SITE INFORMATION

Report Type: Work Plan

General Site Information:						
Site:	Drickey Queen Sand Unit #808					
Company:	Legacy Reserves Operating					
Section, Township and Range	Unit A	Section 4	T 14S	R 31E		
Lease Number:	API - 30-005-00981					
County:	Chavez County					
GPS:	33.13522° N			103.82111° W		
Surface Owner:	BLM					
Mineral Owner:						
Directions:	In Rural Chavez county at the intersection of HWY 249 and HWY 172, travel NORTH on 172 for approximately 7.5 miles, then turn WEST onto lease road (marked GATE 12) and continue for approximately 1.2 miles, then turn NORTH onto lease road and continue for approximately 1.2 miles. Location is in the pasture on WEST side of the lease road.					

Release Data:	
Date Released:	9/5/2014
Type Release:	Produced Water and Oil
Source of Contamination:	Flowline failure
Fluid Released:	75 bbls
Fluids Recovered:	0 bbls

Official Communication:			
Name:	Freddie Gibbs		Ike Tavarez
Company:	Legacy Reserves Operating, L.P.		Tetra Tech
Address:	303 W. Wall St.		4000 N. Big Spring
	Suite 1800		Ste 401
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 689-5200		(432) 687-8110
Fax:			
Email:	fgibbs@legacylp.com		Ike.Tavarez@tetratech.com

Ranking Criteria		
Depth to Groundwater:	*Ranking Score*	*Site Data*
<50 ft	20	
50-99 ft	10	
>100 ft.	0	
WellHead Protection:	*Ranking Score*	*Site Data*
Water Source <1,000 ft., Private <200 ft.	*20*	
Water Source >1,000 ft., Private >200 ft.	*0*	*0*
Surface Body of Water:	*Ranking Score*	*Site Data*
<200 ft.	*20*	
200 ft - 1,000 ft.	10	
>1,000 ft.	0	0
Total Ranking Score:	0	

Acceptable Soil RRAL (mg/kg)		
Benzene	*Total BTEX*	*TPH*
10	50	5,000

TETRA TECH

November 14, 2014

Mr. Glenn von Gonten
Senior Hydrologist/Acting Environmental Bureau Chief
Environmental Bureau
Oil Conservation Division
Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Work Plan for the Legacy Reserves Operating, LP., Drickey Queen Sand Unit #808, Unit A, Section 4, Township 14 South, Range 31 East, Chavez County, New Mexico.

Mr. Gonten,

Tetra Tech, Inc. (Tetra Tech) was contacted by Legacy Reserves Operating, L.P. (Legacy) to assess a spill from the Drickey Queen Sand Unit #808 located in Unit A, Section 4, Township 14 South, Range 31 East, Chavez County, New Mexico (Site). The spill site coordinates are N 33.13522°, W 103.82111°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on September 5, 2014, and released approximately 75 barrels of produced fluid and oil from a ruptured flow line. None of the fluids were recovered. The spill initiated in the pasture approximately 800' southwest of the Drickey Queen Sand Well #808 affecting an area approximately 15' x 300', 3' x 150' and 2' x 600'. The initial C-141 form is enclosed in Appendix A.

Groundwater

Chaves County is located in the southeastern corner of New Mexico. The area is located in the High Plains Valley section of the Great Plains physiographic province. Rocks of Quaternary, Tertiary, and Triassic age are exposed and contain the principal aquifers. The most prominent aquifer is the Ogallala formation, which underlies the Llano Estacado and forms outliers south of it. Below the Cenozoic rocks are sandstones and shales of the Dockum group of Late Triassic age, from

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which small quantities of water are obtained. No usable groundwater is obtained from rocks older than the Triassic.

The Ogallala formation consists chiefly of sediments deposited by streams that had their headwaters in the mountainous regions to the west and northwest. The Ogallala formation rests unconformable upon an erosional surface of the underlying Triassic and Cretaceous rocks. The Ogallala is made of beds and lenses of clay, silt, sand, and gravel. Caliche occurs as a secondary deposit in many places in the formation.

Water wells east of Mescalero Ridge derive their water from the Ogallala. Water wells west of Mescalero Ridge derive water from the Triassic Dockum or Quaternary alluvium. No reported depths to groundwater were found for this area and groundwater in this may be limited or absent west of the Mescalero Ridge.

Neither the New Mexico State Engineer's Office database nor the USGS database show any wells in Section 4. The New Mexico State Engineer's Office database does show wells in Sections 23, 25, 34, and 36, Township 14S, Range 31E, with reported depths to water from 200' to 275'. This spill site is located west of Mescalero Ridge and any groundwater would be derived from the Triassic Dockum or Quaternary Alluvium. The groundwater data is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Archaeology Study

Prior to beginning any drilling or excavation the Bureau of Land Management (BLM) requested an archaeological survey of the site. As such, Southern New Mexico Archaeological Services, Inc. was onsite to perform the Archaeological study. According to the New Mexico Cultural Resources Information System (NMCRIS) Investigation Form, no archaeological activities or the survey results were negative for any culture materials with in the spill areas. The results of the NMCRIS investigation can be found in Appendix D.

Soil Assessment and Analytical Results

Auger holes

On September 10, 2014, Tetra Tech personnel inspected and sampled the spill area. Twelve (12) auger holes (AH-1 through AH-12) were installed using a stainless steel hand auger to assess the impacted soils. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, none of the samples selected for BTEX did not exceed the RRAL's. However, all of the auger holes exceeded the TPH RRAL at 0-1', with the exception of the area of AH-3. Auger hole (AH-3) did not show any TPH or BTEX concentrations above the RRAL's. The remaining auger holes did show declining TPH concentrations with depth below the RRAL at 1-1.5' below surface and were all vertically defined.

Elevated chloride concentrations were detected in majority of the auger holes. In the areas of AH-1 through AH-6 showed elevated chloride concentrations and were not vertically defined with bottom auger holes concentrations of 24,600 mg/kg at 4-4.5', 17,600 mg/kg at 3-3.5', 23,200 mg/kg at 8-8.5', 10,400 mg/kg at 6-6.5', 17,300 mg/kg at 5-5.5' and 14,800 mg/kg at 7-7.5', respectively. Deeper samples were not collected due to the dense caliche formation.

Auger holes (AH-7) did show a declining chloride with depth at 752 mg/kg at 3-3.5' and 59 mg/kg at 4-4.5'. The areas of AH-8 through AH-12 did show a shallow chloride impact to the soils and declined with depth at 1-1.5' below surface.

Boreholes

On October 28, 2014, Tetra Tech supervised the installation of six (6) boreholes (BH-1 through BH-6) using an air rotary drilling rig to assess and define chloride extents in the areas of AH-1 through AH-6. Selected samples were analyzed for chloride by EPA method 300.0. Copies of the laboratory analysis chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The borehole locations are shown on Figure 3.

Referring to Table 1, all of the boreholes did show declining chlorides with depth and were somewhat vertically defined at approximately at 40' to 60' below surface. Auger holes (AH-1, AH-2 and AH-3) showed chloride concentrations of 1,150 mg/kg, 1,460 mg/kg and 1,900 mg/kg at 59-60' below surface. The bottom boring (BH-1) sample appears to be cross-contaminated with the upper soils. The remaining borings (BH-3 and BH-5) declined with depth and did show some field interferences with the red clay encountered in the deeper soils. Based on the

results and decline of the chloride, the concentrations are projected to decline below 1,000 mg/kg at approximately 70' below surface.

Work Plan

The spill area is located west of the Mescalero Ridge and the ground water derived from the Triassic Dockum or Quaternary alluvium. No reported depths to groundwater were found for this area, which the groundwater appears be limited or absent west of the Mescalero Ridge.

Based on the absence of groundwater in the area, Legacy proposes to remove the impacted material as highlighted (green) in Table 1 and shown on Figure 4. The proposed excavation depth will range from 1.0' to 4.0' below surface. A shallow excavation will be performed to a depth of approximately 1.0' in the areas of AH-8, AH-9, AH-10, AH-11 and AH-12. The area of AH-7 will be excavated to a depth of approximately BH-11 will be excavated to approximately 3.0' below surface. The remaining areas AH-1, AH-2, AH3, AH-4, AH-5 and AH-6 will be excavated to a depth 3.0' to 4.0' below surface. Once these areas (AH-1 through AH-6) are excavated, the excavation bottoms will be capped with a 40 mil liner at approximately 4.0' below surface.

All of the excavated soil will be transported to proper disposal. Once excavated to the appropriate depth, the excavations will be backfilled with clean soil.

The proposed excavation depths may not be reached due to wall cave ins and safety concerns for onsite personnel. In addition, impacted soil around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safely concerns. As such, Tetra Tech will excavate the soils to the maximum extent practicable.

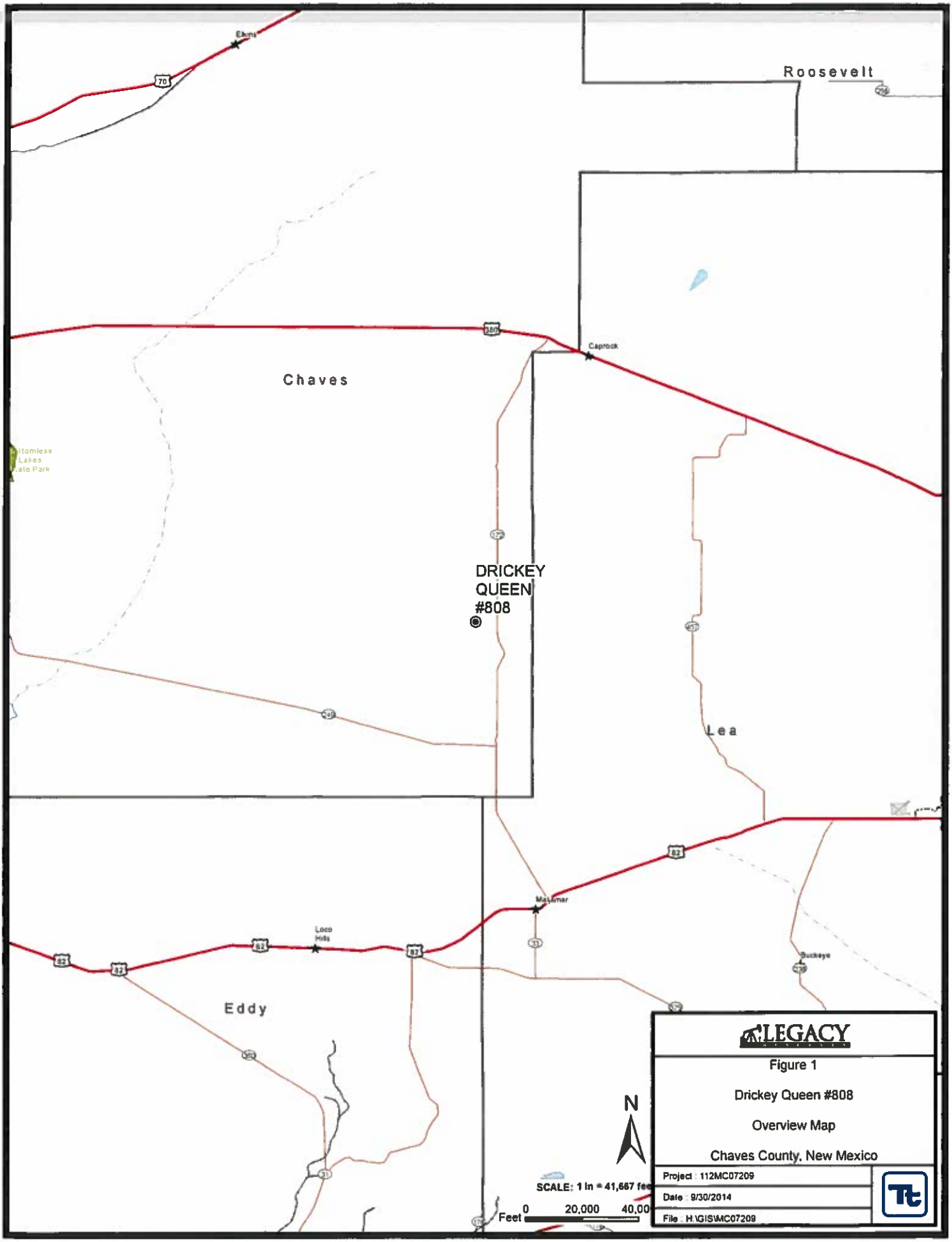
Upon completion, a final report will be submitted to the NMOCD. If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Clair Gonzales,
Geologist

cc: Legacy – Freddie Gibbs

Figures



LEGACY

Figure 1

Drickey Queen #808

Overview Map

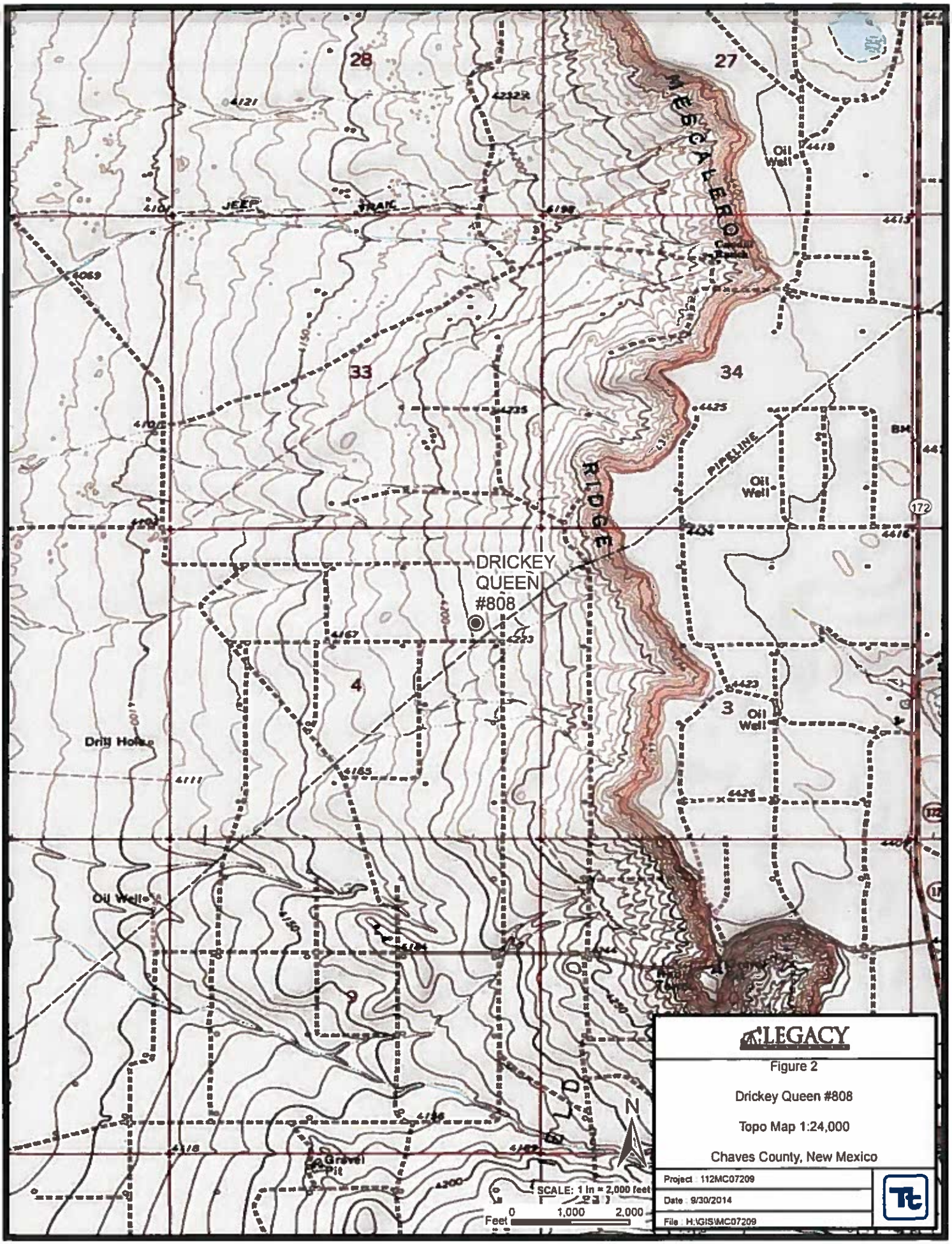
Chaves County, New Mexico

Project : 112MC07209

Date : 9/30/2014

File : H:\GIS\MC07209

Drawn By: Isabel Marmolejo



LEGACY

Figure 2

Drickey Queen #808

Topo Map 1:24,000

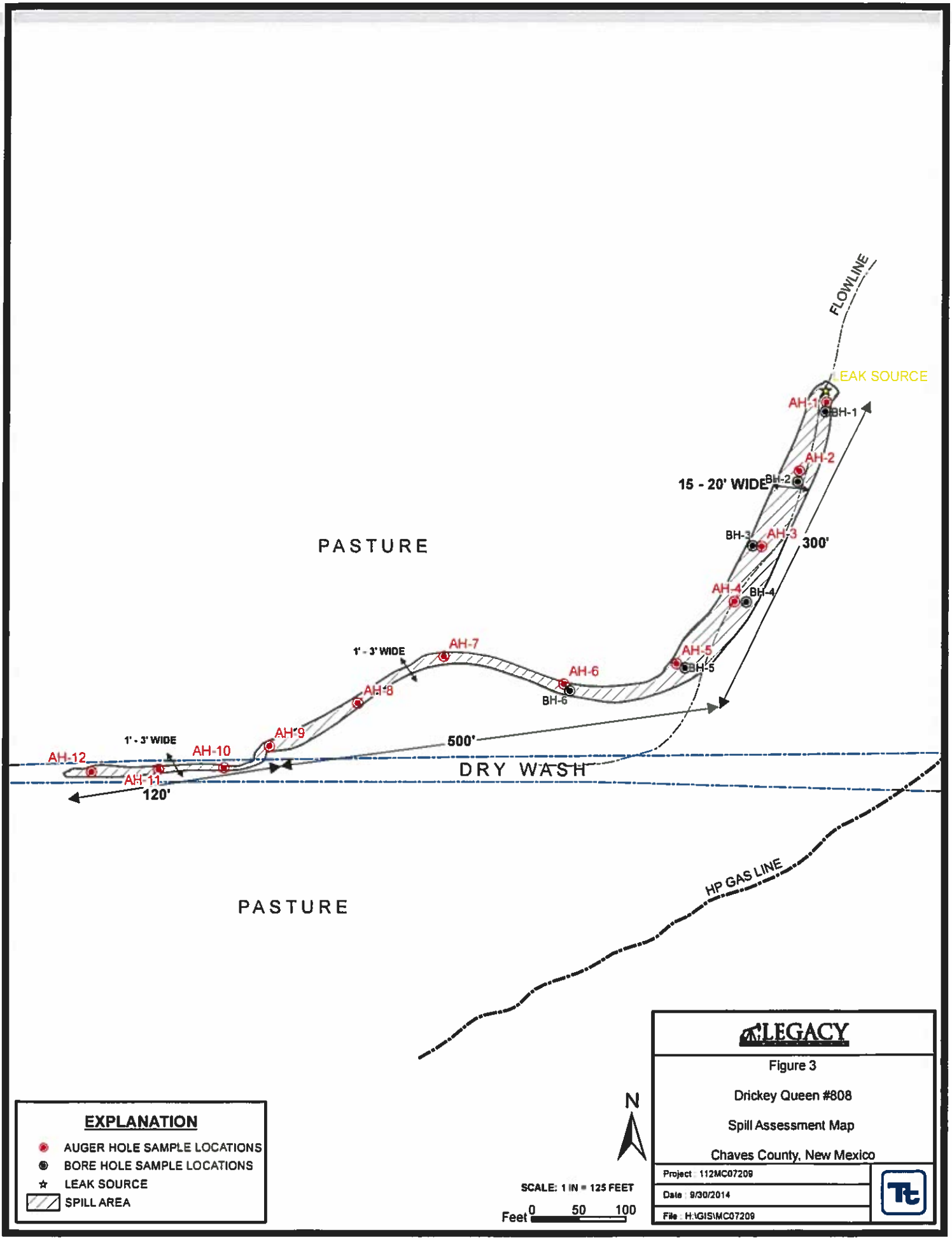
Chaves County, New Mexico

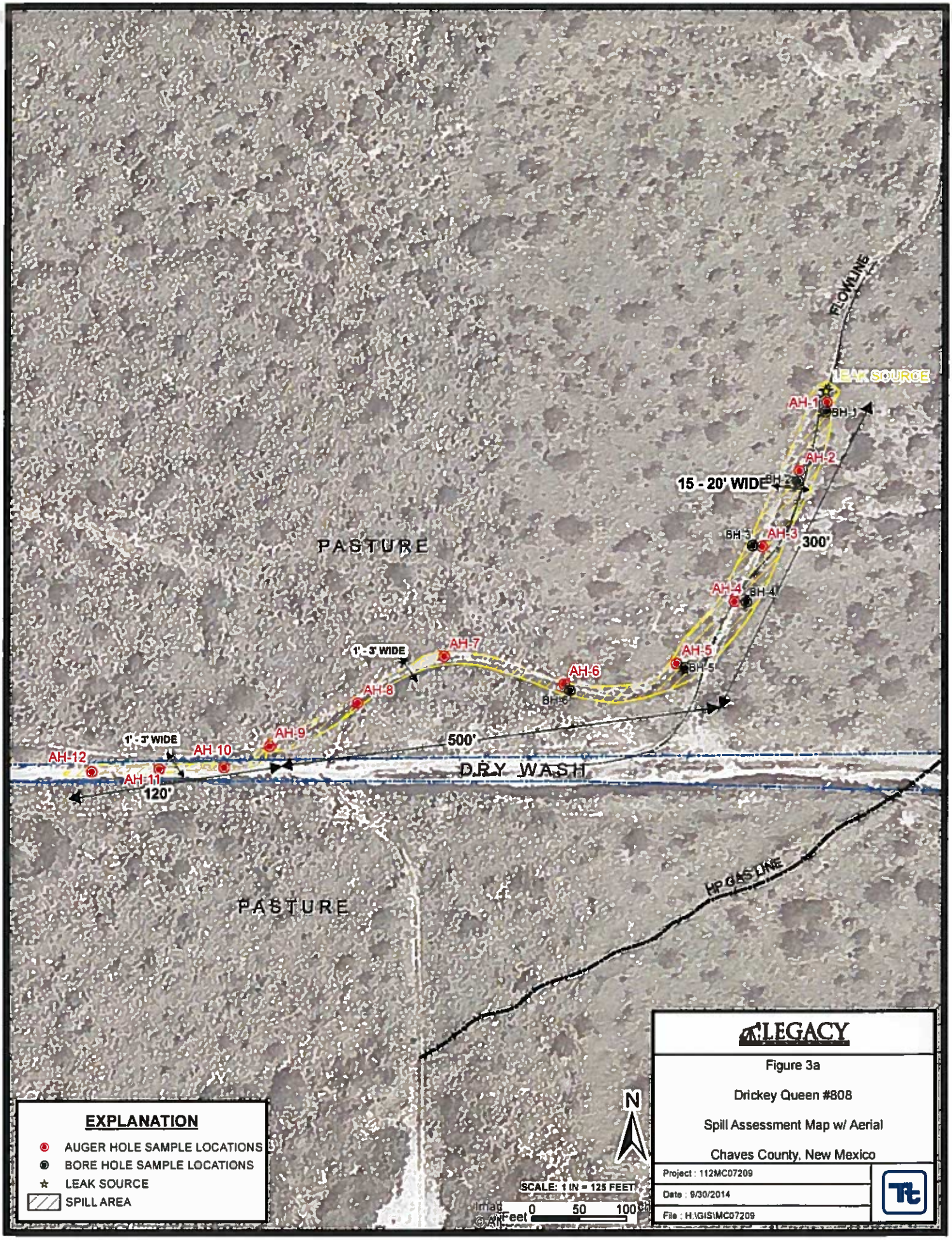
Project : 112MC07209

Date : 9/30/2014

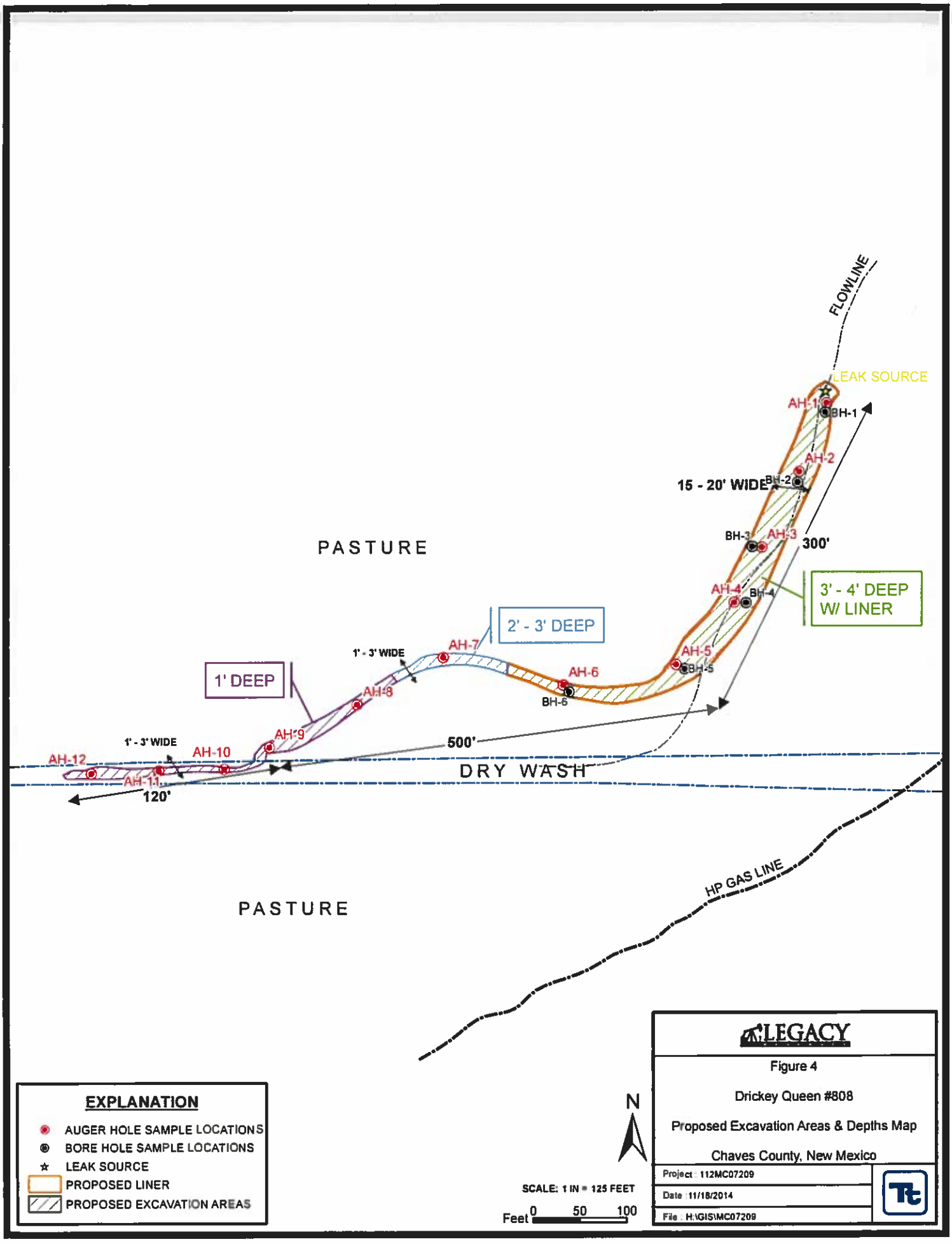
File : H:\GIS\MC07209

Drawn By: Isabel Marmolejo


FLOWLINE
LEAK SOURCE
AH-1
BH-1
AH-2
BH-2
15 - 20' WIDE
BH-3
AH-3
300'
AH-4
BH-4
AH-5
BH-5
AH-6
BH-6
AH-7
1' - 3' WIDE
AH-8
AH-9
500'
AH-10
AH-11
AH-12
1' - 3' WIDE
120'
PASTURE
DRY WASH
PASTURE
HP GAS LINE
EXPLANATION
AUGER HOLE SAMPLE LOCATIONS
BORE HOLE SAMPLE LOCATIONS
LEAK SOURCE
SPILL AREA
N
SCALE: 1 IN = 125 FEET
Feet 0 50 100
LEGACY
Figure 3
Drickey Queen #808
Spill Assessment Map
Chaves County, New Mexico
Project : 112MC07209
Date : 9/30/2014
File : H:\GIS\MC07209
Drawn By: Isabel Marmolejo



Drawn By: Isabel Marroquin



Drawn By: IsabelMarmolejo

Tables

Table 1
Legacy Reserves
Drickey Queen Sand Unit #808
Chaves County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-1	9/10/2014	0-1	-	X		432	9,470	**9,902**	-	-	-	-	-	**13,600**
	"	1-1.5	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**20,300**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	**19,300**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	**17,400**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	**24,600**
BH-1	10/27/2014	4-5	-	X		-	-	-	-	-	-	-	-	**11,500**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**19,800**
	"	9-10	-	X		-	-	-	-	-	-	-	-	**22,200**
	"	14-15	-	X		-	-	-	-	-	-	-	-	**11,100**
	"	19-20	-	X		-	-	-	-	-	-	-	-	**10,100**
	"	24-25	-	X		-	-	-	-	-	-	-	-	**11,600**
	"	29-30	-	X		-	-	-	-	-	-	-	-	**13,000**
	"	39-40	-	X		-	-	-	-	-	-	-	-	**5,310**
	"	49-50	-	X		-	-	-	-	-	-	-	-	**1,930**
	"	54-55	-	X		-	-	-	-	-	-	-	-	675
	"	59-60	-	X		-	-	-	-	-	-	-	-	**1,150**

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Drickey Queen Sand Unit #808
Chaves County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-2	9/10/2014	0-1	-	X		342	6,300	**6,642**	-	-	-	-	-	**16,000**
	"	1-1.5	-	X		93.3	1,250	1,343	<0.0200	<0.0200	0.152	0.419	0.571	**20,400**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	**19,800**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	**17,600**
BH-2	10/27/2014	4-5	-	X		-	-	-	-	-	-	-	-	**9,520**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**8,040**
	"	9-10	-	X		-	-	-	-	-	-	-	-	**13,900**
	"	14-15	-	X		-	-	-	-	-	-	-	-	**10,500**
	"	19-20	-	X		-	-	-	-	-	-	-	-	**8,610**
	"	24-25	-	X		-	-	-	-	-	-	-	-	**6,220**
	"	29-30	-	X		-	-	-	-	-	-	-	-	**9,090**
	"	39-40	-	X		-	-	-	-	-	-	-	-	**2,870**
	"	49-50	-	X		-	-	-	-	-	-	-	-	622
	"	59-60	-	X		-	-	-	-	-	-	-	-	680

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Drickey Queen Sand Unit #808
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Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-3	9/10/2014	0-1	-	X		<4.00	<50.0	<50.0	-	-	-	-	-	1,990
	"	1-1.5	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	6,480
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	8,750
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	10,200
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	20,200
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	21,200
	"	6-6.5	-	X		-	-	-	-	-	-	-	-	30,000
	"	7-7.5	-	X		-	-	-	-	-	-	-	-	22,200
	"	8-8.5	-	X		-	-	-	-	-	-	-	-	23,200
BH-3	10/27/2014	9-10	-	X		-	-	-	-	-	-	-	-	4,660
	"	14-15	-	X		-	-	-	-	-	-	-	-	4,520
	"	19-20	-	X		-	-	-	-	-	-	-	-	2,430
	"	24-25	-	X		-	-	-	-	-	-	-	-	971
	"	29-30	-	X		-	-	-	-	-	-	-	-	15,500
	"	39-40	-	X		-	-	-	-	-	-	-	-	2,430
	"	49-50	-	X		-	-	-	-	-	-	-	-	1,460
	"	59-60	-	X		-	-	-	-	-	-	-	-	1,460

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Drickey Queen Sand Unit #808
Chaves County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-4	9/10/2014	0-1	-	X		<80.0	9,990	**9,990**	-	-	-	-	-	**11,600**
	"	1-1.5	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**18,400**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	**20,300**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	**18,400**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	**25,100**
	"	6-6.5	-	X		-	-	-	-	-	-	-	-	**10,400**
BH-4	10/28/2014	9-10	-	X		-	-	-	-	-	-	-	-	**13,100**
	"	14-15	-	X		-	-	-	-	-	-	-	-	**14,400**
	"	19-20	-	X		-	-	-	-	-	-	-	-	**13,900**
	"	24-25	-	X		-	-	-	-	-	-	-	-	**6,250**
	"	29-30	-	X		-	-	-	-	-	-	-	-	**3,650**
	"	39-40	-	X		-	-	-	-	-	-	-	-	769
	"	49-50	-	X		-	-	-	-	-	-	-	-	721
	"	59-60	-	X		-	-	-	-	-	-	-	-	769
	"	69-70	-	X		-	-	-	-	-	-	-	-	577

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Legacy Reserves
Drickey Queen Sand Unit #808
Chaves County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-5	9/10/2014	0-1	-	X		<80.0	14,300	14,300	-	-	-	-	-	5,910
	"	1-1.5	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	15,000
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	25,000
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	23,100
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	26,000
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	17,300
BH-5	10/28/2014	6-7	-	X		-	-	-	-	-	-	-	-	19,700
	"	9-10	-	X		-	-	-	-	-	-	-	-	14,900
	"	14-15	-	X		-	-	-	-	-	-	-	-	11,900
	"	19-20	-	X		-	-	-	-	-	-	-	-	11,900
	"	24-25	-	X		-	-	-	-	-	-	-	-	3,330
	"	29-30	-	X		-	-	-	-	-	-	-	-	5,240
	"	39-40	-	X		-	-	-	-	-	-	-	-	4,380
	"	49-50	-	X		-	-	-	-	-	-	-	-	2,380
	"	59-60	-	X		-	-	-	-	-	-	-	-	1,900

Table 1
Legacy Reserves
Drickey Queen Sand Unit #808
Chaves County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-6	9/10/2014	0-1	-	X		134	8,330	**8,464**	-	-	-	-	-	**10,400**
	"	1-1.5	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**14,900**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	**12,400**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	**13,900**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	**13,400**
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	**26,000**
	"	7-7.5	-	X		-	-	-	-	-	-	-	-	**14,800**
BH-6	10/28/2014	9-10	-	X		-	-	-	-	-	-	-	-	**18,100**
	"	14-15	-	X		-	-	-	-	-	-	-	-	**8,090**
	"	19-20	-	X		-	-	-	-	-	-	-	-	333
	"	24-25	-	X		-	-	-	-	-	-	-	-	962
	"	29-30	-	X		-	-	-	-	-	-	-	-	**3,360**
	"	39-40	-	X		-	-	-	-	-	-	-	-	**3,360**
	"	49-50	-	X		-	-	-	-	-	-	-	-	337
	"	59-60	-	X		-	-	-	-	-	-	-	-	385
AH-7	9/10/2014	0-1	-	X		135	10,600	**10,735**	-	-	-	-	-	**18,800**
	"	1-1.5	-	X		<4.00	68.1	68.1	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**15,800**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	**9,160**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	752
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	59.0

Table 1
Legacy Reserves
Drickey Queen Sand Unit #808
Chaves County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-8	9/10/2014	0-1	-	X		62.2	4,990	**5,052**	-	-	-	-	-	**2,720**
	"	1-1.5	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	50.0
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	<20.0
AH-9	9/10/2014	0-1	-	X		281	9,180	**9,461**	-	-	-	-	-	**3,270**
	"	1-1.5	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<20.0
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	99.0
AH-10	9/10/2014	0-1	-	X		580	34,400	**34,980**	-	-	-	-	-	644
	"	1-1.5	-	X		<4.00	92.4	92.4	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	198
AH-11	9/10/2014	0-1	-	X		266	21,400	**21,666**	-	-	-	-	-	792
	"	1-1.5	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	0.0234	0.0234	396
AH-12	9/10/2014	0-1	-	X		142	11,000	**11,142**	-	-	-	-	-	**7,340**
	"	1-1.5	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	338

(-) Not Analyzed
(BEB) Below Excavation Bottom
Proposed 40 mil liner
Proposed Excavated Depths

112MC07209

Photos

View North – Area of AH-1

View West – Area of AH-2

View North – Area of AH-3

View West – Area of AH-4

View West –Area of AH-5

View West – Area of AH-6

View West – Area of AH-7

View West – Area of AH-8

View East – Area of AH-9

View West – Area of AH-10

Legacy Reserves Operating, L.P.
Drickey Queen Sand Unit #808
Chavez County, New Mexico

View West – Area of AH-11

View West – Area of AH-12

View North – Area of BH-1

View North – Area of BH-2

View North – Area of BH-3

View North – Area of BH-4

View West – Area of BH-5

View East – Area of BH-6

Appendix A

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Legacy Reserves Operating, LP	Contact Freddie Gibbs
Address 303 W. Wall St. Suite 1800	Telephone No. (432) 689-5200
Facility Name Drickey Queen Sand Unit #808	Facility Type Well

Surface Owner BLM	Mineral Owner	Lease No. 30-005-00981

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	4	14S	31E	665	North	660	East	Chavez

Latitude_____ Longitude_____

NATURE OF RELEASE

Type of Release Flow line	Volume of Release 75 bbls	Volume Recovered 0 bbls
Source of Release Oil and Water	Date and Hour of Occurrence 9/5/14	Date and Hour of Discovery 9/5/14 10:30 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD - Lara, BLM - Jim Amos	
By Whom?	Date and Hour 9/5/14 4:30pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A flow line failure occurred 250' south of the well pad. Legacy immediately repaired the flow line.

Describe Area Affected and Cleanup Action Taken.*
Approximately 75 barrels of fluid were released from the flow line with no fluids recovered. The fluids from the release migrated into a narrow washout approximately 1,000'. The impacted area will be sampled to assess and delineate the spill area. Once assessed, a remediation work plan will be presented to the NMOCD/BLM for approval prior to any significant work.

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

Signature: Freddie Gibbs	OIL CONSERVATION DIVISION Approved by District Supervisor:	
Printed Name: Freddie Gibbs		
Title: Production Superintendent	Approval Date:	Expiration Date:
E-mail Address: fgibbs@legacylp.com	Conditions of Approval:	Attached ☐
Date: 9/8/2014 Phone: (432) 221-6369		

* Attach Additional Sheets If Necessary

Appendix B

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

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 03075	L	LE	3	3	3	34	14S	31E	610436	3657805*	350		
L 03204	L	LE		3	2	34	14S	31E	611333	3652772	290	260	30
L 03451	L	LE		1	3	24	14S	31E	613714	3661572*	336	255	81
L 03451 S	L	LE		2	3	24	14S	31E	614116	3661578*	340	260	80
L 03552 POD1	L	LE				12	14S	31E	614285	3664991*	60	26	34
L 03552 POD2	L	LE	1	1	1	12	14S	31E	613568	3665693*	340		
L 03555	L	LE	4	4	4	13	14S	31E	615004	3662695*	322		
L 03555 POD2	L	LE	4	4	3	13	14S	31E	614201	3662684*			
L 03555 POD3	L	LE	1	1	1	13	14S	31E	613586	3664085*			
L 03583	L	LE		2	4	23	14S	31E	613312	3661566*	292	200	92
L 03583 S	L	LE	2	4	2	23	14S	31E	613406	3662068*	301	275	26
L 03583 S2	L	LE		2	4	23	14S	31E	613312	3661566*	340	258	82
L 03615	L	UN		1	4	25	14S	31E	614536	3659974*	350	255	95
L 04032	L	CH	4	1	2	36	14S	31E	614645	3659069*	343	250	93
L 10279	L	CH	2	2	2	12	14S	31E	614973	3665710*	250		
L 10283	L	CH	4	4	4	12	14S	31E	614986	3664304*	240		
L 10284	L	CH	4	4	4	12	14S	31E	614986	3664304*	240		
RA 09984		CH	4	2	2	28	14S	31E	610201	3660615*	350		

Average Depth to Water: **226 feet**

Minimum Depth: **26 feet**

Maximum Depth: **275 feet**

Record Count: 18

PLSS Search:

Township: 14S **Range:** 31E

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

Appendix C

Summary Report

Ike Tavarez
Tetra Tech
1901 N. Big Spring St.
Midland, TX 79705

Report Date: September 24, 2014

Work Order: 14091212

Project Location: Chaves Co, NM
Project Name: Legacy/Drickey Queen Sand Unit #808
Project Number: 112MC07209

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
374516	AH-1 0-1'	soil	2014-09-10	00:00	2014-09-11
374517	AH-1 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374518	AH-1 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374519	AH-1 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374520	AH-1 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374521	AH-2 0-1'	soil	2014-09-10	00:00	2014-09-11
374522	AH-2 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374523	AH-2 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374524	AH-2 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374525	AH-3 0-1'	soil	2014-09-10	00:00	2014-09-11
374526	AH-3 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374527	AH-3 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374528	AH-3 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374529	AH-3 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374530	AH-3 5-5.5'	soil	2014-09-10	00:00	2014-09-11
374531	AH-3 6-6.5'	soil	2014-09-10	00:00	2014-09-11
374532	AH-3 7-7.5'	soil	2014-09-10	00:00	2014-09-11
374533	AH-3 8-8.5'	soil	2014-09-10	00:00	2014-09-11
374534	AH-4 0-1'	soil	2014-09-10	00:00	2014-09-11
374535	AH-4 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374536	AH-4 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374537	AH-4 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374538	AH-4 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374539	AH-4 6-6.5'	soil	2014-09-10	00:00	2014-09-11
374540	AH-5 0-1'	soil	2014-09-10	00:00	2014-09-11
374541	AH-5 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374542	AH-5 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374543	AH-5 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374544	AH-5 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374545	AH-5 5-5.5'	soil	2014-09-10	00:00	2014-09-11

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
374546	AH-6 0-1'	soil	2014-09-10	00:00	2014-09-11
374547	AH-6 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374548	AH-6 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374549	AH-6 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374550	AH-6 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374551	AH-6 5-5.5'	soil	2014-09-10	00:00	2014-09-11
374552	AH-6 7-7.5'	soil	2014-09-10	00:00	2014-09-11
374553	AH-7 0-1'	soil	2014-09-10	00:00	2014-09-11
374554	AH-7 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374555	AH-7 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374556	AH-7 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374557	AH-7 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374558	AH-8 0-1'	soil	2014-09-10	00:00	2014-09-11
374559	AH-8 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374560	AH-8 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374561	AH-9 0-1'	soil	2014-09-10	00:00	2014-09-11
374562	AH-9 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374563	AH-9 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374564	AH-10 0-1'	soil	2014-09-10	00:00	2014-09-11
374565	AH-10 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374566	AH-11 0-1'	soil	2014-09-10	00:00	2014-09-11
374567	AH-11 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374568	AH-12 0-1'	soil	2014-09-10	00:00	2014-09-11
374569	AH-12 1-1.5'	soil	2014-09-10	00:00	2014-09-11

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
374516 - AH-1 0-1'					**9470**	**432**
374517 - AH-1 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
374521 - AH-2 0-1'					**6300**	**342**
374522 - AH-2 1-1.5'	<0.0200	<0.0200	**0.152**	**0.419**	**1250**	**93.3**
374525 - AH-3 0-1'					<50.0	<4.00
374526 - AH-3 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
374534 - AH-4 0-1'					**9990**	<80.0 [1]
374535 - AH-4 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
374540 - AH-5 0-1'					**14300**	<80.0 [2]
374541 - AH-5 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
374546 - AH-6 0-1'					**8330**	**134**
374547 - AH-6 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
374553 - AH-7 0-1'					**10600**	**135**
374554 - AH-7 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	**68.1**	<4.00
374558 - AH-8 0-1'					**4990** Q-	**62.2**
374559 - AH-8 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Q-	<4.00
374561 - AH-9 0-1'					**9180** Q-	**281**
374562 - AH-9 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Q-	<4.00
374564 - AH-10 0-1'					**34400** Q-	**580**

continued ...

[1]Dilution due to hydrocarbons.
[2]Dilution due to hydrocarbons.

... continued

Sample - Field Code	BTEX Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
374565 - AH-10 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	**92.4** Qs	<4.00
374566 - AH-11 0-1'					**21400** Qs	**266**
374567 - AH-11 1-1.5'	<0.0200	<0.0200	<0.0200	**0.0234**	<50.0 Qs	<4.00
374568 - AH-12 0-1'					**11000** Qs	**142**
374569 - AH-12 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Qs	<4.00

Sample: 374516 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**13600**	mg/Kg	4

Sample: 374517 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**20300**	mg/Kg	4

Sample: 374518 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**19300**	mg/Kg	4

Sample: 374519 - AH-1 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**17400**	mg/Kg	4

Sample: 374520 - AH-1 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**24600**	mg/Kg	4

Sample: 374521 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**16000**	mg/Kg	4

Sample: 374522 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**20400**	mg/Kg	4

Sample: 374523 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**19800**	mg/Kg	4

Sample: 374524 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**17600**	mg/Kg	4

Sample: 374525 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride	Q*	**1990**	mg/Kg	4

Sample: 374526 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**6480**	mg/Kg	4

Sample: 374527 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**8750**	mg/Kg	4

Sample: 374528 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**10200**	mg/Kg	4

Sample: 374529 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**20200**	mg/Kg	4

Sample: 374530 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**21200**	mg/Kg	4

Sample: 374531 - AH-3 6-6.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**30000**	mg/Kg	4

Sample: 374532 - AH-3 7-7.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**22200**	mg/Kg	4

Sample: 374533 - AH-3 8-8.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**23200**	mg/Kg	4

Sample: 374534 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride	Q*	**11600**	mg/Kg	4

Sample: 374535 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**18400**	mg/Kg	4

Sample: 374536 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**20300**	mg/Kg	4

Sample: 374537 - AH-4 3-3.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**18400**	mg/Kg	4

Sample: 374538 - AH-4 4-4.5'

Param	Flag	Result	Units	RL
Chloride	Q-	**25100**	mg/Kg	4

Sample: 374539 - AH-4 6-6.5'

Param	Flag	Result	Units	RL
Chloride	Q-	**10400**	mg/Kg	4

Sample: 374540 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride	Q-	**5910**	mg/Kg	4

Sample: 374541 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride	Q-	**15000**	mg/Kg	4

Sample: 374542 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride	Q-	**25000**	mg/Kg	4

Sample: 374543 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride	Q-	**23100**	mg/Kg	4

Sample: 374544 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride	Q-	**26000**	mg/Kg	4

Sample: 374545 - AH-5 5-5.5'

Param	Flag	Result	Units	RL
Chloride	Q-	**17300**	mg/Kg	4

Sample: 374546 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride	Q*	**10400**	mg/Kg	4

Sample: 374547 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**14900**	mg/Kg	4

Sample: 374548 - AH-6 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**12400**	mg/Kg	4

Sample: 374549 - AH-6 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**13900**	mg/Kg	4

Sample: 374550 - AH-6 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**13400**	mg/Kg	4

Sample: 374551 - AH-6 5-5.5'

Param	Flag	Result	Units	RL
Chloride	Q*	**26000**	mg/Kg	4

Sample: 374552 - AH-6 7-7.5'

Param	Flag	Result	Units	RL
Chloride		**14800**	mg/Kg	4

Sample: 374553 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		**18800**	mg/Kg	4

Sample: 374554 - AH-7 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**15800**	mg/Kg	4

Sample: 374555 - AH-7 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**9160**	mg/Kg	4

Sample: 374556 - AH-7 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**752**	mg/Kg	4

Sample: 374557 - AH-7 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**59.0**	mg/Kg	4

Sample: 374558 - AH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		**2720**	mg/Kg	4

Sample: 374559 - AH-8 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**50.0**	mg/Kg	4

Sample: 374560 - AH-8 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 374561 - AH-9 0-1'

Param	Flag	Result	Units	RL
Chloride		**3270**	mg/Kg	4

Sample: 374562 - AH-9 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 374563 - AH-9 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**99.0**	mg/Kg	4

Sample: 374564 - AH-10 0-1'

Param	Flag	Result	Units	RL
Chloride		**644**	mg/Kg	4

Sample: 374565 - AH-10 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**198**	mg/Kg	4

Sample: 374566 - AH-11 0-1'

Param	Flag	Result	Units	RL
Chloride		**792**	mg/Kg	4

Sample: 374567 - AH-11 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**396**	mg/Kg	4

Sample: 374568 - AH-12 0-1'

Param	Flag	Result	Units	RL
Chloride		**7340**	mg/Kg	4

Sample: 374569 - AH-12 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**338**	mg/Kg	4

Summary Report

Ike Tavarez
Tetra Tech
1901 N. Big Spring St.
Midland, TX 79705

Report Date: November 3, 2014

Work Order: 14102936

Project Location: Chaves Co, NM
Project Name: Legacy/Drickey Queen Sand Unit #808
Project Number: 112MC07209

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
378164	BH-1 4-5'	soil	2014-10-27	00:00	2014-10-29
378165	BH-1 6-7'	soil	2014-10-27	00:00	2014-10-29
378166	BH-1 9-10'	soil	2014-10-27	00:00	2014-10-29
378167	BH-1 14-15'	soil	2014-10-27	00:00	2014-10-29
378168	BH-1 19-20'	soil	2014-10-27	00:00	2014-10-29
378169	BH-1 24-25'	soil	2014-10-27	00:00	2014-10-29
378170	BH-1 29-30'	soil	2014-10-27	00:00	2014-10-29
378171	BH-1 39-40'	soil	2014-10-27	00:00	2014-10-29
378172	BH-1 49-50'	soil	2014-10-27	00:00	2014-10-29
378173	BH-1 54-55'	soil	2014-10-27	00:00	2014-10-29
378174	BH-1 59-60'	soil	2014-10-27	00:00	2014-10-29
378175	BH-2 4-5'	soil	2014-10-27	00:00	2014-10-29
378176	BH-2 6-7'	soil	2014-10-27	00:00	2014-10-29
378177	BH-2 9-10'	soil	2014-10-27	00:00	2014-10-29
378178	BH-2 14-15'	soil	2014-10-27	00:00	2014-10-29
378179	BH-2 19-20'	soil	2014-10-27	00:00	2014-10-29
378180	BH-2 24-25'	soil	2014-10-27	00:00	2014-10-29
378181	BH-2 29-30'	soil	2014-10-27	00:00	2014-10-29
378182	BH-2 39-40'	soil	2014-10-27	00:00	2014-10-29
378183	BH-2 49-50'	soil	2014-10-27	00:00	2014-10-29
378184	BH-2 59-60'	soil	2014-10-27	00:00	2014-10-29
378185	BH-3 9-10'	soil	2014-10-27	00:00	2014-10-29
378186	BH-3 14-15'	soil	2014-10-27	00:00	2014-10-29
378187	BH-3 19-20'	soil	2014-10-27	00:00	2014-10-29
378188	BH-3 24-25'	soil	2014-10-27	00:00	2014-10-29
378189	BH-3 29-30'	soil	2014-10-27	00:00	2014-10-29
378190	BH-3 39-40'	soil	2014-10-27	00:00	2014-10-29
378191	BH-3 49-50'	soil	2014-10-27	00:00	2014-10-29
378192	BH-3 59-60'	soil	2014-10-27	00:00	2014-10-29
378193	BH-4 9-10'	soil	2014-10-28	00:00	2014-10-29

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
378194	BH-4 14-15'	soil	2014-10-28	00:00	2014-10-29
378195	BH-4 19-20'	soil	2014-10-28	00:00	2014-10-29
378196	BH-4 24-25'	soil	2014-10-28	00:00	2014-10-29
378197	BH-4 29-30'	soil	2014-10-28	00:00	2014-10-29
378198	BH-4 39-40'	soil	2014-10-28	00:00	2014-10-29
378199	BH-4 49-50'	soil	2014-10-28	00:00	2014-10-29
378200	BH-4 59-60'	soil	2014-10-28	00:00	2014-10-29
378201	BH-4 69-70'	soil	2014-10-28	00:00	2014-10-29
378202	BH-5 6-7'	soil	2014-10-28	00:00	2014-10-29
378203	BH-5 9-10'	soil	2014-10-28	00:00	2014-10-29
378204	BH-5 14-15'	soil	2014-10-28	00:00	2014-10-29
378205	BH-5 19-20'	soil	2014-10-28	00:00	2014-10-29
378206	BH-5 24-25'	soil	2014-10-28	00:00	2014-10-29
378207	BH-5 29-30'	soil	2014-10-28	00:00	2014-10-29
378208	BH-5 39-40'	soil	2014-10-28	00:00	2014-10-29
378209	BH-5 49-50'	soil	2014-10-28	00:00	2014-10-29
378210	BH-5 59-60'	soil	2014-10-28	00:00	2014-10-29
378211	BH-6 9-10'	soil	2014-10-28	00:00	2014-10-29
378212	BH-6 14-15'	soil	2014-10-28	00:00	2014-10-29
378213	BH-6 19-20'	soil	2014-10-28	00:00	2014-10-29
378214	BH-6 24-25'	soil	2014-10-28	00:00	2014-10-29
378215	BH-6 29-30'	soil	2014-10-28	00:00	2014-10-29
378216	BH-6 39-40'	soil	2014-10-28	00:00	2014-10-29
378217	BH-6 49-50'	soil	2014-10-28	00:00	2014-10-29
378218	BH-6 59-60'	soil	2014-10-28	00:00	2014-10-29

Sample: 378164 - BH-1 4-5'

Param	Flag	Result	Units	RL
Chloride		**11500**	mg/Kg	4

Sample: 378165 - BH-1 6-7'

Param	Flag	Result	Units	RL
Chloride		**19800**	mg/Kg	4

Sample: 378166 - BH-1 9-10'

Param	Flag	Result	Units	RL
Chloride		**22200**	mg/Kg	4

Sample: 378167 - BH-1 14-15'

Param	Flag	Result	Units	RL
Chloride		**11100**	mg/Kg	4

Sample: 378168 - BH-1 19-20'

Param	Flag	Result	Units	RL
Chloride		**10100**	mg/Kg	4

Sample: 378169 - BH-1 24-25'

Param	Flag	Result	Units	RL
Chloride		**11600**	mg/Kg	4

Sample: 378170 - BH-1 29-30'

Param	Flag	Result	Units	RL
Chloride		**13000**	mg/Kg	4

Sample: 378171 - BH-1 39-40'

Param	Flag	Result	Units	RL
Chloride		**5310**	mg/Kg	4

Sample: 378172 - BH-1 49-50'

Param	Flag	Result	Units	RL
Chloride		**1930**	mg/Kg	4

Sample: 378173 - BH-1 54-55'

Param	Flag	Result	Units	RL
Chloride		**676**	mg/Kg	4

Sample: 378174 - BH-1 59-60'

Param	Flag	Result	Units	RL
Chloride		**1150**	mg/Kg	4

Sample: 378175 - BH-2 4-5'

Param	Flag	Result	Units	RL
Chloride		**9520**	mg/Kg	4

Sample: 378176 - BH-2 6-7'

Param	Flag	Result	Units	RL
Chloride		**8040**	mg/Kg	4

Sample: 378177 - BH-2 9-10'

Param	Flag	Result	Units	RL
Chloride		**13900**	mg/Kg	4

Sample: 378178 - BH-2 14-15'

Param	Flag	Result	Units	RL
Chloride		**10500**	mg/Kg	4

Sample: 378179 - BH-2 19-20'

Param	Flag	Result	Units	RL
Chloride		**8610**	mg/Kg	4

Sample: 378180 - BH-2 24-25'

Param	Flag	Result	Units	RL
Chloride		**6220**	mg/Kg	4

Sample: 378181 - BH-2 29-30'

Param	Flag	Result	Units	RL
Chloride		**9090**	mg/Kg	4

Sample: 378182 - BH-2 39-40'

Param	Flag	Result	Units	RL
Chloride		**2870**	mg/Kg	4

Sample: 378183 - BH-2 49-50'

Param	Flag	Result	Units	RL
Chloride		**622**	mg/Kg	4

Sample: 378184 - BH-2 59-60'

Param	Flag	Result	Units	RL
Chloride		**680**	mg/Kg	4

Sample: 378185 - BH-3 9-10'

Param	Flag	Result	Units	RL
Chloride		**4660**	mg/Kg	4

Sample: 378186 - BH-3 14-15'

Param	Flag	Result	Units	RL
Chloride		**4520**	mg/Kg	4

Sample: 378187 - BH-3 19-20'

Param	Flag	Result	Units	RL
Chloride		**2430**	mg/Kg	4

Sample: 378188 - BH-3 24-25'

Param	Flag	Result	Units	RL
Chloride		**971**	mg/Kg	4

Sample: 378189 - BH-3 29-30'

Param	Flag	Result	Units	RL
Chloride		**15500**	mg/Kg	4

Sample: 378190 - BH-3 39-40'

Param	Flag	Result	Units	RL
Chloride		**2430**	mg/Kg	4

Sample: 378191 - BH-3 49-50'

Param	Flag	Result	Units	RL
Chloride		**1460**	mg/Kg	4

Sample: 378192 - BH-3 59-60'

Param	Flag	Result	Units	RL
Chloride		**1460**	mg/Kg	4

Sample: 378193 - BH-4 9-10'

Param	Flag	Result	Units	RL
Chloride		**13100**	mg/Kg	4

Sample: 378194 - BH-4 14-15'

Param	Flag	Result	Units	RL
Chloride	Q*	**14400**	mg/Kg	4

Sample: 378195 - BH-4 19-20'

Param	Flag	Result	Units	RL
Chloride	Q*	**13900**	mg/Kg	4

Sample: 378196 - BH-4 24-25'

Param	Flag	Result	Units	RL
Chloride	Q*	**6250**	mg/Kg	4

Sample: 378197 - BH-4 29-30'

Param	Flag	Result	Units	RL
Chloride	Q*	**3650**	mg/Kg	4

Sample: 378198 - BH-4 39-40'

Param	Flag	Result	Units	RL
Chloride	Q*	**769**	mg/Kg	4

Sample: 378199 - BH-4 49-50'

Param	Flag	Result	Units	RL
Chloride	Q*	**721**	mg/Kg	4

Sample: 378200 - BH-4 59-60'

Param	Flag	Result	Units	RL
Chloride	Q*	**769**	mg/Kg	4

Sample: 378201 - BH-4 69-70'

Param	Flag	Result	Units	RL
Chloride	Q*	**577**	mg/Kg	4

Sample: 378202 - BH-5 6-7'

Param	Flag	Result	Units	RL
Chloride	Q*	**19700**	mg/Kg	4

Sample: 378203 - BH-5 9-10'

Param	Flag	Result	Units	RL
Chloride	Q*	**14900**	mg/Kg	4

Sample: 378204 - BH-5 14-15'

Param	Flag	Result	Units	RL
Chloride		**11900**	mg/Kg	4

Sample: 378205 - BH-5 19-20'

Param	Flag	Result	Units	RL
Chloride		**11900**	mg/Kg	4

Sample: 378206 - BH-5 24-25'

Param	Flag	Result	Units	RL
Chloride		**3330**	mg/Kg	4

Sample: 378207 - BH-5 29-30'

Param	Flag	Result	Units	RL
Chloride		**5240**	mg/Kg	4

Sample: 378208 - BH-5 39-40'

Param	Flag	Result	Units	RL
Chloride		**4380**	mg/Kg	4

Sample: 378209 - BH-5 49-50'

Param	Flag	Result	Units	RL
Chloride		**2380**	mg/Kg	4

Sample: 378210 - BH-5 59-60'

Param	Flag	Result	Units	RL
Chloride		**1900**	mg/Kg	4

Sample: 378211 - BH-6 9-10'

Param	Flag	Result	Units	RL
Chloride		**18100**	mg/Kg	4

Sample: 378212 - BH-6 14-15'

Param	Flag	Result	Units	RL
Chloride		**8090**	mg/Kg	4

Sample: 378213 - BH-6 19-20'

Param	Flag	Result	Units	RL
Chloride		**333**	mg/Kg	4

Sample: 378214 - BH-6 24-25'

Param	Flag	Result	Units	RL
Chloride		**962**	mg/Kg	4

Sample: 378215 - BH-6 29-30'

Param	Flag	Result	Units	RL
Chloride		**3360**	mg/Kg	4

Sample: 378216 - BH-6 39-40'

Param	Flag	Result	Units	RL
Chloride		**3360**	mg/Kg	4

Sample: 378217 - BH-6 49-50'

Param	Flag	Result	Units	RL
Chloride		**337**	mg/Kg	4

Sample: 378218 - BH-6 59-60'

Param	Flag	Result	Units	RL
Chloride		**385**	mg/Kg	4

TRACEANALYSIS, INC.

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(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ike Tavarez
Tetra Tech
1901 N. Big Spring St.
Midland, TX, 79705

Report Date: November 3, 2014

Work Order: 14102936

Project Location: Chaves Co, NM
Project Name: Legacy/Drickey Queen Sand Unit #808
Project Number: 112MC07209

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
378164	BH-1 4-5'	soil	2014-10-27	00:00	2014-10-29
378165	BH-1 6-7'	soil	2014-10-27	00:00	2014-10-29
378166	BH-1 9-10'	soil	2014-10-27	00:00	2014-10-29
378167	BH-1 14-15'	soil	2014-10-27	00:00	2014-10-29
378168	BH-1 19-20'	soil	2014-10-27	00:00	2014-10-29
378169	BH-1 24-25'	soil	2014-10-27	00:00	2014-10-29
378170	BH-1 29-30'	soil	2014-10-27	00:00	2014-10-29
378171	BH-1 39-40'	soil	2014-10-27	00:00	2014-10-29
378172	BH-1 49-50'	soil	2014-10-27	00:00	2014-10-29
378173	BH-1 54-55'	soil	2014-10-27	00:00	2014-10-29
378174	BH-1 59-60'	soil	2014-10-27	00:00	2014-10-29
378175	BH-2 4-5'	soil	2014-10-27	00:00	2014-10-29
378176	BH-2 6-7'	soil	2014-10-27	00:00	2014-10-29
378177	BH-2 9-10'	soil	2014-10-27	00:00	2014-10-29
378178	BH-2 14-15'	soil	2014-10-27	00:00	2014-10-29
378179	BH-2 19-20'	soil	2014-10-27	00:00	2014-10-29
378180	BH-2 24-25'	soil	2014-10-27	00:00	2014-10-29
378181	BH-2 29-30'	soil	2014-10-27	00:00	2014-10-29

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
378182	BH-2 39-40'	soil	2014-10-27	00:00	2014-10-29
378183	BH-2 49-50'	soil	2014-10-27	00:00	2014-10-29
378184	BH-2 59-60'	soil	2014-10-27	00:00	2014-10-29
378185	BH-3 9-10'	soil	2014-10-27	00:00	2014-10-29
378186	BH-3 14-15'	soil	2014-10-27	00:00	2014-10-29
378187	BH-3 19-20'	soil	2014-10-27	00:00	2014-10-29
378188	BH-3 24-25'	soil	2014-10-27	00:00	2014-10-29
378189	BH-3 29-30'	soil	2014-10-27	00:00	2014-10-29
378190	BH-3 39-40'	soil	2014-10-27	00:00	2014-10-29
378191	BH-3 49-50'	soil	2014-10-27	00:00	2014-10-29
378192	BH-3 59-60'	soil	2014-10-27	00:00	2014-10-29
378193	BH-4 9-10'	soil	2014-10-28	00:00	2014-10-29
378194	BH-4 14-15'	soil	2014-10-28	00:00	2014-10-29
378195	BH-4 19-20'	soil	2014-10-28	00:00	2014-10-29
378196	BH-4 24-25'	soil	2014-10-28	00:00	2014-10-29
378197	BH-4 29-30'	soil	2014-10-28	00:00	2014-10-29
378198	BH-4 39-40'	soil	2014-10-28	00:00	2014-10-29
378199	BH-4 49-50'	soil	2014-10-28	00:00	2014-10-29
378200	BH-4 59-60'	soil	2014-10-28	00:00	2014-10-29
378201	BH-4 69-70'	soil	2014-10-28	00:00	2014-10-29
378202	BH-5 6-7'	soil	2014-10-28	00:00	2014-10-29
378203	BH-5 9-10'	soil	2014-10-28	00:00	2014-10-29
378204	BH-5 14-15'	soil	2014-10-28	00:00	2014-10-29
378205	BH-5 19-20'	soil	2014-10-28	00:00	2014-10-29
378206	BH-5 24-25'	soil	2014-10-28	00:00	2014-10-29
378207	BH-5 29-30'	soil	2014-10-28	00:00	2014-10-29
378208	BH-5 39-40'	soil	2014-10-28	00:00	2014-10-29
378209	BH-5 49-50'	soil	2014-10-28	00:00	2014-10-29
378210	BH-5 59-60'	soil	2014-10-28	00:00	2014-10-29
378211	BH-6 9-10'	soil	2014-10-28	00:00	2014-10-29
378212	BH-6 14-15'	soil	2014-10-28	00:00	2014-10-29
378213	BH-6 19-20'	soil	2014-10-28	00:00	2014-10-29
378214	BH-6 24-25'	soil	2014-10-28	00:00	2014-10-29
378215	BH-6 29-30'	soil	2014-10-28	00:00	2014-10-29
378216	BH-6 39-40'	soil	2014-10-28	00:00	2014-10-29
378217	BH-6 49-50'	soil	2014-10-28	00:00	2014-10-29
378218	BH-6 59-60'	soil	2014-10-28	00:00	2014-10-29

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative

Samples for project Legacy/Drickey Queen Sand Unit #808 were received by TraceAnalysis, Inc. on 2014-10-29 and assigned to work order 14102936. Samples for work order 14102936 were received intact at a temperature of 4.8 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	98804	2014-11-01 at 16:00	116868	2014-11-02 at 12:13
Chloride (Titration)	SM 4500-Cl B	98805	2014-11-01 at 16:40	116869	2014-11-02 at 13:13
Chloride (Titration)	SM 4500-Cl B	98806	2014-11-01 at 17:55	116870	2014-11-02 at 14:05
Chloride (Titration)	SM 4500-Cl B	98807	2014-11-01 at 18:03	116871	2014-11-02 at 14:55
Chloride (Titration)	SM 4500-Cl B	98812	2014-11-01 at 18:46	116872	2014-11-02 at 19:54
Chloride (Titration)	SM 4500-Cl B	98813	2014-11-01 at 19:11	116873	2014-11-02 at 20:47

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 14102936 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 378164 - BH-1 4-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116868	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98804	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**11500**	mg/Kg	5	4.00

Sample: 378165 - BH-1 6-7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116868	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98804	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**19800**	mg/Kg	50	4.00

Sample: 378166 - BH-1 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116868	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98804	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**22200**	mg/Kg	50	4.00

Sample: 378167 - BH-1 14-15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116868	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98804	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**11100**	mg/Kg	50	4.00

Sample: 378168 - BH-1 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116868	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98804	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**10100**	mg/Kg	50	4.00

Sample: 378169 - BH-1 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116868	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98804	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**11600**	mg/Kg	50	4.00

Sample: 378170 - BH-1 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116868	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98804	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**13000**	mg/Kg	50	4.00

Sample: 378171 - BH-1 39-40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116868	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98804	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**5310**	mg/Kg	50	4.00

Sample: 378172 - BH-1 49-50'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116868	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98804	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1930**	mg/Kg	50	4.00

Sample: 378173 - BH-1 54-55'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116868	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98804	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**676**	mg/Kg	5	4.00

Sample: 378174 - BH-1 59-60'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116869	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98805	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1150**	mg/Kg	5	4.00

Sample: 378175 - BH-2 4-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116869	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98805	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**9520**	mg/Kg	5	4.00

Sample: 378176 - BH-2 6-7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116869	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98805	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**8040**	mg/Kg	5	4.00

Sample: 378177 - BH-2 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116869	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98805	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**13900**	mg/Kg	50	4.00

Sample: 378178 - BH-2 14-15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116869	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98805	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**10500**	mg/Kg	50	4.00

Sample: 378179 - BH-2 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116869	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98805	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**8610**	mg/Kg	50	4.00

Sample: 378180 - BH-2 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116869	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98805	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**6220**	mg/Kg	50	4.00

Sample: 378181 - BH-2 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116869	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98805	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**9090**	mg/Kg	50	4.00

Sample: 378182 - BH-2 39-40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116869	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98805	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2870**	mg/Kg	50	4.00

Sample: 378183 - BH-2 49-50'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116869	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98805	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**622**	mg/Kg	5	4.00

Sample: 378184 - BH-2 59-60'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116870	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98806	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**680**	mg/Kg	5	4.00

Sample: 378185 - BH-3 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116870	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98806	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4660**	mg/Kg	5	4.00

Sample: 378186 - BH-3 14-15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116870	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98806	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4520**	mg/Kg	5	4.00

Sample: 378187 - BH-3 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116870	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98806	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2430**	mg/Kg	50	4.00

Sample: 378188 - BH-3 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116870	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98806	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**971**	mg/Kg	50	4.00

Sample: 378189 - BH-3 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116870	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98806	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**15500**	mg/Kg	50	4.00

Sample: 378190 - BH-3 39-40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116870	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98806	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2430**	mg/Kg	50	4.00

Sample: 378191 - BH-3 49-50'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116870	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98806	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1460**	mg/Kg	50	4.00

Sample: 378192 - BH-3 59-60'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116870	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98806	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1460**	mg/Kg	50	4.00

Sample: 378193 - BH-4 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116870	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98806	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**13100**	mg/Kg	50	4.00

Sample: 378194 - BH-4 14-15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116871	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98807	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q-		**14400**	mg/Kg	50	4.00

Sample: 378195 - BH-4 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116871	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98807	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Q-		**13900**	mg/Kg	50	4.00

Sample: 378196 - BH-4 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116871	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98807	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Q-		**6250**	mg/Kg	50	4.00

Sample: 378197 - BH-4 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116871	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98807	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Q-		**3650**	mg/Kg	10	4.00

Sample: 378198 - BH-4 39-40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116871	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98807	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q+		**769**	mg/Kg	10	4.00

Sample: 378199 - BH-4 49-50'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116871	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98807	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q+		**721**	mg/Kg	5	4.00

Sample: 378200 - BH-4 59-60'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116871	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98807	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q+		**769**	mg/Kg	5	4.00

Sample: 378201 - BH-4 69-70'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116871	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98807	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q+		**577**	mg/Kg	5	4.00

Sample: 378202 - BH-5 6-7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116871	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98807	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride	Q+		**19700**		mg/Kg	50	4.00

Sample: 378203 - BH-5 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116871	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98807	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride	Q+		**14900**		mg/Kg	50	4.00

Sample: 378204 - BH-5 14-15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116872	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98812	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**11900**		mg/Kg	50	4.00

Sample: 378205 - BH-5 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116872	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98812	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**11900**	mg/Kg	50	4.00

Sample: 378206 - BH-5 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116872	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98812	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3330**	mg/Kg	50	4.00

Sample: 378207 - BH-5 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116872	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98812	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**5240**	mg/Kg	50	4.00

Sample: 378208 - BH-5 39-40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116872	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98812	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4380**	mg/Kg	5	4.00

Sample: 378209 - BH-5 49-50'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116872	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98812	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2380**	mg/Kg	50	4.00

Sample: 378210 - BH-5 59-60'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116872	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98812	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1900**	mg/Kg	50	4.00

Sample: 378211 - BH-6 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116872	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98812	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**18100**	mg/Kg	50	4.00

Sample: 378212 - BH-6 14-15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116872	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98812	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**8090**	mg/Kg	50	4.00

Sample: 378213 - BH-6 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116872	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98812	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**333**	mg/Kg	5	4.00

Sample: 378214 - BH-6 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116873	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98813	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**962**	mg/Kg	50	4.00

Sample: 378215 - BH-6 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116873	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98813	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3360**	mg/Kg	50	4.00

Sample: 378216 - BH-6 39-40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116873	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98813	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**3360**	mg/Kg	50	4.00

Sample: 378217 - BH-6 49-50'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116873	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98813	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**337**	mg/Kg	5	4.00

Sample: 378218 - BH-6 59-60'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	116873	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98813	Sample Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**385**	mg/Kg	5	4.00

Method Blanks

Method Blank (1) QC Batch: 116868

QC Batch: 116868 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98804 | QC Preparation: 2014-11-01 | Prepared By: MM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 116869

QC Batch: 116869 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98805 | QC Preparation: 2014-11-01 | Prepared By: MM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 116870

QC Batch: 116870 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98806 | QC Preparation: 2014-11-01 | Prepared By: MM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 116871

QC Batch: 116871 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98807 | QC Preparation: 2014-11-01 | Prepared By: MM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 116872

QC Batch:	116872	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98812	QC Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 116873

QC Batch:	116873	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98813	QC Preparation:	2014-11-01	Prepared By:	MM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 116868 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98804 | QC Preparation: 2014-11-01 | Prepared By: MM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2750	mg/Kg	5	2500	<19.2	110	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2560	mg/Kg	5	2500	<19.2	102	85 - 115	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 116869 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98805 | QC Preparation: 2014-11-01 | Prepared By: MM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2540	mg/Kg	5	2500	<19.2	102	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2630	mg/Kg	5	2500	<19.2	105	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 116870 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98806 | QC Preparation: 2014-11-01 | Prepared By: MM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2720	mg/Kg	5	2500	<19.2	109	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2670	mg/Kg	5	2500	<19.2	107	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 116871 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98807 | QC Preparation: 2014-11-01 | Prepared By: MM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2740	mg/Kg	5	2500	<19.2	110	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2540	mg/Kg	5	2500	<19.2	102	85 - 115	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 116872 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98812 | QC Preparation: 2014-11-01 | Prepared By: MM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2710	mg/Kg	5	2500	<19.2	108	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2620	mg/Kg	5	2500	<19.2	105	85 - 115	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 116873 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98813 | QC Preparation: 2014-11-01 | Prepared By: MM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2640	mg/Kg	5	2500	<19.2	106	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2450	mg/Kg	5	2500	<19.2	98	85 - 115	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 378173

QC Batch: 116868 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98804 | QC Preparation: 2014-11-01 | Prepared By: MM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3530	mg/Kg	5	2500	676	114	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			3380	mg/Kg	5	2500	676	108	78.9 - 121	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 378183

QC Batch: 116869 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98805 | QC Preparation: 2014-11-01 | Prepared By: MM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3010	mg/Kg	5	2500	622	96	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			3160	mg/Kg	5	2500	622	102	78.9 - 121	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 378193

QC Batch: 116870 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98806 | QC Preparation: 2014-11-01 | Prepared By: MM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			15500	mg/Kg	50	2500	13100	96	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			16000	mg/Kg	50	2500	13100	116	78.9 - 121	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 378203

QC Batch: 116871 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98807 | QC Preparation: 2014-11-01 | Prepared By: MM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Q*	Q*	19700	mg/Kg	50	2500	14900	192	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Q*	Q*	19700	mg/Kg	50	2500	14900	192	78.9 - 121	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 378213

QC Batch: 116872 | Date Analyzed: 2014-11-02 | Analyzed By: MM
Prep Batch: 98812 | QC Preparation: 2014-11-01 | Prepared By: MM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2900	mg/Kg	5	2500	333	103	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2900	mg/Kg	5	2500	333	103	78.9 - 121	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 378218

QC Batch:	116873	Date Analyzed:	2014-11-02	Analyzed By:	MM
Prep Batch:	98813	QC Preparation:	2014-11-01	Prepared By:	MM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2500	mg/Kg	5	2500	385	85	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2550	mg/Kg	5	2500	385	87	78.9 - 121	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (ICV-1)

QC Batch: 116868 | Date Analyzed: 2014-11-02 | Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2014-11-02

Standard (CCV-1)

QC Batch: 116868 | Date Analyzed: 2014-11-02 | Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.0	99	85 - 115	2014-11-02

Standard (ICV-1)

QC Batch: 116869 | Date Analyzed: 2014-11-02 | Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-11-02

Standard (CCV-1)

QC Batch: 116869 | Date Analyzed: 2014-11-02 | Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-11-02

Standard (ICV-1)

QC Batch: 116870 Date Analyzed: 2014-11-02 Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-11-02

Standard (CCV-1)

QC Batch: 116870 Date Analyzed: 2014-11-02 Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-11-02

Standard (ICV-1)

QC Batch: 116871 Date Analyzed: 2014-11-02 Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2014-11-02

Standard (CCV-1)

QC Batch: 116871 Date Analyzed: 2014-11-02 Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.0	99	85 - 115	2014-11-02

Standard (ICV-1)

QC Batch: 116872 Date Analyzed: 2014-11-02 Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-11-02

Standard (CCV-1)

QC Batch: 116872 Date Analyzed: 2014-11-02 Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-11-02

Standard (ICV-1)

QC Batch: 116873 Date Analyzed: 2014-11-02 Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2014-11-02

Standard (CCV-1)

QC Batch: 116873 Date Analyzed: 2014-11-02 Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.0	98	85 - 115	2014-11-02

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

14102936

Analysis Request of Chain of Custody Record

PAGE: OF: 10

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Legacy

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC07209

PROJECT NAME: Dickey Queen #808

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION Chaves Co, NM	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
378164	10/27		S		X	BH-1 4-5					X													X				
165						6-7					X													X				
166						9-10					X													X				
167						14-15					X													X				
168						19-20					X													X				
169						24-25					X													X				
170						29-30					X													X				
171						39-40					X													X				
172						49-50					X													X				
173						54-55					X													X				

RELINQUISHED BY: (Signature) Edwin Gonzales	Date: 10/28/14 Time: 1432	RECEIVED BY: (Signature) C.	Date: 10/28/14 Time: 14:32
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) CG — Date: 10/27/14 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

TETRA TECH CONTACT PERSON: — Results by:

RECEIVING LABORATORY: — RECEIVED BY: (Signature)
ADDRESS: — CITY: — STATE: — ZIP:
CONTACT: — PHONE: — DATE: — TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4 C°

REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

5

1410293b

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 6

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: Legacy
SITE MANAGER: Ike Tavarez
PROJECT NO.: 112MC07209
PROJECT NAME: Dockey Queen #808

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION Chaves Co. NM	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
378174	10/27		S		X	BH-1 59-60					X													X				
175						BH-2 4-5					X													X				
176						6-7					X													X				
177						9-10					X													X				
178						14-15					X													X				
179						19-20					X													X				
180						24-25					X													X				
181						29-30					X													X				
182						39-40					X													X				
183	↓		↓		↓	49-50					X													X				

RELINQUISHED BY: (Signature) Chan Gonzales — Date: 10/29/14 Time: 1432
RECEIVED BY: (Signature) — Date: 10/29/14 Time: 14:24
SAMPLED BY: (Print & Initial) CG — Date: 10/27/14 Time:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
TETRA TECH CONTACT PERSON: — Results by:

RECEIVING LABORATORY: — RECEIVED BY: (Signature)
ADDRESS: — RUSH Charges Authorized: Yes No
CITY: STATE: ZIP:
CONTACT: PHONE: DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 4°C — REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

1410 2936

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Legacy

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC07209

PROJECT NAME: Dorcey Queen #808

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C36)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
378 184	10/27		S		X	BH-2 59-60					X													X				
185						BH-3 9-10					X													X				
186						14-15					X													X				
187						19-20					X													X				
188						24-25					X													X				
189						29-30					X													X				
190						39-40					X													X				
191						49-50					X													X				
192						59-60					X													X				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 10/29/14 Time: 1432

RECEIVED BY: (Signature) — Date: Time: 1429

RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: Time:

RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) — Date: 10/27/14 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

RECEIVING LABORATORY: — ADDRESS: — CITY: — STATE: — ZIP: — CONTACT: — PHONE: — RECEIVED BY: (Signature) — DATE: — TIME:

TETRA TECH CONTACT PERSON: — Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.80

REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

14102936

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 6

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Legacy
SITE MANAGER: Ike Tavarez
PROJECT NO.: 112mc07209
PROJECT NAME: Dancing Queen #808

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
378 H3	10/28		S		X	BH-4 9-10					X														X				
194						14-15					X														X				
195						19-20					X														X				
196						24-25					X														X				
197						29-30					X														X				
198						39-40					X														X				
199						49-50					X														X				
200						59-60					X														X				
201						69-70					X														X				
202						BH-5 6-7					X														X				

RELINQUISHED BY: (Signature) Chavez Gonzales	Date: 10/28/14 Time: 1432	RECEIVED BY: (Signature)	Date: 10/29/14 Time: 14:20
SAMPLED BY: (Print & Initial) CG	Date: 10/28/14 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON:	Results by:		
RECEIVING LABORATORY: ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 4.8°	REMARKS:		

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

1410 1936

Analysis Request of Chain of Custody Record

PAGE: 5 OF: 6

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Legacy

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC07209

PROJECT NAME: Dockey Queen #808

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
378 203	10/28		S		X	BH-5 9-10					Y	
204					X	14-15					X	
205						19-20					X	
206						24-25					X	
207						29-30					X	
208						39-40					X	
209						49-50					X	
210						59-60					X	
211						BH-6 9-10					X	
212						14-15					X	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
												X				
												X				
												X				
												X				
												X				
												X				
												X				
												X				
												X				
												X				

RELINQUISHED BY: (Signature) Date: 10/28/14 Time: 1432

RECEIVED BY: (Signature) Date: 10/29/14 Time: 11:24

SAMPLED BY: (Print & Initial) AB Date: 10/28/2014 Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS
HAND DELIVERED UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

TETRA TECH CONTACT PERSON:

Results by:

RECEIVING LABORATORY:
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4 C

REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

1410296

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Legacy

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC07209

PROJECT NAME: Dockey Queen #808

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	ANALYSIS REQUEST (Circle or Specify Method No.)
378-213	10/28		S		X	BH-6 19-20					X		Chloride
214						24-25					X		X
215						29-30					X		X
216						39-40					X		X
217						49-50					X		X
218	↓		↓		↓	59-60					X		X

BTEX 8021B
TPH 8015 MOD. TX1005 (Ext. to C35)
PAH 8270
RCRA Metals Ag As Ba Cd Cr Pb Hg Se
TCLP Metals Ag As Ba Cd Vr Pd Hg Se
TCLP Volatiles
TCLP Semi Volatiles
RCI
GC.MS Vol. 8240/8260/624
GC.MS Semi. Vol. 8270/625
PCB's 8080/608
Pest. 808/608
Chloride
Gamma Spec.
Alpha Beta (Air)
PLM (Asbestos)
Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature) Allan Gonzales — Date: 10/27/14 Time: 1430
RECEIVED BY: (Signature) — Date: 10/27/14 Time: 14:30
SAMPLED BY: (Print & Initial) IG — Date: 10/28/14 Time:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS
HAND DELIVERED UPS
AIRBILL #:
OTHER:

RECEIVING LABORATORY:
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

TETRA TECH CONTACT PERSON:

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.8°

REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1296
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ike Tavarez
Tetra Tech
1901 N. Big Spring St.
Midland, TX, 79705

Report Date: September 24, 2014

Work Order: 14091212

Project Location: Chaves Co, NM
Project Name: Legacy/Drickey Queen Sand Unit #808
Project Number: 112MC07209

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
374516	AH-1 0-1'	soil	2014-09-10	00:00	2014-09-11
374517	AH-1 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374518	AH-1 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374519	AH-1 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374520	AH-1 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374521	AH-2 0-1'	soil	2014-09-10	00:00	2014-09-11
374522	AH-2 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374523	AH-2 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374524	AH-2 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374525	AH-3 0-1'	soil	2014-09-10	00:00	2014-09-11
374526	AH-3 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374527	AH-3 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374528	AH-3 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374529	AH-3 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374530	AH-3 5-5.5'	soil	2014-09-10	00:00	2014-09-11
374531	AH-3 6-6.5'	soil	2014-09-10	00:00	2014-09-11
374532	AH-3 7-7.5'	soil	2014-09-10	00:00	2014-09-11
374533	AH-3 8-8.5'	soil	2014-09-10	00:00	2014-09-11

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
374534	AH-4 0-1'	soil	2014-09-10	00:00	2014-09-11
374535	AH-4 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374536	AH-4 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374537	AH-4 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374538	AH-4 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374539	AH-4 6-6.5'	soil	2014-09-10	00:00	2014-09-11
374540	AH-5 0-1'	soil	2014-09-10	00:00	2014-09-11
374541	AH-5 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374542	AH-5 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374543	AH-5 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374544	AH-5 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374545	AH-5 5-5.5'	soil	2014-09-10	00:00	2014-09-11
374546	AH-6 0-1'	soil	2014-09-10	00:00	2014-09-11
374547	AH-6 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374548	AH-6 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374549	AH-6 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374550	AH-6 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374551	AH-6 5-5.5'	soil	2014-09-10	00:00	2014-09-11
374552	AH-6 7-7.5'	soil	2014-09-10	00:00	2014-09-11
374553	AH-7 0-1'	soil	2014-09-10	00:00	2014-09-11
374554	AH-7 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374555	AH-7 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374556	AH-7 3-3.5'	soil	2014-09-10	00:00	2014-09-11
374557	AH-7 4-4.5'	soil	2014-09-10	00:00	2014-09-11
374558	AH-8 0-1'	soil	2014-09-10	00:00	2014-09-11
374559	AH-8 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374560	AH-8 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374561	AH-9 0-1'	soil	2014-09-10	00:00	2014-09-11
374562	AH-9 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374563	AH-9 2-2.5'	soil	2014-09-10	00:00	2014-09-11
374564	AH-10 0-1'	soil	2014-09-10	00:00	2014-09-11
374565	AH-10 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374566	AH-11 0-1'	soil	2014-09-10	00:00	2014-09-11
374567	AH-11 1-1.5'	soil	2014-09-10	00:00	2014-09-11
374568	AH-12 0-1'	soil	2014-09-10	00:00	2014-09-11
374569	AH-12 1-1.5'	soil	2014-09-10	00:00	2014-09-11

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative

Samples for project Legacy/Drickey Queen Sand Unit #808 were received by TraceAnalysis, Inc. on 2014-09-11 and assigned to work order 14091212. Samples for work order 14091212 were received intact at a temperature of 9.9 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	97776	2014-09-18 at 15:12	115611	2014-09-18 at 15:12
BTEX	S 8021B	97839	2014-09-22 at 14:40	115691	2014-09-22 at 14:40
BTEX	S 8021B	97840	2014-09-22 at 14:40	115692	2014-09-22 at 14:40
Chloride (Titration)	SM 4500-Cl B	97781	2014-09-16 at 14:47	115638	2014-09-16 at 15:17
Chloride (Titration)	SM 4500-Cl B	97794	2014-09-18 at 14:00	115636	2014-09-19 at 11:12
Chloride (Titration)	SM 4500-Cl B	97817	2014-09-18 at 09:20	115669	2014-09-21 at 16:20
Chloride (Titration)	SM 4500-Cl B	97818	2014-09-18 at 13:55	115670	2014-09-21 at 17:31
Chloride (Titration)	SM 4500-Cl B	97831	2014-09-19 at 13:55	115683	2014-09-21 at 18:31
Chloride (Titration)	SM 4500-Cl B	97832	2014-09-19 at 13:55	115685	2014-09-22 at 12:35
Chloride (Titration)	SM 4500-Cl B	97833	2014-09-19 at 13:55	115686	2014-09-22 at 13:46
TPH DRO - NEW	S 8015 D	97666	2014-09-16 at 11:00	115520	2014-09-17 at 08:17
TPH DRO - NEW	S 8015 D	97724	2014-09-17 at 16:30	115623	2014-09-19 at 11:11
TPH GRO	S 8015 D	97728	2014-09-17 at 15:34	115558	2014-09-17 at 15:34
TPH GRO	S 8015 D	97776	2014-09-18 at 15:12	115612	2014-09-18 at 15:12

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 14091212 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 374516 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115638	Date Analyzed:	2014-09-16	Analyzed By:	MM
Prep Batch:	97781	Sample Preparation:	2014-09-16	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**13600**	mg/Kg	5	4.00

Sample: 374516 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		5	**9470**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		515	mg/Kg	5	100	515	70 - 130

Sample: 374516 - AH-1 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		1,2,3,4	**432**	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.89	mg/Kg	20	2.00	94	73 - 122

continued ...

sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	10.6	mg/Kg	20	2.00	530	74.6 - 120

Sample: 374517 - AH-1 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115691	Date Analyzed:	2014-09-22	Analyzed By:	JS
Prep Batch:	97839	Sample Preparation:	2014-09-22	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene		1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)		6	1.94	mg/Kg	1	2.00	97	70 - 130

Sample: 374517 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115638	Date Analyzed:	2014-09-16	Analyzed By:	MM
Prep Batch:	97781	Sample Preparation:	2014-09-16	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**20300**	mg/Kg	5	4.00

Sample: 374517 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			86.3	mg/Kg	1	100	86	70 - 130

Sample: 374517 - AH-1 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.73	mg/Kg	1	2.00	86	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.72	mg/Kg	1	2.00	86	74.6 - 120

Sample: 374518 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115638	Date Analyzed:	2014-09-16	Analyzed By:	MM
Prep Batch:	97781	Sample Preparation:	2014-09-16	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**19300**	mg/Kg	5	4.00

Sample: 374519 - AH-1 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115638	Date Analyzed:	2014-09-16	Analyzed By:	MM
Prep Batch:	97781	Sample Preparation:	2014-09-16	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**17400**	mg/Kg	5	4.00

Sample: 374520 - AH-1 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115638	Date Analyzed:	2014-09-16	Analyzed By:	MM
Prep Batch:	97781	Sample Preparation:	2014-09-16	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**24600**	mg/Kg	5	4.00

Sample: 374521 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115638	Date Analyzed:	2014-09-16	Analyzed By:	MM
Prep Batch:	97781	Sample Preparation:	2014-09-16	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**16000**	mg/Kg	5	4.00

Sample: 374521 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	**6300**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qer	Qer		377	mg/Kg	5	100	377	70 - 130

Sample: 374521 - AH-2 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	**342**	mg/Kg	10	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.60	mg/Kg	10	2.00	80	73 - 122
4-Bromofluorobenzene (4-BFB)	Qar	Qar 3	9.94	mg/Kg	10	2.00	497	74.6 - 120

Sample: 374522 - AH-2 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115692	Date Analyzed:	2014-09-22	Analyzed By:	JS
Prep Batch:	97840	Sample Preparation:	2014-09-22	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene		1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene		1,2,3,4,6	**0.152**	mg/Kg	1	0.0200
Xylene		1,2,3,4,6	**0.419**	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.95	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)		6	2.18	mg/Kg	1	2.00	109	70 - 130

Sample: 374522 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115638	Date Analyzed:	2014-09-16	Analyzed By:	MM
Prep Batch:	97781	Sample Preparation:	2014-09-16	Prepared By:	MM

continued ...

sample 374522 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**20400**	mg/Kg	5	4.00

Sample: 374522 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	**1250**	mg/Kg	2	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane Qsr	Qsr		148	mg/Kg	2	100	148	70 - 130

Sample: 374522 - AH-2 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	**93.3**	mg/Kg	10	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.87	mg/Kg	10	2.00	94	73 - 122
4-Bromofluorobenzene (4-BFB) Qsr	Qsr	3	4.30	mg/Kg	10	2.00	215	74.6 - 120

Sample: 374523 - AH-2 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115636	Date Analyzed:	2014-09-19	Analyzed By:	MM
Prep Batch:	97794	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Q*		**19800**	mg/Kg	10	4.00

Sample: 374524 - AH-2 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115636	Date Analyzed:	2014-09-19	Analyzed By:	MM
Prep Batch:	97794	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Q*		**17600**	mg/Kg	100	4.00

Sample: 374525 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115636	Date Analyzed:	2014-09-19	Analyzed By:	MM
Prep Batch:	97794	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Q*		**1990**	mg/Kg	5	4.00

Sample: 374525 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			87.1	mg/Kg	1	100	87	70 - 130

Sample: 374525 - AH-3 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	3	1.44	mg/Kg	1	2.00	72	73 - 122
4-Bromofluorobenzene (4-BFB)			3	1.70	mg/Kg	1	2.00	85	74.6 - 120

Sample: 374526 - AH-3 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115691	Date Analyzed:	2014-09-22	Analyzed By:	JS
Prep Batch:	97839	Sample Preparation:	2014-09-22	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene		1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene		1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	2.08	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)		6	1.93	mg/Kg	1	2.00	96	70 - 130

Sample: 374526 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115636	Date Analyzed:	2014-09-19	Analyzed By:	MM
Prep Batch:	97794	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Q6		**6480**	mg/Kg	10	4.00

Sample: 374526 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			88.9	mg/Kg	1	100	89	70 - 130

Sample: 374526 - AH-3 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.82	mg/Kg	1	2.00	91	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.69	mg/Kg	1	2.00	84	74.6 - 120

Sample: 374527 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115636	Date Analyzed:	2014-09-19	Analyzed By:	MM
Prep Batch:	97794	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride	Q*		**8750**		mg/Kg	5	4.00

Sample: 374528 - AH-3 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115636	Date Analyzed:	2014-09-19	Analyzed By:	MM
Prep Batch:	97794	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride	Q*		**10200**		mg/Kg	10	4.00

Sample: 374529 - AH-3 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115636	Date Analyzed:	2014-09-19	Analyzed By:	MM
Prep Batch:	97794	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride	Q*		**20200**		mg/Kg	10	4.00

Sample: 374530 - AH-3 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115669	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97817	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		**21200**	mg/Kg	100	4.00

Sample: 374531 - AH-3 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115669	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97817	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		**30000**	mg/Kg	100	4.00

Sample: 374532 - AH-3 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115636	Date Analyzed:	2014-09-19	Analyzed By:	MM
Prep Batch:	97794	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		**22200**	mg/Kg	100	4.00

Sample: 374533 - AH-3 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115669	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97817	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		**23200**	mg/Kg	100	4.00

Sample: 374534 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115669	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97817	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Q8		**11600**	mg/Kg	50	4.00

Sample: 374534 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		5	**9990**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q8r	Q8r		561	mg/Kg	5	100	561	70 - 130

Sample: 374534 - AH-4 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	I	1,2,3,4	<80.0	mg/Kg	20	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3	1.68	mg/Kg	20	2.00	84	73 - 122
4-Bromofluorobenzene (4-BFB)	Q8r	Q8r	3	3.54	mg/Kg	20	2.00	177	74.6 - 120

Sample: 374535 - AH-4 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115691	Date Analyzed:	2014-09-22	Analyzed By:	JS
Prep Batch:	97839	Sample Preparation:	2014-09-22	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene		1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)		6	1.89	mg/Kg	1	2.00	94	70 - 130

Sample: 374535 - AH-4 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115669	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97817	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		**18400**	mg/Kg	100	4.00

Sample: 374535 - AH-4 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			84.4	mg/Kg	1	100	84	70 - 130

Sample: 374535 - AH-4 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.77	mg/Kg	1	2.00	88	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.77	mg/Kg	1	2.00	88	74.6 - 120

Sample: 374536 - AH-4 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115669	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97817	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		**20300**	mg/Kg	100	4.00

Sample: 374537 - AH-4 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115669	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97817	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		**18400**	mg/Kg	100	4.00

Sample: 374538 - AH-4 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115669	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97817	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride	Q*		**25100**		mg/Kg	100	4.00

Sample: 374539 - AH-4 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115670	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97818	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride	Q*		**10400**		mg/Kg	5	4.00

Sample: 374540 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115670	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97818	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride	Q*		**5910**		mg/Kg	5	4.00

Sample: 374540 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	**14300**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		769	mg/Kg	5	100	769	70 - 130

Sample: 374540 - AH-5 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter		Flag	Cert	RL Result	Units	Dilution	RL
GRO	2		1,2,3,4	<80.0	mg/Kg	20	4.00

Surrogate		Flag		Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)				3	1.97	mg/Kg	20	2.00	98	73 - 122
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		3	2.84	mg/Kg	20	2.00	142	74.6 - 120

Sample: 374541 - AH-5 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115691	Date Analyzed:	2014-09-22	Analyzed By:	JS
Prep Batch:	97839	Sample Preparation:	2014-09-22	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	2.03	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)		6	1.88	mg/Kg	1	2.00	94	70 - 130

Sample: 374541 - AH-5 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115669	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97817	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		**15000**	mg/Kg	50	4.00

Sample: 374541 - AH-5 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			87.4	mg/Kg	1	100	87	70 - 130

Sample: 374541 - AH-5 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.82	mg/Kg	1	2.00	91	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.74	mg/Kg	1	2.00	87	74.6 - 120

Sample: 374542 - AH-5 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115670	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97818	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Q-		**25000**	mg/Kg	100	4.00

Sample: 374543 - AH-5 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115670	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97818	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Q-		**23100**	mg/Kg	100	4.00

Sample: 374544 - AH-5 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115670	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97818	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Q-		**26000**	mg/Kg	100	4.00

Sample: 374545 - AH-5 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115670	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97818	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		**17300**	mg/Kg	50	4.00

Sample: 374546 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115670	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97818	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		**10400**	mg/Kg	5	4.00

Sample: 374546 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	**8330**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q*r	Q*r		477	mg/Kg	5	100	477	70 - 130

Sample: 374546 - AH-6 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	**134**	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.06	mg/Kg	20	2.00	103	73 - 122
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr 3	5.04	mg/Kg	20	2.00	252	74.6 - 120

Sample: 374547 - AH-6 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115691	Date Analyzed:	2014-09-22	Analyzed By:	JS
Prep Batch:	97839	Sample Preparation:	2014-09-22	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	2.05	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)		6	1.84	mg/Kg	1	2.00	92	70 - 130

Sample: 374547 - AH-6 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115670	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97818	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs		14900	mg/Kg	50	4.00

Sample: 374547 - AH-6 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			100	mg/Kg	1	100	100	70 - 130

Sample: 374547 - AH-6 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.87	mg/Kg	1	2.00	94	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.78	mg/Kg	1	2.00	89	74.6 - 120

Sample: 374548 - AH-6 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115683	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97831	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**12400**	mg/Kg	50	4.00

Sample: 374549 - AH-6 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115683	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97831	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**13900**	mg/Kg	50	4.00

Sample: 374550 - AH-6 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115683	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97831	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**13400**	mg/Kg	50	4.00

Sample: 374551 - AH-6 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115670	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97818	Sample Preparation:	2014-09-18	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q•		**26000**	mg/Kg	100	4.00

Sample: 374552 - AH-6 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115683	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97831	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**14800**	mg/Kg	50	4.00

Sample: 374553 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115683	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97831	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**18800**	mg/Kg	50	4.00

Sample: 374553 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	**10600**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		474	mg/Kg	5	100	474	70 - 130

Sample: 374553 - AH-7 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	**135**	mg/Kg	20	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3	1.63	mg/Kg	20	2.00	82	73 - 122
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3	4.68	mg/Kg	20	2.00	234	74.6 - 120

Sample: 374554 - AH-7 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115691	Date Analyzed:	2014-09-22	Analyzed By:	JS
Prep Batch:	97839	Sample Preparation:	2014-09-22	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene		1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)		6	1.85	mg/Kg	1	2.00	92	70 - 130

Sample: 374554 - AH-7 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115683	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97831	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**15800**	mg/Kg	50	4.00

Sample: 374554 - AH-7 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115520	Date Analyzed:	2014-09-17	Analyzed By:	SC
Prep Batch:	97666	Sample Preparation:	2014-09-16	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		3	**68.1**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			94.6	mg/Kg	1	100	95	70 - 130

Sample: 374554 - AH-7 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.71	mg/Kg	1	2.00	86	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.66	mg/Kg	1	2.00	83	74.6 - 120

Sample: 374555 - AH-7 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115683	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97831	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**9160**	mg/Kg	5	4.00

Sample: 374556 - AH-7 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115683	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97831	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**752**	mg/Kg	2	4.00

Sample: 374557 - AH-7 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115683	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97831	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**59.0**		mg/Kg	2	4.00

Sample: 374558 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115685	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97832	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**2720**		mg/Kg	5	4.00

Sample: 374558 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115623	Date Analyzed:	2014-09-19	Analyzed By:	SC
Prep Batch:	97724	Sample Preparation:	2014-09-17	Prepared By:	SC

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
DRO	Qs	5	**4990**		mg/Kg	1	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		254	mg/Kg	1	100	254	70 - 130

Sample: 374558 - AH-8 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	**62.2**	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.69	mg/Kg	5	2.00	84	73 - 122
4-Bromofluorobenzene (4-BFB)	Qar	Qar	3	3.26	mg/Kg	5	2.00	163	74.6 - 120

Sample: 374559 - AH-8 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115691	Date Analyzed:	2014-09-22	Analyzed By:	JS
Prep Batch:	97839	Sample Preparation:	2014-09-22	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	2.08	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)		6	1.85	mg/Kg	1	2.00	92	70 - 130

Sample: 374559 - AH-8 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115685	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97832	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**50.0**	mg/Kg	5	4.00

Sample: 374559 - AH-8 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115623	Date Analyzed:	2014-09-19	Analyzed By:	SC
Prep Batch:	97724	Sample Preparation:	2014-09-17	Prepared By:	SC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	Q5	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			88.6	mg/Kg	1	100	89	70 - 130

Sample: 374559 - AH-8 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.90	mg/Kg	1	2.00	95	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.77	mg/Kg	1	2.00	88	74.6 - 120

Sample: 374560 - AH-8 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115685	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97832	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 374561 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115683	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97831	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3270**	mg/Kg	5	4.00

Sample: 374561 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115623	Date Analyzed:	2014-09-19	Analyzed By:	SC
Prep Batch:	97724	Sample Preparation:	2014-09-17	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qe	5	**9180**	mg/Kg	2	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		467	mg/Kg	2	100	467	70 - 130

Sample: 374561 - AH-9 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	**281**	mg/Kg	20	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3	2.00	mg/Kg	20	2.00	100	73 - 122
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3	8.29	mg/Kg	20	2.00	414	74.6 - 120

Sample: 374562 - AH-9 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115691	Date Analyzed:	2014-09-22	Analyzed By:	JS
Prep Batch:	97839	Sample Preparation:	2014-09-22	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)		6	1.83	mg/Kg	1	2.00	92	70 - 130

Sample: 374562 - AH-9 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115685	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97832	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 374562 - AH-9 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115623	Date Analyzed:	2014-09-19	Analyzed By:	SC
Prep Batch:	97724	Sample Preparation:	2014-09-17	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Q=,U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			81.6	mg/Kg	1	100	82	70 - 130

Sample: 374562 - AH-9 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.91	mg/Kg	1	2.00	96	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.78	mg/Kg	1	2.00	89	74.6 - 120

Sample: 374563 - AH-9 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115685	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97832	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**99.0**	mg/Kg	5	4.00

Sample: 374564 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115685	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97832	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**644**	mg/Kg	5	4.00

Sample: 374564 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115623	Date Analyzed:	2014-09-19	Analyzed By:	SC
Prep Batch:	97724	Sample Preparation:	2014-09-17	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	5	**34400**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		1540	mg/Kg	10	100	1540	70 - 130

Sample: 374564 - AH-10 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	**580**	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.86	mg/Kg	20	2.00	93	73 - 122
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3	18.6	mg/Kg	20	2.00	930	74.6 - 120

Sample: 374565 - AH-10 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115691	Date Analyzed:	2014-09-22	Analyzed By:	JS
Prep Batch:	97839	Sample Preparation:	2014-09-22	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene		1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)		6	1.90	mg/Kg	1	2.00	95	70 - 130

Sample: 374565 - AH-10 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115685	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97832	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**198**	mg/Kg	5	4.00

Sample: 374565 - AH-10 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115623	Date Analyzed:	2014-09-19	Analyzed By:	SC
Prep Batch:	97724	Sample Preparation:	2014-09-17	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Q6	5	**92.4**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			86.8	mg/Kg	1	100	87	70 - 130

Sample: 374565 - AH-10 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115558	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97728	Sample Preparation:	2014-09-17	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.85	mg/Kg	1	2.00	92	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.62	mg/Kg	1	2.00	81	74.6 - 120

Sample: 374566 - AH-11 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115685	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97832	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**792**	mg/Kg	5	4.00

Sample: 374566 - AH-11 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115623	Date Analyzed:	2014-09-19	Analyzed By:	SC
Prep Batch:	97724	Sample Preparation:	2014-09-17	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Q5	5	**21400**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q5r	Q5r		1000	mg/Kg	5	100	1000	70 - 130

Sample: 374566 - AH-11 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115612	Date Analyzed:	2014-09-18	Analyzed By:	JS
Prep Batch:	97776	Sample Preparation:	2014-09-18	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	**266**	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.05	mg/Kg	20	2.00	102	73 - 122
4-Bromofluorobenzene (4-BFB)	Qar	Qar 3	8.61	mg/Kg	20	2.00	430	74.6 - 120

Sample: 374567 - AH-11 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115611	Date Analyzed:	2014-09-18	Analyzed By:	JS
Prep Batch:	97776	Sample Preparation:	2014-09-18	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Jb	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	Jb	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	B	1,2,3,4,6	**0.0234**	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.70	mg/Kg	1	2.00	85	66.2 - 120
4-Bromofluorobenzene (4-BFB)		6	1.76	mg/Kg	1	2.00	88	59.5 - 120

Sample: 374567 - AH-11 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115685	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97832	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**396**	mg/Kg	5	4.00

Sample: 374567 - AH-11 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115623	Date Analyzed:	2014-09-19	Analyzed By:	SC
Prep Batch:	97724	Sample Preparation:	2014-09-17	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			81.8	mg/Kg	1	100	82	70 - 130

Sample: 374567 - AH-11 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115612	Date Analyzed:	2014-09-18	Analyzed By:	JS
Prep Batch:	97776	Sample Preparation:	2014-09-18	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.75	mg/Kg	1	2.00	88	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.70	mg/Kg	1	2.00	85	74.6 - 120

Sample: 374568 - AH-12 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115686	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97833	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7340**	mg/Kg	5	4.00

Sample: 374568 - AH-12 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115623	Date Analyzed:	2014-09-19	Analyzed By:	SC
Prep Batch:	97724	Sample Preparation:	2014-09-17	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	5	**11000**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		576	mg/Kg	5	100	576	70 - 130

Sample: 374568 - AH-12 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115612	Date Analyzed:	2014-09-18	Analyzed By:	JS
Prep Batch:	97776	Sample Preparation:	2014-09-18	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	**142**	mg/Kg	20	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3	1.89	mg/Kg	20	2.00	94	73 - 122
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3	4.60	mg/Kg	20	2.00	230	74.6 - 120

Sample: 374569 - AH-12 1-1.5'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	115611	Date Analyzed:	2014-09-18	Analyzed By:	JS
Prep Batch:	97776	Sample Preparation:	2014-09-18	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	Jb	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	Jb	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.71	mg/Kg	1	2.00	86	66.2 - 120
4-Bromofluorobenzene (4-BFB)		6	1.72	mg/Kg	1	2.00	86	59.5 - 120

Sample: 374569 - AH-12 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	115686	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97833	Sample Preparation:	2014-09-19	Prepared By:	MM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**338**	mg/Kg	5	4.00

Sample: 374569 - AH-12 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	115623	Date Analyzed:	2014-09-19	Analyzed By:	SC
Prep Batch:	97724	Sample Preparation:	2014-09-17	Prepared By:	SC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	Q+,U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			81.2	mg/Kg	1	100	81	70 - 130

Sample: 374569 - AH-12 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	115612	Date Analyzed:	2014-09-18	Analyzed By:	JS
Prep Batch:	97776	Sample Preparation:	2014-09-18	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.83	mg/Kg	1	2.00	92	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.62	mg/Kg	1	2.00	81	74.6 - 120

Method Blanks

Method Blank (1) QC Batch: 115520

QC Batch: 115520 | Date Analyzed: 2014-09-17 | Analyzed By: SC
Prep Batch: 97666 | QC Preparation: 2014-09-16 | Prepared By: SC

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		5	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			101	mg/Kg	1	100	101	70 - 130

Method Blank (1) QC Batch: 115558

QC Batch: 115558 | Date Analyzed: 2014-09-17 | Analyzed By: JS
Prep Batch: 97728 | QC Preparation: 2014-09-17 | Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1,2,3,4	<0.217	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.95	mg/Kg	1	2.00	98	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.65	mg/Kg	1	2.00	82	74.6 - 120

Method Blank (1) QC Batch: 115611

QC Batch: 115611 | Date Analyzed: 2014-09-18 | Analyzed By: JS
Prep Batch: 97776 | QC Preparation: 2014-09-18 | Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,6	0.00550	mg/Kg	0.02
Toluene		1,2,3,4,6	0.00420	mg/Kg	0.02
Ethylbenzene		1,2,3,4,6	<0.00283	mg/Kg	0.02

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Parameter	Flag	Cert	MDL Result	Units	RL
Xylene		1,2,3,4,6	0.00650	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.73	mg/Kg	1	2.00	86	66.2 - 120
4-Bromofluorobenzene (4-BFB)		6	1.68	mg/Kg	1	2.00	84	59.5 - 120

Method Blank (1) QC Batch: 115612

QC Batch:	115612	Date Analyzed:	2014-09-18	Analyzed By:	JS
Prep Batch:	97776	QC Preparation:	2014-09-18	Prepared By:	JS

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1,2,3,4	<0.217	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.84	mg/Kg	1	2.00	92	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.62	mg/Kg	1	2.00	81	74.6 - 120

Method Blank (1) QC Batch: 115623

QC Batch:	115623	Date Analyzed:	2014-09-19	Analyzed By:	SC
Prep Batch:	97724	QC Preparation:	2014-09-17	Prepared By:	SC

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		5	<7.41	mg/Kg	50

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		131	mg/Kg	1	100	131	70 - 130

Method Blank (1) QC Batch: 115636

QC Batch:	115636	Date Analyzed:	2014-09-19	Analyzed By:	MM
Prep Batch:	97794	QC Preparation:	2014-09-18	Prepared By:	SS

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 115638

QC Batch:	115638	Date Analyzed:	2014-09-16	Analyzed By:	MM
Prep Batch:	97781	QC Preparation:	2014-09-16	Prepared By:	MM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 115669

QC Batch:	115669	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97817	QC Preparation:	2014-09-18	Prepared By:	SS

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 115670

QC Batch:	115670	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97818	QC Preparation:	2014-09-18	Prepared By:	SS

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 115683

QC Batch:	115683	Date Analyzed:	2014-09-21	Analyzed By:	MM
Prep Batch:	97831	QC Preparation:	2014-09-19	Prepared By:	SS

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 115685

QC Batch:	115685	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97832	QC Preparation:	2014-09-19	Prepared By:	SS

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 115686

QC Batch:	115686	Date Analyzed:	2014-09-22	Analyzed By:	MM
Prep Batch:	97833	QC Preparation:	2014-09-19	Prepared By:	SS

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 115691

QC Batch:	115691	Date Analyzed:	2014-09-22	Analyzed By:	JS
Prep Batch:	97839	QC Preparation:	2014-09-22	Prepared By:	JS

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,6	<0.00296	mg/Kg	0.02
Toluene		1,2,3,4,6	<0.00351	mg/Kg	0.02
Ethylbenzene		1,2,3,4,6	<0.00312	mg/Kg	0.02
Xylene		1,2,3,4,6	<0.00310	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.97	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)		6	1.93	mg/Kg	1	2.00	96	70 - 130

Method Blank (1) QC Batch: 115692

QC Batch: 115692 | Date Analyzed: 2014-09-22 | Analyzed By: JS
Prep Batch: 97840 | QC Preparation: 2014-09-22 | Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,6	<0.00296	mg/Kg	0.02
Toluene		1,2,3,4,6	<0.00351	mg/Kg	0.02
Ethylbenzene		1,2,3,4,6	<0.00312	mg/Kg	0.02
Xylene		1,2,3,4,6	<0.00310	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)		6	1.85	mg/Kg	1	2.00	92	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 115520 | Date Analyzed: 2014-09-17 | Analyzed By: SC
Prep Batch: 97666 | QC Preparation: 2014-09-16 | Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		5	220	mg/Kg	1	250	<7.41	88	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		5	221	mg/Kg	1	250	<7.41	88	70 - 130	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	95.9	94.1	mg/Kg	1	100	96	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 115558 | Date Analyzed: 2014-09-17 | Analyzed By: JS
Prep Batch: 97728 | QC Preparation: 2014-09-17 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	14.2	mg/Kg	1	20.0	<0.217	71	60.1 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	15.5	mg/Kg	1	20.0	<0.217	78	60.1 - 120	9	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	3	1.69	1.74	mg/Kg	1	2.00	84	87	73 - 122
4-Bromofluorobenzene (4-BFB)	3	1.56	1.65	mg/Kg	1	2.00	78	82	74.6 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 115611 | Date Analyzed: 2014-09-18 | Analyzed By: JS
Prep Batch: 97776 | QC Preparation: 2014-09-18 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,6	1.62	mg/Kg	1	2.00	0.0055	81	69.3 - 120
Toluene		1,2,3,4,6	1.73	mg/Kg	1	2.00	0.0042	86	70.5 - 120
Ethylbenzene		1,2,3,4,6	1.74	mg/Kg	1	2.00	<0.00283	87	70.6 - 120
Xylene		1,2,3,4,6	5.20	mg/Kg	1	6.00	0.0065	86	70.7 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,6	1.61	mg/Kg	1	2.00	0.0055	80	69.3 - 120	1	20
Toluene		1,2,3,4,6	1.73	mg/Kg	1	2.00	0.0042	86	70.5 - 120	0	20
Ethylbenzene		1,2,3,4,6	1.76	mg/Kg	1	2.00	<0.00283	88	70.6 - 120	1	20
Xylene		1,2,3,4,6	5.26	mg/Kg	1	6.00	0.0065	88	70.7 - 120	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	6	1.82	1.80	mg/Kg	1	2.00	91	90	66.2 - 120
4-Bromofluorobenzene (4-BFB)	6	1.72	1.70	mg/Kg	1	2.00	86	85	59.5 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 115612 | Date Analyzed: 2014-09-18 | Analyzed By: JS
Prep Batch: 97776 | QC Preparation: 2014-09-18 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	16.0	mg/Kg	1	20.0	<0.217	80	60.1 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	17.4	mg/Kg	1	20.0	<0.217	87	60.1 - 120	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT) [3]	1.90	1.93	mg/Kg	1	2.00	95	96	73 - 122
4-Bromofluorobenzene (4-BFB) [3]	1.80	1.85	mg/Kg	1	2.00	90	92	74.6 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 115623 | Date Analyzed: 2014-09-19 | Analyzed By: SC
Prep Batch: 97724 | QC Preparation: 2014-09-17 | Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		[5]	241	mg/Kg	1	250	<7.41	96	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		[5]	228	mg/Kg	1	250	<7.41	91	70 - 130	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	99.6	99.7	mg/Kg	1	100	100	100	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 115636 | Date Analyzed: 2014-09-19 | Analyzed By: MM
Prep Batch: 97794 | QC Preparation: 2014-09-18 | Prepared By: SS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2410	mg/Kg	5	2500	<19.2	96	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2450	mg/Kg	5	2500	<19.2	98	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 115638 | Date Analyzed: 2014-09-16 | Analyzed By: MM
Prep Batch: 97781 | QC Preparation: 2014-09-16 | Prepared By: MM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2700	mg/Kg	5	2500	<19.2	108	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2750	mg/Kg	5	2500	<19.2	110	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 115669 | Date Analyzed: 2014-09-21 | Analyzed By: MM
Prep Batch: 97817 | QC Preparation: 2014-09-18 | Prepared By: SS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2420	mg/Kg	5	2500	<19.2	97	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2510	mg/Kg	5	2500	<19.2	100	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 115670 | Date Analyzed: 2014-09-21 | Analyzed By: MM
Prep Batch: 97818 | QC Preparation: 2014-09-18 | Prepared By: SS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2880	mg/Kg	5	2500	<19.2	115	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2740	mg/Kg	5	2500	<19.2	110	85 - 115	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 115683 | Date Analyzed: 2014-09-21 | Analyzed By: MM
Prep Batch: 97831 | QC Preparation: 2014-09-19 | Prepared By: SS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2430	mg/Kg	5	2500	<19.2	97	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2570	mg/Kg	5	2500	<19.2	103	85 - 115	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 115685 | Date Analyzed: 2014-09-22 | Analyzed By: MM
Prep Batch: 97832 | QC Preparation: 2014-09-19 | Prepared By: SS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2570	mg/Kg	5	2500	<19.2	103	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2480	mg/Kg	5	2500	<19.2	99	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 115686 | Date Analyzed: 2014-09-22 | Analyzed By: MM
Prep Batch: 97833 | QC Preparation: 2014-09-19 | Prepared By: SS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2700	mg/Kg	5	2500	<19.2	108	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2800	mg/Kg	5	2500	<19.2	112	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 115691 | Date Analyzed: 2014-09-22 | Analyzed By: JS
Prep Batch: 97839 | QC Preparation: 2014-09-22 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,6	1.94	mg/Kg	1	2.00	<0.00296	97	70 - 130
Toluene		1,2,3,4,6	1.97	mg/Kg	1	2.00	<0.00351	98	70 - 130
Ethylbenzene		1,2,3,4,6	1.97	mg/Kg	1	2.00	<0.00312	98	70 - 130
Xylene		1,2,3,4,6	5.98	mg/Kg	1	6.00	<0.00310	100	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,6	1.90	mg/Kg	1	2.00	<0.00296	95	70 - 130	2	20
Toluene		1,2,3,4,6	1.94	mg/Kg	1	2.00	<0.00351	97	70 - 130	2	20
Ethylbenzene		1,2,3,4,6	1.94	mg/Kg	1	2.00	<0.00312	97	70 - 130	2	20
Xylene		1,2,3,4,6	5.90	mg/Kg	1	6.00	<0.00310	98	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	6	2.01	2.00	mg/Kg	1	2.00	100	100	70 - 130
4-Bromofluorobenzene (4-BFB)	6	2.01	1.97	mg/Kg	1	2.00	100	98	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 115692 | Date Analyzed: 2014-09-22 | Analyzed By: JS
Prep Batch: 97840 | QC Preparation: 2014-09-22 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,6	1.92	mg/Kg	1	2.00	<0.00296	96	70 - 130
Toluene		1,2,3,4,6	1.95	mg/Kg	1	2.00	<0.00351	98	70 - 130
Ethylbenzene		1,2,3,4,6	1.94	mg/Kg	1	2.00	<0.00312	97	70 - 130
Xylene		1,2,3,4,6	5.90	mg/Kg	1	6.00	<0.00310	98	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,6	1.89	mg/Kg	1	2.00	<0.00296	94	70 - 130	2	20
Toluene		1,2,3,4,6	1.96	mg/Kg	1	2.00	<0.00351	98	70 - 130	0	20
Ethylbenzene		1,2,3,4,6	1.96	mg/Kg	1	2.00	<0.00312	98	70 - 130	1	20
Xylene		1,2,3,4,6	5.96	mg/Kg	1	6.00	<0.00310	99	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	6	2.00	2.01	mg/Kg	1	2.00	100	100	70 - 130
4-Bromofluorobenzene (4-BFB)	6	1.95	1.94	mg/Kg	1	2.00	98	97	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 374588

QC Batch: 115520 | Date Analyzed: 2014-09-17 | Analyzed By: SC
Prep Batch: 97666 | QC Preparation: 2014-09-16 | Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		5	204	mg/Kg	1	250	<7.41	82	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		5	206	mg/Kg	1	250	<7.41	82	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	88.9	89.6	mg/Kg	1	100	89	90	70 - 130

Matrix Spike (MS-1) Spiked Sample: 374559

QC Batch: 115558 | Date Analyzed: 2014-09-17 | Analyzed By: JS
Prep Batch: 97728 | QC Preparation: 2014-09-17 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	17.1	mg/Kg	1	20.0	<0.217	86	40.3 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	20.6	mg/Kg	1	20.0	<0.217	103	40.3 - 120	19	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	3	2.02	2.19	mg/Kg	1	2	101	110	73 - 122
4-Bromofluorobenzene (4-BFB)	3	1.97	2.14	mg/Kg	1	2	98	107	74.6 - 120

Matrix Spike (MS-1) Spiked Sample: 374567

QC Batch: 115611 | Date Analyzed: 2014-09-18 | Analyzed By: JS
Prep Batch: 97776 | QC Preparation: 2014-09-18 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,6	1.64	mg/Kg	1	2.00	0.0155	81	63.6 - 120
Toluene		1,2,3,4,6	1.77	mg/Kg	1	2.00	0.0124	88	67.8 - 128
Ethylbenzene		1,2,3,4,6	1.78	mg/Kg	1	2.00	<0.00283	89	69.5 - 136
Xylene		1,2,3,4,6	5.32	mg/Kg	1	6.00	0.0234	88	69.3 - 139

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,6	1.58	mg/Kg	1	2.00	0.0155	78	63.6 - 120	4	20
Toluene		1,2,3,4,6	1.70	mg/Kg	1	2.00	0.0124	84	67.8 - 128	4	20
Ethylbenzene		1,2,3,4,6	1.74	mg/Kg	1	2.00	<0.00283	87	69.5 - 136	2	20
Xylene		1,2,3,4,6	5.17	mg/Kg	1	6.00	0.0234	86	69.3 - 139	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	6	1.75	1.76	mg/Kg	1	2	88	88	66.2 - 120
4-Bromofluorobenzene (4-BFB)	6	1.74	1.66	mg/Kg	1	2	87	83	59.5 - 120

Matrix Spike (MS-1) Spiked Sample: 374567

QC Batch: 115612 | Date Analyzed: 2014-09-18 | Analyzed By: JS
Prep Batch: 97776 | QC Preparation: 2014-09-18 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	17.3	mg/Kg	1	20.0	<0.217	86	40.3 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	17.5	mg/Kg	1	20.0	<0.217	87	40.3 - 120	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

matrix spikes continued . . .

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	3	1.97	1.81	mg/Kg	1	2	98	91	73 - 122
4-Bromofluorobenzene (4-BFB)	3	1.90	1.80	mg/Kg	1	2	95	90	74.6 - 120

Matrix Spike (MS-1) Spiked Sample: 374559

QC Batch: 115623 | Date Analyzed: 2014-09-19 | Analyzed By: SC
Prep Batch: 97724 | QC Preparation: 2014-09-17 | Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		5	228	mg/Kg	1	250	29.4	79	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	Q4	Q4	5	202	mg/Kg	1	250	29.4	69	70 - 130	12	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	88.6	80.2	mg/Kg	1	100	89	80	70 - 130

Matrix Spike (MS-1) Spiked Sample: 374532

QC Batch: 115636 | Date Analyzed: 2014-09-19 | Analyzed By: MM
Prep Batch: 97794 | QC Preparation: 2014-09-18 | Prepared By: SS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Q4	Q4	27800	mg/Kg	100	2500	22200	224	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Q4	Q4	25900	mg/Kg	100	2500	22200	148	78.9 - 121	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 374522

QC Batch: 115638 | Date Analyzed: 2014-09-16 | Analyzed By: MM
Prep Batch: 97781 | QC Preparation: 2014-09-16 | Prepared By: MM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			23400	mg/Kg	5	2500	20400	120	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			22800	mg/Kg	5	2500	20400	96	78.9 - 121	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 374541

QC Batch: 115669 | Date Analyzed: 2014-09-21 | Analyzed By: MM
Prep Batch: 97817 | QC Preparation: 2014-09-18 | Prepared By: SS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Q*	Q*	16400	mg/Kg	50	2500	15000	56	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Q*	Q*	16900	mg/Kg	50	2500	15000	76	78.9 - 121	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 374551

QC Batch: 115670 | Date Analyzed: 2014-09-21 | Analyzed By: MM
Prep Batch: 97818 | QC Preparation: 2014-09-18 | Prepared By: SS

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Q*	Q*		23400	mg/Kg	5	2500	26000	-104	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride Q*	Q*		23000	mg/Kg	5	2500	26000	-120	78.9 - 121	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 374561

QC Batch: 115683 | Date Analyzed: 2014-09-21 | Analyzed By: MM
Prep Batch: 97831 | QC Preparation: 2014-09-19 | Prepared By: SS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			5300	mg/Kg	5	2500	3270	81	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			5350	mg/Kg	5	2500	3270	83	78.9 - 121	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 374651

QC Batch: 115685 | Date Analyzed: 2014-09-22 | Analyzed By: MM
Prep Batch: 97832 | QC Preparation: 2014-09-19 | Prepared By: SS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2570	mg/Kg	5	2500	<19.2	103	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2670	mg/Kg	5	2500	<19.2	107	78.9 - 121	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 374656

QC Batch: 115686 | Date Analyzed: 2014-09-22 | Analyzed By: MM
Prep Batch: 97833 | QC Preparation: 2014-09-19 | Prepared By: SS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2510	mg/Kg	5	2500	<19.2	100	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2510	mg/Kg	5	2500	<19.2	100	78.9 - 121	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 374517

QC Batch: 115691 | Date Analyzed: 2014-09-22 | Analyzed By: JS
Prep Batch: 97839 | QC Preparation: 2014-09-22 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,6	2.09	mg/Kg	1	2.00	<0.00296	104	70 - 130
Toluene		1,2,3,4,6	2.23	mg/Kg	1	2.00	0.0043	111	70 - 130
Ethylbenzene		1,2,3,4,6	2.31	mg/Kg	1	2.00	<0.00312	116	70 - 130
Xylene		1,2,3,4,6	7.06	mg/Kg	1	6.00	<0.00310	118	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,6	1.99	mg/Kg	1	2.00	<0.00296	100	70 - 130	5	20
Toluene		1,2,3,4,6	2.10	mg/Kg	1	2.00	0.0043	105	70 - 130	6	20
Ethylbenzene		1,2,3,4,6	2.19	mg/Kg	1	2.00	<0.00312	110	70 - 130	5	20
Xylene		1,2,3,4,6	6.74	mg/Kg	1	6.00	<0.00310	112	70 - 130	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	6	2.11	2.02	mg/Kg	1	2	106	101	70 - 130
4-Bromofluorobenzene (4-BFB)	6	1.96	1.90	mg/Kg	1	2	98	95	70 - 130

Matrix Spike (MS-1) Spiked Sample: 374993

QC Batch: 115692 | Date Analyzed: 2014-09-22 | Analyzed By: JS
Prep Batch: 97840 | QC Preparation: 2014-09-22 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,6	2.10	mg/Kg	1	2.00	<0.00296	105	70 - 130
Toluene		1,2,3,4,6	2.23	mg/Kg	1	2.00	<0.00351	112	70 - 130
Ethylbenzene		1,2,3,4,6	2.33	mg/Kg	1	2.00	<0.00312	116	70 - 130
Xylene		1,2,3,4,6	7.11	mg/Kg	1	6.00	<0.00310	118	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,6	2.17	mg/Kg	1	2.00	<0.00296	108	70 - 130	3	20
Toluene		1,2,3,4,6	2.28	mg/Kg	1	2.00	<0.00351	114	70 - 130	2	20
Ethylbenzene		1,2,3,4,6	2.38	mg/Kg	1	2.00	<0.00312	119	70 - 130	2	20
Xylene		1,2,3,4,6	7.26	mg/Kg	1	6.00	<0.00310	121	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	6	2.11	2.12	mg/Kg	1	2	106	106	70 - 130
4-Bromofluorobenzene (4-BFB)	6	1.99	2.00	mg/Kg	1	2	100	100	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 115520 | Date Analyzed: 2014-09-17 | Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	223	89	80 - 120	2014-09-17

Standard (CCV-2)

QC Batch: 115520 | Date Analyzed: 2014-09-17 | Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	235	94	80 - 120	2014-09-17

Standard (CCV-3)

QC Batch: 115520 | Date Analyzed: 2014-09-17 | Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	228	91	80 - 120	2014-09-17

Standard (CCV-1)

QC Batch: 115558 | Date Analyzed: 2014-09-17 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.913	91	80 - 120	2014-09-17

Standard (CCV-2)

QC Batch: 115558 Date Analyzed: 2014-09-17 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.813	81	80 - 120	2014-09-17

Standard (CCV-3)

QC Batch: 115558 Date Analyzed: 2014-09-17 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.866	87	80 - 120	2014-09-17

Standard (CCV-1)

QC Batch: 115611 Date Analyzed: 2014-09-18 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,6	mg/kg	0.100	0.0862	86	80 - 120	2014-09-18
Toluene		1,2,3,4,6	mg/kg	0.100	0.0837	84	80 - 120	2014-09-18
Ethylbenzene		1,2,3,4,6	mg/kg	0.100	0.0836	84	80 - 120	2014-09-18
Xylene		1,2,3,4,6	mg/kg	0.300	0.250	83	80 - 120	2014-09-18

Standard (CCV-2)

QC Batch: 115611 Date Analyzed: 2014-09-18 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,6	mg/kg	0.100	0.0851	85	80 - 120	2014-09-18
Toluene		1,2,3,4,6	mg/kg	0.100	0.0836	84	80 - 120	2014-09-18
Ethylbenzene		1,2,3,4,6	mg/kg	0.100	0.0841	84	80 - 120	2014-09-18
Xylene		1,2,3,4,6	mg/kg	0.300	0.252	84	80 - 120	2014-09-18

Standard (CCV-1)

QC Batch: 115612 Date Analyzed: 2014-09-18 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.931	93	80 - 120	2014-09-18

Standard (CCV-2)

QC Batch: 115612 Date Analyzed: 2014-09-18 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.908	91	80 - 120	2014-09-18

Standard (CCV-1)

QC Batch: 115623 Date Analyzed: 2014-09-19 Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	229	92	80 - 120	2014-09-19

Standard (CCV-2)

QC Batch: 115623 Date Analyzed: 2014-09-19 Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	232	93	80 - 120	2014-09-19

Standard (CCV-3)

QC Batch: 115623 Date Analyzed: 2014-09-19 Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	257	103	80 - 120	2014-09-19

Standard (CCV-4)

QC Batch: 115623 Date Analyzed: 2014-09-19 Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	224	90	80 - 120	2014-09-19

Standard (ICV-1)

QC Batch: 115636 Date Analyzed: 2014-09-19 Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	97.0	97	85 - 115	2014-09-19

Standard (CCV-1)

QC Batch: 115636 Date Analyzed: 2014-09-19 Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	103	103	85 - 115	2014-09-19

Standard (ICV-1)

QC Batch: 115638 Date Analyzed: 2014-09-16 Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-09-16

Standard (CCV-1)

QC Batch: 115638 Date Analyzed: 2014-09-16 Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-09-16

Standard (ICV-1)

QC Batch: 115669 Date Analyzed: 2014-09-21 Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.0	98	85 - 115	2014-09-21

Standard (CCV-1)

QC Batch: 115669 Date Analyzed: 2014-09-21 Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2014-09-21

Standard (ICV-1)

QC Batch: 115670 Date Analyzed: 2014-09-21 Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-09-21

Standard (CCV-1)

QC Batch: 115670 Date Analyzed: 2014-09-21 Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-09-21

Standard (ICV-1)

QC Batch: 115683 Date Analyzed: 2014-09-21 Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2014-09-21

Standard (CCV-1)

QC Batch: 115683 Date Analyzed: 2014-09-21 Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.0	99	85 - 115	2014-09-21

Standard (ICV-1)

QC Batch: 115685 Date Analyzed: 2014-09-22 Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.0	99	85 - 115	2014-09-22

Standard (CCV-1)

QC Batch: 115685 Date Analyzed: 2014-09-22 Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2014-09-22

Standard (ICV-1)

QC Batch: 115686 Date Analyzed: 2014-09-22 Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-09-22

Standard (CCV-1)

QC Batch: 115686 Date Analyzed: 2014-09-22 Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-09-22

Standard (CCV-1)

QC Batch: 115691 Date Analyzed: 2014-09-22 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,6	mg/kg	0.100	0.0981	98	80 - 120	2014-09-22
Toluene		1,2,3,4,6	mg/kg	0.100	0.0999	100	80 - 120	2014-09-22
Ethylbenzene		1,2,3,4,6	mg/kg	0.100	0.0998	100	80 - 120	2014-09-22
Xylene		1,2,3,4,6	mg/kg	0.300	0.304	101	80 - 120	2014-09-22

Standard (CCV-2)

QC Batch: 115691 Date Analyzed: 2014-09-22 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,6	mg/kg	0.100	0.0945	94	80 - 120	2014-09-22
Toluene		1,2,3,4,6	mg/kg	0.100	0.0964	96	80 - 120	2014-09-22
Ethylbenzene		1,2,3,4,6	mg/kg	0.100	0.0979	98	80 - 120	2014-09-22
Xylene		1,2,3,4,6	mg/kg	0.300	0.298	99	80 - 120	2014-09-22

Standard (CCV-1)

QC Batch: 115692 Date Analyzed: 2014-09-22 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,6	mg/kg	0.100	0.0962	96	80 - 120	2014-09-22
Toluene		1,2,3,4,6	mg/kg	0.100	0.0974	97	80 - 120	2014-09-22
Ethylbenzene		1,2,3,4,6	mg/kg	0.100	0.0969	97	80 - 120	2014-09-22
Xylene		1,2,3,4,6	mg/kg	0.300	0.294	98	80 - 120	2014-09-22

Standard (CCV-2)

QC Batch: 115692 Date Analyzed: 2014-09-22 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,6	mg/kg	0.100	0.0975	98	80 - 120	2014-09-22

continued ...

standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Toluene		1,2,3,4,6	mg/kg	0.100	0.100	100	80 - 120	2014-09-22
Ethylbenzene		1,2,3,4,6	mg/kg	0.100	0.0992	99	80 - 120	2014-09-22
Xylene		1,2,3,4,6	mg/kg	0.300	0.300	100	80 - 120	2014-09-22

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2014-018	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

1 Dilution due to hydrocarbons.
2 Dilution due to hydrocarbons.

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

14091212

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Legacy Reserves Operating
SITE MANAGER: Ike Tavarez
PROJECT NO.:
PROJECT NAME: Drickey Queen Sand Unit #808, Chaves Co., NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
374516	09/10		S		X	AH-1	0'-1'	1				X			X											X				
517							1'-1.5'	1						X	X											X				
518							2'-2.5'	1																		X				
519							3'-3.5'	1																		X				
520							4'-4.5'	1																		X				
521						AH-2	0-1	1							X											X				
522							1-1.5	1						X	X											X				
523							2-2.5	1																		X				
524							3-3.5	1																		X				
							~~4-4.5~~ X	1																		X				

RELINQUISHED BY: (Signature) [signature] Date: 9-11-14 Time: 1620
RECEIVED BY: (Signature) [signature] Date: 9/11/14 Time: 16:20
RELINQUISHED BY: (Signature) [signature] Date: 9/15/14 Time: 13:00
RECEIVED BY: (Signature) Date: Time:
RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) I. Tavarez, A. McClanahan, C. Francis Date: 09-10-2014 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL #: 2864771 HAND DELIVERED UPS OTHER: LSO
TETRA TECH CONTACT PERSON: Ike Tavarez
Results by:
RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace Analysis
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) [signature] DATE: 9-16-14 TIME: 9Am

SAMPLE CONDITION WHEN RECEIVED: 990 1.7°

REMARKS: Run deeper sample if TPH exceed 5000 mg/Kg.
Run deeper sample if benzene exceed 10 mg/kg or total BTEX exceed 50 mg/kg
*No sample rec AH-2 4-4.5'
Method: 8015 Mod GRO / DRO

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

14091212

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: Legacy Reserves Operating
SITE MANAGER: Ike Tavarez
PROJECT NO.:
PROJECT NAME: Drickey Queen Sand Unit # 808
Chaves Co., NM

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
535	9/10		S		X	AH-4 1'-1.5'	1				X		X	X											X				
536						2'-2.5'	1																		X				
537						3'-3.5'	1																		X				
538						4'-4.5'	1																		X				
539						6'-6.5'	1																		X				
540						AH-5 0'-1'	1							X											X				
541						1'-1.5'	1						X	X											X				
542						2'-2.5'	1																		X				
543						3'-3.5'	1																		X				
544						4'-4.5'	1																		X				

RELINQUISHED BY: (Signature) Date: 9-11-14 Time: 1620
RECEIVED BY: (Signature) Date: 9/11/14 Time: 16:20

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) C. Francis I. Tavarez, A. McClanahan Date: 09-10-2014 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS OTHER: CSO
AIRBILL #: 2R641772

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace Analysis
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: 9-16-14 TIME: 9am

SAMPLE CONDITION WHEN RECEIVED: 9.90 / 1.7°

REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

1409212

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Legacy Reserves Operating
SITE MANAGER: Ike Tavarez
PROJECT NO.:
PROJECT NAME: Drickey Queen Sand Unit # 808
Chaves Co., NM

ANALYSIS REQUEST (Circle or Specify Method No.)

	LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
1	525	09/10		S		X	AH-3 0'-1'	1				X			X										X				
1	526						1'-1.5'	1						X	X											X				
	527						2'-2.5'	1																		X				
	528						3'-3.5'	1																		X				
	529						4'-4.5'	1																		X				
	530						5'-5.5'	1																		X				
	531						6'-6.5'	1																		X				
	532						7'-7.5'	1																		X				
	533						8'-8.5'	1																		X				
1	534						AH-4 0'-1'	#4							X											X				

RELINQUISHED BY: (Signature) — Date: 9-11-14 Time: 11:20
RECEIVED BY: (Signature) — Date: 9/11/14 Time: 1620
RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) C. Francis, I. Tavarez, A. McClanahan — Date: 09-10-2014 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: 2R6417241 OTHER: LSO

RECEIVING LABORATORY: Trace Analysis
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: 9-16-14 TIME: 9 am

TETRA TECH CONTACT PERSON: Ike Tavarez
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 90 / 1.7°
REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

1409312

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Legacy Reserves Operating
SITE MANAGER: Ike Tavarez
PROJECT NO.:
PROJECT NAME: Drickey Queen Sand Unit #808

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
545	09/10		S		X	AH-5 #1 5'-5.5'	1				X														X			
546						AH-6 0'-1'	1							X											X			
547						1'-1.5'	1						X	X											X			
548						2'-2.5'	1																		X			
549						3'-3.5'	1																		X			
550						4'-4.5'	1																		X			
551						5'-5.5'	1																		X			
552						7'-7.5'	1																		X			
553						AH-7 #1 0'-1'	1							X											X			
554						1'-1.5'	1						X	X											X			

RELINQUISHED BY: (Signature) — Date: 9-12-14 Time: 1620
RECEIVED BY: (Signature) — Date: 9/11/14 Time: 1620
SAMPLED BY: (Print & Initial) C. Francis I. Tavarez, A. McClanahan — Date: 09-10-2014 Time:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: 2R641 771 OTHER: 450

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RECEIVING LABORATORY: Trace Analysis
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Cosmos
DATE: 9-16-14 TIME: 9am
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 9.90 / 1.7°
REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

1409 1212

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Legacy Reserves Operating
SITE MANAGER: Ike Tavarez
PROJECT NO.:
PROJECT NAME: Drickey Queen Sand Unit # 808
Chaves Co., NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 Mod. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
555	09/10		S		X	AH-7 2'-2.5'	1				X													X				
556						3'-3.5'	1																	X				
557						4'-4.5'	1																	X				
558						AH-8 0'-1'	1							X										X				
559						1'-1.5'	1						X	X										X				
560						2'-2.5'	1																	X				
561						AH-9 0'-1'	1							X										X				
562						1'-1.5'	1						X	X										X				
563						2'-2.5'	1																	X				
564						AH-10 0'-1'	1							X										X				

RELINQUISHED BY: (Signature) — Date: 9-11-14 Time: 1620
RECEIVED BY: (Signature) — Date: 9/11/14 Time: 16:20
SAMPLED BY: (Print & initial) C. Franco I. Tavarez, A. McClanahan — Date: 09-10-2014 Time:
RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: 2R6417701 OTHER: CSO
RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:
RECEIVING LABORATORY: Trace Analysis — RECEIVED BY: (Signature) Bconnos
ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE: — DATE: 9-16-14 TIME: 9am
RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 98° 11.7° — REMARKS: No sample labeled AH-7 2-2.5' using for my 2-25' w/no AH designation

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

1409121Z

Analysis Request of Chain of Custody Record

PAGE: 6 OF: 6

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Legacy Reserves Operating
SITE MANAGER: Ike Tavarez
PROJECT NO.:
PROJECT NAME: Drickey Queen Sand Unit # 808

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 Mod. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8081/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
565	09/10		S		X	AH-10 Chaves Co., NM 1'-1.5'	1				X		X	X											X				
566						AH-11 0'-1'	1						X	X											X				
567						↓ 1'-1.5'	1						X	X											X				
568						AH-12 0'-1'	1							X											X				
569	↓		↓		↓	↓ 1'-1.5'	1				↓		X	X											X				

RELINQUISHED BY: (Signature)	Date: 9-15-14 Time: 1630	RECEIVED BY: (Signature)	Date: 9/11/14 Time: 16:26
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) G Francis, I. Tavarez, A. McLanahan — Date: 09-10-2014 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL # 2R64 7771 OTHER: LSO

RECEIVING LABORATORY: Trace Analysis
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) B Cisneros
DATE: 9-16-14 TIME: 9Am

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 1.7°

REMARKS: AJ

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Appendix D

NMCRIS No.: 131891

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS Activity No.:	2a. Lead Agency:	2b. Other Agency(ies):	3. Lead Agency Report No.:
131891	US Bureau of Land Management Roswell Field Office		

4. Title of Report:

A Class III Archaeological Survey of an Oil Spill Survey for Legacy Reserves Operating, LP.

Author(s)

Rorex, Allen and Jacklyn Smith

5. Type of Report

☑ Negative

☐ Positive

6. Investigation Type

☐ Research Design ☑ Archaeological Survey/Inventory ☐ Architectural Survey/Inventory ☐ Test Excavation ☐ Excavation
☐ Collections/Non-Field Study ☐ Compliance Decision Based on Previous Inventory ☐ Overview/Lit Review ☐ Monitoring
☐ Ethnographic Study ☐ Site/Property Specific Visit ☐ Historic Structures Report ☐ Other

7. Description of Undertaking (what does the project entail?):

On October 7th, 2014, Allen Rorex with SNMAS conducted a class III archaeological survey for the oil spill. The cultural resource inventory was conducted at the request of Ike Tavarez with Tetra Tech on behalf of Legacy Reserves Operating, LP. The project was conducted to meet or exceed the Bureau of Land Management Roswell District Office (BLM-RFO) current professional standards for cultural surveys. These standards are detailed in the BLM Manual Supplement H-8100-1 New Mexico, Oklahoma and Texas, Procedures for Performing Cultural Resource Fieldwork on Public Lands in the area of New Mexico BLM Responsibilities 2002. The authority for these standards comes in part from Section 106 of the National Historic Preservation Act of 1966, the Antiquities Act of 1906 and the Historic Sites Act of 1935, along with all additional federal and state laws for preserving and protecting cultural resources.

The project consists of an oil spill located in section 04 in T14S R31E; Chavez County, New Mexico. The spill was approximately 2042' (+/-) long covering an area of 1.2 (+/-) acres. The spill began in the NE ¼ of section 4 and flowed west/southwest. It is not clear if Legacy was trying to stop the spill flow or cover it up. Most of the spill has been mechanically pushed by a backhoe and the exterior of the spill have been disturbed. The survey results were negative for any cultural materials within the spill area and a survey area extending 100' in all directions from the spill area. A total of 11.50 (+/-) acres were surveyed for this spill.

The spill area is located within a semi-arid desert on Mescalero Ridge below the Caprock in Chaves County, New Mexico. Impacts to the area include various modern oil field constructions. The survey area of the spill area is plotted on the attached project map. Location plots for the project were obtained by utilizing a survey grade hand held GPS.

[ ] Continuation

8. Dates of Investigation: 1-Oct-14 7-Jan-14 **9. Report Date:** 14-Oct-14

10. Performing Agency/Consultant: Southern NM Archaeological Services

Principal Investigator: David Hill

Field Supervisor: Allen Rorex

Field Personnel Names: Allen Rorex

Historian / Other:

11. Performing Agency/Consultant Report No.:
SNMAS 14NM-4115

12. Applicable Cultural Resource Permit No(s):
BLM: 145-2920-12-U, State: NM-14-095-S

13. Client/Customer (project proponent):

Tetra Tech

Contact: Ike Tavarez

Address: 4000 N Big Springs, Suite 401 Midland, TX 79705 **Phone:** 432-682-4559

14. Client/Customer Project No.:

15. Land Ownership Status (must be indicated on project map):

Land Owner (By Agency)	Acres Surveyed	Acres in APE
US Bureau of Land Management Roswell Field Office	11.50	11.50
TOTALS	11.50	11.50

16. Records Search(es):

Date(s) of HPD/ARMS File Review: 1 Oct 2014	Name of Reviewer(s): Jackie Smith	
Date(s) of Other Agency File Review: 2 Oct 2014	Name of Reviewer(s): Doralene Sanders	Agency: BLM-CFO
Date(s) of Other Agency File Review: 1 Oct 2014	Name of Reviewer(s): Jackie Smith	Agency: GLO

Prefield investigations of the spill area consist of the review of web sites and project files located at the BLM-RFO, the Archaeological Records Management Section (ARMS) and the General Land Office (GLO). The records search at the BLM was conducted on 2 October 2014, the ARMS and GLO search was conducted on the 1 October 2014. A total of 2 cultural sites, LA32243 and LA722415 were found within 1 mile of the spill area for reporting to the BLM. A review of the GLO files found no patents associated with this spill area.

17. Survey Data:

a. Source Graphics [ ] NAD 27 [X] NAD 83 **Note: NAD 83 is the NMCRIS standard.**

☑ **USGS 7.5' (1:24,000) topo map** ☐ **Other topo map, Scale:**

☑ **GPS Unit Accuracy** ☐ **<1.0m** ☑ **1-10m** ☐ **10-100m** ☐ **>100m** ☐ **Aerial Photo(s)**

Other Source Graphic(s):

b. USGS 7.5' Topographic Map Name	USGS Quad Code
CAUDILL RANCH, NM	33103-B7

c. County(ies): Chaves

d. Nearest City or Town: Hagerman, New Mexico

e. Legal Description:

Township (N/S)	Range (E/W)	Section
14 S	31 E	4 SE¼ NE¼, SW¼ NE¼

Projected legal description? [ ] Yes [ ] No [X] Unplatted

f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.):

[ ] Continuation

18. Survey Field Methods:

Intensity: ☐ 100% coverage ☐ <100% coverage

Configuration: ☐ block survey units ☑ linear survey units (l x w): Total BLM 2042' x 200' (+/-)

☐ other survey units (specify):

Scope: ☑ non-selective (all sites/properties recorded) ☐ selective/thematic (selected sites/properties recorded)

Coverage Method: ☑ systematic pedestrian coverage

☐ other method (describe):

Survey Interval (m): 15 **Crew Size:** 1 **Fieldwork Dates:** 7-Oct-14 7-Oct-14

Survey Person Hours: 4 **Recording Person Hours:** 0 **Total Hours:** 4

Additional Narrative:

The spill area was surveyed, by one field person walking with a series of parallel transects spaced at 15 meter intervals covering the survey area. This survey was designed to meet, but not limited to, the requirements detailed in the BLM Manual Supplement H-8100-1 New Mexico, Oklahoma and Texas, Procedures for performing Cultural Resource Fieldwork on Public Lands in the area of New Mexico BLM Responsibilities 2002.

[ ] Continuation

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.):

Topography: A semi-arid desert on Mescalero Ridge below the Caprock

Vegetation: mesquite, sand sagebrush, N.M. Corton, snakeweed, parque, cresote, drop seed grass, and various other desert cacti, grasses and forbes.

NRCS: Roswell-Faskin-Jalmar association: Deep, level to rolling, rapidly permable and moderately permeable fine sands

Aspect: 360 degrees

Elevation: 4180' – 4215'

Lithic Resources: Some cherts, in gravels, very sparse.

Water Sources: (Potential) various unnamed drainages bisecting the project area.
(Permanent) The Pecos River, 27 miles west of the proposed project area.

[ ] Continuation

20.a. Percent Ground Visibility:

b. Condition of Survey Area (grazed, bladed, undistributed, etc.): bladed &disturbed

[ ] Continuation

21. CULTURAL RESOURCE FINDINGS ☐ **Yes, see next report section** ☑ **No, discuss why:**

The area may not have offered natural resources for indigenous cultural groups to exploit.

[ ] Continuation

22. Attachments (check all appropriate boxes):

[X] USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn (required)

[X] Copy of NMCRIS Map Check (required)

[ ] LA Site Forms - new sites (with sketch map & topographic map) if applicable

[ ] LA Site Forms (update) - previously recorded & un-relocated sites (first 2 pages minimum)

[ ] Historic Cultural Property Inventory Forms, if applicable

[ ] List and Description of Isolates, if applicable

[ ] List and Description of Collections, if applicable

23. Other Attachments:

[ ] Photographs and Log

[X] Other Attachments (Describe):
Location Map, BLM prefield map and BLM prefield table

24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator **Printed Name: David Hill**

Qualified Supervisor: **Printed Name: Allen Rorex**

Signature: for Allen Rorex /S/ Jacklyn Smith **Date:** 14-Oct-14 **Title:** Qualified Supervisor

25. Reviewing Agency	**26. SHPO**
Reviewer's Name/Date:	**Reviewer's Name/Date:**
Accepted [ ] **Rejected [ ]**	**HPD Log #:**
	Date sent to ARMS:

CULTURAL RESOURCE FINDINGS

[fill in appropriate section(s)]

SURVEY RESULTS:

Archaeological Sites discovered and registered: 0

Archaeological Sites discovered and NOT registered: 0

Previously recorded archaeological sites revisited (site update form required): 0

Previously recorded archaeological sites not relocated (site update form required): 0

TOTAL ARCHAEOLOGICAL SITES (visited & recorded): 0

Total isolates recorded: 0 ☐ **Non-selective isolate recording?**

HCPI properties discovered and registered: 0

HCPI properties discovered and NOT registered: 0

Previously recorded HCPI properties revisited: 0

Previously recorded HCPI properties not relocated: 0

TOTAL HCPI PROPERTIES (visited & recorded, including acequias): 0

MANAGEMENT SUMMARY:

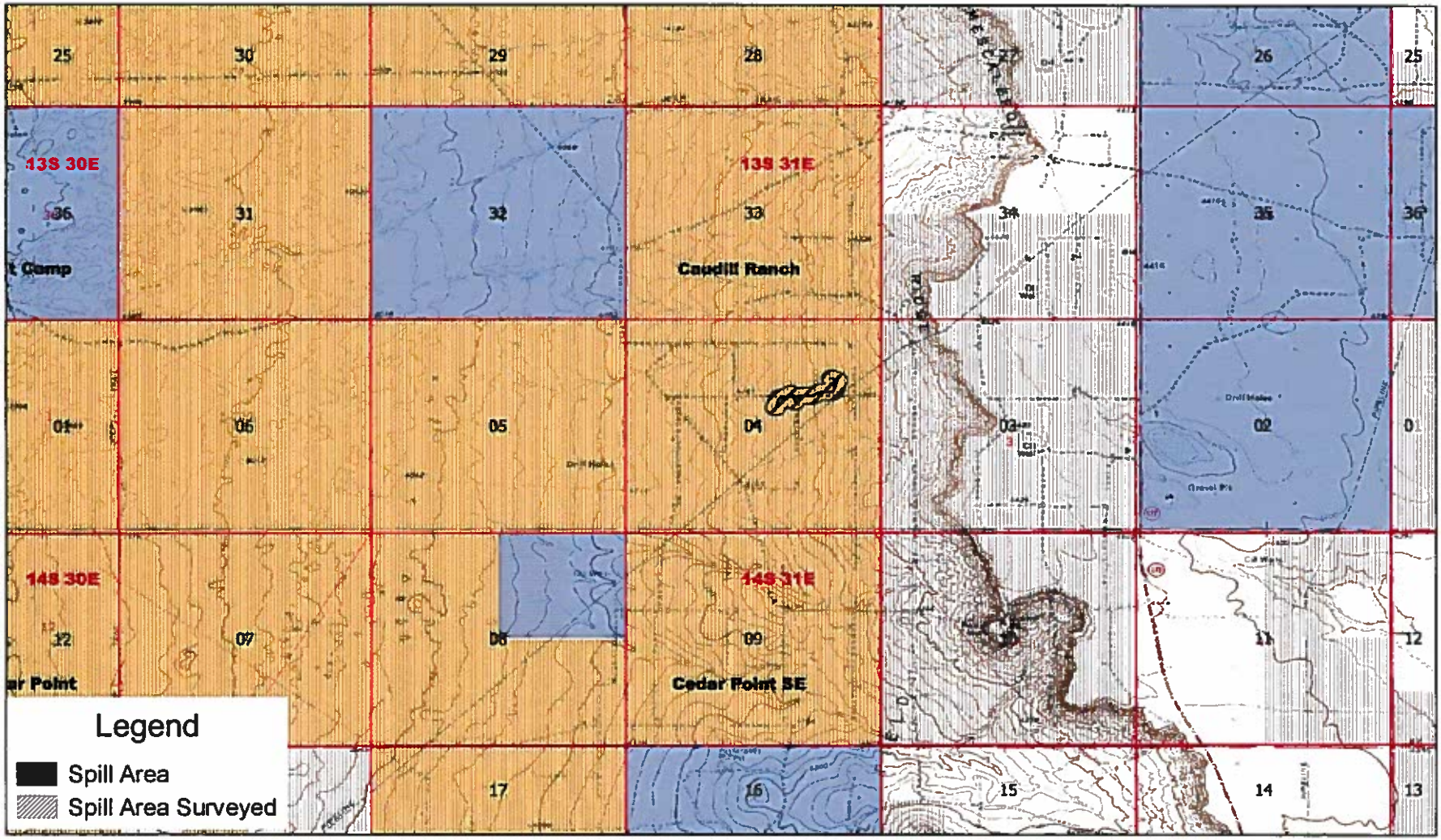
Archaeological clearance is recommended, for the clean up for the spill area for Legacy Reserves Operating, LP as the project is currently staked. If cultural materials are encountered, at any time, all work should cease and a BLM-RFO Staff archaeologist notified immediately

[ ] Continuation

IF REPORT IS NEGATIVE, YOU ARE DONE AT THIS POINT.

Project Map

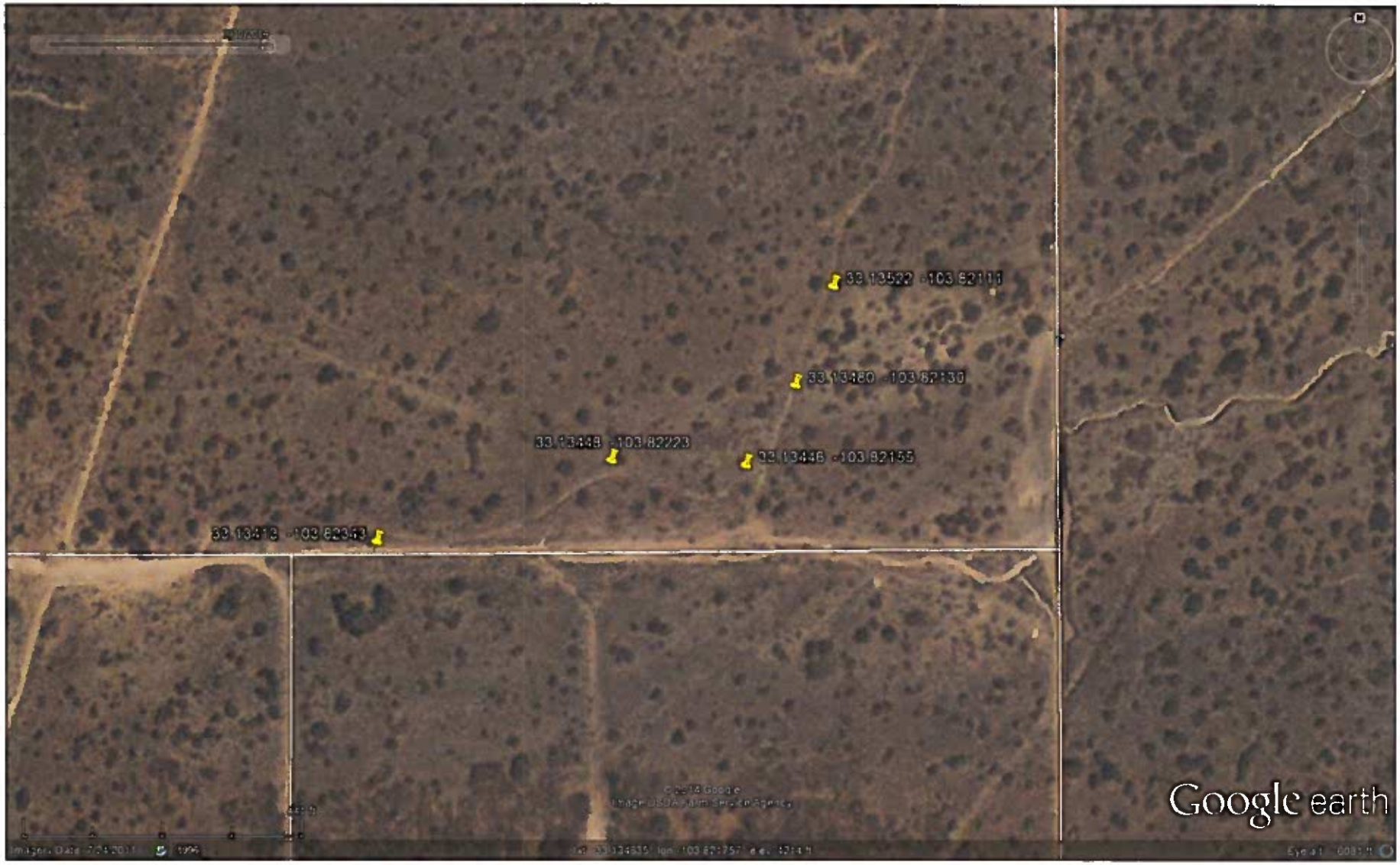
SNMAS 14NM-4115



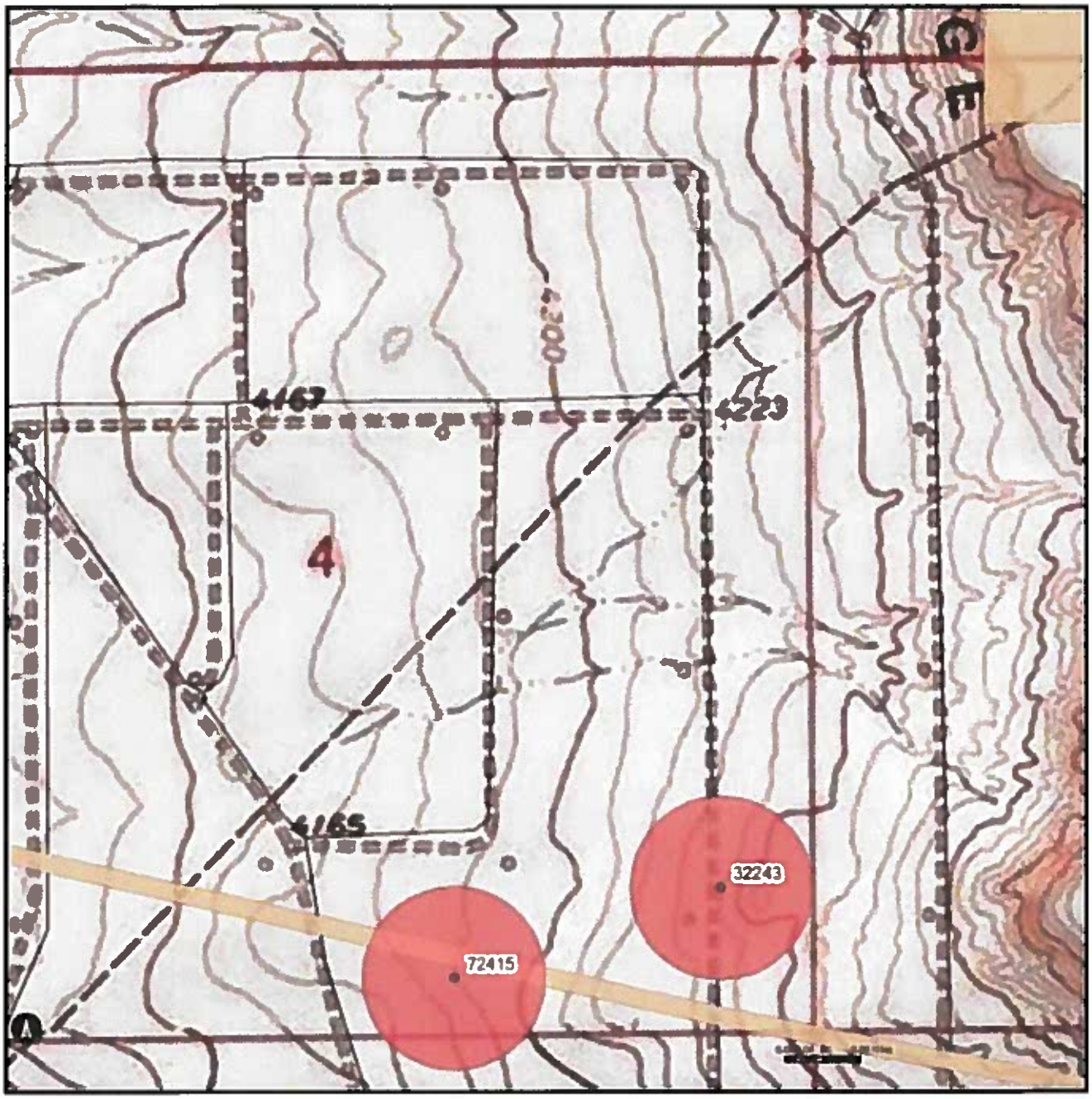
A location map of an oil spill survey for Legacy Reserves Operating, LP. Located in section 04 in T14S R31E; Chaves County, New Mexico.
Map Reference; USGS 7.5'Series Quadrangles: CAUDILL RANCH, NM 33103-B7

0 500 1000 1500 2000 Meters

0 0.25 0.5 0.75 1 Miles


33.13522 -103.82116
33.13480 -103.82130
33.13448 -103.82223
33.13446 -103.82155
33.13413 -103.82343
Google earth

Map



Site Labels

Site Boundaries (Edit)

Site Boundaries
- Not Defined
- Proposed
- Approved

Building Labels

Object Labels

Buildings
- Not Defined
- Proposed
- Approved

Objects
- Not Defined
- Proposed
- Approved

Linear Resources
- Not Defined

Archaeological Surveys (Edit)

Archaeological Surveys
- Not Defined
- Proposed
- Approved

Highways
- Primary Limited Access or Interstate
- Primary US and State Highways
- Secondary State and County

Pre-Field for Legacy Oil Spill Location T14S R31E Sec. 4

1:24,000