

SITE INFORMATION

Report Type: Closure Report

General Site Information:

Site:	Mobil 22 Federal #6 Well Site					
Company:	Stephens & Johnson Operating Co.					
Section, Township and Range	Unit K	Sec 22	T 26S	R 29E		
Lease Number:	API-30-015-25333					
County:	Eddy County					
GPS:	32.02664° N			103.97332° W		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	From the intersection of Hwy 285 and Whitehorn Rd, travel on Whitehorn Rd for 7.8 miles, turn south onto location.					

Release Data:

Date Released:	Unknown
Type Release:	Produced Water
Source of Contamination:	Illegal Dumping
Fluid Released:	Unknown
Fluids Recovered:	None

Official Communication:

Name:	William M. Kincaid	Ike Tavaréz
Company:	Stephens & Johnson Operating	Tetra Tech
Address:	P.O. Box 2249	4000 N. Big Spring
		Suite 401
City:	Wichita Falls, TX 76307	Midland, Texas
Phone number:	(940) 723-2166	(432) 682-4559
Fax:		
Email:	mkincaid@sjoc.net	ike.tavarez@tetrattech.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:		10

Acceptable Soil RRAL (mg/kg)		
Benzene	Total BTEX	TPH
10	50	1,000



TETRA TECH

October 1, 2014

Mr. Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
811S. First Street
Artesia, New Mexico 88210

**Re: Closure Report for the Stephens & Johnson Operating Co.,
Mobil 22 Federal #6, Unit K, Section 22, Township 26 South,
Range 29 East, Eddy County, New Mexico.**

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by Stephens & Johnson Operating Co. S&J to assess an illegal dump located in Unit K, Section 22, Township 26 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.02664°, W 103.97332°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the illegal dump was discovered on February 18, 2014, and the amount released is unknown. The illegal dumping occurred on the south end of the pad affecting an area approximately 30' X 35'. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 22. According to the NMOCD groundwater map, the average depth to groundwater in this area is between 50' – 75' below surface. The groundwater data is shown in Appendix B.

Tetra Tech

4000 North Big Spring, Suite 401, Midland, TX 79705

Tel 432.682.4559 **Fax** 432.682.3946 www.tetrattech.com



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 1,000 mg/kg.

Soil Assessment and Analytical Results

On March 20, 2014, Tetra Tech personnel inspected and sampled the spill area. Two (2) auger holes (AH-1 and AH-2) were installed using a stainless steel hand auger to assess the impacted soils. Select 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 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 exceeded the RRAL's for TPH or BTEX. Elevated chloride concentrations were detected in the areas of AH-1 and AH-2 at 0'-1', with bottom auger hole concentrations of 1,040 mg/kg and 15,500 mg/kg, respectively. Deeper samples were not collected due to the dense formation and the chloride impact was not vertically defined.

On June 5, 2014, Tetra Tech personnel returned to the site to install two (2) boreholes (BH-1 and BH-2) to vertically define chloride impacts in the areas of auger holes (AH-1 and AH-2.) The area of BH-1 (AH-1) showed a chloride impact of 8,060 mg/kg at 0'-1' below surface, which declined with depth to 146 mg/kg at 6'-7' below surface. The results showed a chloride spike of 1,550 mg/kg at 9'-10', which then declined with depth to 971 mg/kg at 19'-20' below surface. Field analysis on the samples showed a minimal impact in the deeper soils and was defined; however the laboratory results showed a bottom borehole result of 971 mg/kg and appeared to be influenced by the gypsum in the soils.

The area of BH-2 (AH-2) showed a chloride high of 6,600 mg/kg at 0'-1', which declined with depth to 861 mg/kg at 9'-10' below surface. The chlorides then spiked to 1,150 mg/kg at 14'-15' below surface before again declining to 622 mg/kg at 19'-20' below surface. The area was vertically defined.

Remediation Activities

On September 9, 2014, Tetra Tech supervised the removal impacted material as highlighted (green) in Table 1 and shown on Figure 4. As proposed in the work plan, the areas of auger holes (AH-1 and AH-2) were excavated to depths of approximately 4.0' below surface and a 40 mil plastic liner was placed to cap the area and prevent further migration of contaminants left in place. Once the areas were excavated to the appropriate depths, the excavations were backfilled with clean soil to grade, and approximately 340 cubic yards of excavated material was hauled to proper disposal.

Conclusion

Based on the assessment and remediation work performed at this site, Stephens and Johnson requests closure of this spill issue. A final C-141 is enclosed in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities for this site, please call me at (432) 682-4559.

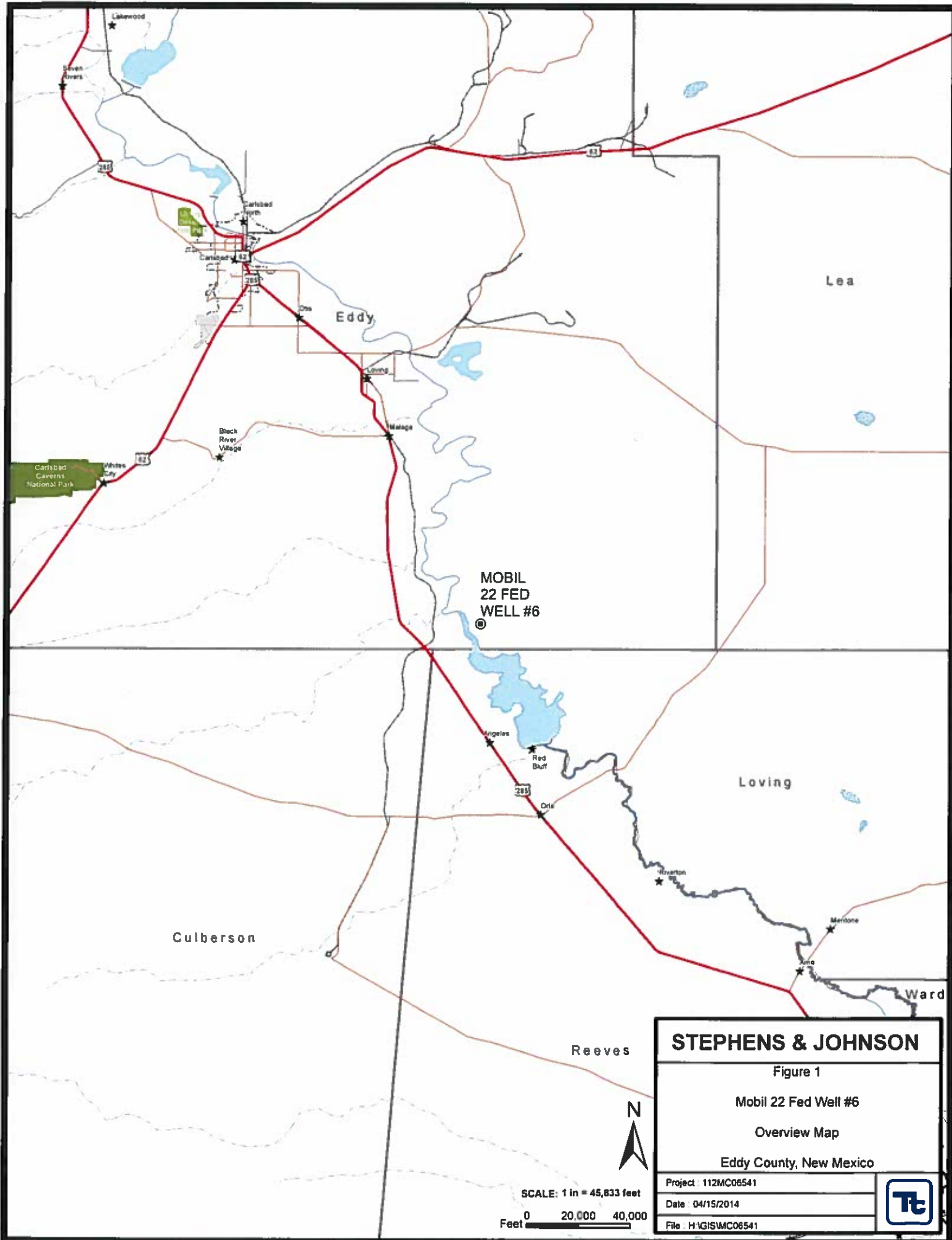
Respectfully submitted,
TETRA TECH

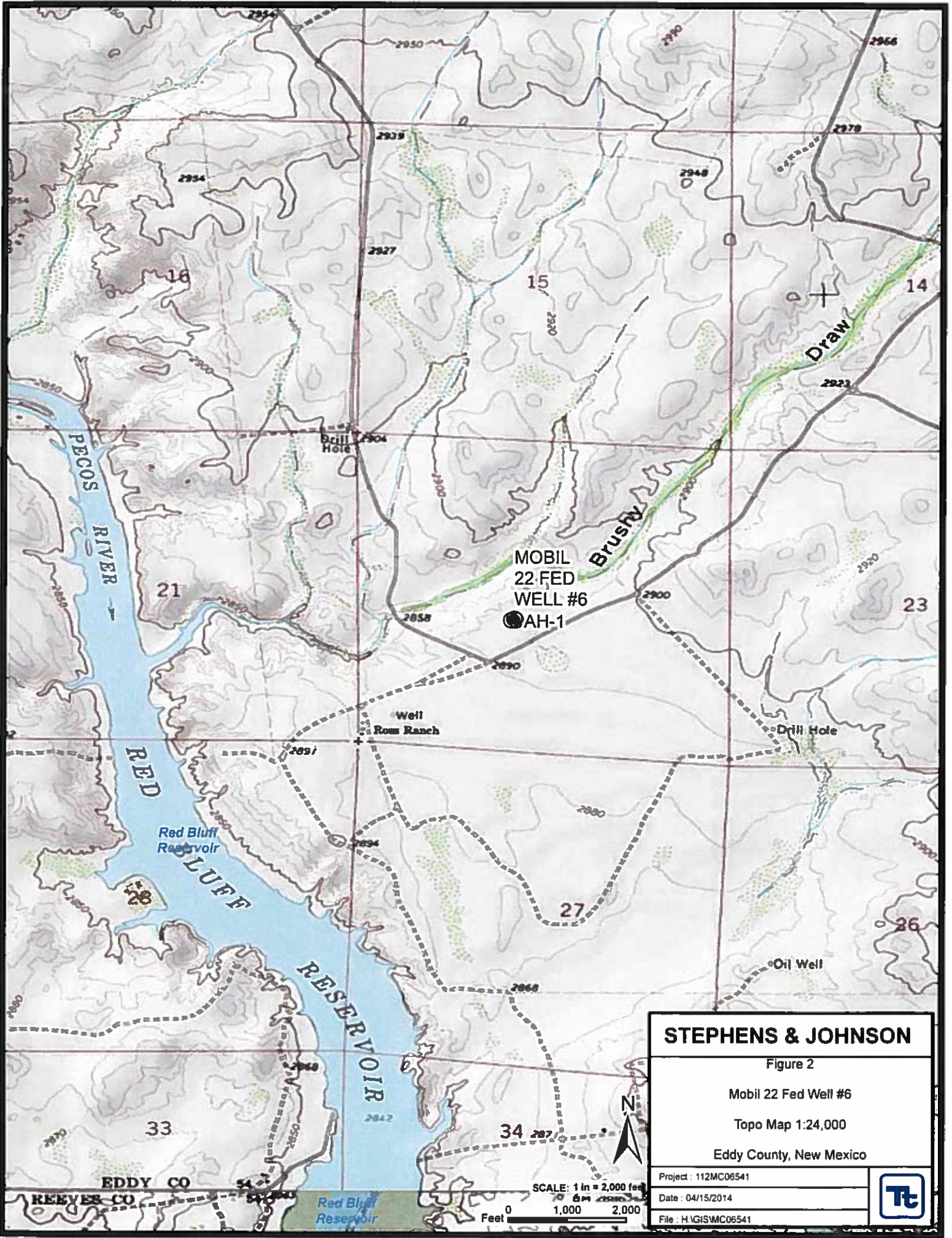


Clair Gonzales,
Geologist

cc: William M. Kincaid – S&J
cc: Jim Amos – BLM

Figures





STEPHENS & JOHNSON

Figure 2

Mobil 22 Fed Well #6

Topo Map 1:24,000

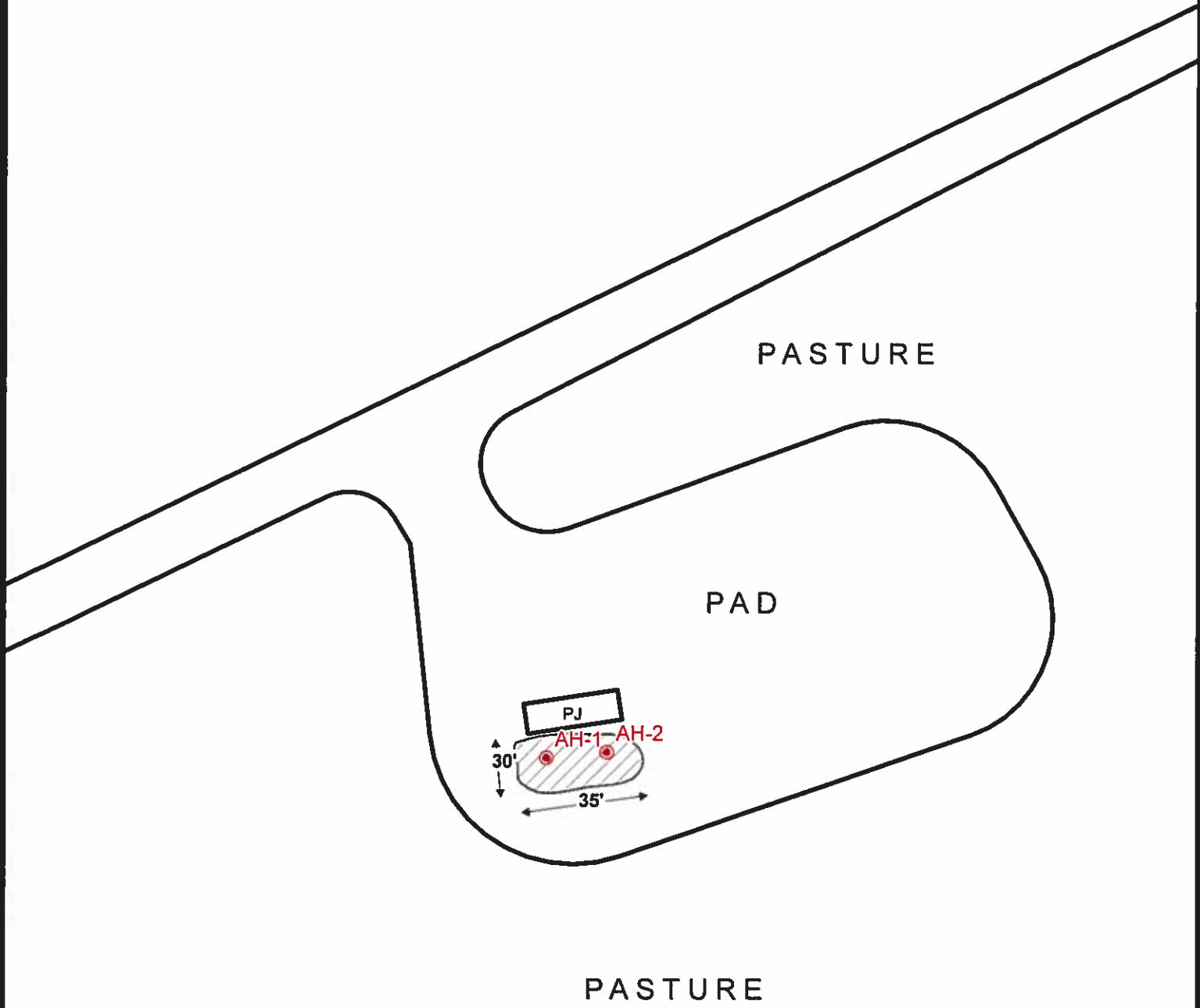
Eddy County, New Mexico

Project : 112MC06541

Date : 04/15/2014

File : H:\GIS\MC06541





EXPLANATION

● AUGER HOLE SAMPLE LOCATIONS

▨ SPILL AREA

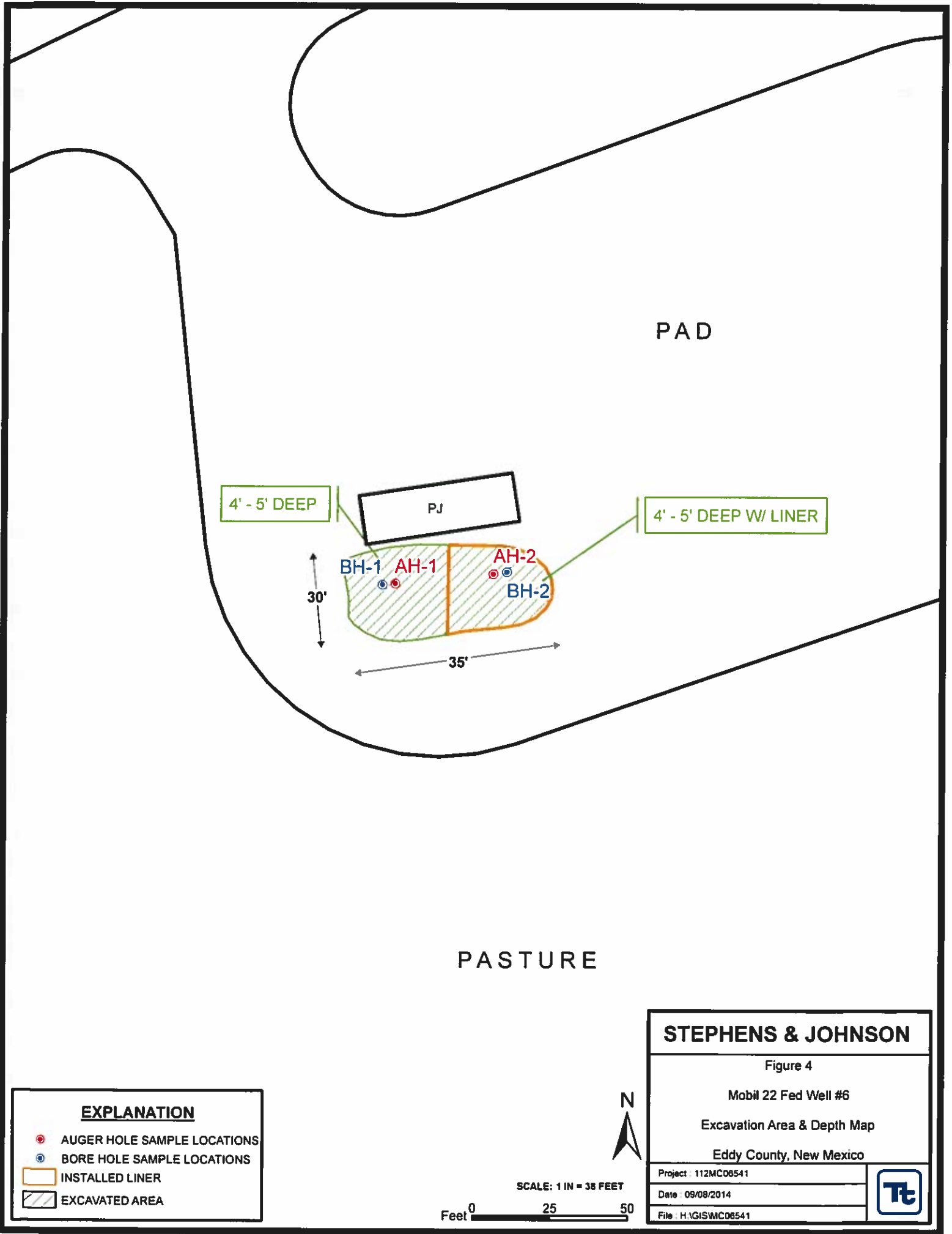


SCALE: 1 IN = 75 FEET

Feet 0 25 50

STEPHENS & JOHNSON	
Figure 3	
Mobil 22 Fed Well #6	
Spill Assessment Map	
Eddy County, New Mexico	
Project: 112MC06541	
Date: 04/15/2014	
File: H:\GIS\MC06541	





Tables

Table 1
Stephens & Johnson Operating
Mobil 22 Federal #6
Eddy 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)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-1	3/20/2014	0-1	0		X	113.0	796	909	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	2,570
	"	1-1.5	0		X	-	-	-	-	-	-	-	-	1,040
BH-1	6/5/2014	0-1	0		X	-	-	-	-	-	-	-	-	8,060
	"	2-3	0		X	-	-	-	-	-	-	-	-	6,460
	"	4-5	0		X	-	-	-	-	-	-	-	-	340
	"	6-7	0	X		-	-	-	-	-	-	-	-	146
	"	9-10	0	X		-	-	-	-	-	-	-	-	1,550
	"	14-15	0	X		-	-	-	-	-	-	-	-	583
	"	19-20	0	X		-	-	-	-	-	-	-	-	971
AH-2	3/20/2014	0-1	0		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	12,600
	"	1-1.5	0		X	-	-	-	-	-	-	-	-	15,500
BH-2	6/5/2014	0-1	0		X	-	-	-	-	-	-	-	-	6,600
	"	2-3	0		X	-	-	-	-	-	-	-	-	1,940
	"	4-5	0		X	-	-	-	-	-	-	-	-	1,360
	"	6-7	0	X		-	-	-	-	-	-	-	-	2,100
	"	9-10	0	X		-	-	-	-	-	-	-	-	861
	"	14-15	0	X		-	-	-	-	-	-	-	-	1,150
	"	19-20	0	X		-	-	-	-	-	-	-	-	622

(-) Not Analyzed

(BEB) Below Excavation Bottom

Liner Depth

Excavation Depths

Photos



View West – Area of AH-1



View East – Area of AH-2



View West – Area of AH-1 and AH-2



View West – Area of BH-1

Stephens & Johnson
Mobil 22 Federal #6
Eddy County, New Mexico



View West – Area of BH-2



View Southwest – Excavated area of AH-1 and AH-2



View North – Lined area of AH-2



View North – Backfilled area of AH-1 and AH-2

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 Stephens & Johnson Operating Co.	Contact William M. Kinkaid
Address P.O. Box 2249, Wichita Falls, TX 76307	Telephone No. (940) 723-2166
Facility Name Mobil 22 Federal #6	Facility Type Well

Surface Owner: Federal	Mineral Owner	Lease No. 30-015-25333
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LOCATION OF RELEASE

Unit Letter K	Section 22	Township 26S	Range 29E	Feet from the 2260	North/South Line SOUTH	Feet from the 2310	East/West Line WEST	County EDDY
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Latitude N 32.02664° Longitude W 103.97310 °

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release Unknown	Volume Recovered None
Source of Release: Illegal dumping from a water truck	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 02-18-2014
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A


Describe Cause of Problem and Remedial Action Taken.*

Possibly an illegal dump by a water transporter. All of the fluids remained on the well pad.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech inspected site and collected samples to define spills extent. Soil that exceeded RRAL was removed and hauled away for proper disposal. Site was then brought up to surface grade with clean backfill material. Tetra Tech prepared closure report and submitted to NMOCD for review.

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: 		OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez <i>Agent In SEJ</i>		Approved by District Supervisor:	
Title: Senior Project Manager, P.G.		Approval Date:	Expiration Date:
E-mail Address: Ike.Tavarez@tetratech.com		Conditions of Approval:	
Date: 10-8-14 Phone: (432) 682-4559		Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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1301 W. Grand Avenue, Artesia, NM 88210
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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	Stephens & Johnson Operating Co.	Contact	William M. Kincaid
Address	P.O. Box 2249, Wichita Falls, TX 76307	Telephone No.	(940) 723-2166
Facility Name	Mobil 22 Federal #6	Facility Type	Well

Surface Owner:	Federal	Mineral Owner:	Federal	Lease No.	30-015-25333
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	22	26S	29E	2260	South	2310	West	Eddy

Latitude N 32.65456° Longitude W 104.15868°

NATURE OF RELEASE

Type of Release:	Produced water	Volume of Release:	Unknown	Volume Recovered:	None
Source of Release:	illegal dumping from water truck	Date and Hour of Occurrence:	Unknown	Date and Hour of Discovery:	02-18-2014
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	N/A		
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		
If a Watercourse was Impacted, Describe Fully.*					
N/A					
Describe Cause of Problem and Remedial Action Taken.*					
Possibly an illegal dump by a water transporter. All of the fluids remained on the well pad.					
Describe Area Affected and Cleanup Action Taken.*					
The produced water spill will be assessed to define extents. Tetra Tech will collect soil samples for the site evaluation. Once defined, a work plan will be submitted to the NMOCD for review and approval.					
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: 	OIL CONSERVATION DIVISION		
Printed Name: William M. Kincaid	Approved by District Supervisor:		
Title: Petroleum Engineer	Approval Date:	Expiration Date:	
E-mail Address: mkincaid@sjoc.net	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 02-28-2014	Phone: 940-723-2166		

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
Stephens & Johnson - Mobile 22 Federal #6, Eddy County, New Mexico

24 South			28 East		
6	70	5	30	4	30
7		8	50	9	
18	17	16		15	14
19	42	29	18	52	34
30	29	28	27	26	25
31	32	33	34	35	36

24 South			29 East		
6		5	4	3	2
7		8	9	10	11
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South			30 East		
6		5	4	3	2
7		8	9	10	11
18	17	16	15	14	13
19	231	20	21	22	23
30	29	28	27	26	25
31	32	33	34	35	36

25 South			28 East		
6		5	4	35	3
7		8	9	10	11
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South			29 East		
6		5	4	3	2
7		8	9	10	11
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South			30 East		
6		5	4	3	2
7	264	8	9	295	10
18	17	16	15	14	13
19	20	21	265	22	23
30	29	28	27	26	25
31	32	33	34	35	36

26 South			28 East		
6		5	4	3	2
7		8	9	10	11
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

26 South			29 East		
6		5	4	3	2
7		8	9	10	11
18	17	16	15	14	13
19	20	21	2257	23	24
30	29	28	27	26	25
31	32	33	34	35	36

26 South			30 East		
6		5	179	4	3
7		8	180	9	10
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

- 88** New Mexico State Engineers Well Reports
- 105** USGS Well Reports
- 90** Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)
 Geology and Groundwater Resources of Eddy County, NM (Report 3)
- 34** NMOCD - Groundwater Data

Appendix C

Summary Report

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

Report Date: June 13, 2014

Work Order: 14060629



Project Location: Eddy Co, NM
Project Name: Stephens & Johnson Oper/Mobil 22 Federal #6
Project Number: 112MC06541

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
364979	BH-1 0-1'	soil	2014-06-05	00:00	2014-06-06
364980	BH-1 2-3'	soil	2014-06-05	00:00	2014-06-06
364981	BH-1 4-5'	soil	2014-06-05	00:00	2014-06-06
364982	BH-1 6-7'	soil	2014-06-05	00:00	2014-06-06
364983	BH-1 9-10'	soil	2014-06-05	00:00	2014-06-06
364984	BH-1 14-15'	soil	2014-06-05	00:00	2014-06-06
364985	BH-1 19-20'	soil	2014-06-05	00:00	2014-06-06
364986	BH-2 0-1'	soil	2014-06-05	00:00	2014-06-06
364987	BH-2 2-3'	soil	2014-06-05	00:00	2014-06-06
364988	BH-24-5'	soil	2014-06-05	00:00	2014-06-06
364989	BH-2 6-7'	soil	2014-06-05	00:00	2014-06-06
364990	BH-2 9-10'	soil	2014-06-05	00:00	2014-06-06
364991	BH-2 14-15'	soil	2014-06-05	00:00	2014-06-06
364992	BH-2 19-20'	soil	2014-06-05	00:00	2014-06-06

Sample: 364979 - BH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		8060	mg/Kg	4

Sample: 364980 - BH-1 2-3'

Param	Flag	Result	Units	RL
Chloride		6460	mg/Kg	4

Sample: 364981 - BH-1 4-5'

Param	Flag	Result	Units	RL
Chloride		340	mg/Kg	4

Sample: 364982 - BH-1 6-7'

Param	Flag	Result	Units	RL
Chloride		146	mg/Kg	4

Sample: 364983 - BH-1 9-10'

Param	Flag	Result	Units	RL
Chloride		1550	mg/Kg	4

Sample: 364984 - BH-1 14-15'

Param	Flag	Result	Units	RL
Chloride		583	mg/Kg	4

Sample: 364985 - BH-1 19-20'

Param	Flag	Result	Units	RL
Chloride		971	mg/Kg	4

Sample: 364986 - BH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		6600	mg/Kg	4

Sample: 364987 - BH-2 2-3'

Param	Flag	Result	Units	RL
Chloride		1940	mg/Kg	4

Sample: 364988 - BH-24-5'

Param	Flag	Result	Units	RL
Chloride		1360	mg/Kg	4

Sample: 364989 - BH-2 6-7'

Param	Flag	Result	Units	RL
Chloride	Q#	2100	mg/Kg	4

Sample: 364990 - BH-2 9-10'

Param	Flag	Result	Units	RL
Chloride	Q#	861	mg/Kg	4

Sample: 364991 - BH-2 14-15'

Param	Flag	Result	Units	RL
Chloride	Q#	1150	mg/Kg	4

Sample: 364992 - BH-2 19-20'

Param	Flag	Result	Units	RL
Chloride	Q#	622	mg/Kg	4



6701 Aberdeen Avenue, Suite 9
200 East Sunset Road, Suite E
5002 Basin Street, Suite A1
(BioAquatic) 2501 Mayes Rd., Suite 100

Lubbock, Texas 79424
El Paso, Texas 79922
Midland, Texas 79703
Carrollton, Texas 75006

800-378-1298 806-794-1296 FAX 806-794-1298
915-585-3443 FAX 915-585-4944
432-689-6301 FAX 432-689-6313
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: June 13, 2014

Work Order: 14060629



Project Location: Eddy Co, NM
Project Name: Stephens & Johnson Oper/Mobil 22 Federal #6
Project Number: 112MC06541

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
364979	BH-1 0-1'	soil	2014-06-05	00:00	2014-06-06
364980	BH-1 2-3'	soil	2014-06-05	00:00	2014-06-06
364981	BH-1 4-5'	soil	2014-06-05	00:00	2014-06-06
364982	BH-1 6-7'	soil	2014-06-05	00:00	2014-06-06
364983	BH-1 9-10'	soil	2014-06-05	00:00	2014-06-06
364984	BH-1 14-15'	soil	2014-06-05	00:00	2014-06-06
364985	BH-1 19-20'	soil	2014-06-05	00:00	2014-06-06
364986	BH-2 0-1'	soil	2014-06-05	00:00	2014-06-06
364987	BH-2 2-3'	soil	2014-06-05	00:00	2014-06-06
364988	BH-2 4-5'	soil	2014-06-05	00:00	2014-06-06
364989	BH-2 6-7'	soil	2014-06-05	00:00	2014-06-06
364990	BH-2 9-10'	soil	2014-06-05	00:00	2014-06-06
364991	BH-2 14-15'	soil	2014-06-05	00:00	2014-06-06
364992	BH-2 19-20'	soil	2014-06-05	00:00	2014-06-06

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.

This report consists of a total of 15 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink that reads "Michael Abel". The signature is written in a cursive, flowing style.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

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Sample 364979 (BH-1 0-1')	5
Sample 364980 (BH-1 2-3')	5
Sample 364981 (BH-1 4-5')	5
Sample 364982 (BH-1 6-7')	5
Sample 364983 (BH-1 9-10')	6
Sample 364984 (BH-1 14-15')	6
Sample 364985 (BH-1 19-20')	6
Sample 364986 (BH-2 0-1')	7
Sample 364987 (BH-2 2-3')	7
Sample 364988 (BH-24-5')	7
Sample 364989 (BH-2 6-7')	7
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Case Narrative

Samples for project Stephens & Johnson Oper/Mobil 22 Federal #6 were received by TraceAnalysis, Inc. on 2014-06-06 and assigned to work order 14060629. Samples for work order 14060629 were received intact at a temperature of 5.8 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	95323	2014-06-11 at 16:11	112741	2014-06-11 at 16:13
Chloride (Titration)	SM 4500-Cl B	95351	2014-06-11 at 12:13	112767	2014-06-12 at 13:22

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 14060629 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.

Report Date: June 13, 2014
112MC06541

Work Order: 14060629
Stephens & Johnson Oper/Mobil 22 Federal #6

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Eddy Co, NM

Analytical Report

Sample: 364979 - BH-1 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-06-11	Analyzed By:	SC
QC Batch:	112741	Sample Preparation:	2014-06-11	Prepared By:	SC
Prep Batch:	95323				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			8060	mg/Kg	10	4.00

Sample: 364980 - BH-1 2-3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-06-11	Analyzed By:	SC
QC Batch:	112741	Sample Preparation:	2014-06-11	Prepared By:	SC
Prep Batch:	95323				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			6460	mg/Kg	5	4.00

Sample: 364981 - BH-1 4-5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-06-11	Analyzed By:	SC
QC Batch:	112741	Sample Preparation:	2014-06-11	Prepared By:	SC
Prep Batch:	95323				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			340	mg/Kg	5	4.00

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112MC06541

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Stephens & Johnson Oper/Mobil 22 Federal #6

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Eddy Co, NM

Sample: 364982 - BH-1 6-7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-06-11	Analyzed By:	SC
QC Batch:	112741	Sample Preparation:	2014-06-11	Prepared By:	SC
Prep Batch:	95323				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			146	mg/Kg	5	4.00

Sample: 364983 - BH-1 9-10'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-06-11	Analyzed By:	SC
QC Batch:	112741	Sample Preparation:	2014-06-11	Prepared By:	SC
Prep Batch:	95323				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1550	mg/Kg	5	4.00

Sample: 364984 - BH-1 14-15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-06-11	Analyzed By:	SC
QC Batch:	112741	Sample Preparation:	2014-06-11	Prepared By:	SC
Prep Batch:	95323				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			583	mg/Kg	5	4.00

Sample: 364985 - BH-1 19-20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-06-11	Analyzed By:	SC
QC Batch:	112741	Sample Preparation:	2014-06-11	Prepared By:	SC
Prep Batch:	95323				

Report Date: June 13, 2014
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Stephens & Johnson Oper/Mobil 22 Federal #6

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			971	mg/Kg	5	4.00

Sample: 364986 - BH-2 0-1'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	112741	Date Analyzed:	2014-06-11	Analyzed By: SC
Prep Batch:	95323	Sample Preparation:	2014-06-11	Prepared By: SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			6600	mg/Kg	10	4.00

Sample: 364987 - BH-2 2-3'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	112741	Date Analyzed:	2014-06-11	Analyzed By: SC
Prep Batch:	95323	Sample Preparation:	2014-06-11	Prepared By: SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1940	mg/Kg	10	4.00

Sample: 364988 - BH-24-5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	112741	Date Analyzed:	2014-06-11	Analyzed By: SC
Prep Batch:	95323	Sample Preparation:	2014-06-11	Prepared By: SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1360	mg/Kg	5	4.00

Report Date: June 13, 2014
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Sample: 364989 - BH-2 6-7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-06-12	Analyzed By:	SC
QC Batch:	112767	Sample Preparation:	2014-06-11	Prepared By:	SC
Prep Batch:	95351				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		2100	mg/Kg	5	4.00

Sample: 364990 - BH-2 9-10'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-06-12	Analyzed By:	SC
QC Batch:	112767	Sample Preparation:	2014-06-11	Prepared By:	SC
Prep Batch:	95351				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Q*		861	mg/Kg	5	4.00

Sample: 364991 - BH-2 14-15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-06-12	Analyzed By:	SC
QC Batch:	112767	Sample Preparation:	2014-06-11	Prepared By:	SC
Prep Batch:	95351				

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

Sample: 364992 - BH-2 19-20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-06-12	Analyzed By:	SC
QC Batch:	112767	Sample Preparation:	2014-06-11	Prepared By:	SC
Prep Batch:	95351				

Report Date: June 13, 2014
112MC06541

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

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112MC06541

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Method Blanks

Method Blank (1) QC Batch: 112741

QC Batch: 112741
Prep Batch: 95323

Date Analyzed: 2014-06-11
QC Preparation: 2014-06-11

Analyzed By: SC
Prepared By: SC

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

Method Blank (1) QC Batch: 112767

QC Batch: 112767
Prep Batch: 95351

Date Analyzed: 2014-06-12
QC Preparation: 2014-06-11

Analyzed By: SC
Prepared By: SC

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

Report Date: June 13, 2014
112MC06541

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 112741
Prep Batch: 95323

Date Analyzed: 2014-06-11
QC Preparation: 2014-06-11

Analyzed By: SC
Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2480	mg/Kg	5	2500	<19.2	99	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			2520	mg/Kg	5	2500	<19.2	101	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: 112767
Prep Batch: 95351

Date Analyzed: 2014-06-12
QC Preparation: 2014-06-11

Analyzed By: SC
Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2630	mg/Kg	5	2500	<19.2	105	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			2580	mg/Kg	5	2500	<19.2	103	85 - 115	2	20

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

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112MC06541

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Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 364979

QC Batch: 112741
Prep Batch: 95323

Date Analyzed: 2014-06-11
QC Preparation: 2014-06-11

Analyzed By: SC
Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			12700	mg/Kg	10	5000	8060	93	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			13200	mg/Kg	10	5000	8060	103	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: 364989

QC Batch: 112767
Prep Batch: 95351

Date Analyzed: 2014-06-12
QC Preparation: 2014-06-11

Analyzed By: SC
Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Q*	Q*	3970	mg/Kg	5	2500	2100	75	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*	3920	mg/Kg	5	2500	2100	73	78.9 - 121	1	20

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

Report Date: June 13, 2014
112MC06541

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Calibration Standards

Standard (ICV-1)

QC Batch: 112741

Date Analyzed: 2014-06-11

Analyzed By: SC

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	2014-06-11

Standard (CCV-1)

QC Batch: 112741

Date Analyzed: 2014-06-11

Analyzed By: SC

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	2014-06-11

Standard (ICV-1)

QC Batch: 112767

Date Analyzed: 2014-06-12

Analyzed By: SC

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	2014-06-12

Standard (CCV-1)

QC Batch: 112767

Date Analyzed: 2014-06-12

Analyzed By: SC

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	2014-06-12

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
SQL	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 SQL. Sample contains less than 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

Report Date: June 13, 2014
112MC06541

Work Order: 14060629
Stephens & Johnson Oper/Mobil 22 Federal #6

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

14060624

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 2
ANALYSIS REQUEST
(Circle or Specify Method No.)



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

CLIENT NAME: <u>Stephens Johnson</u>		SITE MANAGER: <u>1 Ke. Tovar</u>	
PROJECT NO.: <u>112 MCO 16541</u>		PROJECT NAME: <u>Mobil 22 Federal #10</u>	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
364979	10/15		BH-1 0-1
980			2-3
981			4-5
982			6-7
983			9-10
984			14-15
985			19-20
986			BH-2 0-1
987			2-3
988			4-5

NUMBER OF CONTAINERS	PRELIMINARY METHOD	DATE	TIME
	HCL	6-6-14	11:16
	ICE		
	NONE		

TPH 8015 MOD. TX1005 (Ext to C35)	BTX 8021B	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/824	GC/MS Semi. Vol. 8270/825	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
-----------------------------------	-----------	----------	-------------------------------------	----------------	---------------------	-----	--------------------------	---------------------------	----------------	---------------	----------	-------------	------------------	----------------	-------------------------------

RELINQUISHED BY: (Signature) <u>[Signature]</u>	RECEIVED BY: (Signature) <u>William Johnson</u>
RELINQUISHED BY: (Signature) <u>[Signature]</u>	RECEIVED BY: (Signature) <u>[Signature]</u>
RELINQUISHED BY: (Signature) <u>[Signature]</u>	RECEIVED BY: (Signature) <u>[Signature]</u>
RELINQUISHED BY: (Signature) <u>[Signature]</u>	RECEIVED BY: (Signature) <u>[Signature]</u>
RECEIVING LABORATORY:	REMARKS:
ADDRESS:	
CITY:	
STATE:	
ZIP:	
PHONE:	
DATE:	
TIME:	
SAMPLE CONDITION WHEN RECEIVED:	
5.8	

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

14060624

14060627

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 2

ANALYSIS REQUEST
(Circle or Specify Method No.)**TETRA TECH**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: <u>Steenerson, Johnson</u>		SITE MANAGER: <u>14060627</u>	
PROJECT NO.: <u>112mc00541</u>		PROJECT NAME: <u>Midrail 22 Federal #16</u>	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
34989	6/5		BW-2 6-7
990			9-10
991			14-15
992			19-20
NUMBER OF CONTAINERS		PRESERVATIVE METHOD	
HCL		HCL	
HNO3		HNO3	
ICF		ICF	
NONE		NONE	
FILTERED (Y/N)			
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 Spec.			
Alpha Beta (Air)			
PLM (Asbestos)			
Major Anions/Cations, pH, TDS			

RELINQUISHED BY: (Signature) <u>Van Gonzalez</u>	Date: <u>6-10-14</u> Time: <u>11:15</u>	RECEIVED BY: (Signature) <u>Allison Johnson</u>	Date: <u>6-10-14</u> Time: <u>11:16</u>
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____
RECEIVING LABORATORY: ADDRESS: _____ CITY: _____ STATE: _____ ZIP: _____	CONTACT: _____ PHONE: _____ DATE: _____	REMARKS: <u>5.8°C</u>	

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

Summary Report

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

Report Date: April 8, 2014

Work Order: 14032031



Project Location: Eddy Co, NM
Project Name: Stephens & Johnson Oper/Mobil 22 Federal #6
Project Number: 112MC06541

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
358498	AH-1 0-1'	soil	2014-03-20	00:00	2014-03-20
358499	AH-1 1-1.5'	soil	2014-03-20	00:00	2014-03-20
358500	AH-2 0-1'	soil	2014-03-20	00:00	2014-03-20
358501	AH-2 1-1.5'	soil	2014-03-20	00:00	2014-03-20

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
358498 - AH-1 0-1'	<0.0400 ¹	<0.0400	<0.0400	<0.0400	796 Q*	113
358500 - AH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Q*	<4.00

Sample: 358498 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		2570	mg/Kg	5

Sample: 358499 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		1040	mg/Kg	5

Sample: 358500 - AH-2 0-1'¹ Dilution due to hydrocarbons.

Report Date: April 8, 2014

Work Order: 14032031

Page Number: 2 of 2

Param	Flag	Result	Units	RL
Chloride		12600	mg/Kg	5

Sample: 358501 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		15500	mg/Kg	5



6701 Aberdeen Avenue, Suite 9
200 East Sunset Road, Suite E
5002 Basin Street, Suite A1
(BioAquatic) 2501 Mayes Rd., Suite 100

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El Paso, Texas 79922
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Carrollton, Texas 75006

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

Report Date: April 8, 2014

Work Order: 14032031



Project Location: Eddy Co, NM
Project Name: Stephens & Johnson Oper/Mobil 22 Federal #6
Project Number: 112MC06541

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
358498	AH-1 0-1'	soil	2014-03-20	00:00	2014-03-20
358499	AH-1 1-1.5'	soil	2014-03-20	00:00	2014-03-20
358500	AH-2 0-1'	soil	2014-03-20	00:00	2014-03-20
358501	AH-2 1-1.5'	soil	2014-03-20	00:00	2014-03-20

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.

This report consists of a total of 18 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

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Case Narrative

Samples for project Stephens & Johnson Oper/Mobil 22 Federal #6 were received by TraceAnalysis, Inc. on 2014-03-20 and assigned to work order 14032031. Samples for work order 14032031 were received intact at a temperature of 2.3 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	93409	2014-03-24 at 11:00	110482	2014-03-25 at 08:06
Chloride (Titration)	SM 4500-Cl B	93768	2014-04-07 at 09:27	110901	2014-04-07 at 09:29
TPH DRO - NEW	S 8015 D	93373	2014-03-21 at 13:00	110444	2014-03-24 at 09:29
TPH GRO	S 8015 D	93409	2014-03-24 at 11:00	110483	2014-03-25 at 08:09

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 14032031 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.

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Analytical Report

Sample: 358498 - AH-1 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 110482
Prep Batch: 93409

Analytical Method: S 8021B
Date Analyzed: 2014-03-25
Sample Preparation: 2014-03-24

Prep Method: S 5035
Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0400	mg/Kg	2	0.0200
Toluene	U	1	<0.0400	mg/Kg	2	0.0200
Ethylbenzene	U	1	<0.0400	mg/Kg	2	0.0200
Xylene	U	1	<0.0400	mg/Kg	2	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.92	mg/Kg	2	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)	Q _{ref}	Q _{ref}	2.88	mg/Kg	2	2.00	144	70 - 130

Sample: 358498 - AH-1 0-1'

Laboratory: Lubbock
Analysis: Chloride (Titration)
QC Batch: 110901
Prep Batch: 93768

Analytical Method: SM 4500-Cl B
Date Analyzed: 2014-04-07
Sample Preparation: 2014-04-07

Prep Method: N/A
Analyzed By: AT
Prepared By: AT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2570	mg/Kg	5	5.00

Sample: 358498 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 110444
Prep Batch: 93373

Analytical Method: S 8015 D
Date Analyzed: 2014-03-24
Sample Preparation: 2014-03-21

Prep Method: N/A
Analyzed By: RG
Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Q _{ref}	1	796	mg/Kg	1	50.0

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

Sample: 358498 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 110483
Prep Batch: 93409

Analytical Method: S 8015 D
Date Analyzed: 2014-03-25
Sample Preparation: 2014-03-24

Prep Method: S 5035
Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO			113	mg/Kg	2	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.97	mg/Kg	2	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)	QNT	QNT	7.90	mg/Kg	2	2.00	395	70 - 130

Sample: 358499 - AH-1 1-1.5'

Laboratory: Lubbock
Analysis: Chloride (Titration)
QC Batch: 110901
Prep Batch: 93768

Analytical Method: SM 4500-Cl B
Date Analyzed: 2014-04-07
Sample Preparation: 2014-04-07

Prep Method: N/A
Analyzed By: AT
Prepared By: AT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1040	mg/Kg	5	5.00

Sample: 358500 - AH-2 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 110482
Prep Batch: 93409

Analytical Method: S 8021B
Date Analyzed: 2014-03-25
Sample Preparation: 2014-03-24

Prep Method: S 5035
Analyzed By: AK
Prepared By: AK

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sample 358500 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.09	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			1.82	mg/Kg	1	2.00	91	70 - 130

Sample: 358500 - AH-2 0-1'

Laboratory:	Lubbock	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-04-07	Analyzed By:	AT
QC Batch:	110901	Sample Preparation:	2014-04-07	Prepared By:	AT
Prep Batch:	93768				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			12600	mg/Kg	5	5.00

Sample: 358500 - AH-2 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2014-03-24	Analyzed By:	RG
QC Batch:	110444	Sample Preparation:	2014-03-21	Prepared By:	RG
Prep Batch:	93373				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Jb. Qn	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			77.2	mg/Kg	1	100	77	70 - 130

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Sample: 358500 - AH-2 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 110483
Prep Batch: 93409

Analytical Method: S 8015 D
Date Analyzed: 2014-03-25
Sample Preparation: 2014-03-24

Prep Method: S 5035
Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	u	i	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.14	mg/Kg	1	2.00	107	70 - 130
4-Bromofluorobenzene (4-BFB)			2.01	mg/Kg	1	2.00	100	70 - 130

Sample: 358501 - AH-2 1-1.5'

Laboratory: Lubbock
Analysis: Chloride (Titration)
QC Batch: 110901
Prep Batch: 93768

Analytical Method: SM 4500-Cl B
Date Analyzed: 2014-04-07
Sample Preparation: 2014-04-07

Prep Method: N/A
Analyzed By: AT
Prepared By: AT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			15500	mg/Kg	5	5.00

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Method Blanks

Method Blank (1) QC Batch: 110444

QC Batch: 110444
Prep Batch: 93373

Date Analyzed: 2014-03-24
QC Preparation: 2014-03-21

Analyzed By: RG
Prepared By: RG

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	16.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			91.2	mg/Kg	1	100	91	70 - 130

Method Blank (1) QC Batch: 110482

QC Batch: 110482
Prep Batch: 93409

Date Analyzed: 2014-03-25
QC Preparation: 2014-03-24

Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00533	mg/Kg	0.02
Toluene		1	<0.00645	mg/Kg	0.02
Ethylbenzene		1	<0.0116	mg/Kg	0.02
Xylene		1	<0.00874	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.21	mg/Kg	1	2.00	110	70 - 130
4-Bromofluorobenzene (4-BFB)			1.84	mg/Kg	1	2.00	92	70 - 130

Method Blank (1) QC Batch: 110483

QC Batch: 110483
Prep Batch: 93409

Date Analyzed: 2014-03-25
QC Preparation: 2014-03-24

Analyzed By: AK
Prepared By: AK

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Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<2.32	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.22	mg/Kg	1	2.00	111	70 - 130
4-Bromofluorobenzene (4-BFB)			2.03	mg/Kg	1	2.00	102	70 - 130

Method Blank (1) QC Batch: 110901

QC Batch: 110901
Prep Batch: 93768

Date Analyzed: 2014-04-07
QC Preparation: 2014-04-07

Analyzed By: AT
Prepared By: AT

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.05	mg/Kg	5

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 110444
Prep Batch: 93373

Date Analyzed: 2014-03-24
QC Preparation: 2014-03-21

Analyzed By: RG
Prepared By: RG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	212	mg/Kg	1	250	16.5	78	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		1	210	mg/Kg	1	250	16.5	77	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
n-Tricosane	96.4	99.4	mg/Kg	1	100	96	99	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110482
Prep Batch: 93409

Date Analyzed: 2014-03-25
QC Preparation: 2014-03-24

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.80	mg/Kg	1	2.00	<0.00533	90	70 - 130
Toluene		1	1.84	mg/Kg	1	2.00	<0.00645	92	70 - 130
Ethylbenzene		1	1.98	mg/Kg	1	2.00	<0.0116	99	70 - 130
Xylene		1	5.96	mg/Kg	1	6.00	<0.00874	99	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	1.76	mg/Kg	1	2.00	<0.00533	88	70 - 130	2	20
Toluene		1	1.80	mg/Kg	1	2.00	<0.00645	90	70 - 130	2	20
Ethylbenzene		1	1.94	mg/Kg	1	2.00	<0.0116	97	70 - 130	2	20
Xylene		1	5.81	mg/Kg	1	6.00	<0.00874	97	70 - 130	2	20

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

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Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.17	2.16	mg/Kg	1	2.00	108	108	70 - 130
4-Bromofluorobenzene (4-BFB)	1.94	1.81	mg/Kg	1	2.00	97	90	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110483
Prep Batch: 93409

Date Analyzed: 2014-03-25
QC Preparation: 2014-03-24

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO			17.6	mg/Kg	1	20.0	<2.32	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. Limit	RPD	RPD Limit
GRO			18.7	mg/Kg	1	20.0	<2.32	94	70 - 130	6

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)	2.04	2.21	mg/Kg	1	2.00	102	110	70 - 130
4-Bromofluorobenzene (4-BFB)	2.14	2.39	mg/Kg	1	2.00	107	120	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110901
Prep Batch: 93768

Date Analyzed: 2014-04-07
QC Preparation: 2014-04-07

Analyzed By: AT
Prepared By: AT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2170	mg/Kg	5	2500	<15.2	87	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. Limit	RPD	RPD Limit
Chloride			2170	mg/Kg	5	2500	<15.2	87	85 - 115	0

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

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Matrix Spike (MS-1) Spiked Sample: 358438

QC Batch: 110444
Prep Batch: 93373

Date Analyzed: 2014-03-24
QC Preparation: 2014-03-21

Analyzed By: RG
Prepared By: RG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	206	mg/Kg	1	250	27.2	72	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	Q*	Q*	1	191	mg/Kg	1	250	27.2	66	70 - 130	8	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	78.8	78.7	mg/Kg	1	100	79	79	70 - 130

Matrix Spike (MS-1) Spiked Sample: 358444

QC Batch: 110482
Prep Batch: 93409

Date Analyzed: 2014-03-25
QC Preparation: 2014-03-24

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.73	mg/Kg	1	2.00	<0.00533	86	70 - 130
Toluene		1	1.76	mg/Kg	1	2.00	<0.00645	88	70 - 130
Ethylbenzene		1	1.90	mg/Kg	1	2.00	<0.0116	95	70 - 130
Xylene		1	5.68	mg/Kg	1	6.00	<0.00874	95	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	1.86	mg/Kg	1	2.00	<0.00533	93	70 - 130	7	20
Toluene		1	1.90	mg/Kg	1	2.00	<0.00645	95	70 - 130	8	20
Ethylbenzene		1	2.06	mg/Kg	1	2.00	<0.0116	103	70 - 130	8	20
Xylene		1	6.22	mg/Kg	1	6.00	<0.00874	104	70 - 130	9	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)	2.16	2.23	mg/Kg	1	2	108	112	70 - 130

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matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	1.86	1.99	mg/Kg	1	2	93	100	70 - 130

Matrix Spike (MS-1) Spiked Sample: 358444

QC Batch: 110483
Prep Batch: 93409

Date Analyzed: 2014-03-25
QC Preparation: 2014-03-24

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO			17.0	mg/Kg	1	20.0	<2.32	85	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
GRO			17.7	mg/Kg	1	20.0	<2.32	88	70 - 130	4	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)	1.97	2.00	mg/Kg	1	2	98	100	70 - 130
4-Bromofluorobenzene (4-BFB)	2.07	2.10	mg/Kg	1	2	104	105	70 - 130

Matrix Spike (MS-1) Spiked Sample: 358724

QC Batch: 110901
Prep Batch: 93768

Date Analyzed: 2014-04-07
QC Preparation: 2014-04-07

Analyzed By: AT
Prepared By: AT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2140	mg/Kg	5	2500	80	82	75.2 - 127

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			2170	mg/Kg	5	2500	80	84	75.2 - 127	1	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 110444

Date Analyzed: 2014-03-24

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	203	81	80 - 120	2014-03-24

Standard (CCV-2)

QC Batch: 110444

Date Analyzed: 2014-03-24

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	200	80	80 - 120	2014-03-24

Standard (CCV-3)

QC Batch: 110444

Date Analyzed: 2014-03-24

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	202	81	80 - 120	2014-03-24

Standard (CCV-1)

QC Batch: 110482

Date Analyzed: 2014-03-25

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0979	98	80 - 120	2014-03-25
Toluene		1	mg/kg	0.100	0.0988	99	80 - 120	2014-03-25

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standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		1	mg/kg	0.100	0.101	101	80 - 120	2014-03-25
Xylene		1	mg/kg	0.300	0.306	102	80 - 120	2014-03-25

Standard (CCV-2)

QC Batch: 110482

Date Analyzed: 2014-03-25

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0977	98	80 - 120	2014-03-25
Toluene		1	mg/kg	0.100	0.0986	99	80 - 120	2014-03-25
Ethylbenzene		1	mg/kg	0.100	0.0991	99	80 - 120	2014-03-25
Xylene		1	mg/kg	0.300	0.298	99	80 - 120	2014-03-25

Standard (CCV-1)

QC Batch: 110483

Date Analyzed: 2014-03-25

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.10	110	80 - 120	2014-03-25

Standard (CCV-2)

QC Batch: 110483

Date Analyzed: 2014-03-25

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.06	106	80 - 120	2014-03-25

Report Date: April 8, 2014
112MC06541

Work Order: 14032031
Stephens & Johnson Oper/Mobil 22 Federal #6

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Eddy Co, NM

Standard (ICV-1)

QC Batch: 110901

Date Analyzed: 2014-04-07

Analyzed By: AT

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	2014-04-07

Standard (CCV-1)

QC Batch: 110901

Date Analyzed: 2014-04-07

Analyzed By: AT

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	2014-04-07

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
ML	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	NELAP	T104704392-13-7	Midland

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 ML. Sample contains less than 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

Result Comments

Report Date: April 8, 2014
112MC06541

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Eddy Co, NM

1 Dilution due to hydrocarbons.

Attachments

The scanned attachments will follow this page.

Please note, each attachment may consist of more than one page.

Analysis Request of Chain of Custody Record

OF:

ANALYSIS REQUEST
(Circle or Specify Method)

TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-4558**

CLIENT NAME: Stephens & Johnson Operating Co				SITE MANAGER: Mr. T. J. J. J.			
PROJECT NO.: 1120700641				PROJECT NAME: Mobil 22 Federal #10			
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION Fddy Co.	
358498	3/20		S		Y	AH-1	0-1
499							1-1.5
500						AH-2	0-1
501							1-1.5

PRESERVATIVE METHOD		NUMBER OF CONTAINERS		FILTERED (Y/N)		HCL		HNO3		ICE		NONE	
PAH 8270													
RCRA Metals Ag As Ba Cd													
TCLP Metals Ag As Ba Cd													
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													
Gamma Spec.													
Alpha Beta (Air)													
PLM (Asbestos)													
Major Anions/Cations, pH, T													

RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
DATE	TIME	DATE	TIME
3/20/14	5:15	3/20/14	5:15

RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
DATE	TIME	DATE	TIME
3/20/14	5:15	3/20/14	5:15

RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
DATE	TIME	DATE	TIME
3/20/14	5:15	3/20/14	5:15

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

REMARKS:	
Run deeper samples at Bureau ex code 10, total BTEX ex code 20	

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