

RECEIVED JUN 21 2010 NMOCD ARTESIA

June 14, 2010

Mr. Mike Bratcher Environmental Engineer Specialist Oil Conservation Division, District 2 1301 West Grand Avenue Artesia, NM 88210

Re: Assessment Report and Work Plan for the Stephens & Johnson Operating Company, Mobil 22 Federal No. 6, Unit K, Section 22, Township 26 South, Range 29 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech Inc. (Tetra Tech) was contacted by Stephens & Johnson Operating Company, (Stephens & Johnson) to assess a release of oil/produced water which occurred at the Mobil 22 Federal No. 6, located in Unit K, Section 22, Township 26 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.02667°, W 103.97310°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on October 14, 2009. Approximately 2 barrels of oil/produced water was released from a leak at the stuffing box. The stuffing box packing was replaced to curtail further leakage. Of the 2 barrels released, no fluids were recovered. The initial C-141 is enclosed in Appendix A.

Hydrology

According to *The New Mexico Office of the State Engineer Well Reports*, one water well is located within the same Section as the site. The listed well, located in Section 22, has an average reported depth of 57 feet below ground surface (bgs). In addition, the New Mexico Oil Conservation Division (NMOCD) Depth to Groundwater Map for Eddy County, New Mexico, shows one water well located within the section which contains the site. According to the map, the listed well has an average reported depth of 69 feet bgs. No additional water wells were located within the Section. The well reports are shown in Appendix B.

Fax



According to the *Geology and Groundwater Resources of Eddy County, New Mexico (Report 3)*, the Rustler and Castile formations (Ochoa Series) are present west and east of the Pecos River. The Rustler and Castile formations consist of anhydrite, gypsum, interbedded sandy clay and beds of dolomite. Groundwater from the Castile and Rustler formations west of the Pecos River is historically high in chloride and sulfate concentrations which increase towards the river. The site is located on the eastern edge of the Rustler formation.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 1,000 mg/kg.

Soil Assessment and Results

On November 10, 2009, Tetra Tech personnel inspected the site and installed a total of three (3) auger holes (AH-1 to AH-3) to assess the spill area. The spill area is shown on the attached Figure 3. The auger holes were advanced to depths which measured approximately 1.0 foot to 1.5 feet bgs. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1.

Referring to Table 1, all of the samples analyzed for TPH were below the RRAL, with the exception of AH-1 at 0-1 which had results of 3,607 mg/kg. All BTEX samples were below their respective RRAL. Chloride concentrations were elevated in auger holes AH-1 through AH-3 ranging from 2,240 mg/kg in AH-1 at 1-1.5 feet to 12,600 mg/kg in AH-2 at 0-1 feet.

In order to further delineate the chloride concentrations at the site, Tetra Tech personnel were onsite February 2, 2010, to install 2 backhoe trenches (T-1 and T-2). The trenches were placed adjacent to and named in accordance with the auger holes. Each of the trenches was extended from 10 to 12 feet bgs and samples were collected and submitted for analysis of chlorides. Referring to Table 2, the chlorides remained elevated in the two trenches. However, the chloride concentrations did decrease in both trenches with depth.

In order to determine background chloride concentration at the site, Tetra Tech personnel were onsite April 12, 2010, to install 2 backhoe trenches (T-3 and T-4) off the pad and outside the initial release area. Each of the trenches was extended to 12 feet bgs and samples were collected and submitted for analysis of chlorides. Referring to Table 2, the chlorides in both trenches ranged from <200 mg/kg to 380 mg/kg.



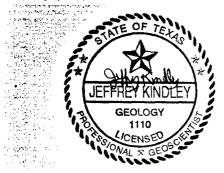
Soil Remediation

On February 2, 2010, Tetra Tech was onsite to oversee the excavation and removal of the first two feet of soil in the vicinity of auger holes AH-1 and AH-2. An area measuring approximately 15 by 15 feet adjacent to AH-1 and 20 by 25 feet adjacent to AH-2 were excavated. Approximately 54 cubic yards of soil were transported offsite for disposal at Lea Land, Inc in Carlsbad, New Mexico.

Work Plan

Stephens & Johnson proposes to excavate and remove an area measuring approximately 20 feet by 20 feet in the vicinity of auger hole AH-1 and 20 feet by 20 feet in the vicinity of AH-2 to a depth of 6 feet. See Figure 4 for proposed poly liner locations. Upon completion of the excavation, the soils will be transported offsite for proper disposal. Afterwards, two 20-mil poly liners with the same measurements as the two excavated areas will be installed to a depth of 4 feet bgs in AH-1 and AH-2. The liners will impede further migration of the remaining chlorides in the soil. After installation of the liners, the site will be backfilled with clean soils and brought up to surface grade.

Once the remedial activities are performed, a closure report will be submitted for the site. If you require any additional information or have any questions or comments concerning this work plan, please call at (432) 682-4559.

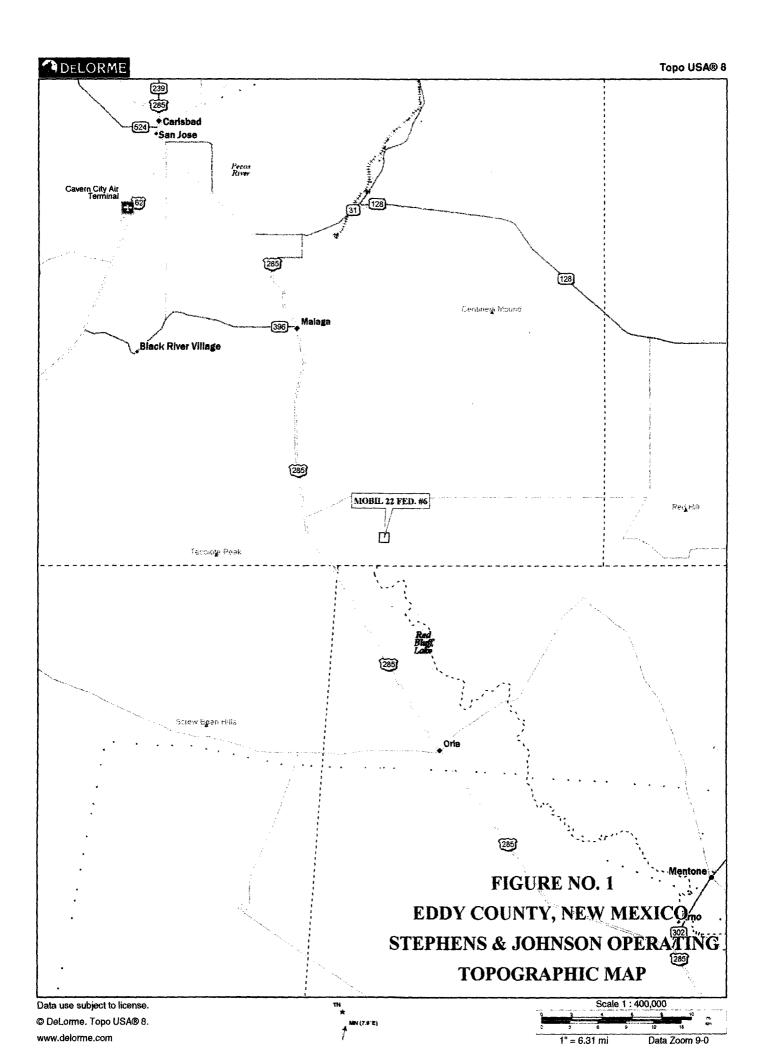


Respectfully submitted, TETRA TECH

Jeff Kindley, P.G. Senior Project Manager

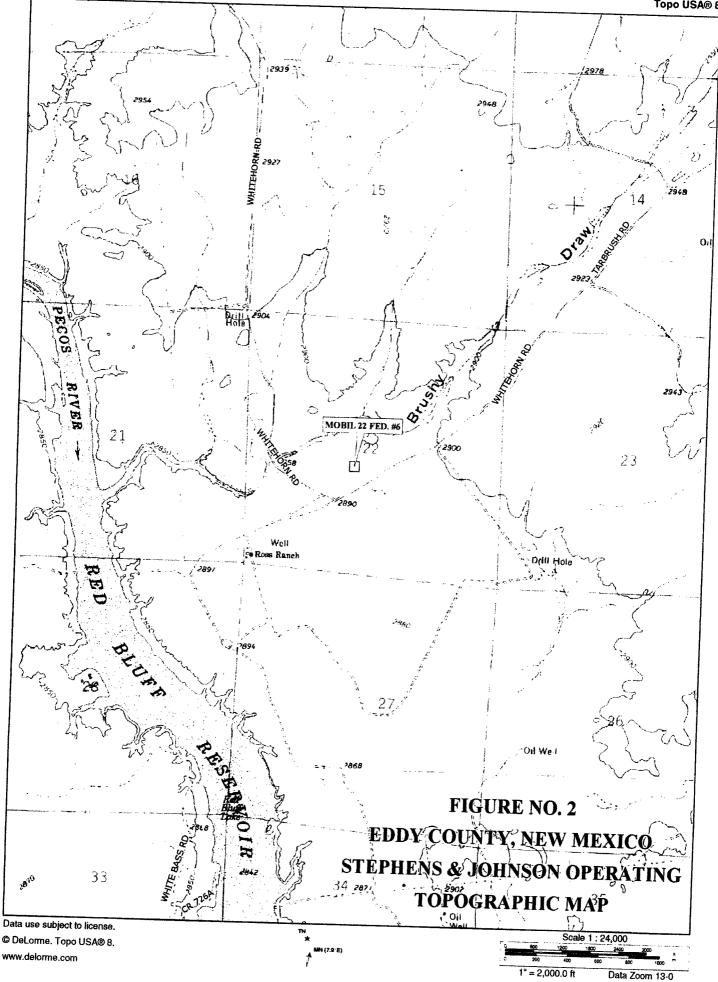
cc: Mike Kincaid - Stephens & Johnson Operating Co.

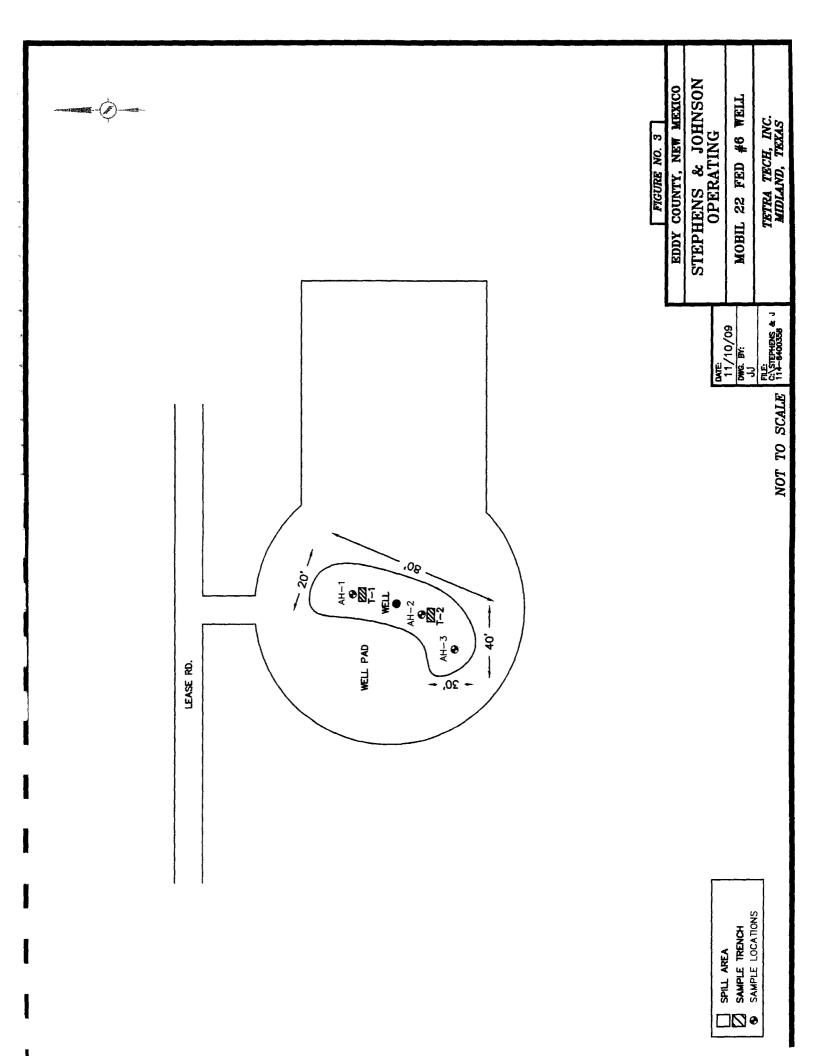
FIGURES

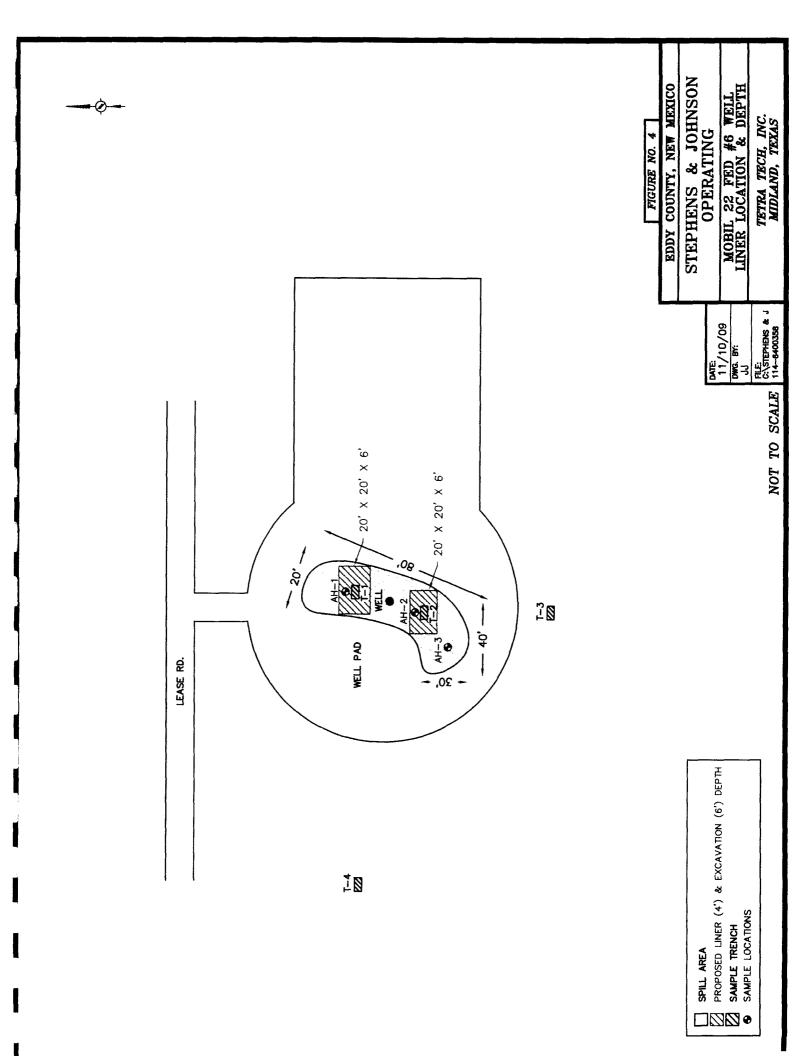


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TABLES

Table 1 Stephens & Johnson Operating Co. Mobil 22 Federal #6 Eddy County, New Mexico

Sample	Date	Sample	Soil S	Soil Status	-	FPH (mg/kg)	(Benzene	Toluene	Ethlybenzene	Xylene	Total	Chloride
Ū	Sampled	Depth (ft)	In-Situ	In-Situ Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	BTEX	(mg/kg)
AH-1	11/10/2009	0-1'		×	27.3	3580	3607.3	<0.100	<0.100	290	778	1068	3800
		1-1.5		×	6.31	96.7	103.01						2240
AH-2	11/10/2009	0-1,		×	<1.0	<50.0	<50.0	•	1		1		12600
AH-3	AH-3 11/10/2009	0-1			18.6	<50.0	18.6	<0.010	<0.010	<0.010	<0.010	<0.010	3220

(-) Not Analyzed

Table 2 Stephens & Johnson Operating Co. Mobil 22 Federal #6 Eddy County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	So In-Situ	Soil Status Removed	Chloride (mg/kg)
T-1	02/02/10				
Liner					
		ω	×		864
		10	×		854
T-2	02/02/10				
Liner					
					2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
			×		ASS .
		8	×		860
		10	×		541
		12	×		530
T-3	04/12/10		×		<200
Backg	Background	2	×		380
		ю	×		237
		4	×		<200
		5	×		<200
		9	×		<200
		8	×		<200
		10	×		<200
		12	×		210

Table 2 Stephens & Johnson Operating Co. Mobil 22 Federal #6 Eddy County, New Mexico

Sample	Date	Sample	So	Soil Status	Chloride
Q	Sampled	Depth (ft)	In-Situ	Removed	(mg/kg)
T-4	04/12/10	1	×		<200
Back	Background	2	×		<200
		3	×		<200
		4	×		<200
		5	×		<200
		9	×		315
		8	×		<200
		10	×		220
		12	×		<200

(-) Not Analyzed

Proposed Excavation Depth Proposed Liner Installation

APPENDIX A INITIAL C-141

District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 South First, Artesia, NM 88210 District III 1000 Rio Brazos Rd, 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

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

			Relea	se Notifica		and Corr RATOR	rective Act		ial Rer	oort 🗌 Final Report
Name						Contact				
Stephens & .	lohnson	Operating	Со	<u></u>			<u>f. Kincaid</u>			
Address	10 Witch		Towns	76207 3940		Telephone				
P.O. Box 224 Facility Name	MICH		Texas	/030/-2249		[940] 723 Facility Ty				
Mobil 22 Fee	leral No	. 6		······			1 0il Well			
Surface Owner				Miner	al Owr	ner			Leas	e No.
J. G. Ross.	Jr.			MMS (Federa	a])	·····		NM-2	2634
			r		_	OF REL	and the second se			
Unit Letter	Section	Township	Range	Feet from the	Nort	h/South Line	Feet from the	East/West	Line	County
K	22	265	29E	2260	S	outh	2310	West		Eddy
		L	atitude			Longitude				
L				NAT	URE	OF RELE	ASE			
Type of Release Stuffing Boy	(leak					Volume of F		2 bbls	Volu	me Recovered None
Source of Release Wellhead						Date and Ho	ur of Occurrence		Date	and Hour of Discovery
Was Immediate	Notice Giv	/en? Yes		o X Not Re	quired	If YES, To		-14-09 1		10-14-09
By Whom?		103			quirca	Date and Ho	pur			
Was a Watercou	ree Deach							a Wetercowe		
was a watercou	120 Meachd	Yes	XN	ío		II 165, VOI	ume Impacting th	e watercour	SC.	
If a Watercourse	was Impa	cted, Describe	Fully. *				**************************************			
Describe Cause										
Stuffing box	leaking	g. Sturri	ng box p	acking replac	ced to	stop leak	•			
					·····					
Describe Area A		-								
1				ined to well laced with ne				th oil an	d wat	er. All
						·				
I hereby certify the and regulations a	hat the info	rmation giver	above is to the tender of tender	rue and complete and/or file certain	to the b release	est of my know notifications ar	wiedge and under	stand that pu	irsuant for rele	to NMOCD rules ases which may
endanger public h	lealth or th	e environmen	t. The acce	ptance of a C-141	l report	by the NMOC	D marked as "Fin	nal Report" d	loes no	t relieve the operator
of liability should	their oper	ations have fa	iled to ade	uately investigate NMOCD accepts	e and re	mediate contar	nination that pos	e a threat to	ground	water, surface
compliance with	any other f	èderal, state o	r local law	s and/or regulation	nce of ns.	a C-141 Tepon	does not reneve	the operator	oi resp	oonsidiinty lor
/	1.00		$\overline{\mathcal{V}}$	<u>^ ()) () () () () () () () () </u>			OIL CONSE	RVATIO	N D	VISION
Signature:	Vill	$- W_{1,3}$	Euc	and						
Printed Name: William M. K	incaid					Approved by District Sup				
	um Engi	neer				Approval Da		Expi	ration	Date:
E-mail Address:		aid@sjoc.n	et	<u> </u>		······				-
Date:10-20-09				40] 723-2166		Conditions of	of Approval:	_		Attached

* Attach Additional Sheets If Necessary

APPENDIX B WATER WELL REPORTS

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

		_24	4 Sc	outh			28	Ea	st		
6	70	5	30	4	30	3		2	55	1	60
7		8	50	9		10 17		11 20		12 73	
18		17 42		16 29		15 18		14 52		13 34	
19		20 48		21		22		23		24	
30		29		28		27		26	i	25	
31		32		33		34		35		36	

	24 Se	outh	29	East	
6	5	4	3	2	1
7 160	8	9	10	11	12
#8	17	16 18)	15	14	13
19	20	21	22	23	24
30	29	98 	27	26	25
31	32 سم	33	34	35	36

	24 S	outh	30	East	
6	5	4	3	2	1
7	8 186	9	10	11	12
18	17	16	15	14	13
19 231 150	20	21	22	23 400	24
30	29	28	27	26	25
31	32	33	34	35	36

	25	South	4	28 East	t
6	5	4 3	5 3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20 96	21	22	23	24
30	29	28 90	27	26	25
31	32	33	34	35	36

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

	25	South		29 East	
6 مرم	محكر	4	3	2	1
E-	8	9	10 40	11	12
لر 18	17	16	15	14	13
19	20	21	22	23	24
30 30	29	28	27	26	25
31	32	33	34	35	36

OF Courth

	26 Sc	outh	29	East	
6	5	4	3	2	1
7	(م	9	10	11	12
18	17	16	15	14	13
19	20	21	22 57 69 Site	23	24
30 5	29	28	27	26	25
31	32	33	84 }	35	36

	25 Sc	outh	30	East	
6	5	4	3	2	1
7 264	8	9 295	10	11	12 390
18	17	16	15	14	13
19	20	21 265 268	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

	26 S	outh	3	BO East	ł
6	5 179 180	4	3	2	1
7	8 172	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24 180
30	29	28	27	26	25
31	32	33	34	35	36

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)
 Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data



DATA



HOME

SCALE

Water Samples for Sect 22 Township 26 South Range 29 East

Instructions:

The number represents the number of water samples of certain well. Click the number if you want to download the data.

4 records are available.

	# of samples	S	Т	R	Formation	Date	Chlorides (mg/L)	Location (qtr/qtr)
	<u>l</u> sample	22	26S	29E	RSLR	7/14/1987	1754	26S.29E.22.23341
С	<u>1</u> sample	22	26S	29E	RSLR	4/11/1985	5770	26S.29E.22.23341
	<u>l</u> sample	22	26S	29E	RSLR	9/3/1997	5880	26S.29E.22.23341
	l sample	22	26S	29E	RSLR	4/8/1992	6070	26S.29E.22.23341

SELECT/DESELECT ALL

Submit

e hostinget ski borker under i staat



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

		(quarter	rs are 1=	NW 2=	=NE 3=	=SW 4	1= SE)				
		(quarter	rs are sn	nallest	to larg	est)	(NAD83 UTM	I in meters)		(In feet)	
	Sub		QQO	2				1	Depth De	epth Wa	ter
POD Number	basin Use	County	64 16 4	Sec	Tws	Rng	X	Y	Well W	aterColu	ımn
C 02038	PRO) ED	324	26	26S	29E	599204	3541992*	200		
C 02115	PRO) ED	1 3	26	26S	29E	598077	3542093*	160	85	75
							Aver	age Depth to	Water:	85 feet	
								Minimum	Depth:	85 feet	
								Maximum	Depth:	85 feet	

Record Count: 2

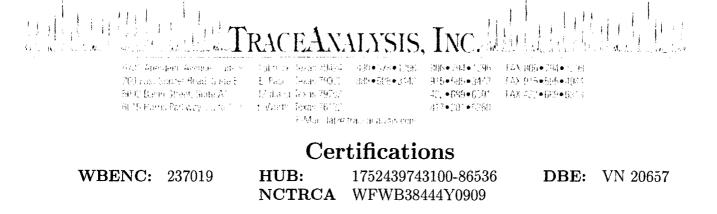
PLSS Search:

Township: 26S Range: 29E

*UTM location was derived from PLSS - see Help

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

APPENDIX C LABORATORY ANALYTICAL



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: November 23, 2009

Work Order: 9111604

Project Location:Eddy Co., NMProject Name:Stephens & Johnson/Mobil 22 Fed. #6Project Number:114-6400358

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
214898	AH-1 0-1'	soil	2009-11-10	00:00	2009-11-13
214899	AH-1 1'-1.5'	soil	2009-11-10	00:00	2009-11-13
214900	AH-2 0-1'	soil	2009-11-10	00:00	2009-11-13
214901	AH-3 0-1'	soil	2009-11-10	00:00	2009-11-13

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

Michael april

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

Standard Flags

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

Case Narrative

Samples for project Stephens & Johnson/Mobil 22 Fed. #6 were received by TraceAnalysis, Inc. on 2009-11-13 and assigned to work order 9111604. Samples for work order 9111604 were received intact at a temperature of 8.2 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
BTEX	S 8021B	55873	2009-11-17 at 16:00	65381	2009-11-17 at 11:38
Chloride (Titration)	SM 4500-Cl B	55915	2009-11-19 at 14:11	65459	2009-11-20 at 10:26
TPH DRO - NEW	Mod. 8015B	55839	2009-11-16 at 15:56	65350	2009-11-16 at 15:56
TPH DRO - NEW	Mod. 8015B	55885	2009-11-18 at 13:26	65408	2009-11-18 at 13:26
TPH GRO	S 8015B	55873	2009-11-17 at 16:00	65382	2009-11-17 at 12:05
TPH GRO	S 8015B	55928	2009-11-19 at 11:00	65457	2009-11-20 at 00:23

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 9111604 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: November 23, 2009 114-6400358

Analytical Report

Sample: 214898 - AH-1 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 65381 55873		Analytical Date Analy Sample Pre	zed:	S 8021B 2009-11-17 2009-11-17		Prep Me Analyze Preparec	d By: AG
			RL					
Parameter	Flag		\mathbf{Result}		Units	Γ	Dilution	RL
Benzene			< 0.100		mg/Kg		10	0.0100
Toluene			< 0.100		mg/Kg		10	0.0100
Ethylbenzene	l,		290		mg/Kg		10	0.0100
Xylene			778		mg/Kg		10	0.0100
						Spike	Percent	Recovery
Surrogate		Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue	ene (TFT)	····	11.0	mg/Kg	10	10.0	110	64.4 - 111.2
4-Bromofluor	obenzene (4-BFB)		9.59	mg/Kg	10	10.0	96	43.1 - 128.4

Sample: 214898 - AH-1 0-1'

Chloride		3800 1	ng/Kg	100	4.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	55915	Sample Preparation:	2009-11-19	Prepared By:	AR
QC Batch:	65459	Date Analyzed:	2009-11-20	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

Sample: 214898 - AH-1 0-1'

DRO		3580	mg/Kg	1	50.0
Parameter	Flag	RL Result	Units	Dilution	\mathbf{RL}
QC Batch: Prep Batch:	63330 35839	Date Analyzed Sample Prepar		Analyzed By: Prepared By:	<u> </u>
Laboratory: Analysis:	TPH DRO - NEW	Analytical Met		Prep Method:	,

Report Date: November 23, 2009 114-6400358				ork Order: 9111 z Johnson/Mobil	Page Number: 5 of 19 Eddy Co., NM		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	1	372	mg/Kg	1	100	372	70 - 130

Sample: 214898 - AH-1 0-1'

Laboratory: Analysis:	Midland TPH GRO		Analytica	l Method:	S 8015B		Prep Me	thod: S 5035
QC Batch:	65382		Date Ana		2009-11-17		Analyze	
Prep Batch:	55873			reparation:	2009-11-17		Prepared	
			\mathbf{RL}					
Parameter	Flag		Result		Units		Dilution	RL
GRO			27.3		mg/Kg		10	1.00
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue	ene (TFT)		10.9	mg/Kg	10	10.0	109	65.3 - 115
4-Bromofluor	obenzene (4-BFB)		9.07	mg/Kg	10	10.0	91	61.7 - 121.1

Sample: 214899 - AH-1 1'-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65459	Date Analyzed:	2009-11-20	Analyzed By:	AR
Prep Batch:	55915	Sample Preparation:	2009-11-19	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		2240	ng/Kg	100	4.00

Sample: 214899 - AH-1 1'-1.5'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO - NEW 63408 55885	Analytical Method: Date Analyzed: Sample Preparation:	Mod. 8015B 2009-11-18 2009-11-18	Prep Method: Analyzed By: Prepared By:	•
Demonster	Elect	RL	TT	Dilution	ът
Parameter	Flag	Result	Units	Dilution	RL
DRO		96.7	mg/Kg	1	50.0

¹High surrogate recovery due to peak interference.

Report Date: November 23, 2009 114-6400358			Stephen		er: 9111604 n/Mobil 22	Page Number: 6 of 19 Eddy Co., NM		
Surrogate	Flag	Result	Units	Dilu	ition	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		106	mg/Kg		1	100	106	70 - 130
Sample: 21	4899 - AH-1 1	'-1.5'						
Laboratory: Analysis:	Midland TPH GRO		Analytica	l Method:	S 8015B		Prep Me	thod: S 5035
QC Batch:	65457		Date Ana		2009-11-20)	Analyze	
Prep Batch:	55928			reparation:	2009-11-19		Prepareo	•
			RL					
Parameter	Fla	ag	Result		Units		Dilution	RL
GRO			6.31		mg/Kg		1	1.00
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue	ene (TFT)		2.12	mg/Kg	1	2.00	106	65.3 - 115
4-Bromofluor	obenzene (4-BFI	B)	1.87	mg/Kg	1	2.00	94	61.7 - 121.1

Sample: 214900 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65459	Date Analyzed:	2009-11-20	Analyzed By:	AR
Prep Batch:	55915	Sample Preparation:	2009-11-19	Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		12600	mg/Kg	100	4.00

Sample: 214900 - AH-2 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO - NEW 65350 55839	Analytical Method: Date Analyzed: Sample Preparation:	Mod. 8015B 2009-11-16 2009-11-16	Prep Method: Analyzed By: Prepared By:	
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
DRO		<50.0	mg/Kg	1	50.0

Report Date: November 23, 2009 114-6400358			Work Order: 9111604 Stephens & Johnson/Mobil 22 Fed. #6				Page Number: 7 of 19 Eddy Co., NM		
Surrogate	Flag	Result	Units	Dilu	tion .	Spike Amount	Percent Recovery	Recovery Limits	
n-Tricosane	2	136	mg/Kg	1		100	136	70 - 130	
Sample: 21 Laboratory: Analysis: QC Batch:	4900 - AH-2 (Midland TPH GRO 65382	D-1'	Analytical M Date Analyze		S 8015B 2009-11-17		Prep Me Analyzed		
Prep Batch:	55873		Sample Prepa	aration:	2009-11-17		Prepared	By: AG	
			\mathbf{RL}						
Parameter	F	lag	Result		\mathbf{Units}		Dilution	\mathbf{RL}	
GRO			<1.00		mg/Kg		1	1.00	
						Spike	Percent	Recovery	

					Spike	Percent	Recovery
Surrogate	Flag	Result	\mathbf{Units}	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		2.13	mg/Kg	1	2.00	106	65.3 - 115
4-Bromofluorobenzene (4-BFB)		1.82	mg/Kg	1	2.00	91	61.7 - 121.1

Sample: 214901 - AH-3 0-1'

Midland							
BTEX		P P				Prep Me	thod: S 5035
5381		Date Anal	yzed:	2009-11-17		Analyze	i By: AG
55873		Sample Pr	eparation:	2009-11-17		Prepareo	By: AG
		RI	J				
\mathbf{F} lag		Resul	t	Units	I	Dilution	\mathbf{RL}
		< 0.010	0	mg/Kg		1	0.0100
		< 0.0100)	mg/Kg		1	0.0100
		< 0.0100)	mg/Kg		1	0.0100
	<u></u>	< 0.0100)	mg/Kg		1	0.0100
					Spike	Percent	Recovery
	Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits
e (TFT)		2.18	mg/Kg	1	2.00	109	64.4 - 111.2
benzene (4-BFB)		1.99	mg/Kg	1	2.00	100	43.1 - 128.4
	BTEX 55381 55873 Flag e (TFT)	BTEX 55381 55873 Flag Flag Flag Flag	BTEX Analytical 05381 Date Analy 05873 Sample Program Flag Result <0.0100	BTEX Analytical Method: Date Analyzed: Sample Preparation: RL Flag Result <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.000 <0.0000 <0.0000 <0.0000 <0.0000 <0.0000 <0.0000 <0.0000 <0.0000 <0.0000 <0.0000 <0.0000 <0.0000 <0.0000 <0.0000 <0.0000 <0.00000 <0.0000 <0.00000 <0.00000 <0.00000 <0.00000 <0.0000000 <0.0000000000	BTEX Analytical Method: S 8021B 05381 Date Analyzed: 2009-11-17 05873 Sample Preparation: 2009-11-17 RL RL Vits Flag Result Units <0.0100	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	BTEXAnalytical Method:S 8021BPrep Method: 35381 Date Analyzed:2009-11-17Analyzed: 55873 Sample Preparation:2009-11-17PreparedRLFlagResultUnitsDilution <0.0100 mg/Kg1 <0.0100 109

Sample: 214901 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65459	Date Analyzed:	2009-11-20	Analyzed By:	AR
Prep Batch:	55915	Sample Preparation:	2009-11-19	Prepared By:	\mathbf{AR}

²High surrogate recovery. Sample non-detect, result bias high.

Report Date: November 23, 2009 114-6400358			c Order: 9111604 ohnson/Mobil 22 Fed. #6	Page Number: 8 of 19 Eddy Co., NM		
Parameter	Flag	RL Result	Units	Dilution	RL	
Chloride		3220	mg/Kg	100	4.00	

Sample: 214901 - AH-3 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	alysis: TPH DRO - NEW C Batch: 65350		Analytical Method: Date Analyzed: Sample Preparation:		Mod. 8015B 2009-11-16 2009-11-16	Prep M Analyz Prepare	, U
Parameter	F	lag	RL Result		Units	Dilution	RL
$\overline{D}RO$	L'.	а <u>в</u>	<50.0	n	ng/Kg	1	50.0
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	3	134	mg/Kg	1	100	134	70 - 130

Sample: 214901 - AH-3 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 65382 55873		Date Ana	l Method: lyzed: reparation:	S 8015B 2009-11-17 2009-11-17		Prep Me Analyzee Preparee	d By: AG
			\mathbf{RL}					
Parameter	Flag		\mathbf{Result}		Units		Dilution	\mathbf{RL}
GRO			18.6		mg/Kg		1	1.00
Sumarata		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Surrogate		riag					107	
Trifluorotolue	· · · ·		2.14	mg/Kg	1	2.00		65.3 - 115
4-Bromofluor	obenzene (4-BFB)		1.87	mg/Kg	1	2.00	94	61.7 - 121.1

Method Blank (1) QC Batch: 65350

QC Batch:	65350	Date Analyzed:	2009-11-16	Analyzed By:	kg
Prep Batch:	55839	QC Preparation:	2009-11-16	Prepared By:	kg

³High surrogate recovery. Sample non-detect, result bias high.

Report Date: November 2 114-6400358	3, 2009	Stepher		rder: 9111604 son/Mobil 22		Page Number: 9 of 19 Eddy Co., NM			
			ME						
Parameter	Flag		Resu		Un			RL	
DRO			<5.	86	mg/	Kg		50	
			_		Spike	Percent		overy	
Surrogate Flag	Result	Units	D	ilution	Amount	Recovery		mits	
n-Tricosane	123	mg/Kg	, . ,	1	100	123	70 -	- 130	
Method Blank (1)	QC Batch: 65381								
QC Batch: 65381		Date An	alvzed	2009-11-17		Analy	zed By:	AG	
Prep Batch: 55873		QC Prep	•	2009-11-17		•	red By:	AG	
1		-v = P				1.000			
				MDL					
Parameter	Flag			esult	Un	lits		RL	
Benzene		<0.00410				/Kg		0.01	
Toluene			<0.0			/Kg		0.01	
Ethylbenzene			<0.00		mg/Kg			0.01	
Kylene			<0.00	0650	mg	/Kg		0.01	
					Spike	Percent	Recov	very	
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Lim		
Frifluorotoluene (TFT)	\	2.17	mg/Kg		2.00	108	64.9 -		
-Bromofluorobenzene (4-E	3FB)	1.88	mg/Kg	1	2.00	94	43.9 -	121.9	
Method Blank (1)	QC Batch: 65382								
QC Batch: 65382		Date Ana	alvzed	2009-11-17		Analy	zed By:	AG	
Prep Batch: 55873		QC Prep	v	2009-11-17			red By:	AG	
)	The		MD Resu		T			זמ	
Parameter GRO	Flag		<0.39		Uni			$\frac{RL}{1}$	
			< 0.58		mg/	ng		1	
humo go to	F lag	Dogult	T':+-	ה:!	Spike	Percent		very	
Surrogate Trifluorotoluene (TFT)	Flag	Result 2.19	Units mg/Kg	Dilution	Amount 2.00	Recovery 110	Lin 66.2		
	RE)	2.19 1.84	mg/Kg	•	2.00	92	62 - 1		
-Bromofluorobenzene (4-E		1.04	IIIK/IZK	. 1	2.130	92	02 -	1 2(1.7)	

QC Batch:	65408	Date Analyzed:	2009-11-18	Analyzed By:	kg
Prep Batch:	55885	QC Preparation:	2009-11-18	Prepared By:	kg

Report Date: No 114-6400358	ovember 23,	2009	Stephens	Work Or s & John			ed. #6	Page Nu	mber: 10 Eddy Co	
Paramatan		Flag		MI Res			Thi			DT
Parameter DRO		Flag					Unit			RL
	·			<u>ر</u> ل,	.60		mg/I	<u>ve</u>	50	
Surrogate	Flag	Rogult	I [*] nita	r	ilution		Spike	Percent Recovery		covery mits
n-Tricosane	Flag	ResultUnitsDilutionAmount98.2mg/Kg1100					100	<u>98</u>		- 130
			mg/ ng	endrone de dita en			100			100
Method Blank	(1) Q(C Batch: 65457								
QC Batch: 654	157		Date Ana	alvzed	2009-1	1-20		Analys	ed By:	AG
Prep Batch: 559			QC Prep		2009-1				red By:	AG
	-		40 - rop			•		- 10pm	· J ·	
				MI	DL					
Parameter		Flag		Res			Unit			RL
GRO			<0.396 mg					۲g		1
Surrogate		Flag	Result	Units	: Т	Dilution	Spike Amount	Percent Recovery		overy mits
Trifluorotoluene (TFT)	1 1005	2.21	mg/K		1	2.00	110		- 125
4-Bromofluorobei	. ,	'B)	1.82	mg/K	-	1	2.00	91		120.5
Method Blank QC Batch: 654	159	C Batch: 65459	Date Ana	-	2009-1			•	ed By:	AR
Prep Batch: 559	915		QC Prepa	aration:	2009-1	1-19		Prepar	ed By:	AR
				MI	Я.					
Parameter		Flag		Resi			Unit	s		\mathbf{RL}
Chloride		8		<2.		<u></u>	mg/k			4
Laboratory Co	-	e (LCS-1)								
QC Batch: 653			Date Ana	•	2009-1				zed By:	-
Prep Batch: 558	39		QC Prep	aration:	2009-1	1-16		Prepa	red By:	kg
_						Spik			Re	
Param		Resu 222		nits /Kg	Dil.	<u>Amou</u> 250			Lin 57.4 -	
DRO			•		1			00	/	199 A

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

114-6400358		Work Order: 9111604 Stephens & Johnson/Mobil 22 Fed. #6								Page Number: 11 of 19 Eddy Co., NM			
	LCSD			Spike		trix]	Rec.		RPD		
Param	Result	Units	Dil.	Amoun	t Re	sult	Rec.	I	limit	RPD	Limit		
DRO	216	mg/Kg	1	250	<5	.86	86	57.4	- 133.4	3	20		
Percent recovery is based on th	ne spike result.	RPD is	based	on the spik	e and s	pike d	uplica	te resu	lt.				
LCS	LCSD				\mathbf{S}	pike		LCS	LCSI)	Rec.		
Surrogate Result		U	Inits	Dil.		10unt		Rec.	Rec.		Limit		
n-Tricosane 112			g/Kg	1		100		112	115	1	70 - 130		
Laboratory Control Spike	(LCS-1)												
QC Batch: 65381		Date A	nalyzed	l: 2009-1	1-17				Anal	yzed By	r: AG		
Prep Batch: 55873		QC Pre	•							ared By			
	• ~~~				<u> </u>					-			
	LCS		7	וית	Spik			trix	ъ		Rec.		
Param	Resu		Inits	Dil.	Amou			sult	Rec.		imit		
Benzene Belgene	2.03		g/Kg	1	2.00			0410	102		- 115.7		
Foluene	2.01		g/Kg	1	2.00 2.00			0310 0240	100 98		- 113.6 - 114.2		
Ethylbenzene Kylene	1.97 5.91		g/Kg g/Kg	1 1	6.00			0240	98 98		- 114.2 - 113.6		
Percent recovery is based on th	e spike result.	RPD is	based (on the spike	e and si	oike du	uplicat	e resul	t.				
referit recovery is based on th	LCSD			Spike	Mat		1]	Rec.		RPD		
Param	LCSD Result	Units	Dil.	Spike Amount	Mat Res	rix ult	Rec.] L	Rec. Jimit	RPD	Limit		
ParamBenzene	LCSD Result 1.97	Units mg/Kg	Dil.	Spike Amount 2.00	Mat Res <0.0	rix ult 0410	Rec. 98	I 75.4	Rec. Limit - 115.7	3	Limit 20		
Param Benzene Toluene	LCSD Result 1.97 1.96	Units mg/Kg mg/Kg	Dil. 1 1	Spike Amount 2.00 2.00	Mat Res <0.0	rix ult 0410 0310	Rec. 98 98	1 75.4 78.4	Rec. Jimit - 115.7 - 113.6	3 2	Limit 20 20		
Param Benzene Foluene Ethylbenzene	LCSD Result 1.97 1.96 1.92	Units mg/Kg mg/Kg mg/Kg	Dil. 1 1 1	Spike Amount 2.00 2.00 2.00	Mat Res <0.0 <0.0	crix ult 0410 0310 0240	Rec. 98 98 96	1 75.4 78.4 76	Rec. Jimit - 115.7 - 113.6 - 114.2	3 2 3	Limit 20 20 20		
Param Benzene Foluene Ethylbenzene Xylene	LCSD Result 1.97 1.96 1.92 5.74	Units mg/Kg mg/Kg mg/Kg mg/Kg	Dil. 1 1 1 1	Spike Amount 2.00 2.00 2.00 6.00	Mat Res <0.00 <0.00 <0.00 <0.00	rix ult 0410 0310 0240 0650	Rec. 98 98 96 96	1 75.4 78.4 76 76.9	Rec. Jimit - 115.7 - 113.6 - 114.2 - 113.6	3 2	Limit 20 20		
Param Benzene Toluene Ethylbenzene Xylene	LCSD Result 1.97 1.96 1.92 5.74 ne spike result.	Units mg/Kg mg/Kg mg/Kg mg/Kg RPD is	Dil. 1 1 1 1 based o	Spike Amount 2.00 2.00 2.00 6.00	Mat Res <0.00 <0.00 <0.00 <0.00	rix ult 0410 0310 0240 0650 pike du	Rec. 98 98 96 96 1plicat	I 75.4 78.4 76 76.9 te resul	Rec. Jimit - 115.7 - 113.6 - 114.2 - 113.6 t.	3 2 3 3	Limit 20 20 20 20		
Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on th	LCSD Result 1.97 1.96 1.92 5.74 te spike result. LCS	Units mg/Kg mg/Kg mg/Kg RPD is LC	Dil. 1 1 1 based o	Spike <u>Amount</u> 2.00 2.00 2.00 6.00 on the spike	$\begin{array}{c} \text{Mat} \\ \text{Res} \\ < 0.0 \\ < 0.0 \\ < 0.0 \\ < 0.0 \\ < 0.0 \\ \end{array}$	rix ult 0410 0310 0240 0650 pike du Spil	Rec. 98 98 96 96 1plicat	1 75.4 78.4 76 76.9 e resul LCS	Rec. Jimit - 115.7 - 113.6 - 114.2 - 113.6 t. LCSD	3 2 3 3	Limit 20 20 20 20 20		
Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on th Surrogate	LCSD Result 1.97 1.96 1.92 5.74 te spike result. LCS Result	Units mg/Kg mg/Kg mg/Kg RPD is LC t Res	Dil. 1 1 1 based o SD sult	Spike Amount 2.00 2.00 2.00 6.00 on the spike Units	Mat Res <0.00 <0.00 <0.00 <0.00 e and sp Dil.	rix ult 0410 0310 0240 0650 pike du Spil Amou	Rec. 98 98 96 96 1plicat ce unt	L 75.4 78.4 76 76.9 e resul LCS Rec.	Rec. .imit - 115.7 - 113.6 - 114.2 - 113.6 t. LCSD Rec.	3 2 3 3 1 L	Limit 20 20 20 20 Rec. imit		
Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on th Surrogate Trifluorotoluene (TFT)	LCSD Result 1.97 1.96 1.92 5.74 ne spike result. LCS Resul 2.13	Units mg/Kg mg/Kg mg/Kg RPD is LC t Res 2.1	Dil. 1 1 1 based of SD sult 18	Spike Amount 2.00 2.00 2.00 6.00 on the spike Units mg/Kg	$\begin{array}{c} \text{Mat} \\ \text{Res} \\ < 0.00 \\ < 0.00 \\ < 0.00 \\ < 0.00 \\ \text{e and sp} \\ \end{array}$	rix ult 0410 0310 0240 0650 pike du Spil Amou 2.0	Rec. 98 98 96 96 1plicat ce unt 0	LCS Rec. 106	Rec. .imit - 115.7 - 113.6 - 114.2 - 113.6 t. LCSD Rec. 109	3 2 3 3 1 L 65 -	Limit 20 20 20 20 Rec. .imit - 122.9		
Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on th Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (QC Batch: 65382 Prep Batch: 55873	LCSD Result 1.97 1.96 1.92 5.74 te spike result. LCS Resul 2.13) 1.88	Units mg/Kg mg/Kg mg/Kg RPD is LC t Res 2.1	Dil. 1 1 based of SD Sult 18 92 nalyzed	Spike Amount 2.00 2.00 6.00 on the spike Units mg/Kg mg/Kg mg/Kg	Mat Res <0.00 <0.00 <0.00 <0.00 e and sp Dil. 1 1	rix ult 0410 0310 0240 0650 pike du Spil Amou	Rec. 98 98 96 96 1plicat ce unt 0	L 75.4 78.4 76 76.9 e resul LCS Rec.	Rec. .imit - 115.7 - 113.6 - 114.2 - 113.6 t. LCSD Rec. 109 96 Analy	3 2 3 3 1 L 65 -	Limit 20 20 20 Rec. imit - 122.9 - 124.9		
Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on th Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (QC Batch: 65382	LCSD Result 1.97 1.96 1.92 5.74 te spike result. LCS Resul 2.13) 1.88	Units mg/Kg mg/Kg mg/Kg RPD is LC t Res 2.1 1.9 Date Ar QC Prej	Dil. 1 1 based of SD Sult 18 92 nalyzed	Spike Amount 2.00 2.00 6.00 on the spike Units mg/Kg mg/Kg mg/Kg	Mat Res <0.00 <0.00 <0.00 <0.00 e and sp Dil. 1 1	rix ult 0410 0310 0240 0650 pike du Spil Amou 2.0 2.0	Rec. 98 96 96 1plicat ce unt 0 0	LCS Rec. 106	Rec. .imit - 115.7 - 113.6 - 114.2 - 113.6 t. LCSD Rec. 109 96 Analy	3 2 3 3 3 4 65 - 43.8 7 7 2 65 - 43.8 7 7 2 8 9 7 8 7 8 7 7 8 7 8 7 8 7 8 7 8 7 8 7	Limit 20 20 20 Rec. imit - 122.9 - 124.9		
Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on th Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (QC Batch: 65382	LCSD Result 1.97 1.96 1.92 5.74 he spike result. LCS Result 2.13) 1.88	Units mg/Kg mg/Kg mg/Kg RPD is LC t Res 2.1 1.9 Date Ar QC Prej	Dil. 1 1 based of SD Sult 18 92 nalyzed	Spike Amount 2.00 2.00 6.00 on the spike Units mg/Kg mg/Kg mg/Kg	Mat Res <0.00 <0.00 <0.00 <0.00 e and sp Dil. 1 1 1 1-17 1-17	rix ult 0410 0310 0240 0650 pike du Spil Amot 2.00 2.00	Rec. 98 96 96 1plicat ce unt 0 0	LCS Rec. 106 94	Rec. .imit - 115.7 - 113.6 - 114.2 - 113.6 t. LCSD Rec. 109 96 Analy	3 2 3 3 4 4 5 4 3.8 7 7 4 3.8 7 7 4 3.8 7 7 8 7 7 8 7 8 7 7 8 7 8 7 8 7 8 7 8	Limit 20 20 20 20 Rec. imit - 122.9 - 124.9 : AG : AG		

114-6400358	oer 23, 2009	Work Order: 9111604 Stephens & Johnson/Mobil 22 Fed. #6								Page Number: 12 of 19 Eddy Co., NM			
		LCSD			Spike		trix			Rec.		RPD	
Param		Result	Units	Dil.	Amount		sult	Rec.		Limit	RPD	Limit	
GRO		16.1	mg/Kg	1	20.0	<0	.396	80	52.	.5 - 114.3	4	20	
Percent recovery is ba	sed on the s	pike result. I	RPD is b	ased on	h the spik	e and s	pike d	uplicat	e res	ult.			
		LCS	LCS	D			Spi	ke	LCS	LCSD		Rec.	
Surrogate		Result			Units	Dil.	Amo		Rec.			Limit	
Trifluorotoluene (TFT	,	2.24	2.18		ng/Kg	1	2.0		112			- 128.7	
4-Bromofluorobenzene	e (4-BFB)	1.90	1.86	<u>3 n</u>	ng/Kg	1	2.0)0	95	93	64.1	- 127.4	
Laboratory Control QC Batch: 65408	l Spike (LC	CS-1)	Date An	alvzed	2009-2	1-18				۸na	lyzed B	y: kg	
Prep Batch: 55885			QC Prep	•							pared B		
		LCS				\mathbf{Sp}	ike	Ma	ıtrix		J	Rec.	
Param		Resul	t U	nits	Dil.	Amo	ount	Re	sult	Rec.	I	limit	
DRO		180	mg	g/Kg	1	23	50	<:	5.86	72	57.4	- 133.4	
Percent recovery is bas	sed on the s	pike result. I	RPD is ba	ased on	the spike	e and s	pike d	uplicat	e resi	ılt.			
_		LCSD	** •.	D	Spike	Ma				Rec.		RPD	
Param		Result	Units mg/Kg	Dil.	Amount			Rec.		Limit	RPD	Limit	
			Mg/Kg	1			Xh	72	- 57.·	4 - 133.4	0	20	
DRO	sed on the s				250 the spike	5>				ılt			
DRO	-	pike result. I			·····	e and s	oike d	uplicat	e resi			D	
DRO Percent recovery is bas	LCS	pike result. I LCSD	RPD is ba	ased on	the spike	e and sp Sp	oike d	uplicat I	e resi .CS	LCSD		Rec.	
DRO Percent recovery is bas Surrogate	LCS Result	pike result. I LCSD Result	PD is ba	ased on its	·····	e and s Sj Am	oike d oike iount	uplicat I F	e resi .CS lec.	LCSD Rec.		Limit	
DRO Percent recovery is bas Surrogate n-Tricosane	LCS Result 101	pike result. I LCSD Result 100 S-1)	PD is ba	ased on its 'Kg	the spike Dil.	e and s Sj Am	oike d	uplicat I F	e resi .CS	LCSD		Limit	
DRO Percent recovery is bas Surrogate n-Tricosane Laboratory Control QC Batch: 65457 Prep Batch: 55928	LCS Result 101	pike result. I LCSD Result 100 S-1)	PD is ba	ased on its Kg lyzed:	the spike Dil. 1 2009-1	e and s S Am 1	oike d oike iount	uplicat I F	e resi .CS lec.	LCSD Rec. 100 Analy		Limit 70 - 130 : AG	
DRO Percent recovery is bas Surrogate n-Tricosane Laboratory Control QC Batch: 65457 Prep Batch: 55928	LCS Result 101	pike result. H LCSD Result 100 S-1)	PD is bi Un mg/ Date Ana QC Prepa	ased on its 'Kg alyzed: aration:	the spike Dil. 1 2009-1 2009-1	e and sj Sj Am 1 1-20 1-19 Spi	pike d pike ount 00	uplicat I F	e resi .CS lec. l01	LCSD Rec. 100 Analy Prepa	vzed By ured By H	Limit 70 - 130 : AG : AG Rec.	
DRO Percent recovery is bas Surrogate n-Tricosane Laboratory Control QC Batch: 65457 Prep Batch: 55928 Param	LCS Result 101	pike result. I LCSD Result 100 S-1)	PD is ba Uni mg/ Date Ana QC Prepa Un	ased on its 'Kg alyzed: aration: nits	the spike Dil. 1 2009-1 2009-1 Dil.	e and sj Am 1 1-20 1-19 Spi Amc	pike d oike ount 00 ke	uplicat I F Ma Res	e resu .CS lec. 101 trix sult	LCSD Rec. 100 Analy Prepa Rec.	vzed By ured By I L	Limit 70 - 130 : AG : AG Rec. imit	
DRO Percent recovery is bas Surrogate n-Tricosane Laboratory Control QC Batch: 65457 Prep Batch: 55928 Param GRO	LCS Result 101	pike result. H LCSD Result 100 S-1)	PD is ba Uni mg/ Date Ana QC Prepa Un mg	ased on its 'Kg ilyzed: aration: nits /Kg	the spike Dil. 1 2009-1 2009-1 Dil. 1	e and sp Sp Am 1-20 1-19 Spi Amo 20	pike d pike count 00 ke punt .0	uplicat I F Ma Res <0.	e resu .CS lec. 101 trix sult 396	LCSD Rec. 100 Analy Prepa Rec. 72	vzed By ured By I L	Limit 70 - 130 : AG : AG Rec. imit	
DRO Percent recovery is bas Surrogate n-Tricosane Laboratory Control QC Batch: 65457	LCS Result 101	pike result. H LCSD Result 100 S-1) LCS Result 14.5 pike result. F	PD is ba Uni mg/ Date Ana QC Prepa Un mg	ased on its 'Kg ilyzed: aration: nits /Kg	the spike Dil. 1 2009-1 2009-1 Dil. 1 the spike	e and sp Sp Am 1-20 1-19 Spi Amc 20 e and sp	bike d bike count 00 ke count .0 bike d	uplicat I F Ma Res <0.	e resu LCS Lec. 101 trix sult 396 e resu	LCSD Rec. 100 Analy Prepa Rec. 72 lt.	vzed By ured By I L	Limit 70 - 130 : AG : AG : AG Rec. imit - 114.3	
DRO Percent recovery is bas Surrogate n-Tricosane Laboratory Control QC Batch: 65457 Prep Batch: 55928 Param GRO	LCS Result 101	pike result. H LCSD Result 100 SS-1) LCS Result 14.5 pike result. H LCSD	PD is ba Uni mg/ Date Ana QC Prepa Un mg	ased on its 'Kg ilyzed: aration: nits /Kg	the spike Dil. 1 2009-1 2009-1 Dil. 1	e and sp Sp Am 1-20 1-19 Spi Amo 20	bike d bike bike 00 ke bike d bike d	uplicat I F Ma Res <0.	e resu LCS Lec. 101 trix sult 396 e resu	LCSD Rec. 100 Analy Prepa Rec. 72 Ilt. Rec.	vzed By ured By I L	Limit 70 - 130 : AG : AG Rec.	

Report Date: November 114-6400358	23, 2009	Work Order: 9111604 Stephens & Johnson/Mobil 22 Fed. #6									Page Number: 13 of 19 Eddy Co., NM			
C		LCS		SD	· • • • •	וית	Spil		LCS		LCSD		Rec.	
Surrogate Trifluorotoluene (TFT)		Result 2.17			Units ng/Kg	Dil. 1	Amo 2.0		$\frac{\text{Rec}}{108}$		Rec. 108		Limit 2 - 128.7	
4-Bromofluorobenzene (4-	BFB)	1.87			ig/Kg	1	2.0		94		108 92		l = 120.7 l = 127.4	
Laboratory Control S	nike (LCS-	1)												
QC Batch: 65459		,	Date A	nalyzed:	2009-1	1-20					Anal	lyzed B	y: AR	
Prep Batch: 55915				eparation:								pared By		
		LC	3				Spike		Matri	iv			Rec.	
Param		Resu		Units	Dil.		mount		Resu		Re	c.	Limit	
Chloride		102		mg/Kg	1		100		<2.1		10		85 - 115	
Percent recovery is based	on the spike				the spike	and s		ıplicat						
		LCSD	TT 1 .		Spike		Matrix	P		Ree			RPD	
Param Chloride		Result 100	Units mg/Kg		Amour 100		$\frac{\text{Result}}{<2.18}$	Re		Lim 85 - 1		RPD 2	Limit 20	
	on the spike Spiked Sa			based on	the spike	e and s	spike dı	iplicat	e rest	ult.				
Matrix Spike (MS-1) QC Batch: 65350	-		4846 Date A	based on nalyzed: eparation	2009-1	1-16	spike dı	plicat	e rest	ult.		dyzed E pared E	• •	
Matrix Spike (MS-1) QC Batch: 65350	-		4846 Date A	nalyzed:	2009-1	1-16 1-16	spike du bike	_	e rest .trix	ult.		pared E		
Matrix Spike (MS-1) QC Batch: 65350 Prep Batch: 55839	-	mple: 21	4846 Date A QC Pre	nalyzed:	2009-1	1-16 1-16 Sp	_	Ма				pared E	y: kg	
Matrix Spike (MS-1) QC Batch: 65350 Prep Batch: 55839 Param	-	mple: 21 MS	4846 Date A QC Pre	nalyzed: eparation	2009-1 : 2009-1	1-16 1-16 Sp Am	pike	Ma Re	trix	1	Pre	pared E	y: kg Rec.	
Matrix Spike (MS-1) QC Batch: 65350 Prep Batch: 55839 Param DRO	Spiked Sa	mple: 21 MS Resul 245	4846 Date A QC Pre t 1	nalyzed: eparation Units 1g/Kg	2009-1 : 2009-1 Dil. 1	1-16 1-16 Sp <u>Am</u> 2	oike ount 50	Ma Re </td <td>trix sult</td> <td>1</td> <td>Prej Rec.</td> <td>pared E</td> <td>y: kg Rec. Limit</td>	trix sult	1	Prej Rec.	pared E	y: kg Rec. Limit	
Matrix Spike (MS-1) QC Batch: 65350 Prep Batch: 55839 Param DRO	Spiked Sa on the spike	mple: 21 MS Resul 245	4846 Date A QC Pre t 1	nalyzed: eparation Units 1g/Kg	2009-1 : 2009-1 Dil. 1	1-16 1-16 Sp <u>Am</u> 2	oike ount 50 spike du	Ma Re </td <td>trix sult</td> <td>1</td> <td>Prej Rec. 98</td> <td>pared E</td> <td>y: kg Rec. Limit</td>	trix sult	1	Prej Rec. 98	pared E	y: kg Rec. Limit	
Matrix Spike (MS-1) QC Batch: 65350 Prep Batch: 55839 Param DRO Percent recovery is based Param	Spiked Sa on the spike R	MS Resul 245 result. 1 MSD esult	4846 Date A QC Pre t n RPD is Units	nalyzed: eparation Units 1g/Kg	2009-1 : 2009-1 Dil. 1 the spike	1-16 1-16 Sp Am 2 and s Ma	oike ount 50 spike du utrix	Ma Re </td <td>trix sult 5.86 e resu</td> <td>l ılt. Rec. Limit</td> <td>Prej Rec. 98</td> <td>pared E</td> <td>y: kg Rec. .imit - 167.1</td>	trix sult 5.86 e resu	l ılt. Rec. Limit	Prej Rec. 98	pared E	y: kg Rec. .imit - 167.1	
Matrix Spike (MS-1) QC Batch: 65350 Prep Batch: 55839 Param DRO Percent recovery is based Param	Spiked Sa on the spike R	MS Resul 245 result. 1 MSD esult	4846 QC Pro t n RPD is	nalyzed: eparation Units ng/Kg based on	2009-1 : 2009-1 Dil. 1 the spike Spike	1-16 1-16 Am 2 and s Ma Re	oike ount 50 spike du utrix	Ma Re </td <td>trix sult 5.86 e resu</td> <td>l ılt. Rec.</td> <td>Prej Rec. 98</td> <td>pared E 1 35.2</td> <td>y: kg Rec. .imit - 167.1 RPD</td>	trix sult 5.86 e resu	l ılt. Rec.	Prej Rec. 98	pared E 1 35.2	y: kg Rec. .imit - 167.1 RPD	
Matrix Spike (MS-1) QC Batch: 65350 Prep Batch: 55839 Param DRO Percent recovery is based Param DRO	Spiked Sa on the spike	MS Resul 245 result. 1 MSD esult 249	4846 Date A QC Pre t n RPD is Units mg/Kg	nalyzed: eparation Units ng/Kg based on Dil. 1	2009-1 : 2009-1 Dil. 1 the spike Amount 250	1-16 1-16 Am 2 and s Ma <u>Re</u>	oike ount 50 spike du utrix sult 5.86	Ma Re oplicat Rec. 100	trix sult 5.86 e resu 35.5	ılt. Rec. Limit 2 - 16	Prej Rec. 98	pared E I 35.2 RPD	y: kg Rec. .imit - 167.1 RPD Limit	
Matrix Spike (MS-1) QC Batch: 65350 Prep Batch: 55839 Param DRO Percent recovery is based Param DRO Percent recovery is based	Spiked Sa on the spike N on the spike MS	MS Resul 245 result. 1 MSD esult 249 result. 1 MSD	4846 Date A QC Pre t n RPD is <u>Units</u> mg/Kg RPD is	nalyzed: eparation Units 1g/Kg based on Dil. 1 based on	2009-1 : 2009-1 Dil. 1 the spike Amount 250 the spike	1-16 1-16 Am 2 and s Ma Re <5 and s	oike ount 50 spike du utrix sult 5.86 spike du Spike	Ma Re <2 Iplicat Rec. 100	e resu 35.3 MS	ılt. Rec. Limit 2 - 16	Pre <u>Rec.</u> <u>98</u> t <u>67.1</u> MSD	Pared E	y: kg Rec. Jimit - 167.1 RPD Limit 20 Rec.	
Prep Batch: 55839 Param DRO Percent recovery is based Param DRO Percent recovery is based	Spiked Sa on the spike N on the spike MS	MS Resul 245 result. 1 MSD esult 249 result. 1 MSD	4846 Date A QC Pre t n RPD is <u>Units</u> mg/Kg RPD is	nalyzed: eparation Units 1g/Kg based on Dil. 1 based on	2009-1 : 2009-1 Dil. 1 the spike Amount 250 the spike	1-16 1-16 Am 2 and s Ma Re <5 and s	oike ount 50 spike du utrix sult 5.86 spike du Spike	Ma Re <2 Iplicat Rec. 100	e resu 35.3 MS	ılt. Rec. Limit 2 - 16	Pre <u>Rec.</u> <u>98</u> t <u>67.1</u> MSD	Pared E	y: kg Rec. Jimit - 167.1 RPD Limit 20 Rec.	
Matrix Spike (MS-1) QC Batch: 65350 Prep Batch: 55839 Param DRO Percent recovery is based Param DRO Percent recovery is based Surrogate n-Tricosane	Spiked Sa on the spike R on the spike	MS Resul 245 e result. 1 MSD esult 249 result. 1 MSD Result 124	4846 Date A QC Pre t n RPD is <u>Units</u> mg/Kg RPD is <u>U</u>	nalyzed: eparation Units ng/Kg based on Dil. 1	2009-1 : 2009-1 Dil. 1 the spike Amount 250	1-16 1-16 Am 2 and s Ma Re <5 and s	oike ount 50 spike du sult 5.86 spike du	Ma Re <2 Iplicat Rec. 100 Iplicat	trix sult 5.86 e resu 35.5 e resu	ılt. Rec. Limit 2 - 16	Pre <u>Rec.</u> <u>98</u> t <u>67.1</u>	pared E I 35.2 <u>RPD</u> 2	y: kg Rec. .imit - 167.1 RPD Limit 20	
Matrix Spike (MS-1) QC Batch: 65350 Prep Batch: 55839 Param DRO Percent recovery is based Param DRO Percent recovery is based	Spiked Sa on the spike N R on the spike MS Result 125	MS Resul 245 e result. 1 MSD esult 249 result. 1 MSD Result 124 mple: 214	4846 Date A QC Pre t n RPD is Units mg/Kg RPD is Units Mg/Kg RPD is Units Mg/Kg RPD is	nalyzed: eparation Units ng/Kg based on Dil. 1 based on Lnits	2009-1 2009-1 Dil. 1 the spike Amount 250 the spike Dil. 1 2009-11	1-16 1-16 Am 2 and s Re <2 and s S An	oike ount 50 spike du utrix sult 5.86 spike du Spike mount	Ma Re <2 Iplicat Rec. 100 Iplicat	trix sult 5.86 e resu 35.5 e resu MS Rec.	ılt. Rec. Limit 2 - 16	Pre Rec. 98 t 67.1 MSD Rec. 124 Analy	pared E I 35.2 <u>RPD</u> 2	y: kg Rec. .imit - 167.1 RPD Limit 20 Rec. Limit 70 - 130	

Report Date: November 23, 2009 <u>114-6400358</u> Param	St	Work ephens & Jo	Page Number: 14 of 19 Eddy Co., NM				
	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.25	mg/Kg	1	2.00	< 0.00410	112	57.7 - 140.7
Toluene	2.28	mg/Kg	1	2.00	< 0.00310	114	53.4 - 146.6
Ethylbenzene	2.30	mg/Kg	1	2.00	0.0189	114	62.1 - 141.6
Xylene	7.02	mg/Kg	1	6.00	0.1503	114	61.2 - 142.7

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

	MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{Result}	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit	RPD	Limit
Benzene	2.14	mg/Kg	1	2.00	< 0.00410	107	57.7 - 140.7	5	20
Toluene	2.17	mg/Kg	1	2.00	< 0.00310	108	53.4 - 146.6	5	20
Ethylbenzene	2.19	mg/Kg	1	2.00	0.0189	108	62.1 - 141.6	5	20
Xylene	6.68	mg/Kg	1	6.00	0.1503	109	61.2 - 142.7	5	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	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.15	2.16	mg/Kg	1	2	108	108	62.7 - 119.6
4-Bromofluorobenzene (4-BFB)	1.98	1.98	mg/Kg	1	2	99	99	49.6 - 136.7

Matrix Spike (MS-1) Spiked Sample: 214900

QC Batch:	65382	Date Analyzed:	2009-11-17	Analyzed By:	AG
Prep Batch:	55873	QC Preparation:	2009-11-17	Prepared By:	\mathbf{AG}

	\mathbf{MS}			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	17.9	mg/Kg	1	20.0	< 0.396	90	10 - 198.3

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	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	19.3	mg/Kg	1	20.0	< 0.396	96	10 - 198.3	8	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	\mathbf{Result}	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.10	2.06	mg/Kg	1	2	105	103	65.5 - 123
4-Bromofluorobenzene (4-BFB)	1.98	1.85	mg/Kg	1	2	99	92	58.6 - 140

Matrix Spike (MS-1) Sj	piked Sample: 214899
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QC Batch:	65408	Date Analyzed:	2009-11-18	Analyzed By:	kg
Prep Batch:	55885	QC Preparation:	2009-11-18	Prepared By:	kg

DRO Percent recovery is based on the s Param DRO Percent recovery is based on the s MS Surrogate Result n-Tricosane 95.0 Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	MSD Result U 199 mg pike result. RP MSD Result 96.0 I Sample: 21496 Da	nits Dil g/Kg 1 PD is based Units mg/Kg	Spike Amount 250 on the spike Dil. 1	Matrix Result 96.7 and spike du Spike Amount 100	F Rec. Li 41 35.2	tec. imit - 167.1 t. MSD Rec. 96	Li 35.2 RPD 8	kec. mit - 167.1 RPD Limit 20 Rec. Limit) - 130 AG
Percent recovery is based on the s Param DRO Percent recovery is based on the s MS Surrogate Result n-Tricosane 95.0 Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param GRO Percent recovery is based on the sp Param GRO Percent recovery is based on the sp Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	216 pike result. RF MSD Result U 199 mg pike result. RF MSD Result 96.0	mg/Kg PD is based nits Dil g/Kg 1 PD is based Units mg/Kg 63 ate Analyze	1 on the spike Spike Amount 250 on the spike Dil. 1 d: 2009-11	250 e and spike du Matrix Result 96.7 e and spike du Spike Amount 100	96.7 iplicate resul Rec. L 41 35.2 iplicate resul MS Rec.	48 t. tec. imit - 167.1 t. MSD Rec. 96	35.2 RPD 8	- 167.1 RPD Limit 20 Rec. Limit) - 130
Percent recovery is based on the s Param DRO Percent recovery is based on the s MS Surrogate Result n-Tricosane 95.0 Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param GRO Percent recovery is based on the sp Param GRO Percent recovery is based on the sp Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	pike result. RF MSD Result U 199 mg pike result. RP MSD Result 96.0 I Sample: 21496 Da	PD is based nits Dil g/Kg 1 PD is based Units mg/Kg 63 ate Analyze	on the spike Spike Amount 250 on the spike Dil. 1	e and spike du Matrix Result 96.7 and spike du Spike Amount 100	plicate resul F Rec. L 41 35.2 plicate resul MS Rec.	t. imit - 167.1 t. MSD <u>Rec.</u> 96	RPD 8	RPD Limit 20 Rec. Limit) - 130
Param DRO Percent recovery is based on the sy MS Surrogate Result n-Tricosane 95.0 Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param GRO Percent recovery is based on the sy Param GRO Percent recovery is based on the sy Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	MSD Result U 199 mg pike result. RP MSD Result 96.0 I Sample: 21496 Da	nits Dil g/Kg 1 PD is based Units mg/Kg 63 ate Analyze	Spike Amount 250 on the spike Dil. 1	Matrix Result 96.7 and spike du Spike Amount 100	F Rec. Li 41 35.2 iplicate resul MS Rec.	tec. imit - 167.1 t. MSD Rec. 96	8	Limit 20 Rec. Limit) - 130
DRO Percent recovery is based on the spon Surrogate Result n-Tricosane 95.0 Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param GRO Percent recovery is based on the sp Param GRO Percent recovery is based on the sp Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	Result U 199 mg pike result. RP MSD Result 96.0 I Sample: 21496 Da	g/Kg 1 PD is based Units mg/Kg 63 ate Analyze	Amount 250 on the spike Dil. 1 d: 2009-11	Result 96.7 and spike du Spike Amount 100	Rec. L 41 35.2 iplicate resul MS Rec.	imit - <u>167.1</u> t. MSD Rec. 96	8	Limit 20 Rec. Limit) - 130
DRO Percent recovery is based on the spontaneous MS Surrogate Result n-Tricosane 95.0 Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param GRO Percent recovery is based on the sp Param GRO Percent recovery is based on the sp Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	199 mg pike result. RP MSD Result 96.0 I Sample: 21496 Da	g/Kg 1 PD is based Units mg/Kg 63 ate Analyze	250 on the spike Dil. 1 d: 2009-11	96.7 and spike du Spike Amount 100	41 35.2 iplicate resul MS Rec.	- 167.1 t. MSD <u>Rec.</u> 96	8	20 Rec. Limit) - 130
Percent recovery is based on the s MS Surrogate Result n-Tricosane 95.0 Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param GRO Percent recovery is based on the sp Param GRO Percent recovery is based on the sp Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	pike result. RP MSD Result 96.0 I Sample: 21496 Da	PD is based Units mg/Kg 63 ate Analyze	on the spike Dil. 1	and spike du Spike Amount 100	iplicate resul MS Rec.	t. MSD Rec. 96	7(Rec. Limit) - 130
MS Surrogate Result n-Tricosane 95.0 Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param GRO Percent recovery is based on the sp Param GRO Percent recovery is based on the sp Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	MSD Result 96.0 I Sample: 21496 Da	Units mg/Kg 63 ate Analyze	Dil. 1 d: 2009-11	Spike Amount 100	MS Rec.	MSD Rec. 96	7(Limit) - 130
Surrogate Result h-Tricosane 95.0 Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param GRO Percent recovery is based on the spectrum Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	Result 96.0 I Sample: 21496 Da	mg/Kg 63 ate Analyze	1 d: 2009-1	Amount 100	Rec.	Rec. 96	7(Limit) - 130
Surrogate Result h-Tricosane 95.0 Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param 3RO Percent recovery is based on the spectrum Param 3RO Percent recovery is based on the spectrum Surrogate Trifluorotoluene (TFT) t-Bromofluorobenzene (4-BFB)	Result 96.0 I Sample: 21496 Da	mg/Kg 63 ate Analyze	1 d: 2009-1	Amount 100	Rec.	Rec. 96	7(Limit) - 130
n-Tricosane 95.0 Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param GRO Percent recovery is based on the sp Param GRO Percent recovery is based on the sp Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	l Sample: 21490 Da	63 ate Analyze	d: 2009-11	1-20	95			
Matrix Spike (MS-1) Spiked QC Batch: 65457 Prep Batch: 55928 Param GRO Percent recovery is based on the sp Param GRO Percent recovery is based on the sp Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	l Sample: 21490 Da	63 ate Analyze		1-20				
GRO Percent recovery is based on the sp Param GRO Percent recovery is based on the sp Surrogate Irifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	MS		V . 11	Spike	Matrix	r		Rec.
Percent recovery is based on the sp Param GRO Percent recovery is based on the sp Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	Result	Units	Dil	Amount	Result	Rec.		imit
Param GRO Percent recovery is based on the s Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	13.9	mg/Kg		20.0	< 0.396	70	10 -	198.3
GRO Percent recovery is based on the sp Surrogate Trifluorotoluene (TFT) I-Bromofluorobenzene (4-BFB)	pike result. RP	'D is based	on the spike	and spike du	plicate result			
GRO Percent recovery is based on the sp Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	MSD		Spike	Matrix	Ι	Rec.		RPD
Percent recovery is based on the s Surrogate Irifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	Result U	nits Di	. Amount	Result	Rec. L	imit	RPD	Limit
Surrogate Trifluorotoluene (TFT) 1-Bromofluorobenzene (4-BFB)	15.0 mg	g/Kg 1	20.0	< 0.396	75 10 -	198.3	8	20
Irifluorotoluene (TFT) I-Bromofluorobenzene (4-BFB)	pike result. RP	D is based	on the spike	and spike du	plicate result			
Irifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	MS	MSD		Sp	ike MS	MSD) I	lec.
1-Bromofluorobenzene (4-BFB)	Result	Result	Units		ount Rec.			imit
	2.04	2.12	mg/Kg		2 102	106		5 - 123
Matrix Spike (MS-1) Spiked	1.91	1.93	mg/Kg	1	2 96	96		6 - 140
	Sample: 21516	36						
QC Batch: 65459	Da	te Analyze	1: 2009-11	-20		Analy	zed By:	AR
Prep Batch: 55915		C Preparati		-19		Prepa	red By:	AR
				Spike	Matrix			Rec.
Param	N/Q	Units	Dil.	Amount	Result	Rec.		Limit
Chloride	MS Result		g 100	10000	911	99		- 115

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

Report Date: November 23, 2009 114-6400358			Work Order: 9111604 Stephens & Johnson/Mobil 22 Fed. #6				Page Number: 16 of 1 Eddy Co., NM			
		MSD		Spike	Matrix		Rec.		RPD	
Param		Result		Dil. Amoun		Rec.	Limit	RPD	Limi	
Chloride		11000	mg/Kg	100 10000	911	101	85 - 115	2	20	
Percent recov	very is based o	on the spike resul	t. RPD is ba	sed on the spike	and spike dup	olicate re	sult.			
Standard (CCV-1)									
QC Batch:	65350		Date Ana		Analyzed By: kg					
			CCVs	CCVs	CCVs	F	Percent			
			True	Found	Percent	\mathbf{R}	ecovery	3	Date	
Param	Flag	Units	Conc.	Conc.	Recovery]	Limits	An	alyzed	
DRO		mg/Kg	250	301	120	8	0 - 120	200	9-11-1	
Standard (CCV-2)									
QC Batch: 65350			Date Analyzed: 2009-11-16					Analyzed By: kg		
			CCVs	CCVs	CCVs	F	ercent			
			True	Found	Percent		ecovery]	Date	
Param	Flag	Units	Conc.	Conc.	Recovery		Limits	An	alyzed	
DRO	¥	mg/Kg	250	248	99	8	0 - 120		9-11-1	
Standard (G QC Batch:	·		Date Ana	lyzed: 2009-11-	16		An	alyzed B	y: kg	
			CCVs	CCVs	CCVs	F	ercent			
			True	Found	Percent		ecovery	I	Date	
Param	Flag	Units	Conc.	Conc.	Recovery		Limits		alyzed	
DRO		mg/Kg	250	283	113		0 - 120		9-11-1	
standard (G										
QC Batch: 65381		Date Analyzed: 2009-11-17					Analyzed By: AG			
			CCVs	CCVs	CCVs		Percent	_	. .	
		**	True	Found	Percent		lecovery		Date	
aram	Flag	Units	Conc.	Conc.	Recovery		Limits		alyzed	
Benzene		mg/Kg	0.100	0.0979	98		30 - 120		9-11-1	
oluene		mg/Kg	0.100	0.0981	98		80 - 120		9-11-1	
Ethylbenzene))	mg/Kg	0.100	0.0956	96		80 - 120		9-11-1	
Kylene		mg/Kg	0.300	0.288	96	ş	30 - 120	200	9-11-1	

Report Date: November 23, 2009 114-6400358			Work Order: 91 & Johnson/Mo	Page Number: 17 of 19 Eddy Co., NM				
Standard	(CCV-2)							
QC Batch:	65381		Date Anal	yzed: 2009-11	-17	Analyzed By: AG		
			CCVs	CCVs	CCVs	Percent		
			True	Found	Percent	Recovery	Date	
Param	Fla	g Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Benzene		mg/Kg	0.100	0.0973	97	80 - 120	2009-11-17	
Toluene		mg/Kg	0.100	0.0959	96	80 - 120	2009-11-17	
Ethylbenzer	ne	mg/Kg	0.100	0.0907	91	80 - 120	2009-11-17	
Xylene		mg/Kg	0.300	0.271	90	80 - 120	2009-11-17	
Standard ((CCV-1)							
QC Batch:	65382		Date Anal	yzed: 2009-11-	Analyzed By: AG			
			CCVs	CCVs	CCVs	Percent		
			True	Found	Percent		Date	
Param	Flag	Units	Conc.	Conc.		Recovery Limits		
GRO	riag		1.00	1.04	Recovery 104	80 - 120	Analyzed 2009-11-17	
3110		mg/Kg	1.00	1.04	104	00 - 120	2009-11-17	
Standard ((CCV-2)							
QC Batch: 65382			Date Anal	yzed: 2009-11-	Analyzed By: AG			
			CCVs	CCVs	CCVs	Percent		
			True	Found	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
GRO		mg/Kg	1.00	1.00	100	80 - 120	2009-11-17	
Standard ((CCV-3)							
QC Batch: 65382			Date Anal	yzed: 2009-11-	Analyzed By: AG			
			CCVs	CCVs	CCVs	Percent		
			True	Found	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
GRO	1 148	mg/Kg	1.00	1.18	118	80 - 120	2009-11-17	
Standard ((CCV-2)							
QC Batch:	65408		Date Anal	yzed: 2009-11	-18	Ana	lyzed By: kg	

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Report Da 114-640033	te: November 58	23, 2009	Stephen	Work Order: 9 5 & Johnson/M	111604 obil 22 Fed. #6	Page N	umber: 18 of 1 Eddy Co., NM
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	222	89	80 - 120	2009-11-18
Standard	(CCV-3)						
QC Batch:	65408		Date An	alyzed: 2009-1	1-18	Ana	alyzed By: kg
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO	· 0	mg/Kg	250	218	87	80 - 120	2009-11-18
Standard QC Batch:			Date Ana	alyzed: 2009-1	1-20	Anal	yzed By: AG
			COL.	COL	aav	D	
			CCVs True	CCVs Found	CCVs Percent	Percent	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Recovery Limits	Analyzed
GRO	1 145	mg/Kg	1.00	0.955	<u>96</u>	80 - 120	2009-11-20
Standard	. ,			l l 0000 1	1.00	A1	
QC Batch:	69497		Date Ana	lyzed: 2009-1	1-20	Anal	yzed By: AG
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.921	92	80 - 120	2009-11-20
Standard	(ICV-1)						
QC Batch:	65459		Date Ana	lyzed: 2009-1	1-20	Anal	yzed By: AR
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
		TT • •	Conc.	Conc.	Recovery	Limits	Analyzed
Param	Flag	Units	Conc.	Conc.	recovery		manyboa

QC Batch: 65459

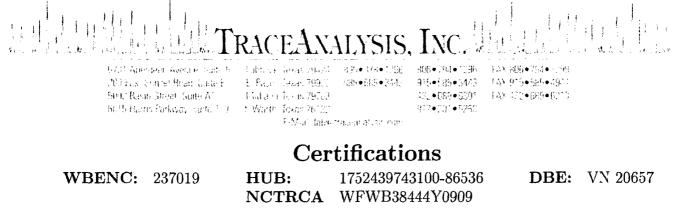
Date Analyzed: 2009-11-20

Analyzed By: AR

Report Date 114-6400358	te: November 23, 2009 8			Work Order: 91 & Johnson/Mo	Page Number: 19 of 19 Eddy Co., NM		
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	98.5	98	85 - 115	2009-11-20

PAGE: / OF: / ANALYSIS REQUEST (Circle or Specify Method No.)	리 Vr Pd Hg Se 리 Cr Pb Hg Se	Ag As Ba Co Ag As Ba Co s hatiles vol: 8270/625 38 38 38 38 38 38 38 38 38 38 38 38 38									SAMPLED BY: (Print & Initial) / 12/5 Date: 11/19/6	r (Circle) Al	0THI		
		LE Tavarte M L'1 22 L'1 21 EL OUTAINERS	TIME KATER COMMENT COMMENT OF COMPANY TO PLANE COMPANY TO	11/10 5 × AHrl 0-1	// AH - 1 1'-1,5'	/// BH-Z 0-1'	+ + + + -3 0-1'				Time 1500 ALON ACTION	Dette:	Date:RECEIVED BY: (Signature)	STATE: 12 PHONE:	8, 2 C INTECHER RELATER RELATE CLEAR CLEAR CARACLE A TPH ON

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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: February 8, 2010

Work Order: 10020230

Project Location:Eddy Co., NMProject Name:Stephens & Johnson/Mobil 22 Fed. #6Project Number:114-6400358

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
221455	T-1 (2')	soil	2010-02-01	14:00	2010-02-02
221456	T-1 (3')	soil	2010-02-01	14:04	2010-02-02
221457	T-1 (4')	soil	2010-02-01	14:08	2010-02-02
221458	T-1 (5')	soil	2010-02-01	14:11	2010-02-02
221459	T-1 (6')	soil	2010-02-01	14:15	2010-02-02
221460	T-1 (8')	soil	2010-02-01	14:20	2010-02-02
221461	T-1 (10')	soil	2010-02-01	14:23	2010-02-02
221462	T-2 (1.5')	soil	2010-02-01	14:30	2010-02-02
221463	T-2(2')	soil	2010-02-01	14:33	2010-02-02
221464	T-2 (3')	soil	2010-02-01	14:35	2010-02-02

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
221465	T-2 (4')	soil	2010-02-01	14:38	2010-02-02
221466	T-2 (5')	soil	2010-02-01	14:42	2010-02-02
221467	T-2(6')	soil	2010-02-01	14:44	2010-02-02
221468	T-2(8')	soil	2010-02-01	14:48	2010-02-02
221469	T-2 (10')	soil	2010-02-01	14:52	2010-02-02
221470	T-2 (12')	soil	2010-02-01	14:56	2010-02-02

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

Michael april

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

Standard Flags

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

Case Narrative

Samples for project Stephens & Johnson/Mobil 22 Fed. #6 were received by TraceAnalysis, Inc. on 2010-02-02 and assigned to work order 10020230. Samples for work order 10020230 were received intact at a temperature of 11.0 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	57574	2010-02-04 at 09:21	67369	2010-02-08 at 09:55
Chloride (Titration)	SM 4500-Cl B	57575	2010-02-04 at 09:22	67370	2010-02-08 at 09:56

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 10020230 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 221455 - T-1 (2')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 67369 57574	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-02-08 2010-02-04	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL_
Chloride		1800 1	ng/Kg	50	4.00
Sample: 22 Laboratory: Analysis: QC Batch: Prep Batch:	21456 - T-1 (3') Midland Chloride (Titration) 67369 57574	Analytical Method: Date Analyzed: Sample Preparation: RL	SM 4500-Cl B 2010-02-08 2010-02-04	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Danamatan	D]		Units	Dilution	\mathbf{RL}
Parameter	Flag	Result		DITITION	ռե
Chloride		1130 r	ng/Kg	50	4.00

Sample: 221457 - T-1 (4')

Laboratory: Analysis: QC Batch: Prep Batch:	Chloride (Titration) 67369	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-02-08 2010-02-04	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		880	mg/Kg	50	4.00

Sample: 221458 - T-1 (5')

Laboratory: Analysis:	Midland Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67369	Date Analyzed:	2010-02-08	Analyzed By:	
Prep Batch:	57574	Sample Preparation:	2010-02-04	Prepared By:	AR

Report Date: February 8, 2010 114-6400358			Work Order: 10020230 Stephens & Johnson/Mobil 22 Fed. #6		
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		962	mg/Kg	50	4.00
Sample: 22 Laboratory: Analysis: QC Batch: Prep Batch:	1459 - T-1 (6') Midland Chloride (Titration) 67369 37574	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-02-08 2010-02-04	Prep Method: Analyzed By: Prepared By:	N/A AR AR

		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		1250	mg/Kg	50	4.00

Sample: 221460 - T-1 (8')

Laboratory: Analysis: QC Batch: Prep Batch:	Chloride (Titration) 67369	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-02-08 2010-02-04	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		864	mg/Kg	50	4.00

Sample: 221461 - T-1 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67369	Date Analyzed:	2010-02-08	Analyzed By:	AR
Prep Batch:	57574	Sample Preparation:	2010-02-04	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride	, , , , , , , , , , , , , , , , , , ,	854	mg/Kg	50	4.00

Sample: 221462 - T-2 (1.5')

Laboratory:	Midland				
•	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67369	Date Analyzed:	2010-02-08	Analyzed By:	AR
Prep Batch:	57574	Sample Preparation:	2010-02-04	Prepared By:	\mathbf{AR}

Report Date: February 8, 2010 114-6400358		Work Order: 10020230 Stephens & Johnson/Mobil 22 Fed. #6		Page Number: 6 of 10 Eddy Co., NM	
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8310	mg/Kg	100	4.00

Sample: 221463 - T-2 (2')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 67369 57574	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-02-08 2010-02-04	Prep Method: Analyzed By: Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		6340	mg/Kg	100	4.00

Sample: 221464 - T-2 (3')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 67369 57574	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-02-08 2010-02-04	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		2780	mg/Kg	100	4.00

Sample: 221465 - T-2 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67370	Date Analyzed:	2010-02-08	Analyzed By:	AR
Prep Batch:	37373	Sample Preparation:	2010-02-04	Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		1090	mg/Kg	<u>50</u>	4.00

Sample: 221466 - T-2 (5')

Laboratory:		A		Drop Mathad	
Analysis:	Chloride (Titration) 67370	Analytical Method:	SM 4500-Cl B 2010-02-08	Prep Method: Analyzed By:	•
QC Batch: Prep Batch:		Date Analyzed: Sample Preparation:		Prepared By:	
i lep battii.	01010	Sample 1 Teparation.	2010-02-04	r tepatet by.	mit

Report Date: February 8, 2010 114-6400358		Work Order: 10020230 Stephens & Johnson/Mobil 22 Fed. #6		Page Number: 7 of 10 Eddy Co., NM	
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	<u>-</u>	1430	mg/Kg	50	4.00

Sample: 221467 - T-2 (6')

Laboratory: Analysis: QC Batch: Prep Batch:	Chloride (Titration) 67370	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-02-08 2010-02-04	Prep Method: Analyzed By: Prepared By:	\mathbf{AR}
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		1370	mg/Kg	50	4.00

Sample: 221468 - T-2 (8')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 67370 57575	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-02-08 2010-02-04	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		860	mg/Kg	50	4.00

Sample: 221469 - T-2 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67370	Date Analyzed:	2010-02-08	Analyzed By:	AR
Prep Batch:	37373	Sample Preparation:	2010-02-04	Prepared By:	AR
		RL			
Demonster	Flore	Result	Units	Dilution	\mathbf{RL}
Parameter	Flag				
Chloride		541 1	mg/Kg	50	4.00

Sample: 221470 - T-2 (12')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67370	Date Analyzed:	2010-02-08	Analyzed By:	AR
Prep Batch:	57575	Sample Preparation:	2010-02-04	Prepared By:	\mathbf{AR}

Report Date: Febr 114-6400358	uary 8, 2010	Work Order: 10020230 Stephens & Johnson/Mobil 22 Fed. #6				P	age Numbe Eddy	r: 8 of 10 Co., NM
Parameter	Flag	RL Result	Un	ite	1	Dilution		\mathbf{RL}
Chloride	1 146	530	mg/l			50		4.00
Method Blank (1	1) QC Batch: 67369							
QC Batch: 6736 Prep Batch: 5757		Date Analyzed: QC Preparation:	2010-02-0 2010-02-0				Analyzed E Prepared B	
_			DL					_ ~
Parameter Chloride	Flag	Res	ult .18		Unit mg/I			$\frac{\text{RL}}{4}$
						-0		
Method Blank (1	L) QC Batch: 67370							
QC Batch: 6737	0	Date Analyzed:	2010-02-0	8			Analyzed B	y: AR
Prep Batch: 5757	5	QC Preparation:	2010-02-0	4			Prepared B	y: AR
		MI						
Parameter	Flag	Res			Unit			RL
Chloride		<2	.18		mg/H	\g	9999-1999-1999-1999-1999-1999-1999-199	4
Laboratory Cont	rol Spike (LCS-1)							
QC Batch: 6736	9	Date Analyzed:	2010-02-0	8			Analyzed B	y: AR
Prep Batch: 5757		QC Preparation:	2010-02-0				Prepared B	
		CS		Spike		trix		Rec.
Param		sult Units	Dil.	Amount	Rea		Rec.	Limit
Chloride		00 mg/Kg	1	100		.18	100	85 - 115
Percent recovery is	based on the spike result.	RPD is based on t	-		plicate re			
Danam	LCSD Bogult	Units Dil.	Spike	Matrix	Der	Rec.		RPD Limit
Param Chloride	Result 103	Units Dil. mg/Kg 1	Amount 100	Result <2.18	Rec. 103	Limit 85 - 11		Limit 20
	100		100	~~.10	100	00 - 11		<u> </u>

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

Report Date: February 8, 2010 114-6400358		Stephe		der: 100202 son/Mobil 2	230 22 Fed. #6		Pa	age Numbe Eddy	er: 9 of 10 7 Co., NM
Laboratory Control Spike (L	CS-1)								
QC Batch: 67370		Date A	nalyzed:	2010-02-0	8		A	Analyzed E	By: AR
Prep Batch: 57575			eparation:	2010-02-0				Prepared E	*
	LC	s			Spike	Ma	trix		Rec.
Param	Resu		Units	Dil.	Amount		sult	Rec.	Limit
Chloride	99.	3	mg/Kg	1	100	<2	2.18	99	85 - 115
Percent recovery is based on the s	pike result.	RPD is	based on t	he spike ar	ıd spike duş	olicate r	esult.		
	LCSD			Spile	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Spike Amount	Result	Rec.	Limit	RPD	Limit
Chloride	101	mg/K		100	<2.18	101	<u>85 - 11</u>		20
ercent recovery is based on the s									
erecht recovery is bubble on blie b	pine result.		bubed on t	ne opine a	ia opine au	metter i	court.		
Aatrix Spike (MS-1) Spiked	l Sample: 22	1464							
Matrix spike (MS-1) spike	i Sample: 22	1404							
QC Batch: 67369		Date A	nalyzed:	2010-02-08	8		Α	nalyzed B	By: AR
rep Batch: 57574		QC Pre	eparation:	2010-02-04	4		Р	repared B	y: AR
	MS				Spike	Ma	trix		Rec.
Param	Resu		Units	Dil.	Amount	Res		Rec.	Limit
Chloride	1140	0	mg/Kg	100	10000	27	80	86	85 - 115
Percent recovery is based on the s	pike result. 1	RPD is	based on t	he spike an	d spike dur	olicate r	esult.		
	MSD			Spike	Matrix		Rec.		RPD
		Units		-		Rec.	Limit	RPD	Limit
Darom	Kooult		Dil	Amount	ROCINT				
	Result			<u>Amount</u>	Result 2780				
hloride	11500	mg/K	g 100	10000	2780	115	85 - 113		20
Chloride	11500	mg/K	g 100	10000	2780	115	85 - 113		
Chloride Percent recovery is based on the s	11500 pike result. 1	mg/Kg RPD is	g 100	10000	2780	115	85 - 113		
Chloride Percent recovery is based on the s	11500	mg/Kg RPD is	g 100	10000	2780	115	85 - 113		
Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked	11500 pike result. 1 l Sample: 22	mg/Kg RPD is 1474	g 100 based on t	10000	2780 ad spike dup	115	85 - 113 esult.	5 1	20
Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 67370	11500 pike result. 1 l Sample: 22	mg/K _é RPD is 1474 Date Ar	g 100	10000 he spike an	2780 Id spike dup 8	115	85 - 115 esult. A		20 y: AR
Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 67370	11500 pike result. 1 l Sample: 22	mg/K _é RPD is 1474 Date Ar	g 100 based on t nalyzed:	10000 he spike an 2010-02-08	2780 Id spike dup 8	115	85 - 115 esult. A	5 1 .nalyzed B	20 y: AR
QC Batch: 67370	11500 pike result. 1 I Sample: 22	mg/Kg RPD is 1474 Date Ai QC Pre	g 100 based on t nalyzed:	10000 he spike an 2010-02-08	2780 ad spike dup 8 4	115 olicate re	85 - 115 esult. A P	5 1 .nalyzed B	20 y: AR y: AR
Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 67370 Prep Batch: 57575	11500 pike result. 1 l Sample: 22	mg/Kg RPD is 1474 Date Ai QC Pre	g 100 based on t nalyzed:	10000 he spike an 2010-02-08	2780 Id spike dup 8	115	85 - 115 esult. A P	5 1 .nalyzed B	20 y: AR
Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 67370 Prep Batch: 57575	11500 pike result. 1 l Sample: 22 MS	mg/Kg RPD is 1474 Date Ai QC Pre lt	g 100 based on t nalyzed: eparation:	10000 he spike an 2010-02-08 2010-02-04	2780 id spike dup 8 4 Spike	115 Dicate re Mai	85 - 115 esult. A P trix	5 1 .nalyzed B repared B Rec.	20 y: AR y: AR Rec. Limit
Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 67370 Prep Batch: 57575 Param Chloride	11500 pike result. 1 l Sample: 22 MS Resu 1010	mg/Kg RPD is 1474 Date Ai QC Pre lt 0	g 100 based on t nalyzed: eparation: Units mg/Kg	10000 he spike an 2010-02-04 2010-02-04 Dil. 100	2780 ad spike dup 8 4 Spike Amount 10000	115 Dicate re Mat Res <2	85 - 115 esult. A P trix sult 18	5 1 .nalyzed B repared B Rec.	20 y: AR y: AR Rec. Limit
Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 67370 Prep Batch: 57575 Param Chloride	11500 pike result. 1 l Sample: 22 MS Resu 1010 pike result. 1	mg/Kg RPD is 1474 Date Ai QC Pre lt 0	g 100 based on t nalyzed: eparation: Units mg/Kg	10000 he spike an 2010-02-04 2010-02-04 Dil. 100 he spike an	2780 ad spike dup Spike Amount 10000 d spike dup	115 Dicate re Mat Res <2	85 - 115 esult. A P trix sult 18 esult.	5 1 .nalyzed B repared B Rec.	20 y: AR y: AR Rec. Limit 85 - 115
Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 67370 Prep Batch: 57575 Param Chloride Percent recovery is based on the s	11500 pike result. 1 I Sample: 22 MS Resu 1010 pike result. 1 MSD	mg/Kg RPD is 1474 Date Ai QC Pre lt 0 RPD is	g 100 based on t nalyzed: eparation: Units mg/Kg based on t	10000 he spike an 2010-02-04 2010-02-04 Dil. 100 he spike an Spike	2780 ad spike dup Spike Amount 10000 ad spike dup Matrix	115 Dicate re Mai Res <2 Dicate re	85 - 115 esult. A P trix ult 18 esult. Rec.	5 1 .nalyzed B repared B Rec. 101	20 y: AR y: AR Rec. Limit 85 - 115 RPD
Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 67370 Prep Batch: 57575 Param Chloride	11500 pike result. 1 l Sample: 22 MS Resu 1010 pike result. 1	mg/Kg RPD is 1474 Date Ai QC Pre lt 0	g 100 based on t nalyzed: eparation: Units mg/Kg based on t Dil.	10000 he spike an 2010-02-04 2010-02-04 Dil. 100 he spike an	2780 ad spike dup Spike Amount 10000 d spike dup	115 Dicate re Mat Res <2	85 - 115 esult. A P trix sult 18 esult.	5 1 nalyzed B repared B Rec. 101 RPD	20 y: AR y: AR Rec. Limit 85 - 115

Report Date 114-6400358	E February 8	, 2010	Work Order: 10020230 Stephens & Johnson/Mobil 22 Fed. #6		Page Number: 10 of 10 Eddy Co., NM			
Standard (ICV-1)							
QC Batch:	67369		Date Ana	lyzed: 2010-02	2-08	Analyzed By: AR		
Param Chloride	Flag	Units mg/Kg	ICVs True Conc. 100	ICVs Found Conc. 103	ICVs Percent Recovery 103	Percent Recovery Limits 85 - 115	Date Analyzed 2010-02-08	
			100				1010 02 00	
Standard (CCV-1)							
QC Batch:	67369		Date Ana	lyzed: 2010-02	2-08	Ana	yzed By: AR	
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Chloride		mg/Kg	100	97.0	97	85 - 115	2010-02-08	
Standard (ICV-1)							
QC Batch:	67370		Date Anal	lyzed: 2010-02	-08	Anal	yzed By: AR	
			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Chloride		mg/Kg	100	97.1	97	85 - 115	2010-02-08	
Standard (CCV-1)							
QC Batch:	67370		Date Anal	yzed: 2010-02	-08	Anal	yzed By: AR	
Param	Flog	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	
Chloride	Flag	mg/Kg	<u> </u>	<u> </u>	103	<u>85 - 115</u>	2010-02-08	

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Analysis Request of Chain of Custody Record Analysis Request of Chain of Custody Record Image: State
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NELAP Certifications

Certifications

DBE: VN 20657

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317

T104704221-08-TX El Paso: 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 16, 2010

Work Order: 10041229

Project Location: Eddy Co., NM **Project Name:** Stephens & Johnson/Mobil 22 Fed. #6 Project Number: 114-6400358

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
228284	T-3 (1')	soil	2010-04-12	00:00	2010-04-12
228285	T-3 (2')	soil	2010-04-12	00:00	2010-04-12
228286	T-3 (3')	soil	2010-04-12	00:00	2010-04-12
228287	T-3 (4')	soil	2010-04-12	00:00	2010-04-12
228288	T-3(5')	soil	2010-04-12	00:00	2010-04-12
228289	T-3 (6')	soil	2010-04-12	00:00	2010-04-12
228290	T-3 (8')	soil	2010-04-12	00:00	2010-04-12
228291	T-3 (10')	soil	2010-04-12	00:00	2010-04-12
228292	T-3 (12')	soil	2010-04-12	00:00	2010-04-12
228293	T-4 (1')	soil	2010-04-12	00:00	2010-04-12

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
228294	T-4 (2')	soil	2010-04-12	00:00	2010-04-12
228295	T-4 (3')	soil	2010-04-12	00:00	2010-04-12
228296	T-4 (4')	soil	2010-04-12	00:00	2010-04-12
228297	T-4 (5')	soil	2010-04-12	00:00	2010-04-12
228298	T-4 (6')	soil	2010-04-12	00:00	2010-04-12
228299	T-4 (8')	soil	2010-04-12	00:00	2010-04-12
228300	T-4 (10')	soil	2010-04-12	00:00	2010-04-12
228301	T-4 (12')	soil	2010-04-12	00:00	2010-04-12

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

Michael april

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

Standard Flags

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

Case Narrative

Samples for project Stephens & Johnson/Mobil 22 Fed. #6 were received by TraceAnalysis, Inc. on 2010-04-12 and assigned to work order 10041229. Samples for work order 10041229 were received intact at a temperature of 23.0 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
Chloride (Titration)	SM 4500-Cl B	59098	2010-04-13 at 09:47	69137	2010-04-15 at 11:45
Chloride (Titration)	SM 4500-Cl B	59099	2010-04-13 at 09:48	69138	2010-04-15 at 11:46

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 10041229 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 228284 - T-3 (1')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 69137 59098	Analytical Metho Date Analyzed: Sample Preparati	2010-04-15	Prep Method: Analyzed By: Prepared By:	\mathbf{AR}
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 228285 - T-3 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69137	Date Analyzed:	2010-04-15	Analyzed By:	AR
Prep Batch:	59098	Sample Preparation:	2010-04-13	Prepared By:	AR
		DI			
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		380 I	ng/Kg	50	4.00

Sample: 228286 - T-3 (3')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 69137 59098	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-04-15 2010-04-13	Prep Method: Analyzed By: Prepared By:	\overline{AR}
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		237	mg/Kg	50	4.00

Sample: 228287 - T-3 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69137	Date Analyzed:	2010-04-15	Analyzed By:	AR
Prep Batch:	59098	Sample Preparation:	2010-04-13	Prepared By:	\mathbf{AR}

Report Date: April 16, 2010 114-6400358		Work Order: 10041229 Stephens & Johnson/Mobil 22 Fed. #6		Page Number: 5 of 11 Eddy Co., NM	
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00
Sample: 228288	- T-3 (5')				
Laboratory: Mid	land				

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69137	Date Analyzed:	2010-04-15	Analyzed By:	AR
Prep Batch:	59098	Sample Preparation	: 2010-04-13	Prepared By:	\mathbf{AR}
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 228289 - T-3 (6')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 69137 59098	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-04-15 2010-04-13	Prep Method: Analyzed By: Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 228290 - T-3 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69137	Date Analyzed:	2010-04-15	Analyzed By:	AR
Prep Batch:	59098	Sample Preparation	2010-04-13	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 228291 - T-3 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69137	Date Analyzed:	2010-04-15	Analyzed By:	AR
Prep Batch:	59098	Sample Preparation:	2010-04-13	Prepared By:	\mathbf{AR}

Report Date: April 16, 2010 114-6400358		Work Order: 10041229 Stephens & Johnson/Mobil 22 Fed. #6		Page Number: 6 of 11 Eddy Co., NM	
Parameter	Flag	RL Result	Units	Dilution	DT
Chloride	Flag		mg/Kg	50	$\frac{\text{RL}}{4.00}$
Sample: 22	8292 - T-3 (12')				
Sample: 22	8292 - T-3 (12')				
Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69138	Date Analyzed:	2010-04-15	Analyzed By:	\mathbf{AR}
Prep Batch:	59099	Sample Preparation:	2010-04-13	Prepared By:	\mathbf{AR}
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		210	mg/Kg	50	4.00

Sample: 228293 - T-4 (1')

Laboratory: Analysis: QC Batch: Prep Batch:	Chloride (Titration) 69138	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-04-15 2010-04-13	Prep Method: Analyzed By: Prepared By:	,
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 228294 - T-4 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69138	Date Analyzed:	2010-04-15	Analyzed By:	AR
Prep Batch:	59099	Sample Preparation	: 2010-04-13	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 228295 - T-4 (3')

Laboratory:	Midland				
	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69138	Date Analyzed:	2010-04-15	Analyzed By:	AR
Prep Batch:	59099	Sample Preparation:	2010-04-13	Prepared By:	AR.

Report Date: April 16, 2010 114-6400358		Work Order: 10041229 Stephens & Johnson/Mobil 22 Fed. #6		Page Number: 7 of 11 Eddy Co., NM	
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 228296 - T-4 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69138	Date Analyzed:	2010-04-15	Analyzed By:	AR
Prep Batch:	59099	Sample Preparation:	2010-04-13	Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 228297 - T-4 (5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 69138 59099	Analytical Method: Date Analyzed: Sample Preparation	SM 4500-Cl B 2010-04-15 2010-04-13	Prep Method: Analyzed By: Prepared By:	,
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 228298 - T-4 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69138	Date Analyzed:	2010-04-15	Analyzed By:	AR
Prep Batch:	59099	Sample Preparation:	2010-04-13	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		315	mg/Kg	<u>50</u>	4.00

Sample: 228299 - T-4 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69138	Date Analyzed:	2010-04-15	Analyzed By:	AR
Prep Batch:	59099	Sample Preparation:	2010-04-13	Prepared By:	AR

Report Date 114-6400358	e: April 16, 2010	Work Order: 10 Stephens & Johnson/Ma		Page Number: 8 of Eddy Co., 1		
		RL				
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}	
Chloride		<200	mg/Kg	50	4.00	
Sample: 22	8300 - T-4 (10')					
Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
QC Batch:	69138	Date Analyzed:	2010-04-15	Analyzed By:	AR	
Prep Batch:	59099	Sample Preparation		Prepared By:	AR	
		bampio i reparation	2010 01 10	r toparea 29.		
		RL				
Parameter	Flag	Result	Units	Dilution	RL	
Chloride		220	mg/Kg	50	4.00	
Analysis: QC Batch: Prep Batch:	Chloride (Titration) 69138 59099	Analytical Method: Date Analyzed: Sample Preparation	SM 4500-Cl B 2010-04-15 : 2010-04-13	Prep Method: Analyzed By: Prepared By:	N/A AR AR	
Dowowerstan	El	RL Barrelt	TT . 14		ъř	
Parameter Chloride	Flag	Result <200	Units	Dilution 50	$\frac{\text{RL}}{4.00}$	
		<200	mg/Kg	30	4.00	
Method Bl	ank (1) QC Batch: 69137					
QC Batch:	69137	Date Analyzed: 2010	-04-15	Analyzed By:	AR	
Prep Batch:	59098	QC Preparation: 2010	-04-13	Prepared By:	AR	
-		MDL				
Parameter	Flag	Result		Units	RL	
Chloride		<2.18		mg/Kg	4	
Method Bla	ank (1) QC Batch: 69138					
QC Batch:	69138	Date Analyzed: 2010	-04-15	Analyzed By:	AR	

QC Batch:	69138	Date Analyzed:	2010-04-15	Analyzed By:	\mathbf{AR}
Prep Batch:	59099	QC Preparation:	2010-04-13	Prepared By:	AR

114-6400358	e: April 16, 2010		Work Order: 10041229 Stephens & Johnson/Mobil 22 Fed. #6						Page Number: 9 of 1 Eddy Co., NM		
					DL						_
Parameter	. <u></u>	Flag		Res			Uni				F
Chloride					.18		mg/	Kg			
Laboratory	Control Spike	(LCS-1)									
QC Batch:	69137		Date A	nalyzed:	2010-04-13	5			Ana	alyzed H	By: Al
Prep Batch:				eparation:						pared E	•
-				-							-
		LC				Spike		ıtrix			Rec.
Param	······································	Res		Units	Dil.	Amount		sult	Re		Limit
Chloride	······································	98		mg/Kg	1	100		2.18	9	88	85 - 11
Percent recov	very is based on th	he spike result.	RPD is	based on t	the spike an	d spike du	plicate r	esult.			
		LCSD			Spike	Matrix		Re	c.		RP
Param		Result	Units		Amount	Result	Rec.	Lim	nit	RPD	Lim
Chloride		100	mg/K	g 1	100	<2.18	100	85 -	115	2	20
Laboratory	very is based on the Control Spike	-			-	-	plicate r	esult.	Ana	lvzed B	v AF
Laboratory QC Batch:	Control Spike	-	Date A	based on t nalyzed: paration:	the spike an 2010-04-15 2010-04-13	- ·	plicate r	esult.		lyzed B pared B	•
Laboratory QC Batch:	Control Spike	-	Date A	nalyzed:	2010-04-15	- ·	plicate r	esult.			•
Laboratory QC Batch: Prep Batch:	Control Spike	(LCS-1) LC	Date An QC Pre	nalyzed: paration:	2010-04-15 2010-04-13	Spike	Ma	trix	Prep	pared B	y: AF Rec.
Laboratory QC Batch: Prep Batch: Param	Control Spike	(LCS-1) LC Res	Date An QC Pre	nalyzed: paration: Units	2010-04-15 2010-04-13 Dil.	Spike Amount	Ma Res	trix sult	Pre _l Re	pared B	y: AF Rec. Limit
Laboratory QC Batch: Prep Batch: Param Chloride	Control Spike 69138 59099	(LCS-1) LC Res 97	Date An QC Pre S ult 8	nalyzed: paration: Units mg/Kg	2010-04-15 2010-04-13 Dil. 1	Spike Amount 100	Ma Res <2	trix sult	Prep	pared B	y: AF Rec.
Laboratory QC Batch: Prep Batch: Param Chloride	Control Spike	(LCS-1) LC Res 97 he spike result.	Date An QC Pre S ult 8	nalyzed: paration: Units mg/Kg	2010-04-15 2010-04-13 Dil. 1 the spike and	Spike Amount 100 d spike dup	Ma Res <2 plicate re	trix sult .18 esult.	Prep Re 98	pared B	y: AF Rec. Limit 85 - 11
Laboratory QC Batch: Prep Batch: Param Chloride Percent recov	Control Spike 69138 59099	(LCS-1) LC Res 97 he spike result. LCSD	Date An QC Pre S ult RPD is	nalyzed: paration: Units mg/Kg based on t	2010-04-15 2010-04-13 Dil. 1 the spike and Spike	Spike Amount 100 d spike duy Matrix	Ma Res <2 plicate re	trix sult .18 esult. Rec	Prep Re 98	pared B ec. 8	y: AF Rec. Limit 85 - 11 RPI
Laboratory QC Batch: Prep Batch: Param Chloride Percent recov Param	Control Spike 69138 59099	(LCS-1) LC Res 97 he spike result. LCSD Result	Date An QC Pre S ult RPD is Units	nalyzed: paration: Units mg/Kg based on t Dil.	2010-04-15 2010-04-13 Dil. 1 the spike and Spike Amount	Spike Amount 100 d spike dup Matrix Result	Ma Res 2 Dicate re Rec.	trix sult .18 esult. Rec Lim	Prep Re 98	pared B ec. 8 RPD	y: AF Rec. Limit 85 - 11 RPI Limi
Laboratory QC Batch: Prep Batch: Param Chloride Percent recov Param Chloride	Control Spike 69138 59099 very is based on th	(LCS-1) LC Res 97 he spike result. LCSD Result 99.5	Date An QC Pre S ult 8 RPD is Units mg/Kg	nalyzed: paration: Units mg/Kg based on t Dil. g 1	2010-04-15 2010-04-13 Dil. 1 the spike and Spike Amount 100	Spike Amount 100 d spike dug Matrix Result <2.18	Ma Res <2 plicate re <u>Rec.</u> 100	trix sult .18 esult. Rec Lim 85 - 1	Prep Re 98	pared B ec. 8	y: AF Rec. Limit 85 - 11 RPI
Laboratory QC Batch: Prep Batch: Param Chloride Percent recov Param Chloride	Control Spike 69138 59099	(LCS-1) LC Res 97 he spike result. LCSD Result 99.5	Date An QC Pre S ult 8 RPD is Units mg/Kg	nalyzed: paration: Units mg/Kg based on t Dil. g 1	2010-04-15 2010-04-13 Dil. 1 the spike and Spike Amount 100	Spike Amount 100 d spike dug Matrix Result <2.18	Ma Res <2 plicate re <u>Rec.</u> 100	trix sult .18 esult. Rec Lim 85 - 1	Prep Re 98	pared B ec. 8 RPD	y: AF Rec. Limit 85 - 11 RPI Limi
Laboratory QC Batch: Prep Batch: Param Chloride Percent recov Param Chloride Percent recov	Control Spike 69138 59099 very is based on th	(LCS-1) LC Res 97 he spike result. LCSD Result 99.5	Date An QC Pres Sult 8 RPD is Units mg/Kg RPD is	nalyzed: paration: Units mg/Kg based on t Dil. g 1	2010-04-15 2010-04-13 Dil. 1 the spike and Spike Amount 100	Spike Amount 100 d spike dug Matrix Result <2.18	Ma Res <2 plicate re <u>Rec.</u> 100	trix sult .18 esult. Rec Lim 85 - 1	Prep Re 98	pared B ec. 8 RPD	y: AF Rec. Limit 85 - 11 RPI Limi
Laboratory QC Batch: Prep Batch: Param Chloride Percent recov Param Chloride Percent recov Matrix Spil QC Batch:	Control Spike 69138 59099 very is based on th very is based on th ke (MS-1) Sp 69137	(LCS-1) LC Res 97. he spike result. LCSD Result 99.5 he spike result.	Date An QC Pre S ult 8 RPD is <u>Units</u> mg/Kg RPD is 28291 Date An	nalyzed: paration: Units mg/Kg based on t Dil. g 1 based on t	2010-04-15 2010-04-13 Dil. 1 the spike and Spike Amount 100 the spike and 2010-04-15	Spike Amount 100 d spike dup Matrix Result <2.18 d spike dup	Ma Res <2 plicate re <u>Rec.</u> 100	trix sult .18 esult. Rec Lim 85 - 1	Prep Re 98 c. iit 115 Anal	pared B ec. 8 RPD 2 lyzed B	y: AF Rec. Limit 85 - 11 RPI Lim 20 y: AF
Laboratory QC Batch: Prep Batch: Param Chloride Percent recov Param Chloride Percent recov Matrix Spil QC Batch:	Control Spike 69138 59099 very is based on th very is based on th ke (MS-1) Sp	(LCS-1) LC Res 97. he spike result. LCSD Result 99.5 he spike result.	Date An QC Pre S ult 8 RPD is <u>Units</u> mg/Kg RPD is 28291 Date An	nalyzed: paration: Units mg/Kg based on t Dil. g 1 based on t	2010-04-15 2010-04-13 Dil. 1 the spike and Spike Amount 100 the spike and	Spike Amount 100 d spike dup Matrix Result <2.18 d spike dup	Ma Res <2 plicate re <u>Rec.</u> 100	trix sult .18 esult. Rec Lim 85 - 1	Prep Re 98 c. iit 115 Anal	pared B ec. 8 RPD 2	y: AF Rec. Limit 85 - 11 RPI Lim 20 y: AF
Laboratory QC Batch: Prep Batch: Param Chloride Percent recov Param Chloride	Control Spike 69138 59099 very is based on th very is based on th ke (MS-1) Sp 69137	(LCS-1) LC Res 97. he spike result. LCSD Result 99.5 he spike result.	Date An QC Pre S ult 8 RPD is <u>Units</u> mg/Kg RPD is 28291 Date An QC Pre	nalyzed: paration: Units mg/Kg based on t Dil. g 1 based on t	2010-04-15 2010-04-13 Dil. 1 the spike and Spike Amount 100 the spike and 2010-04-15	Spike Amount 100 d spike dup Matrix Result <2.18 d spike dup	Ma Res <2 plicate re <u>Rec.</u> 100	trix sult .18 esult. Rec Lim 85 - 1 esult.	Prep Re 98 c. iit 115 Anal	pared B ec. 8 RPD 2 lyzed B	y: AF Rec. Limit 85 - 11 RPI Lim 20 y: AF
Laboratory QC Batch: Prep Batch: Param Chloride Percent recov Param Chloride Percent recov Matrix Spil QC Batch:	Control Spike 69138 59099 very is based on th very is based on th ke (MS-1) Sp 69137	(LCS-1) LC Res 97. he spike result. LCSD Result 99.5 he spike result. iked Sample: 22	Date An QC Press ult 8 RPD is <u>Units</u> mg/Kg RPD is 28291 Date An QC Press Ult	nalyzed: paration: Units mg/Kg based on t Dil. g 1 based on t	2010-04-15 2010-04-13 Dil. 1 the spike and Spike Amount 100 the spike and 2010-04-15	Spike Amount 100 d spike dup Matrix Result <2.18 d spike dup	Ma Res 20licate re <u>Rec.</u> 100 Dlicate re	trix sult .18 esult. Rec Lim 85 - 1 esult.	Prep Re 98 c. iit 115 Anal	pared B ec. 8 RPD 2 lyzed B bared B c.	y: AF Rec. Limit 85 - 11 RPI Lim 20 y: AR y: AR

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

	MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{Result}	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	10100	mg/Kg	100	10000	<218	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: 228301

QC Batch:	69138	Date Analyzed:	2010-04-15	Analyzed By:	AR
Prep Batch:	59099	QC Preparation:	2010-04-13	Prepared By:	\mathbf{AR}

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}
Chloride	10100	mg/Kg	100	10000	<218	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	\mathbf{Result}	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	10200	mg/Kg	100	10000	<218	100	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:	69137		Date Anal	lyzed: 2010-04	-15	Anal	yzed By: AR
			ICVs True	ICVs Found	ICVs Percent	Percent	Date
D	T31	T T 1,				Recovery	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2010-04-15

Standard (CCV-1)

QC Batch: 69137			Date Anal	yzed: 2010-04	Analyzed By: AR		
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	97.9	98	85 - 115	2010-04-15

Standard (ICV-1)

QC Batch: 69138

Date Analyzed: 2010-04-15

Analyzed By: AR

Report Date: April 16, 2010 114-6400358				rk Order: 1004 Johnson/Mobi	Page Number: 11 of 1 Eddy Co., NM		
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.1	99	85 - 115	2010-04-15
Standard	· · ·						
QC Batch:	69138		Date Anal	yzed: 2010-04	-15	Ana	yzed By: AR
			CCVs True	CCVs Found	CCVs Percent	Percent Recoverv	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-04-15



Page 1 of 2

