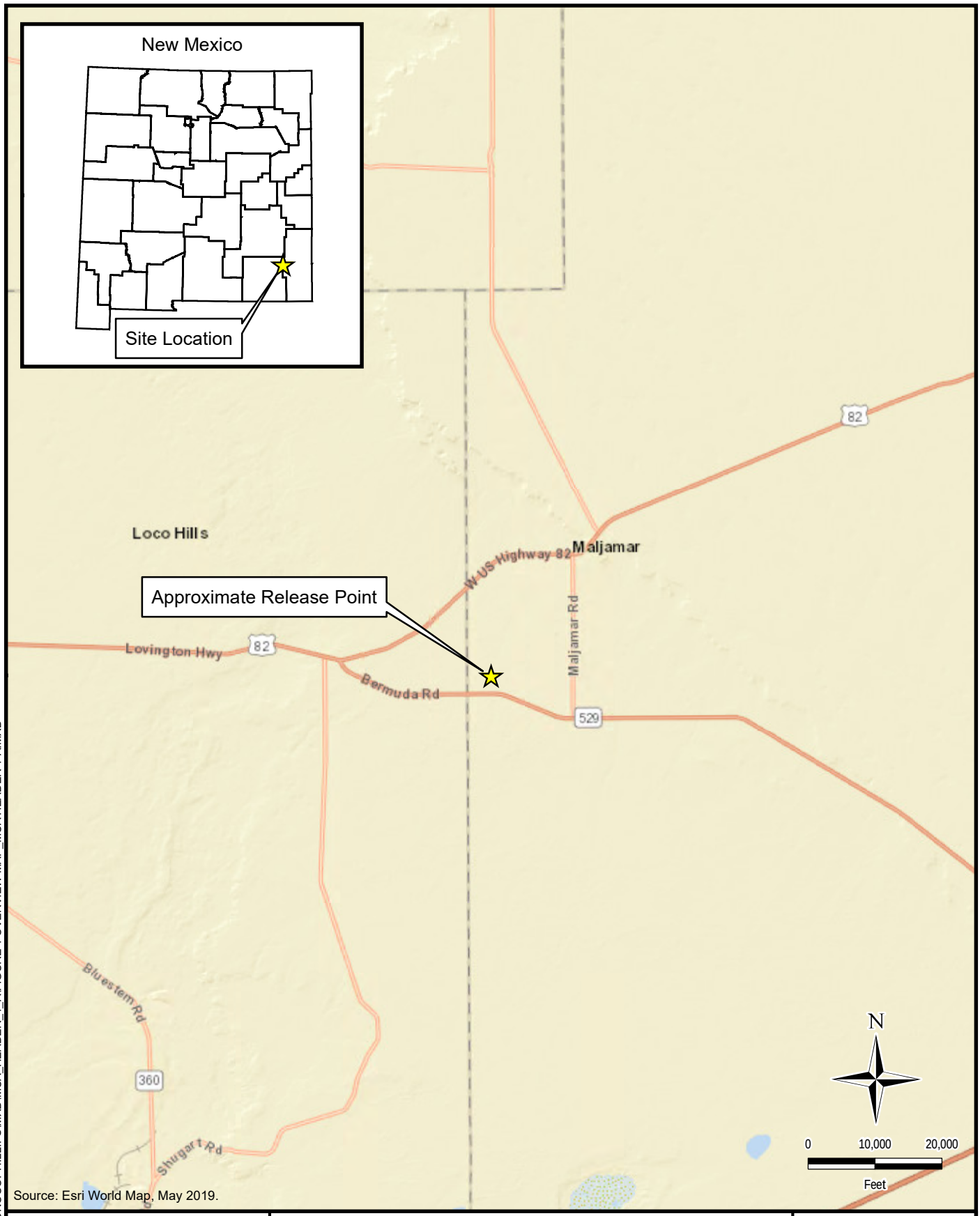
LIST OF ATTACHMENTS

Figures:

Tables:

Appendices:

FIGURES



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\MCA_HEADER_1_A\FIGURE 1 OVERVIEW MAP_MCA HEADER 1-A.MXD

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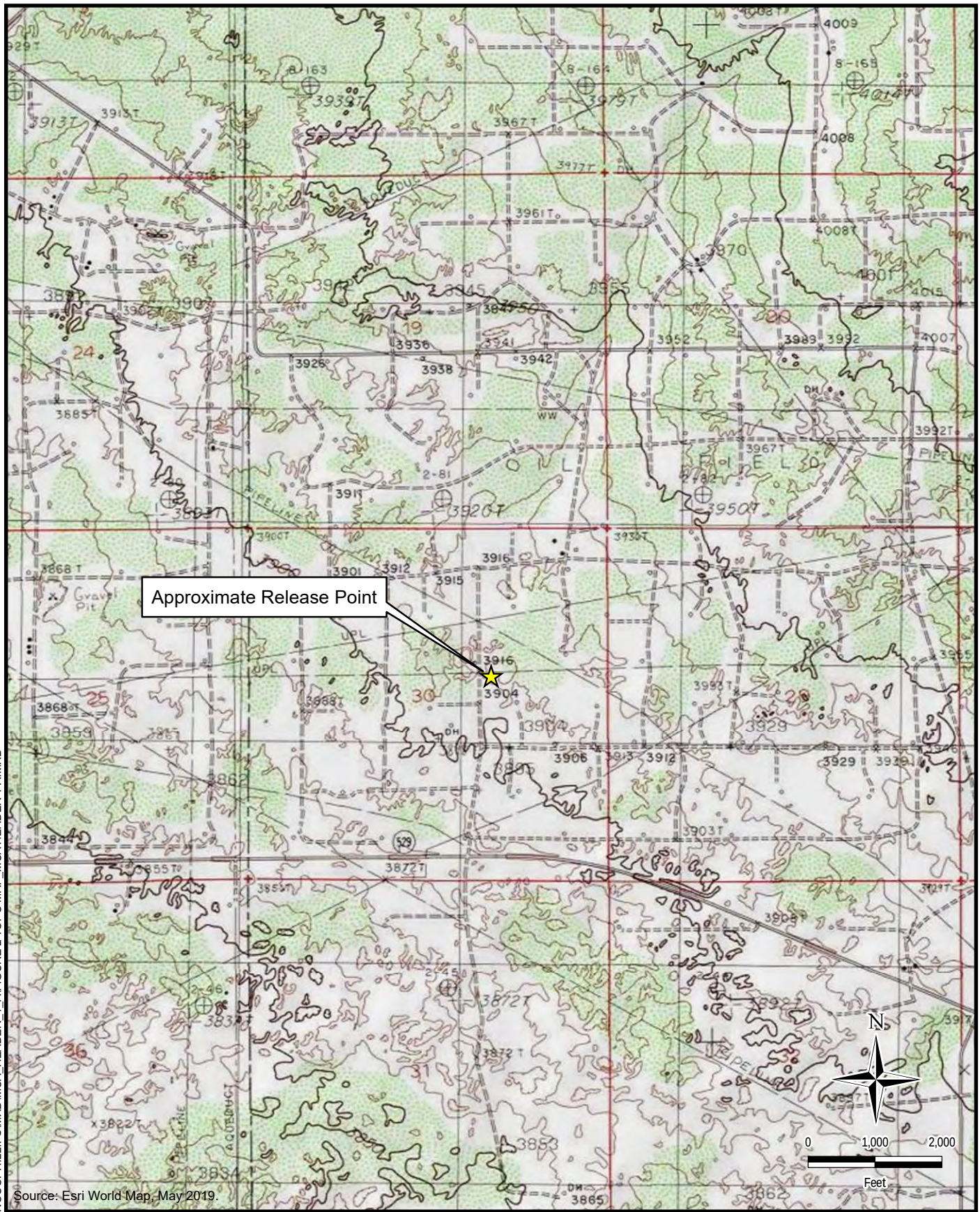
CONOCOPHILLIPS

1RP-3231
(32.806853°, -103.802790°)
LEA COUNTY, NEW MEXICO

MCA 1-A HEADER RELEASE
OVERVIEW MAP

PROJECT NO.:	212C-MD-02251
DATE:	AUGUST 17, 2020
DESIGNED BY:	AAM

Figure No.
1



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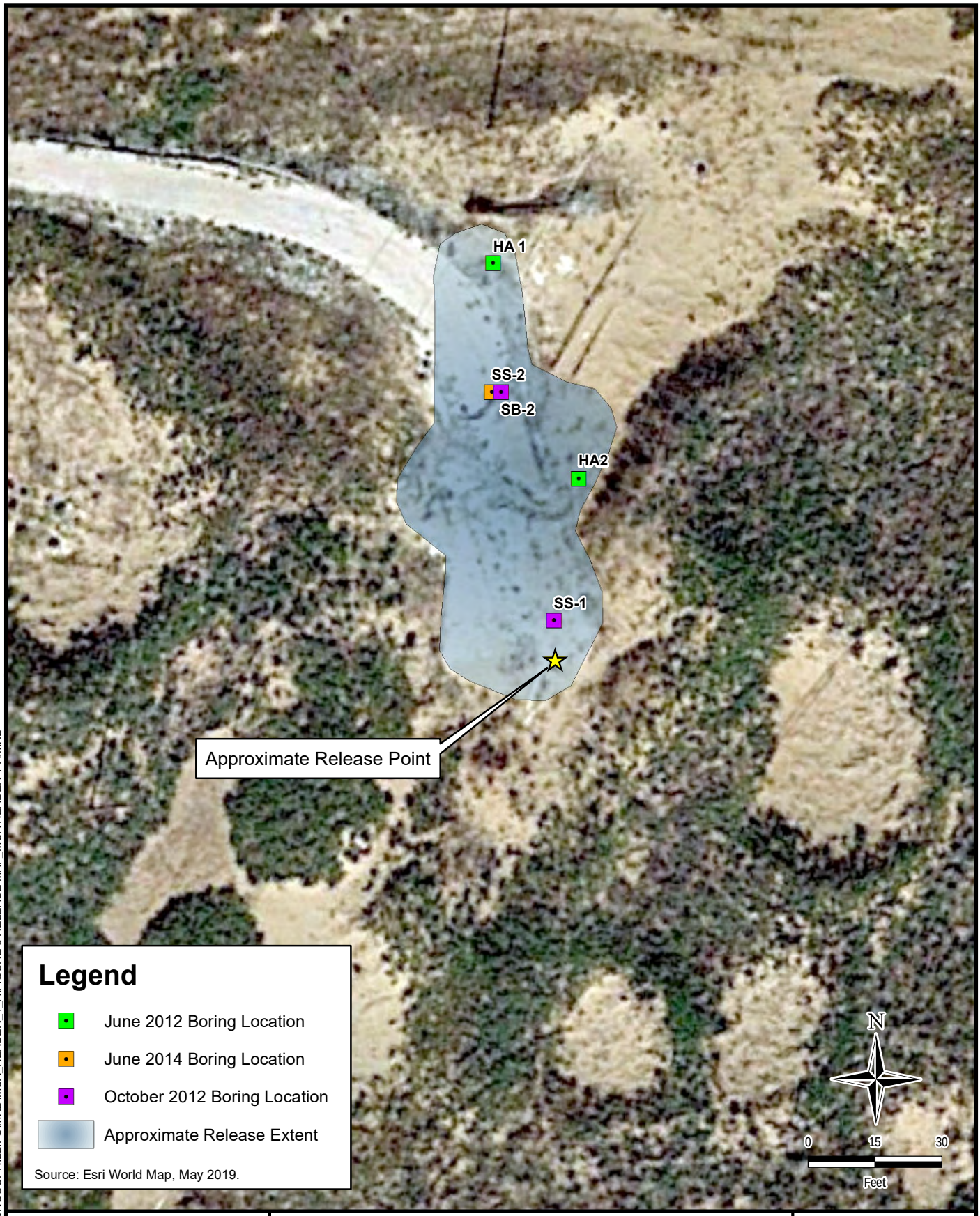
CONOCOPHILLIPS

1RP-3231
(32.806853°, -103.802790°)
LEA COUNTY, NEW MEXICO

MCA 1-A HEADER RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02251
DATE:	AUGUST 17, 2020
DESIGNED BY:	AAM

Figure No.
2



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\MCA_HEADER_1_A\FIGURE 3 RELEASE MAP_MCA HEADER 1-A.MXD

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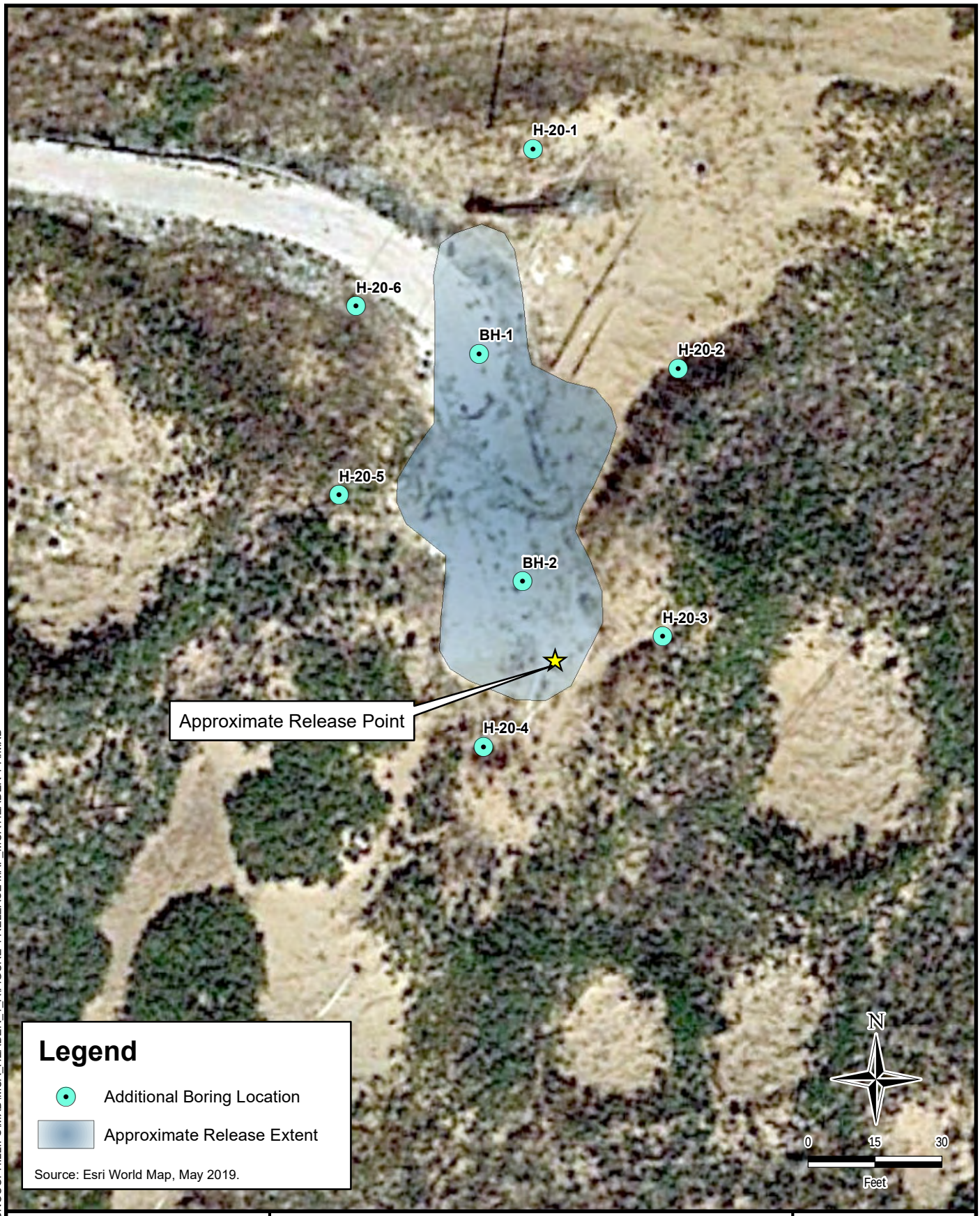
CONOCOPHILLIPS

1RP-3231
(32.806853°, -103.802790°)
LEA COUNTY, NEW MEXICO

MCA 1-A HEADER RELEASE
APPROXIMATE RELEASE EXTENT AND PREVIOUS BORING LOCATIONS

PROJECT NO.:	212C-MD-02251
DATE:	OCTOBER 07, 2020
DESIGNED BY:	AAM

Figure No.
3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\MCA_HEADER_1_A\FIGURE 4 RELEASE MAP_MCA HEADER 1-A.MXD

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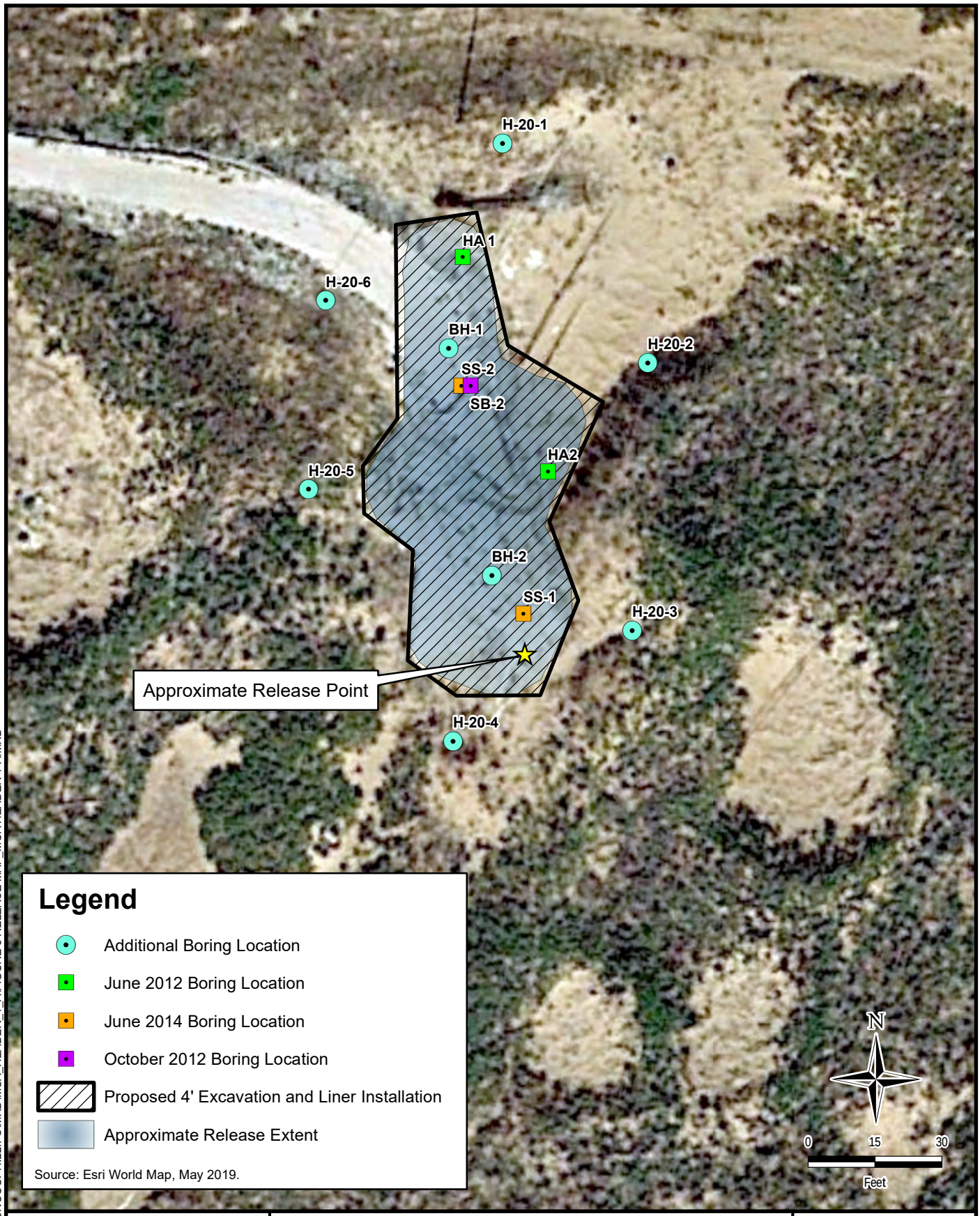
CONOCOPHILLIPS

1RP-3231
(32.806853°, -103.802790°)
LEA COUNTY, NEW MEXICO

MCA 1-A HEADER RELEASE
APPROXIMATE RELEASE EXTENT AND ADDITIONAL ASSESSMENT MAP

PROJECT NO.:	212C-MD-02251
DATE:	OCTOBER 07, 2020
DESIGNED BY:	AAM

Figure No.
4



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\MCA_HEADER_1_A\FIGURE 5 RELEASE MAP_MCA HEADER 1-A.MXD

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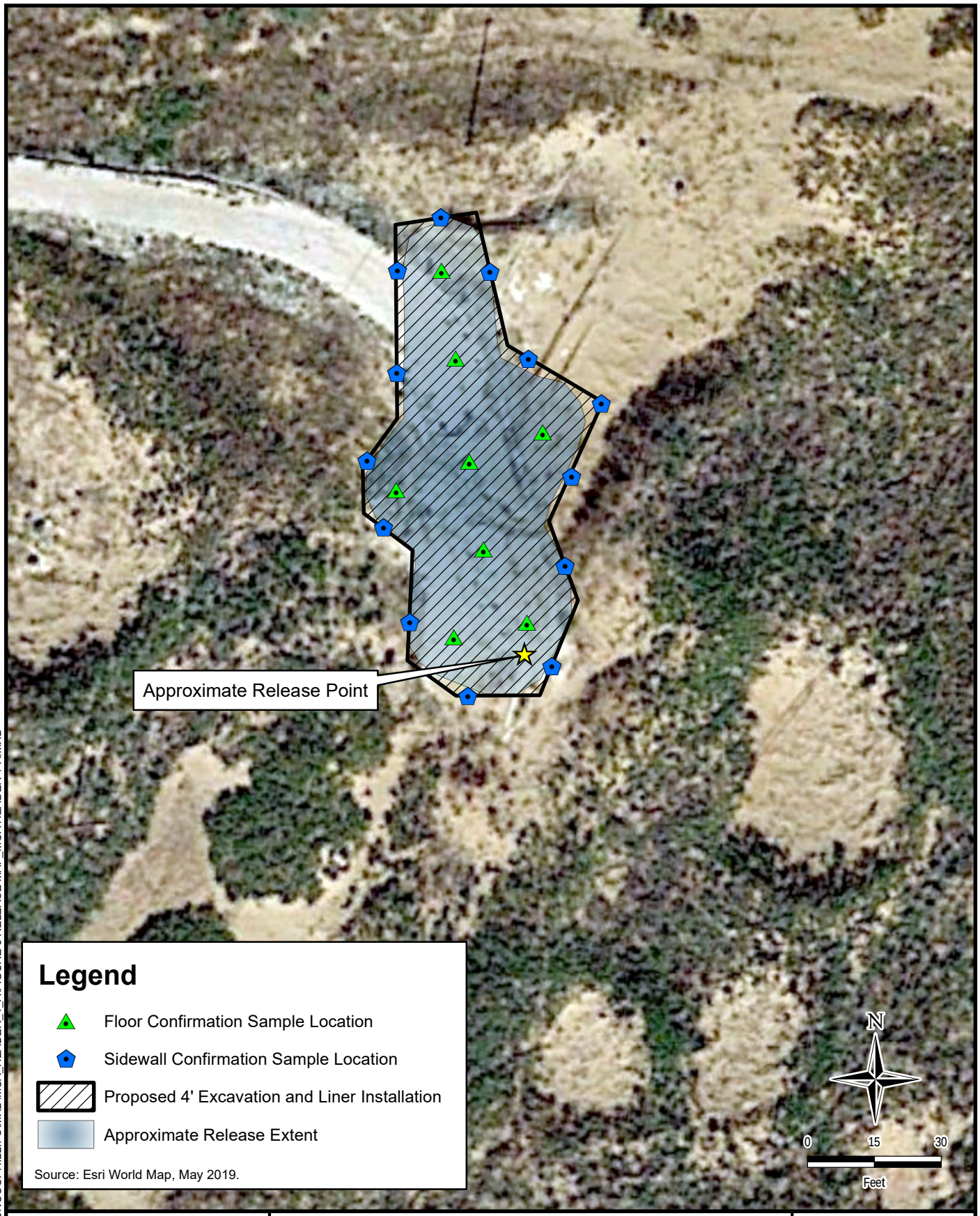
CONOCOPHILLIPS

1RP-3231
(32.806853°, -103.802790°)
LEA COUNTY, NEW MEXICO

MCA 1-A HEADER RELEASE
PROPOSED REMEDIATION EXTENT

PROJECT NO.:	212C-MD-02251
DATE:	OCTOBER 07, 2020
DESIGNED BY:	AAM

Figure No.
5



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\MCA_HEADER_1_A\FIGURE 6 RELEASE MAP_MCA HEADER 1-A.MXD

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CONOCOPHILLIPS

1RP-3231
(32.806853°, -103.802790°)
LEA COUNTY, NEW MEXICO

MCA 1-A HEADER RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN

PROJECT NO.:	212C-MD-02251
DATE:	OCTOBER 07, 2020
DESIGNED BY:	AAM

Figure No.
6

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT
1RP-3231 / INCIDENT ID: NTO1422438684
CONOCOPHILLIPS
MCA 1-A HEADER TRANSITE LINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth	Chloride[1]		BTEX[2]										TPH[3]					
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO C_6 - C_{10}		DRO $>C_{10}$ - C_{28}		Total TPH (GRO+DRO)	
		ft. bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
HA-1	6/6/2012	SURFACE	32.0		2.93		82.0		93.8		148		***327***		971		11500		***12471***	
		9	240		< 0.050		< 0.050		0.077		0.224		0.301		< 10.0		358		***358***	
		14	400		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		123		***123***	
HA-2	6/6/2012	SURFACE	32.0		2.42		43.4		46.8		69.0		***162***		2950		8830		***11780***	
		10	***10100***		< 0.500		0.761		1.48		3.31		5.55		12.9		179		***192***	
		13	***2680***		< 0.050		0.058		0.154		0.383		0.595		11.6		290		***302***	
SS-1	10/16/2012	5	***656***		< 0.050		< 0.050		0.102		0.347		0.449		< 10.0		166		***166***	
		10	***5280***		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		149		***149***	
		15	112		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		< 10.0		-	
		20	592		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		354		***354***	
		25	112		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		95.1		95.1	
		30	160		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		95.6		95.6	
		40	160		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		110		***110***	
		50	96.0		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		69.8		69.8	
		60	160		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		254		***254***	
		70	96.0		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		74.4		74.4	
		80	64.0		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		37.0		37.0	
		90	96.0		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		92.0		92.0	
		100	64.0		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		44.7		44.7	
SS-2	10/16/2012	5	128		< 0.050		0.339		0.537		1.30		2.18		19.8		206		***226***	
		10	496		< 0.050		< 0.050		0.144		0.488		0.632		< 10.0		102		***102***	
		15	***704***		< 0.050		0.246		0.499		1.22		1.97		35.6		326		***362***	
		20	***1400***		< 0.050		0.132		0.332		0.857		1.32		17.0		184		***201***	
		25	***944***		< 0.050		0.052		0.148		0.340		0.540		12.0		490		***502***	
		30	***944***		< 0.050		< 0.050		0.089		0.229		0.318		12.1		560		***572***	
		40	***784***		< 0.050		< 0.050		0.086		0.352		0.438		15.2		579		***594***	
		50	***784***		< 0.050		< 0.050		0.066		0.268		0.334		12.0		626		***638***	
SB-2	6/18/2014	55	432		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		340		***340***	
		65	***1150***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		230		***230***	
		75	352		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		236		***236***	

NOTES:

ft. Feet
bgs Below ground surface
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics

Bold and italicized values indicate exceedance of proposed RRALs

1 Method SM4500Cl-B
2 Method 8021B
3 Method 8015M

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
ADDITIONAL SOIL ASSESSMENT
1RP-3231 / INCIDENT ID: NTO1422438684
CONOCOPHILLIPS
MCA 1-A HEADER TRANSITE LINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride[1]		BTEX[2]										TPH[3]							
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO[4] C_3 - C_{10}		DRO C_{10} - C_{28}		ORO C_{28} - C_{40}		Total TPH (GRO+DRO+ORO)	
		ft. bgs	ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
BH-1	7/29/2020	0-1	998	0.0	***611***		< 0.00147		< 0.00733		< 0.00366		< 0.00952		-		< 0.123		2.13	J	3.94	B J	6.07	
		2-3	-	0.0	467		< 0.00108		< 0.00541		< 0.00270		< 0.00703		-		< 0.104		< 4.16		0.807	B J	0.807	
		6-7	626	0.0	334		< 0.00108		< 0.00538		< 0.00269		< 0.00700		-		0.0273	J	2.13	J	1.11	B J	3.27	
		9-10	-	0.0	165	J	< 0.00138		< 0.00691		< 0.00345		< 0.00898		-		< 0.108		1.98	J	1.25	J	3.23	
		12-13	499	0.0	182	J	< 0.00110		< 0.00549		< 0.00275		< 0.00714		-		< 0.110		< 4.39		< 4.39		-	
		14-15	-	0.0	288		< 0.00109		< 0.00547		< 0.00274		< 0.00711		-		0.0247	J	< 4.34		< 4.34		0.0247	
		17-18	-	0.0	715		< 0.00108		< 0.00542		< 0.00271		0.00133	J	0.00133		0.0410	J J3 J5	< 4.34		< 4.34		0.0410	
		19-20	1820	0.0	1410		< 0.00109		< 0.00546		< 0.00273		< 0.00710		-		0.0300	J	< 4.37		< 4.37		0.0300	
		22-23	-	0.0	3190		< 0.00123		< 0.00614		< 0.00307		< 0.00799		-		0.0484	J	< 4.46	J3 J6	< 4.46		0.0484	
		24-25	-	0.0	2780		< 0.00108		< 0.00540		< 0.00270		< 0.00702		-		< 0.108		1.93	J	0.316	J	2.25	
		26-27	3730	0.0	2990		< 0.00108		< 0.00542		< 0.00271		< 0.00705		-		0.0269	J	< 4.34		< 4.34		0.0269	
		29-30	3310	0.0	3090		< 0.00109		< 0.00546		< 0.00273		< 0.00710		-		< 0.109		< 4.37		< 4.37		-	
BH-2	7/29/2020	0-1	-	0.0	17.1	J	< 0.00130		< 0.00652		< 0.00326		0.00206	J	0.00206		109		1270		684		***2063***	
		2-3	-	0.0	78.3	J	< 0.00125		< 0.00627		< 0.00314		< 0.00815		-		0.0318	B J	2.39	J	< 4.51		2.42	
		6-7	-	0.0	58.8	J	< 0.00109		< 0.00543		< 0.00272		0.00139	J	0.00139		7.48		485		346		838	
		9-10	-	0.0	393		< 0.00148		< 0.00738		< 0.00370		< 0.00959		-		< 0.123		2.11	J	0.658	J	2.77	
		11-12	-	0.0	289		< 0.00112		< 0.00558		< 0.00280		< 0.00725		-		< 0.111		< 4.42		< 4.42		-	
		14-15	-	0.0	172		< 0.00108		< 0.00540		< 0.00270		< 0.00701		-		< 0.108		< 4.32		< 4.32		-	
		17-18	-	0.0	315		< 0.00108		< 0.00539		< 0.00270		< 0.00701		-		< 0.108		< 4.32		1.78	B J	1.78	
		19-20	-	0.0	720		< 0.00110		< 0.00549		< 0.00274		< 0.00713		-		< 0.110		< 4.39		1.94	B J	1.94	
		22-23	1670	0.0	1200		< 0.00125		< 0.00623		< 0.00311		0.00114	J	0.00114		< 0.112		< 4.49		0.696	B J	0.696	
		26-27	-	0.0	1180		< 0.00108		< 0.00542		< 0.00271		< 0.00705		-		0.0321	J	8.78		9.02	B	17.8	
H-20-1	8/13/2020	0-1	12	0.0	< 20.2		< 0.00102		< 0.00511		< 0.00255		< 0.00664		-		< 0.101		7.09		6.60		13.7	
		2-3	20	0.0	< 20.1		< 0.00145		< 0.00726		< 0.00363		< 0.00944		-		< 0.123		< 4.90		< 4.90		-	
		3-4	-	-	22.2	J	< 0.00147		< 0.00735		< 0.00367		< 0.00955		-		< 0.124		< 4.94		< 4.94		-	
H-20-2	8/13/2020	0-1	19	0.0	< 20.3		< 0.00103		< 0.00513		< 0.00256		< 0.00666		-		< 0.101		2.50	J	1.14	J	3.64	
		2-3	11	0.0	18.0	J	< 0.00145		< 0.00726		< 0.00363		< 0.00944		-		< 0.123		< 4.90		< 4.90		-	
		3-4	-	-	22.2		< 0.00147		< 0.00735		< 0.00367		< 0.00955		-		< 0.124		< 4.94		< 4.94		-	
H-20-3	8/13/2020	0-1	-	-	10.6	J	< 0.00124		< 0.00620		< 0.00310		< 0.00807		-		< 0.113		< 4.48		< 4.48		-	
		2-3	-	-	< 20.1		< 0.00101		< 0.00505		< 0.00253		< 0.00657		-		< 0.101		< 4.02		1.67	J	1.67	
		3-4	-	-	17.4	J	< 0.00144		< 0.00719		< 0.00359		< 0.00934		-		< 0.122		< 4.87		< 4.87		-	
H-20-4	8/13/2020	0-1	12	0.0	46.6		< 0.00143		< 0.00717		< 0.00358		< 0.00932		-		< 0.122		< 4.87		< 4.87		-	
		2-3	9	0.0	20.3	J	< 0.00145		< 0.00725		< 0.00362		< 0.00942		-		< 0.124		< 4.90		< 4.90		-	
		3-4	-	-	18.6	J	< 0.00144		< 0.00721		< 0.00361		< 0.00938				< 0.122		< 4.88		< 4.88		-	
H-20-5	8/13/2020	0-1	8	0.0	25.8		< 0.00149		< 0.00743		< 0.00371		< 0.00966		-		< 0.124		< 4.97		< 4.97		-	
		2-3	12	0.0	58.7		< 0.00143		< 0.00714		< 0.00357		< 0.00928		-		< 0.121		< 4.85		< 4.85		-	
		3-4	-	-	< 21.0		< 0.00110		< 0.00550		< 0.00275		< 0.00715		-		0.0520	B J	< 4.20		< 4.20		0.0520	
H-20-6	8/13/2020	0-1	9	0.0	45.5		< 0.00144		< 0.00178		< 0.00359		< 0.00933		-		< 0.122		< 4.87		3.64	J	3.64	
		2-3	11	0.0	19.0	J	< 0.00143		< 0.00714		< 0.00357		< 0.00929		-		< 0.121		< 4.86		< 4.86		-	
		3-4	-	-	< 20.1		< 0.00101		< 0.00503		< 0.00251		< 0.00653		-		0.0536	B J	3.51	J	< 4.01		3.56	

NOTES:

ft. Feet
bgs Below ground surface
ppm Parts per million
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
ORO Oil range organics
1 EPA Method 300.0
2 EPA Method 8260B
3 EPA Method 8015
4 EPA Method 8015D/GRO

Bold and italicized values indicate exceedance of proposed RRALs

QUALIFIERS:

B The same analyte is found in the associated blank.
J The identification of the analyte is acceptable; the reported value is an estimate.
J3 The associated batch QC was outside the established quality control range for precision.
J5 The sample matrix interfered with the ability to make any accurate determination; spike is high.
J6 The sample matrix interfered with the ability to make any accurate determination; spike is low.

APPENDIX A
C-141 Forms

HOBBS OCD

AUG 12 2014

RECEIVED

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company ConocoPhillips Company	Contact John W. Gates
Address 3300 North A St. Bldg 6, Midland, TX 79705-5406	Telephone No. 505.391.3158
Facility Name MCA 1A Header	Facility Type Oil and Gas

Surface Owner Federal	Mineral Owner Federal	Lease No LC 029410B

LOCATION OF RELEASE

30-025-06115 ?0

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	30	17	32					Lea

Latitude N32 48.387 Longitude W 103 48.200

NATURE OF RELEASE

Type of Release Crude Oil & Produced Water	Volume of Release 47bbl (17oil, 30water)	Volume Recovered (0oil, 0water)
Source of Release 1A Header production line(6" transite)	Date and Hour of Occurrence 3/14/12 1403	Date and Hour of Discovery 3/14/2012 1530
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom? NMOCD & BLM Were notified	
By Whom? Justin Wright	Date and Hour 3/14/12	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A 6 inch transite production line at the MCA 1 A Header failed at the collar due to suspected age/fatigue

Describe Area Affected and Cleanup Action Taken.*
A 25' X 85' X 24" deep area of pastureland located ~350 yards north and east of the 1A header. No fluids could be recovered. The spill site will be Delineated/Remediated in accordance with BLM & NMOCD guidelines

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

Signature: John W. Gates	OIL CONSERVATION DIVISION	
Printed Name: John W. Gates	Approved by District Supervisor: Randall Ypacarlad	
Title: HSER Lead	Approval Date: 8-12-14	Expiration Date: 10-14-14
E-mail Address: John.W.Gates@conocophillips.com	Conditions of Approval: Site Sup for request	Attached ☐ IRP-3231
Date: 3/19/12 Phone: 505.391.3158		

• Attach Additional Sheets If Necessary

Submit Final C-141 by 10-14-14

Ogrid 217817
nTO1422 438684
pTO1422 248834

AUG 12 2014

State of New Mexico
Oil Conservation Division

Incident ID	nTO1422438684
District RP	1RP-3231
Facility ID	
Application ID	pTO1422248834

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	78 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nTO1422438684
District RP	1RP-3231
Facility ID	
Application ID	pTO1422248834

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: Marvin Soriwei Title: Program Manager, Risk Management & Remediation

Signature: Date: 11/24/2020

email: marvin.soriwei@conocophillips.com Telephone: 8324862730

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nTO1422438684
District RP	1RP-3231
Facility ID	
Application ID	pTO1422248834

Remediation Plan

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

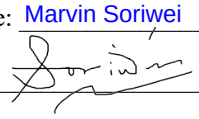
- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note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

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

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

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

Printed Name: Marvin Soriwei Title: Program Manager, Risk Management & Remediation

Signature:  Date: 11/24/2020

email: marvin.soriwei@conocophillips.com Telephone: 8324862730

OCD Only

Received by: _____ Date: _____

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

Signature: Bradford Billings Date: 02/15/2021

Variance request for maximum 500 sq.ft. for confirmation sampling is approved.

APPENDIX B
Site Characterization Data

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

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 612085.678 **Northing (Y):** 3630508.914 **Radius:** 800

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 12721 POD1		RA	LE	3	2	3	28	17S	32E	614645	3630141	2587	125		
RA 10175		RA	LE		2	1	28	17S	32E	614814	3631005*	2773	158		
RA 12020 POD1		RA	LE	2	2	1	28	17S	32E	614828	3630954	2778	120	81	39
RA 12042 POD1		RA	LE	2	2	1	28	17S	32E	614891	3631181	2884	400		
RA 12522 POD1		RA	LE	3	3	4	21	17S	32E	614941	3631122	2919	100		
RA 12522 POD2		RA	LE	2	2	1	28	17S	32E	614949	3631098	2923	100		
RA 12522 POD3		RA	LE	4	4	3	28	17S	32E	614980	3631093	2953	100		
RA 12721 POD2		RA	LE	1	1	4	28	17S	32E	615055	3630407	2972	124	75	49

Average Depth to Water: **78 feet**
Minimum Depth: **75 feet**
Maximum Depth: **81 feet**

Record Count: 8

UTMNAD83 Radius Search (in meters):

Easting (X): 612084.557 **Northing (Y):** 3630515.158 **Radius:** 3000

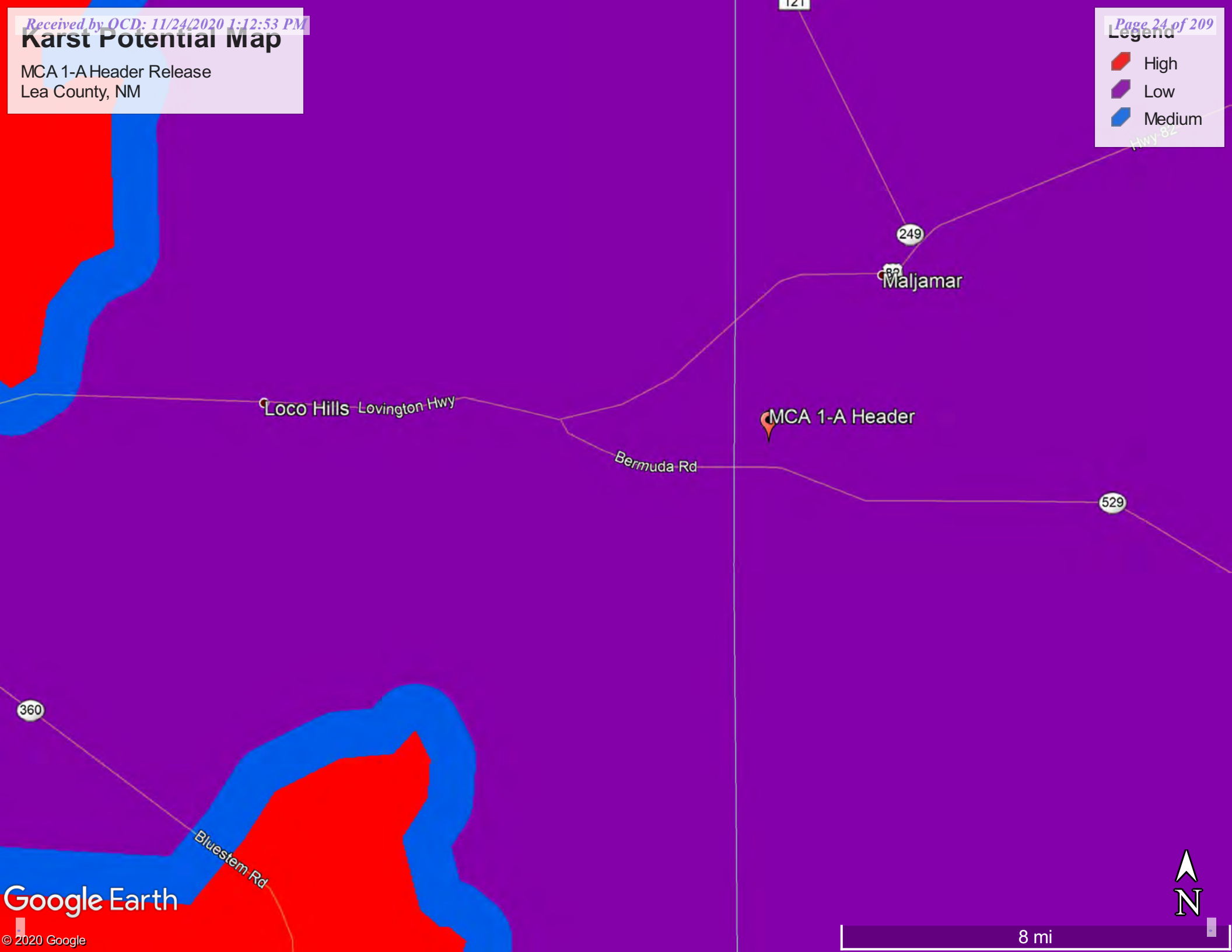
***UTM location was derived from PLSS - see Help**

8/11/20 12:06 PM

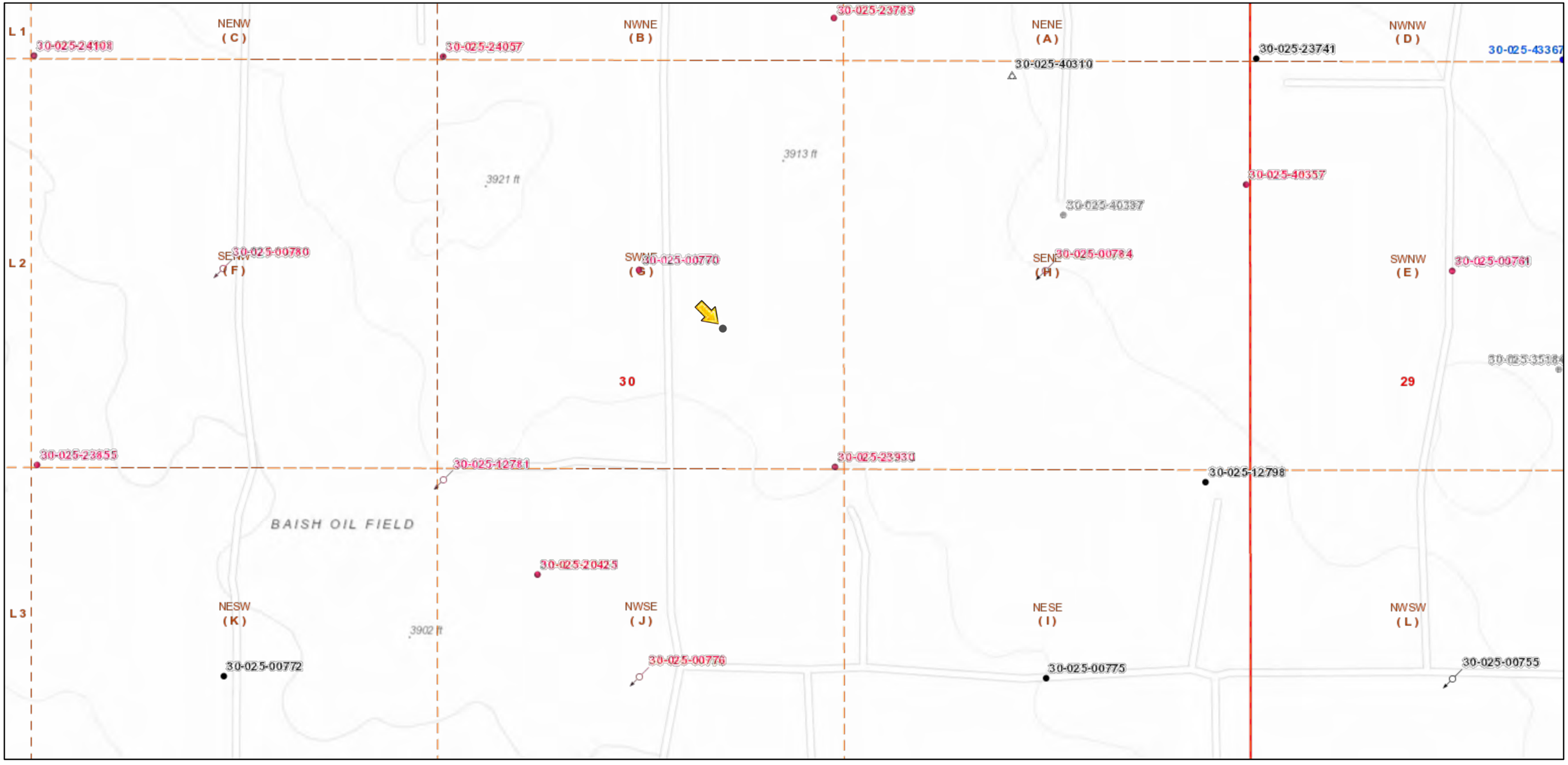
WATER COLUMN/ AVERAGE DEPTH TO WATER

Karst Potential Map

MCA 1-A Header Release
Lea County, NM



MCA 1-A Header Production Line Release (1RP-3231)



8/11/2020, 1:02:58 PM

Override 1

Wells - Large Scale

- undefined
- Miscellaneous
- CO2, Active
- CO2, Cancelled
- CO2, New
- CO2, Plugged
- CO2, Temporarily Abandoned
- Gas, Active
- Gas, Cancelled
- Gas, New
- Gas, Plugged
- Gas, Temporarily Abandoned
- Injection, Active
- Injection, Cancelled
- Injection, New
- Injection, Plugged
- Injection, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled
- Oil, New
- Oil, Plugged
- Oil, Temporarily Abandoned
- Salt Water Injection, Active
- Salt Water Injection, Cancelled
- Salt Water Injection, New
- Salt Water Injection, Plugged
- Salt Water Injection, Temporarily Abandoned
- Water, Active

1:4,514

0 250 500 1,000 ft

0 75 150 300 m

Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department., Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI,

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

APPENDIX C
CAP and Agency Approvals

CONOCOPHILLIPS
P.O. Box 2197
Houston, TX 77252-2197
Phone 281.293.1000

MCA 1A Header

1RP-3231

Corrective Action Plan

API No. 30-025-06115

Release Date: March 14th, 2012

Unit Letter G, Section 30, Township 17S, Range 32E

RICE ENVIRONMENTAL CONSULTING & SAFETY
PO Box 2948 | Hobbs, NM 88241 | Phone 575.393.2967

August 13th, 2014

Dr. Tomáš Oberding, PhD
Environmental Specialist – New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240

RE: **Corrective Action Plan**
ConocoPhillips MCA 1A Header (1RP-3231)
UL/G sec. 30 T17S R32E
API No. 30-025-06115

Dr. Oberding:

ConocoPhillips (CoP) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately 4.1 miles southwest of Maljamar, New Mexico at UL/G sec. 30 T17S R32E. NM OSE and USGS records indicate that groundwater will likely be encountered at a depth of approximately 95 – 105 +/- feet.

On March 14th, 2012, CoP discovered a release from a 6 inch transit production line. The line failed at the collar and released a total of 47 barrels of oil and produced water over approximately 4,476 square feet of pasture land. None of this fluid was recovered. NMOCD and BLM were notified of the release on March 14th, 2012, and an initial C-141 was sent to NMOCD for their approval (Appendix A).

Prior to RECS receiving the site from CoP, another company conducted sampling activities at the site. On June 6th, 2012, that company's personnel were on site to hand augur the release area (Figure 1). Two points within the release area were augured for depth, and all samples were taken to a commercial laboratory for analysis (Appendix B). On October 17th, 2012, two soil bores (SS-1 and SS-2) were installed to further delineate the vertical extent of contamination. All samples from both bores were taken to a commercial laboratory for analysis. The laboratory analysis of SS-1 returned chloride values below regulatory standards beginning at 15 ft bgs. Gasoline Range Organics (GRO), Diesel Range Organics (DRO) and BTEX readings returned values below regulatory standards at all depths. The laboratory analysis of SS-2 returned chloride values below regulatory standards beginning at 25 ft bgs. GRO, DRO and BTEX readings returned values below regulatory standards at all depths.

RECS received the site from CoP on October 31st, 2013 to continue remediation activities. On February 12th, 2014, a meeting was held with NMOCD and the initial sampling data was submitted for approval. NMOCD stated that the data for SS-1 was acceptable, but SS-2 had not achieved an acceptable decline in constituents. Therefore, NMOCD requested an additional soil bore be installed adjacent to SS-2.

RECS personnel were on site to conduct the additional soil bore on June 18th, 2014. SB-2 was installed adjacent to SS-2 to continue sampling activities with depth. The bore was sampled for lithology until 50 ft bgs and then soil samples were taken every 5 ft for field analysis (Appendix C). Representative samples from SB-2 were taken to a commercial laboratory for analysis (Appendix B). At 75 ft bgs, the laboratory chloride reading returned a value of 352 mg/kg, the DRO reading returned a value of 236 mg/kg, and the GRO and BTEX readings returned values of non-detect. Photo documentation from SB-2 can be found in Appendix D.

Corrective Action Plan

Based on the laboratory analysis of the site, the release area will be excavated to a depth of 4 ft bgs. At the base of excavation, a 20-mil reinforced poly liner will be installed and properly seated.

The excavated soil will be evaluated for use as backfill, and any soils that do not meet regulatory standards will be taken to a NMOCD approved facility for disposal. Clean soil will be imported to the site to replace any soils taken for disposal. The clean soil will be blended with the remaining excavated soil and used to backfill the site. A sample of the blended soil will be taken to a commercial laboratory to confirm that chloride, GRO and DRO readings are all below regulatory standards. Once the site is backfilled, the area will be contoured to the surrounding location. The site will then be seeded with a blend of native vegetation.

Once these activities have been completed, a report will be submitted to NMOCD and BLM requesting ‘remediation termination’ and site closure.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

Figure 1 – Initial Sampling Data
Appendix A – Initial C-141
Appendix B – Initial Sampling Labs
Appendix C – Soil Bore Log
Appendix D – Photo Documentation

Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948, Hobbs, NM 88241
Phone 575.393.2967

Initial Sampling Data

HA-1

	Cl-	GRO	DRO	B	T	E	X
Surface	32	971	11500	193	82	93.8	148
9'	240	<10	358	<0.05	<0.05	0.077	0.244
14'	400	<10	123	<0.05	<0.05	<0.05	<0.15

HA-2

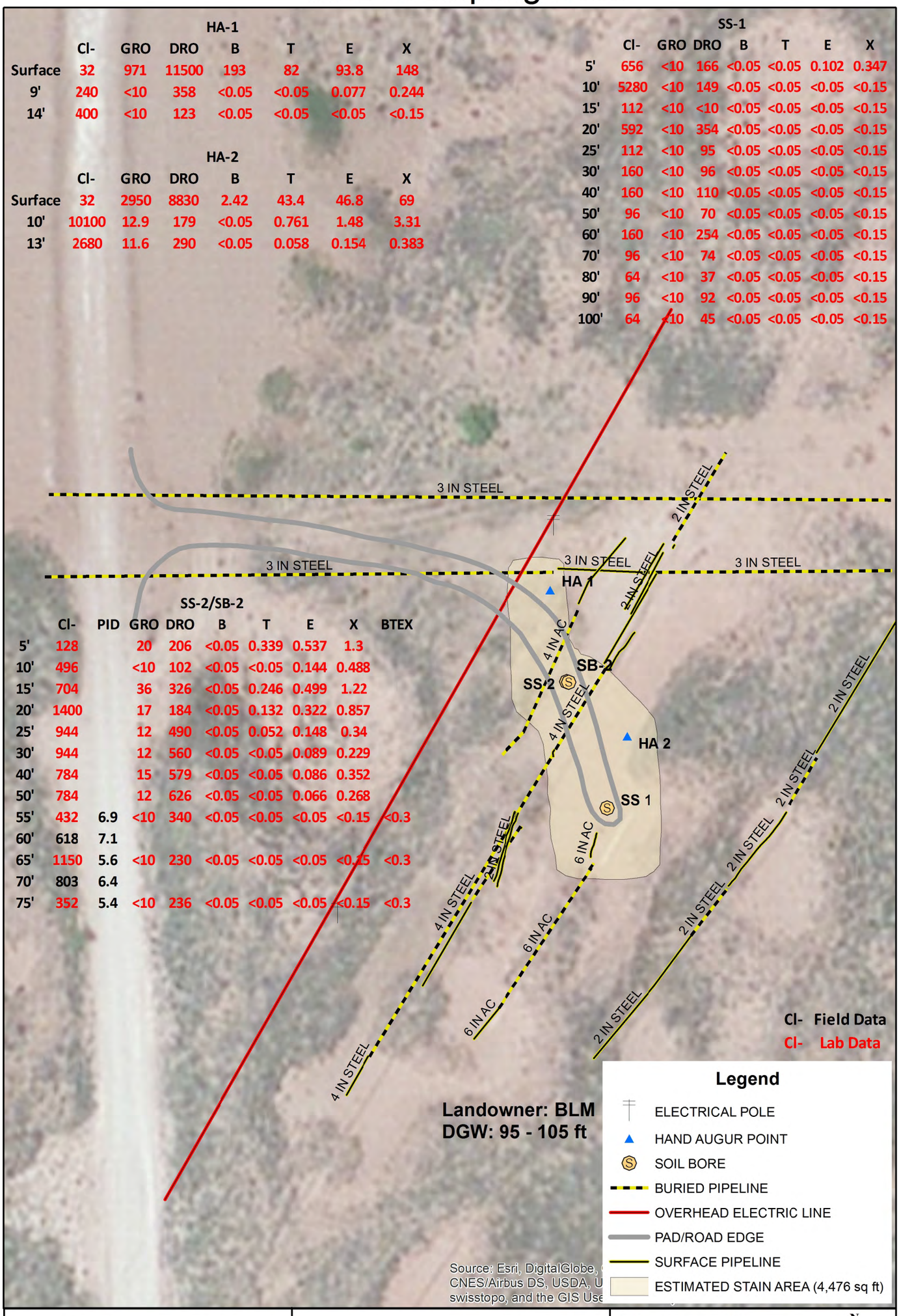
	Cl-	GRO	DRO	B	T	E	X
Surface	32	2950	8830	2.42	43.4	46.8	69
10'	10100	12.9	179	<0.05	0.761	1.48	3.31
13'	2680	11.6	290	<0.05	0.058	0.154	0.383

SS-1

	Cl-	GRO	DRO	B	T	E	X
5'	656	<10	166	<0.05	<0.05	0.102	0.347
10'	5280	<10	149	<0.05	<0.05	<0.05	<0.15
15'	112	<10	<10	<0.05	<0.05	<0.05	<0.15
20'	592	<10	354	<0.05	<0.05	<0.05	<0.15
25'	112	<10	95	<0.05	<0.05	<0.05	<0.15
30'	160	<10	96	<0.05	<0.05	<0.05	<0.15
40'	160	<10	110	<0.05	<0.05	<0.05	<0.15
50'	96	<10	70	<0.05	<0.05	<0.05	<0.15
60'	160	<10	254	<0.05	<0.05	<0.05	<0.15
70'	96	<10	74	<0.05	<0.05	<0.05	<0.15
80'	64	<10	37	<0.05	<0.05	<0.05	<0.15
90'	96	<10	92	<0.05	<0.05	<0.05	<0.15
100'	64	<10	45	<0.05	<0.05	<0.05	<0.15

SS-2/SB-2

	Cl-	PID	GRO	DRO	B	T	E	X	BTEX
5'	128		20	206	<0.05	0.339	0.537	1.3	
10'	496		<10	102	<0.05	<0.05	0.144	0.488	
15'	704		36	326	<0.05	0.246	0.499	1.22	
20'	1400		17	184	<0.05	0.132	0.322	0.857	
25'	944		12	490	<0.05	0.052	0.148	0.34	
30'	944		12	560	<0.05	<0.05	0.089	0.229	
40'	784		15	579	<0.05	<0.05	0.086	0.352	
50'	784		12	626	<0.05	<0.05	0.066	0.268	
55'	432	6.9	<10	340	<0.05	<0.05	<0.05	<0.15	<0.3
60'	618	7.1							
65'	1150	5.6	<10	230	<0.05	<0.05	<0.05	<0.15	<0.3
70'	803	6.4							
75'	352	5.4	<10	236	<0.05	<0.05	<0.05	<0.15	<0.3



RECS
RICE ENVIRONMENTAL
CONSULTING & SAFETY

CONOCOPHILLIPS
MCA 1A HEADER

UL G SECTION 30
T-17-S R-32-E
LEA COUNTY, NM

Figure 1

N
W E
S

0 30 60
Feet

GPS Date 3/25/14, 6/18/14
Drawing date: 8/12/14
Drafted by: L. Weinheimer

Appendix A
Initial C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company ConocoPhillips Company	Contact John W. Gates
Address 3300 North A St. Bldg 6, Midland, TX 79705-5406	Telephone No. 505.391.3158
Facility Name MCA 1A Header	Facility Type Oil and Gas

Surface Owner Federal	Mineral Owner Federal	Lease No LC 029410B

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	30	17	32					Lea

Latitude N32 48.387 Longitude W 103 48.200

NATURE OF RELEASE

Type of Release Crude Oil & Produced Water	Volume of Release 47bbl (17oil, 30water)	Volume Recovered (0oil, 0water)
Source of Release 1A Header production line(6" transite)	Date and Hour of Occurrence 3/14/12 1403	Date and Hour of Discovery 3/14/2012 1530
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom? NMOCD & BLM Were notified	
By Whom? Justin Wright	Date and Hour 3/14/12	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A 6 inch transite production line at the MCA 1 A Header failed at the collar due to suspected age/fatigue

Describe Area Affected and Cleanup Action Taken.*
A 25' X 85' X 24" deep area of pastureland located ~350 yards north and east of the 1A header. No fluids could be recovered. The spill site will be Delineated/Remediated in accordance with BLM & NMOCD guidelines

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

Signature: John W. Gates	OIL CONSERVATION DIVISION	
Printed Name: John W. Gates	Approved by District Supervisor:	
Title: HSER Lead	Approval Date:	Expiration Date:
E-mail Address: John.W.Gates@conocophillips.com	Conditions of Approval:	Attached ☐
Date: 3/19/12 Phone: 505.391.3158		

- Attach Additional Sheets If Necessary

Appendix B

Initial Sampling Labs

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

CARDINAL Laboratories

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

June 14, 2012

JUSTIN ROBERTS

DIAMONDBACK DISPOSAL SERVICE INC.

P. O. BOX 2491

HOBBS, NM 88241

RE: MCA IA TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 06/08/12 10:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	06/08/2012	Sampling Date:	06/06/2012
Reported:	06/14/2012	Sampling Type:	Soil
Project Name:	MCA IA TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: HA 1 SURFACE (H201294-01)

BTEX 8021B mg/kg Analyzed By: ZZZ S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**2.93**	1.00	06/13/2012	ND	2.10	105	2.00	4.88	
Toluene*	**82.0**	1.00	06/13/2012	ND	2.17	109	2.00	2.07	
Ethylbenzene*	**93.8**	1.00	06/13/2012	ND	2.21	111	2.00	1.77	
Total Xylenes*	**148**	3.00	06/13/2012	ND	6.86	114	6.00	0.457	

Surrogate: 4-Bromofluorobenzene (PIL *168 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/12/2012	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**971**	100	06/12/2012	ND	176	88.0	200	4.28	
DRO >C10-C28	**11500**	100	06/12/2012	ND	172	86.2	200	7.49	

Surrogate: 1-Chlorooctane *210 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *405 %* *63.6-154*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	06/08/2012	Sampling Date:	06/06/2012
Reported:	06/14/2012	Sampling Type:	Soil
Project Name:	MCA IA TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: HA 1 9' BGS (H201294-02)

BTEX 8021B mg/kg **Analyzed By: ZZZ**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/13/2012	ND	2.10	105	2.00	4.88	
Toluene*	<0.050	0.050	06/13/2012	ND	2.17	109	2.00	2.07	
Ethylbenzene*	**0.077**	0.050	06/13/2012	ND	2.21	111	2.00	1.77	
Total Xylenes*	**0.224**	0.150	06/13/2012	ND	6.86	114	6.00	0.457	

Surrogate: 4-Bromofluorobenzene (PIL *111 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	06/12/2012	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/12/2012	ND	176	88.0	200	4.28	
DRO >C10-C28	**358**	10.0	06/12/2012	ND	172	86.2	200	7.49	

Surrogate: 1-Chlorooctane *95.6 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *115 %* *63.6-154*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	06/08/2012	Sampling Date:	06/06/2012
Reported:	06/14/2012	Sampling Type:	Soil
Project Name:	MCA IA TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: HA 1 14' BGS (H201294-03)

BTEX 8021B mg/kg **Analyzed By: ZZZ**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/13/2012	ND	2.10	105	2.00	4.88	
Toluene*	<0.050	0.050	06/13/2012	ND	2.17	109	2.00	2.07	
Ethylbenzene*	<0.050	0.050	06/13/2012	ND	2.21	111	2.00	1.77	
Total Xylenes*	<0.150	0.150	06/13/2012	ND	6.86	114	6.00	0.457	

Surrogate: 4-Bromofluorobenzene (PIL *103 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**400**	16.0	06/12/2012	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/12/2012	ND	176	88.0	200	4.28	
DRO >C10-C28	**123**	10.0	06/12/2012	ND	172	86.2	200	7.49	

Surrogate: 1-Chlorooctane *94.2 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *110 %* *63.6-154*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	06/08/2012	Sampling Date:	06/06/2012
Reported:	06/14/2012	Sampling Type:	Soil
Project Name:	MCA IA TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: HA 2 SURFACE (H201294-04)

BTEX 8021B mg/kg Analyzed By: ZZZ S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**2.42**	0.500	06/13/2012	ND	2.10	105	2.00	4.88	
Toluene*	**43.4**	0.500	06/13/2012	ND	2.17	109	2.00	2.07	
Ethylbenzene*	**46.8**	0.500	06/13/2012	ND	2.21	111	2.00	1.77	
Total Xylenes*	**69.0**	1.50	06/13/2012	ND	6.86	114	6.00	0.457	

Surrogate: 4-Bromofluorobenzene (PIL *178 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/12/2012	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**2950**	100	06/12/2012	ND	176	88.0	200	4.28	
DRO >C10-C28	**8830**	100	06/12/2012	ND	172	86.2	200	7.49	

Surrogate: 1-Chlorooctane *269 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *281 %* *63.6-154*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	06/08/2012	Sampling Date:	06/06/2012
Reported:	06/14/2012	Sampling Type:	Soil
Project Name:	MCA IA TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: HA 2 10' BGS (H201294-05)

BTEX 8021B mg/kg **Analyzed By: ZZZ**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	06/13/2012	ND	2.10	105	2.00	4.88	
Toluene*	**0.761**	0.500	06/13/2012	ND	2.17	109	2.00	2.07	
Ethylbenzene*	**1.48**	0.500	06/13/2012	ND	2.21	111	2.00	1.77	
Total Xylenes*	**3.31**	1.50	06/13/2012	ND	6.86	114	6.00	0.457	

Surrogate: 4-Bromofluorobenzene (PIL *112 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**10100**	16.0	06/12/2012	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**12.9**	10.0	06/12/2012	ND	176	88.0	200	4.28	
DRO >C10-C28	**179**	10.0	06/12/2012	ND	172	86.2	200	7.49	

Surrogate: 1-Chlorooctane *93.0 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *109 %* *63.6-154*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	06/08/2012	Sampling Date:	06/06/2012
Reported:	06/14/2012	Sampling Type:	Soil
Project Name:	MCA IA TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: HA 2 13' BGS (H201294-06)

BTEX 8021B mg/kg **Analyzed By: ZZZ**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/13/2012	ND	2.10	105	2.00	4.88	
Toluene*	**0.058**	0.050	06/13/2012	ND	2.17	109	2.00	2.07	
Ethylbenzene*	**0.154**	0.050	06/13/2012	ND	2.21	111	2.00	1.77	
Total Xylenes*	**0.383**	0.150	06/13/2012	ND	6.86	114	6.00	0.457	

Surrogate: 4-Bromofluorobenzene (PID *120 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2680**	16.0	06/12/2012	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**11.6**	10.0	06/12/2012	ND	176	88.0	200	4.28	
DRO >C10-C28	**290**	10.0	06/12/2012	ND	172	86.2	200	7.49	

Surrogate: 1-Chlorooctane *90.5 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *116 %* *63.6-154*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Diamondback Disposal
Project Manager:	Justin Roberts
Address:	P.O. Box 2491
City:	Hobbs State: NM Zip: 88240
Phone #:	575-392-5556 Fax #: 575-392-5374
Project #:	N/A Project Owner: COPC
Project Name:	MCA IA Trunkline
Project Location:	Maljamar
Sampler Name:	Justin Roberts

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH	BTEX	Cl
H201294-1	HA 1 Surface	G				X							6-6-12	11:40	X	X	X
-2	HA 1 9' BGS	G				X								12:01	X	X	X
-3	HA 1 14' BGS	G				X								12:22	X	X	X
-4	HA 2 Surface	G				X								12:26	X	X	X
-5	HA 2 10' BGS	G				X								12:47	X	X	X
-6	HA 2 13' BGS	G				X								1:07	X	X	X

Relinquished By:	Date: 6/8/12 Time: 16:15	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
			REMARKS:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 3°C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

CARDINAL Laboratories

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

October 31, 2012

JUSTIN ROBERTS

DIAMONDBACK DISPOSAL SERVICE INC.

P. O. BOX 2491

HOBBS, NM 88241

RE: MCA 1A TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 10/17/12 13:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 5' BGS (H202535-01)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/18/2012	ND	2.09	104	2.00	11.7	
Toluene*	<0.050	0.050	10/18/2012	ND	2.04	102	2.00	4.75	
Ethylbenzene*	**0.102**	0.050	10/18/2012	ND	1.95	97.5	2.00	8.19	
Total Xylenes*	**0.347**	0.150	10/18/2012	ND	5.35	89.2	6.00	14.9	

Surrogate: 4-Bromofluorobenzene (PIL *115 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**656**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/18/2012	ND	192	95.9	200	5.10	
DRO >C10-C28	**166**	10.0	10/18/2012	ND	189	94.7	200	8.47	

Surrogate: 1-Chlorooctane *80.6 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *84.0 %* *63.6-154*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 10' BGS (H202535-02)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/18/2012	ND	2.09	104	2.00	11.7	
Toluene*	<0.050	0.050	10/18/2012	ND	2.04	102	2.00	4.75	
Ethylbenzene*	<0.050	0.050	10/18/2012	ND	1.95	97.5	2.00	8.19	
Total Xylenes*	<0.150	0.150	10/18/2012	ND	5.35	89.2	6.00	14.9	

Surrogate: 4-Bromofluorobenzene (PIL *108 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5280**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/18/2012	ND	192	95.9	200	5.10	
DRO >C10-C28	**149**	10.0	10/18/2012	ND	189	94.7	200	8.47	

Surrogate: 1-Chlorooctane *79.8 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *86.5 %* *63.6-154*

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JUSTIN ROBERTS
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Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 15' BGS (H202535-03)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/18/2012	ND	2.09	104	2.00	11.7	
Toluene*	<0.050	0.050	10/18/2012	ND	2.04	102	2.00	4.75	
Ethylbenzene*	<0.050	0.050	10/18/2012	ND	1.95	97.5	2.00	8.19	
Total Xylenes*	<0.150	0.150	10/18/2012	ND	5.35	89.2	6.00	14.9	

Surrogate: 4-Bromofluorobenzene (PID *113 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/18/2012	ND	192	95.9	200	5.10	
DRO >C10-C28	<10.0	10.0	10/18/2012	ND	189	94.7	200	8.47	

Surrogate: 1-Chlorooctane *74.9 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *80.4 %* *63.6-154*

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Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 20' BGS (H202535-04)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/18/2012	ND	2.09	104	2.00	11.7	
Toluene*	<0.050	0.050	10/18/2012	ND	2.04	102	2.00	4.75	
Ethylbenzene*	<0.050	0.050	10/18/2012	ND	1.95	97.5	2.00	8.19	
Total Xylenes*	<0.150	0.150	10/18/2012	ND	5.35	89.2	6.00	14.9	

Surrogate: 4-Bromofluorobenzene (PIL *116 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**592**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/18/2012	ND	192	95.9	200	5.10	
DRO >C10-C28	**354**	10.0	10/18/2012	ND	189	94.7	200	8.47	

Surrogate: 1-Chlorooctane *82.1 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *90.4 %* *63.6-154*

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HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 25' BGS (H202535-05)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/18/2012	ND	2.09	104	2.00	11.7	
Toluene*	<0.050	0.050	10/18/2012	ND	2.04	102	2.00	4.75	
Ethylbenzene*	<0.050	0.050	10/18/2012	ND	1.95	97.5	2.00	8.19	
Total Xylenes*	<0.150	0.150	10/18/2012	ND	5.35	89.2	6.00	14.9	

Surrogate: 4-Bromofluorobenzene (PIL *114 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/18/2012	ND	192	95.9	200	5.10	
DRO >C10-C28	**95.1**	10.0	10/18/2012	ND	189	94.7	200	8.47	

Surrogate: 1-Chlorooctane *78.2 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *83.1 %* *63.6-154*

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Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 30' BGS (H202535-06)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/30/2012	ND	2.25	113	2.00	16.1	
Toluene*	<0.050	0.050	10/30/2012	ND	2.49	124	2.00	17.3	
Ethylbenzene*	<0.050	0.050	10/30/2012	ND	2.48	124	2.00	17.4	
Total Xylenes*	<0.150	0.150	10/30/2012	ND	7.46	124	6.00	17.3	

Surrogate: 4-Bromofluorobenzene (PIL *108 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/18/2012	ND	192	95.9	200	5.10	
DRO >C10-C28	**95.6**	10.0	10/18/2012	ND	189	94.7	200	8.47	

Surrogate: 1-Chlorooctane *73.8 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *79.4 %* *63.6-154*

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Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 40' BGS (H202535-07)

BTEX 8021B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/30/2012	ND	2.25	113	2.00	16.1	
Toluene*	<0.050	0.050	10/30/2012	ND	2.49	124	2.00	17.3	
Ethylbenzene*	<0.050	0.050	10/30/2012	ND	2.48	124	2.00	17.4	
Total Xylenes*	<0.150	0.150	10/30/2012	ND	7.46	124	6.00	17.3	

Surrogate: 4-Bromofluorobenzene (PID 106 % 89.4-126

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/19/2012	ND	179	89.5	200	1.14	
DRO >C10-C28	**110**	10.0	10/19/2012	ND	176	87.9	200	0.0370	

Surrogate: 1-Chlorooctane 72.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 76.1 % 63.6-154

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Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 50' BGS (H202535-08)

BTEX 8021B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/30/2012	ND	2.25	113	2.00	16.1	
Toluene*	<0.050	0.050	10/30/2012	ND	2.49	124	2.00	17.3	
Ethylbenzene*	<0.050	0.050	10/30/2012	ND	2.48	124	2.00	17.4	
Total Xylenes*	<0.150	0.150	10/30/2012	ND	7.46	124	6.00	17.3	

Surrogate: 4-Bromofluorobenzene (PIL 108 % 89.4-126

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	10/24/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/19/2012	ND	179	89.5	200	1.14	
DRO >C10-C28	**69.8**	10.0	10/19/2012	ND	176	87.9	200	0.0370	

Surrogate: 1-Chlorooctane 74.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 77.8 % 63.6-154

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Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 60' BGS (H202535-09)

BTEX 8021B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/30/2012	ND	2.25	113	2.00	16.1	
Toluene*	<0.050	0.050	10/30/2012	ND	2.49	124	2.00	17.3	
Ethylbenzene*	<0.050	0.050	10/30/2012	ND	2.48	124	2.00	17.4	
Total Xylenes*	<0.150	0.150	10/30/2012	ND	7.46	124	6.00	17.3	

Surrogate: 4-Bromofluorobenzene (PIL *111 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	10/24/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/19/2012	ND	179	89.5	200	1.14	
DRO >C10-C28	**254**	10.0	10/19/2012	ND	176	87.9	200	0.0370	

Surrogate: 1-Chlorooctane *78.4 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *84.5 %* *63.6-154*

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Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 70' BGS (H202535-10)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/30/2012	ND	2.25	113	2.00	16.1	
Toluene*	<0.050	0.050	10/30/2012	ND	2.49	124	2.00	17.3	
Ethylbenzene*	<0.050	0.050	10/30/2012	ND	2.48	124	2.00	17.4	
Total Xylenes*	<0.150	0.150	10/30/2012	ND	7.46	124	6.00	17.3	

Surrogate: 4-Bromofluorobenzene (PIL 106 % 89.4-126

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	10/24/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/19/2012	ND	179	89.5	200	1.14	
DRO >C10-C28	**74.4**	10.0	10/19/2012	ND	176	87.9	200	0.0370	

Surrogate: 1-Chlorooctane 81.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 86.6 % 63.6-154

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Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 80' BGS (H202535-11)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/30/2012	ND	2.25	113	2.00	16.1	
Toluene*	<0.050	0.050	10/30/2012	ND	2.49	124	2.00	17.3	
Ethylbenzene*	<0.050	0.050	10/30/2012	ND	2.48	124	2.00	17.4	
Total Xylenes*	<0.150	0.150	10/30/2012	ND	7.46	124	6.00	17.3	

Surrogate: 4-Bromofluorobenzene (PIL *106 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	10/24/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/19/2012	ND	179	89.5	200	1.14	
DRO >C10-C28	**37.0**	10.0	10/19/2012	ND	176	87.9	200	0.0370	

Surrogate: 1-Chlorooctane *83.6 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *88.6 %* *63.6-154*

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Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 90' BGS (H202535-12)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/30/2012	ND	2.25	113	2.00	16.1	
Toluene*	<0.050	0.050	10/30/2012	ND	2.49	124	2.00	17.3	
Ethylbenzene*	<0.050	0.050	10/30/2012	ND	2.48	124	2.00	17.4	
Total Xylenes*	<0.150	0.150	10/30/2012	ND	7.46	124	6.00	17.3	

Surrogate: 4-Bromofluorobenzene (PID 107 % 89.4-126

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	10/24/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/19/2012	ND	179	89.5	200	1.14	
DRO >C10-C28	**92.0**	10.0	10/19/2012	ND	176	87.9	200	0.0370	

Surrogate: 1-Chlorooctane 75.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 81.6 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 1 - 100' BGS (H202535-13)

BTEX 8021B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/30/2012	ND	2.25	113	2.00	16.1	
Toluene*	<0.050	0.050	10/30/2012	ND	2.49	124	2.00	17.3	
Ethylbenzene*	<0.050	0.050	10/30/2012	ND	2.48	124	2.00	17.4	
Total Xylenes*	<0.150	0.150	10/30/2012	ND	7.46	124	6.00	17.3	

Surrogate: 4-Bromofluorobenzene (PIL *108 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	10/24/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/19/2012	ND	179	89.5	200	1.14	
DRO >C10-C28	**44.7**	10.0	10/19/2012	ND	176	87.9	200	0.0370	

Surrogate: 1-Chlorooctane *76.0 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *81.9 %* *63.6-154*

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Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 2 - 5' BGS (H202535-14)

BTEX 8021B mg/kg Analyzed By: AP S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/18/2012	ND	2.09	104	2.00	11.7	
Toluene*	**0.339**	0.050	10/18/2012	ND	2.04	102	2.00	4.75	
Ethylbenzene*	**0.537**	0.050	10/18/2012	ND	1.95	97.5	2.00	8.19	
Total Xylenes*	**1.30**	0.150	10/18/2012	ND	5.35	89.2	6.00	14.9	

Surrogate: 4-Bromofluorobenzene (PID 136 % 89.4-126

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**19.8**	10.0	10/18/2012	ND	192	95.9	200	5.10	
DRO >C10-C28	**206**	10.0	10/18/2012	ND	189	94.7	200	8.47	

Surrogate: 1-Chlorooctane 78.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 84.1 % 63.6-154

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Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 2 - 10' BGS (H202535-15)

BTEX 8021B mg/kg Analyzed By: AP S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/18/2012	ND	2.09	104	2.00	11.7	
Toluene*	<0.050	0.050	10/18/2012	ND	2.04	102	2.00	4.75	
Ethylbenzene*	**0.144**	0.050	10/18/2012	ND	1.95	97.5	2.00	8.19	
Total Xylenes*	**0.488**	0.150	10/18/2012	ND	5.35	89.2	6.00	14.9	

Surrogate: 4-Bromofluorobenzene (PIL 129 % 89.4-126

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**496**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/18/2012	ND	192	95.9	200	5.10	
DRO >C10-C28	**102**	10.0	10/18/2012	ND	189	94.7	200	8.47	

Surrogate: 1-Chlorooctane 77.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 81.9 % 63.6-154

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Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 2 - 15' BGS (H202535-16)

BTEX 8021B mg/kg Analyzed By: AP S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/18/2012	ND	2.09	104	2.00	11.7	
Toluene*	**0.246**	0.050	10/18/2012	ND	2.04	102	2.00	4.75	
Ethylbenzene*	**0.499**	0.050	10/18/2012	ND	1.95	97.5	2.00	8.19	
Total Xylenes*	**1.22**	0.150	10/18/2012	ND	5.35	89.2	6.00	14.9	

Surrogate: 4-Bromofluorobenzene (PIL *135 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**704**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**35.6**	10.0	10/18/2012	ND	192	95.9	200	5.10	
DRO >C10-C28	**326**	10.0	10/18/2012	ND	189	94.7	200	8.47	

Surrogate: 1-Chlorooctane *83.9 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *87.1 %* *63.6-154*

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Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 2 - 20' BGS (H202535-17)

BTEX 8021B mg/kg Analyzed By: AP S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/18/2012	ND	2.09	104	2.00	11.7	
Toluene*	**0.132**	0.050	10/18/2012	ND	2.04	102	2.00	4.75	
Ethylbenzene*	**0.332**	0.050	10/18/2012	ND	1.95	97.5	2.00	8.19	
Total Xylenes*	**0.857**	0.150	10/18/2012	ND	5.35	89.2	6.00	14.9	

Surrogate: 4-Bromofluorobenzene (PID 136 % 89.4-126

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1400**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**17.0**	10.0	10/18/2012	ND	192	95.9	200	5.10	
DRO >C10-C28	**184**	10.0	10/18/2012	ND	189	94.7	200	8.47	

Surrogate: 1-Chlorooctane 82.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 83.6 % 63.6-154

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CARDINAL Laboratories

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Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 2 - 25' BGS (H202535-18)

BTEX 8021B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/18/2012	ND	2.09	104	2.00	11.7	
Toluene*	**0.052**	0.050	10/18/2012	ND	2.04	102	2.00	4.75	
Ethylbenzene*	**0.148**	0.050	10/18/2012	ND	1.95	97.5	2.00	8.19	
Total Xylenes*	**0.340**	0.150	10/18/2012	ND	5.35	89.2	6.00	14.9	

Surrogate: 4-Bromofluorobenzene (PID 122 % 89.4-126

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**944**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**12.0**	10.0	10/19/2012	ND	179	89.5	200	1.14	
DRO >C10-C28	**490**	10.0	10/19/2012	ND	176	87.9	200	0.0370	

Surrogate: 1-Chlorooctane 75.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 82.8 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 2 - 30' BGS (H202535-19)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/18/2012	ND	2.09	104	2.00	11.7	
Toluene*	<0.050	0.050	10/18/2012	ND	2.04	102	2.00	4.75	
Ethylbenzene*	**0.089**	0.050	10/18/2012	ND	1.95	97.5	2.00	8.19	
Total Xylenes*	**0.229**	0.150	10/18/2012	ND	5.35	89.2	6.00	14.9	

Surrogate: 4-Bromofluorobenzene (PID *118 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**944**	16.0	10/23/2012	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**12.1**	10.0	10/19/2012	ND	179	89.5	200	1.14	
DRO >C10-C28	**560**	10.0	10/19/2012	ND	176	87.9	200	0.0370	

Surrogate: 1-Chlorooctane *79.7 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *88.7 %* *63.6-154*

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Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 2 - 40' BGS (H202535-20)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2012	ND	1.98	99.0	2.00	2.23	
Toluene*	<0.050	0.050	10/22/2012	ND	2.15	108	2.00	2.85	
Ethylbenzene*	**0.086**	0.050	10/22/2012	ND	2.16	108	2.00	2.30	
Total Xylenes*	**0.352**	0.150	10/22/2012	ND	6.54	109	6.00	2.75	

Surrogate: 4-Bromofluorobenzene (PIL *125 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**784**	16.0	10/24/2012	ND	400	100	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**15.2**	10.0	10/19/2012	ND	179	89.5	200	1.14	
DRO >C10-C28	**579**	10.0	10/19/2012	ND	176	87.9	200	0.0370	

Surrogate: 1-Chlorooctane *83.5 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *92.9 %* *63.6-154*

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Analytical Results For:

DIAMONDBACK DISPOSAL SERVICE INC.
JUSTIN ROBERTS
P. O. BOX 2491
HOBBS NM, 88241
Fax To: (575) 392-9376

Received:	10/17/2012	Sampling Date:	10/16/2012
Reported:	10/31/2012	Sampling Type:	Soil
Project Name:	MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	MALJAMAR, NEW MEXICO		

Sample ID: SS 2 - 50' BGS (H202535-21)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2012	ND	1.98	99.0	2.00	2.23	
Toluene*	<0.050	0.050	10/22/2012	ND	2.15	108	2.00	2.85	
Ethylbenzene*	**0.066**	0.050	10/22/2012	ND	2.16	108	2.00	2.30	
Total Xylenes*	**0.268**	0.150	10/22/2012	ND	6.54	109	6.00	2.75	

Surrogate: 4-Bromofluorobenzene (PID 125 % *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**784**	16.0	10/24/2012	ND	400	100	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**12.0**	10.0	10/19/2012	ND	179	89.5	200	1.14	
DRO >C10-C28	**626**	10.0	10/19/2012	ND	176	87.9	200	0.0370	

Surrogate: 1-Chlorooctane *77.4 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *86.2 %* *63.6-154*

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Diamondback Disposal Sav. Inc
Project Manager: Justin Roberts
Address: P.O. Box 2491
City: Hobbs State: NM Zip: 88241
Phone #: 575-392-9996 Fax #: 575-392-9376
Project #: N/A Project Owner: COPC
Project Name: MCA IA Trunkline
Project Location: Mahamar
Sampler Name: Justin Roberts

BILL TO
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Fax #:

FOR LAB USE ONLY				MATRIX					PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE	ICE / COOL	OTHER:	DATE	TIME	TPH	BTEX	Cl
H207535																	
1	SS1 - 5' BGS	G	1			X							10-16-12	9:30	X	X	X
2	SS1 - 10' BGS					X							"	9:40	X	X	X
3	SS1 - 15' BGS					X							"	9:46	X	X	X
4	SS1 - 20' BGS					X							"	9:52	X	X	X
5	SS1 - 25' BGS					X							"	9:53	X	X	X
6	SS1 - 30' BGS					X							"	9:56	X	X	X
7	SS1 - 40' BGS					X							"	9:59	X	X	X
8	SS1 - 50' BGS					X							"	10:04	X	X	X
9	SS1 - 60' BGS					X							"	10:14	X	X	X
10	SS1 - 70' BGS					X							"	10:24	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

Relinquished By: Justin Date: 10/17/12 Time: 1:25 Received By: Deni Henson
Relinquished By: Date: Time: Received By:
Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition: Cool: Yes / No; Intact: Yes / No
CHECKED BY: (Initials)

Phone Result: Yes No Add'l Phone #:
Fax Result: Yes No Add'l Fax #:
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#26

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Diamondback Disposal Sav. Inc
Project Manager: Justin Roberts
Address: P.O. Box 2491
City: Hobbs State: NM Zip: 88241
Phone #: 575-392-9996 Fax #: 575-392-9376
Project #: N/A Project Owner: COPC
Project Name: MCA IA Trunk Line
Project Location: Maljamar
Sampler Name: Justin Roberts

BILL TO
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST: TPH, BTEX, Cl

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE	ICE / COOL	OTHER:	SAMPLING DATE	SAMPLING TIME
H207535														
11	SS1 - 80' BGS	G	1			X					X		10-16-12	10:36
12	SS1 - 90' BGS					X					X		"	10:52
13	SS1 - 100' BGS					X					X		"	11:01
14	SS2 - 5' BGS					X					X		"	11:13
15	SS2 - 10' BGS					X					X		"	11:20
16	SS2 - 15' BGS					X					X		"	11:25
17	SS2 - 20' BGS					X					X		"	11:28
18	SS2 - 25' BGS					X					X		"	11:34
19	SS2 - 30' BGS					X					X		"	11:36
20	SS2 - 40' BGS					X					X		"	11:39

Relinquished By: Justin L Date: 10/12/12 Time: 1:35 Received By: Jodi Henson
Relinquished By: Date: Time: Received By:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition: Cool ☐ Yes ☐ No / Intact ☑ Yes ☐ No
CHECKED BY: (Initials)

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#26

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Diamondback Disposal Sov. Inc.
Project Manager: Justin Roberts
Address: P.O. Box 2491
City: Hobbs State: NM Zip: 88241
Phone #: 575-392-9996 Fax #: 575-392-9376
Project #: N/A Project Owner: COPC
Project Name: MCA I A Trunkline
Project Location: Maljamar
Sampler Name: Justin Roberts

BILL TO

P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE	ICE / COOL	OTHER:	SAMPLING DATE	TIME	TPH	BTEX	Cl
H202535-21	SS2 - 50' BGS	G	1			X				X			10-16-12	11:46	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Date: 10/17/12 Received By: Jodi Henson
Time: 1:35
Relinquished By: Date: Received By:
Time:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 1°C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No
CHECKED BY: (Initials)

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#26

CARDINAL Laboratories

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

June 24, 2014

KYLE NORMAN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: COP MCA 1A TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 06/19/14 14:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
KYLE NORMAN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	06/19/2014	Sampling Date:	06/18/2014
Reported:	06/24/2014	Sampling Type:	Soil
Project Name:	COP MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

Sample ID: SB2@ 55FT (H401850-01)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2014	ND	2.03	101	2.00	2.64	
Toluene*	<0.050	0.050	06/20/2014	ND	2.18	109	2.00	2.92	
Ethylbenzene*	<0.050	0.050	06/20/2014	ND	1.99	99.3	2.00	3.07	
Total Xylenes*	<0.150	0.150	06/20/2014	ND	6.23	104	6.00	2.85	
Total BTEX	<0.300	0.300	06/20/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID *117 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**432**	16.0	06/20/2014	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/23/2014	ND	181	90.3	200	3.55	
DRO >C10-C28	**340**	10.0	06/23/2014	ND	197	98.3	200	6.86	

Surrogate: 1-Chlorooctane *85.3 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *91.2 %* *63.6-154*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
KYLE NORMAN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	06/19/2014	Sampling Date:	06/18/2014
Reported:	06/24/2014	Sampling Type:	Soil
Project Name:	COP MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

Sample ID: SB2@ 65FT (H401850-02)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2014	ND	2.03	101	2.00	2.64	
Toluene*	<0.050	0.050	06/20/2014	ND	2.18	109	2.00	2.92	
Ethylbenzene*	<0.050	0.050	06/20/2014	ND	1.99	99.3	2.00	3.07	
Total Xylenes*	<0.150	0.150	06/20/2014	ND	6.23	104	6.00	2.85	
Total BTEX	<0.300	0.300	06/20/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1150**	16.0	06/20/2014	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/23/2014	ND	181	90.3	200	3.55	
DRO >C10-C28	**230**	10.0	06/23/2014	ND	197	98.3	200	6.86	

Surrogate: 1-Chlorooctane *78.9 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *84.5 %* *63.6-154*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
KYLE NORMAN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	06/19/2014	Sampling Date:	06/18/2014
Reported:	06/24/2014	Sampling Type:	Soil
Project Name:	COP MCA 1A TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

Sample ID: SB2@ 75FT (H401850-03)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2014	ND	2.03	101	2.00	2.64	
Toluene*	<0.050	0.050	06/20/2014	ND	2.18	109	2.00	2.92	
Ethylbenzene*	<0.050	0.050	06/20/2014	ND	1.99	99.3	2.00	3.07	
Total Xylenes*	<0.150	0.150	06/20/2014	ND	6.23	104	6.00	2.85	
Total BTEX	<0.300	0.300	06/20/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	06/20/2014	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/23/2014	ND	181	90.3	200	3.55	
DRO >C10-C28	**236**	10.0	06/23/2014	ND	197	98.3	200	6.86	

Surrogate: 1-Chlorooctane *78.1 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *88.1 %* *63.6-154*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RECS	BILL TO
Project Manager: Kyle Norman	P.O. #:
Address:	Company:
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name: COP MCA 1A Trunk Line	State: Zip:
Project Location:	Phone #:
Sampler Name: Amber Groves	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS							
H401850																											
	SB2@55ft	G	1			✓							6-18-14	10:00	✓	✓	✓										
	SB2@45ft	G	1			✓							6-18-14	10:10	✓	✓	✓										
	SB2@75ft	G	1			✓							6-18-14	10:20	✓	✓	✓										

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Amber Groves	Date: 6/19/14 Time: 2:15	Received By: Kathy Perry	Phone Result: ☐ Yes ☑ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☑ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 1.6°C #54	Sample Condition Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) KP	REMARKS: email results knorman@rice-ecs.com hconder@rice-ecs.com; Lweinheimer@rice-ecs.com; kjones@riceswd.com; Lpena@riceswd.com; sedwards@rice-ecs.com agroves@rice-ecs.com

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

Appendix C

Soil Bore Log

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Logger:	Amber Groves		RECS RICE ENVIRONMENTAL CONSULTING & SAFETY
Driller:	White Drilling		**Project Name:** CoP MCA 1A Header **Well ID:** SB-2
Drilling Method:	Air Rotary		**Project Consultant:** RECS
Start Date:	6/18/2014		**Location:** U/L G Sec 30 T-17-S R-32-E
End Date:	6/18/2014		**Lat:** 32°48'24.926"N **Long:**103°48'10.021"W **County**:Lea **State**:NM

Comments: All samples were taken from cuttings.

DRAFTED BY: C. Uršanić

TD = 75' GW = 95' - 105'

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				RED SAND		Bentonite Seal
SS						
5 ft						
10 ft						
15 ft						
20 ft						
25 ft						
30 ft						
35 ft						

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
40 ft				COARSE RED SAND		Bentonite Seal
45 ft						
50 ft						
55 ft	452	Cl- 432	6.9			
	B <0.05 T <0.05	GRO <10		RED SAND		
	E <0.05 X <0.15	DRO 340				
60 ft	618		7.1			
				RED SAND/CLAY		
65 ft	1024	Cl- 1150	5.6			
	B <0.05 T <0.05	GRO <10				
	E <0.05 X <0.15	DRO 230				
70 ft	803		6.4			
75 ft	369	Cl- 352	5.4			
	B <0.05 T <0.05	GRO <10				
	E <0.05 X <0.15	DRO 236				

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): SB-2		OSE FILE NUMBER(S):
WELL OWNER NAME(S): Conoco Phillips		PHONE (OPTIONAL):
WELL OWNER MAILING ADDRESS: HC 60, Box 66	CITY: Lovington	STATE: NM ZIP: 88260

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	48	24.85	N
LONGITUDE	103	48	10.00	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE: MCA I Trunk Line

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1456	John W. White	White Drilling Company, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
06/18/2014	06/18/2014		75.0	Dry

COMPLETED WELL IS: ( ) ARTESIAN (•) DRY HOLE ( ) SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): Dry

DRILLING FLUID: (•) AIR ( ) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ( ) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0.0	75.0	6.0	Type 2 Portland Cement w/5% Bentonite	14.7225	Pump Mix w/tremmi

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

Appendix D

Photo Documentation

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

ConocoPhillips MCA 1A Header

Unit Letter G, Section 30, T17S, R32E

Drilling SB-2, facing southeast 6/18/14

Plugging SB-2 in total with bentonite, facing east 6/18/14

Completed SB-2, facing southeast 6/18/14

Completed SB-2, facing northwest 6/18/14

From: Hughes, Solomon
To: Kyle Norman
Cc: Justin Wright (PAC); Hack Conder; Lara Weinheimer; Laura Flores; Catherine Ursanic
Subject: Re: COP MCA 1A Header
Date: Wednesday, August 13, 2014 12:43:41 PM

Kyle,

Approved as written.

Sol

Sol Hughes
Environmental Protection Division
Bureau of Land Management
620 E. Greene St
Carlsbad, NM

Office: 575.234.5951
Cell: 575.499.3378

On Wed, Aug 13, 2014 at 10:05 AM, Kyle Norman <knorman@rice-ecs.com> wrote:

> Sol, attached is the Corrective Action Plan for the CoP MCA 1A Header. If you have any questions, please let us know. Otherwise, we await your approval.
>
> Thanks!
>
> Kyle Norman
>
> Project Lead
>
> 419 W. Cain
>
> Hobbs NM 88240
>
> Cell # (575)942-8542
>
> Fax # (575)393-0293
>
> RICE ENVIRONMENTAL CONSULTING & SAFETY

From: Oberding, Tomas, EMNRD
To: Kyle Norman
Cc: "Hack Conder"; Justin.Wright@conocophillips.com; "Lara Weinheimer"; "Laura Flores"; "Catherine Ursanic"
Subject: RE: COP MCA 1A Header
Date: Wednesday, August 13, 2014 8:51:22 AM

Aloha Kyle,

Second mail of the morning-
Thank you for sending in this plan again.
I appreciate you stopping by to explain the proposals for this event
Based on the documentation and our discussion OCD approves the scope of work (please consider this the official 'signing off').

If you have any questions, please contact me, else please keep me informed as the situation warrants.
Mahalo

Tomáš 'Doc' Oberding, PhD
Environmental Specialist – New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240
(O): (575) 393-6161 ext 111
(C): 575-370-3180
(F): (575) 393-0720
E-Mail: tomas.oberding@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/

From: Kyle Norman [mailto:knorman@rice-ecs.com]
Sent: Wednesday, August 13, 2014 8:04 AM
To: Oberding, Tomas, EMNRD
Cc: 'Hack Conder'; Justin.Wright@conocophillips.com; 'Lara Weinheimer'; 'Laura Flores'; 'Catherine Ursanic'
Subject: COP MCA 1A Header

Tomas,

I have attached the COP MCA 1A Header CAP plan for the meeting this morning at 8:30 AM. Thanks

Kyle Norman
Project Lead
419 W. Cain
Hobbs NM 88240
Cell # (575)942-8542
Fax # (575)393-0293

RECS
RICE ENVIRONMENTAL
CONSULTING & SAFETY

APPENDIX D
Soil Boring Logs

212C-MD-02251 | TETRA TECH | **LOG OF BORING BH-2** | Page 1 of 1

Project Name: MCA 1-A Header Release

Borehole Location: GPS: 32.806814°, -103.802761° | Surface Elevation: 3913 ft

Borehole Number: BH-2 | Borehole Diameter (in.): 6 | Date Started: 7/29/2020 | Date Finished: 7/29/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
												-SM- SILTY SAND; Brown, loose, dry, with no odor, with no staining.	1.5	BH-2 (0'-1')
												-SM- SILTY SAND; Brown, loose, dry, with moderate odor, with high staining.		BH-2 (2'-3')
5														BH-2 (4'-5')
														BH-2 (6'-7')
10														BH-2 (9'-10')
													13	BH-2 (12'-13')
												-SM- SILTY SAND; Tan, dense, dry, with moderate gravel, with low odor, with no staining.		BH-2 (14'-15')
15													16	
												-SM- SILTY SAND; Light tan, very dense, dry, with moderate gravel, with no odor, with no staining.		BH-2 (17'-18')
20														BH-2 (19'-20')
			1670											BH-2 (22'-23')
25														BH-2 (24'-25')
													27	BH-2 (26'-27')

Bottom of borehole at 27.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:
Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Direct Push | Driller: HCI Drilling

212C-MD-02251 | TETRA TECH | **LOG OF BORING BH-1** | Page 1 of 1

Project Name: MCA 1-A Header Release

Borehole Location: GPS: 32.806954°, -103.802792° | Surface Elevation: 3911 ft

Borehole Number: BH-1 | Borehole Diameter (in.): 6 | Date Started: 7/29/2020 | Date Finished: 7/29/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			998									**-SM-** SILTY SAND; Brown, loose, dry, with no odor, with no staining.		BH-1 (0'-1')
														BH-1 (2'-3')
5														BH-1 (4'-5')
			626											BH-1 (6'-7')
10														BH-1 (9'-10')
													11	
			499									**-SM-** SILTY SAND; Tan, dense, dry, moderately cemented, with moderate gravel, with no odor, with no staining.		BH-1 (12'-13')
15														BH-1 (14'-15')
														BH-1 (17'-18')
20			1820											BH-1 (19'-20')
													21	
												-SM- SILTY SAND; Light tan, very dense, dry, highly cemented, with moderate gravel, with no odor, with no staining.		BH-1 (22'-23')
25														BH-1 (24'-25')
			3730											BH-1 (26'-27')
30			3310										30	BH-1 (29'-29')

Bottom of borehole at 30.0 feet.

Sampler Types: Split Spoon, Shelby, Bulk Sample, Grab Sample, Acetate Liner, Vane Shear, California, Test Pit

Operation Types: Mud Rotary, Continuous Flight Auger, Wash Rotary, Hand Auger, Air Rotary, Direct Push, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Direct Push | Driller: HCI Drilling

212C-MD-02251 | TETRA TECH

LOG OF BORING H-20-1

Page 1 of 1

Project Name: MCA 1-A Header Release

Borehole Location: GPS: 32.807080°, -103.802752° | Surface Elevation: 3911 ft

Borehole Number: H-20-1 | Borehole Diameter (in.): 2 | Date Started: 8/12/2020 | Date Finished: 8/12/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			12	0								**-SM-** SILTY SAND; Brown, loose, dry, with no odor, with no staining.		AH-1 (0'-1')
			20	0										AH-1 (2'-3')
													4	AH-1 (3'-4')

Bottom of borehole at 4.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Adrian Garcia | Drilling Equipment: Hand Auger | Driller: Tetra Tech

212C-MD-02251 | TETRA TECH | **LOG OF BORING H-20-2** | Page 1 of 1

Project Name: MCA 1-A Header Release

Borehole Location: GPS: 32.806944°, -103.802647° | Surface Elevation: 3912 ft

Borehole Number: H-20-2 | Borehole Diameter (in.): 2 | Date Started: 8/12/2020 | Date Finished: 8/12/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			19	0								**-SM-** SILTY SAND; Brown, loose, dry, with no odor, with no staining.		AH-2 (0'-1')
			11	0										AH-2 (2'-3')
													4	AH-2 (3'-4')

Bottom of borehole at 4.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Adrian Garcia | Drilling Equipment: Hand Auger | Driller: Tetra Tech

212C-MD-02251 | TETRA TECH | **LOG OF BORING H-20-3** | Page 1 of 1

Project Name: MCA 1-A Header Release

Borehole Location: GPS: 32.806780°, -103.802659° | Surface Elevation: 3913 ft

Borehole Number: H-20-3 | Borehole Diameter (in.): 2 | Date Started: 8/12/2020 | Date Finished: 8/12/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
												-SM- SILTY SAND; Brown, loose, dry, with no odor, with no staining.		AH-3 (0'-1')
														AH-3 (2'-3')
													4	AH-3 (3'-4')

Bottom of borehole at 4.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Adrian Garcia | Drilling Equipment: Hand Auger | Driller: Tetra Tech

212C-MD-02251 | TETRA TECH | **LOG OF BORING H-20-4** | Page 1 of 1

Project Name: MCA 1-A Header Release

Borehole Location: GPS: 32.806712°, -103.802790° | Surface Elevation: 3913 ft

Borehole Number: H-20-4 | Borehole Diameter (in.): 2 | Date Started: 8/12/2020 | Date Finished: 8/12/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			12	0								**-SM-** SILTY SAND; Brown, loose, dry, with no odor, with no staining.		AH-4 (0'-1')
			9	0										AH-4 (2'-3')
													4	AH-4 (3'-4')

Bottom of borehole at 4.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Adrian Garcia | Drilling Equipment: Hand Auger | Driller: Tetra Tech

212C-MD-02251 | TETRA TECH | **LOG OF BORING H-20-5** | Page 1 of 1

Project Name: MCA 1-A Header Release

Borehole Location: GPS: 32.806867°, -103.802895° | Surface Elevation: 3910 ft

Borehole Number: H-20-5 | Borehole Diameter (in.): 2 | Date Started: 8/12/2020 | Date Finished: 8/12/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			8	0								**-SM-** SILTY SAND; Brown, loose, dry, with no odor, with no staining.		AH-5 (0'-1')
			12	0										AH-5 (2'-3')
													4	AH-5 (3'-4')

Bottom of borehole at 4.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Adrian Garcia | Drilling Equipment: Hand Auger | Driller: Tetra Tech

212C-MD-02251 | TETRA TECH | **LOG OF BORING H-20-6** | Page 1 of 1

Project Name: MCA 1-A Header Release

Borehole Location: GPS: 32.806984°, -103.802881° | Surface Elevation: 3910 ft

Borehole Number: H-20-6 | Borehole Diameter (in.): 2 | Date Started: 8/12/2020 | Date Finished: 8/12/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			9	0								**-SM-** SILTY SAND; Brown, loose, dry, with no odor, with no staining.		AH-6 (0'-1')
			11	0										AH-6 (2'-3')
													4	AH-6 (3'-4')

Bottom of borehole at 4.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Adrian Garcia | Drilling Equipment: Hand Auger | Driller: Tetra Tech

APPENDIX E
Laboratory Analytical Data

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 10, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1245426
Samples Received:	07/31/2020
Project Number:	212C-MD-02251
Description:	MCA 1-A Header Transit Line

Report To: Christian Llull
901 West Wall
Suite 100
Midland, TX 79701

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

TABLE OF CONTENTS

BH-1 (0-1') L1245426-01 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 10:00 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521260	1	08/06/20 10:15	08/06/20 10:23	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 15:13	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1522330	1	08/07/20 15:50	08/07/20 16:40	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519285	1	08/01/20 20:32	08/03/20 10:51	AV	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520130	1	08/04/20 15:34	08/05/20 01:08	JN	Mt. Juliet, TN

BH-1 (2-3') L1245426-02 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 10:10 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521260	1	08/06/20 10:15	08/06/20 10:23	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 15:22	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519518	1	08/01/20 20:32	08/03/20 17:00	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519285	1.04	08/01/20 20:32	08/03/20 11:10	AV	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520130	1	08/04/20 15:34	08/05/20 01:21	JN	Mt. Juliet, TN

BH-1 (6-7') L1245426-03 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 10:20 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521260	1	08/06/20 10:15	08/06/20 10:23	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 15:32	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519518	1	08/01/20 20:32	08/03/20 17:22	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 00:50	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520130	1	08/04/20 15:34	08/05/20 01:34	JN	Mt. Juliet, TN

BH-1 (9-10') L1245426-04 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 10:30 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521260	1	08/06/20 10:15	08/06/20 10:23	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 15:41	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519518	1	08/01/20 20:32	08/03/20 17:45	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1.28	08/01/20 20:32	08/04/20 01:09	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 15:16	FM	Mt. Juliet, TN

BH-1 (12-13') L1245426-05 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 10:40 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521260	1	08/06/20 10:15	08/06/20 10:23	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 15:51	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519518	1	08/01/20 20:32	08/03/20 18:07	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 01:28	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 15:28	FM	Mt. Juliet, TN

BH-1 (14-15') L1245426-06 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 10:50 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521261	1	08/06/20 09:59	08/06/20 10:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	1	08/06/20 10:19	08/06/20 16:00	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519518	1	08/01/20 20:32	08/03/20 18:29	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1.01	08/01/20 20:32	08/04/20 01:47	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 15:41	FM	Mt. Juliet, TN

BH-1 (17-18') L1245426-07 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 11:00 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521261	1	08/06/20 09:59	08/06/20 10:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	1	08/06/20 10:19	08/06/20 16:10	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519518	1	08/01/20 20:32	08/03/20 18:51	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 02:06	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 15:54	FM	Mt. Juliet, TN

BH-1 (19-20') L1245426-08 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 11:20 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521261	1	08/06/20 09:59	08/06/20 10:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 16:57	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519518	1	08/01/20 20:32	08/03/20 19:14	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 02:25	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 16:07	FM	Mt. Juliet, TN

BH-1 (22-23') L1245426-09 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 11:40 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521261	1	08/06/20 09:59	08/06/20 10:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 17:16	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519518	1	08/01/20 20:32	08/03/20 19:36	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 02:43	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 18:37	JN	Mt. Juliet, TN

BH-1 (24-25') L1245426-10 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 12:00 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521261	1	08/06/20 09:59	08/06/20 10:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 17:26	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519518	1	08/01/20 20:32	08/03/20 19:58	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 03:02	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 19:16	JN	Mt. Juliet, TN

BH-1 (26-27') L1245426-11 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 12:20 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521261	1	08/06/20 09:59	08/06/20 10:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 17:35	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519518	1.01	08/01/20 20:32	08/03/20 20:47	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 03:21	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 19:29	JN	Mt. Juliet, TN

BH-1 (29-30') L1245426-12 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 12:40 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521261	1	08/06/20 09:59	08/06/20 10:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 17:45	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519518	1	08/01/20 20:32	08/03/20 22:07	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 03:40	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 19:41	JN	Mt. Juliet, TN

BH-2 (0-1') L1245426-13 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 13:20 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521261	1	08/06/20 09:59	08/06/20 10:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	1	08/06/20 10:19	08/07/20 11:33	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1522330	50	08/01/20 20:32	08/07/20 17:01	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 03:59	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	5	08/05/20 22:31	08/07/20 15:39	JDG	Mt. Juliet, TN

BH-2 (2-3') L1245426-14 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 13:30 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521261	1	08/06/20 09:59	08/06/20 10:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	5	08/06/20 10:19	08/06/20 18:04	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519979	1	08/01/20 20:32	08/04/20 15:16	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 04:18	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 19:54	JN	Mt. Juliet, TN

BH-2 (6-7') L1245426-15 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 13:40 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521261	1	08/06/20 09:59	08/06/20 10:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	5	08/06/20 10:19	08/06/20 18:14	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519979	1	08/01/20 20:32	08/04/20 15:39	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 04:37	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	5	08/05/20 22:31	08/07/20 15:26	JDG	Mt. Juliet, TN

BH-2 (9-10') L1245426-16 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 13:50 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521262	1	08/06/20 13:18	08/06/20 13:29	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	1	08/06/20 10:19	08/06/20 18:42	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1520452	1	08/01/20 20:32	08/05/20 19:58	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1.01	08/01/20 20:32	08/04/20 04:56	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 20:07	JN	Mt. Juliet, TN

BH-2 (11-12') L1245426-17 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 14:00 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521262	1	08/06/20 13:18	08/06/20 13:29	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	5	08/06/20 10:19	08/06/20 18:52	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1520452	1	08/01/20 20:32	08/05/20 20:21	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1.01	08/01/20 20:32	08/04/20 05:15	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 20:20	JN	Mt. Juliet, TN

BH-2 (14-15') L1245426-18 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 14:20 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521262	1	08/06/20 13:18	08/06/20 13:29	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	5	08/06/20 10:19	08/06/20 19:01	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1520304	1	08/01/20 20:32	08/05/20 03:07	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 05:33	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1520132	1	08/05/20 22:31	08/06/20 20:33	JN	Mt. Juliet, TN

BH-2 (17-18') L1245426-19 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 14:40 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521262	1	08/06/20 13:18	08/06/20 13:29	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 19:20	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1520304	1	08/01/20 20:32	08/05/20 03:30	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 05:52	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1521551	1	08/05/20 16:04	08/07/20 03:20	JN	Mt. Juliet, TN

BH-2 (19-20') L1245426-20 Solid

Collected by: Joe Tyler | Collected date/time: 07/29/20 15:00 | Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521262	1	08/06/20 13:18	08/06/20 13:29	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519269	10	08/06/20 10:19	08/06/20 19:30	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1520304	1	08/01/20 20:32	08/05/20 03:52	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:32	08/04/20 06:11	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1521551	1	08/05/20 16:04	08/07/20 03:33	JN	Mt. Juliet, TN

BH-2 (22-23') L1245426-21 Solid

Collected by: Joe Tyler
Collected date/time: 07/29/20 15:30
Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521262	1	08/06/20 13:18	08/06/20 13:29	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519268	5	08/03/20 22:00	08/04/20 07:23	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1520304	1	08/01/20 20:44	08/05/20 04:14	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:44	08/04/20 06:30	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1521551	1	08/05/20 16:04	08/07/20 03:45	JN	Mt. Juliet, TN

BH-2 (26-27') L1245426-22 Solid

Collected by: Joe Tyler
Collected date/time: 07/29/20 16:00
Received date/time: 07/31/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1521262	1	08/06/20 13:18	08/06/20 13:29	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1519268	5	08/03/20 22:00	08/04/20 07:41	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1521831	1	08/01/20 20:44	08/07/20 05:39	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1519731	1	08/01/20 20:44	08/04/20 06:49	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1521551	1	08/05/20 16:04	08/07/20 03:58	JN	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.2		1	08/06/2020 10:23	WG1521260

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	611		113	246	10	08/06/2020 15:13	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0267	0.123	1	08/07/2020 16:40	WG1522330
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*		*08/07/2020 16:40*	WG1522330

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000684	0.00147	1	08/03/2020 10:51	WG1519285
Toluene	U		0.00190	0.00733	1	08/03/2020 10:51	WG1519285
Ethylbenzene	U		0.00108	0.00366	1	08/03/2020 10:51	WG1519285
Total Xylenes	U		0.00129	0.00952	1	08/03/2020 10:51	WG1519285
(S) Toluene-d8	*104*			*75.0-131*		*08/03/2020 10:51*	WG1519285
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*		*08/03/2020 10:51*	WG1519285
(S) 1,2-Dichloroethane-d4	*92.3*			*70.0-130*		*08/03/2020 10:51*	WG1519285

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.13	J	1.98	4.93	1	08/05/2020 01:08	WG1520130
C28-C40 Oil Range	3.94	B J	0.338	4.93	1	08/05/2020 01:08	WG1520130
(S) o-Terphenyl	*51.2*			*18.0-148*		*08/05/2020 01:08*	WG1520130

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.1		1	08/06/2020 10:23	WG1521260

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	467		95.7	208	10	08/06/2020 15:22	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0226	0.104	1	08/03/2020 17:00	WG1519518
(S) a,a,a-Trifluorotoluene(FID)	*97.9*			*77.0-120*		*08/03/2020 17:00*	WG1519518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000505	0.00108	1.04	08/03/2020 11:10	WG1519285
Toluene	U		0.00140	0.00541	1.04	08/03/2020 11:10	WG1519285
Ethylbenzene	U		0.000797	0.00270	1.04	08/03/2020 11:10	WG1519285
Total Xylenes	U		0.000952	0.00703	1.04	08/03/2020 11:10	WG1519285
(S) Toluene-d8	*106*			*75.0-131*		*08/03/2020 11:10*	WG1519285
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*08/03/2020 11:10*	WG1519285
(S) 1,2-Dichloroethane-d4	*93.8*			*70.0-130*		*08/03/2020 11:10*	WG1519285

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.67	4.16	1	08/05/2020 01:21	WG1520130
C28-C40 Oil Range	0.807	B J	0.285	4.16	1	08/05/2020 01:21	WG1520130
(S) o-Terphenyl	*67.2*			*18.0-148*		*08/05/2020 01:21*	WG1520130

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.9		1	08/06/2020 10:23	WG1521260

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	334		99.0	215	10	08/06/2020 15:32	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0273	J	0.0234	0.108	1	08/03/2020 17:22	WG1519518
(S) a,a,a-Trifluorotoluene(FID)	*96.9*			*77.0-120*		*08/03/2020 17:22*	WG1519518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000503	0.00108	1	08/04/2020 00:50	WG1519731
Toluene	U		0.00140	0.00538	1	08/04/2020 00:50	WG1519731
Ethylbenzene	U		0.000793	0.00269	1	08/04/2020 00:50	WG1519731
Total Xylenes	U		0.000947	0.00700	1	08/04/2020 00:50	WG1519731
(S) Toluene-d8	*102*			*75.0-131*		*08/04/2020 00:50*	WG1519731
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*08/04/2020 00:50*	WG1519731
(S) 1,2-Dichloroethane-d4	*94.4*			*70.0-130*		*08/04/2020 00:50*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.13	J	1.73	4.30	1	08/05/2020 01:34	WG1520130
C28-C40 Oil Range	1.11	B J	0.295	4.30	1	08/05/2020 01:34	WG1520130
(S) o-Terphenyl	*71.0*			*18.0-148*		*08/05/2020 01:34*	WG1520130

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.7		1	08/06/2020 10:23	WG1521260

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	165	J	99.3	216	10	08/06/2020 15:41	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0234	0.108	1	08/03/2020 17:45	WG1519518
(S) a,a,a-Trifluorotoluene(FID)	*96.4*			*77.0-120*		*08/03/2020 17:45*	WG1519518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000645	0.00138	1.28	08/04/2020 01:09	WG1519731
Toluene	U		0.00179	0.00691	1.28	08/04/2020 01:09	WG1519731
Ethylbenzene	U		0.00102	0.00345	1.28	08/04/2020 01:09	WG1519731
Total Xylenes	U		0.00122	0.00898	1.28	08/04/2020 01:09	WG1519731
(S) Toluene-d8	*104*			*75.0-131*		*08/04/2020 01:09*	WG1519731
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*08/04/2020 01:09*	WG1519731
(S) 1,2-Dichloroethane-d4	*94.3*			*70.0-130*		*08/04/2020 01:09*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1.98	J	1.74	4.32	1	08/06/2020 15:16	WG1520132
C28-C40 Oil Range	1.25	J	0.296	4.32	1	08/06/2020 15:16	WG1520132
(S) o-Terphenyl	*50.0*			*18.0-148*		*08/06/2020 15:16*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.1		1	08/06/2020 10:23	WG1521260

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	182	J	101	220	10	08/06/2020 15:51	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0238	0.110	1	08/03/2020 18:07	WG1519518
(S) a,a,a-Trifluorotoluene(FID)	*96.8*			*77.0-120*		*08/03/2020 18:07*	WG1519518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000513	0.00110	1	08/04/2020 01:28	WG1519731
Toluene	U		0.00143	0.00549	1	08/04/2020 01:28	WG1519731
Ethylbenzene	U		0.000809	0.00275	1	08/04/2020 01:28	WG1519731
Total Xylenes	U		0.000966	0.00714	1	08/04/2020 01:28	WG1519731
(S) Toluene-d8	*100*			*75.0-131*		*08/04/2020 01:28*	WG1519731
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*08/04/2020 01:28*	WG1519731
(S) 1,2-Dichloroethane-d4	*94.1*			*70.0-130*		*08/04/2020 01:28*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.77	4.39	1	08/06/2020 15:28	WG1520132
C28-C40 Oil Range	U		0.301	4.39	1	08/06/2020 15:28	WG1520132
(S) o-Terphenyl	*62.3*			*18.0-148*		*08/06/2020 15:28*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.2		1	08/06/2020 10:10	WG1521261

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	288		9.97	21.7	1	08/06/2020 16:00	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0247	J	0.0235	0.108	1	08/03/2020 18:29	WG1519518
(S) a,a,a-Trifluorotoluene(FID)	*97.3*			*77.0-120*		*08/03/2020 18:29*	WG1519518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000512	0.00109	1.01	08/04/2020 01:47	WG1519731
Toluene	U		0.00142	0.00547	1.01	08/04/2020 01:47	WG1519731
Ethylbenzene	U		0.000807	0.00274	1.01	08/04/2020 01:47	WG1519731
Total Xylenes	U		0.000964	0.00711	1.01	08/04/2020 01:47	WG1519731
(S) Toluene-d8	*98.2*			*75.0-131*		*08/04/2020 01:47*	WG1519731
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*08/04/2020 01:47*	WG1519731
(S) 1,2-Dichloroethane-d4	*96.8*			*70.0-130*		*08/04/2020 01:47*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.75	4.34	1	08/06/2020 15:41	WG1520132
C28-C40 Oil Range	U		0.297	4.34	1	08/06/2020 15:41	WG1520132
(S) o-Terphenyl	*53.8*			*18.0-148*		*08/06/2020 15:41*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.2		1	08/06/2020 10:10	WG1521261

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	715		9.98	21.7	1	08/06/2020 16:10	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0410	J J3 J5	0.0235	0.108	1	08/03/2020 18:51	WG1519518
(S) a,a,a-Trifluorotoluene(FID)	*97.6*			*77.0-120*		*08/03/2020 18:51*	WG1519518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000507	0.00108	1	08/04/2020 02:06	WG1519731
Toluene	U		0.00141	0.00542	1	08/04/2020 02:06	WG1519731
Ethylbenzene	U		0.000799	0.00271	1	08/04/2020 02:06	WG1519731
Total Xylenes	0.00133	J	0.000955	0.00705	1	08/04/2020 02:06	WG1519731
(S) Toluene-d8	*103*			*75.0-131*		*08/04/2020 02:06*	WG1519731
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*08/04/2020 02:06*	WG1519731
(S) 1,2-Dichloroethane-d4	*95.1*			*70.0-130*		*08/04/2020 02:06*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.75	4.34	1	08/06/2020 15:54	WG1520132
C28-C40 Oil Range	U		0.297	4.34	1	08/06/2020 15:54	WG1520132
(S) o-Terphenyl	*62.2*			*18.0-148*		*08/06/2020 15:54*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.6		1	08/06/2020 10:10	WG1521261

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	1410		100	218	10	08/06/2020 16:57	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0300	J	0.0237	0.109	1	08/03/2020 19:14	WG1519518
(S) a,a,a-Trifluorotoluene(FID)	*97.5*			*77.0-120*		*08/03/2020 19:14*	WG1519518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000510	0.00109	1	08/04/2020 02:25	WG1519731
Toluene	U		0.00142	0.00546	1	08/04/2020 02:25	WG1519731
Ethylbenzene	U		0.000804	0.00273	1	08/04/2020 02:25	WG1519731
Total Xylenes	U		0.000961	0.00710	1	08/04/2020 02:25	WG1519731
(S) Toluene-d8	*98.3*			*75.0-131*		*08/04/2020 02:25*	WG1519731
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*08/04/2020 02:25*	WG1519731
(S) 1,2-Dichloroethane-d4	*96.1*			*70.0-130*		*08/04/2020 02:25*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.76	4.37	1	08/06/2020 16:07	WG1520132
C28-C40 Oil Range	U		0.299	4.37	1	08/06/2020 16:07	WG1520132
(S) o-Terphenyl	*48.9*			*18.0-148*		*08/06/2020 16:07*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.7		1	08/06/2020 10:10	WG1521261

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	3190		103	223	10	08/06/2020 17:16	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0484	J	0.0242	0.111	1	08/03/2020 19:36	WG1519518
(S) a,a,a-Trifluorotoluene(FID)	*97.0*			*77.0-120*		*08/03/2020 19:36*	WG1519518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000574	0.00123	1	08/04/2020 02:43	WG1519731
Toluene	U		0.00160	0.00614	1	08/04/2020 02:43	WG1519731
Ethylbenzene	U		0.000906	0.00307	1	08/04/2020 02:43	WG1519731
Total Xylenes	U		0.00108	0.00799	1	08/04/2020 02:43	WG1519731
(S) Toluene-d8	*101*			*75.0-131*		*08/04/2020 02:43*	WG1519731
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*08/04/2020 02:43*	WG1519731
(S) 1,2-Dichloroethane-d4	*95.7*			*70.0-130*		*08/04/2020 02:43*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U	J3 J6	1.79	4.46	1	08/06/2020 18:37	WG1520132
C28-C40 Oil Range	U		0.305	4.46	1	08/06/2020 18:37	WG1520132
(S) o-Terphenyl	*33.9*			*18.0-148*		*08/06/2020 18:37*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.6		1	08/06/2020 10:10	WG1521261

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	2780		99.4	216	10	08/06/2020 17:26	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0234	0.108	1	08/03/2020 19:58	WG1519518
(S) a,a,a-Trifluorotoluene(FID)	*96.8*			*77.0-120*		*08/03/2020 19:58*	WG1519518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000504	0.00108	1	08/04/2020 03:02	WG1519731
Toluene	U		0.00140	0.00540	1	08/04/2020 03:02	WG1519731
Ethylbenzene	U		0.000796	0.00270	1	08/04/2020 03:02	WG1519731
Total Xylenes	U		0.000950	0.00702	1	08/04/2020 03:02	WG1519731
(S) Toluene-d8	*101*			*75.0-131*		*08/04/2020 03:02*	WG1519731
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*08/04/2020 03:02*	WG1519731
(S) 1,2-Dichloroethane-d4	*93.3*			*70.0-130*		*08/04/2020 03:02*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1.93	J	1.74	4.32	1	08/06/2020 19:16	WG1520132
C28-C40 Oil Range	0.316	J	0.296	4.32	1	08/06/2020 19:16	WG1520132
(S) o-Terphenyl	*65.5*			*18.0-148*		*08/06/2020 19:16*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.2		1	08/06/2020 10:10	WG1521261

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	2990		99.8	217	10	08/06/2020 17:35	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0269	J	0.0238	0.110	1.01	08/03/2020 20:47	WG1519518
(S) a,a,a-Trifluorotoluene(FID)	*96.1*			*77.0-120*		*08/03/2020 20:47*	WG1519518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000507	0.00108	1	08/04/2020 03:21	WG1519731
Toluene	U		0.00141	0.00542	1	08/04/2020 03:21	WG1519731
Ethylbenzene	U		0.000799	0.00271	1	08/04/2020 03:21	WG1519731
Total Xylenes	U		0.000954	0.00705	1	08/04/2020 03:21	WG1519731
(S) Toluene-d8	*101*			*75.0-131*		*08/04/2020 03:21*	WG1519731
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*08/04/2020 03:21*	WG1519731
(S) 1,2-Dichloroethane-d4	*93.0*			*70.0-130*		*08/04/2020 03:21*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.75	4.34	1	08/06/2020 19:29	WG1520132
C28-C40 Oil Range	U		0.297	4.34	1	08/06/2020 19:29	WG1520132
(S) o-Terphenyl	*51.1*			*18.0-148*		*08/06/2020 19:29*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.5		1	08/06/2020 10:10	WG1521261

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	3090		101	219	10	08/06/2020 17:45	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0237	0.109	1	08/03/2020 22:07	WG1519518
(S) a,a,a-Trifluorotoluene(FID)	*97.3*			*77.0-120*		*08/03/2020 22:07*	WG1519518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000510	0.00109	1	08/04/2020 03:40	WG1519731
Toluene	U		0.00142	0.00546	1	08/04/2020 03:40	WG1519731
Ethylbenzene	U		0.000805	0.00273	1	08/04/2020 03:40	WG1519731
Total Xylenes	U		0.000962	0.00710	1	08/04/2020 03:40	WG1519731
(S) Toluene-d8	*99.2*			*75.0-131*		*08/04/2020 03:40*	WG1519731
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*08/04/2020 03:40*	WG1519731
(S) 1,2-Dichloroethane-d4	*95.2*			*70.0-130*		*08/04/2020 03:40*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.76	4.37	1	08/06/2020 19:41	WG1520132
C28-C40 Oil Range	U		0.299	4.37	1	08/06/2020 19:41	WG1520132
(S) o-Terphenyl	*62.7*			*18.0-148*		*08/06/2020 19:41*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.9		1	08/06/2020 10:10	WG1521261

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	17.1	J	10.6	23.0	1	08/07/2020 11:33	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	109		1.42	6.52	50	08/07/2020 17:01	WG1522330
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*		*08/07/2020 17:01*	WG1522330

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000609	0.00130	1	08/04/2020 03:59	WG1519731
Toluene	U		0.00169	0.00652	1	08/04/2020 03:59	WG1519731
Ethylbenzene	U		0.000961	0.00326	1	08/04/2020 03:59	WG1519731
Total Xylenes	0.00206	J	0.00115	0.00847	1	08/04/2020 03:59	WG1519731
(S) Toluene-d8	*102*			*75.0-131*		*08/04/2020 03:59*	WG1519731
(S) 4-Bromofluorobenzene	*132*			*67.0-138*		*08/04/2020 03:59*	WG1519731
(S) 1,2-Dichloroethane-d4	*95.3*			*70.0-130*		*08/04/2020 03:59*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1270		9.27	23.0	5	08/07/2020 15:39	WG1520132
C28-C40 Oil Range	684		1.58	23.0	5	08/07/2020 15:39	WG1520132
(S) o-Terphenyl	*171*	J1		*18.0-148*		*08/07/2020 15:39*	WG1520132

Sample Narrative:

L1245426-13 WG1520132: Surrogate failure due to matrix interference

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.7		1	08/06/2020 10:10	WG1521261

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	78.3	J	51.8	113	5	08/06/2020 18:04	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0318	B J	0.0245	0.113	1	08/04/2020 15:16	WG1519979
(S) a,a,a-Trifluorotoluene(FID)	*97.5*			*77.0-120*		*08/04/2020 15:16*	WG1519979

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000586	0.00125	1	08/04/2020 04:18	WG1519731
Toluene	U		0.00163	0.00627	1	08/04/2020 04:18	WG1519731
Ethylbenzene	U		0.000924	0.00314	1	08/04/2020 04:18	WG1519731
Total Xylenes	U		0.00110	0.00815	1	08/04/2020 04:18	WG1519731
(S) Toluene-d8	*101*			*75.0-131*		*08/04/2020 04:18*	WG1519731
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*08/04/2020 04:18*	WG1519731
(S) 1,2-Dichloroethane-d4	*94.2*			*70.0-130*		*08/04/2020 04:18*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.39	J	1.81	4.51	1	08/06/2020 19:54	WG1520132
C28-C40 Oil Range	U		0.309	4.51	1	08/06/2020 19:54	WG1520132
(S) o-Terphenyl	*64.4*			*18.0-148*		*08/06/2020 19:54*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.0		1	08/06/2020 10:10	WG1521261

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	58.8	J	50.0	109	5	08/06/2020 18:14	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	7.48		0.0236	0.109	1	08/04/2020 15:39	WG1519979
(S) a,a,a-Trifluorotoluene(FID)	*95.6*			*77.0-120*		*08/04/2020 15:39*	WG1519979

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000508	0.00109	1	08/04/2020 04:37	WG1519731
Toluene	U		0.00141	0.00543	1	08/04/2020 04:37	WG1519731
Ethylbenzene	U		0.000801	0.00272	1	08/04/2020 04:37	WG1519731
Total Xylenes	0.00139	J	0.000956	0.00706	1	08/04/2020 04:37	WG1519731
(S) Toluene-d8	*104*			*75.0-131*		*08/04/2020 04:37*	WG1519731
(S) 4-Bromofluorobenzene	*113*			*67.0-138*		*08/04/2020 04:37*	WG1519731
(S) 1,2-Dichloroethane-d4	*94.8*			*70.0-130*		*08/04/2020 04:37*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	485		8.75	21.7	5	08/07/2020 15:26	WG1520132
C28-C40 Oil Range	346		1.49	21.7	5	08/07/2020 15:26	WG1520132
(S) o-Terphenyl	*88.8*			*18.0-148*		*08/07/2020 15:26*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.2		1	08/06/2020 13:29	WG1521262

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	393		11.3	24.6	1	08/06/2020 18:42	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0267	0.123	1	08/05/2020 19:58	WG1520452
(S) a,a,a-Trifluorotoluene(FID)	*97.8*			*77.0-120*		*08/05/2020 19:58*	WG1520452

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000690	0.00148	1.01	08/04/2020 04:56	WG1519731
Toluene	U		0.00191	0.00738	1.01	08/04/2020 04:56	WG1519731
Ethylbenzene	U		0.00109	0.00370	1.01	08/04/2020 04:56	WG1519731
Total Xylenes	U		0.00130	0.00959	1.01	08/04/2020 04:56	WG1519731
(S) Toluene-d8	*103*			*75.0-131*		*08/04/2020 04:56*	WG1519731
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*08/04/2020 04:56*	WG1519731
(S) 1,2-Dichloroethane-d4	*93.4*			*70.0-130*		*08/04/2020 04:56*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.11	J	1.98	4.93	1	08/06/2020 20:07	WG1520132
C28-C40 Oil Range	0.658	J	0.337	4.93	1	08/06/2020 20:07	WG1520132
(S) o-Terphenyl	*58.8*			*18.0-148*		*08/06/2020 20:07*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.5		1	08/06/2020 13:29	WG1521262

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	289		50.8	111	5	08/06/2020 18:52	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0240	0.111	1	08/05/2020 20:21	WG1520452
(S) a,a,a-Trifluorotoluene(FID)	*97.8*			*77.0-120*		*08/05/2020 20:21*	WG1520452

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000522	0.00112	1.01	08/04/2020 05:15	WG1519731
Toluene	U		0.00145	0.00558	1.01	08/04/2020 05:15	WG1519731
Ethylbenzene	U		0.000822	0.00280	1.01	08/04/2020 05:15	WG1519731
Total Xylenes	U		0.000983	0.00725	1.01	08/04/2020 05:15	WG1519731
(S) Toluene-d8	*101*			*75.0-131*		*08/04/2020 05:15*	WG1519731
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*08/04/2020 05:15*	WG1519731
(S) 1,2-Dichloroethane-d4	*94.9*			*70.0-130*		*08/04/2020 05:15*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.78	4.42	1	08/06/2020 20:20	WG1520132
C28-C40 Oil Range	U		0.303	4.42	1	08/06/2020 20:20	WG1520132
(S) o-Terphenyl	*48.8*			*18.0-148*		*08/06/2020 20:20*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.7		1	08/06/2020 13:29	WG1521262

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	172		49.6	108	5	08/06/2020 19:01	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0234	0.108	1	08/05/2020 03:07	WG1520304
(S) a,a,a-Trifluorotoluene(FID)	*97.4*			*77.0-120*		*08/05/2020 03:07*	WG1520304

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000504	0.00108	1	08/04/2020 05:33	WG1519731
Toluene	U		0.00140	0.00540	1	08/04/2020 05:33	WG1519731
Ethylbenzene	U		0.000795	0.00270	1	08/04/2020 05:33	WG1519731
Total Xylenes	U		0.000950	0.00701	1	08/04/2020 05:33	WG1519731
(S) Toluene-d8	*98.8*			*75.0-131*		*08/04/2020 05:33*	WG1519731
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*08/04/2020 05:33*	WG1519731
(S) 1,2-Dichloroethane-d4	*95.0*			*70.0-130*		*08/04/2020 05:33*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.74	4.32	1	08/06/2020 20:33	WG1520132
C28-C40 Oil Range	U		0.296	4.32	1	08/06/2020 20:33	WG1520132
(S) o-Terphenyl	*62.2*			*18.0-148*		*08/06/2020 20:33*	WG1520132

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.7		1	08/06/2020 13:29	WG1521262

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	315		99.3	216	10	08/06/2020 19:20	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0234	0.108	1	08/05/2020 03:30	WG1520304
(S) a,a,a-Trifluorotoluene(FID)	*97.5*			*77.0-120*		*08/05/2020 03:30*	WG1520304

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000504	0.00108	1	08/04/2020 05:52	WG1519731
Toluene	U		0.00140	0.00539	1	08/04/2020 05:52	WG1519731
Ethylbenzene	U		0.000795	0.00270	1	08/04/2020 05:52	WG1519731
Total Xylenes	U		0.000949	0.00701	1	08/04/2020 05:52	WG1519731
(S) Toluene-d8	*102*			*75.0-131*		*08/04/2020 05:52*	WG1519731
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*08/04/2020 05:52*	WG1519731
(S) 1,2-Dichloroethane-d4	*93.8*			*70.0-130*		*08/04/2020 05:52*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.74	4.32	1	08/07/2020 03:20	WG1521551
C28-C40 Oil Range	1.78	B J	0.296	4.32	1	08/07/2020 03:20	WG1521551
(S) o-Terphenyl	*58.9*			*18.0-148*		*08/07/2020 03:20*	WG1521551

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.1		1	08/06/2020 13:29	WG1521262

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	720		101	219	10	08/06/2020 19:30	WG1519269

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0238	0.110	1	08/05/2020 03:52	WG1520304
(S) a,a,a-Trifluorotoluene(FID)	*97.4*			*77.0-120*		*08/05/2020 03:52*	WG1520304

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000513	0.00110	1	08/04/2020 06:11	WG1519731
Toluene	U		0.00143	0.00549	1	08/04/2020 06:11	WG1519731
Ethylbenzene	U		0.000809	0.00274	1	08/04/2020 06:11	WG1519731
Total Xylenes	U		0.000966	0.00713	1	08/04/2020 06:11	WG1519731
(S) Toluene-d8	*102*			*75.0-131*		*08/04/2020 06:11*	WG1519731
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*08/04/2020 06:11*	WG1519731
(S) 1,2-Dichloroethane-d4	*91.6*			*70.0-130*		*08/04/2020 06:11*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.77	4.39	1	08/07/2020 03:33	WG1521551
C28-C40 Oil Range	1.94	B J	0.301	4.39	1	08/07/2020 03:33	WG1521551
(S) o-Terphenyl	*63.7*			*18.0-148*		*08/07/2020 03:33*	WG1521551

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.1		1	08/06/2020 13:29	WG1521262

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	1200		51.6	112	5	08/04/2020 07:23	WG1519268

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0243	0.112	1	08/05/2020 04:14	WG1520304
(S) a,a,a-Trifluorotoluene(FID)	*96.8*			*77.0-120*		*08/05/2020 04:14*	WG1520304

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000582	0.00125	1	08/04/2020 06:30	WG1519731
Toluene	U		0.00162	0.00623	1	08/04/2020 06:30	WG1519731
Ethylbenzene	U		0.000918	0.00311	1	08/04/2020 06:30	WG1519731
Total Xylenes	0.00114	J	0.00110	0.00809	1	08/04/2020 06:30	WG1519731
(S) Toluene-d8	*97.8*			*75.0-131*		*08/04/2020 06:30*	WG1519731
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*08/04/2020 06:30*	WG1519731
(S) 1,2-Dichloroethane-d4	*92.4*			*70.0-130*		*08/04/2020 06:30*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.81	4.49	1	08/07/2020 03:45	WG1521551
C28-C40 Oil Range	0.696	B J	0.307	4.49	1	08/07/2020 03:45	WG1521551
(S) o-Terphenyl	*66.7*			*18.0-148*		*08/07/2020 03:45*	WG1521551

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.2		1	08/06/2020 13:29	WG1521262

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	1180		49.9	108	5	08/04/2020 07:41	WG1519268

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0321	J	0.0235	0.108	1	08/07/2020 05:39	WG1521831
(S) a,a,a-Trifluorotoluene(FID)	*104*			*77.0-120*		*08/07/2020 05:39*	WG1521831

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000507	0.00108	1	08/04/2020 06:49	WG1519731
Toluene	U		0.00141	0.00542	1	08/04/2020 06:49	WG1519731
Ethylbenzene	U		0.000799	0.00271	1	08/04/2020 06:49	WG1519731
Total Xylenes	U		0.000955	0.00705	1	08/04/2020 06:49	WG1519731
(S) Toluene-d8	*103*			*75.0-131*		*08/04/2020 06:49*	WG1519731
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*08/04/2020 06:49*	WG1519731
(S) 1,2-Dichloroethane-d4	*91.9*			*70.0-130*		*08/04/2020 06:49*	WG1519731

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	8.78		1.75	4.34	1	08/07/2020 03:58	WG1521551
C28-C40 Oil Range	9.02	B	0.297	4.34	1	08/07/2020 03:58	WG1521551
(S) o-Terphenyl	*46.0*			*18.0-148*		*08/07/2020 03:58*	WG1521551

Method Blank (MB)

(MB) R3557295-1 08/06/20 10:23

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1245424-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1245424-06 08/06/20 10:23 • (DUP) R3557295-3 08/06/20 10:23

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.0	84.4	1	0.458		10

Laboratory Control Sample (LCS)

(LCS) R3557295-2 08/06/20 10:23

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	99.9	85.0-115	

Method Blank (MB)

(MB) R3557287-1 08/06/20 10:10

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1245426-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1245426-06 08/06/20 10:10 • (DUP) R3557287-3 08/06/20 10:10

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	92.2	91.9	1	0.395		10

Laboratory Control Sample (LCS)

(LCS) R3557287-2 08/06/20 10:10

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3557330-1 08/06/20 13:29

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

L1245426-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1245426-17 08/06/20 13:29 • (DUP) R3557330-3 08/06/20 13:29

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	90.5	91.2	1	0.751		10

Laboratory Control Sample (LCS)

(LCS) R3557330-2 08/06/20 13:29

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3556076-1 08/03/20 23:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		9.20	20.0

L1244535-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1244535-02 08/04/20 01:17 • (DUP) R3556076-3 08/04/20 01:35

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	2130	2160	1	1.50	E	20

L1245426-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1245426-22 08/04/20 07:41 • (DUP) R3556076-6 08/04/20 07:58

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1180	1160	5	1.34		20

Laboratory Control Sample (LCS)

(LCS) R3556076-2 08/03/20 23:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	208	104	90.0-110	

L1244535-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1244535-14 08/04/20 05:39 • (MS) R3556076-4 08/04/20 05:56 • (MSD) R3556076-5 08/04/20 06:13

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	599	1750	2550	2330	133	96.6	1	80.0-120	E J5	E	9.01	20

Method Blank (MB)

(MB) R3557417-1 08/06/20 14:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		9.20	20.0

L1245426-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1245426-08 08/06/20 16:57 • (DUP) R3557417-5 08/06/20 17:07

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1410	1360	10	3.86		20

L1245426-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1245426-18 08/06/20 19:01 • (DUP) R3557417-6 08/06/20 19:11

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	172	171	5	0.125		20

Laboratory Control Sample (LCS)

(LCS) R3557417-2 08/06/20 14:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	192	96.0	90.0-110	

L1245426-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1245426-07 08/06/20 16:10 • (MS) R3557417-3 08/06/20 16:19 • (MSD) R3557417-4 08/06/20 16:48

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	542	715	1310	1240	110	97.5	1	80.0-120	E	E	5.15	20

Method Blank (MB)

(MB) R3557545-3 08/03/20 13:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*97.2*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3557545-2 08/03/20 12:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.39	116	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*101*	*77.0-120*	

L1245426-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1245426-07 08/03/20 18:51 • (MS) R3557545-4 08/03/20 22:51 • (MSD) R3557545-5 08/03/20 23:39

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.91	0.0410	17.4	6.27	293	105	1	10.0-151	E J5	J3	93.8	28
(S) a,a,a-Trifluorotoluene(FID)					*95.4*	*97.5*		*77.0-120*				

Method Blank (MB)

(MB) R3556176-3 08/04/20 12:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0678	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3556176-2 08/04/20 11:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.55	101	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*97.5*	*77.0-120*	

Method Blank (MB)

(MB) R3557182-3 08/05/20 02:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*98.3*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3557182-2 08/05/20 01:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.89	107	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*97.7*	*77.0-120*	

L1245576-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1245576-02 08/05/20 10:17 • (MS) R3557182-6 08/05/20 11:24 • (MSD) R3557182-7 08/05/20 11:45

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	1110	432	1250	1430	69.1	84.4	202	10.0-151			13.5	28
(S) a,a,a-Trifluorotoluene(FID)					*94.9*	*96.8*		*77.0-120*				

Method Blank (MB)

(MB) R3556902-3 08/05/20 15:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*98.1*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3556902-2 08/05/20 14:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.50	118	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*102*	*77.0-120*	

Method Blank (MB)

(MB) R3557472-3 08/07/20 02:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3557472-2 08/07/20 01:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.88	107	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*77.0-120*	

Method Blank (MB)

(MB) R3557815-2 08/07/20 15:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3557815-1 08/07/20 15:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.72	104	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*101*	*77.0-120*	

Method Blank (MB)

(MB) R3555948-2 08/03/20 04:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*100*			*75.0-131*
(S) 4-Bromofluorobenzene	*102*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*95.3*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3555948-1 08/03/20 03:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.0993	79.4	70.0-123	
Ethylbenzene	0.125	0.114	91.2	74.0-126	
Toluene	0.125	0.101	80.8	75.0-121	
Xylenes, Total	0.375	0.318	84.8	72.0-127	
(S) Toluene-d8			*94.6*	*75.0-131*	
(S) 4-Bromofluorobenzene			*112*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*101*	*70.0-130*	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3557175-2 08/04/20 00:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*99.9*			*75.0-131*
(S) 4-Bromofluorobenzene	*105*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*95.0*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3557175-1 08/03/20 23:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.100	80.0	70.0-123	
Ethylbenzene	0.125	0.117	93.6	74.0-126	
Toluene	0.125	0.0943	75.4	75.0-121	
Xylenes, Total	0.375	0.319	85.1	72.0-127	
(S) Toluene-d8			*90.6*	*75.0-131*	
(S) 4-Bromofluorobenzene			*112*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*101*	*70.0-130*	

L1245426-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1245426-13 08/04/20 03:59 • (MS) R3557175-3 08/04/20 07:08 • (MSD) R3557175-4 08/04/20 07:27

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.163	U	0.159	0.159	97.6	97.6	1	10.0-149			0.000	37
Ethylbenzene	0.163	U	0.202	0.175	124	107	1	10.0-160			14.5	38
Toluene	0.163	U	0.182	0.158	112	96.8	1	10.0-156			14.6	38
Xylenes, Total	0.489	0.00206	0.532	0.473	108	96.4	1	10.0-160			11.7	38
(S) Toluene-d8					*113*	*97.4*		*75.0-131*				
(S) 4-Bromofluorobenzene					*159*	*152*		*67.0-138*	J1	J1		
(S) 1,2-Dichloroethane-d4					*95.8*	*94.9*		*70.0-130*				

Method Blank (MB)

(MB) R3556442-1 08/04/20 21:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	1.70	J	0.274	4.00
(S) o-Terphenyl	*70.9*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3556442-2 08/04/20 22:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.4	76.8	50.0-150	
(S) o-Terphenyl			*81.4*	*18.0-148*	

L1245424-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1245424-05 08/05/20 01:59 • (MS) R3556442-3 08/05/20 02:12 • (MSD) R3556442-4 08/05/20 02:25

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	58.1	U	39.6	34.5	68.3	59.4	1	50.0-150			13.9	20
(S) o-Terphenyl					*70.2*	*63.5*		*18.0-148*				

Method Blank (MB)

(MB) R3557067-1 08/06/20 11:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*79.9*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3557067-2 08/06/20 11:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	33.0	66.0	50.0-150	
(S) o-Terphenyl			*64.1*	*18.0-148*	

L1245426-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1245426-09 08/06/20 18:37 • (MS) R3557067-3 08/06/20 18:50 • (MSD) R3557067-4 08/06/20 19:03

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	54.0	U	26.4	34.8	48.9	64.3	1	50.0-150	J6	J3	27.3	20
(S) o-Terphenyl					*48.5*	*57.0*		*18.0-148*				

Method Blank (MB)

(MB) R3557069-1 08/06/20 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	1.82	J	0.274	4.00
(S) o-Terphenyl	*62.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3557069-2 08/06/20 14:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.3	72.6	50.0-150	
(S) o-Terphenyl			*67.7*	*18.0-148*	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

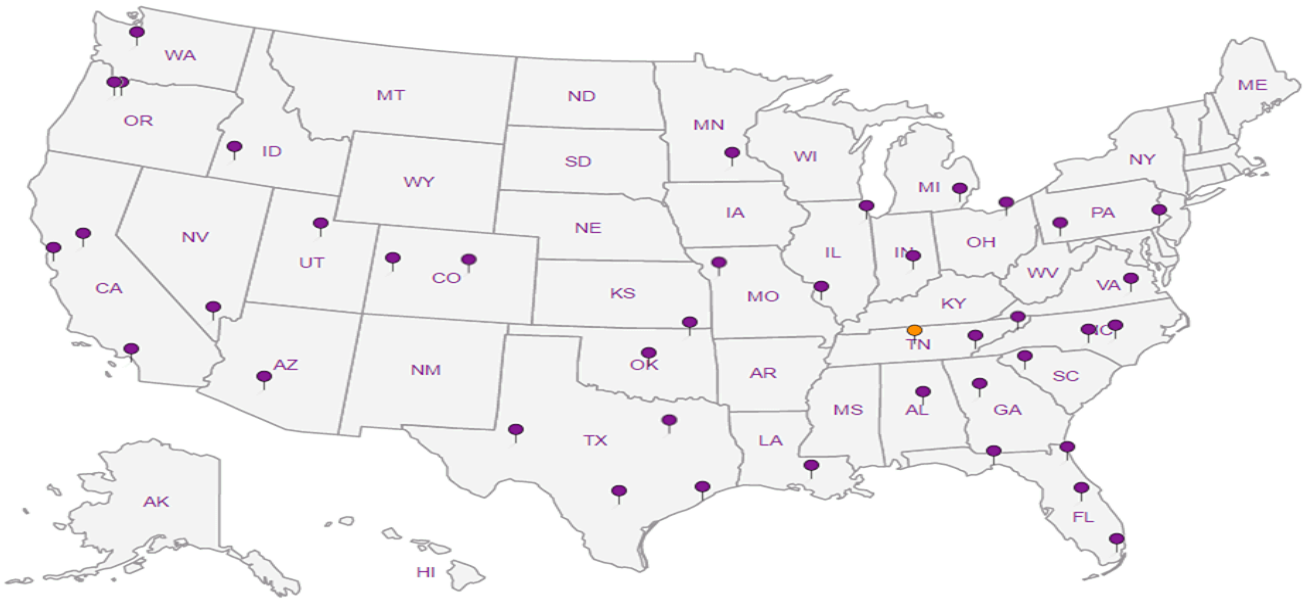
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

1043

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA 1-A Header Transit Line	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02251
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Joe Tyler
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
L1245426		YEAR: 2020																																
-01	BH-1 (0'-1')	07/29/20	1000		X				X			1	N	X		X												X						
02	BH-1 (2'-3')	07/29/20	1010		X				X			1	N	X		X												X						
03	BH-1 (6'-7')	07/29/20	1020		X				X			1	N	X		X												X						
04	BH-1 (9'-10')	07/29/20	1030		X				X			1	N	X		X												X						
05	BH-1 (12'-13')	07/29/20	1040		X				X			1	N	X		X												X						
06	BH-1 (14'-15')	07/29/20	1050		X				X			1	N	X		X												X						
07	BH-1 (17'-18')	07/29/20	1100		X				X			1	N	X		X												X						
08	BH-1 (19'-20')	07/29/20	1120		X				X			1	N	X		X												X						
09	BH-1 (22'-23')	07/29/20	1140		X				X			1	N	X		X												X						
10	BH-1 (24'-25')	07/29/20	1200		X				X			1	N	X		X												X						

Relinquished by: Joe Tyler	Date: 7/30/20	Time: 5:30	Received by:	Date: 7/30/20	Time: 5:30
Relinquished by:	Date: 7/30/20	Time: 16:30	Received by: FedEx	Date: 7/30/20	Time: 16:30
Relinquished by:	Date:	Time:	Received by:	Date: 7-31-20	Time: 900

ORIGINAL COPY

LAB USE ONLY

Sample Temperature

REMARKS:

- [X] Standard
- [ ] RUSH: Same Day 24 hr. 48 hr. 72 hr.
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA 1-A Header Transit Line	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02251
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Joe Tyler
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
L124442																																		
-11	BH-1 (26'-27')	07/29/20	1220		X				X			1	N	X		X												X						
12	BH-1 (29'-30')	07/29/20	1240		X				X			1	N	X		X												X						
13	BH-2 (0'-1')	07/29/20	1320		X				X			1	N	X		X												X						
14	BH-2 (2'-3')	07/29/20	1330		X				X			1	N	X		X												X						
15	BH-2 (6'-7')	07/29/20	1340		X				X			1	N	X		X												X						
16	BH-2 (9'-10')	07/29/20	1350		X				X			1	N	X		X												X						
17	BH-2 (11'-12')	07/29/20	1400		X				X			1	N	X		X												X						
18	BH-2 (14'-15')	07/29/20	1420		X				X			1	N	X		X												X						
19	BH-2 (17'-18')	07/29/20	1440		X				X			1	N	X		X												X						
20	BH-2 (19'-20')	07/29/20	1500		X				X			1	N	X		X												X						

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Joe Tyler	7/30/20	16:30		7/30/20	15:30
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	7/30/20	16:30	FedEx	7/30/20	16:30
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
				7-31-20	900

ORIGINAL COPY

LAB USE ONLY

Sample Temperature

REMARKS:

- [X] Standard
- [ ] RUSH: Same Day 24 hr. 48 hr. 72 hr.
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA 1-A Header Transit Line	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02251
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Joe Tyler
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
L1245426		YEAR: 2020																															
-21	BH-2 (22'-23')	07/29/20	1530		X				X			1	N	X		X											X						
22	BH-2 (26'-27')	07/29/20	1600		X				X			1	N	X		X											X						

Relinquished by: Joe Tyler Date: 7.30.20 Time: 15:30
Received by: Date: 7.30.20 Time: 15:30

Relinquished by: Date: 7.30.20 Time: 16:30
Received by: Date: 7.30.20 Time: 16:30

Relinquished by: Date: Time:
Received by: Date: 7-31-20 Time: 900

ORIGINAL COPY

LAB USE ONLY

Sample Temperature

REMARKS:

- [X] Standard
- [ ] RUSH: Same Day 24 hr. 48 hr. 72 hr.
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: Tetra Tech COPTETRA	L1245426	
Cooler Received/Opened On: 7 / 31 / 20 Temperature:	.8	
Received By: Bryan Burgess		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 27, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1251164
Samples Received:	08/15/2020
Project Number:	212C-MD-02251
Description:	MCA 1-A Header Transit Line

Report To: Christian Llull
901 West Wall
Suite 100
Midland, TX 79701

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

TABLE OF CONTENTS

H 20-1 (0-1) L1251164-01 Solid

Collected by: Adrian | Collected date/time: 08/13/20 08:00 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529497	1	08/20/20 21:50	08/20/20 22:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 16:15	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1529361	1	08/19/20 17:00	08/20/20 19:10	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529592	1	08/19/20 17:00	08/20/20 21:11	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529484	1	08/21/20 17:11	08/22/20 18:02	JN	Mt. Juliet, TN

H 20-1 (2-3) L1251164-02 Solid

Collected by: Adrian | Collected date/time: 08/13/20 08:10 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529497	1	08/20/20 21:50	08/20/20 22:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 16:24	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1529361	1	08/19/20 17:00	08/20/20 19:32	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529592	1	08/19/20 17:00	08/20/20 21:31	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529484	1	08/21/20 17:11	08/22/20 16:32	JN	Mt. Juliet, TN

H 20-1 (3-4) L1251164-03 Solid

Collected by: Adrian | Collected date/time: 08/13/20 08:20 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529497	1	08/20/20 21:50	08/20/20 22:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 16:43	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1529361	1	08/19/20 17:00	08/20/20 19:54	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529592	1	08/19/20 17:00	08/20/20 21:52	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529484	1	08/21/20 17:11	08/22/20 16:45	JN	Mt. Juliet, TN

H 20-2 (0-1) L1251164-04 Solid

Collected by: Adrian | Collected date/time: 08/13/20 08:30 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529497	1	08/20/20 21:50	08/20/20 22:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 16:53	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1529361	1	08/19/20 17:00	08/20/20 20:16	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529592	1	08/19/20 17:00	08/20/20 22:12	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529516	1	08/21/20 19:36	08/23/20 05:28	TJD	Mt. Juliet, TN

H 20-2 (2-3) L1251164-05 Solid

Collected by: Adrian | Collected date/time: 08/13/20 08:40 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529497	1	08/20/20 21:50	08/20/20 22:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 17:02	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1531602	1	08/25/20 10:57	08/25/20 13:01	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529592	1	08/19/20 17:00	08/20/20 22:33	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529516	1	08/21/20 19:36	08/23/20 05:41	TJD	Mt. Juliet, TN

H 20-2 (3-4) L1251164-06 Solid

Collected by: Adrian | Collected date/time: 08/13/20 08:50 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529500	1	08/20/20 21:10	08/20/20 21:38	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 17:12	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1531484	1	08/19/20 17:00	08/24/20 17:15	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529592	1	08/19/20 17:00	08/20/20 22:54	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529516	1	08/21/20 19:36	08/23/20 05:54	TJD	Mt. Juliet, TN

H 20-3 (0-1) L1251164-07 Solid

Collected by: Adrian | Collected date/time: 08/13/20 09:00 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529500	1	08/20/20 21:10	08/20/20 21:38	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 17:40	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1529803	1.01	08/19/20 17:00	08/21/20 08:54	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529592	1	08/19/20 17:00	08/20/20 23:15	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529516	1	08/21/20 19:36	08/23/20 06:06	TJD	Mt. Juliet, TN

H 20-3 (2-3) L1251164-08 Solid

Collected by: Adrian | Collected date/time: 08/13/20 09:10 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529500	1	08/20/20 21:10	08/20/20 21:38	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 17:50	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1529803	1	08/19/20 17:00	08/21/20 09:14	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529592	1	08/19/20 17:00	08/20/20 23:35	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529516	1	08/21/20 19:36	08/23/20 08:26	TJD	Mt. Juliet, TN

H 20-3 (3-4) L1251164-09 Solid

Collected by: Adrian | Collected date/time: 08/13/20 09:20 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529500	1	08/20/20 21:10	08/20/20 21:38	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 17:59	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1531484	1	08/19/20 17:00	08/24/20 17:37	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529592	1	08/19/20 17:00	08/20/20 23:56	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529516	1	08/21/20 19:36	08/23/20 08:38	TJD	Mt. Juliet, TN

H 20-4 (0-1) L1251164-10 Solid

Collected by: Adrian | Collected date/time: 08/13/20 09:30 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529500	1	08/20/20 21:10	08/20/20 21:38	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 18:09	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1531602	1	08/25/20 10:57	08/25/20 13:22	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529284	1	08/19/20 17:00	08/20/20 11:07	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529516	1	08/21/20 19:36	08/23/20 09:16	TJD	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

H 20-4 (2-3) L1251164-11 Solid

Collected by: Adrian | Collected date/time: 08/13/20 09:40 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529500	1	08/20/20 21:10	08/20/20 21:38	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 18:37	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1529803	1.01	08/19/20 17:00	08/21/20 10:16	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529284	1	08/19/20 17:00	08/20/20 11:27	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529516	1	08/21/20 19:36	08/23/20 09:29	TJD	Mt. Juliet, TN

H 20-4 (3-4) L1251164-12 Solid

Collected by: Adrian | Collected date/time: 08/13/20 09:50 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529500	1	08/20/20 21:10	08/20/20 21:38	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 18:47	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1531484	1	08/19/20 17:00	08/24/20 18:22	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529284	1	08/19/20 17:00	08/20/20 11:47	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1529516	1	08/21/20 19:36	08/23/20 07:22	TJD	Mt. Juliet, TN

H 20-5 (0-1) L1251164-13 Solid

Collected by: Adrian | Collected date/time: 08/13/20 10:00 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529500	1	08/20/20 21:10	08/20/20 21:38	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 18:56	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1531602	1	08/25/20 10:57	08/25/20 13:43	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529284	1	08/19/20 17:00	08/20/20 12:07	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1530250	1	08/21/20 17:09	08/23/20 09:55	TJD	Mt. Juliet, TN

H 20-5 (2-3) L1251164-14 Solid

Collected by: Adrian | Collected date/time: 08/13/20 10:10 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529500	1	08/20/20 21:10	08/20/20 21:38	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 19:06	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1531602	1	08/25/20 10:57	08/25/20 14:03	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529284	1	08/19/20 17:00	08/20/20 12:27	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1530250	1	08/21/20 17:09	08/23/20 10:07	TJD	Mt. Juliet, TN

H 20-5 (3-4) L1251164-15 Solid

Collected by: Adrian | Collected date/time: 08/13/20 10:20 | Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529500	1	08/20/20 21:10	08/20/20 21:38	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 19:34	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1529803	1	08/19/20 17:00	08/21/20 12:06	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529284	1	08/19/20 17:00	08/20/20 16:06	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1530250	1	08/21/20 17:09	08/23/20 10:20	TJD	Mt. Juliet, TN

H 20-6 (0-1) L1251164-16 Solid

Collected by: Adrian
Collected date/time: 08/13/20 10:30
Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529502	1	08/20/20 19:52	08/20/20 20:09	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 19:44	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1531484	1	08/19/20 17:00	08/24/20 19:29	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529284	1	08/19/20 17:00	08/20/20 16:26	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1530250	1	08/21/20 17:09	08/23/20 14:56	TJD	Mt. Juliet, TN

H 20-6 (2-3) L1251164-17 Solid

Collected by: Adrian
Collected date/time: 08/13/20 10:40
Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529502	1	08/20/20 19:52	08/20/20 20:09	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 19:53	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1529803	1	08/19/20 17:00	08/21/20 12:48	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529284	1	08/19/20 17:00	08/20/20 16:46	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1530250	1	08/21/20 17:09	08/23/20 10:33	TJD	Mt. Juliet, TN

H 20-6 (3-4) L1251164-18 Solid

Collected by: Adrian
Collected date/time: 08/13/20 10:50
Received date/time: 08/15/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1529502	1	08/20/20 19:52	08/20/20 20:09	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1529566	1	08/21/20 11:30	08/21/20 20:03	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1530437	1	08/19/20 17:00	08/21/20 23:12	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1529284	1	08/19/20 17:00	08/20/20 17:05	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1530250	1	08/21/20 17:09	08/23/20 11:11	TJD	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.9		1	08/20/2020 22:01	WG1529497

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.30	20.2	1	08/21/2020 16:15	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0219	0.101	1	08/20/2020 19:10	WG1529361
(S) a,a,a-Trifluorotoluene(FID)	*96.6*			*77.0-120*		*08/20/2020 19:10*	WG1529361

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000477	0.00102	1	08/20/2020 21:11	WG1529592
Toluene	U		0.00133	0.00511	1	08/20/2020 21:11	WG1529592
Ethylbenzene	U		0.000753	0.00255	1	08/20/2020 21:11	WG1529592
Total Xylenes	U		0.000899	0.00664	1	08/20/2020 21:11	WG1529592
(S) Toluene-d8	*102*			*75.0-131*		*08/20/2020 21:11*	WG1529592
(S) 4-Bromofluorobenzene	*98.5*			*67.0-138*		*08/20/2020 21:11*	WG1529592
(S) 1,2-Dichloroethane-d4	*95.5*			*70.0-130*		*08/20/2020 21:11*	WG1529592

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	7.09		1.63	4.04	1	08/22/2020 18:02	WG1529484
C28-C40 Oil Range	6.60		0.277	4.04	1	08/22/2020 18:02	WG1529484
(S) o-Terphenyl	*82.2*			*18.0-148*		*08/22/2020 18:02*	WG1529484

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.4		1	08/20/2020 22:01	WG1529497

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.26	20.1	1	08/21/2020 16:24	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0218	0.101	1	08/20/2020 19:32	WG1529361
(S) a,a,a-Trifluorotoluene(FID)	*97.3*			*77.0-120*		*08/20/2020 19:32*	WG1529361

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000473	0.00101	1	08/20/2020 21:31	WG1529592
Toluene	U		0.00132	0.00506	1	08/20/2020 21:31	WG1529592
Ethylbenzene	U		0.000746	0.00253	1	08/20/2020 21:31	WG1529592
Total Xylenes	U		0.000891	0.00658	1	08/20/2020 21:31	WG1529592
(S) Toluene-d8	*102*			*75.0-131*		*08/20/2020 21:31*	WG1529592
(S) 4-Bromofluorobenzene	*97.1*			*67.0-138*		*08/20/2020 21:31*	WG1529592
(S) 1,2-Dichloroethane-d4	*90.9*			*70.0-130*		*08/20/2020 21:31*	WG1529592

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4.84		1.62	4.03	1	08/22/2020 16:32	WG1529484
C28-C40 Oil Range	1.39	B J	0.276	4.03	1	08/22/2020 16:32	WG1529484
(S) o-Terphenyl	*86.0*			*18.0-148*		*08/22/2020 16:32*	WG1529484

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.7		1	08/20/2020 22:01	WG1529497

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.23	20.1	1	08/21/2020 16:43	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0218	0.100	1	08/20/2020 19:54	WG1529361
(S) a,a,a-Trifluorotoluene(FID)	*96.3*			*77.0-120*		*08/20/2020 19:54*	WG1529361

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000470	0.00101	1	08/20/2020 21:52	WG1529592
Toluene	U		0.00131	0.00503	1	08/20/2020 21:52	WG1529592
Ethylbenzene	U		0.000742	0.00252	1	08/20/2020 21:52	WG1529592
Total Xylenes	U		0.000886	0.00654	1	08/20/2020 21:52	WG1529592
(S) Toluene-d8	*101*			*75.0-131*		*08/20/2020 21:52*	WG1529592
(S) 4-Bromofluorobenzene	*95.8*			*67.0-138*		*08/20/2020 21:52*	WG1529592
(S) 1,2-Dichloroethane-d4	*92.0*			*70.0-130*		*08/20/2020 21:52*	WG1529592

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.11		1.62	4.01	1	08/22/2020 16:45	WG1529484
C28-C40 Oil Range	4.37		0.275	4.01	1	08/22/2020 16:45	WG1529484
(S) o-Terphenyl	*86.7*			*18.0-148*		*08/22/2020 16:45*	WG1529484

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.8		1	08/20/2020 22:01	WG1529497

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.32	20.3	1	08/21/2020 16:53	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0220	0.101	1	08/20/2020 20:16	WG1529361
(S) a,a,a-Trifluorotoluene(FID)	*97.2*			*77.0-120*		*08/20/2020 20:16*	WG1529361

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000479	0.00103	1	08/20/2020 22:12	WG1529592
Toluene	U		0.00133	0.00513	1	08/20/2020 22:12	WG1529592
Ethylbenzene	U		0.000756	0.00256	1	08/20/2020 22:12	WG1529592
Total Xylenes	U		0.000902	0.00666	1	08/20/2020 22:12	WG1529592
(S) Toluene-d8	*102*			*75.0-131*		*08/20/2020 22:12*	WG1529592
(S) 4-Bromofluorobenzene	*96.9*			*67.0-138*		*08/20/2020 22:12*	WG1529592
(S) 1,2-Dichloroethane-d4	*89.9*			*70.0-130*		*08/20/2020 22:12*	WG1529592

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.50	J	1.63	4.05	1	08/23/2020 05:28	WG1529516
C28-C40 Oil Range	1.14	J	0.277	4.05	1	08/23/2020 05:28	WG1529516
(S) o-Terphenyl	*91.6*			*18.0-148*		*08/23/2020 05:28*	WG1529516

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.6		1	08/20/2020 22:01	WG1529497

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	18.0	J	11.3	24.5	1	08/21/2020 17:02	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0266	0.123	1	08/25/2020 13:01	WG1531602
(S) a,a,a-Trifluorotoluene(FID)	*105*			*77.0-120*		*08/25/2020 13:01*	WG1531602

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000678	0.00145	1	08/20/2020 22:33	WG1529592
Toluene	U		0.00189	0.00726	1	08/20/2020 22:33	WG1529592
Ethylbenzene	U		0.00107	0.00363	1	08/20/2020 22:33	WG1529592
Total Xylenes	U		0.00128	0.00944	1	08/20/2020 22:33	WG1529592
(S) Toluene-d8	*101*			*75.0-131*		*08/20/2020 22:33*	WG1529592
(S) 4-Bromofluorobenzene	*95.5*			*67.0-138*		*08/20/2020 22:33*	WG1529592
(S) 1,2-Dichloroethane-d4	*94.2*			*70.0-130*		*08/20/2020 22:33*	WG1529592

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.97	4.90	1	08/23/2020 05:41	WG1529516
C28-C40 Oil Range	U		0.336	4.90	1	08/23/2020 05:41	WG1529516
(S) o-Terphenyl	*75.7*			*18.0-148*		*08/23/2020 05:41*	WG1529516

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.0		1	08/20/2020 21:38	WG1529500

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	22.2	J	11.4	24.7	1	08/21/2020 17:12	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0268	0.124	1	08/24/2020 17:15	WG1531484
(S) a,a,a-Trifluorotoluene(FID)	*96.6*			*77.0-120*		*08/24/2020 17:15*	WG1531484

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000686	0.00147	1	08/20/2020 22:54	WG1529592
Toluene	U		0.00191	0.00735	1	08/20/2020 22:54	WG1529592
Ethylbenzene	U		0.00108	0.00367	1	08/20/2020 22:54	WG1529592
Total Xylenes	U		0.00129	0.00955	1	08/20/2020 22:54	WG1529592
(S) Toluene-d8	*103*			*75.0-131*		*08/20/2020 22:54*	WG1529592
(S) 4-Bromofluorobenzene	*93.9*			*67.0-138*		*08/20/2020 22:54*	WG1529592
(S) 1,2-Dichloroethane-d4	*95.8*			*70.0-130*		*08/20/2020 22:54*	WG1529592

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.99	4.94	1	08/23/2020 05:54	WG1529516
C28-C40 Oil Range	U		0.338	4.94	1	08/23/2020 05:54	WG1529516
(S) o-Terphenyl	*63.2*			*18.0-148*		*08/23/2020 05:54*	WG1529516

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.3		1	08/20/2020 21:38	WG1529500

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	10.6	J	10.3	22.4	1	08/21/2020 17:40	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0245	0.113	1.01	08/21/2020 08:54	WG1529803
(S) a,a,a-Trifluorotoluene(FID)	*88.1*			*77.0-120*		*08/21/2020 08:54*	WG1529803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000579	0.00124	1	08/20/2020 23:15	WG1529592
Toluene	U		0.00161	0.00620	1	08/20/2020 23:15	WG1529592
Ethylbenzene	U		0.000915	0.00310	1	08/20/2020 23:15	WG1529592
Total Xylenes	U		0.00109	0.00807	1	08/20/2020 23:15	WG1529592
(S) Toluene-d8	*102*			*75.0-131*		*08/20/2020 23:15*	WG1529592
(S) 4-Bromofluorobenzene	*95.1*			*67.0-138*		*08/20/2020 23:15*	WG1529592
(S) 1,2-Dichloroethane-d4	*95.7*			*70.0-130*		*08/20/2020 23:15*	WG1529592

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.80	4.48	1	08/23/2020 06:06	WG1529516
C28-C40 Oil Range	U		0.307	4.48	1	08/23/2020 06:06	WG1529516
(S) o-Terphenyl	*80.6*			*18.0-148*		*08/23/2020 06:06*	WG1529516

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.5		1	08/20/2020 21:38	WG1529500

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.25	20.1	1	08/21/2020 17:50	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0218	0.101	1	08/21/2020 09:14	WG1529803
(S) a,a,a-Trifluorotoluene(FID)	*87.8*			*77.0-120*		*08/21/2020 09:14*	WG1529803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000472	0.00101	1	08/20/2020 23:35	WG1529592
Toluene	U		0.00131	0.00505	1	08/20/2020 23:35	WG1529592
Ethylbenzene	U		0.000744	0.00253	1	08/20/2020 23:35	WG1529592
Total Xylenes	U		0.000889	0.00657	1	08/20/2020 23:35	WG1529592
(S) Toluene-d8	*104*			*75.0-131*		*08/20/2020 23:35*	WG1529592
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*		*08/20/2020 23:35*	WG1529592
(S) 1,2-Dichloroethane-d4	*98.2*			*70.0-130*		*08/20/2020 23:35*	WG1529592

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.62	4.02	1	08/23/2020 08:26	WG1529516
C28-C40 Oil Range	1.67	J	0.275	4.02	1	08/23/2020 08:26	WG1529516
(S) o-Terphenyl	*94.7*			*18.0-148*		*08/23/2020 08:26*	WG1529516

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.1		1	08/20/2020 21:38	WG1529500

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	17.4	J	11.2	24.4	1	08/21/2020 17:59	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0264	0.122	1	08/24/2020 17:37	WG1531484
(S) a,a,a-Trifluorotoluene(FID)	*95.9*			*77.0-120*		*08/24/2020 17:37*	WG1531484

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000671	0.00144	1	08/20/2020 23:56	WG1529592
Toluene	U		0.00187	0.00719	1	08/20/2020 23:56	WG1529592
Ethylbenzene	U		0.00106	0.00359	1	08/20/2020 23:56	WG1529592
Total Xylenes	U		0.00126	0.00934	1	08/20/2020 23:56	WG1529592
(S) Toluene-d8	*98.6*			*75.0-131*		*08/20/2020 23:56*	WG1529592
(S) 4-Bromofluorobenzene	*96.6*			*67.0-138*		*08/20/2020 23:56*	WG1529592
(S) 1,2-Dichloroethane-d4	*95.6*			*70.0-130*		*08/20/2020 23:56*	WG1529592

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.96	4.87	1	08/23/2020 08:38	WG1529516
C28-C40 Oil Range	U		0.334	4.87	1	08/23/2020 08:38	WG1529516
(S) o-Terphenyl	*84.9*			*18.0-148*		*08/23/2020 08:38*	WG1529516

Collected date/time: 08/13/20 09:30

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.2		1	08/20/2020 21:38	WG1529500

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	46.6		11.2	24.3	1	08/21/2020 18:09	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0264	0.122	1	08/25/2020 13:22	WG1531602
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*		*08/25/2020 13:22*	WG1531602

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000669	0.00143	1	08/20/2020 11:07	WG1529284
Toluene	U		0.00186	0.00717	1	08/20/2020 11:07	WG1529284
Ethylbenzene	U		0.00106	0.00358	1	08/20/2020 11:07	WG1529284
Total Xylenes	U		0.00126	0.00932	1	08/20/2020 11:07	WG1529284
(S) Toluene-d8	*111*			*75.0-131*		*08/20/2020 11:07*	WG1529284
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*08/20/2020 11:07*	WG1529284
(S) 1,2-Dichloroethane-d4	*87.8*			*70.0-130*		*08/20/2020 11:07*	WG1529284

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.96	4.87	1	08/23/2020 09:16	WG1529516
C28-C40 Oil Range	U		0.333	4.87	1	08/23/2020 09:16	WG1529516
(S) o-Terphenyl	*66.4*			*18.0-148*		*08/23/2020 09:16*	WG1529516

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.6		1	08/20/2020 21:38	WG1529500

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	20.3	J	11.3	24.5	1	08/21/2020 18:37	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0268	0.124	1.01	08/21/2020 10:16	WG1529803
(S) a,a,a-Trifluorotoluene(FID)	*88.7*			*77.0-120*		*08/21/2020 10:16*	WG1529803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000677	0.00145	1	08/20/2020 11:27	WG1529284
Toluene	U		0.00188	0.00725	1	08/20/2020 11:27	WG1529284
Ethylbenzene	U		0.00107	0.00362	1	08/20/2020 11:27	WG1529284
Total Xylenes	U		0.00128	0.00942	1	08/20/2020 11:27	WG1529284
(S) Toluene-d8	*110*			*75.0-131*		*08/20/2020 11:27*	WG1529284
(S) 4-Bromofluorobenzene	*98.5*			*67.0-138*		*08/20/2020 11:27*	WG1529284
(S) 1,2-Dichloroethane-d4	*86.2*			*70.0-130*		*08/20/2020 11:27*	WG1529284

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.97	4.90	1	08/23/2020 09:29	WG1529516
C28-C40 Oil Range	U		0.336	4.90	1	08/23/2020 09:29	WG1529516
(S) o-Terphenyl	*76.8*			*18.0-148*		*08/23/2020 09:29*	WG1529516

Collected date/time: 08/13/20 09:50

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.9		1	08/20/2020 21:38	WG1529500

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	18.6	J	11.2	24.4	1	08/21/2020 18:47	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0265	0.122	1	08/24/2020 18:22	WG1531484
(S) a,a,a-Trifluorotoluene(FID)	*97.1*			*77.0-120*		*08/24/2020 18:22*	WG1531484

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000674	0.00144	1	08/20/2020 11:47	WG1529284
Toluene	U		0.00188	0.00721	1	08/20/2020 11:47	WG1529284
Ethylbenzene	U		0.00106	0.00361	1	08/20/2020 11:47	WG1529284
Total Xylenes	U		0.00127	0.00938	1	08/20/2020 11:47	WG1529284
(S) Toluene-d8	*110*			*75.0-131*		*08/20/2020 11:47*	WG1529284
(S) 4-Bromofluorobenzene	*99.9*			*67.0-138*		*08/20/2020 11:47*	WG1529284
(S) 1,2-Dichloroethane-d4	*87.1*			*70.0-130*		*08/20/2020 11:47*	WG1529284

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.97	4.88	1	08/23/2020 07:22	WG1529516
C28-C40 Oil Range	U		0.335	4.88	1	08/23/2020 07:22	WG1529516
(S) o-Terphenyl	*69.5*			*18.0-148*		*08/23/2020 07:22*	WG1529516

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.5		1	08/20/2020 21:38	WG1529500

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	25.8		11.4	24.8	1	08/21/2020 18:56	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0270	0.124	1	08/25/2020 13:43	WG1531602
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*		*08/25/2020 13:43*	WG1531602

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000694	0.00149	1	08/20/2020 12:07	WG1529284
Toluene	U		0.00193	0.00743	1	08/20/2020 12:07	WG1529284
Ethylbenzene	U		0.00109	0.00371	1	08/20/2020 12:07	WG1529284
Total Xylenes	U		0.00131	0.00966	1	08/20/2020 12:07	WG1529284
(S) Toluene-d8	*110*			*75.0-131*		*08/20/2020 12:07*	WG1529284
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*08/20/2020 12:07*	WG1529284
(S) 1,2-Dichloroethane-d4	*84.4*			*70.0-130*		*08/20/2020 12:07*	WG1529284

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		2.00	4.97	1	08/23/2020 09:55	WG1530250
C28-C40 Oil Range	U		0.340	4.97	1	08/23/2020 09:55	WG1530250
(S) o-Terphenyl	*63.9*			*18.0-148*		*08/23/2020 09:55*	WG1530250

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.4		1	08/20/2020 21:38	WG1529500

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	58.7		11.2	24.3	1	08/21/2020 19:06	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0263	0.121	1	08/25/2020 14:03	WG1531602
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*		*08/25/2020 14:03*	WG1531602

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000666	0.00143	1	08/20/2020 12:27	WG1529284
Toluene	U		0.00186	0.00714	1	08/20/2020 12:27	WG1529284
Ethylbenzene	U		0.00105	0.00357	1	08/20/2020 12:27	WG1529284
Total Xylenes	U		0.00126	0.00928	1	08/20/2020 12:27	WG1529284
(S) Toluene-d8	*108*			*75.0-131*		*08/20/2020 12:27*	WG1529284
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*		*08/20/2020 12:27*	WG1529284
(S) 1,2-Dichloroethane-d4	*81.4*			*70.0-130*		*08/20/2020 12:27*	WG1529284

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.95	4.85	1	08/23/2020 10:07	WG1530250
C28-C40 Oil Range	U		0.332	4.85	1	08/23/2020 10:07	WG1530250
(S) o-Terphenyl	*74.8*			*18.0-148*		*08/23/2020 10:07*	WG1530250

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.2		1	08/20/2020 21:38	WG1529500

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.66	21.0	1	08/21/2020 19:34	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0520	B J	0.0228	0.105	1	08/21/2020 12:06	WG1529803
(S) a,a,a-Trifluorotoluene(FID)	*87.9*			*77.0-120*		*08/21/2020 12:06*	WG1529803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000514	0.00110	1	08/20/2020 16:06	WG1529284
Toluene	U		0.00143	0.00550	1	08/20/2020 16:06	WG1529284
Ethylbenzene	U		0.000811	0.00275	1	08/20/2020 16:06	WG1529284
Total Xylenes	U		0.000969	0.00715	1	08/20/2020 16:06	WG1529284
(S) Toluene-d8	*112*			*75.0-131*		*08/20/2020 16:06*	WG1529284
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*08/20/2020 16:06*	WG1529284
(S) 1,2-Dichloroethane-d4	*88.9*			*70.0-130*		*08/20/2020 16:06*	WG1529284

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.69	4.20	1	08/23/2020 10:20	WG1530250
C28-C40 Oil Range	U		0.288	4.20	1	08/23/2020 10:20	WG1530250
(S) o-Terphenyl	*84.8*			*18.0-148*		*08/23/2020 10:20*	WG1530250

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.1		1	08/20/2020 20:09	WG1529502

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	45.5		11.2	24.4	1	08/21/2020 19:44	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0264	0.122	1	08/24/2020 19:29	WG1531484
(S) a,a,a-Trifluorotoluene(FID)	*96.5*			*77.0-120*		*08/24/2020 19:29*	WG1531484

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000670	0.00144	1	08/20/2020 16:26	WG1529284
Toluene	U		0.00187	0.00718	1	08/20/2020 16:26	WG1529284
Ethylbenzene	U		0.00106	0.00359	1	08/20/2020 16:26	WG1529284
Total Xylenes	U		0.00126	0.00933	1	08/20/2020 16:26	WG1529284
(S) Toluene-d8	*110*			*75.0-131*		*08/20/2020 16:26*	WG1529284
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*08/20/2020 16:26*	WG1529284
(S) 1,2-Dichloroethane-d4	*87.7*			*70.0-130*		*08/20/2020 16:26*	WG1529284

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.96	4.87	1	08/23/2020 14:56	WG1530250
C28-C40 Oil Range	3.64	J	0.334	4.87	1	08/23/2020 14:56	WG1530250
(S) o-Terphenyl	*76.0*			*18.0-148*		*08/23/2020 14:56*	WG1530250

H-20-6 (2-3)
Collected date/time: 08/13/20 10:40

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.4		1	08/20/2020 20:09	WG1529502

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	19.0	J	11.2	24.3	1	08/21/2020 19:53	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0263	0.121	1	08/21/2020 12:48	WG1529803
(S) a,a,a-Trifluorotoluene(FID)	*88.2*			*77.0-120*		*08/21/2020 12:48*	WG1529803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000667	0.00143	1	08/20/2020 16:46	WG1529284
Toluene	U		0.00186	0.00714	1	08/20/2020 16:46	WG1529284
Ethylbenzene	U		0.00105	0.00357	1	08/20/2020 16:46	WG1529284
Total Xylenes	U		0.00126	0.00929	1	08/20/2020 16:46	WG1529284
(S) Toluene-d8	*110*			*75.0-131*		*08/20/2020 16:46*	WG1529284
(S) 4-Bromofluorobenzene	*99.0*			*67.0-138*		*08/20/2020 16:46*	WG1529284
(S) 1,2-Dichloroethane-d4	*88.6*			*70.0-130*		*08/20/2020 16:46*	WG1529284

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.95	4.86	1	08/23/2020 10:33	WG1530250
C28-C40 Oil Range	U		0.333	4.86	1	08/23/2020 10:33	WG1530250
(S) o-Terphenyl	*66.5*			*18.0-148*		*08/23/2020 10:33*	WG1530250

Collected date/time: 08/13/20 10:50

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.7		1	08/20/2020 20:09	WG1529502

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.22	20.1	1	08/21/2020 20:03	WG1529566

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0536	B J	0.0218	0.100	1	08/21/2020 23:12	WG1530437
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*		*08/21/2020 23:12*	WG1530437

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000469	0.00101	1	08/20/2020 17:05	WG1529284
Toluene	U		0.00131	0.00503	1	08/20/2020 17:05	WG1529284
Ethylbenzene	U		0.000741	0.00251	1	08/20/2020 17:05	WG1529284
Total Xylenes	U		0.000885	0.00653	1	08/20/2020 17:05	WG1529284
(S) Toluene-d8	*110*			*75.0-131*		*08/20/2020 17:05*	WG1529284
(S) 4-Bromofluorobenzene	*99.7*			*67.0-138*		*08/20/2020 17:05*	WG1529284
(S) 1,2-Dichloroethane-d4	*88.8*			*70.0-130*		*08/20/2020 17:05*	WG1529284

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.51	J	1.61	4.01	1	08/23/2020 11:11	WG1530250
C28-C40 Oil Range	U		0.275	4.01	1	08/23/2020 11:11	WG1530250
(S) o-Terphenyl	*84.7*			*18.0-148*		*08/23/2020 11:11*	WG1530250

Method Blank (MB)

(MB) R3562308-1 08/20/20 22:01

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1251164-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1251164-02 08/20/20 22:01 • (DUP) R3562308-3 08/20/20 22:01

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	99.4	99.3	1	0.0606		10

Laboratory Control Sample (LCS)

(LCS) R3562308-2 08/20/20 22:01

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3562304-1 08/20/20 21:38

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1251164-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1251164-12 08/20/20 21:38 • (DUP) R3562304-3 08/20/20 21:38

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	81.9	83.0	1	1.32		10

Laboratory Control Sample (LCS)

(LCS) R3562304-2 08/20/20 21:38

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3562297-1 08/20/20 20:09

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1251170-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1251170-01 08/20/20 20:09 • (DUP) R3562297-3 08/20/20 20:09

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.7	85.0	1	0.253		10

Laboratory Control Sample (LCS)

(LCS) R3562297-2 08/20/20 20:09

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3562816-1 08/21/20 15:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		9.20	20.0

L1251164-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1251164-02 08/21/20 16:24 • (DUP) R3562816-3 08/21/20 16:34

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	U	1	0.000		20

L1251164-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1251164-18 08/21/20 20:03 • (DUP) R3562816-6 08/21/20 20:12

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3562816-2 08/21/20 15:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	190	95.1	90.0-110	

L1251164-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1251164-10 08/21/20 18:09 • (MS) R3562816-4 08/21/20 18:18 • (MSD) R3562816-5 08/21/20 18:28

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	608	46.6	609	626	92.5	95.2	1	80.0-120			2.71	20

Method Blank (MB)

(MB) R3562114-3 08/20/20 16:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.6*			*77.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3562114-1 08/20/20 15:46 • (LCSD) R3562114-2 08/20/20 16:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.25	6.88	114	125	72.0-127			9.60	20
(S) a,a,a-Trifluorotoluene(FID)				*100*	*101*	*77.0-120*				

L1251205-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1251205-13 08/21/20 01:26 • (MS) R3562114-4 08/21/20 01:48 • (MSD) R3562114-5 08/21/20 02:10

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	106	U	60.1	62.1	56.7	58.6	25	10.0-151			3.27	28
(S) a,a,a-Trifluorotoluene(FID)					*70.2*	*69.8*		*77.0-120*	J2	J2		

Method Blank (MB)

(MB) R3563142-2 08/21/20 02:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0220	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*90.9*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3563142-1 08/21/20 01:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.14	93.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	

Method Blank (MB)

(MB) R3562817-2 08/21/20 21:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0439	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3562817-1 08/21/20 21:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.51	100	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*101*	*77.0-120*	

Method Blank (MB)

(MB) R3563294-2 08/24/20 13:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*97.5*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3563294-1 08/24/20 12:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.10	92.7	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*97.2*	*77.0-120*	

Method Blank (MB)

(MB) R3563564-3 08/25/20 12:06

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3563564-2 08/25/20 11:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.92	108	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*77.0-120*	

Method Blank (MB)

(MB) R3562068-3 08/20/20 10:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*112*			*75.0-131*
(S) 4-Bromofluorobenzene	*102*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*83.0*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3562068-1 08/20/20 09:01 • (LCSD) R3562068-2 08/20/20 09:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.133	0.133	106	106	70.0-123			0.000	20
Ethylbenzene	0.125	0.136	0.141	109	113	74.0-126			3.61	20
Toluene	0.125	0.139	0.137	111	110	75.0-121			1.45	20
Xylenes, Total	0.375	0.423	0.428	113	114	72.0-127			1.18	20
(S) Toluene-d8				*110*	*109*	*75.0-131*				
(S) 4-Bromofluorobenzene				*104*	*105*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*92.2*	*87.3*	*70.0-130*				

L1251164-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1251164-10 08/20/20 11:07 • (MS) R3562068-4 08/20/20 17:25 • (MSD) R3562068-5 08/20/20 17:45

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.179	U	0.140	0.159	78.0	88.8	1	10.0-149			12.9	37
Ethylbenzene	0.179	U	0.149	0.173	83.2	96.8	1	10.0-160			15.1	38
Toluene	0.179	U	0.148	0.172	82.4	96.0	1	10.0-156			15.2	38
Xylenes, Total	0.538	U	0.449	0.528	83.5	98.1	1	10.0-160			16.2	38
(S) Toluene-d8					*111*	*111*		*75.0-131*				
(S) 4-Bromofluorobenzene					*102*	*103*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*83.7*	*88.3*		*70.0-130*				

Method Blank (MB)

(MB) R3563152-2 08/20/20 20:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	0.00100	J	0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*103*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*94.8*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3563152-1 08/20/20 19:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.133	106	70.0-123	
Ethylbenzene	0.125	0.123	98.4	74.0-126	
Toluene	0.125	0.112	89.6	75.0-121	
Xylenes, Total	0.375	0.366	97.6	72.0-127	
(S) Toluene-d8			*95.0*	*75.0-131*	
(S) 4-Bromofluorobenzene			*107*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*104*	*70.0-130*	

L1251178-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1251178-02 08/21/20 02:41 • (MS) R3563152-3 08/21/20 04:04 • (MSD) R3563152-4 08/21/20 04:24

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	1.29	U	1.19	1.42	91.7	110	8	10.0-149			18.1	37
Ethylbenzene	1.29	0.680	1.97	2.25	99.4	121	8	10.0-160			13.5	38
Toluene	1.29	0.266	1.26	1.51	77.0	96.4	8	10.0-156			18.1	38
Xylenes, Total	3.88	7.11	12.0	13.2	127	157	8	10.0-160			9.23	38
(S) Toluene-d8					*90.5*	*91.7*		*75.0-131*				
(S) 4-Bromofluorobenzene					*117*	*118*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*108*	*106*		*70.0-130*				

Sample Narrative:

OS: Non-target compounds too high to run at a lower dilution.

Method Blank (MB)

(MB) R3562648-1 08/22/20 13:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	0.333	J	0.274	4.00
(S) o-Terphenyl	*79.3*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3562648-2 08/22/20 13:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	44.5	89.0	50.0-150	
(S) o-Terphenyl			*64.9*	*18.0-148*	

L1250943-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1250943-10 08/22/20 17:24 • (MS) R3562648-3 08/22/20 17:37 • (MSD) R3562648-4 08/22/20 17:50

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	61.4	3.23	42.5	49.6	64.0	76.3	1	50.0-150			15.3	20
(S) o-Terphenyl					*46.8*	*51.4*		*18.0-148*				

Method Blank (MB)

(MB) R3562836-1 08/23/20 03:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*84.5*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3562836-2 08/23/20 04:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.1	72.2	50.0-150	
(S) o-Terphenyl			*81.4*	*18.0-148*	

Method Blank (MB)

(MB) R3562650-1 08/22/20 07:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*79.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3562650-2 08/22/20 08:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	40.1	80.2	50.0-150	
(S) o-Terphenyl			*59.6*	*18.0-148*	

L1251164-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1251164-17 08/23/20 10:33 • (MS) R3562837-1 08/23/20 10:46 • (MSD) R3562837-2 08/23/20 10:58

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	58.5	U	33.1	32.9	56.6	56.9	1	50.0-150			0.735	20
(S) o-Terphenyl					*56.9*	*100*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

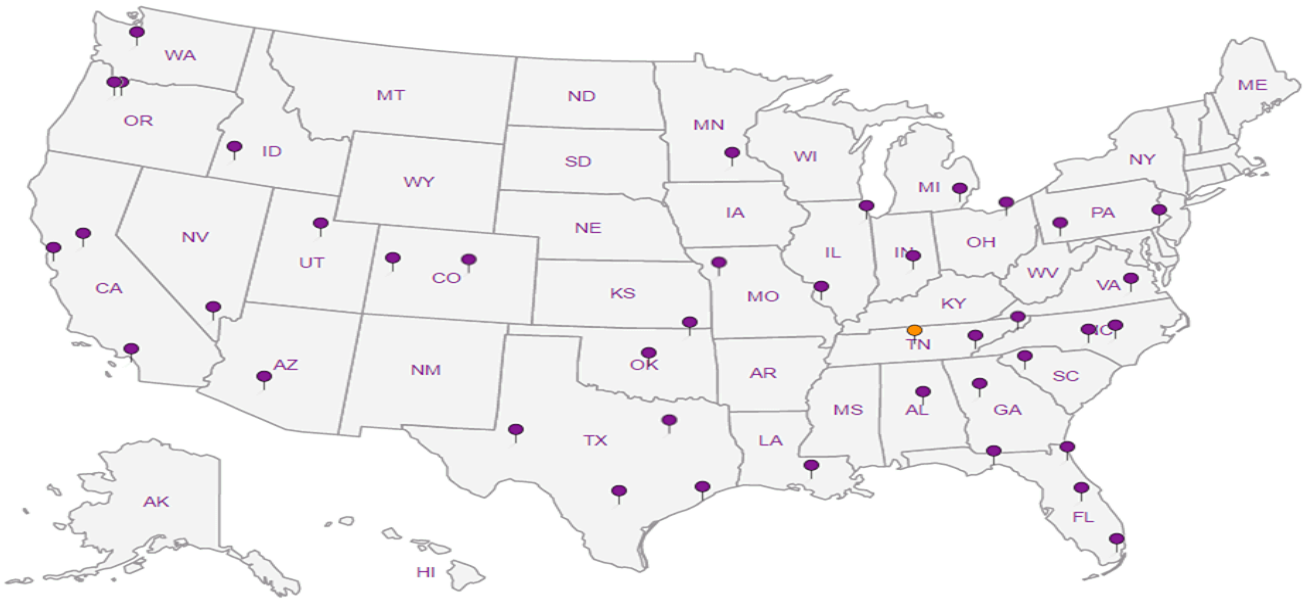
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

H176

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA - 1A Header Release	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02251
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Adrian
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
L251164		YEAR: 2020																																
-01	H 20-1 (0-1)	8/13/2020	800		X				X			1	N	X		X												X						
02	H 20-1 (2-3)	8/13/2020	810		X				X			1	N	X		X												X						
03	H 20-1 (3-4)	8/13/2020	820		X				X			1	N	X		X												X						
04	H 20-2 (0-1)	8/13/2020	830		X				X			1	N	X		X												X						
05	H 20-2 (2-3)	8/13/2020	840		X				X			1	N	X		X												X						
06	H 20-2 (3-4)	8/13/2020	850		X				X			1	N	X		X												X						
07	H 20-3 (0-1)	8/13/2020	900		X				X			1	N	X		X												X						
08	H 20-3 (2-3)	8/13/2020	910		X				X			1	N	X		X												X						
09	H 20-3 (3-4)	8/13/2020	920		X				X			1	N	X		X												X						
10	H 20-4 (0-1)	8/13/2020	930		X				X			1	N	X		X												X						

	Date:	Time:		Date:	Time:
Relinquished by:	8/14/20	1100	Received by:	8/14/20	1100
Relinquished by:	8/14/20	1600	Received by: FedEx	8/15/20	1600
Relinquished by:			Received by:	8/15/20	900

ORIGINAL COPY

LAB USE ONLY

Sample Temperature

REMARKS:

- [X] Standard
- [ ] RUSH: Same Day 24 hr. 48 hr. 72 hr.
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

1.3-.1=1.2 ny

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA - 1A Header Release	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02251
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Adrian
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
L1251164		YEAR: 2020																																
-11	H 20-4 (2-3)	8/13/2020	940		X				X			1	N	X		X												X						
12	H 20-4 (3-4)	8/13/2020	950		X				X			1	N	X		X												X						
13	H 20-5 (0-1)	8/13/2020	1000		X				X			1	N	X		X												X						
14	H 20-5 (2-3)	8/13/2020	1010		X				X			1	N	X		X												X						
15	H 20-5 (3-4)	8/13/2020	1020		X				X			1	N	X		X												X						
16	H 20-6 (0-1)	8/13/2020	1030		X				X			1	N	X		X												X						
17	H 20-6 (2-3)	8/13/2020	1040		X				X			1	N	X		X												X						
18	H 20-6 (3-4)	8/13/2020	1050		X				X			1	N	X		X												X						

Relinquished by:	Date: 8/14/20	Time: 1100	Received by: Date: 8/14/20 Time: 1500
Relinquished by:	Date: 8/14/20	Time: 1600	Received by: FedEx Date: 8/14/20 Time: 1600
Relinquished by:	Date:	Time:	Received by: Date: 8/15/20 Time: 9:00

ORIGINAL COPY

LAB USE ONLY

Sample Temperature

REMARKS:

- [X] Standard
- [ ] RUSH: Same Day 24 hr. 48 hr. 72 hr.
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	COPTETRA	L1251164
Cooler Received/Opened On: 8 / 15 / 20	Temperature:	1.2
Received By:	DECARSO GOODE	
Signature:	Decarso Goode	

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

APPENDIX F
NMSLO Seed Mixture Details

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Lea County, New Mexico

October 5, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (MCA 1-A Header Release)

Map Scale: 1:196 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 2 5 10 15

Feet: 0 5 10 20 30

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 17, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (MCA 1-A Header Release)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KM	Kermit soils and Dune land, 0 to 12 percent slopes	0.1	100.0%
Totals for Area of Interest		**0.1**	**100.0%**

Map Unit Descriptions (MCA 1-A Header Release)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Lea County, New Mexico

KM—Kermit soils and Dune land, 0 to 12 percent slopes

Map Unit Setting

National map unit symbol: dmpx
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 15 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Kermit and similar soils: 46 percent
Dune land: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kermit

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear, concave
Across-slope shape: Convex
Parent material: Calcareous sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 8 inches: fine sand
C - 8 to 60 inches: fine sand

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 3 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R042XC022NM - Sandhills
Hydric soil rating: No

Description of Dune Land

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear, concave
Across-slope shape: Convex

Typical profile

A - 0 to 6 inches: fine sand
C - 6 to 60 inches: fine sand

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Palomas

Percent of map unit: 3 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Pyote

Percent of map unit: 3 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Wink

Percent of map unit: 2 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Maljamar

Percent of map unit: 2 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

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NMSLO Seed Mix Sandy (S)

SANDY (S) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sand bluestem	**Elida, VNS, So.**	**2.0**	**F**
Little bluestem	**Cimarron, Pastura**	**3.0**	**F**
Black grama	**VNS, Southern**	**1.0**	**D**
Sand dropseed	**VNS, Southern**	**4.0**	**S**
Plains bristlegrass	**VNS, Southern**	**2.0**	**D**
Forbs:			
Firewheel (Gaillardia)	**VNS, Southern**	**1.0**	**D**
Annual Sunflower	**VNS, Southern**	**1.0**	**D**
Shrubs:			
Fourwing Saltbush	**VNS, Southern**	**1.0**	**F**
	Total PLS/acre	**16.0**	

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

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