



**TETRA TECH**

September 24, 2010

Mr. Mike Bratcher  
Environmental Bureau  
Oil Conservation Division, District 2  
1301 W. Grand Ave.  
Artesia, New Mexico 88210

**RE: Assessment and Closure Request for the Stephens and Johnson Operating Co., East Millman Unit #150, located in Unit Letter P, Section 15, Township 19 South, Range 28 East, Eddy County, New Mexico. (LOV #02-09-132)**

Dear Mr. Bratcher:

Tetra Tech Inc. was contacted by Stephens and Johnson Operating Co. to assess and remediate a vent area located Unit Letter P, Section 15, Township 19 South, Range 28 East, Eddy County, New Mexico. The vent area is located west of the Millman Tank Battery. Periodically, the gas and oil from the tank battery was vented into an earthen pit measuring approximately 25' x 25'. Stephens and Johnson received a Letter of Violation (LOV), dated February 23, 2010, from the New Mexico Oil Conservation Division (NMOCD) addressing the vent area and impacted soils. The LOV and the initial C-141 are enclosed in Appendix A.

Tetra Tech submitted a work plan to assess impacted soils associated with the earthen pit, dated March 15, 2010. The work plan proposed the following:

1. Discontinue venting into the earthen pit.
2. Remove free fluids from the earthen pit.
3. The venting line will be connected to an above ground tank to contain any liquids during periodic venting.
4. Once the equipment and vent line are removed, the earthen pit will be scraped (1.0' to 2.0') to remove saturated soils, which would be hauled to proper disposal.
5. Once removed, Tetra Tech will supervise the installation of boreholes to assess the impacted soil.

**RECEIVED**

**OCT 22 2010**

**NMOCD ARTESIA**

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com



## **Groundwater and Regulatory**

A review of the New Mexico office of the State Engineer and the USGS database did show wells in Section 9, Township 19 South, Range 25 East with reported depths to water of 265' and 246', respectively. The groundwater depth map is enclosed in Appendix B.

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. Based upon the risk based evaluation, the Site will be remediated to the proposed RRAL of 5,000 mg/kg.

## **Soil Assessment/Boreholes Installation**

Stephens and Johnson have discontinued the used of the earthen pit. The vent line has been plumbed into an above ground tank to contain any liquids from periodic venting. In addition, the free liquids were removed and earthen pit the was excavated to remove the saturated soil, approximately 2.0 to 4.0' below surface. The excavated soil was transported to proper disposal. Once completed, Stephens and Johnson contacted Tetra Tech to evaluate the soils.

On May 6, 2010, Tetra Tech personnel were onsite to supervise the installation of boreholes using an air rotary rig. Soil samples were collected to evaluate the extent of subsurface impact at this site to total depth of 20.0' to 40.0' below surface. In addition, a background borehole was installed to evaluate the soil surrounding the area. Borehole (BH-1) was installed in the center of the vent pit to define the vertical extents and the remaining boreholes (BH-2, BH-3, BH-4 and BH-5) were installed around the perimeter of the pit to define the horizontal extents. The soil samples were placed into laboratory supplied containers and delivered to a laboratory under chain-of-custody control for TPH analysis by EPA method 8015 modified, BTEX by EPA method 8021B and chloride by EPA method 300.0. The laboratory reports and chain of custody documentation are included in Appendix C. The borehole data is summarized in Table 1.

Referring to Table 1, none of the samples exceed the RRAL for TPH or BTEX. The chloride concentrations did show a slight impact the subsurface soils. Borehole (BH-1), installed in the center of the pit, showed chloride concentrations <1,000 mg/kg, with a bottom hole concentration of 368 mg/kg at 20.0' below excavation bottom. The samples



**TETRA TECH**

from BH-2 were all below 1,000 mg/kg, with bottom hole concentration of 507 mg/kg. Boreholes (BH-3, BH-4 and BH-5) did show chloride concentrations slightly above 1,000 mg/kg (1,260 mg/kg, 1,270 mg/kg and 1,130 mg/kg) at varying depths. The samples declined with depth, with bottom hole concentrations of <200 mg/kg at 20', 575 mg/kg at 20' and 460 mg/kg at 40', respectively.

The background borehole was installed to a depth of 60' below surface and showed chloride concentrations <200 in the majority of the samples, with a chloride high of 289 mg/kg at 30' below surface.

### **Recommendations**

Based on the results, the soil impact appears to be limited around the pit area and the investigation did not show a significant impact the subsurface soil. The visually oily soil surrounding the pit will be excavated and hauled to proper disposal. Prior to backfilling, a 40 mil liner will be installed at 4.0' below surface to cap the pit area. The area will be backfilled with clean soil to grade. Once the remedial activities are performed, Stephens and Johnson will submit a final C-141 and request closure of the site.

If you have any questions or comments concerning the assessment, please call me at (432) 682-4559.

TETRA TECH  


Ike Tavaréz, P.G.  
Project Manager/Senior Geologist

cc: Mike Kincaid - Stephens and Johnson

**TABLE**

T  
**STEPHENS & JOHNSON**  
**EAST MILLMAN TANK BATTERY**  
**EDDY COUNTY, NEW MEXICO**

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total					
BH-1	5/5/2010	0-1'	X		1140	404	1544	0.816	1.35	1.16	3.49	<200
		3-4'	X		-	-	-	-	-	-	-	246
		7-8'	X		-	-	-	-	-	-	-	398
		10-11'	X		-	-	-	-	-	-	-	355
		15-16'	X		-	-	-	-	-	-	-	617
		20-21'	X		-	-	-	-	-	-	-	368
BH-2	5/5/2010	0-1'	X		<1.00	177	177	<0.0100	<0.0100	<0.0100	<0.0100	779
		3-4'	X		-	-	-	-	-	-	-	913
		7-8'	X		-	-	-	-	-	-	-	435
		10-11'	X		-	-	-	-	-	-	-	<200
		15-16'	X		-	-	-	-	-	-	-	621
		20-21'	X		-	-	-	-	-	-	-	507
BH-3	5/6/2010	0-1'	X		<1.00	<50.00	<50.00	<0.0100	<0.0100	<0.0100	<0.0100	<200
		3-4'	X		-	-	-	-	-	-	-	1,260
		7-8'	X		-	-	-	-	-	-	-	971
		10-11'	X		-	-	-	-	-	-	-	667
		15-16'	X		-	-	-	-	-	-	-	<200
		20-21'	X		-	-	-	-	-	-	-	<200
BH-4	5/6/2010	0-1'	X		<1.00	<50.00	<50.00	<0.0100	<0.0100	<0.0100	<0.0100	<200
		3-4'	X		-	-	-	-	-	-	-	247
		7-8'	X		-	-	-	-	-	-	-	918
		10-11'	X		-	-	-	-	-	-	-	1,270
		15-16'	X		-	-	-	-	-	-	-	628
		20-21'	X		-	-	-	-	-	-	-	575

(-) Not Analyzed

**Table 1**  
**STEPHENS & JOHNSON**  
**EAST MILLMAN TANK BATTERY**  
**EDDY COUNTY, NEW MEXICO**

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total					
BH-5	5/6/2010	0-1'	X		<1.00	<50.00	<50.00	<0.0100	<0.0100	<0.0100	<0.0100	<200
		3-4'	X		-	-	-	-	-	-	-	620
		7-8'	X		-	-	-	-	-	-	-	421
		10-11'	X		-	-	-	-	-	-	-	809
		15-16'	X		-	-	-	-	-	-	-	644
		20-21'	X		-	-	-	-	-	-	-	983
		30-31	X		-	-	-	-	-	-	-	1,130
		40-41	X		-	-	-	-	-	-	-	460
Background	5/5/2010	10'	X		-	-	-	-	-	-	-	<200
		20'	X		-	-	-	-	-	-	-	<200
		30'	X		-	-	-	-	-	-	-	289
		40'	X		-	-	-	-	-	-	-	<200
		50'	X		-	-	-	-	-	-	-	<200
		60'	X		-	-	-	-	-	-	-	<200

(- ) Not Analyzed

## FIGURES



Oil City

Williams Hollow

Burton Flat

104 15887-32-6551

1:100,000

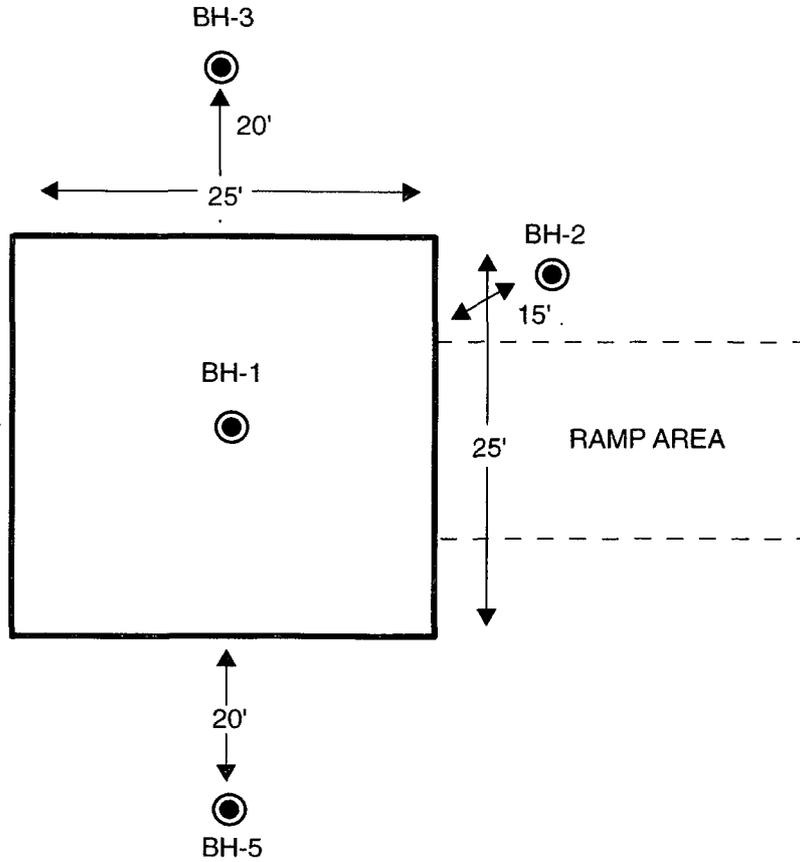
**STEPHENS & JOHNSON**

Figure 1  
Millman Unit 150  
Topo Map 1:100,000  
Eddy County, New Mexico  
Project Number: 114-6423

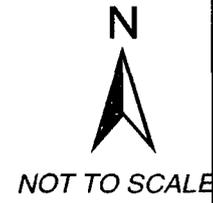


DCP UNDERGROUND LINE

DCP UNDERGROUND LINE



East Millman Tank Battery



**STEPHENS & JOHNSON**

Figure 3

Millman Unit 150

Site Assessment Map  
Eddy County, New Mexico

Project Number: 114-6400476

Date: 9-24-2010

File: H/GIS/114-6400476

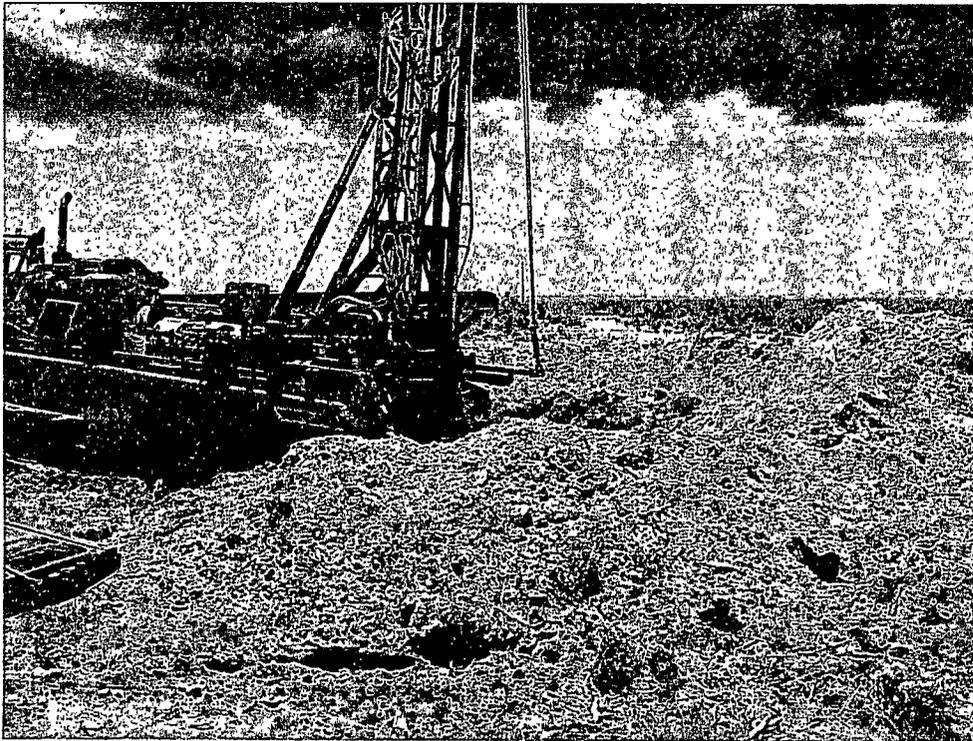


## **PHOTOGRAPHS**

Stephens and Johnson - East Millman Unit  
Eddy County, New Mexico

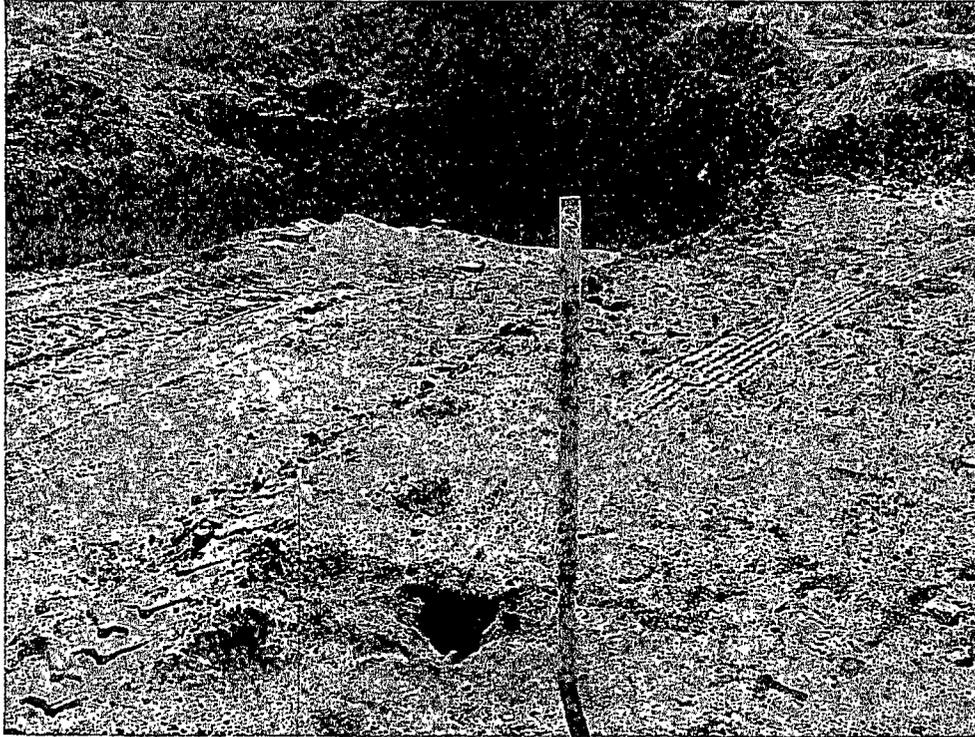


View of earthen pit area, after excavation

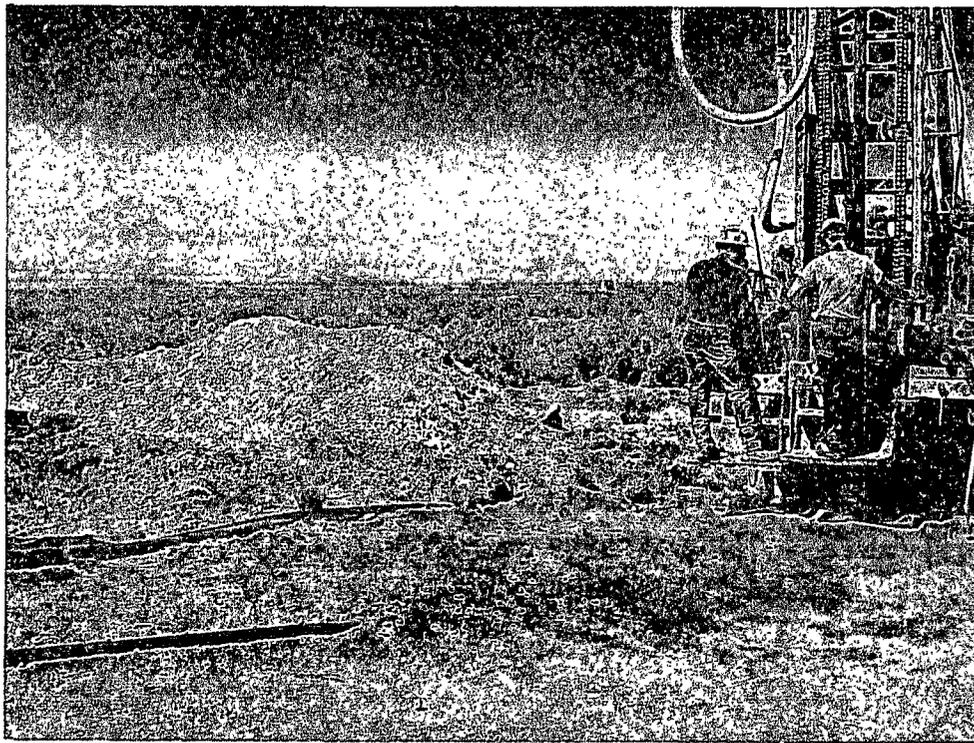


View of earthen pit area and BH-1

Stephens and Johnson - East Millman Unit  
Eddy County, New Mexico

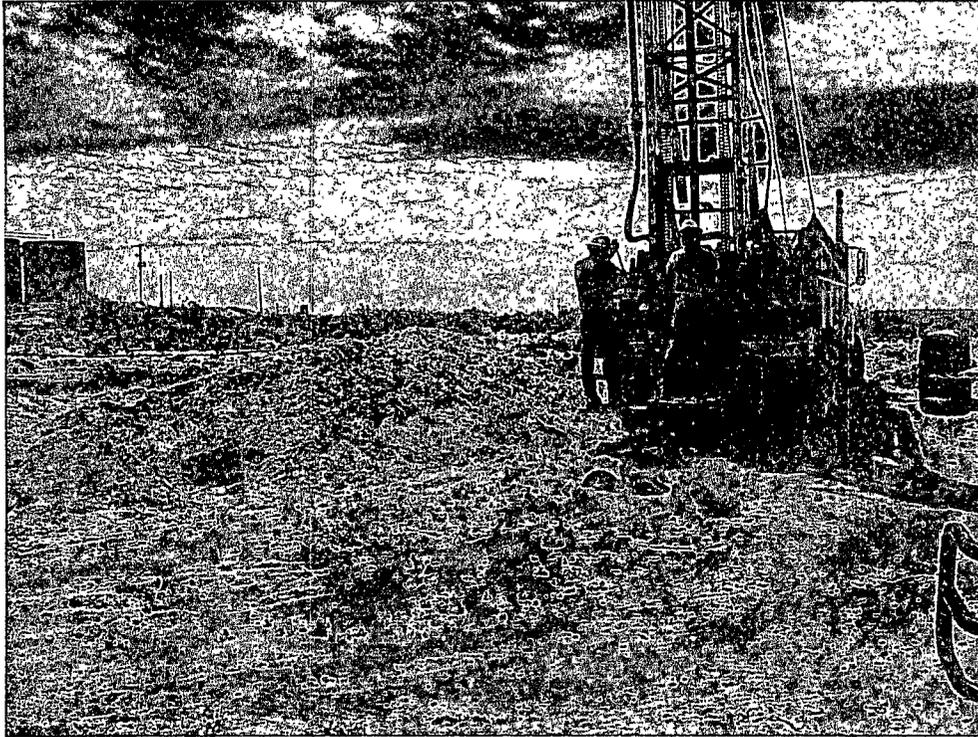


View of BH-2 Location



View of BH-3 Installation

Stephens and Johnson - East Millman Unit  
Eddy County, New Mexico



View of BH-4 Installation



View of new above tank installed for venting

## **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 Mike Kincaid
Address P.O. Box 2249, Wichita Falls, Tx. 76307	Telephone No. (940) 723-2166
Facility Name East Millman Unit No. 150	Facility Type Tank Battery

Surface Owner State Land	Mineral Owner	Lease No. 30-015-02257
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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
P	15	19S	28E					Eddy

Latitude 32.65456 Longitude 104.15868

**NATURE OF RELEASE**

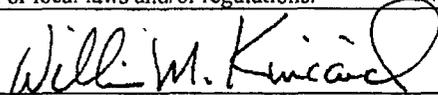
Type of Release Oil	Volume of Release Unknown	Volume Recovered NA
Source of Release Vent line	Date and Hour of Occurrence NA	Date and Hour of Discovery NA
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom?	Date and Hour N/A	
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.\*  
A vent line was located west of the East Millman Tank Battery, which periodically vented gas and small amounts oil into an earthen pit. Venting would occur due to vessel malfunction or emergencies. The pit contained free oil on top of rain water. The vent line has been connected to a holding tank to capture any fluids during periodic venting in the future.

Describe Area Affected and Cleanup Action Taken.\*  
The earthen pit measured approximately 25' x 25'. As per LOV No. 02-09-132 the rain water and free oil have been removed from the pit. A work plan will be completed to address the impacted soil.

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: 	<b>OIL CONSERVATION DIVISION</b>	
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: 03/15/2010	Phone: 940-723-2166	

\* Attach Additional Sheets If Necessary

# New Mexico Energy, Minerals and Natural Resources Department

**Bill Richardson**  
Governor

Jon Goldstein  
Cabinet Secretary

Jim Noel  
Deputy Cabinet Secretary

Mark Fesmire  
Division Director  
Oil Conservation Division



**\*Response Required – Deadline Enclosed\***

*Field Inspection  
Program*

*"Preserving the Integrity of Our Environment"*

23-Feb-10

**STEPHENS & JOHNSON OP CO**  
PO BOX 2249  
WICHITA FALLS TX 76307

**LOV NO. 02-09-132**

**LETTER OF VIOLATION -**

Dear Operator:

The following inspection(s) indicate that the well, equipment, location or operational status of the well(s) failed to meet standards of the New Mexico Oil Conservation Division as described in the detail section below. To comply with standards imposed by Rules and Regulations of the Division, corrective action must be taken immediately and the situation brought into compliance. The detail section indicates preliminary findings and/or probable nature of the violation. This determination is based on an inspection of your well or facility by an inspector employed by the Oil Conservation Division.

Please notify the proper district office, in writing, of the date corrective actions are scheduled to be made so that arrangements can be made to reinspect the well and /or facility.

**INSPECTION DETAIL SECTION**

**EAST MILLMAN UNIT No.150**

P-15-19S-28E 30-015-02257-00-00

Inspection	Date	Type Inspection	Inspector	Violation?	Non-Compliance?	Action Due By:	Inspection No.
	02/23/2010	Routine/Periodic	Tim Gum	Yes	No	3/23/2010	iTWG10054465

Comments on  
Inspection:

NOTE: large amount of free oil standing in earthen pit located west of battery.

Numerous violations of OCD rules as follows: 1.) Rule 19.15.2; General Operations/Waste prohibited, 2.) 19.15.18 ; Tanks, 3.) 19.15.29 ; Release Notification, 4.) 19.15.17 ; Pits, and 4.) 19.15.36; Netting requirements.

Corrective action to be taken 1.) All free oil to be removed from pit, 2.) Submit a form C-141 along with a remediation and closure plan to address the contaminated area and the closure of the pit

Corrective action to be taken; oil removed immediately, form and plan by 3/23/10.

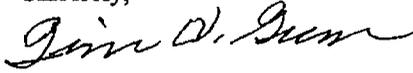
Oil Conservation Division \* 1220 South St. Francis Drive  
\* Santa Fe, New Mexico 87505

\* Phone: (505) 476-3440 \* Fax (505) 476-3462\* <http://www.emnrd.state.nm.us>



In the event that a satisfactory response is not received to this letter of direction by the "Corrective Action Due By:" date shown above, further enforcement will occur. Such enforcement may include this office applying to the Division for an order summoning you to a hearing before a Division Examiner in Santa Fe to show cause why you should not be ordered to permanently plug and abandon this well. Such a hearing may result in imposition of CIVIL PENALTIES for your violation of OCD rules.

Sincerely,



Artesia OCD District Office

Note: Information in Detail Section comes directly from field inspector data entries - not all blanks will contain data.  
\*Significant Non-Compliance events are reported directly to the EPA, Region VI, Dallas, Texas.

## **APPENDIX B**

**Water Well Data**  
**Average Depth to Groundwater (ft)**  
**Stephens and Johnson - Millman Tank Battery**  
**Eddy County, New Mexico**

18 South		27 East			
5	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

18 South		28 East			
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
				65	

18 South		29 East			
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

19 South		27 East				
5	5	20	4	3	2	1
7	8	50	9	10	11	12
18	17	16	15	1482.4	13	
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	34	35	36	
				18	107.7	60.7

19 South		28 East				
6	5	4	3	2	1	
7	8	9	246	10	11	12
18	17	16	15	14	13	
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	34	35	36	
			SITE			
			265			

19 South		29 East				
6	5	4	3	2	1	
7	8	9	10	11	12	
18	17	16	15	14	13	123
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	34	35	36	
			62.9			
			34 62'	35 121	36	
			60	110	115	

20 South		27 East				
6	5	50	4	3	2	1
7	66	8	9	10	11	12
18	17	16	15	14	66	13
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	34	35	36	
				74		
				150		

20 South		28 East				
6	5	4	3	2	1	
7	8	9	10	11	12	
18	17	16	15	14	13	
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	25	34	35	36
			30	35		
			33	29		
			115		19	

20 South		29 East			
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
			91		
			62		
			52		

- 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
- 123 Field water level
- 143 NMOCD Groundwater map well location

## **APPENDIX C**

## Summary Report

Ike Tavarez  
Tetra Tech  
1910 N. Big Spring Street  
Midland, TX 79705

Report Date: May 19, 2010

Work Order: 10051019



Project Location: Eddy County, NM  
Project Name: Stephens & Johnson/East Millman TB  
Project Number: 114-6400476

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
231048	BG-10'	soil	2010-05-05	00:00	2010-05-07
231049	BG-20'	soil	2010-05-05	00:00	2010-05-07
231050	BG-30'	soil	2010-05-05	00:00	2010-05-07
231051	BG-40'	soil	2010-05-05	00:00	2010-05-07
231052	BG-50'	soil	2010-05-05	00:00	2010-05-07
231053	BG-60'	soil	2010-05-05	00:00	2010-05-07
231054	BH-1 0-1'	soil	2010-05-05	00:00	2010-05-07
231055	BH-1 3-4'	soil	2010-05-05	00:00	2010-05-07
231056	BH-1 7-8'	soil	2010-05-05	00:00	2010-05-07
231057	BH-1 10-11'	soil	2010-05-05	00:00	2010-05-07
231058	BH-1 15-16'	soil	2010-05-05	00:00	2010-05-07
231059	BH-1 20-21'	soil	2010-05-05	00:00	2010-05-07
231067	BH-2 0-1'	soil	2010-05-05	00:00	2010-05-07
231068	BH-2 3-4'	soil	2010-05-05	00:00	2010-05-07
231069	BH-2 7-8'	soil	2010-05-05	00:00	2010-05-07
231070	BH-2 10-11'	soil	2010-05-05	00:00	2010-05-07
231071	BH-2 15-16'	soil	2010-05-05	00:00	2010-05-07
231072	BH-2 20-21'	soil	2010-05-05	00:00	2010-05-07
231076	BH-3 0-1'	soil	2010-05-06	00:00	2010-05-07
231077	BH-3 3-4'	soil	2010-05-06	00:00	2010-05-07
231078	BH-3 7-8'	soil	2010-05-06	00:00	2010-05-07
231079	BH-3 10-11'	soil	2010-05-06	00:00	2010-05-07
231080	BH-3 15-16'	soil	2010-05-06	00:00	2010-05-07
231081	BH-3 20-21'	soil	2010-05-06	00:00	2010-05-07
231084	BH-4 0-1'	soil	2010-05-06	00:00	2010-05-07
231085	BH-4 3-4'	soil	2010-05-06	00:00	2010-05-07
231086	BH-4 7-8'	soil	2010-05-06	00:00	2010-05-07
231087	BH-4 10-11'	soil	2010-05-06	00:00	2010-05-07
231088	BH-4 15-16'	soil	2010-05-06	00:00	2010-05-07
231089	BH-4 20-21'	soil	2010-05-06	00:00	2010-05-07

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
231095	BH-5 0-1'	soil	2010-05-06	00:00	2010-05-07
231096	BH-5 3-4'	soil	2010-05-06	00:00	2010-05-07
231097	BH-5 7-8'	soil	2010-05-06	00:00	2010-05-07
231098	BH-5 10-11'	soil	2010-05-06	00:00	2010-05-07
231099	BH-5 15-16'	soil	2010-05-06	00:00	2010-05-07
231100	BH-5 20-21'	soil	2010-05-06	00:00	2010-05-07

Sample - Field Code	BTEX				TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)		
231054 - BH-1 0-1'	0.816	1.35	1.16	3.49	404	1140
231067 - BH-2 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	177	<1.00
231076 - BH-3 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
231084 - BH-4 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
231095 - BH-5 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00

**Sample: 231048 - BG-10'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231049 - BG-20'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231050 - BG-30'**

Param	Flag	Result	Units	RL
Chloride		289	mg/Kg	4.00

**Sample: 231051 - BG-40'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231052 - BG-50'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231053 - BG-60'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231054 - BH-1 0-1'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231055 - BH-1 3-4'**

Param	Flag	Result	Units	RL
Chloride		246	mg/Kg	4.00

**Sample: 231056 - BH-1 7-8'**

Param	Flag	Result	Units	RL
Chloride		398	mg/Kg	4.00

**Sample: 231057 - BH-1 10-11'**

Param	Flag	Result	Units	RL
Chloride		355	mg/Kg	4.00

**Sample: 231058 - BH-1 15-16'**

Param	Flag	Result	Units	RL
Chloride		617	mg/Kg	4.00

**Sample: 231059 - BH-1 20-21'**

Param	Flag	Result	Units	RL
Chloride		368	mg/Kg	4.00

**Sample: 231067 - BH-2 0-1'**

Param	Flag	Result	Units	RL
Chloride		779	mg/Kg	4.00

**Sample: 231068 - BH-2 3-4'**

Param	Flag	Result	Units	RL
Chloride		913	mg/Kg	4.00

**Sample: 231069 - BH-2 7-8'**

Param	Flag	Result	Units	RL
Chloride		435	mg/Kg	4.00

**Sample: 231070 - BH-2 10-11'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231071 - BH-2 15-16'**

Param	Flag	Result	Units	RL
Chloride		621	mg/Kg	4.00

**Sample: 231072 - BH-2 20-21'**

Param	Flag	Result	Units	RL
Chloride		507	mg/Kg	4.00

**Sample: 231076 - BH-3 0-1'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231077 - BH-3 3-4'**

Param	Flag	Result	Units	RL
Chloride		1260	mg/Kg	4.00

**Sample: 231078 - BH-3 7-8'**

Param	Flag	Result	Units	RL
Chloride		971	mg/Kg	4.00

**Sample: 231079 - BH-3 10-11'**

Param	Flag	Result	Units	RL
Chloride		667	mg/Kg	4.00

**Sample: 231080 - BH-3 15-16'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231081 - BH-3 20-21'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231084 - BH-4 0-1'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231085 - BH-4 3-4'**

Param	Flag	Result	Units	RL
Chloride		247	mg/Kg	4.00

**Sample: 231086 - BH-4 7-8'**

Param	Flag	Result	Units	RL
Chloride		918	mg/Kg	4.00

**Sample: 231087 - BH-4 10-11'**

Param	Flag	Result	Units	RL
Chloride		1270	mg/Kg	4.00

**Sample: 231088 - BH-4 15-16'**

Param	Flag	Result	Units	RL
Chloride		628	mg/Kg	4.00

**Sample: 231089 - BH-4 20-21'**

Param	Flag	Result	Units	RL
Chloride		575	mg/Kg	4.00

**Sample: 231095 - BH-5 0-1'**

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

**Sample: 231096 - BH-5 3-4'**

Param	Flag	Result	Units	RL
Chloride		620	mg/Kg	4.00

**Sample: 231097 - BH-5 7-8'**

Param	Flag	Result	Units	RL
Chloride		421	mg/Kg	4.00

**Sample: 231098 - BH-5 10-11'**

Param	Flag	Result	Units	RL
Chloride		809	mg/Kg	4.00

**Sample: 231099 - BH-5 15-16'**

Param	Flag	Result	Units	RL
Chloride		644	mg/Kg	4.00

**Sample: 231100 - BH-5 20-21'**

Param	Flag	Result	Units	RL
Chloride		983	mg/Kg	4.00



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 6015 Harris Parkway, Suite 110 Ft Worth, Texas 76132 817•201•5260  
 E-Mail: lah@traceanalysis.com

### Certifications

**WBENC:** 237019      **HUB:** 1752439743100-86536      **DBE:** VN 20657  
**NCTRCA** WFWB38444Y0909

### NELAP Certifications

**Lubbock:** T104704219-08-TX      **El Paso:** T104704221-08-TX      **Midland:** T104704392-08-TX  
 LELAP-02003      LELAP-02002  
 Kansas E-10317

## Analytical and Quality Control Report

Ike Tavaraz  
 Tetra Tech  
 1910 N. Big Spring Street  
 Midland, TX, 79705

Report Date: May 19, 2010

Work Order: 10051019



Project Location: Eddy County, NM  
 Project Name: Stephens & Johnson/East Millman TB  
 Project Number: 114-6400476

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
231048	BG-10'	soil	2010-05-05	00:00	2010-05-07
231049	BG-20'	soil	2010-05-05	00:00	2010-05-07
231050	BG-30'	soil	2010-05-05	00:00	2010-05-07
231051	BG-40'	soil	2010-05-05	00:00	2010-05-07
231052	BG-50'	soil	2010-05-05	00:00	2010-05-07
231053	BG-60'	soil	2010-05-05	00:00	2010-05-07
231054	BH-1 0-1'	soil	2010-05-05	00:00	2010-05-07
231055	BH-1 3-4'	soil	2010-05-05	00:00	2010-05-07
231056	BH-1 7-8'	soil	2010-05-05	00:00	2010-05-07
231057	BH-1 10-11'	soil	2010-05-05	00:00	2010-05-07

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
231058	BH-1 15-16'	soil	2010-05-05	00:00	2010-05-07
231059	BH-1 20-21'	soil	2010-05-05	00:00	2010-05-07
231067	BH-2 0-1'	soil	2010-05-05	00:00	2010-05-07
231068	BH-2 3-4'	soil	2010-05-05	00:00	2010-05-07
231069	BH-2 7-8'	soil	2010-05-05	00:00	2010-05-07
231070	BH-2 10-11'	soil	2010-05-05	00:00	2010-05-07
231071	BH-2 15-16'	soil	2010-05-05	00:00	2010-05-07
231072	BH-2 20-21'	soil	2010-05-05	00:00	2010-05-07
231076	BH-3 0-1'	soil	2010-05-06	00:00	2010-05-07
231077	BH-3 3-4'	soil	2010-05-06	00:00	2010-05-07
231078	BH-3 7-8'	soil	2010-05-06	00:00	2010-05-07
231079	BH-3 10-11'	soil	2010-05-06	00:00	2010-05-07
231080	BH-3 15-16'	soil	2010-05-06	00:00	2010-05-07
231081	BH-3 20-21'	soil	2010-05-06	00:00	2010-05-07
231084	BH-4 0-1'	soil	2010-05-06	00:00	2010-05-07
231085	BH-4 3-4'	soil	2010-05-06	00:00	2010-05-07
231086	BH-4 7-8'	soil	2010-05-06	00:00	2010-05-07
231087	BH-4 10-11'	soil	2010-05-06	00:00	2010-05-07
231088	BH-4 15-16'	soil	2010-05-06	00:00	2010-05-07
231089	BH-4 20-21'	soil	2010-05-06	00:00	2010-05-07
231095	BH-5 0-1'	soil	2010-05-06	00:00	2010-05-07
231096	BH-5 3-4'	soil	2010-05-06	00:00	2010-05-07
231097	BH-5 7-8'	soil	2010-05-06	00:00	2010-05-07
231098	BH-5 10-11'	soil	2010-05-06	00:00	2010-05-07
231099	BH-5 15-16'	soil	2010-05-06	00:00	2010-05-07
231100	BH-5 20-21'	soil	2010-05-06	00:00	2010-05-07

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 30 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.




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

#### Standard Flags

**B** - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project Stephens & Johnson/East Millman TB were received by TraceAnalysis, Inc. on 2010-05-07 and assigned to work order 10051019. Samples for work order 10051019 were received intact at a temperature of 4.0 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	59862	2010-05-11 at 09:20	69934	2010-05-11 at 12:08
Chloride (Titration)	SM 4500-Cl B	60018	2010-05-17 at 08:48	70112	2010-05-17 at 16:58
Chloride (Titration)	SM 4500-Cl B	60019	2010-05-17 at 08:49	70113	2010-05-17 at 16:58
Chloride (Titration)	SM 4500-Cl B	60020	2010-05-17 at 08:49	70152	2010-05-18 at 15:54
Chloride (Titration)	SM 4500-Cl B	60022	2010-05-17 at 12:50	70153	2010-05-18 at 16:01
TPH DRO - NEW	S 8015 D	59834	2010-05-11 at 10:00	69902	2010-05-11 at 10:00
TPH GRO	S 8015 D	59862	2010-05-11 at 09:20	69936	2010-05-11 at 12:36

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 10051019 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: 231048 - BG-10'

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70112      Date Analyzed: 2010-05-17      Analyzed By: AR  
Prep Batch: 60018      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

### Sample: 231049 - BG-20'

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70112      Date Analyzed: 2010-05-17      Analyzed By: AR  
Prep Batch: 60018      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

### Sample: 231050 - BG-30'

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70112      Date Analyzed: 2010-05-17      Analyzed By: AR  
Prep Batch: 60018      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		289	mg/Kg	50	4.00

### Sample: 231051 - BG-40'

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70112      Date Analyzed: 2010-05-17      Analyzed By: AR  
Prep Batch: 60018      Sample Preparation: 2010-05-17      Prepared By: AR

*continued ...*

sample 231051 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

**Sample: 231052 - BG-50'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 70112      Date Analyzed: 2010-05-17      Analyzed By: AR  
 Prep Batch: 60018      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

**Sample: 231053 - BG-60'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 70112      Date Analyzed: 2010-05-17      Analyzed By: AR  
 Prep Batch: 60018      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

**Sample: 231054 - BH-1 0-1'**

Laboratory: Midland  
 Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5035  
 QC Batch: 69934      Date Analyzed: 2010-05-11      Analyzed By: AG  
 Prep Batch: 59862      Sample Preparation: 2010-05-11      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.816	mg/Kg	20	0.0100
Toluene		1.35	mg/Kg	20	0.0100
Ethylbenzene		1.16	mg/Kg	20	0.0100
Xylene		3.49	mg/Kg	20	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		19.6	mg/Kg	20	20.0	98	60.4 - 141.2
4-Bromofluorobenzene (4-BFB)		21.6	mg/Kg	20	20.0	108	43.1 - 158.4

**Sample: 231054 - BH-1 0-1'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 70112      Date Analyzed: 2010-05-17      Analyzed By: AR  
 Prep Batch: 60018      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

**Sample: 231054 - BH-1 0-1'**

Laboratory: Midland  
 Analysis: TPH DRO - NEW      Analytical Method: S 8015 D      Prep Method: N/A  
 QC Batch: 69902      Date Analyzed: 2010-05-11      Analyzed By: kg  
 Prep Batch: 59834      Sample Preparation: 2010-05-11      Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		404	mg/Kg	1	50.0

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

**Sample: 231054 - BH-1 0-1'**

Laboratory: Midland  
 Analysis: TPH GRO      Analytical Method: S 8015 D      Prep Method: S 5035  
 QC Batch: 69936      Date Analyzed: 2010-05-11      Analyzed By: AG  
 Prep Batch: 59862      Sample Preparation: 2010-05-11      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1140	mg/Kg	20	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		19.8	mg/Kg	20	20.0	99	50.3 - 155
4-Bromofluorobenzene (4-BFB)		24.6	mg/Kg	20	20.0	123	51.7 - 131.1

**Sample: 231055 - BH-1 3-4'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 70112      Date Analyzed: 2010-05-17      Analyzed By: AR  
 Prep Batch: 60018      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>246</b>	mg/Kg	50	4.00

**Sample: 231056 - BH-1 7-8'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 70112      Date Analyzed: 2010-05-17      Analyzed By: AR  
 Prep Batch: 60018      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>398</b>	mg/Kg	50	4.00

**Sample: 231057 - BH-1 10-11'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 70112      Date Analyzed: 2010-05-17      Analyzed By: AR  
 Prep Batch: 60018      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>355</b>	mg/Kg	50	4.00

**Sample: 231058 - BH-1 15-16'**

Laboratory: Midland  
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
 QC Batch: 70113 Date Analyzed: 2010-05-17 Analyzed By: AR  
 Prep Batch: 60019 Sample Preparation: 2010-05-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>617</b>	mg/Kg	50	4.00

**Sample: 231059 - BH-1 20-21'**

Laboratory: Midland  
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
 QC Batch: 70113 Date Analyzed: 2010-05-17 Analyzed By: AR  
 Prep Batch: 60019 Sample Preparation: 2010-05-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>368</b>	mg/Kg	50	4.00

**Sample: 231067 - BH-2 0-1'**

Laboratory: Midland  
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035  
 QC Batch: 69934 Date Analyzed: 2010-05-11 Analyzed By: AG  
 Prep Batch: 59862 Sample Preparation: 2010-05-11 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.66	mg/Kg	1	2.00	83	60.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.52	mg/Kg	1	2.00	76	43.1 - 158.4

**Sample: 231067 - BH-2 0-1'**

Laboratory: Midland  
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
 QC Batch: 70113 Date Analyzed: 2010-05-17 Analyzed By: AR  
 Prep Batch: 60019 Sample Preparation: 2010-05-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		779	mg/Kg	50	4.00

**Sample: 231067 - BH-2 0-1'**

Laboratory: Midland  
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A  
 QC Batch: 69902 Date Analyzed: 2010-05-11 Analyzed By: kg  
 Prep Batch: 59834 Sample Preparation: 2010-05-11 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		177	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		124	mg/Kg	1	100	124	70 - 130

**Sample: 231067 - BH-2 0-1'**

Laboratory: Midland  
 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035  
 QC Batch: 69936 Date Analyzed: 2010-05-11 Analyzed By: AG  
 Prep Batch: 59862 Sample Preparation: 2010-05-11 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.74	mg/Kg	1	2.00	87	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.72	mg/Kg	1	2.00	86	51.7 - 131.1

**Sample: 231068 - BH-2 3-4'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70113      Date Analyzed: 2010-05-17      Analyzed By: AR  
Prep Batch: 60019      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		913	mg/Kg	50	4.00

**Sample: 231069 - BH-2 7-8'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70113      Date Analyzed: 2010-05-17      Analyzed By: AR  
Prep Batch: 60019      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		435	mg/Kg	50	4.00

**Sample: 231070 - BH-2 10-11'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70113      Date Analyzed: 2010-05-17      Analyzed By: AR  
Prep Batch: 60019      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

**Sample: 231071 - BH-2 15-16'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70113      Date Analyzed: 2010-05-17      Analyzed By: AR  
Prep Batch: 60019      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		621	mg/Kg	50	4.00

**Sample: 231072 - BH-2 20-21'**

Laboratory: Midland  
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
 QC Batch: 70113 Date Analyzed: 2010-05-17 Analyzed By: AR  
 Prep Batch: 60019 Sample Preparation: 2010-05-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		507	mg/Kg	50	4.00

**Sample: 231076 - BH-3 0-1'**

Laboratory: Midland  
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035  
 QC Batch: 69934 Date Analyzed: 2010-05-11 Analyzed By: AG  
 Prep Batch: 59862 Sample Preparation: 2010-05-11 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.23	mg/Kg	1	2.00	62	60.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	2.00	54	43.1 - 158.4

**Sample: 231076 - BH-3 0-1'**

Laboratory: Midland  
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
 QC Batch: 70113 Date Analyzed: 2010-05-17 Analyzed By: AR  
 Prep Batch: 60019 Sample Preparation: 2010-05-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

**Sample: 231076 - BH-3 0-1'**

Laboratory: Midland  
Analysis: TPH DRO - NEW                      Analytical Method: S 8015 D                      Prep Method: N/A  
QC Batch: 69902                                  Date Analyzed: 2010-05-11                      Analyzed By: kg  
Prep Batch: 59834                                  Sample Preparation: 2010-05-11                      Prepared By: kg

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

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

**Sample: 231076 - BH-3 0-1'**

Laboratory: Midland  
Analysis: TPH GRO                                  Analytical Method: S 8015 D                      Prep Method: S 5035  
QC Batch: 69936                                  Date Analyzed: 2010-05-11                      Analyzed By: AG  
Prep Batch: 59862                                  Sample Preparation: 2010-05-11                      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.23	mg/Kg	1	2.00	62	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.22	mg/Kg	1	2.00	61	51.7 - 131.1

**Sample: 231077 - BH-3 3-4'**

Laboratory: Midland  
Analysis: Chloride (Titration)                      Analytical Method: SM 4500-Cl B                      Prep Method: N/A  
QC Batch: 70113                                  Date Analyzed: 2010-05-17                      Analyzed By: AR  
Prep Batch: 60019                                  Sample Preparation: 2010-05-17                      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1260	mg/Kg	50	4.00

**Sample: 231078 - BH-3 7-8'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70152      Date Analyzed: 2010-05-18      Analyzed By: AR  
Prep Batch: 60020      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>971</b>	mg/Kg	50	4.00

**Sample: 231079 - BH-3 10-11'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70152      Date Analyzed: 2010-05-18      Analyzed By: AR  
Prep Batch: 60020      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>667</b>	mg/Kg	50	4.00

**Sample: 231080 - BH-3 15-16'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70152      Date Analyzed: 2010-05-18      Analyzed By: AR  
Prep Batch: 60020      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

**Sample: 231081 - BH-3 20-21'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70152      Date Analyzed: 2010-05-18      Analyzed By: AR  
Prep Batch: 60020      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

**Sample: 231084 - BH-4 0-1'**

Laboratory: Midland  
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035  
 QC Batch: 69934 Date Analyzed: 2010-05-11 Analyzed By: AG  
 Prep Batch: 59862 Sample Preparation: 2010-05-11 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.31	mg/Kg	1	2.00	66	60.4 - 141.2
4-Bromofluorobenzene (4-BFB)		0.914	mg/Kg	1	2.00	46	43.1 - 158.4

**Sample: 231084 - BH-4 0-1'**

Laboratory: Midland  
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
 QC Batch: 70152 Date Analyzed: 2010-05-18 Analyzed By: AR  
 Prep Batch: 60020 Sample Preparation: 2010-05-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

**Sample: 231084 - BH-4 0-1'**

Laboratory: Midland  
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A  
 QC Batch: 69902 Date Analyzed: 2010-05-11 Analyzed By: kg  
 Prep Batch: 59834 Sample Preparation: 2010-05-11 Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		89.7	mg/Kg	1	100	90	70 - 130

**Sample: 231084 - BH-4 0-1'**

Laboratory: Midland  
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035  
QC Batch: 69936 Date Analyzed: 2010-05-11 Analyzed By: AG  
Prep Batch: 59862 Sample Preparation: 2010-05-11 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.37	mg/Kg	1	2.00	68	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	2.00	54	51.7 - 131.1

**Sample: 231085 - BH-4 3-4'**

Laboratory: Midland  
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
QC Batch: 70152 Date Analyzed: 2010-05-18 Analyzed By: AR  
Prep Batch: 60020 Sample Preparation: 2010-05-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		247	mg/Kg	50	4.00

**Sample: 231086 - BH-4 7-8'**

Laboratory: Midland  
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
QC Batch: 70152 Date Analyzed: 2010-05-18 Analyzed By: AR  
Prep Batch: 60020 Sample Preparation: 2010-05-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		918	mg/Kg	50	4.00

**Sample: 231087 - BH-4 10-11'**

Laboratory: Midland  
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
QC Batch: 70152 Date Analyzed: 2010-05-18 Analyzed By: AR  
Prep Batch: 60020 Sample Preparation: 2010-05-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1270	mg/Kg	50	4.00

**Sample: 231088 - BH-4 15-16'**

Laboratory: Midland  
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
 QC Batch: 70152 Date Analyzed: 2010-05-18 Analyzed By: AR  
 Prep Batch: 60020 Sample Preparation: 2010-05-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		628	mg/Kg	50	4.00

**Sample: 231089 - BH-4 20-21'**

Laboratory: Midland  
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
 QC Batch: 70152 Date Analyzed: 2010-05-18 Analyzed By: AR  
 Prep Batch: 60020 Sample Preparation: 2010-05-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		575	mg/Kg	50	4.00

**Sample: 231095 - BH-5 0-1'**

Laboratory: Midland  
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035  
 QC Batch: 69934 Date Analyzed: 2010-05-11 Analyzed By: AG  
 Prep Batch: 59862 Sample Preparation: 2010-05-11 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.02	mg/Kg	1	2.00	101	60.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.84	mg/Kg	1	2.00	92	43.1 - 158.4

**Sample: 231095 - BH-5 0-1'**

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-05-18	Analyzed By: AR
QC Batch: 70153	Sample Preparation: 2010-05-17	Prepared By: AR
Prep Batch: 60022		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

**Sample: 231095 - BH-5 0-1'**

Laboratory: Midland	Analytical Method: S 8015 D	Prep Method: N/A
Analysis: TPH DRO - NEW	Date Analyzed: 2010-05-11	Analyzed By: kg
QC Batch: 69902	Sample Preparation: 2010-05-11	Prepared By: kg
Prep Batch: 59834		

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		88.1	mg/Kg	1	100	88	70 - 130

**Sample: 231095 - BH-5 0-1'**

Laboratory: Midland	Analytical Method: S 8015 D	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2010-05-11	Analyzed By: AG
QC Batch: 69936	Sample Preparation: 2010-05-11	Prepared By: AG
Prep Batch: 59862		

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.08	mg/Kg	1	2.00	104	50.3 - 155
4-Bromofluorobenzene (4-BFB)		2.06	mg/Kg	1	2.00	103	51.7 - 131.1

**Sample: 231096 - BH-5 3-4'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70153      Date Analyzed: 2010-05-18      Analyzed By: AR  
Prep Batch: 60022      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>620</b>	mg/Kg	50	4.00

**Sample: 231097 - BH-5 7-8'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70153      Date Analyzed: 2010-05-18      Analyzed By: AR  
Prep Batch: 60022      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>421</b>	mg/Kg	50	4.00

**Sample: 231098 - BH-5 10-11'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70153      Date Analyzed: 2010-05-18      Analyzed By: AR  
Prep Batch: 60022      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>809</b>	mg/Kg	50	4.00

**Sample: 231099 - BH-5 15-16'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 70153      Date Analyzed: 2010-05-18      Analyzed By: AR  
Prep Batch: 60022      Sample Preparation: 2010-05-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>644</b>	mg/Kg	50	4.00

**Sample: 231100 - BH-5 20-21'**

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-05-18	Analyzed By: AR
QC Batch: 70153	Sample Preparation: 2010-05-17	Prepared By: AR
Prep Batch: 60022		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		983	mg/Kg	50	4.00

**Method Blank (1)**      QC Batch: 69902

QC Batch: 69902	Date Analyzed: 2010-05-11	Analyzed By: kg
Prep Batch: 59834	QC Preparation: 2010-05-11	Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		78.8	mg/Kg	1	100	79	70 - 130

**Method Blank (1)**      QC Batch: 69934

QC Batch: 69934	Date Analyzed: 2010-05-11	Analyzed By: AG
Prep Batch: 59862	QC Preparation: 2010-05-11	Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00410	mg/Kg	0.01
Toluene		<0.00310	mg/Kg	0.01
Ethylbenzene		<0.00240	mg/Kg	0.01
Xylene		<0.00650	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.01	mg/Kg	1	2.00	100	64.9 - 142.7
4-Bromofluorobenzene (4-BFB)		1.56	mg/Kg	1	2.00	78	43.9 - 141.9





*control spikes continued ...*

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Toluene	1.93	mg/Kg	1	2.00	<0.00310	96	78.4 - 113.6	2	20
Ethylbenzene	1.88	mg/Kg	1	2.00	<0.00240	94	76 - 114.2	1	20
Xylene	5.63	mg/Kg	1	6.00	<0.00650	94	76.9 - 113.6	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)	2.00	1.86	mg/Kg	1	2.00	100	93	65 - 142.9
4-Bromofluorobenzene (4-BFB)	1.88	1.75	mg/Kg	1	2.00	94	88	43.8 - 144.9

**Laboratory Control Spike (LCS-1)**

QC Batch: 69936  
Prep Batch: 59862

Date Analyzed: 2010-05-11  
QC Preparation: 2010-05-11

Analyzed By: AG  
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.2	mg/Kg	1	20.0	<0.396	76	52.5 - 114.3

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.8	mg/Kg	1	20.0	<0.396	79	52.5 - 114.3	4	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)	2.03	1.80	mg/Kg	1	2.00	102	90	66.2 - 148.7
4-Bromofluorobenzene (4-BFB)	2.00	1.78	mg/Kg	1	2.00	100	89	64.1 - 127.4

**Laboratory Control Spike (LCS-1)**

QC Batch: 70112  
Prep Batch: 60018

Date Analyzed: 2010-05-17  
QC Preparation: 2010-05-17

Analyzed By: AR  
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.1	mg/Kg	1	100	<2.18	98	85 - 115

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





Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.27	mg/Kg	1	2.00	<0.00410	114	57.7 - 140.7	12	20
Toluene	2.30	mg/Kg	1	2.00	<0.00310	115	53.4 - 146.6	12	20
Ethylbenzene	2.27	mg/Kg	1	2.00	<0.00240	114	62.1 - 141.6	12	20
Xylene	6.82	mg/Kg	1	6.00	<0.00650	114	61.2 - 142.7	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
Trifluorotoluene (TFT)	1.53	1.44	mg/Kg	1	2	76	72	61.7 - 139.6
4-Bromofluorobenzene (4-BFB)	1.44	1.34	mg/Kg	1	2	72	67	49.6 - 146.7

**Matrix Spike (MS-1)** Spiked Sample: 230972

QC Batch: 69936 Date Analyzed: 2010-05-11 Analyzed By: AG  
Prep Batch: 59862 QC Preparation: 2010-05-11 Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	28.6	mg/Kg	1	20.0	8.37	101	10 - 198.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	22.9	mg/Kg	1	20.0	8.37	114	10 - 198.3	22	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)	1.87	1.56	mg/Kg	1	2	94	78	65.5 - 143
4-Bromofluorobenzene (4-BFB)	2.18	1.68	mg/Kg	1	2	109	84	58.6 - 140

**Matrix Spike (MS-1)** Spiked Sample: 231057

QC Batch: 70112 Date Analyzed: 2010-05-17 Analyzed By: AR  
Prep Batch: 60018 QC Preparation: 2010-05-17 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10200	mg/Kg	100	10000	355	98	85 - 115

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

<sup>1</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.









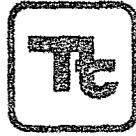






Order #: 10051019

# 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:  
Stephens & Johnson Operating

SITE MANAGER:  
Ike Tavaraz

PROJECT NO.:  
114-1410-176

PROJECT NAME:  
Stephens & Johnson / East Millman TB  
Elddy Co. NM

LAB I.D. NUMBER DATE TIME MATRIX COMP. GRAB SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION
231008	5/5		S	X		BH-2 3'-4'
069						BH-2 7'-8'
070						BH-2 10'-11'
071						BH-2 15'-16'
072						BH-2 20'-21'
073						BH-2 25'-26'
074						BH-2 30'-31'
075						BH-2 40'-41'
076	5/6					BH-3 0'-1'
077						BH-3 3'-4'

NUMBER OF CONTAINERS  
FILTERED (Y/N)  
PRESERVATIVE METHOD  
HCL HNO3 ICE NONE

STEX 8021B	GC.PH 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	FCI	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
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RELINQUISHED BY: (Signature) Date: 5/16/10 Time: 1:00  
RELINQUISHED BY: (Signature) Date: Time:  
RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: 5/16/10 Time: 1:00  
RECEIVED BY: (Signature) Date: Time:  
RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) Date: 5/16/10 Time:  
SAMPLE SHIPPED BY: (Circle) AIRBILL #: FEDEX BUS HAND DELIVERED UPS OTHER:

RECEIVING LABORATORY: Tetra Tech ADDRESS: CITY: Midland STATE: TX PHONE: ZIP: CONTACT: DATE: TIME:

RECEIVED BY: (Signature) DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavaraz Results by: RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:  
4.0°C intact

REMARKS:  
If total TPH exceed 5,000 mg/kg run deeper samples If Benzene exceeds 10 mg/kg run deeper samples If BTEX exceeds 55 mg/kg run deeper samples





Order #: 10057019

# 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: Stephens & Johnson Operating

SITE MANAGER: Ike Tavaroz

PROJECT NO.: 114-640070

PROJECT NAME: Stephens & Johnson / East Mill man TB

DATE: 2010 TIME: \_\_\_\_\_  
MATRIX: \_\_\_\_\_ COMP: \_\_\_\_\_ GRAB: \_\_\_\_\_  
SAMPLE IDENTIFICATION: Eddy Co. NM

NUMBER OF CONTAINERS: \_\_\_\_\_  
FILTERED (Y/N): \_\_\_\_\_  
PRESERVATIVE METHOD:  
HCL \_\_\_\_\_ HNO3 \_\_\_\_\_ ICE \_\_\_\_\_ NONE \_\_\_\_\_

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

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD	TX1005	PAH 8270	RCRA Metals	TCLP Metals	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC-MS Vol.	GC-MS Semi.	PCB's	Pest.	Chloride	Gamma Spec.	Alpha Beta	PLM	Major Anions
231098			S		X	BH-5 10'-11'	1				X															X				
099						BH-5 15'-16'																				X				
231100						BH-5 20'-21'																				X				
101						BH-5 30'-31'																								
102						BH-5 40'-41'																								
103						BH-5 50'-51'																								
104						BH-5 60'-61'																								
105						BH-6 20'-21'																								
106						BH-6 30'-31'																								
107						BH-7 20'-21'																								

RELINQUISHED BY: (Signature) [Signature] Date: 5/7/10 Time: 17:00

RECEIVED BY: (Signature) [Signature] Date: 5/7/10 Time: 17:00

SAMPLED BY: (Print & Initial) IT Date: 5/7/10 Time: \_\_\_\_\_  
SAMPLE SHIPPED BY: (Circle) FEDEX  BUS \_\_\_\_\_ UPS \_\_\_\_\_ AIRBILL #: \_\_\_\_\_  
TETRA TECH CONTACT PERSON: Ike Tavaroz Results by: \_\_\_\_\_  
RUSH Charges Authorized: Yes \_\_\_\_\_ No \_\_\_\_\_

RECEIVING LABORATORY: Trace ADDRESS: \_\_\_\_\_ CITY: Midland STATE: TX ZIP: \_\_\_\_\_ CONTACT: \_\_\_\_\_ PHONE: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact

REMARKS: If total TPH exceed 5,000 mg/kg run deeper samples If BTEX exceeds 10 mg/kg run deeper samples If BTEX exceeds 25 mg/kg run deeper samples

Order: 10057014

# 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: Stephens & Johnson Operating SITE MANAGER: Ike Tavaroz

PROJECT NO.: 114-4400476 PROJECT NAME: Stephens & Johnson / East Millman TB

LAB I.D. NUMBER: DATE: TIME: MATRIX: COMP: GRAB: SAMPLE IDENTIFICATION: Eddy G NM

NUMBER OF CONTAINERS: FILTERED (Y/N): PRESERVATIVE METHOD: HCL HNO3 ICE NONE

- STEEX 8021B
- TPH - 8015 MOD TX1005 (Ext. to C36)
- PAH 8270
- FCRA Metals Ag As Ba Cd Cr Pb Hg Se
- TCLP Metals Ag As Ba Cd Vr Pd Hg Se
- TCLP Volatiles
- TCLP Semi Volatiles
- FCI
- 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

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	PRESERVATIVE METHOD										
231108			S	X		BH-7 30'-31'	1				X												
109						BH-8 20'-21'																	
110						BH-8 30'-31'																	
111						BH-8 40'-41'																	
112						BH-8 50'-51'																	
113						BH-8 60'-61'																	
114						BH-8 70'-71'																	
115						BH-8 80'-81'																	
116						BH-9 20'-21'																	
117						BH-9 30'-31'																	

RELINQUISHED BY: (Signature) [Signature] Date: 5/12/10 Time: 1700 RECEIVED BY: (Signature) [Signature] Date: 5/12/10 Time: 1710 SAMPLED BY: (Print & Initial) IT Date: 5/12/10 Time: \_\_\_\_\_

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

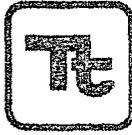
RELINQUISHED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ RECEIVED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ TETRA TECH CONTACT PERSON: Ike Tavaroz Results by: \_\_\_\_\_

RECEIVING LABORATORY: Tetra ADDRESS: \_\_\_\_\_ CITY: Midland STATE: TX ZIP: \_\_\_\_\_ CONTACT: \_\_\_\_\_ PHONE: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ RUSH Charges Authorized: Yes  No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact REMARKS: If total TPH exceed 5,000 mg/kg run deeper samples If Benzene exceeds 10 mg/kg run deeper samples If BTEX exceeds 55 mg/kg run deeper samples 11/6

Order # 10051019

# 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:  
*Stephens & Johnson Operating*

SITE MANAGER:  
*Ike Tavaraz*

PROJECT NO.:  
*114-4400470*

PROJECT NAME:  
*Stephens & Johnson / East Millman TB*

LAB I.D. NUMBER: DATE: TIME: MATRIX: COMP: GRAB: SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION
<i>23118</i>	<i>5/6</i>		<i>S</i>	<i>X</i>		<i>BH-10 20'-21'</i>
<i>119</i>	<i>5/6</i>		<i>S</i>	<i>S</i>		<i>BH-10 30'-31'</i>
<i>Hold all additional samples for further instructions</i>						

NUMBER OF CONTAINERS: FILTERED (Y/N): PRESERVATIVE METHOD: HCL HNO3 ICE NONE

- STEX 8021B
- PH\* 8015 MDD, TX1005 (Ext. to C35)
- PAH 8270
- PCRA Metals Ag As Ba Cd Cr Pb Hg Se
- TCLP Metals Ag As Ba Cd Vr Pd Hg Se
- TCLP Volatiles
- TCLP Semi Volatiles
- FCI
- 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) *[Signature]* Date: *5/7/10* Time: *1700*

RECEIVED BY: (Signature) *[Signature]* Date: *5/7/10* Time: *1715*

SAMPLED BY: (Print & Initial) *IT* Date: *5/4/10* Time: *1715*

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

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

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

TETRA TECH CONTACT PERSON: *Ike Tavaraz* Results by: RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: *Tech* RECEIVED BY: (Signature)

ADDRESS: CITY: *Midland* STATE: *TX* ZIP: PHONE: DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: *4.0°C intact* REMARKS: *If total TPH exceed 5,000 mg/kg run deeper samples If Benzene exceeds 10mg/kg run deeper samples If BTEX exceeds 50mg/kg run deeper samples*



TCEQ Use Only

# TCEQ Core Data Form

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

## SECTION I: General Information

<b>1. Reason for Submission</b> (If other is checked please describe in space provided)			
<input type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application)			
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)		<input type="checkbox"/> Other	
<b>2. Attachments</b> Describe Any Attachments: (ex. Title V Application, Waste Transporter Application, etc.)			
<input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>3. Customer Reference Number (if issued)</b>		<b>4. Regulated Entity Reference Number (if issued)</b>	
CN		RN	

## SECTION II: Customer Information

<b>5. Effective Date for Customer Information Updates (mm/dd/yyyy)</b>			
<b>6. Customer Role</b> (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check only one of the following:			
<input type="checkbox"/> Owner	<input type="checkbox"/> Operator	<input type="checkbox"/> Owner & Operator	
<input type="checkbox"/> Occupational Licensee	<input type="checkbox"/> Responsible Party	<input type="checkbox"/> Voluntary Cleanup Applicant	<input type="checkbox"/> Other: _____
<b>7. General Customer Information</b>			
<input type="checkbox"/> New Customer		<input type="checkbox"/> Update to Customer Information	<input type="checkbox"/> Change in Regulated Entity Ownership
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State)		<input type="checkbox"/> No Change**	
<b>**If "No Change" and Section I is complete, skip to Section III – Regulated Entity Information.</b>			
<b>8. Type of Customer:</b>			
<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	<input type="checkbox"/> Sole Proprietorship- D.B.A	
<input type="checkbox"/> City Government	<input type="checkbox"/> County Government	<input type="checkbox"/> Federal Government	<input type="checkbox"/> State Government
<input type="checkbox"/> Other Government	<input type="checkbox"/> General Partnership	<input type="checkbox"/> Limited Partnership	<input type="checkbox"/> Other: _____
<b>9. Customer Legal Name</b> (If an individual, print last name first: ex: Doe, John)			<b>End Date:</b>
<b>10. Mailing Address:</b>			
City			
State			
ZIP			
ZIP + 4			
<b>11. Country Mailing Information</b> (if outside USA)		<b>12. E-Mail Address</b> (if applicable)	
<b>13. Telephone Number:</b>		<b>14. Extension or Code</b>	
( ) -		( ) -	
<b>15. Fax Number</b> (if applicable)			
( ) -			
<b>16. Federal Tax ID</b> (9 digits)	<b>17. TX State Franchise Tax ID</b> (11 digits)	<b>18. DUNS Number</b> (if applicable)	<b>19. TX SOS Filing Number</b> (if applicable)
<b>20. Number of Employees</b>			<b>21. Independently Owned and Operated?</b>
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher			<input type="checkbox"/> Yes <input type="checkbox"/> No

## SECTION III: Regulated Entity Information

<b>22. General Regulated Entity Information:</b> (If 'New Regulated Entity' is selected below this form should be accompanied by a permit application)			
<input type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information <input type="checkbox"/> No Change** (See below)			
<b>**If "NO CHANGE" is checked and Section I is complete, skip to Section IV, Preparer Information.</b>			
<b>23. Regulated Entity Name</b> (name of the site where the regulated action is taking place)			

24. Street Address of the Regulated Entity: (No P.O. Boxes)							
	City		State		ZIP		ZIP + 4
25. Mailing Address:							
	City		State		ZIP		ZIP + 4
26. E-Mail Address:							
27. Telephone Number	28. Extension or Code			29. Fax Number (if applicable)			
( ) -				( ) -			
30. Primary SIC Code (4 digits)	31. Secondary SIC Code (4 digits)		32. Primary NAICS Code (5 or 6 digits)		33. Secondary NAICS Code (5 or 6 digits)		
34. What is the Primary Business of this entity? (Please do not repeat the SIC or NAICS description.)							

Questions 34 – 37 address geographic location. Please refer to the instructions for applicability.

35. Description to Physical Location:							
36. Nearest City	County			State		Nearest ZIP Code	
37. Latitude (N) In Decimal:			38. Longitude (W) In Decimal:				
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form or the updates may not be made. If your Program is not listed, check other and write it in. See the Core Data Form instructions for additional guidance.

<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Industrial Hazardous Waste	<input type="checkbox"/> Municipal Solid Waste
<input type="checkbox"/> New Source Review – Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS	<input type="checkbox"/> Sludge
<input type="checkbox"/> Stormwater	<input type="checkbox"/> Title V – Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil	<input type="checkbox"/> Utilities
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

#### SECTION IV: Preparer Information

40. Name:				41. Title:			
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address				
( ) -		( ) -					

#### SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 9 and/or as required for the updates to the ID numbers identified in field 39.

(See the Core Data Form instructions for more information on who should sign this form.)

Company:				Job Title:			
Name (In Print):					Phone:	( ) -	
Signature:					Date:		

## Summary Report

Ike Tavarez  
Tetra Tech  
1910 N. Big Spring Street  
Midland, TX 79705

Report Date: May 25, 2010

Work Order: 10051019



Project Location: Eddy County, NM  
Project Name: Stephens & Johnson/East Millman TB  
Project Number: 114-6400476

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
231101	BH-5 30-31'	soil	2010-05-06	00:00	2010-05-07
231102	BH-5 40-41'	soil	2010-05-06	00:00	2010-05-07

### Sample: 231101 - BH-5 30-31'

Param	Flag	Result	Units	RL
Chloride		1130	mg/Kg	4.00

### Sample: 231102 - BH-5 40-41'

Param	Flag	Result	Units	RL
Chloride		460	mg/Kg	4.00



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298  
 200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944  
 5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313  
 6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260  
 E-Mail: lah@traceanalysis.com

### Certifications

**WBENC:** 237019      **HUB:** 1752439743100-86536      **DBE:** VN 20657  
**NCTRCA** WFWB38444Y0909

### NELAP Certifications

**Lubbock:** T104704219-08-TX      **El Paso:** T104704221-08-TX      **Midland:** T104704392-08-TX  
 LELAP-02003      LELAP-02002  
 Kansas E-10317

## Analytical and Quality Control Report

Ike Tavaréz  
 Tetra Tech  
 1910 N. Big Spring Street  
 Midland, TX, 79705

Report Date: May 25, 2010

Work Order: 10051019



Project Location: Eddy County, NM  
 Project Name: Stephens & Johnson/East Millman TB  
 Project Number: 114-6400476

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
231101	BH-5 30-31'	soil	2010-05-06	00:00	2010-05-07
231102	BH-5 40-41'	soil	2010-05-06	00:00	2010-05-07

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 5 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

*Michael Abel*

---

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

**Standard Flags**

**B** - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project Stephens & Johnson/East Millman TB were received by TraceAnalysis, Inc. on 2010-05-07 and assigned to work order 10051019. Samples for work order 10051019 were received intact at a temperature of 4.0 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	60199	2010-05-24 at 09:13	70333	2010-05-25 at 09:55

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 10051019 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: 231101 - BH-5 30-31'**

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-05-25	Analyzed By: AR
QC Batch: 70333	Sample Preparation: 2010-05-25	Prepared By: AR
Prep Batch: 60199		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>1130</b>	mg/Kg	50	4.00

**Sample: 231102 - BH-5 40-41'**

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-05-25	Analyzed By: AR
QC Batch: 70333	Sample Preparation: 2010-05-25	Prepared By: AR
Prep Batch: 60199		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>460</b>	mg/Kg	50	4.00

**Method Blank (1)      QC Batch: 70333**

QC Batch: 70333	Date Analyzed: 2010-05-25	Analyzed By: AR
Prep Batch: 60199	QC Preparation: 2010-05-24	Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<b>&lt;2.18</b>	mg/Kg	4

**Laboratory Control Spike (LCS-1)**

QC Batch: 70333	Date Analyzed: 2010-05-25	Analyzed By: AR
Prep Batch: 60199	QC Preparation: 2010-05-24	Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.4	mg/Kg	1	100	<2.18	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115	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: 231598

QC Batch: 70333 Date Analyzed: 2010-05-25 Analyzed By: AR  
Prep Batch: 60199 QC Preparation: 2010-05-24 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10700	mg/Kg	100	10000	470	102	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10900	mg/Kg	100	10000	470	104	85 - 115	2	20

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

**Standard (ICV-1)**

QC Batch: 70333 Date Analyzed: 2010-05-25 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.3	99	85 - 115	2010-05-25

**Standard (CCV-1)**

QC Batch: 70333 Date Analyzed: 2010-05-25 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-05-25



Order #: 10057019

# Analysis Request of Chain of Custody Record

PAGE: 2 OF: 8



## 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:  
*Stephens & Johnson Operating*

SITE MANAGER:  
*Ike Tavaroz*

PROJECT NO.:  
*114-4400476*

PROJECT NAME:  
*Stephens & Johnson / East Millman TIS*

LAB I.D. NUMBER  
DATE  
TIME

MATRIX  
COMP.  
GRAB

SAMPLE IDENTIFICATION  
*Eddy Co. NM*

NUMBER OF CONTAINERS  
FILTERED (Y/N)

PRESERVATIVE METHOD  
HCL  
HNO3  
ICE  
NONE

- RTEX 8021B
- LPH 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. 8240/8260/824
- GC-MS Semi. Vol. 8270/825
- PCB's 8080/808
- Pest. 808/608
- Chloride
- Gamma Spec.
- Alpha Beta (Air)
- PLM (Asbestos)
- Major Anions/Cations, pH, TDS

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD
<i>231058</i>	<i>5/5</i>		<i>S</i>	<i>X</i>		<i>BH-1 15'-16'</i>	<i>1</i>		<i>X</i>
<i>059</i>						<i>BH-1 20'-21'</i>			
<i>060</i>						<i>BH-1 25'-26'</i>			
<i>061</i>						<i>BH-1 30'-31'</i>			
<i>062</i>						<i>BH-1 40'-41'</i>			
<i>063</i>						<i>BH-1 50'-51'</i>			
<i>064</i>						<i>BH-1 60'-61'</i>			
<i>065</i>						<i>BH-1 70'-71'</i>			
<i>066</i>						<i>BH-1 80'-81'</i>			
<i>067</i>						<i>BH-2 0'-1'</i>		<i>XX</i>	<i>X</i>

RELINQUISHED BY: (Signature) *[Signature]* Date: *5/11/10* Time: *1:26*

RECEIVED BY: (Signature) *[Signature]* Date: *5/11/10* Time: *12:00*

SAMPLED BY: (Print & Initial) *IT* Date: *5/6/10* Time: \_\_\_\_\_

SAMPLE SHIPPED BY: (Circle)  FEDEX  BUS  UPS AIRBILL #: \_\_\_\_\_

TETRA TECH CONTACT PERSON: *Ike Tavaroz* Results by: \_\_\_\_\_

RECEIVING LABORATORY: *Tace* ADDRESS: \_\_\_\_\_ CITY: *Midland* STATE: *TX* ZIP: \_\_\_\_\_ CONTACT: \_\_\_\_\_ PHONE: \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RUSH Charges Authorized: Yes  No

SAMPLE CONDITION WHEN RECEIVED:  
*H<sub>2</sub>O°C in act*

REMARKS:  
*If total TPH exceed 5,000 mg/kg run deeper samples If BTEX exceeds 10 mg/kg run deeper samples If BIK exceeds 150 mg/kg run deeper samples*









Order: 10051017

# 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:  
*Stephens & Johnson Operating*

SITE MANAGER:  
*Ike Tavaroz*

PROJECT NO.:  
*114-4100476*

PROJECT NAME:  
*Stephens & Johnson / East Millman TB*

LAB I.D. NUMBER: DATE: TIME: MATRIX: COMP: GRAB: SAMPLE IDENTIFICATION:  
*231108 2010*

NUMBER OF CONTAINERS: FILTERED (Y/N): PRESERVATIVE METHOD:  
*1*

- BTEX 80215
- 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. 8240/8260/824
- 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

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE
231108			S		X	BH-7 30'-31'	1				X	
109						BH-8 20'-21'						
110						BH-8 30'-31'						
111						BH-8 40'-41'						
112						BH-8 50'-51'						
113						BH-8 60'-61'						
114						BH-8 70'-71'						
115						BH-8 80'-81'						
116						BH-9 20'-21'						
117						BH-9 30'-31'						

RELINQUISHED BY: (Signature) *[Signature]* Date: *5/17/10* Time: *1700*

RECEIVED BY: (Signature) *[Signature]* Date: *5/17/10* Time: *1710*

SAMPLED BY: (Print & Initial) *IT* Date: *5/17/10* Time: \_\_\_\_\_

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

RECEIVING LABORATORY: *Trace* ADDRESS: \_\_\_\_\_ CITY: *Midland* STATE: *TX* ZIP: \_\_\_\_\_ CONTACT: \_\_\_\_\_ PHONE: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_

TETRA TECH CONTACT PERSON: *Ike Tavaroz* Results by: \_\_\_\_\_ RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:  
*4.0°C intact*

REMARKS:  
*If total TPH exceed 5,000 mg/kg run deeper samples If BTEX exceeds 50 mg/kg run deeper samples If Benzen exceeds 10 mg/kg run deeper samples*

Order # 10051019

# 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: *Stephens & Johnson Operating*

SITE MANAGER: *Ike Tavaroz*

PROJECT NO.: *114-4400-76*

PROJECT NAME: *Stephens & Johnson / East Millman TB*

LAB I.D. NUMBER: *23118*  
DATE: *5/6*  
TIME: *↓*  
MATRIX: *S*  
COMP: *X*  
GRAB: *↓*  
SAMPLE IDENTIFICATION: *BH-10 20'-21'*

NUMBER OF CONTAINERS: *1*  
FILTERED (Y/N): *↓*  
PRESERVATIVE METHOD:  
HCL: *↓*  
HNO3: *↓*  
ICE: *X*  
NONE: *↓*

<input checked="" type="checkbox"/> BTEX 8021B	<input checked="" type="checkbox"/> PH 8015 MOD TX1005 (Ext. to C35)	<input type="checkbox"/> PAH 8270	<input type="checkbox"/> PCRA Metals Ag As Ba Cd Cr Pb Hg Se	<input type="checkbox"/> TCLP Metals Ag As Ba Cd Vr Pd Hg Se	<input type="checkbox"/> TCLP Volatiles	<input type="checkbox"/> TCLP Semi Volatiles	<input type="checkbox"/> RCI	<input type="checkbox"/> GC-MS Vol. 8240/8260/824	<input type="checkbox"/> GC-MS Semi. Vol. 8270/825	<input type="checkbox"/> PCB's 8080/608	<input type="checkbox"/> Pest. 809/608	<input checked="" type="checkbox"/> Chloride	<input type="checkbox"/> Gamma Spec.	<input type="checkbox"/> Alpha Beta (Air)	<input type="checkbox"/> PLM (Asbestos)	<input type="checkbox"/> Major Anions/Cations, pH, TDS
--	--	-----------------------------------	--	--	---	--	------------------------------	---	--	---	--	--	--------------------------------------	---	---	--

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE
<i>23118</i>	<i>5/6</i>	<i>↓</i>	<i>S</i>	<i>X</i>	<i>↓</i>	<i>BH-10 20'-21'</i>	<i>1</i>	<i>↓</i>			<i>X</i>	
<i>119</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>BH-10 30'-31'</i>	<i>↓</i>	<i>↓</i>			<i>↓</i>	
<i>Hold all additional samples for further instructions</i>												

RELINQUISHED BY: (Signature) *[Signature]* Date: *5/7/10* Time: *1200*

RECEIVED BY: (Signature) *[Signature]* Date: *5/7/10* Time: *17:15*

SAMPLED BY: (Print & Initial) *IT* Date: *5/6/10* Time: *↓*

SAMPLE SHIPPED BY: (Circle)  FEDEX  BUS  UPS  OTHER: *↓*

TETRA TECH CONTACT PERSON: *Ike Tavaroz*

RECEIVING LABORATORY: *Trace* ADDRESS: *Midland* CITY: *Midland* STATE: *TX* ZIP: *↓* PHONE: *↓* DATE: *↓* TIME: *↓*

RECEIVED BY: (Signature) *[Signature]*

Results by: *↓*

RUSH Charges Authorized:  Yes  No

SAMPLE CONDITION WHEN RECEIVED: *4.0°C intact*

REMARKS: *If total TPH exceed 5,000 mg/kg run deeper samples If Benzen exceeds 10mg/kg run deeper samples If BTEX exceeds 150mg/kg run deeper samples (6)*