



Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Michael Gant
 Larson and Associates, Inc.

Report Date: May 18, 2016

P. O. Box 50685
 Midland, TX, 79710

Work Order: 16051615



Project Location: Lea Co, NM
 Project Name: Townsend 16" Pipeline
 Project Number: 15-0143-01

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

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
419207	N Wall E 4'	soil	2016-05-13	11:20	2016-05-16
419208	N Wall E 8'	soil	2016-05-13	11:15	2016-05-16
419209	N Wall E 10'	soil	2016-05-13	11:10	2016-05-16
419210	N Wall E 14'	soil	2016-05-13	11:06	2016-05-16
419211	N Wall E 18'	soil	2016-05-13	12:55	2016-05-16
419212	N Wall W 4'	soil	2016-05-13	10:57	2016-05-16
419213	N Wall W 8'	soil	2016-05-13	10:53	2016-05-16
419214	N Wall W 10'	soil	2016-05-13	10:44	2016-05-16
419215	N Wall W 14'	soil	2016-05-13	10:45	2016-05-16
419216	N Wall W 18'	soil	2016-05-13	10:40	2016-05-16
419217	S Wall E 4'	soil	2016-05-13	13:24	2016-05-16
419218	S Wall E 8'	soil	2016-05-13	13:12	2016-05-16
419219	S Wall E 10'	soil	2016-05-13	12:32	2016-05-16
419220	S Wall E 14'	soil	2016-05-13	12:28	2016-05-16
419221	S Wall E 18'	soil	2016-05-13	12:24	2016-05-16
419222	S Wall W 4'	soil	2016-05-13	13:40	2016-05-16
419223	S Wall W 8'	soil	2016-05-13	13:31	2016-05-16

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
419224	S Wall W 10'	soil	2016-05-13	12:48	2016-05-16
419225	S Wall W 14'	soil	2016-05-13	12:43	2016-05-16
419226	S Wall W 18'	soil	2016-05-13	12:40	2016-05-16
419227	E Wall 4'	soil	2016-05-13	12:05	2016-05-16
419228	E Wall 8'	soil	2016-05-13	11:57	2016-05-16
419229	E Wall 10'	soil	2016-05-13	11:50	2016-05-16
419230	E Wall 14'	soil	2016-05-13	11:42	2016-05-16
419231	E Wall 18'	soil	2016-05-13	11:35	2016-05-16
419232	W Wall 4'	soil	2016-05-13	14:04	2016-05-16
419233	W Wall 8'	soil	2016-05-13	14:01	2016-05-16
419234	W Wall 10'	soil	2016-05-13	13:58	2016-05-16
419235	W Wall 14'	soil	2016-05-13	13:44	2016-05-16
419236	W Wall 18'	soil	2016-05-13	13:48	2016-05-16
419237	Bottom 24'	soil	2016-05-13	13:20	2016-05-16

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.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 70 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Johnny Grindstaff, Operations Manager

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Case Narrative

Samples for project Townsend 16" Pipeline were received by TraceAnalysis, Inc. on 2016-05-16 and assigned to work order 16051615. Samples for work order 16051615 were received intact at a temperature of -3.1 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (IC)	E 300.0	110258	2016-05-17 at 09:30	130148	2016-05-17 at 10:34
Chloride (IC)	E 300.0	110271	2016-05-17 at 14:00	130164	2016-05-17 at 15:43
Chloride (IC)	E 300.0	110272	2016-05-17 at 14:00	130165	2016-05-17 at 15:43
Chloride (IC)	E 300.0	110273	2016-05-17 at 14:00	130166	2016-05-17 at 15:43
TPH DRO	S 8015 D	110264	2016-05-17 at 15:00	130157	2016-05-18 at 09:07
TPH DRO	S 8015 D	110266	2016-05-17 at 16:00	130159	2016-05-18 at 09:10
TPH GRO	S 8015 D	110233	2016-05-16 at 14:00	130118	2016-05-17 at 08:20
TPH GRO	S 8015 D	110234	2016-05-17 at 08:59	130152	2016-05-18 at 07:28
TPH ORO	S 8015 D	110265	2016-05-17 at 15:00	130158	2016-05-18 at 09:09
TPH ORO	S 8015 D	110267	2016-05-17 at 16:00	130160	2016-05-18 at 09:11

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 16051615 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

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Analytical Report

Sample: 419207 - N Wall E 4'

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-05-17	Analyzed By:	RL
QC Batch:	130148	Sample Preparation:	2016-05-17	Prepared By:	RL
Prep Batch:	110258				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	89.9	mg/Kg	1	25.0

Sample: 419207 - N Wall E 4'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130157	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110264				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	28.7	mg/Kg	1	25.0	115	58.2 - 150

Sample: 419207 - N Wall E 4'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-17	Analyzed By:	AK
QC Batch:	130118	Sample Preparation:	2016-05-16	Prepared By:	AK
Prep Batch:	110233				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

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

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			1.98	mg/Kg	1	2.00	99	70 - 130

Sample: 419207 - N Wall E 4'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			28.7	mg/Kg	1	25.0	115	70 - 130
n-Triacontane			31.1	mg/Kg	1	25.0	124	70 - 130

Sample: 419208 - N Wall E 8'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130148
Prep Batch: 110258

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	32.5	mg/Kg	1	25.0

Sample: 419208 - N Wall E 8'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130157
Prep Batch: 110264

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	1,2,3,4	<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	25.1	mg/Kg	1	25.0	100	58.2 - 150

Sample: 419208 - N Wall E 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130118
Prep Batch: 110233

Analytical Method: S 8015 D
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-16

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)			1.89	mg/Kg	1	2.00	94	70 - 130

Sample: 419208 - N Wall E 8'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MDL	PQL Result	PQL	RL Result	RL	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	<50.0		mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			25.1	mg/Kg	1	25.0	100	70 - 130
n-Triacontane			27.8	mg/Kg	1	25.0	111	70 - 130

Sample: 419209 - N Wall E 10'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130148
Prep Batch: 110258

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	36.6	mg/Kg	1	25.0

Sample: 419209 - N Wall E 10'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130157
Prep Batch: 110264

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	25.4	mg/Kg	1	25.0	102	58.2 - 150

Sample: 419209 - N Wall E 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130118
Prep Batch: 110233

Analytical Method: S 8015 D
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-16

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.99	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	70 - 130

Sample: 419209 - N Wall E 10'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			25.4	mg/Kg	1	25.0	102	70 - 130
n-Triacontane			28.0	mg/Kg	1	25.0	112	70 - 130

Sample: 419210 - N Wall E 14'

Laboratory: Lubbock
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 130148 Date Analyzed: 2016-05-17 Analyzed By: RL
Prep Batch: 110258 Sample Preparation: 2016-05-17 Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	31.1	mg/Kg	1	25.0

Sample: 419210 - N Wall E 14'

Laboratory: Lubbock
Analysis: TPH DRO Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 130157 Date Analyzed: 2016-05-18 Analyzed By: HJ
Prep Batch: 110264 Sample Preparation: 2016-05-17 Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	320	mg/Kg	1	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	3	49.8	mg/Kg	1	25.0	199	58.2 - 150

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Sample: 419210 - N Wall E 14'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-17	Analyzed By:	AK
QC Batch:	130118	Sample Preparation:	2016-05-16	Prepared By:	AK
Prep Batch:	110233				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.85	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.82	mg/Kg	1	2.00	91	70 - 130

Sample: 419210 - N Wall E 14'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130158	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110265				

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	49.8	mg/Kg	1	25.0	199	70 - 130
n-Triacontane	Qsr	Qsr	47.2	mg/Kg	1	25.0	189	70 - 130

Sample: 419211 - N Wall E 18'

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-05-17	Analyzed By:	RL
QC Batch:	130148	Sample Preparation:	2016-05-17	Prepared By:	RL
Prep Batch:	110258				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

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Sample: 419211 - N Wall E 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130157	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110264				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	25.6	mg/Kg	1	25.0	102	58.2 - 150

Sample: 419211 - N Wall E 18'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-17	Analyzed By:	AK
QC Batch:	130118	Sample Preparation:	2016-05-16	Prepared By:	AK
Prep Batch:	110233				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.84	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.83	mg/Kg	1	2.00	92	70 - 130

Sample: 419211 - N Wall E 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130158	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110265				

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			25.6	mg/Kg	1	25.0	102	70 - 130

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sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			28.1	mg/Kg	1	25.0	112	70 - 130

Sample: 419212 - N Wall W 4'

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-05-17	Analyzed By:	RL
QC Batch:	130148	Sample Preparation:	2016-05-17	Prepared By:	RL
Prep Batch:	110258				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419212 - N Wall W 4'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130157	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110264				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	30.8	mg/Kg	1	25.0	123	58.2 - 150

Sample: 419212 - N Wall W 4'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-17	Analyzed By:	AK
QC Batch:	130118	Sample Preparation:	2016-05-16	Prepared By:	AK
Prep Batch:	110233				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.77	mg/Kg	1	2.00	88	70 - 130

Sample: 419212 - N Wall W 4'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			30.8	mg/Kg	1	25.0	123	70 - 130
n-Triacontane	Qsr	Qsr	34.1	mg/Kg	1	25.0	136	70 - 130

Sample: 419213 - N Wall W 8'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130148
Prep Batch: 110258

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419213 - N Wall W 8'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130157
Prep Batch: 110264

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	27.1	mg/Kg	1	25.0	108	58.2 - 150

Sample: 419213 - N Wall W 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130118
Prep Batch: 110233

Analytical Method: S 8015 D
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-16

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.86	mg/Kg	1	2.00	93	70 - 130

Sample: 419213 - N Wall W 8'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MDL	PQL Result	PQL	RL Result	RL	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	<50.0		mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			27.1	mg/Kg	1	25.0	108	70 - 130
n-Triacontane			30.0	mg/Kg	1	25.0	120	70 - 130

Sample: 419214 - N Wall W 10'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130148
Prep Batch: 110258

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	97.9	mg/Kg	1	25.0

Sample: 419214 - N Wall W 10'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130157
Prep Batch: 110264

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	27.9	mg/Kg	1	25.0	112	58.2 - 150

Sample: 419214 - N Wall W 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130118
Prep Batch: 110233

Analytical Method: S 8015 D
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-16

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	70 - 130

Sample: 419214 - N Wall W 10'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	Qs,U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			27.9	mg/Kg	1	25.0	112	70 - 130
n-Triacontane			31.2	mg/Kg	1	25.0	125	70 - 130

Sample: 419215 - N Wall W 14'

Laboratory: Lubbock
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 130148 Date Analyzed: 2016-05-17 Analyzed By: RL
Prep Batch: 110258 Sample Preparation: 2016-05-17 Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419215 - N Wall W 14'

Laboratory: Lubbock
Analysis: TPH DRO Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 130157 Date Analyzed: 2016-05-18 Analyzed By: HJ
Prep Batch: 110264 Sample Preparation: 2016-05-17 Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	25.3	mg/Kg	1	25.0	101	58.2 - 150

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Sample: 419215 - N Wall W 14'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130118
Prep Batch: 110233

Analytical Method: S 8015 D
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-16

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.82	mg/Kg	1	2.00	91	70 - 130

Sample: 419215 - N Wall W 14'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			25.3	mg/Kg	1	25.0	101	70 - 130
n-Triacontane			27.5	mg/Kg	1	25.0	110	70 - 130

Sample: 419216 - N Wall W 18'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130164
Prep Batch: 110271

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	25.5	mg/Kg	1	25.0

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Sample: 419216 - N Wall W 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130157	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110264				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	26.8	mg/Kg	1	25.0	107	58.2 - 150

Sample: 419216 - N Wall W 18'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-17	Analyzed By:	AK
QC Batch:	130118	Sample Preparation:	2016-05-16	Prepared By:	AK
Prep Batch:	110233				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.00	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			1.86	mg/Kg	1	2.00	93	70 - 130

Sample: 419216 - N Wall W 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130158	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110265				

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			26.8	mg/Kg	1	25.0	107	70 - 130

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			29.8	mg/Kg	1	25.0	119	70 - 130

Sample: 419217 - S Wall E 4'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	130164	Date Analyzed:	2016-05-17	Analyzed By:	RL
Prep Batch:	110271	Sample Preparation:	2016-05-17	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419217 - S Wall E 4'

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	130157	Date Analyzed:	2016-05-18	Analyzed By:	HJ
Prep Batch:	110264	Sample Preparation:	2016-05-17	Prepared By:	HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	22.9	mg/Kg	1	25.0	92	58.2 - 150

Sample: 419217 - S Wall E 4'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	130118	Date Analyzed:	2016-05-17	Analyzed By:	AK
Prep Batch:	110233	Sample Preparation:	2016-05-16	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

Sample: 419217 - S Wall E 4'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MDL	MQP Result	MQP	RL Result	RL	Units	Dilution	MDL	MQP	RL
ORO	u		<7.48		<50.0		<50.0		mg/Kg	1	7.48	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			22.9	mg/Kg	1	25.0	92	70 - 130
n-Triacontane			25.5	mg/Kg	1	25.0	102	70 - 130

Sample: 419218 - S Wall E 8'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130164
Prep Batch: 110271

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419218 - S Wall E 8'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130157
Prep Batch: 110264

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	1,2,3,4	<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	24.5	mg/Kg	1	25.0	98	58.2 - 150

Sample: 419218 - S Wall E 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130118
Prep Batch: 110233

Analytical Method: S 8015 D
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-16

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	70 - 130

Sample: 419218 - S Wall E 8'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MDL	PQL Result	PQL	RL Result	RL	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	<50.0		mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			24.5	mg/Kg	1	25.0	98	70 - 130
n-Triacontane			27.1	mg/Kg	1	25.0	108	70 - 130

Sample: 419219 - S Wall E 10'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130164
Prep Batch: 110271

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419219 - S Wall E 10'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130157
Prep Batch: 110264

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	23.0	mg/Kg	1	25.0	92	58.2 - 150

Sample: 419219 - S Wall E 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130118
Prep Batch: 110233

Analytical Method: S 8015 D
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-16

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.90	mg/Kg	1	2.00	95	70 - 130
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

Sample: 419219 - S Wall E 10'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			23.0	mg/Kg	1	25.0	92	70 - 130
n-Triacontane			25.8	mg/Kg	1	25.0	103	70 - 130

Sample: 419220 - S Wall E 14'

Laboratory: Lubbock
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 130164 Date Analyzed: 2016-05-17 Analyzed By: RL
Prep Batch: 110271 Sample Preparation: 2016-05-17 Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419220 - S Wall E 14'

Laboratory: Lubbock
Analysis: TPH DRO Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 130157 Date Analyzed: 2016-05-18 Analyzed By: HJ
Prep Batch: 110264 Sample Preparation: 2016-05-17 Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	24.9	mg/Kg	1	25.0	100	58.2 - 150

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Sample: 419220 - S Wall E 14'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130152
Prep Batch: 110234

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.02	mg/Kg	1	2.00	101	70 - 130
4-Bromofluorobenzene (4-BFB)			1.68	mg/Kg	1	2.00	84	70 - 130

Sample: 419220 - S Wall E 14'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			24.9	mg/Kg	1	25.0	100	70 - 130
n-Triacontane			28.1	mg/Kg	1	25.0	112	70 - 130

Sample: 419221 - S Wall E 18'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130164
Prep Batch: 110271

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	25.0	mg/Kg	1	25.0

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Sample: 419221 - S Wall E 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130157	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110264				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	23.0	mg/Kg	1	25.0	92	58.2 - 150

Sample: 419221 - S Wall E 18'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-18	Analyzed By:	AK
QC Batch:	130152	Sample Preparation:	2016-05-17	Prepared By:	AK
Prep Batch:	110234				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.77	mg/Kg	1	2.00	88	70 - 130

Sample: 419221 - S Wall E 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130158	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110265				

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			23.0	mg/Kg	1	25.0	92	70 - 130

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			25.3	mg/Kg	1	25.0	101	70 - 130

Sample: 419222 - S Wall W 4'

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-05-17	Analyzed By:	RL
QC Batch:	130164	Sample Preparation:	2016-05-17	Prepared By:	RL
Prep Batch:	110271				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	25.0	mg/Kg	1	25.0

Sample: 419222 - S Wall W 4'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130157	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110264				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	69.8	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	36.5	mg/Kg	1	25.0	146	58.2 - 150

Sample: 419222 - S Wall W 4'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-18	Analyzed By:	AK
QC Batch:	130152	Sample Preparation:	2016-05-17	Prepared By:	AK
Prep Batch:	110234				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.93	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.71	mg/Kg	1	2.00	86	70 - 130

Sample: 419222 - S Wall W 4'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	36.5	mg/Kg	1	25.0	146	70 - 130
n-Triacontane	Q _{sr}	Q _{sr}	41.9	mg/Kg	1	25.0	168	70 - 130

Sample: 419223 - S Wall W 8'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130164
Prep Batch: 110271

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419223 - S Wall W 8'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130157
Prep Batch: 110264

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	25.5	mg/Kg	1	25.0	102	58.2 - 150

Sample: 419223 - S Wall W 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130152
Prep Batch: 110234

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

Sample: 419223 - S Wall W 8'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130158
Prep Batch: 110265

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MDL	MQP Result	MQP	RL Result	RL	Units	Dilution	MDL	MQP	MQP	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	<50.0		mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			25.5	mg/Kg	1	25.0	102	70 - 130
n-Triacontane			28.4	mg/Kg	1	25.0	114	70 - 130

Sample: 419224 - S Wall W 10'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130164
Prep Batch: 110271

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419224 - S Wall W 10'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130159
Prep Batch: 110266

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	24.8	mg/Kg	1	25.0	99	58.2 - 150

Sample: 419224 - S Wall W 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130152
Prep Batch: 110234

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.99	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			1.99	mg/Kg	1	2.00	100	70 - 130

Sample: 419224 - S Wall W 10'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130160
Prep Batch: 110267

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	Qs,U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			24.8	mg/Kg	1	25.0	99	70 - 130
n-Triacontane			27.0	mg/Kg	1	25.0	108	70 - 130

Sample: 419225 - S Wall W 14'

Laboratory: Lubbock
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 130164 Date Analyzed: 2016-05-17 Analyzed By: RL
Prep Batch: 110271 Sample Preparation: 2016-05-17 Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	124	mg/Kg	1	25.0

Sample: 419225 - S Wall W 14'

Laboratory: Lubbock
Analysis: TPH DRO Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 130159 Date Analyzed: 2016-05-18 Analyzed By: HJ
Prep Batch: 110266 Sample Preparation: 2016-05-17 Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	24.6	mg/Kg	1	25.0	98	58.2 - 150

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Sample: 419225 - S Wall W 14'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130152
Prep Batch: 110234

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BFB)			1.62	mg/Kg	1	2.00	81	70 - 130

Sample: 419225 - S Wall W 14'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130160
Prep Batch: 110267

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			24.6	mg/Kg	1	25.0	98	70 - 130
n-Triacontane			26.7	mg/Kg	1	25.0	107	70 - 130

Sample: 419226 - S Wall W 18'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130165
Prep Batch: 110272

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	120	mg/Kg	1	25.0

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Sample: 419226 - S Wall W 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130159	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110266				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	23.2	mg/Kg	1	25.0	93	58.2 - 150

Sample: 419226 - S Wall W 18'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-18	Analyzed By:	AK
QC Batch:	130152	Sample Preparation:	2016-05-17	Prepared By:	AK
Prep Batch:	110234				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BFB)			1.65	mg/Kg	1	2.00	82	70 - 130

Sample: 419226 - S Wall W 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130160	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110267				

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			23.2	mg/Kg	1	25.0	93	70 - 130

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			25.1	mg/Kg	1	25.0	100	70 - 130

Sample: 419227 - E Wall 4'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	130165	Date Analyzed:	2016-05-17	Analyzed By:	RL
Prep Batch:	110272	Sample Preparation:	2016-05-17	Prepared By:	RL

Parameter	Flag	Cert	RL		Units	Dilution	RL
			Result				
Chloride		3,4,6	<25.0		mg/Kg	1	25.0

Sample: 419227 - E Wall 4'

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	130159	Date Analyzed:	2016-05-18	Analyzed By:	HJ
Prep Batch:	110266	Sample Preparation:	2016-05-17	Prepared By:	HJ

Parameter	Flag	Cert	RL		Units	Dilution	RL
			Result				
DRO	U	1,2,3,4	<50.0		mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	26.8	mg/Kg	1	25.0	107	58.2 - 150

Sample: 419227 - E Wall 4'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	130152	Date Analyzed:	2016-05-18	Analyzed By:	AK
Prep Batch:	110234	Sample Preparation:	2016-05-17	Prepared By:	AK

Parameter	Flag	Cert	RL		Units	Dilution	RL
			Result				
GRO	U	5	<4.00		mg/Kg	1	4.00

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.92	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.82	mg/Kg	1	2.00	91	70 - 130

Sample: 419227 - E Wall 4'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130160
Prep Batch: 110267

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MDL	MQP Result	MQP	RL Result	RL	Units	Dilution	MDL	MQP	RL
ORO	u		<7.48		<50.0		<50.0		mg/Kg	1	7.48	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			26.8	mg/Kg	1	25.0	107	70 - 130
n-Triacontane			28.6	mg/Kg	1	25.0	114	70 - 130

Sample: 419228 - E Wall 8'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130165
Prep Batch: 110272

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419228 - E Wall 8'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130159
Prep Batch: 110266

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	1,2,3,4	<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	23.3	mg/Kg	1	25.0	93	58.2 - 150

Sample: 419228 - E Wall 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130152
Prep Batch: 110234

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.74	mg/Kg	1	2.00	87	70 - 130

Sample: 419228 - E Wall 8'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130160
Prep Batch: 110267

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MDL	PQL Result	PQL	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			23.3	mg/Kg	1	25.0	93	70 - 130
n-Triacontane			25.9	mg/Kg	1	25.0	104	70 - 130

Sample: 419229 - E Wall 10'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130165
Prep Batch: 110272

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419229 - E Wall 10'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130159
Prep Batch: 110266

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	26.5	mg/Kg	1	25.0	106	58.2 - 150

Sample: 419229 - E Wall 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130152
Prep Batch: 110234

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.68	mg/Kg	1	2.00	84	70 - 130

Sample: 419229 - E Wall 10'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130160
Prep Batch: 110267

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			26.5	mg/Kg	1	25.0	106	70 - 130
n-Triacontane			28.6	mg/Kg	1	25.0	114	70 - 130

Sample: 419230 - E Wall 14'

Laboratory: Lubbock
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 130165 Date Analyzed: 2016-05-17 Analyzed By: RL
Prep Batch: 110272 Sample Preparation: 2016-05-17 Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419230 - E Wall 14'

Laboratory: Lubbock
Analysis: TPH DRO Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 130159 Date Analyzed: 2016-05-18 Analyzed By: HJ
Prep Batch: 110266 Sample Preparation: 2016-05-17 Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	22.5	mg/Kg	1	25.0	90	58.2 - 150

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Sample: 419230 - E Wall 14'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130152
Prep Batch: 110234

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.84	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.75	mg/Kg	1	2.00	88	70 - 130

Sample: 419230 - E Wall 14'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130160
Prep Batch: 110267

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			22.5	mg/Kg	1	25.0	90	70 - 130
n-Triacontane			24.6	mg/Kg	1	25.0	98	70 - 130

Sample: 419231 - E Wall 18'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130165
Prep Batch: 110272

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

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Sample: 419231 - E Wall 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130159	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110266				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	26.6	mg/Kg	1	25.0	106	58.2 - 150

Sample: 419231 - E Wall 18'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-18	Analyzed By:	AK
QC Batch:	130152	Sample Preparation:	2016-05-17	Prepared By:	AK
Prep Batch:	110234				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.97	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.86	mg/Kg	1	2.00	93	70 - 130

Sample: 419231 - E Wall 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130160	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110267				

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			26.6	mg/Kg	1	25.0	106	70 - 130

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			29.0	mg/Kg	1	25.0	116	70 - 130

Sample: 419232 - W Wall 4'

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-05-17	Analyzed By:	RL
QC Batch:	130165	Sample Preparation:	2016-05-17	Prepared By:	RL
Prep Batch:	110272				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419232 - W Wall 4'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130159	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110266				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	4870	mg/Kg	2	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	3	217	mg/Kg	2	25.0	868	58.2 - 150

Sample: 419232 - W Wall 4'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-18	Analyzed By:	AK
QC Batch:	130152	Sample Preparation:	2016-05-17	Prepared By:	AK
Prep Batch:	110234				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		5	248	mg/Kg	10	4.00

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			18.0	mg/Kg	10	20.0	90	70 - 130
4-Bromofluorobenzene (4-BFB)			22.8	mg/Kg	10	20.0	114	70 - 130

Sample: 419232 - W Wall 4'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130160
Prep Batch: 110267

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			1080	1080	1080	1080	mg/Kg	2	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	217	mg/Kg	2	25.0	868	70 - 130
n-Triacontane	Q _{sr}	Q _{sr}	168	mg/Kg	2	25.0	672	70 - 130

Sample: 419233 - W Wall 8'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130165
Prep Batch: 110272

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	25.9	mg/Kg	1	25.0

Sample: 419233 - W Wall 8'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130159
Prep Batch: 110266

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	23.2	mg/Kg	1	25.0	93	58.2 - 150

Sample: 419233 - W Wall 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130152
Prep Batch: 110234

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.74	mg/Kg	1	2.00	87	70 - 130

Sample: 419233 - W Wall 8'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130160
Prep Batch: 110267

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MDL	PQL Result	PQL	RL Result	RL	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	<50.0		mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			23.2	mg/Kg	1	25.0	93	70 - 130
n-Triacontane			25.2	mg/Kg	1	25.0	101	70 - 130

Sample: 419234 - W Wall 10'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130165
Prep Batch: 110272

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419234 - W Wall 10'

Laboratory: Lubbock
Analysis: TPH DRO
QC Batch: 130159
Prep Batch: 110266

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	23.7	mg/Kg	1	25.0	95	58.2 - 150

Sample: 419234 - W Wall 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130152
Prep Batch: 110234

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.97	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.86	mg/Kg	1	2.00	93	70 - 130

Sample: 419234 - W Wall 10'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130160
Prep Batch: 110267

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

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Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			23.7	mg/Kg	1	25.0	95	70 - 130
n-Triacontane			26.0	mg/Kg	1	25.0	104	70 - 130

Sample: 419235 - W Wall 14'

Laboratory: Lubbock
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 130165 Date Analyzed: 2016-05-17 Analyzed By: RL
Prep Batch: 110272 Sample Preparation: 2016-05-17 Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

Sample: 419235 - W Wall 14'

Laboratory: Lubbock
Analysis: TPH DRO Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 130159 Date Analyzed: 2016-05-18 Analyzed By: HJ
Prep Batch: 110266 Sample Preparation: 2016-05-17 Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	25.3	mg/Kg	1	25.0	101	58.2 - 150

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Sample: 419235 - W Wall 14'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 130152
Prep Batch: 110234

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.64	mg/Kg	1	2.00	82	70 - 130

Sample: 419235 - W Wall 14'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130160
Prep Batch: 110267

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			25.3	mg/Kg	1	25.0	101	70 - 130
n-Triacontane			26.9	mg/Kg	1	25.0	108	70 - 130

Sample: 419236 - W Wall 18'

Laboratory: Lubbock
Analysis: Chloride (IC)
QC Batch: 130166
Prep Batch: 110273

Analytical Method: E 300.0
Date Analyzed: 2016-05-17
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	89.5	mg/Kg	1	25.0

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Sample: 419236 - W Wall 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130159	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110266				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	28.0	mg/Kg	1	25.0	112	58.2 - 150

Sample: 419236 - W Wall 18'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-18	Analyzed By:	AK
QC Batch:	130152	Sample Preparation:	2016-05-17	Prepared By:	AK
Prep Batch:	110234				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.78	mg/Kg	1	2.00	89	70 - 130

Sample: 419236 - W Wall 18'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130160	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110267				

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			28.0	mg/Kg	1	25.0	112	70 - 130

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			30.7	mg/Kg	1	25.0	123	70 - 130

Sample: 419237 - Bottom 24'

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-05-17	Analyzed By:	RL
QC Batch:	130166	Sample Preparation:	2016-05-17	Prepared By:	RL
Prep Batch:	110273				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	57.5	mg/Kg	1	25.0

Sample: 419237 - Bottom 24'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-05-18	Analyzed By:	HJ
QC Batch:	130159	Sample Preparation:	2016-05-17	Prepared By:	HJ
Prep Batch:	110266				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	25.3	mg/Kg	1	25.0	101	58.2 - 150

Sample: 419237 - Bottom 24'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-05-18	Analyzed By:	AK
QC Batch:	130152	Sample Preparation:	2016-05-17	Prepared By:	AK
Prep Batch:	110234				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.84	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.71	mg/Kg	1	2.00	86	70 - 130

Sample: 419237 - Bottom 24'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 130160
Prep Batch: 110267

Analytical Method: S 8015 D
Date Analyzed: 2016-05-18
Sample Preparation: 2016-05-17

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

Parameter	Flag	Cert	MDL Result	MDL	MDL	MDL	Units	Dilution	MDL	MDL	MDL	MDL
ORO	u		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			25.3	mg/Kg	1	25.0	101	70 - 130
n-Triacontane			27.5	mg/Kg	1	25.0	110	70 - 130

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Method Blanks

Method Blank (1) QC Batch: 130118

QC Batch: 130118 Date Analyzed: 2016-05-17 Analyzed By: AK
Prep Batch: 110233 QC Preparation: 2016-05-16 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		5	<1.76	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.97	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.56	mg/Kg	1	2.00	78	70 - 130

Method Blank (1) QC Batch: 130148

QC Batch: 130148 Date Analyzed: 2016-05-17 Analyzed By: RL
Prep Batch: 110258 QC Preparation: 2016-05-17 Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<4.44	mg/Kg	25

Method Blank (1) QC Batch: 130152

QC Batch: 130152 Date Analyzed: 2016-05-18 Analyzed By: AK
Prep Batch: 110234 QC Preparation: 2016-05-17 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		5	<1.76	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.99	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			1.59	mg/Kg	1	2.00	80	70 - 130

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Method Blank (1) QC Batch: 130157

QC Batch: 130157
Prep Batch: 110264

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1,2,3,4	<8.47	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	24.8	mg/Kg	1	25.0	99	58.2 - 150

Method Blank (1) QC Batch: 130158

QC Batch: 130158
Prep Batch: 110265

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			<7.48	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			24.8	mg/Kg	1	25.0	99	70 - 130
n-Triacontane			26.6	mg/Kg	1	25.0	106	70 - 130

Method Blank (1) QC Batch: 130159

QC Batch: 130159
Prep Batch: 110266

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1,2,3,4	<8.47	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	21.0	mg/Kg	1	25.0	84	58.2 - 150

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Method Blank (1) QC Batch: 130160

QC Batch: 130160
Prep Batch: 110267

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			<7.48	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			21.0	mg/Kg	1	25.0	84	70 - 130
n-Triacontane			22.7	mg/Kg	1	25.0	91	70 - 130

Method Blank (1) QC Batch: 130164

QC Batch: 130164
Prep Batch: 110271

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-17

Analyzed By: RL
Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<4.44	mg/Kg	25

Method Blank (1) QC Batch: 130165

QC Batch: 130165
Prep Batch: 110272

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-17

Analyzed By: RL
Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<4.44	mg/Kg	25

Method Blank (1) QC Batch: 130166

QC Batch: 130166
Prep Batch: 110273

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-17

Analyzed By: RL
Prepared By: RL

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Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<4.44	mg/Kg	25

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 130118
Prep Batch: 110233

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-16

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		5	22.3	mg/Kg	1	20.0	<1.76	112	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		5	22.0	mg/Kg	1	20.0	<1.76	110	70 - 130	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.96	1.94	mg/Kg	1	2.00	98	97	70 - 130
4-Bromofluorobenzene (4-BFB)	1.80	1.76	mg/Kg	1	2.00	90	88	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 130148
Prep Batch: 110258

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-17

Analyzed By: RL
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	244	mg/Kg	1	250	<4.44	98	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	244	mg/Kg	1	250	<4.44	98	90 - 110	0	20

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

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Laboratory Control Spike (LCS-1)

QC Batch: 130152
Prep Batch: 110234

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		5	22.0	mg/Kg	1	20.0	<1.76	110	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		5	22.5	mg/Kg	1	20.0	<1.76	112	70 - 130	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.92	1.96	mg/Kg	1	2.00	96	98	70 - 130
4-Bromofluorobenzene (4-BFB)	1.79	1.84	mg/Kg	1	2.00	90	92	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 130157
Prep Batch: 110264

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	535	mg/Kg	1	500	<8.47	107	68.5 - 136

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	584	mg/Kg	1	500	<8.47	117	68.5 - 136	9	20

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

		LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate		Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	3	23.0	24.1	mg/Kg	1	25.0	92	96	58.2 - 150

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Laboratory Control Spike (LCS-1)

QC Batch: 130158
Prep Batch: 110265

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	23.0	23.0	mg/Kg	1	25.0	92	92	70 - 130
n-Triacontane	21.5	22.0	mg/Kg	1	25.0	86	88	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 130159
Prep Batch: 110266

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	555	mg/Kg	1	500	<8.47	111	68.5 - 136

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	550	mg/Kg	1	500	<8.47	110	68.5 - 136	1	20

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	3	24.1	23.5	mg/Kg	1	25.0	96	94	58.2 - 150

Laboratory Control Spike (LCS-1)

QC Batch: 130160
Prep Batch: 110267

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane		24.1	23.5	mg/Kg	1	25.0	96	94	70 - 130
n-Triacontane		21.5	21.0	mg/Kg	1	25.0	86	84	70 - 130

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Laboratory Control Spike (LCS-1)

QC Batch: 130164
Prep Batch: 110271

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-17

Analyzed By: RL
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	248	mg/Kg	1	250	<4.44	99	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	249	mg/Kg	1	250	<4.44	100	90 - 110	0	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 130165
Prep Batch: 110272

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-17

Analyzed By: RL
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	248	mg/Kg	1	250	<4.44	99	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	263	mg/Kg	1	250	<4.44	105	90 - 110	6	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 130166
Prep Batch: 110273

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-17

Analyzed By: RL
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	246	mg/Kg	1	250	<4.44	98	90 - 110

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

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Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	249	mg/Kg	1	250	<4.44	100	90 - 110	1	20

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

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Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 419152

QC Batch: 130118
Prep Batch: 110233

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-16

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		5	18.0	mg/Kg	2	20.0	<3.52	90	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		5	20.6	mg/Kg	2	20.0	<3.52	103	70 - 130	14	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	3.83	4.01	mg/Kg	2	4	96	100	70 - 130
4-Bromofluorobenzene (4-BFB)	3.88	4.11	mg/Kg	2	4	97	103	70 - 130

Matrix Spike (MS-1) Spiked Sample: 419212

QC Batch: 130148
Prep Batch: 110258

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-17

Analyzed By: RL
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	264	mg/Kg	1	250	7.13	103	80 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	256	mg/Kg	1	250	7.13	100	80 - 120	3	20

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

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Matrix Spike (MS-1) Spiked Sample: 419220

QC Batch: 130152
Prep Batch: 110234

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		5	17.6	mg/Kg	1	20.0	<1.76	88	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		5	15.2	mg/Kg	1	20.0	<1.76	76	70 - 130	15	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.77	1.80	mg/Kg	1	2	88	90	70 - 130
4-Bromofluorobenzene (4-BFB)	1.80	1.83	mg/Kg	1	2	90	92	70 - 130

Matrix Spike (MS-1) Spiked Sample: 419214

QC Batch: 130157
Prep Batch: 110264

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	610	mg/Kg	1	500	<8.47	122	49.3 - 138

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	585	mg/Kg	1	500	<8.47	117	49.3 - 138	4	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
n-Tricosane	3	32.6	33.0	mg/Kg	1	25	130	132	58.2 - 150

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Matrix Spike (MS-1) Spiked Sample: 419214

QC Batch: 130158
Prep Batch: 110265

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	30.9	30.6	mg/Kg	1	25	124	122	70 - 130
n-Triacontane	29.7	27.6	mg/Kg	1	25	119	110	70 - 130

Matrix Spike (MS-1) Spiked Sample: 419224

QC Batch: 130159
Prep Batch: 110266

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	672	mg/Kg	1	500	<8.47	134	49.3 - 138

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	690	mg/Kg	1	500	<8.47	138	49.3 - 138	3	20

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

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	3	32.9	35.6	mg/Kg	1	25	132	142	58.2 - 150

Matrix Spike (MS-1) Spiked Sample: 419224

QC Batch: 130160
Prep Batch: 110267

Date Analyzed: 2016-05-18
QC Preparation: 2016-05-17

Analyzed By: HJ
Prepared By: HJ

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane		25.1	28.1	mg/Kg	1	25	100	112	70 - 130
n-Triacontane		23.5	24.3	mg/Kg	1	25	94	97	70 - 130

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Matrix Spike (MS-1) Spiked Sample: 419225

QC Batch: 130164
Prep Batch: 110271

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-17

Analyzed By: RL
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	380	mg/Kg	1	250	124	102	80 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	382	mg/Kg	1	250	124	103	80 - 120	0	20

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

Matrix Spike (MS-1) Spiked Sample: 419235

QC Batch: 130165
Prep Batch: 110272

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-17

Analyzed By: RL
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	229	mg/Kg	1	250	19.3	84	80 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	274	mg/Kg	1	250	19.3	102	80 - 120	18	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: 419237

QC Batch: 130166
Prep Batch: 110273

Date Analyzed: 2016-05-17
QC Preparation: 2016-05-17

Analyzed By: RL
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	313	mg/Kg	1	250	57.5	102	80 - 120

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

Report Date: May 18, 2016
15-0143-01

Work Order: 16051615
Townsend 16" Pipeline

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Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	324	mg/Kg	1	250	57.5	107	80 - 120	3	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 130118

Date Analyzed: 2016-05-17

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	1.14	114	80 - 120	2016-05-17

Standard (CCV-2)

QC Batch: 130118

Date Analyzed: 2016-05-17

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.993	99	80 - 120	2016-05-17

Standard (CCV-3)

QC Batch: 130118

Date Analyzed: 2016-05-17

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.972	97	80 - 120	2016-05-17

Standard (CCV-1)

QC Batch: 130148

Date Analyzed: 2016-05-17

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.5	102	90 - 110	2016-05-17

Report Date: May 18, 2016
15-0143-01

Work Order: 16051615
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Lea Co, NM

Standard (CCV-2)

QC Batch: 130148

Date Analyzed: 2016-05-17

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	24.3	97	90 - 110	2016-05-17

Standard (CCV-1)

QC Batch: 130152

Date Analyzed: 2016-05-18

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.972	97	80 - 120	2016-05-18

Standard (CCV-2)

QC Batch: 130152

Date Analyzed: 2016-05-18

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.984	98	80 - 120	2016-05-18

Standard (CCV-3)

QC Batch: 130152

Date Analyzed: 2016-05-18

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.945	94	80 - 120	2016-05-18

Standard (CCV-1)

QC Batch: 130157

Date Analyzed: 2016-05-18

Analyzed By: HJ

Report Date: May 18, 2016
15-0143-01

Work Order: 16051615
Townsend 16" Pipeline

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	561	112	80 - 120	2016-05-18

Standard (CCV-2)

QC Batch: 130157

Date Analyzed: 2016-05-18

Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	582	116	80 - 120	2016-05-18

Standard (CCV-1)

QC Batch: 130159

Date Analyzed: 2016-05-18

Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	582	116	80 - 120	2016-05-18

Standard (CCV-2)

QC Batch: 130159

Date Analyzed: 2016-05-18

Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	523	105	80 - 120	2016-05-18

Standard (CCV-1)

QC Batch: 130164

Date Analyzed: 2016-05-17

Analyzed By: RL

Report Date: May 18, 2016
15-0143-01

Work Order: 16051615
Townsend 16" Pipeline

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Lea Co, NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.0	100	90 - 110	2016-05-17

Standard (CCV-2)

QC Batch: 130164

Date Analyzed: 2016-05-17

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.0	100	90 - 110	2016-05-17

Standard (CCV-1)

QC Batch: 130165

Date Analyzed: 2016-05-17

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.0	100	90 - 110	2016-05-17

Standard (CCV-2)

QC Batch: 130165

Date Analyzed: 2016-05-17

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	24.6	98	90 - 110	2016-05-17

Standard (CCV-1)

QC Batch: 130166

Date Analyzed: 2016-05-17

Analyzed By: RL

Report Date: May 18, 2016
15-0143-01

Work Order: 16051615
Townsend 16" Pipeline

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	24.6	98	90 - 110	2016-05-17

Standard (CCV-2)

QC Batch: 130166

Date Analyzed: 2016-05-17

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	24.9	100	90 - 110	2016-05-17

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-16-12	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2015-066	Lubbock

Standard Flags

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

F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

DATE: 5/16/2016

PAGE 1 OF 3

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Arson & Associates, Inc.
Environmental Consultants

Data Reported to:

LAB WORK ORDER #:

PO #:

PROJECT LOCATION OR NAME: Townsend 16" Levinston, NM

LAI PROJECT #: 15-0143-01

TRRP report?		S=SOIL W=WATER A=AIR		P=PAINT SL=SLUDGE OT=OTHER		# of Containers	PRESERVATION				FIELD NOTES
Yes ☐	No ☐						HCl	HNO ₃	H ₂ SO ₄ ☐	NaOH ☐	
TIME ZONE: Time zone/State:		Lab #	Date	Time	Matrix						
N wall E 4'			5/13	11:20	S	1					419207
N wall E 8'				11:15		1					208
N wall E 10'				11:10		1					209
N wall E 14'				11:06		1					210
N wall E 18'				12:55		1					211
N wall W 4'				10:57		1					212
N wall W 8'				10:53		1					213
N wall W 10'				10:49		1					214
N wall W 14'				10:45		1					215
N wall W 18'				10:40		1					216
S wall E 4'				13:24		1					217
S wall E 8'				13:12		1					218
S wall E 10'				12:32		1					219
S wall E 14'				12:28		1					220
S wall E 18'				12:24		1					221

RELINQUISHED BY: (Signature) <i>Hand Car</i>	DATE/TIME 5/16/16 10:06	RECEIVED BY: (Signature) <i>Naile H</i>	TURN AROUND TIME NORMAL ☐ 1 DAY ☐ 2 DAY ☒ OTHER ☐	LABORATORY USE ONLY: RECEIVING TEMP: <u>3.1</u> THERM # <u>IR-1</u> CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED ☐ CARRIER BILL # <u>25 ZT 742941</u> ☒ HAND DELIVERED
RELINQUISHED BY: (Signature) <i>Naile H</i>	DATE/TIME 5/16/16 11:19	RECEIVED BY: (Signature)		
RELINQUISHED BY: (Signature)	DATE/TIME 5/17/16	RECEIVED BY: (Signature) <i>Doreen Ward</i>		
		3.1 3.5		

W00# 16051615

CHAIN-OF-CUSTODY

PAGE 2 OF 3

DATE: 5/16/2016

PO #:

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

LAB WORK ORDER #:

PROJECT LOCATION OR NAME: Townsend 16 Livingston, NM

LAI PROJECT #: 15-0143-01

COLLECTOR: Michael Gan

Arson & Associates, Inc.
Environmental Consultants

TRRP report? ☐ Yes ☐ No

TIME ZONE: MST / NM

Field Sample I.D.

TIME ZONE: Time zone/State:

S=SOIL
W=WATER
A=AIR

P=PAINT
SL=SLUDGE
OT=OTHER

Lab #

Date

Time

of Containers

PRESERVATION

UNPRESERVED

ANALYSES

TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐

DIESEL - MOD 8015 ☐

VOC 8260 ☐

8082 PCBs ☐

8081 PESTICIDES ☐

TCAP - METALS (RCRA) ☐ PAH 8270 ☐ HOLDPAH ☐

TCAP - PEST ☐ HERB ☐ 8151 HERBICIDES ☐

TCAP - TOTAL (RCRA) ☐ Sem-VOC ☐

TCAP - TOX ☐ D.W. 200.8 ☐ TOLP ☐

PH ☐ TSS ☐ % MOISTURE ☐ OTHER LIST ☐

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