

February 8, 2021

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

Re: Release Characterization and Reclamation Work Plan ConocoPhillips MCA Elvis Trunk Line Release Unit Letter C, Section 29, Township 17 South, Range 35 East Lea County, New Mexico 1RP-797 Incident ID nPAC0608132223

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a historical release that occurred from a produced water trunk line from the Maljamar Cooperative Agreement (MCA) Elvis Battery. The release footprint is located in Public Land Survey System (PLSS) Unit Letter C, Section 29, Township 17 South, Range 32 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.81178°, -103.79039°, as shown on Figures 1 and 2.

BACKGROUND

No official State of New Mexico C-141 Initial Report has been found; however, a Record of Accidental Discharge was completed for the release (Appendix A). According to this report the release was discovered on September 24, 2001. The release occurred due to fatigue (pressure) when a 4-inch tee settled and pulled out of the line. The release consisted of 450 barrels (bbls) of produced water affecting a 135-foot (ft) by 160-ft sandy pasture area. During immediate response actions, a vacuum truck recovered 430 bbls of produced water. The New Mexico Oil Conservation District (NMOCD) was notified of the release and subsequently assigned the Remediation Permit (RP) number 1RP-797 and the Incident ID nPAC0608132223. The 1RP-797 release is included in an Agreed Compliance Order-Releases (ACO-R) between COP and the NMOCD signed on May 7 and 9, 2019, respectively.

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 19.15.29 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 ten (10) water wells within 2,000 meters (approximately 1.25 miles) of the Site. The average depth to groundwater is 82 ft 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

ConocoPhillips

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 and in accordance with Table I of 19.15.29.12 NMAC, the remediation RRALs for the Site are as follows:

Constituent	Remediation RRAL
Chloride	10,000 mg/kg
TPH	2,500 mg/kg
BTEX	50 mg/kg

Additionally, in accordance with the NMOCD guidance *Procedures for Implementation of the Spill Rule* (19.15.29 NMAC) (September 6, 2019), the following reclamation RRALs for surface soils (0-4 ft bgs) outside of active oil and gas operations are as follows:

Constituent	Reclamation RRAL
Chloride	600 mg/kg
TPH	100 mg/kg
BTEX	50 mg/kg

INITIAL ASSESSMENT ACTIVITIES AND SAMPLING RESULTS

Initial assessment activities conducted at the Site were reported to the NMOCD in an Environmental Site Investigation (ESI) report dated April 12, 2002, prepared by BBC International, Inc. (BBC) on behalf of COP (Appendix C). On November 30, 2001, BBC drilled two sample points, Elvis 1 and Elvis 2, to depths of twenty-five (25) ft bgs and thirty-five (35) ft bgs, respectively. Samples were collected at 1 ft, 5 ft, 15 ft, and at 25 ft bgs at sample point Elvis 1, and at 1 ft, 5 ft, 15 ft, 25 ft, 30 ft, and at 35 ft at sample point Elvis 2. Samples were field screened for chlorides and submitted to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for chlorides via EPA Method 4500-CI-B.

Field measurements and analytical results from the initial assessment are presented in Figure 1 of the BBC report (Appendix C). The laboratory analytical report is included as Appendix I of the BBC report. The analytical results for chloride were elevated in surface soils at both sample points, and concentrations reduced to less than 600 mg/kg at 25 ft bgs in Elvis 1 and at 35 ft bgs in Elvis 2.

The BBC report concluded that because the depth to groundwater is greater than 55 ft bgs at the Site, and that the subsurface soil lithology consists of caliche and sandstone layers, then migration of chlorides to groundwater is unlikely. BBC recommended that only surface remediation is necessary and that gypsum, ammonium nitrate, Salt Block, or other amendments that will reduce the chloride concentrations in the soil be added to allow for revegetation. A review of aerial imagery from 2005 revealed evidence of apparent soil disturbance along the trunk line and a lack of revegetation in the release area. Photographic documentation of Site conditions taken during a June 2020 Site visit conducted by Tetra Tech is presented in Appendix D.

ADDITIONAL SITE ASSESSMENT

In order to complete horizontal and vertical delineation of the release extent, Tetra Tech personnel conducted additional soil sampling on December 8, 2020 on behalf of COP. Two (2) hand auger borings (AH-5 and AH-6) were installed within the release extent to depths of 5 ft bgs to achieve vertical delineation. The remaining four (4) borings (AH-1 through AH-4) were installed along the perimeter of the release extent (to the north, east, south, and west, respectively) to a depth of 2 ft bgs to achieve horizontal delineation. Surface and subsurface soils consist of light brown to tan loose silty sands. Figure 3 depicts the release extent and the 2020 soil boring locations. The GPS coordinates for the 2020 soil boring locations are presented in Table 1.

A total of fourteen (14) samples were collected from the five (5) borings (AH-1 through AH-5) and submitted to Pace Analytical National Center for Testing & Innovation (Pace) in Nashville, Tennessee to be analyzed

Release Characterization and Reclamation Work Plan February 8, 2021

for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix E.

SUMMARY OF SAMPLING RESULTS

Results from the December 2020 soil sampling event are summarized in Table 2. The analytical results associated with all samples from the five (5) borings (AH-1 through AH-5) were below the appropriate Site reclamation and remediation RRALs for all constituents. Sampling results imply that previous remediation work has occurred at the Site.

SITE RECLAMATION AND RESTORATION PLAN

Based on the results of the Site assessment, no soil remediation is necessary at the Site. A comparison of analytical data collected during the 2001 BBC activities and the 2020 Tetra Tech activities lends support to the concept that previously undocumented soil remediation occurred at the release Site. Nonetheless, as this is an off-pad release, Site reclamation and restoration activities are warranted in order to establish vegetative cover that reflects a life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels. Bare soils in the former release footprint will be ripped, blended with clean topsoil, and contoured to promote drainage and root penetration. The mixing of topsoil with underlying subsoil will promote revegetation (Figure 4).

Unvegetated areas in the former release footprint will be seeded in Spring 2021 (or the 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.

CONCLUSION

ConocoPhillips proposes to begin reclamation activities at the Site within 1 year of NMOCD plan approval. The MCA Elvis Trunk Line Release (1RP-797) is included in an Agreed Compliance Order-Releases (ACO-R) between COP and the NMOCD signed on May 7 and 9, 2019, respectively. COP is dedicated to addressing and closing all historical releases included in the ACO-R, and given the number of releases to be addressed, 1 year is anticipated to be a practicable timeline. Upon completion of the proposed work, a final closure report detailing the reclamation activities will be submitted to NMOCD.

If you have any questions concerning the soil assessment or the proposed reclamation activities for the Site, please call me at (512) 739-7874 or Christian at (512) 338-2861.

3

Received by OCD: 4/17/2023 10:21:50 AM

February 8, 2021

ConocoPhillips

Sincerely, Tetra Tech, Inc.

Samantha K. Abbott, P.G. Senior Staff Geologist

Christian M, Llull, P.G. Project Manager

CC:

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

Release Characterization and Reclamation Work Plan

.

Page 5 of 86

LIST OF ATTACHMENTS

Figures:

Figure 1 – Site Map

Figure 2 – Topographic Map

Figure 3 – Release Extent and Assessment Map

Figure 4 – Proposed Reclamation Extent

Tables:

 Table 1 – Boring Location Coordinates

Table 2 – Summary of Analytical Results – Soil Assessment

Appendices:

Appendix A – C-141 Forms

Appendix B – Site Characterization Data

Appendix C – Environmental Site Investigation Report (BBC, November 19, 2001)

Appendix D – Photographic Documentation

Appendix E – Laboratory Analytical Data

Appendix F – NMSLO Seed Mixture Details

FIGURES



Released to Imaging: 4/24/2023 11:18:36 AM



Released to Imaging: 4/24/2023 11:18:36 AM

Received by OCD: 4/17/2023 10:21:50 AM





TABLES

TABLE 1 BORING LOCACTION COORDINATES SOIL ASSESSMENT - 1RP-797 CONOCOPHILLIPS MCA ELVIS TRUNKLINE RELEASE LEA COUNTY, NM

Boring ID	Latitude	Longitude
AH-1	32.812069	-103.790520
AH-2	32.811876	-103.789949
AH-3	32.811389	-103.790209
AH-4	32.811722	-103.790789
AH-5	32.811853	-103.790340
AH-6	32.811651	-103.790375

TABLE 2 SUMMARY OF ANALYTICAL RESULTS SOIL ASSESSMENT - 1RP-797 CONOCOPHILLIPS MCA ELVIS TRUNKLINE RELEASE LEA COUNTY, NM

									BTEX ²								TPH	3		
Sample ID	Sample Date	Sample Depth Interval	Chloride ¹		Bonzono		Toluono		Ethylbonzon	0	Total Vulonov		Total BTEV	GRO ⁴		DRO		ORO		Total TPH
Sample ID	Sample Date				Denzene		Toldene		Ethylbenzen	e		•	TOTAL DIEX	C ₃ - C ₁₀		C ₁₀ - C ₂₈		C ₂₈ - C ₄₀		(GRO+DRO+ORO)
		ft. bgs	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
۸H_1	12/8/2020	0-1	< 24.3		< 0.00156		< 0.00779		< 0.00389		< 0.0101		-	1.28	J	< 4.86	J3	2.14	J	3.42
All-1	12/8/2020	1-2	< 24.7		< 0.00161		< 0.00807		< 0.00403		< 0.0105		-	< 4.03		< 4.94		1.63	J	1.63
AUL 2	12/0/2020	0-1	< 23.8		< 0.00196		< 0.00978		< 0.00489		< 0.0127		-	1.12	J	< 4.77		3.06	J	4.18
AH-2	12/8/2020	1-2	< 22.3		< 0.00127		< 0.00633		< 0.00316		< 0.00823		-	< 3.16		< 4.47		4.23	J	4.23
AUL 2	12/8/2020	0-1	< 23.6		< 0.00176		< 0.00880		< 0.00440		< 0.0114		-	< 4.40		< 4.72	Π	4.47	J	4.47
АП-3	12/8/2020	1-2	< 20.6		< 0.00108		< 0.00538		< 0.00269		< 0.00700		-	< 2.69		1.72	J	7.22		8.94
	12/8/2020	0-1	< 25.0		< 0.00160		< 0.00798		< 0.00399		< 0.0104		-	< 3.99		< 4.99		5.35		5.35
AU-4	12/8/2020	1-2	< 24.7		< 0.00150		< 0.00751		< 0.00376		< 0.00976		-	1.62	ВJ	< 4.94		5.79		7.41
		0-1	< 21.4		< 0.00115		< 0.00576		< 0.00288		< 0.00749		-	1.08	ВJ	8.07		23.0		32.2
AH-5	12/8/2020	2-3	< 24.1		< 0.00177		< 0.00883		< 0.00442		< 0.0115		-	1.85	ВJ	< 4.81		1.25	J	3.10
		4-5	502		< 0.00127		< 0.00634		< 0.00317		< 0.00824		-	1.05	ВJ	< 4.47		4.72		5.77
		0-1	< 22.3		< 0.00190		< 0.00948		< 0.00474		< 0.0123		-	1.60	ВJ	< 4.46		5.19		6.79
AH-6	12/8/2020	2-3	< 24.5		< 0.00149		< 0.00743		< 0.00372		< 0.00967		-	1.14	ВJ	< 4.90		1.59	J	2.73
		4-5	668		< 0.00190		< 0.00951		< 0.00475		< 0.0124		-	1.36	ВJ	< 4.61		5.89		7.25

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

Bold and italicized values indicate exceedance of proposed RRALs

1 EPA Method 300.0

2 EPA Method 8260B

3 EPA Method 8015

4 EPA Method 8015D/GRO

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.

APPENDIX A C-141 Forms

•

		Conoco Inc.				Record of A	ccidental Di	scharge
			-			of Crude Oil	, Water or	
.	SPILL	CATEGORY:	8			Hazardous a	Substances	40/4
P - Americas		~,	2 Field		·	2 Barcon In Ch	area of Site	10/10
MCA PRO	D. WTR TR	UNK LINE	2. Field	BMP			ARRY MINNI	СК
4. Person Repo	rting Discharge				Person Receivir	ng Report		
	K	EN ANDERS	EN			DEEN, GAT	SON,RITTE	<u>२</u>
5. Discharge Di	scovered By	KEVINI				Date and Time I 9/2	Discovered 4/01 @ 08-0	0am
Witnesses	<u></u>			<u>-</u>				
E Haw Did Can		Discharge	M	EVIN McNA	3B			
b. Now Did Con	npany Learn of	Discharge	SAW	LEAK FROM	TRUCK			
7. Date and Tim	ne Discharge B	egan	7a. Date and T	ime Discharge E	nded	8. Date and Tim	ne Initial Report	Received
9/24	4/01 @ 03:0	0aM	9/2	<u>4/01 @ 08:30</u>	am			
9. Discharge	Unit Letter	Section	Blk./ TWP	Survey/Range		County		State
Site	C	29	<u>17S</u>	32	E	LE	Α	NM
Highway Map I	Location							
30 SOUTH	FROM MAL	JAMAR ON N	MALJAMAR I	ROAD 3.25 M	ILES, THEN	WEST FOR	1.5 MILES	
10. Location of	Discharge		Click Here		Feet to Wellhea	d No.		
Other	<u>4" PROD V</u>	VTR TRUNK I	LINE 200' NC	ORTH OF MC	A # 110			· · · · · · · · · · · · · · · · · · ·
11. Source of E)ischarge - Pipe	2	Туре	Placement	Coating		Other Source of	of Discharge
Piping Size	(In Inches)	4"	Fiberglass	Buried	Bare		N/A	
12. Possible Re	eason	12a. Describe	Cause of Discha	rge and Action T	aken to Prevent		TOBACHIC	
for Dischar	ge	4" IEE SEI	ILED ON LI				I BRACING	
Fatigue(F	ressure)	UNDER GR	OUND AND	ABOVE GRO	UND. ALAR	MLINEWIII	HIRANSDU	ICER.
13. Names and	Volumes of Su	ubstances involve	450	• "	14. Remedial A	ction - Picked Up	p	
BDIS. OII		Bois. Water	430	Salt	BDIS. OII	400	Other Volume	
Other			Other Volume		BDIS. Water	430	Sait	
100'X200' O	F SANDY P	ASTURE DA		AIN WITH NC EAK.	COWS PRE	SENT. WIL	L CORE AR	EA AND
16. Water Cou	rses Reached		Туре	Condition	Volume Enterin	g Water		
			None	N/A .	Bbls, Oil			
Name					Bbls. Water		Other	
17. How Was [Discharge Stop	ped						
SHUT VALV	ES @ BTR	Y # 1, ELVIS,	& 4000 BBL	TANK.				
	Conditions at Ti	me of Discharge		Injection Well		BWPD @		PSI
18. Operating (Line PSI	
18. Operating (Click Here	BOPD		BWPD			
18. Operating (19. General W	eather Conditio	Click Here ns at Time of Dis	BOPD charge		BWPD 20. Cost of Rep	air/Cleanup		
18. Operating (19. General W	eather Conditic	Click Here ons at Time of Dis EAR AND C	: BOPD charge OOL		BWPD 20. Cost of Rep	pair/Cleanup \$2,0	00.00	
 18. Operating (19. General W 21. Federal, St 	eather Conditic Cí ate, and Local	Click Here ns at Time of Dis EAR AND CO Agencies Notified	: BOPD charge OOL l and/or Non - Co	ompany On - Site	BWPD 20. Cost of Rep Investigators	pair/Cleanup \$2,0	00.00	
 Operating (General W Federal, St Agency 	eather Conditic Cl ate, and Local	Click Here ns at Time of Dis EAR AND Co Agencies Notified Person Notifie	: BOPD charge DOL and/or Non - Co	ompany On - Site	BWPD 20. Cost of Rep Investigators Time Notified	pair/Cleanup \$2,0 Method Used	Person Notify	ng
18. Operating (19. General W 21. Federal, St Agency B	eather Conditic Cl ate, and Local LM	Click Here ns at Time of Dis EAR AND Co Agencies Notified Person Notifie ANI	BOPD charge OOL and/or Non - Co ed DREA	ompany On - Site Date Notified 09/24/01	BWPD 20. Cost of Rep Investigators Time Notified	pair/Cleanup \$2,0 Method Used PHONE	Person Notify	
18. Operating (19. General W 21. Federal, St Agency Bl NM	eather Conditic Cl ate, and Local LM OCD	Click Here ns at Time of Dis EAR AND Co Agencies Notified Person Notified ANI SILVIA	BOPD charge OOL and/or Non - Co d DREA DICKEY	ompany On - Site Date Notified 09/24/01 09/25/01	BWPD 20. Cost of Rep Investigators Time Notified 10:10 AM	Method Used PHONE PHONE	Person Notifyi KEN Al	ng NDERSEN NDERSEN
18. Operating (19. General W 21. Federal, St Agency Bi NM(eather Conditic Cl ate, and Local LM OCD	Click Here ns at Time of Dis EAR AND Co Agencies Notified Person Notified ANI SILVIA	BOPD charge OOL l and/or Non - Co d DREA DICKEY	ompany On - Site Date Notified 09/24/01 09/25/01	BWPD 20. Cost of Rep Investigators Time Notified 10:10 AM	Method Used PHONE	Person Notify KEN AI	^{ng} NDERSEN NDERSEN
18. Operating (19. General W 21. Federal, St Agency BI NM 22. Federal Let	eather Conditic Cl ate, and Local LM OCD ase No.	Click Here ns at Time of Dis EAR AND Co Agencies Notified Person Notifie ANI SILVIA	BOPD charge OOL and/or Non - Co ed DREA DICKEY	ompany On - Site Date Notified 09/24/01 09/25/01	BWPD 20. Cost of Rep Investigators Time Notified 10:10 AM	Method Used PHONE PHONE Right of Way N	Person Notify KEN AI KEN AI	
18. Operating (19. General W 21. Federal, St Agency BI NM 22. Federal Le	eather Conditic Cl ate, and Local LM OCD ase No. LC - 029410	Click Here ons at Time of Dis LEAR AND CO Agencies Notified Person Notifie ANI SILVIA	BOPD charge OOL and/or Non - Co ed DREA DICKEY Unit/CA No.	ompany On - Site Date Notified 09/24/01 09/25/01 8920003410	BWPD 20. Cost of Rep Investigators Time Notified 10:10 AM	Method Used PHONE PHONE Right of Way N ONE	Person Notify KEN AI KEN AI KEN AI O. CALL # 200	ng NDERSEN NDERSEN 1390409
18. Operating (19. General W 21. Federal, St Agency BI NM 22. Federal Le 23. Landowner	eather Conditic Cl ate, and Local LM OCD ase No. LC - 029410 / Tenant	Click Here ons at Time of Dis EAR AND Co Agencies Notified Person Notifie ANI SILVIA	BOPD charge DOL and/or Non - Co ed DREA DICKEY Unit/CA No.	ompany On - Site Date Notified 09/24/01 09/25/01 8920003410	BWPD 20. Cost of Rep Investigators Time Notified 10:10 AM	Method Used PHONE PHONE PHONE Right of Way N ONE ber:	Person Notifyi KEN AI KEN AI O. CALL # 200	ng NDERSEN NDERSEN 1390409
18. Operating (19. General W 21. Federal, St Agency Bi NM 22. Federal Le 23. Landowner I Hereby Certi	eather Conditic Cl ate, and Local LM OCD ase No. LC - 029410 / Tenant fy That The Info	Click Here ns at Time of Dis EAR AND CO Agencies Notified Person Notifie ANI SILVIA	BOPD charge DOL and/or Non - Co ad DREA DICKEY Unit/CA No.	ompany On - Site Date Notified 09/24/01 09/25/01 8920003410 Dete To The Best	BWPD 20. Cost of Rep Investigators Time Notified 10:10 AM Telephone Num of My Knowledg	Method Used PHONE PHONE PHONE Right of Way N ONE ber: e.	Person Notifyi KEN AI KEN AI O. CALL # 200	ng NDERSEN NDERSEN 1390409
18. Operating (19. General W 21. Federal, St Agency Bi NM 22. Federal Le 23. Landowner I Hereby Certi Kennet	eather Conditic Cl ate, and Local LM OCD ase No. LC - 029410 // Tenant fy That The Info	Click Here ns at Time of Dis EAR AND C Agencies Notified Person Notifie ANI SILVIA	BOPD charge DOL and/or Non - Co ad DREA DICKEY Unit/CA No.	ompany On - Site Date Notified 09/24/01 09/25/01 8920003410 Dete To The Best	BWPD 20. Cost of Rep Investigators Time Notified 10:10 AM Telephone Num of My Knowledg 9/25/01 @	Method Used PHONE PHONE PHONE Right of Way N ONE ber: e.	Person Notifyi KEN AI KEN AI o. CALL # 200	ng NDERSEN NDERSEN 1390409
18. Operating (19. General W 21. Federal, St Agency Bi NM(22. Federal Lec 23. Landowner I Hereby Certi Kennet Signature and Signature and	eather Conditic Cl ate, and Local LM OCD ase No. LC - 029410 / Tenant fy That The Info W. A. Title	Click Here Ins at Time of Dis LEAR AND Co Agencies Notified Person Notified ANI SILVIA DA	BOPD Charge DOL and/or Non - Co and/or Non - Co and/	ompany On - Site Date Notified 09/24/01 09/25/01 8920003410 Dete To The Best	BWPD 20. Cost of Rep Investigators Time Notified 10:10 AM Telephone Num of My Knowledg 9/25/01 @	Method Used PHONE PHONE PHONE Right of Way N ONE ber: re. MALJAM/	Person Notifyi KEN AI KEN AI CALL # 200	ng NDERSEN NDERSEN 1390409

Received by OCD: 4/17/2023 10:21:50 AM Form C-141 State of New Mexico

Oil Conservation Division

	Page 16 of 86
Incident ID	
District RP	
Facility ID	
Application ID	

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?	(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.

.

	3 10:21:50 AM			Page 17 of 8
Form C-141			Incident ID	
Page 4	Oil Conservation Division	n	District RP	
			Facility ID	
			Application ID	
 I nereby certify that the inform regulations all operators are republic health or the environmed failed to adequately investigat addition, OCD acceptance of a and/or regulations. Printed Name:	nation given above is true and complete to the equired to report and/or file certain release nent. The acceptance of a C-141 report by the te and remediate contamination that pose a the a C-141 report does not relieve the operator	me best of my knowledge otifications and perform o e OCD does not relieve th hreat to groundwater, surf of responsibility for comp Title: Date:	and understand that purst corrective actions for rele le operator of liability sho acce water, human health oliance with any other feo	ant to OCD rules and ases which may endanger build their operations have or the environment. In deral, state, or local laws
email:		Telephone:		
				1

Received by OCD: 4/17/2023 10:21:50 AM Form C-141 State of New Mexico

Oil Conservation Division

<u>Remediation Plan Checklist</u>: Each of the following items must be included in the plan.

	Incident ID	
	District RP	
ĺ	Facility ID	
ĺ	Application ID	

Remediation 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: Title: Signature: Charles R. Beauvais 99 Date: email: Telephone: _____ OCD Only Received by: Date: Approved Approved with Attached Conditions of Approval Denied Deferral Approved Signature: Date:

Page 5

APPENDIX B Site Characterization Data

Page 20 of 86

1RP-797



Released to Imaging: 4/24/2023 11:18:36 AM

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



Page 22 of 86



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)	(quar quar	ters ters	ar ar	re 1= re sm	NW 2 nalles	2=NE a	3=SW 4= rgest)	=SE) (NA) AD83 UTM in me	ters)	(1	n feet)	
POD Number	POD Sub- Code basin Co	ounty	Q / 64	Q (16 /	ຊ 4 ຮ	Sec 1	Tws	Rng		х	Y	Distance	Depth Well	Depth Water	Water Column
RA 10175	RA	LE		2	1	28	17S	32E	6148	814	3631005* 🌍	1575	158		
RA 12020 POD1	RA	LE	2	2	1	28	17S	32E	6148	28	3630954 🌍	1592	120	81	39
RA 12042 POD1	RA	LE	2	2	1	28	17S	32E	6148	91	3631181 🌍	1655	400		
RA 12721 POD1	RA	LE	3	2	3	28	17S	32E	6146	645	3630141 🌍	1683	125		
RA 12522 POD1	RA	LE	3	3	4	21	17S	32E	6149	941	3631122 🌍	1702	100		
RA 12522 POD2	RA	LE	2	2	1	28	17S	32E	6149	49	3631098 🌍	1710	100		
RA 12522 POD3	RA	LE	4	4	3	28	17S	32E	6149	80	3631093 🌍	1741	100		
RA 12521 POD1	RA	LE	3	3	4	21	17S	32E	6151	27	3631271 🌍	1898	105	92	13
RA 12020 POD3	RA	LE	2	1	2	28	17S	32E	6151	52	3631019 🌍	1913	112	83	29
RA 12721 POD2	RA	LE	1	1	4	28	17S	32E	6150)55	3630407 🌍	1932	124	75	49
											Averaç	ge Depth to	Water:	82	feet
												Minimum	Depth:	75	feet
												Maximum	Depth:	92	feet
					_										

Record Count: 10

UTMNAD83 Radius Search (in meters):

Easting (X): 613239.35

Northing (Y): 3631069

Radius: 2000

*UTM location was derived from PLSS - see Help

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

7/24/20 11:32 AM

APPENDIX C Environmental Site Investigation Report (BBC, November 19, 2001)



CONOCO INC.

MCA ELVIS TRUNKLINE LEAK

ENVIRONMENTAL SITE INVESTIGATION

PERFORMED BY:

BBC INTERNATIONAL, INC. WORLD-WIDE ENVIRONMENTAL SPECIALISTS 1324 W. MARLAND BLVD. P. O. BOX 805 HOBBS, NEW MEXICO 88240 (505)397-6388 • FAX (505)397-0397 EMAIL: bbc@bbcinternational.com WEBSITE: www.bbcinternational.com

NOVEMBER 19, 2001

PREPARED FOR:

MR. LEO GATSON CONOCO INC. 1410 W. COUNTY ROAD HOBBS, NEW MEXICO 88240

Released to Imaging 4/24/2028-11118:36 ANACO608132223

application pPACO608132317





PHONE (505) 397-6388 • FAX (505) 397- 0397 • 1324 W. MARLAND • P.O. BOX 805 • HOBBS, NM 88241-0805 E-MAIL: bbc@bbcinternational.com

April 12, 2002

Chris Williams NM Oil Conservation Division

Hobbs, NM 88240

RE: Conoco, Inc. - MCA Elvis Trunkline Leak

Dear Mr. Williams:

BBC International, Inc. respectfully submits this site investigation report for the MCA Elvis

This site is an area that was investigated due to an injection line leak that occurred on September 24, 2001. Approximately 450 barrels of produced water was released with 430 barrels recovered

The initial investigation and sampling was conducted on November 30, 2001. This report details the results.

As can be found in the report, the chlorides are reduced greatly at depth. The recommendation is to halt any further investigations activities and conduct surface remediation measures only.

I look forward to your review of this report and the agreement to our recommendation. If you have any questions, please do not hesitate to contact me at (505)397-6388 or at the address above.

Sincerely,

BBC International, Inc.

Ken Swinner

Ken Swinney, CEI, CRS Director of Operations

KS:js

encl.

Conoco MCA Elvis Trunkline Leak 9/24/01

1.0 INTRODUCTION

The subject site is located south of Maljamar, New Mexico in Unit Letter C of Section 29, Township 17 South, Range 32 East. The site consists of undeveloped rangeland. On September 24, 2001 a trunkline leaked approximately 450 barrels of produced water, with approximately 430 barrels being recovered from the surface.

2.0 SITE CHARACTERIZATION

The leak area is in a depression surrounded by sand hills. The leak area runs North-South for approximately 160 feet. The leak area is approximately 135 feet wide at the widest point. The surface soil is red sand. There is no water source within 1,000 feet of the site. There is no surface water within 1,000 feet of the site. Based on data from the ground water monitoring well located at the Conoco Maljamar Plant, depth to ground water is approximately <u>.90</u> feet.

3.0 SITE INVESTIGATION ACTIVITIES

On November 30, 2001, BBC personnel conducted an inspection of the site. Two sample points were drilled at the site using BBC's tractor mount drilling rig. Sample point Elvis 1 was drilled to a depth of 25 feet. Sample point Elvis 2 was drilled to a depth of 35 feet. Samples were taken at 1 foot, 5 feet, 15 feet, and at 25 feet at sample point Elvis 1, at 1 foot, 5 feet, 15 feet, 25 feet, 30 feet, and at 35 feet at sample point Elvis 2. Field screening for chloride was performed on site. Field screening data is located on Figure 1. Soil samples were then sent to Cardinal Laboratories for analysis. Laboratory data is located on Figure 1 and in Appendix I. Photographs of the investigation activities are located in Appendix II.

4.0 CONCLUSION AND RECOMMENDATION

The data shows a reduction in chloride concentrations from 1 foot to approximately 35 feet. At the 25 feet and 35 feet depths the chloride concentrations are 576 ppm and 144 ppm respectively, this reduction is significant. The lab results for chloride is located on Figure 1 and in Appendix I. Taking into consideration that the depth to groundwater is greater than fifty-five feet, and the subsurface soil lithology at the site consists of caliche and sandstone layers, it is evident that the migration of chlorides to groundwater is unlikely. Therefore it is recommended that only surface remediation is necessary. This could consist of the addition of gypsum, ammonium nitrate, Salt Block, or other amendments that will reduce the chloride concentrations in the soil to allow for revegetation.

•

	$\sim \lor$					of Crude Oil	Water or	
	SPILL (B			Hazardous S	Substances	
P - Americas								10/14
1. Lease	<u> </u>		2. Field		·	3. Person In Ch	arge of Site	
MCA PRO	D. WTR TR	UNK LINE		BMP			ARRY MINNI	СК
4. Person Repo	rting Discharge		in <u>, i por</u> 1913 a. 213		Person Receivir	ng Report		
	K	EN ANDERSI	EN			DEEN, GAT	SON,RITTE	R
5. Discharge Di	scovered By					Date and Time	Discovered	•
	<u> </u>	KEVINA	ICNABB		1	9/2	4/01 @ 08:0	0am
Witnesses			м		20			
6 How Did Con	npany Learn of	Discharge						
		Discrial ge	SAWI	LEAK FROM	TRUCK			
7. Date and Tim	e Discharge Be	igan	7a. Date and T	ime Discharge E	nded	8. Date and Tim	ne Initial Report	Received
9/24	l/01 @ 03:0	0aM	9/2	<u>4/01 @ 08:30</u>	am		····=	
9. Discharge	Unit Letter	Section	Blk./ TWP	Survey/Range	_	County		State
Site	<u> </u>	29	175	32	E	<u>LE</u>	EA	NM
Highway Map l	ocation				U EQ TUEN		4 E MIL EC	
10 Location of	Picobargo	JAMAR UN N		COAD 3.25 M	Eest to Wellboard	VYESI FUR	1.5 MILES	
Other	4" PROD W		INF 200' NC	RTH OF MC	Δ # 110			
11. Source of D	ischarge - Pipe		Type	Placement	Coating		Other Source of	of Discharge
Piping Size	(In Inches)	4"	Fiberglass	Buried	Bare		N/A	•
12. Possible Re	ason	12a. Describe	Cause of Discha	rge and Action T	aken to Prevent	Recurrence		
for Discharg	je	4" TEE SET	TLED ON LI	NE PULLING	OUT OF LIN	IE. WILL PU	T BRACING	UNDER L
Fatigue(F	Pressure)	UNDER GR	OUND AND	ABOVE GRO	UND. ALAR	M LINE WIT	H TRANSDU	ICER.
13. Names and	Volumes of Su	bstances involve	d		14. Remedial A	ction - Picked U	p	
Bbls. Oil		Bbls. Water	450	Salt	Bbls. Oil		Other Volume	
Other			Other Volume		Bbls. Water	430	Salt	
10. Describe Na 100'X200' O	E SANDY P		MP FROM R		COWS PRE			
				FAK				
16. Water Cour	ses Reached		Type	Condition	Volume Enterin	g Water		
			None	N/A	Bbls, Oil			
Name					Bbls. Water		Other	
17. How Was [Discharge Stopp	xed						
SHUT VALV	ES@BTR	<u>(# 1, ELVIS,</u>	& 4000 BBL	TANK.				
18. Operating C	Conditions at Til	me of Discharge		Injection Well		BWPD @		PSI
		Click Here	BOPD		BWPD		Line PSI	
40.0								
19. General We	eather Condition	ns at Time of Dis	charge		20. Cost of Rep	air/Cleanup	00 00	
19. General We	eather Condition	ns at Time of Dis EAR AND CO	charge DOL		20. Cost of Rep	air/Cleanup \$2,0	00.00	
19. General We 21. Federal, St Agency	eather Condition CL ate, and Local A	Agencies Notified	charge DOL and/or Non - Co	ompany On - Site	20. Cost of Rep Investigators	Sair/Cleanup	Person Notify	
19. General We 21. Federal, St Agency BI	eather Condition CL ate, and Local A	ns at Time of Dis EAR AND CO Agencies Notified Person Notifie AND	charge DOL and/or Non - Co d DREA	ompany On - Site Date Notified 09/24/01	20. Cost of Rep Investigators Time Notified	Method Used	Person Notifyi	
19. General Wo 21. Federal, St Agency BI NMG	eather Condition CL ate, and Local A _M DCD	Agencies Notified Person Notified SILVIA	charge DOL and/or Non - Co d DREA DICKEY	ompany On - Site Date Notified 09/24/01 09/25/01	20. Cost of Rep Investigators Time Notified 10:10 AM	Method Used PHONE PHONE	Person Notifyi KEN Al	ing NDERSEN NDERSEN
19. General Wo 21. Federal, St Agency BI NMG	eather Condition CL ate, and Local A _M DCD	Agencies Notified Person Notified SILVIA	charge DOL and/or Non - Co d DREA DICKEY	ompany On - Site Date Notified 09/24/01 09/25/01	20. Cost of Rep Investigators Time Notified 10:10 AM	Method Used PHONE PHONE	Person Notify KEN AI	ng NDERSEN NDERSEN
19. General Wo 21. Federal, St Agency Bi NMC 22. Federal Lea	eather Condition CL ate, and Local A _M DCD ase No.	Agencies Notified Person Notified SILVIA	charge DOL and/or Non - Co d DREA DICKEY Unit/CA No.	ompany On - Site Date Notified 09/24/01 09/25/01	20. Cost of Rep Investigators Time Notified 10:10 AM	Method Used PHONE PHONE Right of Way N	Person Notify KEN AI KEN AI	ng NDERSEN NDERSEN
19. General Wo 21. Federal, St Agency Bi NM(22. Federal Lea	eather Condition CL ate, and Local A 	As at Time of Dis EAR AND CO Agencies Notified Person Notifie ANE SILVIA	charge DOL and/or Non - Co ed DREA DICKEY Unit/CA No.	20003410 20003410 20003410	20. Cost of Rep Investigators Time Notified 10:10 AM	Method Used PHONE PHONE Right of Way N ONE	Person Notifyi KEN Al KEN Al KEN Al O. CALL # 200	ing NDERSEN NDERSEN 1390409
19. General We 21. Federal, St Agency Bi NMC 22. Federal Lea 23. Landowner	eather Condition CL ate, and Local / _M DCD ase No. LC - 029410 / Tenant	A	charge DOL and/or Non - Co d DREA DICKEY Unit/CA No.	20003410 20003410 20003410	20. Cost of Rep Investigators Time Notified 10:10 AM	Method Used PHONE PHONE PHONE Right of Way N ONE ber:	Person Notifyi KEN AI KEN AI O. CALL # 200	ing NDERSEN NDERSEN 1390409
19. General We 21. Federal, St Agency Bi NMC 22. Federal Lea 23. Landowner I Hereby Certifi	eather Condition CL ate, and Local / 	Agencies Notified Person Notified SILVIA	charge DOL and/or Non - Co d DREA DICKEY Unit/CA No.	2000 2010 2010 2010 2010 2010 2010 2010	20. Cost of Rep Investigators Time Notified 10:10 AM Telephone Num of My Knowledg	Method Used PHONE PHONE Right of Way N ONE bber: e.	Person Notify KEN AI KEN AI CALL # 200	INDERSEN NDERSEN NDERSEN 1390409
19. General We 21. Federal, St Agency BI NMC 22. Federal Lea 23. Landowner I Hereby Certif	Anter Condition CL Ate, and Local A A A A A A A A A A A A A A A A A A A	American Above Is	charge DOL and/or Non - Co d DREA DICKEY Unit/CA No.	ompany On - Site Date Notified 09/24/01 09/25/01 8920003410 Nete To The Best	20. Cost of Rep Investigators Time Notified 10:10 AM Telephone Num of My Knowledg	Method Used PHONE PHONE Right of Way N ONE ber: e.	Person Notify KEN AI KEN AI O. CALL # 200	ing NDERSEN NDERSEN 1390409
19. General We 21. Federal, St Agency BI NMC 22. Federal Lea 23. Landowner I Hereby Certif	eather Condition CL ate, and Local / 	Ammation Above Is	charge DOL and/or Non - Co od DREA DICKEY Unit/CA No.	200003410 09/25/01 09/25/01 8920003410 Dete To The Best	20. Cost of Rep Investigators Time Notified 10:10 AM Telephone Num of My Knowledg 9/25/01 @	Method Used PHONE PHONE Right of Way N ONE ber: e. MALJAM	Person Notify KEN AI KEN AI O. CALL # 200 AR, NM	ing NDERSEN NDERSEN 1390409

Figure 1



Scale: Not to Scale

File Name

Appendix I

Received by OCD: 4/17/2023 10:21:50 AM



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC. ATTN: CLIFF BRUNSON P.O. BOX 805 HOBBS, NM 88241 FAX TO: (505) 397-0397

Receiving Date: 12/07/01 Reporting Date: 12/10/01 Project Owner: CONOCO Project Name: ELVIS TRUNKLINE Project Location: MALJAMAR, NM Analysis Date: 12/10/01 Sampling Date: 11/30,12/03, 12/06/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: AH Analyzed By: HM

		Cl
LAB NUMBER	SAMPLE ID	(mg/Kg)
H6329-1	ELVIS 1-1'	3679
H6329-2	ELVIS 1-5'	5758
H6329-3	ELVIS 1-15'	2159
H6329-4	ELVIS 1-25'	576
H6329-5	ELVIS 2-1'	1056
H6329-6	ELVIS 2-5'	7518
H6329-7	ELVIS 2-15'	4799
H6329-8	ELVIS 2-25'	3119
H6329-9	ELVIS 2-30'	1951
H6329-10	ELVIS 2-35'	144
Quality Control		1050
True Value QC		1000
% Accuracy		105
Relative Percent	Difference	5.0

METHOD: Standard Methods 4500-CI'B

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 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 thirty (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, attiliates 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. H6329

Ity: Hobs hone #: (505) 3 rolect #: rolect Name: F/2 For LAB I.D. LAB I.D. HU329-1 For LAB USE ONLY FOR LAB USE	Sample I.D. Sample I.D. Sample I.D. E[uis 1 - 1' E[uis 1 - 3' E[uis 1 - 3'] E[uis 1 - 3']	The state of the s	State: Phone #: SLUDGE Phone #: Phone #: Fax #: SLUDGE PRES: Y: SLUDGE SV: CHECKE OTHER: ACID: PRES: CE / COOL SV: CHECKE OTHER: OTHER: Initial OTHER: OTHER: OTHER: Initial OTHER: Initial Initial	SAMPLING SAMPLING DATE TIME DATE TIME 1-30-01 10:104 -30-01 11:15 -30-01 11:15 -30-	when a first state of the second state of the	Additional Fax #:	ser interest ville extrapo
ty: 4.5%	L. Markar	Zip: # #2.40	Attn:				
hone #: (50 5)	797 - 2388		Address:	eas			
··*· (r-n -) ->			Citv:				
r (ros) and	1150.11		Uny.				
roject #:	Project Ov	vner: Consco	State:	Zlp:			
roject Name:	vis Trunkl		Phone #:				
rolect Location: 🥕	~~/~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Fax #:		· · · · ·		
	Caljanse			CUN IDMAS			
FOR LAB UBE ONLY	·	P. MATR	IX PRES.	SAMPLING	le 		
)omp. RS TER R					
LAB I.D.	Sample I.D.	B OR (C) ITAINERS NDWATT EWATEF	ge R : COOL R :		hlor		
		(G)RAB # CONT GROUN WASTE SOIL	SLUDGI OTHER ACID: ICE / CC	DATE TIME	<u> </u>		
41,229-1		0	5	1-10-01-10-02-1	、 、		
2-	6/11.1.5	<u>B</u> (V	V D	-30.01 10:15A	2		
	- luis 1 - 95'	2	V 1	- 90-01 11:45 Ar	7		
1-1-	Fluir 1 - 25	5 - -		30.01 2:95 am	<u>ح</u>		
'n	Eline 2 - 1'	9 7	1 2	1-30-9 2:40	<		
1	Elvis 1 - 5'	1 10	7	- Joo 1:53:	×		
ر د	Elwis > -15'	a 1 1		2 . 3.01 9: Jone	2		
<u>ک</u> ۔	Eluis 2 - 25,	1 10	•	2-3-01 1:25 pm	<		
- Q	Elvisz 30'	G /	~	2.6-01 1:30,00	۲		
101-	61011 8-35'	B	e	2.6.00 2:35m	2		
EASE NOTE: Usbity and Dama	iges. Cardnai's lability and disct's s	ocknerve nemedy for any claim artising wheth wheteoexec shall be deemed welved unless	her based in contract or tort, shall b made in writing and received by C	Emited to the amount paid by the industry of the second	he client for the pistion of the applicable	Terms and Conditio 30 days past due at t	ne: interest will be charged on all a refer of 24% per annum from the
aryses. Al delina including incess rvice. In no event shall Candinal b	ng negaganike nika any kuna kekeen se lable for incidental or consequents si or reletad to the nerformance of the	u damagee, including without ilmitation, jus Mose hankinder by Cardinal, nedardeet o	liness interruptions, loss of use, or If whether such ciaim is based upor	toss of profits incurred by olient, any of the above stated reason	its subsidaries, s or otherwise,	and all costs of colex	tions, including stromey's fees.
ampler Relinquishe		ate: Received E	iv:	Phone Res	ult D Yes D No	Additional Fax #:	
				REMARKS			andhar ya a
	.D.C.	ates in Bacelved E	3y: (Lab Staff)				
All or		MALLIOI JANNI					
elinquished By:		TILL COR	A A A	HV.			
elinquished By:	1	I Sample C	bindition CHECKEI				
elinquished By:	Ircle One)			-			

· · · ·

. .

. .

. .

,

Appendix II

.

· .

.

.

.

.

.

·





Elvis Truckline – Spill date 9-24-01 – Sample taken at 1', 5', 15', 25', 30', 35' on 11-30-01, 12-03-01, 12-6-01

APPENDIX D Photographic Documentation



TETRA TECH, INC.	DESCRIPTION	View facing north of release area.	1
212C-MD-02152	SITE NAME	MCA Elvis Trunk Line Release	6/9/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing south of above ground piping.	2
	SITE NAME	MCA Elvis Trunk Line Release	6/9/2020


TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing southeast of above ground piping.	3
	SITE NAME	MCA Elvis Trunk Line Release	6/9/2020



TETRA TECH, INC.	DESCRIPTION	View facing northwest of release area.	4
212C-MD-02152	SITE NAME	MCA Elvis Trunk Line Release	6/9/2020



TETRA TECH, INC.	DESCRIPTION	View facing south of release area.	5
212C-MD-02152	SITE NAME	MCA Elvis Trunk Line Release	6/9/2020



TETRA TECH, INC.	DESCRIPTION	View facing northwest of well pad area.	6
212C-MD-02152	SITE NAME	MCA Elvis Trunk Line Release	6/9/2020



TETRA TECH, INC.	DESCRIPTION	View facing northwest of release area.	7
212C-MD-02152	SITE NAME	MCA Elvis Trunk Line Release	6/9/2020

APPENDIX E Laboratory Analytical Data



ANALYTICAL REPORT December 23, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group: Samples Received: Project Number: Description:

L1296820 12/15/2020 212C-MD-02334 TASK06 MCA Elvis Trunk Line Release (1RP-797)

Report To:

Christian Llull 901 West Wall Suite 100 Midland, TX 79701

Ср Τс ŚS Cn Sr Qc Gl AI Sc

Page 41 of 86

Entire Report Reviewed By:

Chu, toph

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.

Pace Analytical National

Mount Juliet, TN 37122 615-758-5858 800-767-5859 12065 Lebanon Rd www.pacenational.com

Released to Imaging: 4/24/2023 11:18:36 AM ConocoPhillips - Tetra Tech

PROJECT: 212C-MD-02334 TASK06

SDG: L1296820

DATE/TIME: 12/23/20 18:46

PAGE: 1 of 32

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	6
Sr: Sample Results	7
AH-1 (0'-1') L1296820-01	7
AH-1 (1'-2') L1296820-02	8
AH-2 (0'-1') L1296820-03	9
AH-2 (1'-2') L1296820-04	10
AH-3 (0'-1') L1296820-05	11
AH-3 (1'-2') L1296820-06	12
AH-4 (0'-1') L1296820-07	13
AH-4 (1'-2') L1296820-08	14
AH-5 (0'-1') L1296820-09	15
AH-5 (2'-3') L1296820-10	16
AH-5 (4'-5') L1296820-11	17
AH-6 (0'-1') L1296820-12	18
AH-6 (2'-3') L1296820-13	19
AH-6 (4'-5') L1296820-14	20
Qc: Quality Control Summary	21
Total Solids by Method 2540 G-2011	21
Wet Chemistry by Method 300.0	23
Volatile Organic Compounds (GC) by Method 8015D/GRO	24
Volatile Organic Compounds (GC/MS) by Method 8260B	26
Semi-Volatile Organic Compounds (GC) by Method 8015	27
GI: Glossary of Terms	28
Al: Accreditations & Locations	29
Sc: Sample Chain of Custody	30



PROJECT: 212C-MD-02334 TASK06

SDG: L1296820

DATE/TIME: 12/23/20 18:46

PAGE: 2 of 32

SAMPLE SUMMARY

ONE LAB. NATI Rage 43 0 06

Ср

Тс

Ss

Cn

Sr

Qc

Gl

Â

Sc

AH-1 (0'-1') L1296820-01 Solid			Joe Tyler	12/08/20 10:00	12/15/20 09:	30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595325	1	12/21/20 13:47	12/21/20 14:06	KDW	Mt. Juliet, TI
Wet Chemistry by Method 300.0	WG1595618	1	12/22/20 09:47	12/22/20 16:31	ELN	Mt. Juliet, TI
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1594668	25	12/16/20 22:03	12/20/20 02:57	ACG	Mt. Juliet, T
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1	12/16/20 22:03	12/17/20 20:32	DWR	Mt. Juliet, T
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595463	1	12/21/20 23:34	12/22/20 09:24	CAG	Mt. Juliet, T
			Collected by	Collected date/time	Received da	te/time
AH-1(1'-2') L1296820-02 Solid			Joe Tyler	12/08/20 10:30	12/15/20 09:	30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595325	1	12/21/20 13:47	12/21/20 14:06	KDW	Mt. Juliet, T
Net Chemistry by Method 300.0	WG1595618	1	12/22/20 09:47	12/22/20 16:59	ELN	Mt. Juliet, T
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1594668	25	12/16/20 22:03	12/20/20 03:18	ACG	Mt. Juliet, T
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1	12/16/20 22:03	12/17/20 20:51	DWR	Mt. Juliet, T
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595463	1	12/21/20 23:34	12/22/20 10:02	CAG	Mt. Juliet, T
			Collected by	Collected date/time	Received da	te/time
AH-2 (0'-1') L1296820-03 Solid			Joe Tyler	12/08/20 11:00	12/15/20 09:	30
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Fotal Solids by Method 2540 G-2011	WG1595325	1	12/21/20 13:47	12/21/20 14:06	KDW	Mt. Juliet, T
Net Chemistry by Method 300.0	WG1595618	1	12/22/20 09:47	12/22/20 17:18	ELN	Mt. Juliet, T
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1594668	37	12/16/20 22:03	12/20/20 03:39	ACG	Mt. Juliet, T
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1.48	12/16/20 22:03	12/17/20 21:10	DWR	Mt. Juliet, T
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595463	1	12/21/20 23:34	12/22/20 10:15	CAG	Mt. Juliet, T
			Collected by	Collected date/time	Received da	te/time 30
AH-2 (1-21) L1296820-04 Solid			Soc Tyler	12,00,20 11.00	12/10/20 000.	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595325	1	12/21/20 13:47	12/21/20 14:06	KDW	Mt. Juliet, T
Net Chemistry by Method 300.0	WG1595618	1	12/22/20 09:47	12/22/20 17:28	ELN	Mt. Juliet, T
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1594668	25	12/16/20 22:03	12/20/20 03:59	ACG	Mt. Juliet, T
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1	12/16/20 22:03	12/17/20 21:29	DWR	Mt. Juliet, T
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595463	1	12/21/20 23:34	12/22/20 10:28	CAG	Mt. Juliet, T
			Collected by	Collected date/time	Received da	te/time
AH-3 (0'-1') L1296820-05 Solid			Joe Tyler	12/08/20 12:00	12/15/20 09:	30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595325	1	12/21/20 13:47	12/21/20 14:06	KDW	Mt. Juliet, T
Net Chemistry by Method 300.0	WG1595618	1	12/22/20 09:47	12/22/20 17:37	ELN	Mt. Juliet, T
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1594668	33.5	12/16/20 22:03	12/20/20 04:20	ACG	Mt. Juliet, T
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1.34	12/16/20 22:03	12/17/20 21:48	DWR	Mt. Juliet, T
			12/21/20 22 24	12/22/20 10:11	616	No. 1 1

Released to Imaging: 94/24/2023 11:18:36 AM ConocoPhillips - Tetra Tech PROJECT: 212C-MD-02334 TASK06

SDG: L1296820 DATE/TIME: 12/23/20 18:46

PAGE: 3 of 32

SAMPLE SUMMARY

ONE LAB. NATI Rage 44 0 66

Ср

Тс

Ss

Cn

Sr

Qc

Gl

Â

Sc

AH-3 (1'-2') L1296820-06 Solid			Joe Tyler	12/08/20 12:30	12/15/20 09:	30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595509	1	12/22/20 13:08	12/22/20 13:16	KDW	Mt. Juliet, Tl
Wet Chemistry by Method 300.0	WG1595618	1	12/22/20 09:47	12/22/20 18:06	ELN	Mt. Juliet, TI
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1594668	25	12/16/20 22:03	12/20/20 04:41	ACG	Mt. Juliet, T
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1	12/16/20 22:03	12/17/20 22:07	DWR	Mt. Juliet, T
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595463	1	12/21/20 23:34	12/22/20 10:53	CAG	Mt. Juliet, T
			Collected by	Collected date/time	Received da	te/time 30
AH-4 (0'-1') L1296820-07 Solid			Soc Tyler	12/00/20 13:00	12/13/20 03.	50
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Total Solids by Method 2540 G-2011	WG1595509	1	12/22/20 13:08	12/22/20 13:16	KDW	Mt. Juliet, T
Net Chemistry by Method 300.0	WG1595618	1	12/22/20 09:47	12/22/20 18:15	ELN	Mt. Juliet, TI
/olatile Organic Compounds (GC) by Method 8015D/GRO	WG1594668	27	12/16/20 22:03	12/20/20 05:01	ACG	Mt. Juliet, T
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1.08	12/16/20 22:03	12/17/20 22:26	DWR	Mt. Juliet, T
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595463	1	12/21/20 23:34	12/22/20 11:06	CAG	Mt. Juliet, T
			Collected by	Collected date/time	Received da	te/time
AH-4 (1'-2') L1296820-08 Solid			Joe Tyler	12/08/20 13:30	12/15/20 09:	30
Method	Batch	Dilution	Preparation dato/time	Analysis dato/timo	Analyst	Location
Total Solids by Mothod 2E40 C 2011	WC1EQEE00	1	12/22/20 12:09	12/22/20 12:16	KDW	Mt Juliot T
Net Chemistry by Method 300.0	WG1595509	1	12/22/20 13:08	12/22/20 13:10	FLN	Mt Juliot T
Volatile Organic Compounds (GC) by Method 8015D/GPO	WG1593018	25	12/22/20 03.47	12/22/20 18:23		Mt Juliot T
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1	12/16/20 22:03	12/20/20 01:10	DWR	Mt Juliet T
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595463	1	12/21/20 23:34	12/22/20 11:19	CAG	Mt. Juliet, T
			Collected by	Collected date/time	Received da	te/time
AH-5 (0'-1') L1296820-09 Solid			Joe Tyler	12/08/20 14:00	12/15/20 09:	30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595509	1	12/22/20 13:08	12/22/20 13:16	KDW	Mt. Juliet, T
Wet Chemistry by Method 300.0	WG1595618	1	12/22/20 09:47	12/22/20 18:34	ELN	Mt. Juliet, T
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1594770	25	12/16/20 22:03	12/20/20 02:05	DWR	Mt. Juliet, T
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1	12/16/20 22:03	12/17/20 23:04	DWR	Mt. Juliet, T
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595463	1	12/21/20 23:34	12/22/20 12:35	CAG	Mt. Juliet, T
			Collected by	Collected date/time	Received da	te/time
AH-5 (2'-3') L1296820-10 Solid			Joe Tyler	12/08/20 14:20	12/15/20 09:	30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595509	1	12/22/20 13:08	12/22/20 13:16	KDW	Mt. Juliet, T
Wet Chemistry by Method 300.0	WG1595618	1	12/22/20 09:47	12/22/20 18:44	ELN	Mt. Juliet, T
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1594770	32.5	12/16/20 22:03	12/20/20 02:28	DWR	Mt. Juliet, T
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1.3	12/16/20 22:03	12/17/20 23:23	DWR	Mt. Juliet, T
Comi Valatila Organia Compounda (CC) by Mathed 2015	WC1E0E462	1	12/21/20 22.24	12/22/20 11.22	CAG	Mt Juliot T

Released to Imaging: 4/24/2023 11:18:36 AM ConocoPhillips - Tetra Tech PROJECT: 212C-MD-02334 TASK06

SDG: L1296820 DATE/TIME: 12/23/20 18:46

: •6 PAGE: 4 of 32

SAMPLE SUMMARY

ONE LAB. NATI Rage 45 0166

Ср

Тс

Ss

Cn

Sr

Qc

Gl

Â

Sc

AH-5 (4'-5') L1296820-11 Solid			Collected by Joe Tyler	Collected date/time 12/08/20 14:40	Received da 12/15/20 09:	te/time 30
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Total Solids by Method 2540 G-2011	WG1595509	1	12/22/20 13:08	12/22/20 13:16	KDW	Mt. Juliet, TN
Net Chemistry by Method 300.0	WG1595618	5	12/22/20 09:47	12/22/20 18:57	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1594770	25	12/16/20 22:03	12/20/20 02:51	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1	12/16/20 22:03	12/17/20 23:42	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595463	1	12/21/20 23:34	12/22/20 11:44	CAG	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
AH-6 (0'-1') L1296820-12 Solid			Joe Tyler	12/08/20 15:00	12/15/20 09:	30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595509	1	12/22/20 13:08	12/22/20 13:16	KDW	Mt. Juliet, TN
Net Chemistry by Method 300.0	WG1595618	1	12/22/20 09:47	12/22/20 19:06	ELN	Mt. Juliet, TN
/olatile Organic Compounds (GC) by Method 8015D/GRO	WG1594770	40	12/16/20 22:03	12/20/20 03:14	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593404	1.6	12/16/20 22:03	12/18/20 00:01	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595463	1	12/21/20 23:34	12/22/20 11:57	CAG	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
				10/00/00 10 00	10/15/00 00	20
AH-6 (2'-3') L1296820-13 Solid			Joe Tyler	12/08/20 16:00	12/15/20 09:	30
AH-6 (2'-3') L1296820-13 Solid Method	Batch	Dilution	Joe Tyler Preparation date/time	12/08/20 16:00 Analysis date/time	12/15/20 09: Analyst	30 Location
AH-6 (2'-3') L1296820-13 Solid Method Fotal Solids by Method 2540 G-2011	Batch WG1595509	Dilution	Joe Tyler Preparation date/time 12/22/20 13:08	12/08/20 16:00 Analysis date/time 12/22/20 13:16	12/15/20 09: Analyst KDW	30 Location Mt. Juliet, TN
AH-6 (2'-3') L1296820-13 Solid Method Fotal Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0	Batch WG1595509 WG1595618	Dilution 1 1	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16	12/15/20 09:: Analyst KDW ELN	30 Location Mt. Juliet, TN Mt. Juliet, TN
AH-6 (2'-3') L1296820-13 Solid Method Fotal Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0 /olatile Organic Compounds (GC) by Method 8015D/GRO	Batch WG1595509 WG1595618 WG1594770	Dilution 1 1 25.8	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16 12/20/20 04:01	12/15/20 09: Analyst KDW ELN DWR	Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN
AH-6 (2'-3') L1296820-13 Solid Method Fotal Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0 /olatile Organic Compounds (GC) by Method 8015D/GRO /olatile Organic Compounds (GC/MS) by Method 8260B	Batch WG1595509 WG1595618 WG1594770 WG1593404	Dilution 1 1 25.8 1.03	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03 12/16/20 22:03	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16 12/20/20 04:01 12/18/20 00:20	12/15/20 09: Analyst KDW ELN DWR DWR	Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN
AH-6 (2'-3') L1296820-13 Solid Method Total Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0 Volatile Organic Compounds (GC) by Method 8015D/GRO Volatile Organic Compounds (GC/MS) by Method 8260B Semi-Volatile Organic Compounds (GC) by Method 8015	Batch WG1595509 WG1595618 WG1593404 WG1593404 WG1595463	Dilution 1 25.8 1.03 1	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03 12/16/20 22:03 12/21/20 23:34	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16 12/20/20 04:01 12/18/20 00:20 12/22/20 12:10	12/15/20 09: Analyst KDW ELN DWR DWR CAG	Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN
AH-6 (2'-3') L1296820-13 Solid Method Total Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0 Volatile Organic Compounds (GC) by Method 8015D/GRO Volatile Organic Compounds (GC/MS) by Method 8260B Semi-Volatile Organic Compounds (GC) by Method 8015	Batch WG1595509 WG1595618 WG1593404 WG1595463	Dilution 1 25.8 1.03 1	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03 12/16/20 22:03 12/21/20 23:34 Collected by	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16 12/20/20 04:01 12/18/20 00:20 12/22/20 12:10 Collected date/time	12/15/20 09: Analyst KDW ELN DWR DWR CAG Received da	Location Mt. Juliet, Th Mt. Juliet, Th Mt. Juliet, Th Mt. Juliet, Th Mt. Juliet, Th Mt. Juliet, Th
AH-6 (2'-3') L1296820-13 Solid Method Total Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0 /olatile Organic Compounds (GC) by Method 8015D/GRO /olatile Organic Compounds (GC/MS) by Method 8260B Semi-Volatile Organic Compounds (GC) by Method 8015 AH-6 (4'-5') L1296820-14 Solid	Batch WG1595509 WG1595618 WG1594770 WG1593404 WG1595463	Dilution 1 15.8 1.03 1	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03 12/16/20 22:03 12/21/20 23:34 Collected by Joe Tyler	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16 12/20/20 04:01 12/18/20 00:20 12/22/20 12:10 Collected date/time 12/08/20 16:20	12/15/20 09: Analyst KDW ELN DWR CAG Received da 12/15/20 09:	Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN
AH-6 (2'-3') L1296820-13 Solid Method Total Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0 Volatile Organic Compounds (GC) by Method 8015D/GRO Volatile Organic Compounds (GC/MS) by Method 8260B Semi-Volatile Organic Compounds (GC) by Method 8015 AH-6 (4'-5') L1296820-14 Solid Method	Batch WG1595509 WG1595618 WG1593404 WG1595463 Batch	Dilution 1 25.8 1.03 1 Dilution	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03 12/16/20 22:03 12/21/20 23:34 Collected by Joe Tyler Preparation	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16 12/20/20 04:01 12/18/20 00:20 12/22/20 12:10 Collected date/time 12/08/20 16:20 Analysis	12/15/20 09: Analyst KDW ELN DWR DWR CAG Received da 12/15/20 09: Analyst	Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN te/time 30
AH-6 (2'-3') L1296820-13 Solid Method Total Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0 /olatile Organic Compounds (GC) by Method 8015D/GRO /olatile Organic Compounds (GC/MS) by Method 8260B Semi-Volatile Organic Compounds (GC) by Method 8015 AH-6 (4'-5') L1296820-14 Solid Method	Batch WG1595509 WG1595618 WG1594770 WG1593404 WG1595463 Batch	Dilution 1 1 25.8 1.03 1 Dilution	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03 12/16/20 22:03 12/16/20 23:34 Collected by Joe Tyler Preparation date/time	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16 12/20/20 04:01 12/18/20 00:20 12/22/20 12:10 Collected date/time 12/08/20 16:20 Analysis date/time	12/15/20 09: Analyst KDW ELN DWR DWR CAG Received da 12/15/20 09: Analyst	Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN te/time 30
AH-6 (2'-3') L1296820-13 Solid Method Total Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0 Volatile Organic Compounds (GC) by Method 8015D/GRO Volatile Organic Compounds (GC) by Method 8260B Semi-Volatile Organic Compounds (GC) by Method 8015 AH-6 (4'-5') L1296820-14 Solid Method Total Solids by Method 2540 G-2011	Batch WG1595509 WG1595618 WG1594770 WG1593404 WG1595463 Batch WG1595509	Dilution 1 1 25.8 1.03 1 Dilution	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03 12/16/20 22:03 12/16/20 23:34 Collected by Joe Tyler Preparation date/time 12/22/20 13:08	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16 12/20/20 04:01 12/18/20 00:20 12/22/20 12:10 Collected date/time 12/08/20 16:20 Analysis date/time 12/22/20 13:16	12/15/20 09: Analyst KDW ELN DWR DWR CAG Received da 12/15/20 09: Analyst KDW	30 Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN te/time 30 Location Mt. Juliet, TN
AH-6 (2'-3') L1296820-13 Solid Method Total Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0 Volatile Organic Compounds (GC) by Method 8015D/GRO Volatile Organic Compounds (GC/MS) by Method 8260B Semi-Volatile Organic Compounds (GC) by Method 8015 AH-6 (4'-5') L1296820-14 Solid Method Total Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0	Batch WG1595509 WG1595618 WG1594770 WG1593404 WG1595463 Batch WG1595509 WG1595509	Dilution 1 1 25.8 1.03 1 Dilution 1 5	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03 12/16/20 22:03 12/21/20 23:34 Collected by Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16 12/20/20 04:01 12/18/20 00:20 12/22/20 12:10 Collected date/time 12/08/20 16:20 Analysis date/time 12/22/20 13:16 12/22/20 19:25	12/15/20 09: Analyst KDW ELN DWR CAG Received da 12/15/20 09: Analyst KDW ELN	30 Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Location Mt. Juliet, TN Mt. Juliet, TN
AH-6 (2'-3') L1296820-13 Solid Method Total Solids by Method 2540 G-2011 Vet Chemistry by Method 300.0 /olatile Organic Compounds (GC) by Method 8015D/GRO /olatile Organic Compounds (GC) by Method 8260B Semi-Volatile Organic Compounds (GC) by Method 8015 AH-6 (4'-5') L1296820-14 Solid Method Total Solids by Method 2540 G-2011 Vet Chemistry by Method 300.0 /olatile Organic Compounds (GC) by Method 8015D/GRO	Batch WG1595509 WG1595618 WG1594770 WG1593404 WG1595463 Batch WG1595509 WG1595509 WG1595618 WG1594770	Dilution 1 1 25.8 1.03 1 Dilution 1 5 38	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03 12/16/20 22:03 12/21/20 23:34 Collected by Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16 12/20/20 04:01 12/18/20 00:20 12/22/20 12:10 Collected date/time 12/08/20 16:20 Analysis date/time 12/22/20 13:16 12/22/20 19:25 12/20/20 04:24	12/15/20 09: Analyst KDW ELN DWR CAG Received da 12/15/20 09: Analyst KDW ELN DWR	Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN te/time 30 Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN
AH-6 (2'-3') L1296820-13 Solid Method Total Solids by Method 2540 G-2011 Wet Chemistry by Method 300.0 /olatile Organic Compounds (GC) by Method 8015D/GRO /olatile Organic Compounds (GC) by Method 8260B Semi-Volatile Organic Compounds (GC) by Method 8015 AH-6 (4'-5') L1296820-14 Solid Method Total Solids by Method 2540 G-2011 Net Chemistry by Method 300.0 /olatile Organic Compounds (GC) by Method 8015D/GRO /olatile Organic Compounds (GC) by Method 8015D/GRO /olatile Organic Compounds (GC) by Method 8015D/GRO /olatile Organic Compounds (GC) by Method 8015D/GRO	Batch WG1595509 WG1595618 WG1594770 WG1593404 WG1595463 Batch WG1595509 WG1595509 WG1595618 WG1594770 WG1593404	Dilution 1 1 25.8 1.03 1 Dilution 1 5 38 1.52	Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03 12/16/20 22:03 12/21/20 23:34 Collected by Joe Tyler Preparation date/time 12/22/20 13:08 12/22/20 09:47 12/16/20 22:03 12/16/20 22:03	12/08/20 16:00 Analysis date/time 12/22/20 13:16 12/22/20 19:16 12/20/20 04:01 12/18/20 00:20 12/22/20 12:10 Collected date/time 12/08/20 16:20 Analysis date/time 12/22/20 13:16 12/22/20 13:16 12/22/20 19:25 12/20/20 04:24 12/18/20 00:39	12/15/20 09: Analyst KDW ELN DWR DWR CAG Received da 12/15/20 09: Analyst KDW ELN DWR DWR	30 Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN

PROJECT: 212C-MD-02334 TASK06

SDG: L1296820 DATE/TIME: 12/23/20 18:46

PAGE: 5 of 32

CASE NARRATIVE

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

Released to Imaging: 4/24/2023 11:18:36 AM ConocoPhillips - Tetra Tech PROJECT: 212C-MD-02334 TASK06 SDG: L1296820 D 12/

DATE/TIME: 12/23/20 18:46 PAGE: 6 of 32 Recreined by OGD: 4/17/2023 10:21:50 AM Collected date/time: 12/08/20 10:00

SAMPLE RESULTS - 01

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch		
Analyte	%			date / time		2	_
Total Solids	82.3		1	12/21/2020 14:06	WG1595325	1	٢c

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.2	24.3	1	12/22/2020 16:31	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	G
Analyte	mg/kg		mg/kg	mg/kg		date / time		ŮQ
TPH (GC/FID) Low Fraction	1.28	J	0.846	3.89	25	12/20/2020 02:57	WG1594668	
(S) a,a,a-Trifluorotoluene(FID)	95.6			77.0-120		12/20/2020 02:57	WG1594668	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000727	0.00156	1	12/17/2020 20:32	WG1593404
Toluene	U		0.00202	0.00779	1	12/17/2020 20:32	<u>WG1593404</u>
Ethylbenzene	U		0.00115	0.00389	1	12/17/2020 20:32	WG1593404
Total Xylenes	U		0.00137	0.0101	1	12/17/2020 20:32	<u>WG1593404</u>
(S) Toluene-d8	106			75.0-131		12/17/2020 20:32	WG1593404
(S) 4-Bromofluorobenzene	97.8			67.0-138		12/17/2020 20:32	<u>WG1593404</u>
(S) 1,2-Dichloroethane-d4	120			70.0-130		12/17/2020 20:32	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U	<u>J3</u>	1.96	4.86	1	12/22/2020 09:24	WG1595463
C28-C40 Oil Range	2.14	J	0.333	4.86	1	12/22/2020 09:24	WG1595463
(S) o-Terphenyl	53.3			18.0-148		12/22/2020 09:24	WG1595463

SDG: L1296820 DATE/TIME: 12/23/20 18:46

Ss

Sr

ΆI

Sc

Received by DGD: 4/17/2023 10:21:50 AM Collected date/time: 12/08/20 10:30 SAMPLE RESULTS - 02

ONE LAB. NATI Rage 48 0 6

Ss

Cn

Â

Sc

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch	C
Analyte	%			date / time		2
Total Solids	81.0		1	12/21/2020 14:06	WG1595325	Τ

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.4	24.7	1	12/22/2020 16:59	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ľQ
TPH (GC/FID) Low Fraction	U		0.876	4.03	25	12/20/2020 03:18	WG1594668	
(S) a,a,a-Trifluorotoluene(FID)	96.1			77.0-120		12/20/2020 03:18	WG1594668	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000753	0.00161	1	12/17/2020 20:51	<u>WG1593404</u>
Toluene	U		0.00210	0.00807	1	12/17/2020 20:51	WG1593404
Ethylbenzene	U		0.00119	0.00403	1	12/17/2020 20:51	WG1593404
Total Xylenes	U		0.00142	0.0105	1	12/17/2020 20:51	<u>WG1593404</u>
(S) Toluene-d8	105			75.0-131		12/17/2020 20:51	WG1593404
(S) 4-Bromofluorobenzene	98.6			67.0-138		12/17/2020 20:51	<u>WG1593404</u>
(S) 1,2-Dichloroethane-d4	120			70.0-130		12/17/2020 20:51	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.99	4.94	1	12/22/2020 10:02	WG1595463
C28-C40 Oil Range	1.63	J	0.338	4.94	1	12/22/2020 10:02	WG1595463
(S) o-Terphenyl	43.7			18.0-148		12/22/2020 10:02	WG1595463

SAMPLE RESULTS - 03

Ss

Cn

Â

Sc

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch		C
Analyte	%			date / time		2	_
Total Solids	83.9		1	12/21/2020 14:06	WG1595325		T

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.0	23.8	1	12/22/2020 17:18	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ľQ
TPH (GC/FID) Low Fraction	1.12	J	1.06	4.89	37	12/20/2020 03:39	WG1594668	
(S) a,a,a-Trifluorotoluene(FID)	96.7			77.0-120		12/20/2020 03:39	WG1594668	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000913	0.00196	1.48	12/17/2020 21:10	WG1593404
Toluene	U		0.00254	0.00978	1.48	12/17/2020 21:10	<u>WG1593404</u>
Ethylbenzene	U		0.00144	0.00489	1.48	12/17/2020 21:10	WG1593404
Total Xylenes	U		0.00172	0.0127	1.48	12/17/2020 21:10	WG1593404
(S) Toluene-d8	103			75.0-131		12/17/2020 21:10	WG1593404
(S) 4-Bromofluorobenzene	95.8			67.0-138		12/17/2020 21:10	<u>WG1593404</u>
(S) 1,2-Dichloroethane-d4	123			70.0-130		12/17/2020 21:10	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.92	4.77	1	12/22/2020 10:15	WG1595463
C28-C40 Oil Range	3.06	Ţ	0.327	4.77	1	12/22/2020 10:15	WG1595463
(S) o-Terphenyl	69.9			18.0-148		12/22/2020 10:15	WG1595463

SDG: L1296820 DAT 12/23 SAMPLE RESULTS - 04

Ss

Cn

Â

Sc

Total Solids by Method 2540 G-2011

							\cap
	Result	Qualifier	Dilution	Analysis	Batch		C
Analyte	%			date / time		5	<u>,</u>
Total Solids	89.5		1	12/21/2020 14:06	WG1595325		T

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		10.3	22.3	1	12/22/2020 17:28	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ľQ
TPH (GC/FID) Low Fraction	U		0.687	3.16	25	12/20/2020 03:59	WG1594668	
(S) a,a,a-Trifluorotoluene(FID)	95.6			77.0-120		12/20/2020 03:59	WG1594668	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000591	0.00127	1	12/17/2020 21:29	<u>WG1593404</u>
Toluene	U		0.00165	0.00633	1	12/17/2020 21:29	<u>WG1593404</u>
Ethylbenzene	U		0.000933	0.00316	1	12/17/2020 21:29	WG1593404
Total Xylenes	U		0.00111	0.00823	1	12/17/2020 21:29	<u>WG1593404</u>
(S) Toluene-d8	105			75.0-131		12/17/2020 21:29	<u>WG1593404</u>
(S) 4-Bromofluorobenzene	96.3			67.0-138		12/17/2020 21:29	<u>WG1593404</u>
(S) 1,2-Dichloroethane-d4	122			70.0-130		12/17/2020 21:29	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.80	4.47	1	12/22/2020 10:28	WG1595463
C28-C40 Oil Range	4.23	J	0.306	4.47	1	12/22/2020 10:28	WG1595463
(S) o-Terphenyl	62.4			18.0-148		12/22/2020 10:28	WG1595463

Received by 90D: 4/17/2023 10:21:50 AM Collected date/time: 12/08/20 12:00

SAMPLE RESULTS - 05 L1296820

Â

Sc

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch	(2
Analyte	%			date / time		2	_
Total Solids	84.8		1	12/21/2020 14:06	WG1595325	1-	Γc

Wet Chemistry by Method 300.0

Wet Chemistry by Method 300.0									
	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch		
Analyte	mg/kg		mg/kg	mg/kg		date / time		4	<u>_</u> n
Chloride	U		10.9	23.6	1	12/22/2020 17:37	WG1595618		-11

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ľQ
TPH (GC/FID) Low Fraction	U		0.955	4.40	33.5	12/20/2020 04:20	WG1594668	
(S) a,a,a-Trifluorotoluene(FID)	95.4			77.0-120		12/20/2020 04:20	WG1594668	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000822	0.00176	1.34	12/17/2020 21:48	WG1593404
Toluene	U		0.00229	0.00880	1.34	12/17/2020 21:48	WG1593404
Ethylbenzene	U		0.00130	0.00440	1.34	12/17/2020 21:48	WG1593404
Total Xylenes	U		0.00155	0.0114	1.34	12/17/2020 21:48	WG1593404
(S) Toluene-d8	114			75.0-131		12/17/2020 21:48	WG1593404
(S) 4-Bromofluorobenzene	66.6	<u>J2</u>		67.0-138		12/17/2020 21:48	WG1593404
(S) 1,2-Dichloroethane-d4	107			70.0-130		12/17/2020 21:48	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.90	4.72	1	12/22/2020 10:41	WG1595463
C28-C40 Oil Range	4.47	Ţ	0.323	4.72	1	12/22/2020 10:41	WG1595463
(S) o-Terphenyl	47.3			18.0-148		12/22/2020 10:41	WG1595463

PROJECT: 212C-MD-02334 TASK06

SDG: L1296820

DATE/TIME: 12/23/20 18:46 PAGE: 11 of 32 SAMPLE RESULTS - 06 L1296820

Ss

Cn

Â

Sc

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch		С
Analyte	%			date / time		5	_
Total Solids	97.2		1	12/22/2020 13:16	WG1595509		Т

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.46	20.6	1	12/22/2020 18:06	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ľQ
TPH (GC/FID) Low Fraction	U		0.584	2.69	25	12/20/2020 04:41	WG1594668	
(S) a,a,a-Trifluorotoluene(FID)	99.3			77.0-120		12/20/2020 04:41	WG1594668	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000503	0.00108	1	12/17/2020 22:07	<u>WG1593404</u>
Toluene	U		0.00140	0.00538	1	12/17/2020 22:07	WG1593404
Ethylbenzene	U		0.000793	0.00269	1	12/17/2020 22:07	WG1593404
Total Xylenes	U		0.000947	0.00700	1	12/17/2020 22:07	WG1593404
(S) Toluene-d8	106			75.0-131		12/17/2020 22:07	WG1593404
(S) 4-Bromofluorobenzene	96.4			67.0-138		12/17/2020 22:07	WG1593404
(S) 1,2-Dichloroethane-d4	120			70.0-130		12/17/2020 22:07	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1.72	J	1.66	4.11	1	12/22/2020 10:53	WG1595463
C28-C40 Oil Range	7.22		0.282	4.11	1	12/22/2020 10:53	<u>WG1595463</u>
(S) o-Terphenyl	61.7			18.0-148		12/22/2020 10:53	WG1595463

DATE/TIME:

SAMPLE RESULTS - 07

Ss

Cn

Â

Sc

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch		Ľ
Analyte	%			date / time		2	_
Total Solids	80.1		1	12/22/2020 13:16	WG1595509	12.	Г

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.5	25.0	1	12/22/2020 18:15	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ľQ
TPH (GC/FID) Low Fraction	U		0.866	3.99	27	12/20/2020 05:01	WG1594668	
(S) a,a,a-Trifluorotoluene(FID)	96.0			77.0-120		12/20/2020 05:01	WG1594668	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000745	0.00160	1.08	12/17/2020 22:26	WG1593404
Toluene	U		0.00207	0.00798	1.08	12/17/2020 22:26	<u>WG1593404</u>
Ethylbenzene	U		0.00118	0.00399	1.08	12/17/2020 22:26	WG1593404
Total Xylenes	U		0.00140	0.0104	1.08	12/17/2020 22:26	WG1593404
(S) Toluene-d8	105			75.0-131		12/17/2020 22:26	WG1593404
(S) 4-Bromofluorobenzene	94.7			67.0-138		12/17/2020 22:26	WG1593404
(S) 1,2-Dichloroethane-d4	121			70.0-130		12/17/2020 22:26	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		2.01	4.99	1	12/22/2020 11:06	WG1595463
C28-C40 Oil Range	5.35		0.342	4.99	1	12/22/2020 11:06	WG1595463
(S) o-Terphenyl	61.3			18.0-148		12/22/2020 11:06	WG1595463

Received by QGD: 4/17/2023 10:21:50 AM Collected date/time: 12/08/20 13:30

SAMPLE RESULTS - 08 L1296820

ONE LAB. NATI Rage 54 0186

Ss

Cn

Â

Sc

Total Solids by Method 2540 G-2011

							C
	Result	Qualifier	Dilution	Analysis	Batch		C
Analyte	%			date / time		Ē	2
Total Solids	81.0		1	12/22/2020 13:16	<u>WG1595509</u>		ŤΤ(

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.4	24.7	1	12/22/2020 18:25	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ľQ
TPH (GC/FID) Low Fraction	1.62	<u>B J</u>	0.816	3.76	25	12/20/2020 01:18	WG1594770	
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120		12/20/2020 01:18	WG1594770	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000702	0.00150	1	12/17/2020 22:45	<u>WG1593404</u>
Toluene	U		0.00195	0.00751	1	12/17/2020 22:45	WG1593404
Ethylbenzene	U		0.00111	0.00376	1	12/17/2020 22:45	WG1593404
Total Xylenes	U		0.00132	0.00976	1	12/17/2020 22:45	<u>WG1593404</u>
(S) Toluene-d8	102			75.0-131		12/17/2020 22:45	WG1593404
(S) 4-Bromofluorobenzene	96.5			67.0-138		12/17/2020 22:45	WG1593404
(S) 1,2-Dichloroethane-d4	120			70.0-130		12/17/2020 22:45	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.99	4.94	1	12/22/2020 11:19	WG1595463
C28-C40 Oil Range	5.79		0.338	4.94	1	12/22/2020 11:19	WG1595463
(S) o-Terphenyl	51.4			18.0-148		12/22/2020 11:19	WG1595463

DATE/TIME:

SAMPLE RESULTS - 09

Ss

Cn

Â

Sc

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch		C
Analyte	%			date / time		2	_
Total Solids	93.5		1	12/22/2020 13:16	WG1595509	12.	T

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.84	21.4	1	12/22/2020 18:34	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ČQ
TPH (GC/FID) Low Fraction	1.08	<u>B J</u>	0.625	2.88	25	12/20/2020 02:05	WG1594770	
(S) a,a,a-Trifluorotoluene(FID)	96.2			77.0-120		12/20/2020 02:05	WG1594770	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000538	0.00115	1	12/17/2020 23:04	WG1593404
Toluene	U		0.00150	0.00576	1	12/17/2020 23:04	<u>WG1593404</u>
Ethylbenzene	U		0.000849	0.00288	1	12/17/2020 23:04	WG1593404
Total Xylenes	U		0.00101	0.00749	1	12/17/2020 23:04	WG1593404
(S) Toluene-d8	104			75.0-131		12/17/2020 23:04	WG1593404
(S) 4-Bromofluorobenzene	96.9			67.0-138		12/17/2020 23:04	WG1593404
(S) 1,2-Dichloroethane-d4	121			70.0-130		12/17/2020 23:04	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	8.07		1.72	4.28	1	12/22/2020 12:35	WG1595463
C28-C40 Oil Range	23.0		0.293	4.28	1	12/22/2020 12:35	WG1595463
(S) o-Terphenyl	54.0			18.0-148		12/22/2020 12:35	WG1595463

Recreating (by OCP: 4/17/2023 10:21:50 AM Collected date/time: 12/08/20 14:20

SAMPLE RESULTS - 10

Ss

Cn

Â

Sc

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch	C
Analyte	%			date / time		2
Total Solids	83.1		1	12/22/2020 13:16	WG1595509	T

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.1	24.1	1	12/22/2020 18:44	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ľQ
TPH (GC/FID) Low Fraction	1.85	ВJ	0.958	4.42	32.5	12/20/2020 02:28	WG1594770	
(S) a,a,a-Trifluorotoluene(FID)	96.4			77.0-120		12/20/2020 02:28	WG1594770	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000825	0.00177	1.3	12/17/2020 23:23	WG1593404
Toluene	U		0.00230	0.00883	1.3	12/17/2020 23:23	<u>WG1593404</u>
Ethylbenzene	U		0.00130	0.00442	1.3	12/17/2020 23:23	WG1593404
Total Xylenes	U		0.00155	0.0115	1.3	12/17/2020 23:23	<u>WG1593404</u>
(S) Toluene-d8	106			75.0-131		12/17/2020 23:23	WG1593404
(S) 4-Bromofluorobenzene	96.6			67.0-138		12/17/2020 23:23	<u>WG1593404</u>
(S) 1,2-Dichloroethane-d4	121			70.0-130		12/17/2020 23:23	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.94	4.81	1	12/22/2020 11:32	WG1595463
C28-C40 Oil Range	1.25	J	0.330	4.81	1	12/22/2020 11:32	WG1595463
(S) o-Terphenyl	58.7			18.0-148		12/22/2020 11:32	WG1595463

SDG: L1296820

Recrined by OCD: 4/17/2023 10:21:50 AM Collected date/time: 12/08/20 14:40 SAMPLE RESULTS - 11

Ss

Cn

Â

Sc

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch		С
Analyte	%			date / time		5	_
Total Solids	89.4		1	12/22/2020 13:16	WG1595509		Т

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	502		51.4	112	5	12/22/2020 18:57	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ČQ
TPH (GC/FID) Low Fraction	1.05	ВJ	0.688	3.17	25	12/20/2020 02:51	WG1594770	
(S) a,a,a-Trifluorotoluene(FID)	96.1			77.0-120		12/20/2020 02:51	WG1594770	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000592	0.00127	1	12/17/2020 23:42	WG1593404
Toluene	U		0.00165	0.00634	1	12/17/2020 23:42	WG1593404
Ethylbenzene	U		0.000934	0.00317	1	12/17/2020 23:42	WG1593404
Total Xylenes	U		0.00112	0.00824	1	12/17/2020 23:42	WG1593404
(S) Toluene-d8	104			75.0-131		12/17/2020 23:42	WG1593404
(S) 4-Bromofluorobenzene	96.3			67.0-138		12/17/2020 23:42	<u>WG1593404</u>
(S) 1,2-Dichloroethane-d4	125			70.0-130		12/17/2020 23:42	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.80	4.47	1	12/22/2020 11:44	WG1595463
C28-C40 Oil Range	4.72		0.306	4.47	1	12/22/2020 11:44	WG1595463
(S) o-Terphenyl	64.0			18.0-148		12/22/2020 11:44	WG1595463

Received by QCD: 4/17/2023 10:21:50 AM Collected date/time: 12/08/20 15:00

SAMPLE RESULTS - 12

ONE LAB. NATI Rage 58 0 6

Ss

Cn

Â

Sc

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch	C
Analyte	%			date / time		2
Total Solids	89.8		1	12/22/2020 13:16	WG1595509	T

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		10.2	22.3	1	12/22/2020 19:06	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ľQ
TPH (GC/FID) Low Fraction	1.60	<u>B J</u>	1.03	4.74	40	12/20/2020 03:14	WG1594770	
(S) a,a,a-Trifluorotoluene(FID)	96.1			77.0-120		12/20/2020 03:14	WG1594770	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000885	0.00190	1.6	12/18/2020 00:01	<u>WG1593404</u>
Toluene	U		0.00246	0.00948	1.6	12/18/2020 00:01	<u>WG1593404</u>
Ethylbenzene	U		0.00140	0.00474	1.6	12/18/2020 00:01	WG1593404
Total Xylenes	U		0.00167	0.0123	1.6	12/18/2020 00:01	<u>WG1593404</u>
(S) Toluene-d8	102			75.0-131		12/18/2020 00:01	<u>WG1593404</u>
(S) 4-Bromofluorobenzene	94.1			67.0-138		12/18/2020 00:01	<u>WG1593404</u>
(S) 1,2-Dichloroethane-d4	122			70.0-130		12/18/2020 00:01	<u>WG1593404</u>

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.79	4.46	1	12/22/2020 11:57	WG1595463
C28-C40 Oil Range	5.19		0.305	4.46	1	12/22/2020 11:57	WG1595463
(S) o-Terphenyl	67.1			18.0-148		12/22/2020 11:57	WG1595463

SDG: L1296820 DATE/TIME: 12/23/20 18:46

PAGE: 18 of 32 Recreiced by OCP: 4/17/2023 10:21:50 AM Collected date/time: 12/08/20 16:00

SAMPLE RESULTS - 13

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch		
Analyte	%			date / time		2	_
Total Solids	81.6		1	12/22/2020 13:16	WG1595509	1	T

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.3	24.5	1	12/22/2020 19:16	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ČQ
TPH (GC/FID) Low Fraction	1.14	ВJ	0.808	3.72	25.8	12/20/2020 04:01	WG1594770	
(S) a,a,a-Trifluorotoluene(FID)	96.1			77.0-120		12/20/2020 04:01	<u>WG1594770</u>	⁷ GI

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000694	0.00149	1.03	12/18/2020 00:20	WG1593404
Toluene	U		0.00193	0.00743	1.03	12/18/2020 00:20	WG1593404
Ethylbenzene	U		0.00110	0.00372	1.03	12/18/2020 00:20	WG1593404
Total Xylenes	U		0.00131	0.00967	1.03	12/18/2020 00:20	<u>WG1593404</u>
(S) Toluene-d8	159	<u>J1</u>		75.0-131		12/18/2020 00:20	WG1593404
(S) 4-Bromofluorobenzene	96.4			67.0-138		12/18/2020 00:20	WG1593404
(S) 1,2-Dichloroethane-d4	108			70.0-130		12/18/2020 00:20	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.97	4.90	1	12/22/2020 12:10	WG1595463
C28-C40 Oil Range	1.59	Ţ	0.336	4.90	1	12/22/2020 12:10	WG1595463
(S) o-Terphenyl	73.5			18.0-148		12/22/2020 12:10	WG1595463

DATE/TIME: 12/23/20 18:46

Ss

Sr

Â

Sc

SAMPLE RESULTS - 14

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch	
Analyte	%			date / time		2
Total Solids	86.9		1	12/22/2020 13:16	WG1595509	-

Wet Chemistry by Method 300.0

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Chloride	688		53.0	115	5	12/22/2020 19:25	WG1595618

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	6
Analyte	mg/kg		mg/kg	mg/kg		date / time		ľQ
TPH (GC/FID) Low Fraction	1.36	ВJ	1.03	4.75	38	12/20/2020 04:24	WG1594770	
(S) a,a,a-Trifluorotoluene(FID)	98.4			77.0-120		12/20/2020 04:24	WG1594770	⁷ Gl

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000888	0.00190	1.52	12/18/2020 00:39	<u>WG1593404</u>
Toluene	U		0.00248	0.00951	1.52	12/18/2020 00:39	<u>WG1593404</u>
Ethylbenzene	U		0.00140	0.00475	1.52	12/18/2020 00:39	WG1593404
Total Xylenes	U		0.00168	0.0124	1.52	12/18/2020 00:39	<u>WG1593404</u>
(S) Toluene-d8	106			75.0-131		12/18/2020 00:39	WG1593404
(S) 4-Bromofluorobenzene	98.2			67.0-138		12/18/2020 00:39	<u>WG1593404</u>
(S) 1,2-Dichloroethane-d4	124			70.0-130		12/18/2020 00:39	WG1593404

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.85	4.61	1	12/22/2020 12:22	WG1595463
C28-C40 Oil Range	5.89		0.315	4.61	1	12/22/2020 12:22	<u>WG1595463</u>
(S) o-Terphenyl	57.7			18.0-148		12/22/2020 12:22	WG1595463

Cn

Ss

Â

Sc

Register BGD #/17/2023 10:21:50 AM

Total Solids by Method 2540 G-2011

QUALITY CONTROL SUMMARY L1296820-01,02,03,04,05

Qc

Gl

Â

Sc

Method Blank (MB)

Method Blauk	(IVIB)				1	Cn			
(MB) R3606181-1 12	3) R3606181-1 12/21/20 14:06								
	MB Result	MB Qualifier	MB MDL	MB RDL		,			
Analyte	%		%	%		Тс			
Total Solids	0.000								
					3	Ss			

L1298423-01 Original Sample (OS) • Duplicate (DUP)

L1298423-01 Origi	nal Sample	(OS) • Dup	olicate (DUP)			4				
(OS) L1298423-01 12/21/2	OS) L1298423-01 12/21/20 14:06 • (DUP) R3606181-3 12/21/20 14:06										
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits	⁵ Sr				
Analyte	%	%		%		%					
Total Solids	96.6	96.9	1	0.312		10	6				

Laboratory Control Sample (LCS)

(LCS) R3606181-2 12/21/20 14:06								
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier			
Analyte	%	%	%	%				
Total Solids	50.0	50.4	101	85.0-115				

SDG: L1296820

DATE/TIME: 12/23/20 18:46

PAGE: 21 of 32

Register BCD: \$17/2023 10:21:50 AM

Total Solids by Method 2540 G-2011

QUALITY CONTROL SUMMARY L1296820-06,07,08,09,10,11,12,13,14

Qc

Gl

Â

Sc

Method Blank (MB)

Method Blank						20
(MB) R3606574-1	2/22/20 13:16					-P
	MB Result	MB Qualifier	MB MDL	MB RDL	2	
Analyte	%		%	%	T	ГC
Total Solids	0.000					
					³ S	s

L1296820-13 Original Sample (OS) • Duplicate (DUP)

L1296820-13 Origi	nal Sample	(OS) • Dup	olicate (DUP)		4	4				
(OS) L1296820-13 12/22/2	(OS) L1296820-13 12/22/20 13:16 • (DUP) R3606574-3 12/22/20 13:16										
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits	⁵ Sr				
Analyte	%	%		%		%	5				
Total Solids	81.6	81.9	1	0.293		10	6				

Laboratory Control Sample (LCS)

(LCS) R3606574-2 12/22/20 13:16							
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier		
Analyte	%	%	%	%			
Total Solids	50.0	50.0	100	85.0-115			

DATE/TIME: 12/23/20 18:46

PAGE: 22 of 32

Reg @ 4519 860:8/17/2023 10:21:50 AM

Wet Chemistry by Method 300.0

QUALITY CONTROL SUMMARY L1296820-01,02,03,04,05,06,07,08,09,10,11,12,13,14

Ср

Τс

Ss

Cn

Sr

Qc

Method Blank (MB)

(MB) R3606489-1 12/22/2	0 16:12			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	U		9.20	20.0

L1296820-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1296820-02 12/22/	(OS) L1296820-02 12/22/20 16:59 • (DUP) R3606489-5 12/22/20 17:09							
	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits		
Analyte	mg/kg	mg/kg		%		%		
Chloride	U	U	1	0.000		20		

L1296820-14 Original Sample (OS) • Duplicate (DUP)

L1296820-14 Origin	al Sample	(OS) • Dup	olicate (DUP)			⁷ Gl
(OS) L1296820-14 12/22/2	0 19:25 • (DUP) R3606489-6	12/22/20	19:35			
	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits	⁸ Al
Analyte	mg/kg	mg/kg		%		%	
Chloride	688	699	5	1.68		20	⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3606489-2 12/22/2	20 16:21				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	200	99.9	90.0-110	

L1296820-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1296820-01 12/22/2	0 16:31 • (MS) R	3606489-3 12	/22/20 16:40 •	(MSD) R36064	189-4 12/22/20) 16:50						
	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	607	U	550	560	90.6	92.2	1	80.0-120			1.76	20

Released	to	Imaging ^{AC4} /24/2023 11:18:36	AM
		ConocoPhillips - Tetra Tech	

PROJECT: 212C-MD-02334 TASK06

SDG: L1296820

DATE/TIME: 12/23/20 18:46

PAGE: 23 of 32

Reg @ q 6 15 8/17/2023 10:21:50 AM

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

QUALITY CONTROL SUMMARY

Method Blank (MB)

)				l'cr
(MB) R3605520-2 12/19/	/20 21:37				Cp
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	mg/kg		mg/kg	mg/kg	Tc
TPH (GC/FID) Low Fraction	U		0.0217	0.100	
(S) a,a,a-Trifluorotoluene(FID)	94.0			77.0-120	³ Ss

Laboratory Control Sample (LCS)

(LCS) R3605520-1 12/19/	20 20:56				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
TPH (GC/FID) Low Fraction	5.50	6.05	110	72.0-127	
(S) a.a.a-Trifluorotoluene(FID)			104	77.0-120	

L1295946-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1295946-03 12/20/2	20 01:35 • (MS)	R3605520-3 1	2/20/20 05:22	• (MSD) R360	5520-4 12/20/	20 05:43						
	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
TPH (GC/FID) Low Fraction	159	10.5	165	182	97.3	108	25	10.0-151			9.87	28
(S) a,a,a-Trifluorotoluene(FID)					108	110		77.0-120				

Reading 297: 0/17/2023 10:21:50 AM

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

QUALITY CONTROL SUMMARY

⁺Cn

Sr

Qc

GI

Â

Sc

Method Blank (MB)

)				1 Cn
(MB) R3605913-2 12/20/	20 00:32				Cp
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	mg/kg		mg/kg	mg/kg	Tc
TPH (GC/FID) Low Fraction	0.0763	J	0.0217	0.100	
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120	³ Ss

Laboratory Control Sample (LCS)

(LCS) R3605913-1 12/19/2	0 22:59				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
TPH (GC/FID) Low Fraction	5.50	4.97	90.4	72.0-127	
(S) a.a.a-Trifluorotoluene(FID)			103	77.0-120	

DATE/TIME: 12/23/20 18:46

PAGE: 25 of 32

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

QUALITY CONTROL SUMMARY L1296820-01,02,03,04,05,06,07,08,09,10,11,12,13,14

Ср

Τс

Ss

Cn

Sr

Qc

Method Blank (MB)

(MB) R3605951-3 12/17/20	0 18:38			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	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	102			75.0-131
(S) 4-Bromofluorobenzene	94.6			67.0-138
(S) 1,2-Dichloroethane-d4	122			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3605951-1 12/17/20	17:22 • (LCSD)	R3605951-2	12/17/20 17:41								7
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	΄GΙ
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
Benzene	0.125	0.123	0.123	98.4	98.4	70.0-123			0.000	20	⁸ A I
Ethylbenzene	0.125	0.113	0.123	90.4	98.4	74.0-126			8.47	20	A
Toluene	0.125	0.112	0.117	89.6	93.6	75.0-121			4.37	20	9
Xylenes, Total	0.375	0.334	0.348	89.1	92.8	72.0-127			4.11	20	Sc
(S) Toluene-d8				100	101	75.0-131					
(S) 4-Bromofluorobenzene				93.1	95.6	67.0-138					
(S) 1,2-Dichloroethane-d4				128	126	70.0-130					

SDG: L1296820 DATE/TIME: 12/23/20 18:46

PAGE: 26 of 32

Semi-Volatile Organic Compounds (GC) by Method 8015

QUALITY CONTROL SUMMARY L1296820-01,02,03,04,05,06,07,08,09,10,11,12,13,14

Â

Sc

Method Blank (MB)

(MB) R3606239-1 12/2	2/20 08:21					Ср					
	MB Result	MB Qualifier	MB MDL	MB RDL		2					
Analyte	mg/kg		mg/kg	mg/kg		Tc					
C10-C28 Diesel Range	U		1.61	4.00							
C28-C40 Oil Range	U		0.274	4.00		³ Ss					
(S) o-Terphenyl	51.8			18.0-148							
					1	4					
						Cn					

Laboratory Control Sample (LCS)

(LCS) R3606239-2 12/2	22/20 08:33				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
nalyte	mg/kg	mg/kg	%	%	
10-C28 Diesel Range	50.0	35.6	71.2	50.0-150	
(S) o-Terphenyl			60.8	18.0-148	

L1296820-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1296820-01 12/22/2	0 09:24 • (MS)	R3606239-3 1	2/22/20 09:37	• (MSD) R3606	5239-4 12/22/2	20 09:50						
	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
C10-C28 Diesel Range	60.7	U	51.5	38.5	84.8	63.4	1	50.0-150		<u>J3</u>	28.9	20
(S) o-Terphenyl					38.1	54.8		18.0-148				

Τс

Ss

Cn

Sr

Qc

GI

AI

Sc

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
В	The same analyte is found in the associated blank.
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.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.

PROJECT: 212C-MD-02334 TASK06 SDG: L1296820 DATE/TIME: 12/23/20 18:46

PAGE: 28 of 32

Received by OCD: 4/17/2023 10:21:50 ACCREDITATIONS & LOCATIONS



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
Alaska	17-026
Arizona	AZ0612
Arkansas	88-0469
California	2932
Colorado	TN00003
Connecticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia ¹	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
lowa	364
Kansas	E-10277
Kentucky ¹⁶	KY90010
Kentucky ²	16
Louisiana	AI30792
Louisiana ¹	LA180010
Maine	TN00003
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086

Nebraska	NE-OS-15-05
Nevada	TN000032021-1
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico 1	TN00003
New York	11742
North Carolina	Env375
North Carolina ¹	DW21704
North Carolina ³	41
North Dakota	R-140
Ohio-VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	LAO00356
South Carolina	84004
South Dakota	n/a
Tennessee ¹⁴	2006
Texas	T104704245-20-18
Texas ⁵	LAB0152
Utah	TN00003
Vermont	VT2006
Virginia	460132
Washington	C847
West Virginia	233
Wisconsin	998093910
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		

¹Drinking 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.



Released to Imaging: 4/24/2023 11:18:36 AM ConocoPhillips - Tetra Tech

PROJECT: 212C-MD-02334 TASK06

SDG: L1296820

Received by OCD: 4/17/2023 10:21:50 AM Analysis Request of Chain of Custody Record Page : 1 of 2

F	Tetra Tech, Inc.			901 West Wall Street, Suite 100 Midland, Texas 79701 Tel (432) 682-4559 Fax (432) 682-3946												L	.12	29	16	821	0	D	075		
Client Name:	Conoco Phillips	Site Manage	er:	Ch	ristian	Llull					Τ			-		A	NAL	YS	IS F	EQ	UES	г	-		
Project Name:	MCA Elvis Trunk Line Release (1RP-797)	Contact Info	D:	Em	Email: christian.llull@tetratech.com Phone: (512) 338-1667							1	11	(C	irc	le c	or S	Spe 	cify	y M	etho	l bc	No.)	11	1
Project Location: (county, state)	Lea County, New Mexico	Project #: 212C-MD-02334, Task No. 06																							
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 7	9701											0										list)		
Receiving Laboratory:	Pace Analytical	Sampler Sig	gnature:		Joe T	yler							- MRG	Se Ha	Se Hg								ached		
Comments: COPTET	RA Acctnum			į							RORDR	35)	RO - ORO	Cd Cr Pb S	Cd Cr Pb			24	0C/625			DS	rry (see att		
	10	SAME	PLING	M	ATRIX	PRE	SER	VATIV	E	S	ATEX	d to C	30 - D	As Ba (As Ba		tiles	0B / 62	I. 827			E T	hemist	ance	
		YEAR: 2020				T	T	TT		INER	and an	05 (E)	M (GF	s Ad A	Is Ag	tiles	i Volat	. 826	mi. Vo	2 / 60	stos)	Sulfat	ater C	on Bal	
(LAB USE)	SAMPLE IDENTIFICATION	DATE	TIME	NATER	SOIL	ICE NONE			# CONTA		TPH TX10	FPH 8015	Fotal Metal	TCLP Meta	TCLP Volat	TCLP Sem	GC/MS Vol	GC/MS Ser	PCB's 808	PLM (Asbe	Chloride 30 Chloride	General Wa	Anion/Catic TPH 8015F	НОГР	
A C	AH-1 (0'-1')	12/08/20	1000	Í	X		X		T	1 1	V)	<	X								T	X		-01	
	AH-1 (1'-2')	12/08/20	1030		X		X		T	1 1	4 >	<	X								T	x		- 02	
	AH-2 (0'-1')	12/08/20	1100		x		X			1 1	V)	<	X									x		-03	
	AH-2 (1'-2')	12/08/20	1130		X		X			1 1	V)	<	X									x		-04	
Carl State	AH-3 (0'-1')	12/08/20	1200		X		X			1 1	V)	<	X	1								x		-05	
	AH-3 (1'-2')	12/08/20	1230		X		X		T	1 1	4)	<	X									x		-06	
and and a	AH-4 (0'-1')	12/08/20	1300		x		X			1 1	4 >	<	X									x	-	-07	
	AH-4 (1'-2')	12/08/20	1330		X		X			1 1	4)	<	X									×		-08	
Same and	AH-5 (0'-1')	12/08/20	1400		x		X		T	1 1	V)	<	X									×		-09	
aler a	AH-5 (2'-3')	12/08/20	1420	-	×		X			1 1	1)	K	X									x		-10	
Relinquished by:	Date: Time: 12-14-75 Bice Date: Time:	Received by	the		12	Date:	20	>				L		JSE		REN [X	Standa	ard Sa	me Da	av 24	hr 4	8 hr	72 hr	
Belingitthed by	Seal	Secolived by:				R-14-23 (6:30					Sample Temperature					Rush Charges Authorized									
initiquisited by.	Date: Time:	Heceived by	X			Date:	15	i a	25	TO			-					Specia	al Rep	ort Lir	nits or	TRRP	Report		
		ORIGUNA	L COPY	Note that we have		V	12	78	7+	.77	.0.0	Circle	e) HA	NDD	ELIV	ERE	DF	EDE)	< U	PS	Trackir	ng #:			-

Received by OCD: 4/17/2023 10:21:50 AM Analysis Request of Chain of Custody Record

.

TŁ	Tetra Tech, Inc.			ç	901 West Wall Street, Suite 100 Midland, Texas 79701 Tel (432) 682-4559 Fax (432) 682-3946									-						1						
Client Name:	Conoco Phillips	Site Manager		Chris	hristian Llull								1	,	C i.,		ANALYSIS REQUEST									
Project Name:	MCA Elvis Trunk Line Release (1RP-797)	Contact Info		Emai Phon	mail: christian.llull@tetratech.com Phone: (512) 338-1667								1).)		1
Project Location: (county, state)	Lea County, New Mexico	Project #:		2120	-MD-	023	34, T	ask N	0. 06	5																
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas	79701		19		-							10										11-11	1181)		
Receiving Laboratory:	Pace Analytical	Sampler Sig	nature:	J	oe Ty	ler							0 - MB		Se Hg	D Se H								attacher		
Comments: COPTET	rRA Acctnum	(Second	-	2	9		1					8260B	35) PRO - OR		Cd Cr Pb	Cd Cr H			24 70C/625				SQ.	stry (see a		
		SAMP	LING	MA	TRIX	PF	ME	THOD	IVE	RS	(N/	BTEX	Ext to C		As Ba	g As Ba	atiles		60B / 6	08			ate T	Chernis		
LAB #	SAMPLE IDENTIFICATION	YEAR: 2020 DATE	TIME	/ATER	OIL	CL	INO ₃	ONE		CONTAINE	ILTERED (Y	TEX 8021B	PH TX1005 (1	AH 8270C	otal Metals Ag	CLP Metals A	CLP Semi Vol	ICI	aC/MS Vol. 82	CB's 8082 / 6	IORM	LM (Aspestos Chloride 300.0	Chloride Sulf	seneral water inion/Cation B	PH 8015R	IOLD
(ONLY /	AH-5 (4'-5')	12/08/20	1440	50	X	I	I	X		#	N	X						LL.				X		1 N		-
	AH-6 (0'-1')	12/08/20	1500	1	x			X		1	N	X)	(X		-	2	
	AH-6 (2'-3')	12/08/20	1600		x			X	1	1	N	Х)						2	100		X		-1	3	
	AH-6 (4'-5')	12/08/20	1620		×			×	100	1	N	×)	(X		-1	4	-
Relinquished by:	Date: Time: 2-14-23 Big Date: Time: 12-14-23 163 Date: Time: Date: Time:	Received by Received by	the COA		12		ate: 14 ate: 4 ate:	23	1	Time 3 C Time G	3	Sar	LAI O	B U: NL'	SE	e		ARK	S: andard ISH: S sh Cha ecial R	Same arges eport	Day Autho Limits	24 hr. rized or TRI	48 h	r. 72 port	hr.	
-	and the second	ORIGIN	AL COPY	/		-		1	A	T	A	(Ci	rcle)	HAN	D DE	LIVE	RED	FEI	DEX	UPS	Tra	cking	#:			-

Pace Analytical National Center fo	r Testing & Innov	vation	
Cooler Receipt F	orm		
Client:		11286820	
Cooler Received/Opened On: 12 / 15 / 20	Temperature:	1.0	
Received By: joey brent			
Signature:			
Receipt Check List	NP	Yes	No
COC Seal Present / Intact?			
COC Signed / Accurate?	Carlos and the set	-	
Bottles arrive intact?			
Correct bottles used?	and the state of the state of		State Markey
Sufficient volume sent?			
If Applicable			Charles Indexed
VOA Zero headspace?			
Preservation Correct / Chackad?		The state of the state of the	
•

APPENDIX F NMSLO Seed Mixture Details

1 REVEGETATION PLANS

The following Revegetation Plans were developed for revegetation of sites in southeastern New Mexico. To determine which revegetation plan is appropriate follow procedures in the section titled Determining the Revegetation Plan.

Revegetation Plans contain seed mixtures, as well as seed bed preparation and planting requirements. The detailed instructions for seedbed preparation and planting can be found in the section Revegetation Techniques.

REVEGTATION PLANS	CODE	SOIL TEXTURES
Clay	С	Clay, Silty Clay, Stony Silty Clay, Clay Loam, Silty Clay Loam (including saline and sodic Clay soils)
Loam	L	Silty Loam, Cobbly Silt Loam, Stony Silt Loam, Silt, Loam, Sandy, Clay Loam
Sandy Loam	SL	Very Fine Sandy Loam, Fine Sandy Loam, Cobbly Fine Sandy Loam, Sandy Loam, Cobbly Sandy Loam, Gravelly Fine Sandy Loam, Very Gravelly Fine Sand Loam, Stony Fine Sandy Loam, Stony Sandy Loam
Shallow	SH	Rocky Loam, Cobbly Loam
Course	CS	Gravelly Loam, very Gravelly Loam, Gravelly Sandy Loam, Very Gravelly Sandy Loam, Stony Loam, Stony Sandy Loam
Sandy	S	Loamy Fine Sand, Loam Sand, Very Gravelly Loamy Fine Sand
Blow Sand	BS	Fine Sand, Sand, Coarse Sand
Mountain Meadow	MM	Clay, Loam
Mountain Upland	MU	Clay Loam, Loam

Table 3 - Revegetation Plans, Codes, and Soil Types for Southeastern New Mexico



Version 1 - 200808

New Mexico State Land Office Southeastern New Mexico Revegetation Handbook

Clay (C)

CLAY (C) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX	
Grasses:				
Vine mesquite	VNS, Southern	2.5	S	
Alkali sacaton	VNS, Southern	2.0	S	
Tobosa grass	VNS	2.0	F	
Blue grama	Hachita, Lovington	1.0	D	
Forbs:				
Prairie coneflower	VNS, Southern	1.0	D	
Blue flax	Appar	1.0	D	
Scarlet globemallow	VNS, Southern	1.0	D	
Shrubs:				
Fourwing saltbush	VNS, Southern	2.0	D	
Douglas rabbitbrush	VNS, Southern	1.5	F	
	Total PLS/acr	re 14.0		

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box

VNS, Southern – No Variety Stated, seed should be from a southern latitude collection of this species.

• Double above seed rates for broadcast or hydroseeding.

- If vine mesquite is not available, substitute Alamo switchgrass or galleta.
- If a species is not available, provide a suggested substitute to the New Mexico Land Office for approval. Increasing all other species proportionately may be acceptable.



Version 1 - 200808

New Mexico State Land Office Southeastern New Mexico Revegetation Handbook

Loamy (L)

LOAMY (L) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Black grama	VNS, Southern	1.0	D
Blue grama	Lovington	1.0	D
Sideoats grama	Vaughn, El Reno	4.0	F
Sand dropseed	VNS, Southern	2.0	S
Alkali sacaton	VNS, Southern	1.0	
Little bluestem	Cimarron, Pastura	1.5	F
ALL AND A		DOM	
Forbs:			2
Firewheel (Gaillardia)	VNS, Southern	1.0	D
	0		B
Shrubs:		0.7	B
Fourwing saltbush	Marana. Santa Rita	1.0	D
Common winterfat	VNS. Southern	0.5	FB
			B
	Total PLS/acro	18.0	

- 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.



Sandy Loam (SL)

SANDY LOAM (SL) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX	
Grasses:				
Galleta grass	Viva, VNS, So.	2.5	F	
Little bluestem	Cimmaron, Pastura	2.5	F	
Blue grama	Hachita, Lovington	2.0	D	
Sideoats grama	Vaughn, El Reno	2.0	F	
Sand dropseed	VNS, Southern	1.0	S	
<u>Forbs:</u>				
Indian blanketflower	VNS, Southern	1.0	D	
Parry penstemon	VNS, Southern	1.0	D	
Blue flax	Appar	1.0	D	
Desert globemallow	VNS, Southern	1.0	D	
Shrubs:				
Fourwing saltbush	VNS, Southern	2.0	D	
Common winterfat	VNS, Southern	1.0	F	
Apache plume	VNS, Southern	0.75	F	
	Total PLS/acr	re 17.75		

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box

• VNS, Southern – No Variety Stated, seed should be from a southern latitude collection of this species.

• Double above seed rates for broadcast or hydroseeding.

• If Parry penstemon is not available, substitute firecracker penstemon.

• If desert globemallow is not available, substitute scarlet globemallow or Nelson globemallow.

• If a species is not available, provide a suggested substitute to the New Mexico Land Office for approval. Increasing all other species proportionately may be acceptable.



Lime – Gypsum (LG)

LIME – GYPSUM (LG) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Die als anome	VNC Conthe	1.0	
DIACK grama	vins, southern	1.0	D D
Blue grama	Lovington	1.0	D
Sideoats grama	Vaughn, El Reno	4.0	F
Plains bristlegrass	VNS, Southern	2.0	D
Sand dropseed	VNS, Southern	2.0	S
Forbs: Firewheel (Gaillardia)	VNS, Southern	1.0	D
Annual Sunflower	VNS, Southern	1.0	D D
<u>Shrubs:</u> Fourwing saltbush	VNS, Southern	1.0	T
	Total PLS/acr	re 13.0	

- 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.



Sandy with Tall Grass (ST)

SANDY with TALL GRASS (ST) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sand bluestem	Elida, VNS, So.	2.0	F
Sideoats grama	Vaughn, El Reno	4.0	F
Little bluestem	Pastura, Cimmaron	6.0	F
Plains bristlegrass	VNS, Southern	1.0	D
Sand dropseed	VNS, Southern	2.0	S
- all			<u> </u>
Forbs:			2
Indian blanketflower	VNS, Southern	1.0	D
Plains coreopsis	VNS, Southern	1.0	S
N.	о° — —		B
	Total PLS/acr	re 17.0	B
	99. 7		

- 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.



Shallow (SH)

SHALLOW (SH) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sideoats grama	Vaughn, El Reno	4.0	F
Blue grama	Lovington, Hachita	3.0	D
Little bluestem	Pastura, Cimmaron	1.5	F
Green sprangletop	VNS, Southern	1.0	D
Plains bristlegrass	VNS, Southern	1.0	D
<u>Forbs:</u> Firewheel (<i>Gaillardia</i>)	VNS, Southern	1.0	D
Shrubs:	7	0	B
Fourwing saltbush	Marana. Santa Rita	1.0	D
Common winterfat	VNS, Southern	0.5	F
	Total PLS/acro	2 13.0	

- 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.



Coarse (CS)

COARSE (CS) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX	
Grasses:				
Sand bluestem	VNS, Southern	2.0	F	
Sideoats grama	Vaughn, El Reno	2.0	F	
Blue grama	Hachita, Lovington	1.5	D	
Little bluestem	Cimmaron, Pastura	1.5	F	
Sand dropseed	VNS, Southern	1.0	S	
Plains bristlegrass	VNS, Southern	0.75	D	
Forbs:				
Parry penstemon	VNS, Southern	1.0	D	
Desert globemallow	VNS, Southern	1.0	D	
White prairieclover	Kaneb, VNS	0.5	D	
Sulfur buckwheat	VNS, Southern	0.5	D	
Shrubs:				
Fourwing saltbush	VNS, Southern	1.0	D	
Skunkbush sumac	VNS, Southern	1.0	D	
Common winterfat	VNS, Southern	1.0	F	
Fringed sagewort	VNS, Southern	0.5	F	
	Total PLS/acr	e 18.25		

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box

• VNS, Southern – No Variety Stated, seed should be from a southern latitude collection of this species.

- Double above seed rates for broadcast or hydroseeding.
- If Parry is not available, substitute firecracker penstemon.
- If desert globemallow is not available, substitute scarlet globemallow.
- If one species is not available, provide a suggested substitute to the New Mexico Land Office for approval. Increasing all other species proportionately may be acceptable.



Released to Imaging: 4/24/2023 11:18:36 AM

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
- II	MCK VI	NIS	
Forbs:			5
Firewheel (Gaillardia)	VNS, Southern	1.0	D
Annual Sunflower	VNS, Southern	1.0	D
	.0		B
Shrubs:			
Fourwing Saltbush	VNS, Southern	1.0	F
	Total PLS/acr	e 16.0	3 8

- 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.



Deep Sand (DS)

1.1 BLOW SAND SITES REVEGETATION PLAN (BS)

Use this Revegetation Plan with the following ESD's:

CP2 – Sandy Plains, Sandhills, Deep Sand, Shallow Plains **HP3** – Loamy Sand, Sandy Plains, Sandhills, Deep Sand **SD3** – Loamy Sand, Deep Sand, Sandhills, Salt Meadow

Soil Texture: Fine Sand, Sand, Course Sand

Revegetation Procedures:

I. For flat or gently sloping areas with slopes less than or equal to 3H:1V:

- 1. Soil Amendments: Apply composted manure or similar at the rate of 30.0 air dry tons/acre.
- 2. Fertilize: Type 2
- 3. Mulch Grass Hay mulch applied at 2.0 tons/acre
- 4. Prepare the seedbed and incorporate mulch, fertilizer, and soil amendments:
 - a. Scarify
 - b. Disc (thoroughly mix mulch, fertilizer, and soil amendments in top 6-8 inches of soil before proceeding).
- 5. **Drill Seed** use rangeland drill and apply Drill box seed to 0.5-0.75 inch depth, apply small seed to surface and lightly cover with drag chains or packer wheels or equal.
- 6. Mulch Grass Hay mulch applied at 2.0 tons/acre
- 7. Crimp
- 8. **Tackify** tackify to minimize risk of mulch blowing and to hold soil and mulch in place until vegetation begins to establish.
- 9. Wind Fence Install wind fence.



Deep Sand (DS)

DEEP SAND (DS) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sand bluestem	Elida, VNS, So.	4.0	F
Sideoats grama	Vaughn, El Reno	4.0	\mathbf{F}
Little bluestem	Cimarron, Pastura	3.0	\mathbf{F}
Plains bristlegrass	VNS, Southern	1.0	D
Sand dropseed	VNS, Southern	2.0	S
Blue grama	Lovington	1.0	D
Forbs:			2
Firewheel (Gaillardia)	VNS, Southern	1.0	D
Anuual Sunflower	VNS, Southern	0.5	D
Prairie Conflower	VNS, Southern	0.5	D
	Total PLS/acr	e 17	

- 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.





August 2009

New Mexico State Land Office Southeastern New Mexico Revegetation Handbook

.

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

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

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

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

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

CONDITIONS

Operator:	OGRID:
CONOCOPHILLIPS COMPANY	217817
600 W. Illinois Avenue	Action Number:
Midland, TX 79701	208258
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
jharimon	The reclamation plan is approved with the following conditions. (1) The reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. (2) The responsible party must reseed disturbed area in the first favorable growing season following closure of the site.	4/24/2023
jharimon	(3) The division will consider reclamation of all disturbed areas complete when uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds. (4) For any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.	4/24/2023

CONDITIONS

Action 208258