District I
1625 N French Dt., 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 RECEIVED OCT 0 1 Form C-144

For drilling and production facilities, submit to appropriate NMOCD District Office.

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

	or below-grade tank \square Closure of a pit or below-gra	
Operator St Mary Land & Exploration Company Telephone: Address 3300 N A Street, Bldg # 7 Suite 200 Midland, Texasc79705 Facility or well name: Osceola State # 1 Well and Tank Battery API #: 3 County: Eddy Latitude Surface Owner: Federal State Private Indian	5	@stmaryland com Sec I T-25-S R-28-E NAD. 1927 ⊠ 1983 □
Pit Type: Drilling ☐ Production ☒, Disposal ☐ Workover ☐ Emergency ☐ Lined ☐ Unlined ☒ Liner type Thickness mil Ćlay ☐ Pit Volume 500 bbl (estimated)	Below-grade tank	-
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water) 40'	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) 20 (10 points)
Wellhead protection area (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points) (0 points) 0
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points) 0
	Ranking Score (Total Points)	20
If this is a pit closure: (1) Attach a diagram of the facility showing the pit? your are burying in place) onsite offsite If offsite, name of facility I remediation start date and end date. (4) Groundwater encountered: No (5) Attach soil sample results and a diagram of sample locations and excava Additional Comments. Please see attached closure plan.	To Be Determined (3) Attach a general Yes ☐ If yes, show depth below ground surface	description of remedial action taken including
I hereby certify that the information above is true and complete to the best has been/will be constructed or closed according to NMOCD guideline. Date: 5-28-2008 Printed Name/Title Gary Miller, Agent, Highlander Environmental Convolution of this application/closure does otherwise endanger public health or the environment. Nor does it relieve regulations.	es , a general permit , or an (attached) altern orp Signature not relieve the operator of liability should the content	ative OCD-approved plan . See above .
Approval: Accepted for record Printed Name/Title NMOCD	Signature	OCT 0 1 2009

Closure ops commenced prior to chistos



August 17, 2009

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

RE: Closure Report for the Pit Located at the Osceola State #1 Well and Tank Battery, Unit Letter L, Section 1, Township 25 South, Range 28 East, Eddy County, New Mexico, Operated by St. Mary Land & Exploration Company

Mr. Bratcher:

St. Mary Land & Exploration Company retained Tetra Tech, Inc. to assist in the closure of the above mentioned pit. The site location coordinates are 32° 09' 38.49" N, 104° 02' 07.35" W. The site location is shown on Figures 1 and 2.

Background

At the time, St. Mary Land & Exploration Co had recently acquired the property from Nance Petroleum Corporation. The Osceola State #1 and Tank Battery pit was located immediately south of the tank battery approximately 5.0' from the tank battery firewall. The unlined pit was dry and grassed over. The pit was visually inspected and no obvious signs of impact were noted in the pit. The pit measured approximately 20' x 50' at a depth of 2.0' below surface. In order to close the pit, a C-144 was submitted to the NMOCD for approval. According to published data, the depth to groundwater was reportedly less than 50' below surface. The C-144 is included in Appendix A.

Regulatory

A review of the New Mexico State Engineer's Office database and the USGS database did not show any wells in Section 1, Township 25 South, Range 28 East. The closest well listed in the New Mexico State Engineer's database is located in Section 6, T-25-S, R-29-E, with a reported depth to water of 40'.



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 on the regional groundwater data, the proposed RRAL for TPH was 100 mg/kg.

Pit Assessment

The pit was visually inspected and found no obvious signs of impact in the bottom of the pit. The pit measured approximately 20' x 50' at a depth of 2.0' below surface. Due to the size of the pit, a total of two test trenches (T-1 and T-2) were installed in the bottom of the pit using a backhoe on June 11, 2008. Soil samples were collected placed into a laboratory prepared sample container and properly preserved. Selected samples were analyzed for TPH by method 8015 modified, and chloride by EPA method SM4500-Cl B. Selected samples were analyzed for benzene, toluene, ethylbenzene and xylene (BTEX) by method 8021B, depending on TPH results. The samples were transported to Trace Analysis, Inc. laboratory under chain-of-custody control. Table 1 presents a summary of the analyses. The analytical reports and chain-of-custodies are presented in Appendix B.

Soil Sample Results

Referring to Table 1, no TPH and BTEX exceeded the RRAL. Elevated chloride concentrations were detected in both trenches and declined with depth. T-1 showed a chloride high of 15,500 mg/kg at 5.0' and declined to 338 mg/kg at 12.0' below pit bottom. T-2 chlorides were not as high as T-1, with chloride concentrations ranging from <100 mg/kg at 0-1' to 4,170 mg/kg at 3.0' below pit bottom. The bottom hole sample at 12.0' showed a chloride of 278 mg/kg.

Pit Closure Activities

From April 16 – 17, 2009 and May 4, 2009, the pit was excavated to the final approximate dimensions of 32' x 73' to a depth of 12.0' below pit bottom. On May 5, 2009, final confirmation samples were collected from the sidewalls. In addition, background samples were collected for evaluation. Based on the field chloride data, a test trench was installed on the east wall to define the extents horizontally. The excavated soils were hauled to proper disposal at the Lea Land, Inc. facility. Confirmation sidewall samples collected were consistent with background samples taken in the area.



Analytical data is summarized in Table 2. The site closure was approved by the NMOCD during a meeting with the NMOCD in Artesia, New Mexico on July 27, 2009. Once approved, the excavated pit area was backfilled with clean fill material and closed. Based upon the closure activities performed at this facility, St. Mary Land & Exploration requests closure of this pit. A copy of the C-144 (Closure) form is included in Appendix A.

Should you have any questions, or require any additional information, please contact me at (432) 682-4559. Thank you for your attention to this matter.

Tetra Tech, Inc.

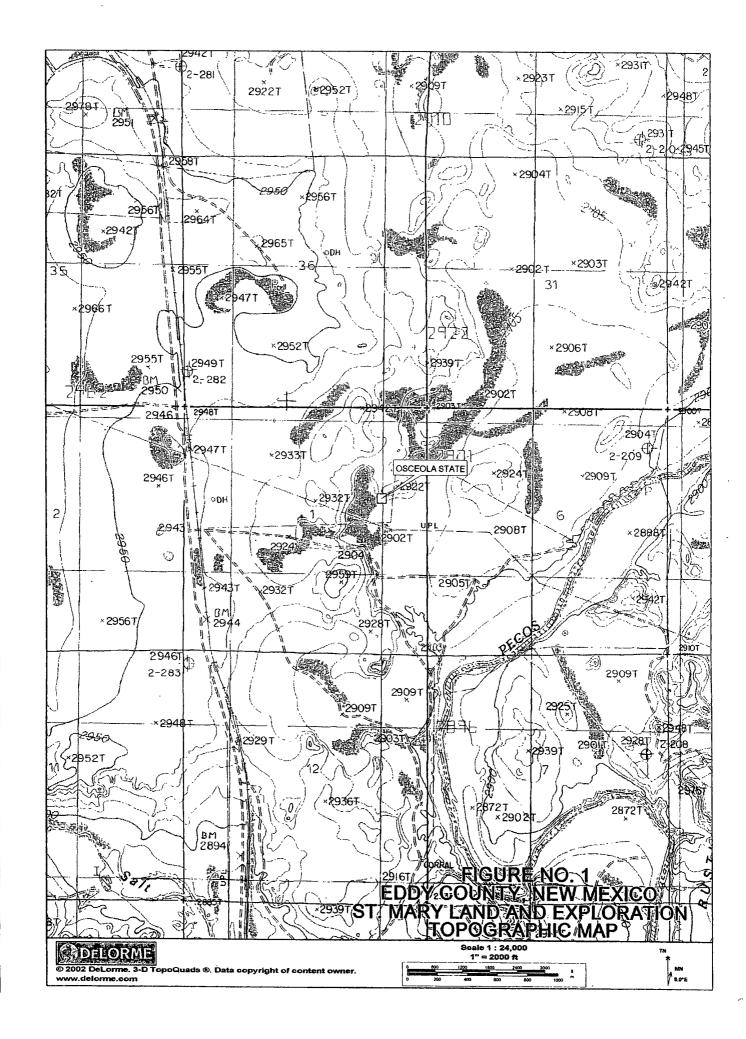
Tim Reed, P.G.

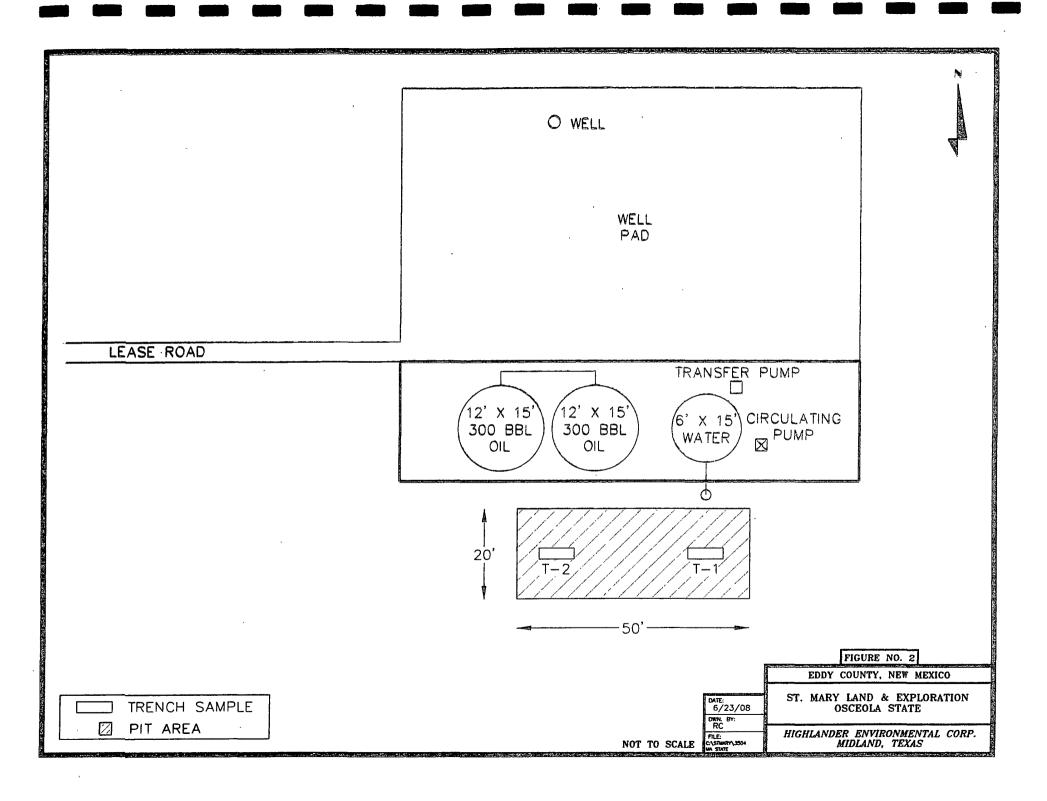
Senior Project Manager

cc: Tom Morrow – St. Mary Land

Don Riggs- St. Mary

FIGURES





TABLES

Table 1 St. Mary Land & Exploration Osceola State #1 Tank Battery

Sample	Soil S	tatus	Date,	Sample		TPH (mg/kg)	1	Benzene	Toluene	Ethlybenzene	Xylene	Chloride
ID	Insitu	Removed	Sampled	Depth (ft)	C6-C12	C12-C35	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
												,
T-1	X		6/11/2008	0-1	<50.0	3.83	3.83	<0.001	< 0.001	0.0150	0.0199	3,220
	X		6/11/2008	2.0	-	-	-	_	-	-	-	2,160
	X		6/11/2008	3.0	-	-	-	-	•	-	-	5,890
	X		6/11/2008	5.0	-	-	-	-	•	_	-	15,500
	X		6/11/2008	7.0	-	-	-	-		-	-	12,800
	X		6/11/2008	10.0	-	-	-	-	•	_	-	604
	X		6/11/2008	12.0	-	-		-	-	-	_	338
T-2	X		6/11/2008	0-1	<50.0	<1.0	<50.0	<0.001	< 0.001	< 0.001	0.0225	<100
	X		6/11/2008	2.0	_	-	-	-	-	-	<u>-</u>	2,320
	X		6/11/2008	3.0	-	-	٠ ـ	-	-	-	-	4,170
	X		6/11/2008	5.0	-	-	-	-	-	_	-	2,420
	X		6/11/2008	7.0	-	-	<u>-</u>	-	-	-	-	2,500
	X		6/11/2008	10.0	-	-	-	-	- .	-	-	2,200
	X		6/11/2008	12.0	-	-	-	-	<u>-</u>	_	-	278

(-) not analyzed

Table 2
St. Mary Land & Exploration
Osceola State #1 Tank Battery

Sample	Soil S	Status	Date	Sample	Т	PH (mg/k	g)	Benzene	Toluene	Ethlybenzene	Xylene	Chloride
<u>ID</u>	Insitu	Removed	Sampled	Туре	DRO	GRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Northwall	X	er Carri	4/17/2009	composite	₹ <50.0	1284	1.84	<0.100	<0.100	<0.100	<0:100	2,790
Southwall		X	4/17/2009	composite	<50.0	<1.00	<50.0	<0.100	<0.100	<0.100	<0.100	2,470
Southeast Southeast	X	X	4/23/2009 \$5/5/2009	composite composite			-				-	3,010 2,970
Southwest Southwest	X	X	4/23/2009 5/5/2009	composite	-	-	-	10000000 55 N.T.E. 1,0045643	7 (1888 S.) (17 P. 1844 S. 1877)	**************************************	- -	3,360
Eastwall Eastwall		X X	4/17/2009	composite	<50.0	<1.00	<50.0	<0.100	<0.100	<0.100	<0.100	2,670
	X		4/23/2009 5/5/2009	composite composite					Market A			3,240 3,750
T-1 (2.0')	Х		5/5/2009	grab		-	-	_	· •	-	-	1,170
T-1 (4.0') T-1 (6.0')	X		5/5/2009 5/5/2009	grab grab	<u>-</u>	- -		-		-	-	1,300 229
Westwall		Х	4/17/2009	composite	<50.0	<1.00	<50.0	<0.100	<0.100	<0.100	0.0968	1,800
Westwall Westwall		X	4/23/2009	composite composite								1,530 200 \$
Background 3'	Х		5/5/2009	grab		-		-	<u>-</u> .		-	1,950
Background 6' Background 8'	X X		5/5/2009 5/5/2009	grab grab	-	-		-		-	-	2,130 2,810

(-) not analyzed

APPENDIX A

District I
1625 N. French Dr., Hobbs, NM 88240
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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 For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Form C-144

June 1, 2004

Pit or Below-Grade Tank Registration or Closure

	K covered by a "general plan'"? Yes ☐ No or below-grade tank ☐ Closure of a pit or below-gra	
Address: 3300 N. A Street, Bldg # 7 Suite 200 Midland, Texasc79705 Facility or well name: Osceola State # 1 Well and Tank Battery API #: 3 County: Eddy Latitude Surface Owner. Federal 🖾 State 🗌 Private 🗀 Indian 🗀	0-015-27844 U/L or Qtr/Qtr L 32.16077 N Longitude 104.03529 W	/@stmaryland.com Sec I T-25-S R-28-E NAD: 1927 ⊠ 1983 □
Pit Type: Drilling ☐ Production ☑ Disposal ☐ Workover ☐ Emergency ☐ Lined ☐ Unlined ☑ Liner type Thickness mil Clay ☐ Pit Volume 500 bbl (estimated)	Below-grade tank Volume:bbl Type of fluid Construction material: Double-walled, with leak detection? Yes If no	-
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) 40'	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) 20 (10 points) 0
Wellhead protection area. (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points) (0 points) 0
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points)
	Ranking Score (Total Points)	20
If this is a pit closure: (1) Attach a diagram of the facility showing the pit's your are burying in place) onsite offsite If offsite, name of facility To remediation start date and end date. (4) Groundwater encountered: No You Attach soil sample results and a diagram of sample locations and excavate Additional Comments: Registration.	o Be Determined . (3) Attach a general //es If yes, show depth below ground surfaceions.	description of remedial action taken including
I hereby certify that the information above is true and complete to the best has been/will be constructed or closed according to NMOCD guideline	of my knowledge and belief. I further certify that is □, a general permit □, or an (attached) altern	the above-described pit or below-grade tank ative OCD-approved plan □. See above ⊠
Date: 5-28-2008 Printed Name/Title Gary Miller, Agent, Highlander Environmental Con Your certification and NMOCD approval of this application/closure does not otherwise endanger public health or the environment. Nor does it relieve to regulations.	not relieve the operator of liability should the content	
Approval: Printed Name/Title	Signature ·	Date:

APPENDIX B

3504

Work Order: 8061331 St. Mary/Asceola State #1 Tank Battery Page Number: 1 of 3 Eddy County, NM

Summary Report

Ike Tavarez

Highlander Environmental Services

1910 N. Big Spring Street Midland, TX, 79705

Report Date: June 17, 2008

Work Order: 8061331

Project Location: Eddy County, NM

Project Name: St. Mary/Asceola State #1 Tank Battery

Project Number: 3504

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
163242	T-1 0-1'	soil	2008-06-11	00:00	2008-06-13
163243	T-1 2.0'	soil	2008-06-11	00:00	2008-06-13
163244	T-1 3.0'	soil	2008-06-11	00:00	2008-06-13
163245	T-1 5.0'	soil	2008-06-11	00:00	2008-06-13
163246	T-1 7.0'	soil	2008-06-11	00:00	2008-06-13
163247	T-1 10.0'	soil	2008-06-11	00:00	2008-06-13
163248	T-1 12.0'	soil	2008-06-11	00:00	2008-06-13
163249	T-2 0-1'	soil	2008-06-11	00:00	2008-06-13
163250	T-2 2.0'	soil	2008-06-11	00:00	2008-06-13
163251	T-2 3.0'	soil	2008-06-11	00:00	2008-06-13
163252	T-2 5.0'	soil	2008-06-11	00:00	2008-06-13
163253	T-2 7.0'	soil	2008-06-11	00:00	2008-06-13
163254	T-2 10.0'	soil	2008-06-11	00:00	2008-06-13
163255	T-2 12.0'	soil	2008-06-11	00:00	2008-06-13

		I	TPH DRO	TPH GRO		
1	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
163242 - T-1 0-1'	< 0.0100	< 0.0100	0.0150	0.0199	<50.0	3.83
163249 - T-2 0-1'	< 0.0100	< 0.0100	< 0.0100	0.0225	< 50.0	<1.00

Sample: 163242 - T-1 0-1'

Param	Flag	Result	Units	m RL
Chloride		3220	mg/Kg	2.00

Sample: 163243 - T-1 2.0'

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: June 3504	17, 2008	Work Order: 8061331 St. Mary/Asceola State #1 Tank	Battery	Page Number: 2 of 3 Eddy County, NM
Param	Flag	Result	Units	RL
Chloride		2160	mg/Kg	2.00
Sample: 163244	- T-1 3.0'		,	
Param	Flag	Result	Units	RL
Chloride		5890	mg/Kg	2.00
Sample: 163245	- T-1 5.0'			
Param	Flag	Result	Units	RL
Chloride		15500	mg/Kg	2.00
Sample: 163246 Param Chloride Sample: 163247	Flag	Result 12800	Units mg/Kg	RL 2.00
Param		Result	TT 4:	
	Flag	nesm	Units	RL
Chloride	Flag	. 604	Units mg/Kg	
Sample: 163248 Param		604 Result	mg/Kg Units	2.00 RL
Sample: 163248	- T-1 12.0'	604	mg/Kg	2.00 RL
Sample: 163248 Param Chloride	- T-1 12.0' Flag	604 Result	mg/Kg Units	2.00 RL
Sample: 163248 Param Chloride Sample: 163249 Param	- T-1 12.0' Flag	Result 338	mg/Kg Units mg/Kg Units	RL 2.00
Sample: 163248 Param Chloride Sample: 163249	- T-1 12.0' Flag - T-2 0-1'	Result 338	mg/Kg Units mg/Kg	2.00 RL 2.00
Sample: 163248 Param Chloride Sample: 163249 Param	- T-1 12.0' Flag - T-2 0-1' Flag	Result 338	mg/Kg Units mg/Kg Units	2.00 RL 2.00
Sample: 163248 Param Chloride Sample: 163249 Param Chloride	- T-1 12.0' Flag - T-2 0-1' Flag	Result 338	mg/Kg Units mg/Kg Units	2.00 RL 2.00

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296

This is only a summary. Please, refer to the complete report package for quality control data.

	.7, 2008	Work Order: 8061331 St. Mary/Asceola State #1 Tanl	k Battery	Page Number: 3 of 3 Eddy County, NM
Sample: 163251 -	Т-2 3.0'			
Param	Flag	Result	Units	RL
Chloride		4170	mg/Kg	2.00
Sample: 163252 -	T-2 5.0'			
			Units	RL
Param	Flag	Result	Units	1611
Param Chloride Sample: 163253 -		2420	mg/Kg	2.00
Chloride				2.00
Chloride				
Chloride Sample: 163253 - Param	T-2 7.0' Flag	2420 Result	mg/Kg Units	2.00 RL
Chloride Sample: 163253 - Param Chloride	T-2 7.0' Flag	2420 Result	mg/Kg Units	2.00 RL



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110 Ft Worth, Texas 76132

Lubbock, Texas 79424 800 • 378 • 1296 El Paso, Texas 79922 888 • 588 • 3443 Midland, Texas 79703

E-Mail lab@traceanalysis.com

806 • 794 • 1296 FAX 806 • 794 • 1298 FAX 915 • 585 • 4944 915 • 585 • 3443

432 • 689 • 6301 FAX 432 • 689 • 6313 817 • 201 • 5260

Analytical and Quality Control Report

Ike Tavarez Highlander Environmental Services 1910 N. Big Spring Street Midland, TX, 79705

Report Date: June 17, 2008

Work Order: 8061331

Project Location: Eddy County, NM

Project Name: St. Mary/Asceola State #1 Tank Battery

Project Number:

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
163242	T-1 0-1'	soil	2008-06-11	00:00	2008-06-13
163243	T-1 2.0'	soil	2008-06-11	00:00	2008-06-13
163244	T-1 3.0'	soil	2008-06-11	00:00	2008-06-13
163245	T-1 5.0'	soil	2008-06-11	00:00	2008-06-13
163246	T-1 7.0'	soil	2008-06-11	00:00	2008-06-13
163247	T-1 10.0'	soil	2008-06-11	00:00	2008-06-13
163248	T-1 12.0'	soil	2008-06-11	00:00	2008-06-13
163249	T-2 0-1'	soil	2008-06-11	00:00	2008-06-13
163250	T-2 2.0'	soil	2008-06-11	00:00	2008-06-13
163251	T-2 3.0'	soil	2008-06-11	00:00	2008-06-13
163252	T-2 5.0'	soil	2008-06-11	00:00	2008-06-13
163253	T-2 7.0'	soil	2008-06-11	00:00	2008-06-13
163254	T-2 10.0'	soil	2008-06-11	00:00	2008-06-13
163255	T-2 12.0'	soil	2008-06-11	00:00	2008-06-13

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

Certifications Lubbock - NELAP T104704219-08-TX El Paso - NELAP T104704221-08-TX

Standard Flags

 $\boldsymbol{B}\,$ - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project St. Mary/Asceola State #1 Tank Battery were received by TraceAnalysis, Inc. on 2008-06-13 and assigned to work order 8061331. Samples for work order 8061331 were received intact at a temperature of 3.2 deg C.

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

Test	Method
BTEX	S 8021B
Chloride (Titration)	SM 4500-Cl B
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

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 8061331 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.

Work Order: 8061331

St. Mary/Asceola State #1 Tank Battery

Page Number: 4 of 18 Eddy County, NM

Analytical Report

Sample: 163242 - T-1 0-1'

Laboratory: Midland

3504

Analysis: **BTEX** QC Batch: 49404 Prep Batch: 42405

Analytical Method: S 8021B Date Analyzed:

2008-06-16 Sample Preparation: 2008-06-16

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

RL

Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Benzene		< 0.0100	mg/Kg	1	0.0100
Toluene		< 0.0100	mg/Kg	1	0.0100
Ethylbenzene		0.0150	mg/Kg	1	0.0100
Xylene		0.0199	mg/Kg	1	0.0100

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.986	mg/Kg	1	1.00	99	68 - 136.9
4-Bromofluorobenzene (4-BFB)		1.01	mg/Kg	1	1.00	101	48.2 - 155

Sample: 163242 - T-1 0-1'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 49380 Prep Batch: 42412 Analytical Method: SM 4500-Cl B Date Analyzed:

2008-06-16 Sample Preparation: 2008-06-16

Prep Method: N/A Analyzed By: \mathbf{AR}

Prepared By: AR

RL

Parameter	Flag	Result	Units	Dilution	RL
Chloride		3220	mg/Kg	50	2.00

Sample: 163242 - T-1 0-1'

Laboratory: Midland

Analysis: TPH DRO QC Batch: 49369 Prep Batch: 42392

Analytical Method: Date Analyzed:

Mod. 8015B 2008-06-16 Sample Preparation: 2008-06-16

Prep Method: N/A Analyzed By: LDPrepared By: LD

RL

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

3504

Work Order: 8061331 St. Mary/Asceola State #1 Tank Battery Page Number: 5 of 18 Eddy County, NM

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	${f Amount}$	Recovery	Limits
n-Triacontane		135	mg/Kg	1	100	135	10 - 250.4

Sample: 163242 - T-1 0-1'

Laboratory:

Midland

Analysis: QC Batch: Prep Batch:

TPH GRO 49405 42405

Analytical Method:

S 8015B Date Analyzed: 2008-06-16 Sample Preparation: 2008-06-16 Prep Method: S 5035 Analyzed By:

DCPrepared By: DC

RL

Parameter	Flag	Result	Units	Dilution	RL
GRO		3.83	mg/Kg	1	1.00

					Spike	$\mathbf{Percent}$	Recovery
Surrogate	\mathbf{Flag}	Result	\mathbf{Units}	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1.03	mg/Kg	1	1.00	103	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.00	mg/Kg	1	1.00	100	63.8 - 141

Sample: 163243 - T-1 2.0'

Laboratory:

Midland

Analysis: QC Batch: Chloride (Titration)

49380 Prep Batch: 42412 Analytical Method: Date Analyzed:

SM 4500-Cl B 2008-06-16 Sample Preparation: 2008-06-16

Prep Method: N/A

Analyzed By: ARPrepared By: AR

RL

Parameter	Flag	Result	Units	Dilution	RL
Chloride		2160	mg/Kg	50	2.00

Sample: 163244 - T-1 3.0'

Laboratory:

Prep Batch:

Midland

42412

Analysis: Chloride (Titration) QC Batch: 49380

Analytical Method: Date Analyzed:

SM 4500-Cl B 2008-06-16 2008-06-16

Prep Method: N/A \mathbf{AR}

Analyzed By: Prepared By: AR

RL

Parameter	Flag	Result	Units	Dilution	RL
Chloride		5890	mg/Kg	50	2.00

Sample Preparation:

Work Order: 8061331 Report Date: June 17, 2008 Page Number: 6 of 18 3504 St. Mary/Asceola State #1 Tank Battery Eddy County, NM Sample: 163245 - T-1 5.0' Laboratory: Midland Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 49380 Date Analyzed: 2008-06-16 Analyzed By: AR Prep Batch: 42412 Sample Preparation: 2008-06-16 Prepared By: ARRLParameter Result Units Dilution RLFlag 15500 Chloride mg/Kg 50 2.00 Sample: 163246 - T-1 7.0' Laboratory: Midland SM 4500-Cl B Analysis: Chloride (Titration) Analytical Method: Prep Method: N/A QC Batch: 49380 Date Analyzed: 2008-06-16 Analyzed By: AR. Prep Batch: 42412 Sample Preparation: 2008-06-16 Prepared By: ARRLParameter Flag Result Units Dilution RLChloride 12800 mg/Kg 50 2.00 Sample: 163247 - T-1 10.0' Laboratory: Midland Analysis: Chloride (Titration) Analytical Method: Prep Method: N/A SM 4500-Cl B QC Batch: 49380 Date Analyzed: 2008-06-16 Analyzed By: ARPrep Batch: 42412 Sample Preparation: 2008-06-16 Prepared By: ARRLFlag Parameter Result Units Dilution RLChloride 604 mg/Kg 50 2.00 Sample: 163248 - T-1 12.0' Laboratory: Midland Chloride (Titration) Analysis: Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 49380 Date Analyzed: 2008-06-16 Analyzed By: AR Prep Batch: 42412 Sample Preparation: 2008-06-16 Prepared By: AR

RL

338

Units

mg/Kg

Dilution

50

RL

2.00

Result

Flag

Parameter

Chloride

Work Order: 8061331

St. Mary/Asceola State #1 Tank Battery

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Sample: 163249 - T-2 0-1'

Laboratory: Midland

3504

Analysis: **BTEX** QC Batch: 49404 Prep Batch: 42405

Analytical Method: S 8021B Date Analyzed: 2008-06-16 Sample Preparation: 2008-06-16

Prep Method: S 5035 Analyzed By: DCPrepared By: DC

RL

Parameter	\mathbf{Flag}	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		0.0225	mg/Kg	11	0.0100

					\mathbf{Spike}	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.995	mg/Kg	1	1.00	100	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.995	mg/Kg	1	1.00	100	48.2 - 155

Sample: 163249 - T-2 0-1'

Laboratory: Midland

Analysis: Chloride (Titration) QC Batch: 49380 Prep Batch: 42412

Analytical Method: SM 4500-Cl B Date Analyzed: 2008-06-16 Sample Preparation: 2008-06-16

Prep Method: N/A Analyzed By: ARPrepared By: AR

RL

Parameter	Flag	Result	Units	Dilution	RL
Chloride		<100	mg/Kg	50	2.00

Sample: 163249 - T-2 0-1'

Midland Laboratory:

TPH DRO Analysis: QC Batch: 49369 Prep Batch: 42392

Analytical Method: Mod. 8015B Date Analyzed: 2008-06-16 Sample Preparation: 2008-06-16

Prep Method: N/A Analyzed By: LDPrepared By: LD

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

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		138	mg/Kg	1	100	138	10 - 250.4

3504

Work Order: 8061331 St. Mary/Asceola State #1 Tank Battery Page Number: 8 of 18 Eddy County, NM

Sample: 163249 - T-2 0-1'

Laboratory: Midland

Analysis: TPH GRO QC Batch: 49405 Prep Batch: 42405 Analytical Method: S 8015B
Date Analyzed: 2008-06-16
Sample Preparation: 2008-06-16

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

RL

RL

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

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1.04	mg/Kg	1	1.00	104	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.04	mg/Kg	1	1.00	104	63.8 - 141

Sample: 163250 - T-2 2.0'

Laboratory: Midland

Analysis: Chloride (Titration) QC Batch: 49380 Prep Batch: 42412 Analytical Method: SM 4500-Cl B
Date Analyzed: 2008-06-16
Sample Preparation: 2008-06-16

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

Dl. .

Parameter	Flag	Result	Units	Dilution	RL
Chloride		2320	mg/Kg	50	2.00

Sample: 163251 - T-2 3.0'

Laboratory: Midland

Analysis: Chloride (Titration) QC Batch: 49380 Prep Batch: 42412 Analytical Method: SM 4500-Cl B Date Analyzed: 2008-06-16 Sample Preparation: 2008-06-16

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

Sample: 163252 - T-2 5.0'

Laboratory: Midland

Analysis: Chloride (Titration)
QC Batch: 49381
Prep Batch: 42413

Analytical Method: SM 4500-Cl B
Date Analyzed: 2008-06-16
Sample Preparation: 2008-06-16

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

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Work Order: 8061331

St. Mary/Asceola State #1 Tank Battery

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Parameter	${f Flag}$	Result	$\mathbf{U}_{\mathbf{nits}}$	Dilution	RL
Chloride		2420	mg/Kg	50	2.00

Sample: 163253 - T-2 7.0'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 49381 Prep Batch: 42413

Analytical Method: Date Analyzed:

SM 4500-Cl B 2008-06-16 Sample Preparation: 2008-06-16

Prep Method: N/A Analyzed By: AR

Prepared By: AR

RL

	•				
Parameter	Flag	Result	Units	Dilution	RL
Chloride		2500	mg/Kg	50	2.00

Sample: 163254 - T-2 10.0'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 49381 Prep Batch: 42413 Analytical Method: Date Analyzed:

Sample Preparation:

SM 4500-Cl B 2008-06-16 2008-06-16

Prep Method: N/A Analyzed By: AR

Prepared By: AR

RL

Parameter	Flag	Result	Units	Dilution	$_{}$ RL
Chloride		2200	mg/Kg	50	2.00

Sample: 163255 - T-2 12.0'

Laboratory:

Midland

Analysis: Chloride (Titration)

QC Batch: 49381 Prep Batch: 42413 Analytical Method: Date Analyzed:

Sample Preparation:

SM 4500-Cl B 2008-06-16 2008-06-16

Prep Method: N/A Analyzed By: ARPrepared By:

RL

Parameter	Flag	Result	Units	Dilution	RL
Chloride		278	mg/Kg	50	2.00

Method Blank (1)

QC Batch: 49369

QC Batch: 49369 Prep Batch: 42392 Date Analyzed: 2008-06-16 QC Preparation: 2008-06-16 Analyzed By: LD Prepared By: LD

Work Order: 8061331

St. Mary/Asceola State #1 Tank Battery Eddy County, NM

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		M	DL					
Parameter	Flag	Res	sult		Units		RL	
DRO		1	16.0				50	
Surrogate	Surrogate Flag Result		Dilution	Spike Amount			•	
n-Triacontane	132	mg/Kg	1	100	132		146.4	
Method Blank (1)) QC Batch: 49380	ı					,	
QC Batch: 49380 Prep Batch: 42412		Date Analyzed: QC Preparation:	2008-06-16 2008-06-16			Analyzed By: Prepared By:	AR AR	
Parameter	Flag		IDL sult		Units		m RL	
Chloride	Flag		500		mg/Kg		2	
QC Batch: 49381 Prep Batch: 42413		Date Analyzed: QC Preparation:				Analyzed By: Prepared By:	AR AR	
			IDL			•		
Parameter	Flag		sult		Units		RL	
Chloride			500		mg/Kg		2	
Method Blank (1)) QC Batch: 49404	Ł						
QC Batch: 49404		Date Analyzed:	2008-06-16			Analyzed By:	\mathbf{DC}	
Prep Batch: 42405		QC Preparation:	2008-06-16			Prepared By:	\mathbf{DC}	
			MDL					
Parameter	Flag		Result		Units		RL	
Benzene			.00110		mg/Kg	•	0.01	
Toluene			.00150		mg/Kg		0.01	
Ethylbenzene			.00160		mg/Kg		0.01	
Xylene		<0.	.00410		mg/Kg		0.01	

Surrogate	Flag	Result	Units	Dilution	$\begin{array}{c} {\rm Spike} \\ {\rm Amount} \end{array}$	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.955	mg/Kg	1	1.00	96	48.3 - 132.5
4-Bromofluorobenzene (4-BFB)		0.967	mg/Kg	1	1.00	97	37.7 - 128.9

Work Order: 8061331

St. Mary/Asceola State #1 Tank Battery

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Method Blank (1)

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QC Batch: 49405

QC Batch: 49405 Prep Batch: 42405 Date Analyzed: 2008-06-16 QC Preparation:

2008-06-16

Analyzed By: DC

Prepared By: DC

MDL

Parameter	Flag	Result	Units	RL
GRO		< 0.739	mg/Kg	1

					Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.996	mg/Kg	1	1.00	100	39.2 - 135.2
4-Bromofluorobenzene (4-BFB)		0.988	mg/Kg	1	1.00	99	16.8 - 138.1

Laboratory Control Spike (LCS-1)

QC Batch: 49369

Date Analyzed:

2008-06-16

Analyzed By: LD

Prepared By: LD

Prep Batch: 42392

QC Preparation: 2008-06-16

LCS Spike Matrix Rec. Result Units Dil. Limit Amount Result Rec. Param 27.8 - 152.1 271DRO mg/Kg $\overline{250}$ 16 102

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	320	mg/Kg	1	250	16	122	27.8 - 152.1	17	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	${f Units}$	Dil.	Amount	Rec.	Rec.	Limit
n-Triacontane	108	97.0	mg/Kg	1	100	108	97	38 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 49380 Prep Batch: 42412 Date Analyzed: QC Preparation:

2008-06-16 2008-06-16 Analyzed By: AR

Prepared By: AR

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	99.1	mg/Kg	1	100	< 0.500	99	85 - 115

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

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	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	100	mg/Kg	1	100	< 0.500	100	85 - 115	1	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: 49381 Prep Batch: 42413 Date Analyzed: 2008-06-16 QC Preparation: 2008-06-16 Analyzed By: AR Prepared By: AR

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	102	mg/Kg	1	100	< 0.500	102	85 - 115

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	104	mg/Kg	1	100	< 0.500	104	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: 49404 Prep Batch: 42405 Date Analyzed: 2008-06-16 QC Preparation: 2008-06-16 Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.00	mg/Kg	1	1.00	<0.00110	100	73.3 - 116.6
Toluene	0.996	mg/Kg	1	1.00	< 0.00150	100	78.6 - 115.1
Ethylbenzene	0.924	mg/Kg	1	1.00	< 0.00160	92	77.4 - 114.9
Xylene	2.93	mg/Kg	1	3.00	< 0.00410	98	78.2 - 114.7

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.991	mg/Kg	1	1.00	< 0.00110	99	73.3 - 116.6	1	20
Toluene	0.987	mg/Kg	1	1.00	< 0.00150	99	78.6 - 115.1	1	20
Ethylbenzene	0.948	mg/Kg	1	1.00	< 0.00160	95	77.4 - 114.9	3	20
Xylene	2.94	mg/Kg	1	3.00	< 0.00410	98	78.2 - 114.7	0	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.958	0.946	mg/Kg	1	1.00	96	95	45 - 124.2

continued ...

Report Date: June 17, 2008

St. Mary/Asceola State #1 Tank Battery

control spikes continued . . .

LCS LCSD Spil

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-	LCS	LCSD		,	Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
4-Bromofluorobenzene (4-BFB)	0.975	0.959	mg/Kg	1	1.00	98	96	47.2 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 49405 Prep Batch: 42405 Date Analyzed: 2008-06-16 QC Preparation: 2008-06-16 Analyzed By: DC Prepared By: DC

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	7.87	mg/Kg	1	10.0	< 0.739	79	57.5 - 106.4

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	8.14	mg/Kg	1	10.0	< 0.739	81	57.5 - 106.4	3	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.979	0.995	mg/Kg	1	1.00	98	100	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	0.998	1.02	mg/Kg	1	1.00	100	102	53.3 - 123.6

Matrix Spike (MS-1) Spiked Sample: 163242

QC Batch: 49369 Prep Batch: 42392 Date Analyzed: 2008-06-16 QC Preparation: 2008-06-16 Analyzed By: LD Prepared By: LD

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO	265	mg/Kg	1	250	21.75	97	18 - 179.5

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

	MSD			\mathbf{Spike}	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	280	mg/Kg	1	250	21.75	112	18 - 179.5	6	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	${f Units}$	Dil.	Amount	Rec.	Rec.	Limit
n-Triacontane	93.6	107	mg/Kg	1	100	94	107	34.1 - 158

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Matrix Spike (MS-1)

Spiked Sample: 163251

QC Batch: Prep Batch:

49380 42412 Date Analyzed:

2008-06-16

QC Preparation: 2008-06-16

Analyzed By: AR Prepared By: AR

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	8610	mg/Kg	50	5000	4168	89	85 - 115

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	\mathbf{Units}	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	8770	mg/Kg	50	5000	4168	92	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: 163261

QC Batch: Prep Batch: 42413

49381

Date Analyzed: QC Preparation:

2008-06-16 2008-06-16 Analyzed By: AR

Prepared By: AR

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	18400	mg/Kg	50	5000	12860	111	85 - 115

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

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	•	18500	mg/Kg	50	5000	12860	113	85 - 115	0	20

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

Matrix Spike (MS-1)

Spiked Sample: 163242

QC Batch:

49404 Prep Batch: 42405

Date Analyzed:

2008-06-16

QC Preparation: 2008-06-16 Analyzed By: DC

Prepared By: DC

		MS			Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	1	2.45	mg/Kg	1	1.00	< 0.00110	245	62.2 - 134.3
Toluene	2	2.48	mg/Kg	1	1.00	< 0.00150	248	62.6 - 145.4
Ethylbenzene	3	2.51	mg/Kg	1	1.00	0.015	250	64.6 - 146.4

 $continued \dots$

¹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

²Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

³Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Work Order: 8061331

St. Mary/Asceola State #1 Tank Battery

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matrix spikes continued ...

		MS			Spike	Matrix		${ m Rec.}$
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Xylene	4	7.55	mg/Kg	1	3.00	0.0199	251	64.3 - 148.8

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

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	\mathbf{Limit}
Benzene	5	2.53	mg/Kg	1	1.00	< 0.00110	253	62.2 - 134.3	3	20
Toluene	6	2.60	mg/Kg	1	1.00	< 0.00150	260	62.6 - 145.4	5	20
Ethylbenzene	7	2.66	mg/Kg	1	1.00	0.015	264	64.6 - 146.4	6	20
Xylene	8	7.98	mg/Kg	1	3.00	0.0199	265	64.3 - 148.8	6	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	\mathbf{Units}	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.05	0.973	mg/Kg	1	1	105	97	38.8 - 127.5
4-Bromofluorobenzene (4-BFB)	1.08	1.02	mg/Kg	1	1	108	102	49.3 - 142.4

Matrix Spike (MS-1) Spiked Sample: 163242

QC Batch: 49405 Prep Batch: 42405

2008-06-16 Date Analyzed: QC Preparation: 2008-06-16

Analyzed By: DC Prepared By: DC

		MS			\mathbf{Spike}	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}
GRO	9	23.7	mg/Kg	1	10.0	3.8341	199	10 - 139.3

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

•		MSD			\mathbf{Spike}	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	10	22.4	mg/Kg	1	10.0	3.8341	186	10 - 139.3	6	20

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

	MS	MSD			Spike	MS	MSD	${ m Rec.}$
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.02	1.03	mg/Kg	1	1	102	103	21.3 - 119
4-Bromofluorobenzene (4-BFB)	1.04	1.04	mg/Kg	1	1	104	104	52.5 - 154

⁴Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁵Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁶Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁷Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁸Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. ⁹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

¹⁰Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

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Standard ((ICV-1)						.,
QC Batch:	49369		Date Ana	lyzed: 2008-06	5-16	Anal	yzed By: LD
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	262	105	85 - 115	2008-06-16
Standard ((CCV-1)						
QC Batch:	49369		Date Ana	lyzed: 2008-06	5-16	Anal	yzed By: LD
_	T 11	** •	CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param DRO	Flag	Units mg/Kg	Conc. 250	Conc. 287	Recovery 115	Limits 85 - 115	Analyzed 2008-06-16
		<u> </u>					
Standard (QC Batch:			Date Ana	lyzed: 2008-06	3-16	Anal	yzed By: AR
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2008-06-16
Standard QC Batch:	,		Date Ana	llyzed: 2008-00	6-16	Anal	yzed By: AR
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	97.6	98	85 - 115	2008-06-16
Standard	,		Date Ana	alyzed: 2008-0	6-16	Anai	lyzed By: AR
			ICVs	ICVs.	ICVs	Percent	
_			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	98.0	98	85 - 115	2008-06-1

3504

Work Order: 8061331 St. Mary/Asceola State #1 Tank Battery Page Number: 17 of 18 Eddy County, NM

Standard (CCV-1)

QC Batch: 49381

Date Analyzed: 2008-06-16

Analyzed By: AR

			\mathbf{CCVs}	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	$\mathbf{Analyzed}$
Chloride		mg/Kg	100	102	102	85 - 115	2008-06-16

Standard (ICV-1)

QC Batch: 49404

Date Analyzed: 2008-06-16

Analyzed By: DC

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	$\mathbf{Analyzed}$
Benzene		mg/Kg	0.100	0.0991	99	85 - 115	2008-06-16
Toluene		mg/Kg	0.100	0.0984	98	85 - 115	2008-06-16
Ethylbenzene		mg/Kg	0.100	0.0885	88	85 - 115	2008-06-16
Xylene		mg/Kg	0.300	0.282	94	85 - 115	2008-06-16

Standard (CCV-1)

QC Batch: 49404

Date Analyzed: 2008-06-16

Analyzed By: DC

			CCVs	CCVs	\mathbf{CCVs}	Percent	
			True	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	${f Units}$	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.0881	88	85 - 115	2008-06-16
Toluene		mg/Kg	0.100	0.0878	88	85 - 115	2008-06-16
Ethylbenzene	11	mg/Kg	0.100	0.0818	82	85 - 115	2008-06-16
Xylene		mg/Kg	0.300	0.261	87	85 - 115	2008-06-16

Standard (ICV-1)

QC Batch: 49405

Date Analyzed: 2008-06-16

Analyzed By: DC

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.939	94	85 - 115	2008-06-16

¹¹Ethylbenzene outside of control limits on CCV. CCV component average is .0863 which is within acceptable range. This is acceptable by Method 8000.

Report Date: June 17, 2008 3504

Work Order: 8061331

St. Mary/Asceola State #1 Tank Battery

Page Number: 18 of 18

Eddy County, NM

Standard (CCV-1)

QC Batch: 49405

Date Analyzed: 2008-06-16

Analyzed By: DC

			CCVs	CCVs	\mathbf{CCVs}	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.862	86	85 - 115	2008-06-16

WO# 806(33 Analysis Request of Chain of Custody Record PAGE: ANALYSIS REQUEST HIGHLANDER ENVIRONMENTAL CORP. (Circle or Specify Method No.) 1910 N. Big Spring St. (Ext. to C35) တ္တို့ မွ 모 모 Midland, Texas 79705 Pb (432) 682-4559 Fax (432) 682-3946 TX1005 CLIENT NAME: PRESERVATIVE Mary METHOD PROJECT NO .: PROJECT NAME: LAB I.D. MATRIX COMP. DATE TIME NONE NUMBER 핑 243 241 245 246 247 248 249 250 3.01 RECEIVED BY: (Signature) RELIQUISHED BY: (Signature) RECEIVED BY: (Signature) Time: **RELIQUISHED BY: (Signature)** RECEIVED BY: (Signature) HIGHLANDER CONTACT PERSON: RECEIVING LABORATORY: RECEIVED BY: (Signature) 14:40 CONTACT: PHONE: SAMPLE CONDITION WHEN RECEIVED:

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

WOH806133 **Analysis Request of Chain of Custody Record** ANALYSIS REQUEST HIGHLANDER ENVIRONMENTAL CORP. (Circle or Specify Method No.) 1910 N. Big Spring St. (Ext. to C35) က္ကို တို Ę Midland, Texas 79705 (432) 682-4559 Fax (432) 682-3946 TX1005 CLIENT NAME: PRESERVATIVE METHOD PROJECT NO.: PROJECT NAME: ST MONY LAB I.D. DATE TIME COMP. HNO3 NONE NUMBER 63250 RECEIVED BY: (Signature) RECEIVED BY: (Signature) SAMPLE SHIPPED BY: (Circle) Time HANDLDEDVERED RECEIVED BY: (Signature) RELINQUISHED BY: (Signature) HIGHLANDER CONTACT PERSON: Results by: RECEIVED BY: (Signature) RECEIVING LABORATORY: 1/5= lawarer

Laboratory retains Yellow copy - Return Orginal copy to Highlander Environmental Corp. - Project Manager retains Pink copy - Accounting receives Gold copy.

14:40

ADDRESS:

CONTACT:

SAMPLE CONDITION WHEN RECEIVED:

PHONE:

3504

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 1 of 2 Eddy Co., NM

Summary Report

Ike Tavarez Tetra Tech

1910 N. Big Spring Street Midland, TX 79705

Report Date: April 22, 2009

Work Order: 9042012

Project Location: Eddy Co., NM

St. Mary/Osceola State #1 Project Name:

Project Number: 3504

			Date	${f Time}$	Date
Sample	Description	Matrix	Taken	Taken	Received
193572	North Wall	soil	2009-04-17	00:00	2009-04-20
193573	South Wall	soil	2009-04-17	00:00	2009-04-20
193574	East Wall	soil	2009-04-17	00:00	2009-04-20
193575	West Wall	soil	2009-04-17	00:00	2009-04-20

	BTEX			TPH DRO	TPH GRO	
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
193572 - North Wall	< 0.0100	< 0.0100	< 0.0100	< 0.0100	<50.0	1.84
193573 - South Wall	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 50.0	< 1.00
193574 - East Wall	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 50.0	< 1.00
193575 - West Wall	< 0.0100	< 0.0100	< 0.0100	0.0968	< 50.0	< 1.00

Sample: 193572 - North Wall

Param	Flag	Result	Units	RL
Chloride		2790	mg/Kg	4.00

Sample: 193573 - South Wall

Param	Flag	Result	Units	RL
Chloride		2470	mg/Kg	4.00

Sample: 193574 - East Wall

Report Date: April 22, 2009 3504

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 2 of 2 Eddy Co., NM

Param	Flag	Result	Units	\mathbf{RL}
Chloride		2670	mg/Kg	4.00

Sample: 193575 - West Wall

Param	${f Flag}$	Result	Units	RL
Chloride		1800	mg/Kg	4.00



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E

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432 • 689 • 6301

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· E-Mail lab@traceanalysis.com

Certifications

WBENC: 237019

HUB:

1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX

LELAP-02003

Kansas E-10317

El Paso: T104704221-08-TX

LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ike Tavarez Tetra Tech

1910 N. Big Spring Street Midland, TX, 79705

Report Date: April 22, 2009

Work Order: 9042012

Project Location:

Eddy Co., NM

Project Name:

St. Mary/Osceola State #1

Project Number:

3504

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
193572	North Wall	soil	2009-04-17	00:00	2009-04-20
193573	South Wall	soil	2009-04-17	00:00	2009-04-20
193574	East Wall	soil	2009-04-17	00:00	2009-04-20
193575	West Wall	soil	2009-04-17	00:00	2009-04-20

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

Michael april

Dr. Blair Leftwich, Director

Standard Flags

 $\boldsymbol{B}\,$ - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project St. Mary/Osceola State #1 were received by TraceAnalysis, Inc. on 2009-04-20 and assigned to work order 9042012. Samples for work order 9042012 were received intact at a temperature of 3.6 deg. C.

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

		\mathbf{Prep}	\mathbf{Prep}	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	50179	2009-04-21 at 10:07	58790	2009-04-21 at 10:07
Chloride (Titration)	SM 4500-Cl B	50197	2009-04-22 at 09:00	58813	2009-04-22 at 11:35
TPH DRO	Mod. 8015B	50145	2009-04-20 at 09:00	58771	2009-04-20 at 14:20
TPH GRO	S 8015B	50179	2009-04-21 at 10:07	58791	2009-04-21 at 10:07

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 9042012 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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Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 4 of 16 Eddy Co., NM

Analytical Report

Sample: 193572 - North Wall

Laboratory: Midland

Analysis: **BTEX** QC Batch: 58790 Prep Batch: 50179

Analytical Method: S 8021B Date Analyzed: 2009-04-21 Sample Preparation: 2009-04-21

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

RL

Parameter	Flag	Result	Units	Dilution	m 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

					Spike	Percent	$\operatorname{Recovery}$
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		2.02	mg/Kg	1	2.00	101	49 - 129.7
4-Bromofluorobenzene (4-BFB)		1.80	mg/Kg	1	2.00	90	45.2 - 144.3

Sample: 193572 - North Wall

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 58813 Prep Batch: 50197 Analytical Method: SM 4500-Cl B Date Analyzed:

2009-04-22 Sample Preparation: 2009-04-22

Prep Method: N/A Analyzed By: AR

Prepared By: AR

RL

Parameter	Flag	Result	${f Units}$	Dilution	m RL
Chloride		2790	mg/Kg	50	4.00

Sample: 193572 - North Wall

Laboratory: Midland

Analysis: TPH DRO 58771 QC Batch: Prep Batch: 50145

Analytical Method: Date Analyzed: Sample Preparation:

Mod. 8015B 2009-04-20 2009-04-20

Prep Method: N/A Analyzed By: LD

Prepared By: LD

RL

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

3504 St

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 5 of 16 Eddy Co., NM

					Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Result	\mathbf{Units}	Dilution	Amount	Recovery	Limits
n-Triacontane	, ,	154	mg/Kg	1	100	154	13.2 - 219.3

Sample: 193572 - North Wall

Laboratory: Midland

Analysis: TPH GRO QC Batch: 58791 Prep Batch: 50179 Analytical Method: S 8015B
Date Analyzed: 2009-04-21
Sample Preparation: 2009-04-21

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

					Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1.99	mg/Kg	1	2.00	100	68.5 - 119.4
4-Bromofluorobenzene (4-BFB)		1.75	mg/Kg	1	2.00	88	52 - 117

Sample: 193573 - South Wall

Laboratory: Midland

Analysis: BTEX QC Batch: 58790 Prep Batch: 50179 Analytical Method: S 8021B
Date Analyzed: 2009-04-21
Sample Preparation: 2009-04-21

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

RLFlag Result **Dilution** \mathbf{RL} Parameter Units Benzene < 0.0100 mg/Kg 1 0.0100Toluene < 0.0100 mg/Kg 1 0.0100Ethylbenzene 1 0.0100 < 0.0100 mg/Kg Xylene < 0.0100 mg/Kg 1 0.0100

			•		Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Result	\mathbf{Units}	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	1	2.00	100	49 - 129.7
4-Bromofluorobenzene (4-BFB)		1.81	mg/Kg	1	2.00	90	45.2 - 144.3

3504

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 6 of 16 Eddy Co., NM

Sample: 193573 - South Wall

Midland Laboratory:

Chloride (Titration) Analysis:

58813 QC Batch: Prep Batch: 50197

Analytical Method: Date Analyzed:

Sample Preparation:

SM 4500-Cl B 2009-04-22

2009-04-22

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

RL

RLResult Units Dilution Parameter Flag 2470 4.00 Chloride mg/Kg 50

Sample: 193573 - South Wall

Laboratory: Midland

TPH DRO Analysis: QC Batch: 58771 Prep Batch: 50145

Analytical Method: Mod. 8015B Date Analyzed: Sample Preparation:

2009-04-20 2009-04-20

Prep Method: N/A Analyzed By: LD

Prepared By: LD

RLParameter Flag Result Units Dilution RLDRO < 50.0 mg/Kg 50.0

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		140	mg/Kg	1	100	140	13.2 - 219.3

Sample: 193573 - South Wall

Midland Laboratory:

TPH GRO Analysis: QC Batch: 58791 Prep Batch: 50179

Analytical Method: S 8015B Date Analyzed: 2009-04-21 Sample Preparation: 2009-04-21

Prep Method: S 5035 ME Analyzed By: MEPrepared By:

RL

Flag Result Dilution Units RLParameter GRO <1.00 1.00 mg/Kg 1

Surrogate	Flag	Result	Units	Dilution	$\begin{array}{c} {\rm Spike} \\ {\rm Amount} \end{array}$	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.09	mg/Kg	1	2.00	104	68.5 - 119.4
4-Bromofluorobenzene (4-BFB)		1.70	mg/Kg	1	2.00	85	52 - 117

Work Order: 9042012

3504

St. Mary/Osceola State #1

Page Number: 7 of 16 Eddy Co., NM

Sample: 193574 - East Wall

Laboratory: Midland

Analysis: **BTEX** QC Batch: 58790 Prep Batch: 50179

Analytical Method: S 8021B Date Analyzed: Sample Preparation: 2009-04-21

2009-04-21

Prep Method: S 5035 Analyzed By: MEPrepared By: ME

RL

Parameter	Flag	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

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		2.06	mg/Kg	1	2.00	103	49 - 129.7
4-Bromofluorobenzene (4-BFB)		1.75	mg/Kg	1	2.00	88	45.2 - 144.3

Sample: 193574 - East Wall

Laboratory: Midland

Analysis: Chloride (Titration) QC Batch: 58813 Prep Batch: 50197

Analytical Method: SM 4500-Cl B Date Analyzed: 2009-04-22 Sample Preparation: 2009-04-22

Prep Method: N/A Analyzed By: \mathbf{AR} Prepared By: AR

RL

Parameter	Flag	Result	Units	Dilution	RL
Chloride		2670	mg/Kg	50	4.00

Sample: 193574 - East Wall

Laboratory: Midland

TPH DRO Analysis: QC Batch: 58771 Prep Batch: 50145

Analytical Method: Mod. 8015B Date Analyzed: 2009-04-20 Sample Preparation: 2009-04-20

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

RL

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

					Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane	,	162	${ m mg/Kg}$	1	100	162	13.2 - 219.3

3504

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 8 of 16

Eddy Co., NM

Sample: 193574 - East Wall

Laboratory: Midland

Analysis: TPH GRO QC Batch: 58791 Prep Batch: 50179 Analytical Method: S 8015B
Date Analyzed: 2009-04-21
Sample Preparation: 2009-04-21

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

RL

Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
GRO		<1.00	mg/Kg	1	1.00

					\mathbf{Spike}	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1.98	mg/Kg	1	2.00	99	68.5 - 119.4
4-Bromofluorobenzene (4-BFB)		1.66	mg/Kg	1	2.00	83	52 - 117

Sample: 193575 - West Wall

Laboratory: Midland

Analysis: BTEX QC Batch: 58790 Prep Batch: 50179 Analytical Method: S 8021B
Date Analyzed: 2009-04-21
Sample Preparation: 2009-04-21

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

		RL			
Parameter	Flag	Result	\mathbf{Units}	Dilution	$_{ m RL}$
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		0.0968	mg/Kg	1	0.0100

					\mathbf{Spike}	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		2.04	mg/Kg	1	2.00	102	49 - 129.7
4-Bromofluorobenzene (4-BFB)		1.72	mg/Kg	1	2.00	86	45.2 - 144.3

Sample: 193575 - West Wall

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 58813 Prep Batch: 50197 Analytical Method: SM 4500-Cl B Date Analyzed: 2009-04-22 Sample Preparation: 2009-04-22

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

RL

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1800	mg/Kg	50	4.00

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 9 of 16 Eddy Co., NM

Sample: 193575 - West Wall

Laboratory: Midland

Analysis: TPH DRO QC Batch: 58771 Prep Batch: 50145 Analytical Method: Mod. 8015B
Date Analyzed: 2009-04-20
Sample Preparation: 2009-04-20

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

RL

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

					Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		153	mg/Kg	1	100	153	13.2 - 219.3

Sample: 193575 - West Wall

Laboratory: Midland

Analysis: TPH GRO QC Batch: 58791 Prep Batch: 50179 Analytical Method: S 8015B
Date Analyzed: 2009-04-21
Sample Preparation: 2009-04-21

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

RL

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

					Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		2.01	mg/Kg	1	2.00	100	68.5 - 119.4
4-Bromofluorobenzene (4-BFB)		1.65	mg/Kg	1	2.00	82	52 - 117

Method Blank (1)

QC Batch: 58771

QC Batch: 58771 Prep Batch: 50145

Date Analyzed: 2009-04-20 QC Preparation: 2009-04-20

Analyzed By: LD Prepared By: LD

MDL

Parameter	Flag	Result	Units	RL
DRO		8.40	mg/Kg	50

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		105	mg/Kg	1	100	105	13 - 178.5

3504

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 10 of 16

Eddy Co., NM

Method Blank (1)

QC Batch: 58790

QC Batch: 58790 Prep Batch: 50179 Date Analyzed: 2009-04-21 QC Preparation: 2009-04-21 Analyzed By: ME Prepared By: ME

 Ela.c	Donult
	MDL

Parameter	\mathbf{Flag}	Result	Units	m RL
Benzene		< 0.00100	mg/Kg	0.01
Toluene		< 0.00100	mg/Kg	0.01
Ethylbenzene		< 0.00110	mg/Kg	0.01
Xylene		< 0.00360	mg/Kg	0.01

					\mathbf{Spike}	Percent	Recovery
Surrogate	\mathbf{Flag}	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		2.11	mg/Kg	1	2.00	106	65.6 - 130.6
4-Bromofluorobenzene (4-BFB)		2.06	mg/Kg	1	2.00	103	51.9 - 128.1

Method Blank (1)

QC Batch: 58791

QC Batch: 58791 Prep Batch: 50179 Date Analyzed: 2009-04-21 QC Preparation: 2009-04-21 Analyzed By: ME Prepared By: ME

MDL

 Parameter
 Flag
 Result
 Units
 RL

 GRO
 <0.482</td>
 mg/Kg
 1

Surrogate	Flag	Result	Units	Dilution	$\begin{array}{c} {\rm Spike} \\ {\rm Amount} \end{array}$	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.98	mg/Kg	1	2.00	99	71.9 - 115
4-Bromofluorobenzene (4-BFB)		2.00	mg/Kg	1	2.00	100	45.7 - 118.9

Method Blank (1)

QC Batch: 58813

QC Batch: 58813 Prep Batch: 50197 Date Analyzed: 2009-04-22 QC Preparation: 2009-04-22 Analyzed By: AR Prepared By: AR

MDL

Laboratory Control Spike (LCS-1)

QC Batch: 58771 Prep Batch: 50145 Date Analyzed: 2009-04-20 QC Preparation: 2009-04-20 Analyzed By: LD Prepared By: LD

3504

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 11 of 16 Eddy Co., NM

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO	254	mg/Kg	1	250	8.4	98	57.4 - 133.4

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	260	mg/Kg	1	250	8.4	101	57.4 - 133.4	2	20

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

	$_{ m LCS}$	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Triacontane	89.0	94.7	mg/Kg	1	100	89	95	48.5 - 146.7

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 50179

58790

Date Analyzed: QC Preparation: 2009-04-21

2009-04-21

Analyzed By: ME Prepared By: ME

	LCS			Spike	Matrix		Rec.
Param	Result	\mathbf{Units}	Dil.	Amount	Result	Rec.	Limit
Benzene	2.03	mg/Kg	1	2.00	< 0.00100	102	72.7 - 129.8
Toluene	2.08	mg/Kg	1	2.00	< 0.00100	104	71.6 - 129.6
Ethylbenzene	2.05	mg/Kg	1	2.00	< 0.00110	102	70.8 - 129.7
Xylene	6.19	mg/Kg	1	6.00	< 0.00360	103	70.9 - 129.4

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	2.14	mg/Kg	1	2.00	< 0.00100	107	72.7 - 129.8	5	20
Toluene	2.16	mg/Kg	1	2.00	< 0.00100	108	71.6 - 129.6	4	20
Ethylbenzene	2.19	mg/Kg	1	2.00	< 0.00110	110	70.8 - 129.7	7	20
Xylene	6.66	mg/Kg	1	6.00	< 0.00360	111	70.9 - 129.4	7	20

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

Surrogate	$rac{ ext{LCS}}{ ext{Result}}$	$\begin{array}{c} \text{LCSD} \\ \text{Result} \end{array}$	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.07	2.01	mg/Kg	1	2.00	104	100	65.9 - 132
4-Bromofluorobenzene (4-BFB)	2.15	2.16	mg/Kg	1	2.00	108	108	55.2 - 128.9

Laboratory Control Spike (LCS-1)

QC Batch: 58791 Prep Batch: 50179 Date Analyzed: 2009-04-21 QC Preparation: 2009-04-21 Analyzed By: ME Prepared By: ME

3504

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 12 of 16

Eddy Co., NM

	•	LCS			Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		18.5	mg/Kg	1	20.0	< 0.482	92	60.5 - 100.1

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	19.9	mg/Kg	1	20.0	< 0.482	100	60.5 - 100.1	7	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.03	2.06	mg/Kg	1	2.00	102	103	78.8 - 104.7
4-Bromofluorobenzene (4-BFB)	2.10	2.10	mg/Kg	1	2.00	105	105	66.1 - 107.3

Laboratory Control Spike (LCS-1)

QC Batch:

58813

Date Analyzed:

2009-04-22

Analyzed By: AR

Prep Batch: 50197

QC Preparation: 2009-04-22 Prepared By: AR

`	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	98.3	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.

	LCSD			\mathbf{Spike}	Matrix		Rec.		RPD
Param	Result	\mathbf{Units}	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	99.8	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: 193518

QC Batch: Prep Batch: 50145

58771

Date Analyzed:

2009-04-20

QC Preparation: 2009-04-20 Analyzed By: LD

Prepared By: LD

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO	174	mg/Kg	1	250	14.28	64	35.2 - 167.1

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	190	mg/Kg	1	250	14.28	70	35.2 - 167.1	9	20

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

Work Order: 9042012

3504

St. Mary/Osceola State #1

Page Number: 13 of 16 Eddy Co., NM

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Triacontane	62.8	119	mg/Kg	1	100	63	119	34.5 - 178.4

Matrix Spike (MS-1)

Spiked Sample: 193575

QC Batch: 58790 Prep Batch: 50179 Date Analyzed: 2009-04-21 QC Preparation: 2009-04-21 Analyzed By: ME Prepared By: ME

	MS			Spike	Matrix		Rec.
Param	Result	${f Units}$	Dil.	Amount	Result	Rec.	Limit
Benzene	1.98	mg/Kg	1	2.00	< 0.00100	99	58.6 - 165.2
Toluene	1.98	mg/Kg	1	2.00	< 0.00100	99	64.2 - 153.8
Ethylbenzene	2.04	mg/Kg	1	2.00	< 0.00110	102	61.6 - 159.4
Xylene	6.00	mg/Kg	1	6.00	0.0968	98	64.4 - 155.3

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

•	MSD			Spike	Matrix		Rec.		RPD
Param	Result	\mathbf{Units}	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	1.92	mg/Kg	1	2.00	< 0.00100	96	58.6 - 165.2	3	20
Toluene	2.02	mg/Kg	1	2.00	< 0.00100	101	64.2 - 153.8	2	20
Ethylbenzene	2.11	mg/Kg	1	2.00	< 0.00110	106	61.6 - 159.4	3	20
Xylene	6.19	mg/Kg	1	6.00	0.0968	102	64.4 - 155.3	3	20

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

Surrogate	$rac{ ext{MS}}{ ext{Result}}$	$rac{ ext{MSD}}{ ext{Result}}$	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.04	2.03	mg/Kg	1	2	102	102	76 - 127.9
4-Bromofluorobenzene (4-BFB)	1.72	1.80	mg/Kg	1	2	86	90	72 - 127.8

Matrix Spike (MS-1)

Spiked Sample: 193574

QC Batch: 58791 Prep Batch: 50179 Date Analyzed: 2009-04-21 QC Preparation: 2009-04-21

Analyzed By: ME Prepared By: ME

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	25.0	mg/Kg	1	20.0	< 0.482	125	12.8 - 175.2

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	\mathbf{Units}	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	24.7	mg/Kg	1	20.0	< 0.482	124	12.8 - 175.2	1	20

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

3504

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 14 of 16

Eddy Co., NM

	MS	MSD	T7 • .	D.1	Spike	MS	MSD	Rec.
Surrogate	\mathbf{Result}	\mathbf{Result}	${f Units}$	Dil.	Amount	Rec.	Rec .	Limit
Trifluorotoluene (TFT)	2.26	2.23	mg/Kg	1	2	113	112	60.8 - 132.1
4-Bromofluorobenzene (4-BFB)	1.74	1.73	mg/Kg	1	2	87	86	31.3 - 161.7

Matrix Spike (MS-1) Spiked Sample: 193572

QC Batch: 58813 Date Analyzed:

2009-04-22

Analyzed By: AR Prepared By: AR

Prep Batch: 50197

QC Preparation: 2009-04-22

MS Spike Matrix Rec. Param Result Units Dil. Amount Result Limit Rec. Chloride 7770 50 5000 2790 100 85 - 115 mg/Kg

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

34	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	\mathbf{Limit}
Chloride	7940	mg/Kg	50	5000	2790	103	85 - 115	2	20

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

Standard (CCV-2)

QC Batch: 58771

Date Analyzed: 2009-04-20

Analyzed By: LD

			CCVs	CCVs	CCVs	Percent	
		•	\mathbf{True}^{-1}	Found	Percent	Recovery	\mathbf{Date}
Param	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	229	92	80 - 120	2009-04-20

Standard (CCV-3)

QC Batch: 58771

Date Analyzed: 2009-04-20

Analyzed By: LD

			CCVs True	$\begin{array}{c} { m CCVs} \\ { m Found} \end{array}$	$rac{ ext{CCVs}}{ ext{Percent}}$	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	235	94	80 - 120	2009-04-20

Standard (CCV-4)

QC Batch: 58771

Date Analyzed: 2009-04-20

Analyzed By: LD

3504

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 15 of 16 Eddy Co., NM

			CCVs True	${ m CCVs} \ { m Found}$	$egin{array}{c} ext{CCVs} \ ext{Percent} \end{array}$	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	268	107	80 - 120	2009-04-20

Standard (CCV-1)

QC Batch: 58790

Date Analyzed: 2009-04-21

Analyzed By: ME

			\mathbf{CCVs}	\mathbf{CCVs}	\mathbf{CCVs}	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.106	106	80 - 120	2009-04-21
Toluene		mg/Kg	0.100	0.111	111	80 - 120	2009-04-21
Ethylbenzene		mg/Kg	0.100	0.109	109	80 - 120	2009-04-21
Xylene		mg/Kg	0.300	0.324	108	80 - 120	2009-04-21

Standard (CCV-2)

QC Batch: 58790

Date Analyzed: 2009-04-21

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.106	106	80 - 120	2009-04-21
Toluene	٠	mg/Kg	0.100	0.106	106	80 - 120	2009-04-21
Ethylbenzene		mg/Kg	0.100	0.104	104	80 - 120	2009-04-21
Xylene		mg/Kg	0.300	0.306	102	80 - 120	2009-04-21

Standard (CCV-1)

QC Batch: 58791

Date Analyzed: 2009-04-21

Analyzed By: ME

			CCVs	\mathbf{CCVs}	\mathbf{CCVs}	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.10	110	80 - 120	2009-04-21

Standard (CCV-2)

QC Batch: 58791

Date Analyzed: 2009-04-21

Analyzed By: ME

3504

Work Order: 9042012 St. Mary/Osceola State #1 Page Number: 16 of 16

Eddy Co., NM

			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.18	118	80 - 120	2009-04-21

Standard (ICV-1)

QC Batch: 58813

Date Analyzed: 2009-04-22

Analyzed By: 'AR

			ICVs	ICVs	ICVs	Percent	
			${f True}$	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	99.4	99	85 - 115	2009-04-22

Standard (CCV-1)

QC Batch: 58813

Date Analyzed: 2009-04-22

Analyzed By: AR

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2009-04-22

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

3504

Work Order: 9042421 St. Mary/Osceola State #1 Page Number: 1 of 2 Eddy Co., NM

Summary Report

Ike Tavarez Tetra Tech

1910 N. Big Spring Street

Midland, TX 79705

Report Date: April 27, 2009

Work Order: 9042421

Project Location: Eddy Co., NM

Project Name: St. Mary/Osceola State #1

Project Number: 3504

			Date	\mathbf{Time}	Date
\mathbf{Sample}	Description	Matrix	Taken	Taken	Received
193995	Southwest Wall	soil	2009-04-23	00:00	2009-04-24
193996	Southeast Wall	soil	2009-04-23	00:00	2009-04-24
193997	East Wall	soil	2009-04-23	00:00	2009-04-24
193998	West Wall	soil	2009-04-23	00:00	2009-04-24

Sample: 193995 - Southwest Wall

Param	Flag	Result	${f Units}$	RL
Chloride		3360	mg/Kg	4.00

Sample: 193996 - Southeast Wall

Param	\mathbf{Flag}	Result	Units	$_{ m L}$
Chloride		3010	mg/Kg	4.00

Sample: 193997 - East Wall

Param	Flag	Result	Units	RL
Chloride		3240	mg/Kg	4.00

Sample: 193998 - West Wall

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

3504

Work Order: 9042421 St. Mary/Osceola State #1 Page Number: 2 of 2

Eddy Co., NM

Param	Flag	Result	Units	RL
Chloride		1530	mg/Kg	4.00



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1

El Paso, Texas 79922 Midland Texas 79703

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FAX 915 • 585 • 4944

6015 Harris Parkway, Suite 110 Ft Worth, Texas 76132

432 • 689 • 6301 817 • 201 • 5260 FAX 432 • 689 • 6313

E-Mail lab@traceanalysis.com

Certifications

WBENC: 237019

HUB:

1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX

LELAP-02003 Kansas E-10317

El Paso: T104704221-08-TX LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ike Tavarez Tetra Tech

1910 N. Big Spring Street Midland, TX, 79705

Report Date: April 27, 2009

Work Order: 9042421

Project Location:

Eddy Co., NM

Project Name:

St. Mary/Osceola State #1

Project Number:

3504

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
193995	Southwest Wall	soil	2009-04-23	00:00	2009-04-24
193996	Southeast Wall	soil	2009-04-23	00:00	2009-04-24
193997	East Wall	soil	2009-04-23	00:00	2009-04-24
193998	West Wall	soil	2009-04-23	00:00	2009-04-24

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

Blair fatural

Dr. Blair Leftwich, Director

Standard Flags

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

Case Narrative

Samples for project St. Mary/Osceola State #1 were received by TraceAnalysis, Inc. on 2009-04-24 and assigned to work order 9042421. Samples for work order 9042421 were received intact at a temperature of 5.3 deg. C.

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

		Prep	\mathbf{Prep}	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
Chloride (Titration)	SM 4500-Cl B	50267	2009-04-24 at 09:03	58891	2009-04-24 at 15:06

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 9042421 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.

3504

Work Order: 9042421 St. Mary/Osceola State #1 Page Number: 4 of 6 Eddy Co., NM

Analytical Report

Sample: 193995 - Southwest Wall

Laboratory:

Midland

Analysis: QC Batch: Chloride (Titration)

58891

Analytical Method: Date Analyzed:

SM 4500-Cl B

2009-04-24

Prep Method: N/A Analyzed By:

AR

Prep Batch:

50267

Sample Preparation:

2009-04-24

Prepared By:

AR

RL

Parameter Chloride

Flag Result 3360

Units mg/Kg Dilution 50 RL

4.00

Sample: 193996 - Southeast Wall

Laboratory:

Midland

Analysis:

Chloride

Chloride (Titration)

Flag

Analytical Method:

SM 4500-Cl B

Prep Method: N/A Analyzed By:

AR

QC Batch: Prep Batch: 58891 50267 Date Analyzed: Sample Preparation:

2009-04-24 2009-04-24

Prepared By: AR

Parameter

RLResult 3010

Units mg/Kg Dilution

Dilution

50

RL

4.00

Sample: 193997 - East Wall

Laboratory:

Midland

Analysis:

Chloride (Titration)

58891 QC Batch: Prep Batch:

Analytical Method: Date Analyzed:

SM 4500-Cl B 2009-04-24

Prep Method: N/A Analyzed By: AR

50267

Sample Preparation:

Sample Preparation:

2009-04-24

Prepared By:

AR

Parameter

RLResult

3240

Flag Chloride

Units

mg/Kg

RL

4.00

Sample: 193998 - West Wall

Laboratory: Analysis:

Prep Batch:

Midland

50267

QC Batch: 58891

Chloride (Titration) Analytical Method: Date Analyzed:

SM 4500-Cl B 2009-04-24 2009-04-24

Prep Method: N/A Analyzed By:

ARPrepared By: AR

continued ...

3504

Work Order: 9042421 St. Mary/Osceola State #1 Page Number: 5 of 6 Eddy Co., NM

sample 193998 continued ...

		m RL		? * *	
Parameter	Flag	Result	Units	Dilution	RL
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		1530	mg/Kg	50	4.00

Method Blank (1)

QC Batch: 58891

QC Batch: Prep Batch: 50267

58891

Date Analyzed:

2009-04-24

Analyzed By: AR

Prepared By: \mathbf{AR}

MDL Result

Flag Parameter Units RL<2.18 Chloride mg/Kg 4

QC Preparation: 2009-04-24

Laboratory Control Spike (LCS-1)

QC Batch:

58891

Date Analyzed:

2009-04-24

Analyzed By: AR Prepared By:

 \mathbf{AR}

Prep Batch: 50267

QC Preparation: 2009-04-24

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	98.9	mg/Kg	1	100	<2.18	99	85 - 115

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	, Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115	1	20

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

Matrix Spike (MS-1)

Spiked Sample: 193925

QC Batch: Prep Batch: 50267

58891

Date Analyzed:

QC Preparation:

2009-04-24 2009-04-24

Analyzed By: AR Prepared By: AR

MS Spike Matrix Rec. Param Rec. Result Units Dil. Amount Result Limit Chloride 11800 50 7070 95 mg/Kg 5000 85 - 115

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

3504

Work Order: 9042421 St. Mary/Osceola State #1 Page Number: 6 of 6

Eddy Co., NM

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	11900	mg/Kg	50	5000	7070	97	85 - 115	1	20

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

Standard (ICV-1)

QC Batch: 58891

Date Analyzed: 2009-04-24

Analyzed By: AR

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2009-04-24

Standard (CCV-1)

QC Batch: 58891

Date Analyzed: 2009-04-24

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	$\begin{array}{c} \text{Date} \\ \text{Analyzed} \end{array}$
Chloride		mg/Kg	100	99.1	99	85 - 115	2009-04-24

Analysis Request of Ch	ain of Custody	R	<u>e</u> (30	rd									PAG	E:		1	OI	F:	I	مندسوس
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1910 N. Big Midland, Te (432) 682-4559	exas 79705 • Fax (432) 682-3946						1 1	5 (Ext. to C35)	Cr Pb Hg Se	Vr Pd Hg									DS		
PROJECT NO.: PROJECT NAME: 3404 PROJECT NAME: 3704 PROJECT NAME: 3704 PROJECT NAME: 3704 PROJECT NAME:	Ke Tabriz	NERS	F		ERVA			TX1005	Ba Cd	Ba			60/624	270/625					Is, pH, T		
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193927-73-09 Snothbest 996 South Engr 997 Engr wal	-hall															X					
997 EAST WAR	l															X					
998 V LEST LOCK	?															X					
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SAMPLE CONDITION WHEN RECEIVED: REMARKS: 5.3°C, into ct. Please fill out all copies - Laboratory retains Yello	w copy - Return Orginal copy to Tet	TIME:	1,	Proje	ect M	A\ anage	rret	- ains F	Q	+ ¢	-\$ v - 1	4000	W	\ ;		۸ ۸ ves G	d .	1-6>	Yes y.		No

Report Date: June 9, 2009

115-6403504

Work Order: 9050534 St. Mary/Osceola State #1 Page Number: 1 of 1 Eddy Co., NM

Summary Report

Ike Tavarez

Tetra Tech

1910 N. Big Spring Street

Midland, TX 79705

Report Date: June 9, 2009

Work Order: 9050534

Project Location: Eddy Co., NM

Project Name:

St. Mary/Osceola State #1

Project Number: 115-6403504

			Date	${f Time}$	Date
Sample	Description	Matrix	Taken	Taken	Received
195008	East Trench 2'	soil	2009-05-04	00:00	2009-05-05
195009	East Trench 4'	soil	2009-05-04	00:00	2009-05-05
195010	East Trench 6'	soil	2009-05-04	00:00	2009-05-05

Sample: 195008 - East Trench 2'

Param	Flag	Result	Units	RL
Chloride		1170	mg/Kg	4.00

Sample: 195009 - East Trench 4'

Param	Flag	Result	Units	RL
Chloride		1300	mg/Kg	4.00

Sample: 195010 - East Trench 6'

Param	Flag	Result	Units	RL
Chloride		229	mg/Kg	4.00



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E

5002 Basin Street, Suite A1

6015 Harris Parkway Suite 110

Lubbock, Texas 79424 El Paso, Texas 79922

Ft Worth, Texas 76132

888 • 588 • 3443 Midland, Texas 79703

800 • 378 • 1296

915 • 585 • 3443 432 • 689 • 6301

FAX 806 • 794 • 1298 FAX 915 • 585 • 4944 FAX 432 • 689 • 6313

817 • 201 • 5260

806 • 794 • 1296

E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB:

1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX

LELAP-02003

Kansas E-10317

El Paso: T104704221-08-TX

LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: June 9, 2009

9050534 Work Order:

Project Location: Eddy Co., NM

Project Name:

St. Mary/Osceola State #1

Project Number:

115-6403504

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
195008	East Trench 2'	soil	2009-05-04	00:00	2009-05-05
195009	East Trench 4'	soil	2009-05-04	00:00	2009-05-05
195010	East Trench 6'	soil	2009-05-04	00:00	2009-05-05

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

Michael april

Dr. Blair Leftwich, Director

Standard Flags

 $\boldsymbol{B}\,$ - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project St. Mary/Osceola State #1 were received by TraceAnalysis, Inc. on 2009-05-05 and assigned to work order 9050534. Samples for work order 9050534 were received intact at a temperature of 4.1 deg. C.

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

		\mathbf{Prep}	$P_{\mathbf{f}\mathbf{e}\mathbf{p}}$	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
Chloride (Titration)	SM 4500-Cl B	51363	2009-06-08 at 09:31	60187	2009-06-08 at 15:11

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 9050534 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 9, 2009

115-6403504

Work Order: 9050534 St. Mary/Osceola State #1 Page Number: 4 of 6 Eddy Co., NM

Analytical Report

Sample: 195008 - East Trench 2'

Laboratory:

Midland

Chloride (Titration) Analysis:

QC Batch: 60187 Prep Batch: 51363 Analytical Method:

SM 4500-Cl B

Date Analyzed: Sample Preparation:

2009-06-08 2009-06-08 Prep Method: N/A Analyzed By:

AR Prepared By: AR

RL

Parameter Chloride

Flag

Result 1170

Units mg/Kg Dilution 50

RL

4.00

Laboratory:

Sample: 195009 - East Trench 4' Midland

Analysis:

Chloride (Titration)

QC Batch: Prep Batch: 51363

60187

Analytical Method: Date Analyzed:

SM 4500-Cl B 2009-06-08 Sample Preparation: 2009-06-08

Prep Method: N/A Analyzed By:

ARPrepared By: AR

RL

Parameter Chloride

Flag Result 1300

Units mg/Kg Dilution 50

RL4.00

Sample: 195010 - East Trench 6'

Laboratory:

Midland

Analysis:

Chloride (Titration)

QC Batch: 60187 Prep Batch: 51363 Analytical Method: Date Analyzed:

Sample Preparation:

SM 4500-Cl B 2009-06-08 2009-06-08

Prep Method: N/A Analyzed By: AR

Prepared By: AR

RL

Parameter Chloride

Flag

Result 229 Units

mg/Kg

Dilution 50 RL

4.00

Method Blank (1)

QC Batch: 60187

QC Batch: Prep Batch: 51363

60187

Date Analyzed: QC Preparation:

2009-06-08 2009-06-08

Analyzed By: AR Prepared By:

MDL

Parameter Flag Chloride

Result < 2.18

Units mg/Kg RL4

Report Date: June 9, 2009

115-6403504

Work Order: 9050534 St. Mary/Osceola State #1 Page Number: 5 of 6

Eddy Co., NM

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 51363

60187

Date Analyzed:

2009-06-08

QC Preparation: 2009-06-08

Analyzed By: AR

Prepared By: AR

	LCS	٠		Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115

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

•	$_{ m LCSD}$			Spike	Matrix		Rec.		\mathbf{RPD}
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	102	mg/Kg	1	100	<2.18	102	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: 198009

QC Batch:

60187 Prep Batch: 51363

Date Analyzed:

2009-06-08

Analyzed By: AR

QC Preparation: 2009-06-08 Prepared By: AR

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	5000	mg/Kg	50	5000	<109	100	85 - 115

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	5040	mg/Kg	50	5000	<109	101	85 - 115	1	20

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

Standard (ICV-1)

QC Batch: 60187

Date Analyzed: 2009-06-08

Analyzed By: AR

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2009-06-08

Standard (CCV-1)

QC Batch: 60187

Date Analyzed: 2009-06-08

Analyzed By: AR

Report Date: June 9, 2009 115-6403504

Work Order: 9050534 St. Mary/Osceola State #1

Page Number: 6 of 6 Eddy Co., NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.4	99	85 - 115	2009-06-08

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

Report Date: May 6, 2009

115-6403504

Work Order: 9050534 St. Marys/Osceola State #1 Page Number: 1 of 2

Eddy Co., NM

Summary Report

Ike Tavarez Tetra Tech

1910 N. Big Spring Street

Midland, TX 79705

Report Date: May 6, 2009

Work Order: 9050534

Project Location: Eddy Co., NM

St. Marys/Osceola State #1 Project Name:

Project Number: 115-6403504

			Date	\mathbf{Time}	. Date
\mathbf{Sample}	Description	Matrix	Taken	Taken	Received
194995	Background 3'	soil	2009-05-04	00:00	2009-05-05
194996	Background 6'	soil	2009-05-04	00:00	2009-05-05
194997	Background 8'	soil	2009-05-04	00:00	2009-05-05
195004	West Wall	soil	2009-05-04	00:00	2009-05-05
195005	East Wall	soil	2009-05-04	00:00	2009-05-05
195006	Southwest Wall	soil	2009-05-04	00:00	2009-05-05
195007	Southeast Wall	soil	2009-05-04	00:00	2009-05-05

Sample: 194995 - Background 3'

Param	Flag	Result	${f Units}$	RL
Chloride		1950	mg/Kg	4.00

Sample: 194996 - Background 6'

Param	Flag	Result	Units	RL
Chloride		2130	mg/Kg	4.00

Sample: 194997 - Background 8'

Param	Flag	Result	${f Units}$	RL
Chloride		2810	mg/Kg	4.00



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1

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

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FAX 806 • 794 • 1298 FAX 915 • 585 • 4944

6015 Harris Parkway, Suite 110 Ft Worth, Texas 76132

432 • 689 • 6301 817 • 201 • 5260

FAX 432 • 689 • 6313

E-Mail lab@traceanalysis.com

Certifications

WBENC: 237019

HUB:

1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX

LELAP-02003

Kansas E-10317

El Paso: T104704221-08-TX

LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ike Tavarez Tetra Tech

1910 N. Big Spring Street Midland, TX, 79705

Report Date: May 6, 2009

Work Order:

9050534

Project Location: Eddy Co., NM

Project Name:

St. Mary/Osceola State #1

Project Number:

115-6403504

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

			Date	1 ime	Date
\mathbf{Sample}	Description	Matrix	Taken	Taken	Received
194995	Background 3'	soil	2009-05-04	00:00	2009-05-05
194996	Background 6'	soil	2009-05-04	00:00	2009-05-05
194997	Background 8'	soil	2009-05-04	00:00	2009-05-05
195004	West Wall	soil	2009-05-04	00:00	2009-05-05
195005	East Wall	soil	2009-05-04	00:00	2009-05-05
195006	Southwest Wall	soil	2009-05-04	00:00	2009-05-05
195007	Southeast Wall	soil	2009-05-04	00:00	2009-05-05

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

Mehad alres

Dr. Blair Leftwich, Director

Standard Flags

 ${f B}\,$ - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project St. Mary/Osceola State #1 were received by TraceAnalysis, Inc. on 2009-05-05 and assigned to work order 9050534. Samples for work order 9050534 were received intact at a temperature of 4.1 deg. C.

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

		\mathbf{Prep}	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
Chloride (Titration)	SM 4500-Cl B	50516	2009-05-05 at 16:15	59194	2009-05-05 at 17:00

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 9050534 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: May 6, 2009

115-6403504

Work Order: 9050534 St. Mary/Osceola State #1 Page Number: 4 of 7 Eddy Co., NM

Analytical Report

Sample: 194995 - Background 3'

Laboratory:

Midland

Analysis: Chloride (Titration)

QC Batch: 59194 50516 Prep Batch:

Analytical Method:

SM 4500-Cl B

Date Analyzed: Sample Preparation:

2009-05-05 2009-05-05 Prep Method: N/A

AG Analyzed By: AG Prepared By:

RL

Parameter Chloride

Flag Result 1950

Units mg/Kg Dilution 50

RL4.00

Sample: 194996 - Background 6'

Laboratory:

Midland

Analysis: QC Batch:

Parameter

Chloride (Titration)

59194 Prep Batch: 50516 Analytical Method: Date Analyzed:

SM 4500-Cl B 2009-05-05

Prep Method: N/A Analyzed By:

 \mathbf{AG}

RL

4.00

Flag

Sample Preparation:

2009-05-05

Units

mg/Kg

Prepared By: AG

Chloride

Sample: 194997 - Background 8'

Laboratory:

Midland

Analysis:

Chloride (Titration)

QC Batch: 59194 Prep Batch: 50516 Analytical Method: Date Analyzed:

Sample Preparation:

SM 4500-Cl B 2009-05-05 2009-05-05

Prep Method: N/A Analyzed By: \mathbf{AG}

RL

RL

Result

2130

Parameter Chloride

Flag Result 2810 Units

mg/Kg

Dilution

50

Dilution

Prepared By: AG

RL

4.00

Sample: 195004 - West Wall

Laboratory:

Midland

Analysis: QC Batch: Prep Batch: Chloride (Titration) 59194 50516

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

2009-05-05 2009-05-05 Prep Method: Analyzed By:

N/A AG AG

Prepared By:

continued ...

Report Date: May 6, 2009 Work Order: 9050534 Page Number: 5 of 7 St. Mary/Osceola State #1 Eddy Co., NM 115-6403504 sample 195004 continued ... RLResult Dilution RLParameter Flag Units RLFlag Result Units Dilution RLParameter <200 50 4.00 Chloride mg/Kg Sample: 195005 - East Wall Laboratory: Midland Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 59194 Date Analyzed: 2009-05-05 Analyzed By: \mathbf{AG} Prep Batch: 50516 Sample Preparation: 2009-05-05 Prepared By: AG RLParameter Flag Result Units Dilution RL3750 4.00 Chloride mg/Kg 50 Sample: 195006 - Southwest Wall Midland Laboratory: Chloride (Titration) Analysis: Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 59194 Date Analyzed: 2009-05-05 Analyzed By: \mathbf{AG} Sample Preparation: Prep Batch: 50516 Prepared By: AG 2009-05-05 RLFlag Parameter Result Units Dilution RL1650 4.00 mg/Kg 50 Chloride Sample: 195007 - Southeast Wall Laboratory: Midland Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 59194 Date Analyzed: 2009-05-05 Analyzed By: AG

Sample Preparation:

RL

Result

2970

2009-05-05

Units

mg/Kg

Prepared By:

Dilution

50

 \mathbf{AG}

RL

4.00

Prep Batch:

Parameter

Chloride

50516

Flag

Report Date: May 6, 2009

115-6403504

Work Order: 9050534 St. Mary/Osceola State #1 Page Number: 6 of 7

Eddy Co., NM

Method Blank (1)

QC Batch: 59194

QC Batch: Prep Batch:

59194 50516 Date Analyzed:

2009-05-05

QC Preparation: 2009-05-05

Analyzed By: AG

Prepared By: AG

M	D	L

Parameter	Flag	Result	Units	RL
Chloride		<2.18	mg/Kg	4

Laboratory Control Spike (LCS-1)

QC Batch:

59194

Date Analyzed:

2009-05-05

Analyzed By: AG

Prep Batch: 50516

QC Preparation: 2009-05-05

Prepared By: AG

	$_{ m LCS}$
Param	Result
Chloride	96.4

Spike Matrix Rec. Units Dil. Result Limit Amount Rec. 100 <2.18 96 85 - 115 mg/Kg

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	97.2	mg/Kg	1	100	<2.18	97	85 - 115	1	20

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

Matrix Spike (MS-1)

Spiked Sample: 195007

QC Batch:

59194

Date Analyzed:

2009-05-05

Analyzed By: AG

Prep Batch: 50516

QC Preparation: 2009-05-05

Dil.

50

Spike

Amount

5000

Matrix

Result

2970

Prepared By: AG

Param	

	MS		
Param	Result		
Chloride	8650	mg/K	

Rec. Limit Rec.

85 - 115

114

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	\mathbf{RPD}	Limit
Chloride	8710	mg/Kg	50	5000	2970	115	85 - 115	1	20

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

Standard (ICV-1)

QC Batch: 59194

Date Analyzed: 2009-05-05

Analyzed By: AG

Report Date: May 6, 2009

115 - 6403504

Work Order: 9050534 St. Mary/Osceola State #1 Page Number: 7 of 7

Eddy Co., NM

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride	,	mg/Kg	100	97.7	98	85 - 115	2009-05-05

Standard (CCV-1)

QC Batch: 59194

Date Analyzed: 2009-05-05

Analyzed By: AG

			\mathbf{CCVs}	CCVs	\mathbf{CCVs}	Percent	
			True	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	$\mathbf{Analyzed}$
Chloride		mg/Kg	100	98.2	98	85 - 115	2009-05-05

Analysis Request of Chain of Custody Record						L								GE:		ć	2	OF	:	2								
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				100		1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946								5 (Ext. to C35)	Ö	Vr Pd Hg										TDS		
CLIENT NAME: SITE MANAGER:							ERS		PRESERVATIVE METHOD					TX1005	Ba Cd	Ba			3/624	8270/625	l				:	됩		
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Analysis Request of Chain of Custody Record							PAGE: / OF: ANALYSIS REQUEST												F:	2	
						ANALYSIS REQUEST (Circle or Specify Method No.)															
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