RECEIVED JUN 0 4 2010

TETRA TECH

May 12, 2010

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

Re: Assessment and Closure Report – for the COG Operating, LLC, Skelly #942 Tank Battery Facility, Located in Unit Letter B, Section 22, Township 17 South, Range 31 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. was contacted by COG Operating, LLC to investigate the two (2) spills that occurred at the Skelly #942 Tank Battery. The tank battery is located in Unit Letter B, Section 22, Township 17 South, Range 31 East, Eddy County, New Mexico. The site coordinates are N 32° 49.482', W 103° 51.340. The Site is shown on Figures 1and 2.

Background

Spill #1, 11/12/09

The spill occurred on November 12, 2009, when the safety gauges float malfunctioned, causing the production tank to overflow. An estimated 170 barrels of oil were spilled with 160 barrels recovered with a vacuum truck. The spill was fully contained within the facility firewall. The spill location is shown on Figure 3. The C-141 (initial) is included in Appendix A.

Spill #2, 12/27/09

On December 27, 2009, the water meter on the heater plugged, which overran the equalizers. An estimated 38 barrels of oil were spilled with 35 barrels recovered with a vacuum truck. The spill was fully contained within the facility firewall. However, the spill migrated into an open excavation from the first spill. The spill location is shown on Figure 3. The C-141 (initial) is included in Appendix A.

Tetra Tech
1910 North Big Spring, Midland,TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

2RP-347

Groundwater and Regulatory

According to the NMOCD groundwater map, the depth to groundwater in this area is greater than 300' below surface. The Geology and Groundwater Resources of Eddy County, New Mexico (Report 3) did show one well located in Section 34 with a reported depth to groundwater of 271'. The groundwater data is enclosed in Appendix B.

A risk-based evaluation was performed for the Site in accordance with the NMOCD Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene and xylene). Based on the regional groundwater data, the proposed RRAL for TPH is 5,000 mg/kg.

Assessment and Corrective Action

On November 18, 2009, Tetra Tech personnel inspected the facility. Prior to sampling, COG had scraped approximately 6" of impacted soil from inside the tank battery. A total of eight (8) auger holes were installed using a stainless steel hand auger. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chlorides by EPA method 300.0. The laboratory reports are shown in Appendix C. The results are summarized in Table 1.

Referring to Table 1, the samples in AH-1 through AH-6 did showed elevated BTEX above the RRAL. The TPH concentrations were all below the RRAL of 5,000 mg/kg. In addition, the chloride concentrations did show a shallow impact to the soil from 1.0' to 3.0' below surface.

On December 15, 2009, Tetra Tech supervised the excavation of these soils to depths ranging from 1.0' to 3.5' to remove the elevated BTEX and chlorides above the RRAL. Once completed, confirmation samples were collected from these areas. As shown in Table 1, all the samples were below the RRAL for BTEX. The excavated soil was hauled to proper disposal. The sample locations and spill area are shown on Figure 3.

On December 27, 2009, a second spill occurred and migrated into the open excavation near AH-2 and measure 10' x 30' at a depth of 3.0'. On January 12, 2010, Tetra Tech installed one auger hole to assess the spill to a depth of 3.5' below excavation bottom. Referring to Table 2, the BTEX concentrations were above the RRAL were not defined. A backhoe trench was installed on January 13, 2010, to vertically define the impacted area to a depth of 7.0' below excavation bottom, which showed BTEX concentrations below the reporting limits. Based on the results, the area

was excavated down to 7.0' below excavation bottom to remove the soil above the RRAL. The excavated soil was transported to proper disposal. The area was then backfilled with clean soil. The sample locations and spill areas are shown on Figure 3. Copies of the laboratory reports and chain of custody documents are included in Appendix C.

Closure Request

Based upon the results of the investigation and remediation performed at this site, COG Operating LLC requests closure of this site. The C-141 (Final) is included in Appendix A. If you have any question or comments concerning the assessment or the activities performed at the Site, please call me at (432) 682-4559.

Respectfully submitted,
Tetra Tech Inc.

Ike Tavarez P.G.
Senior Project Manager

cc: Pat Ellis - COG

FIGURES

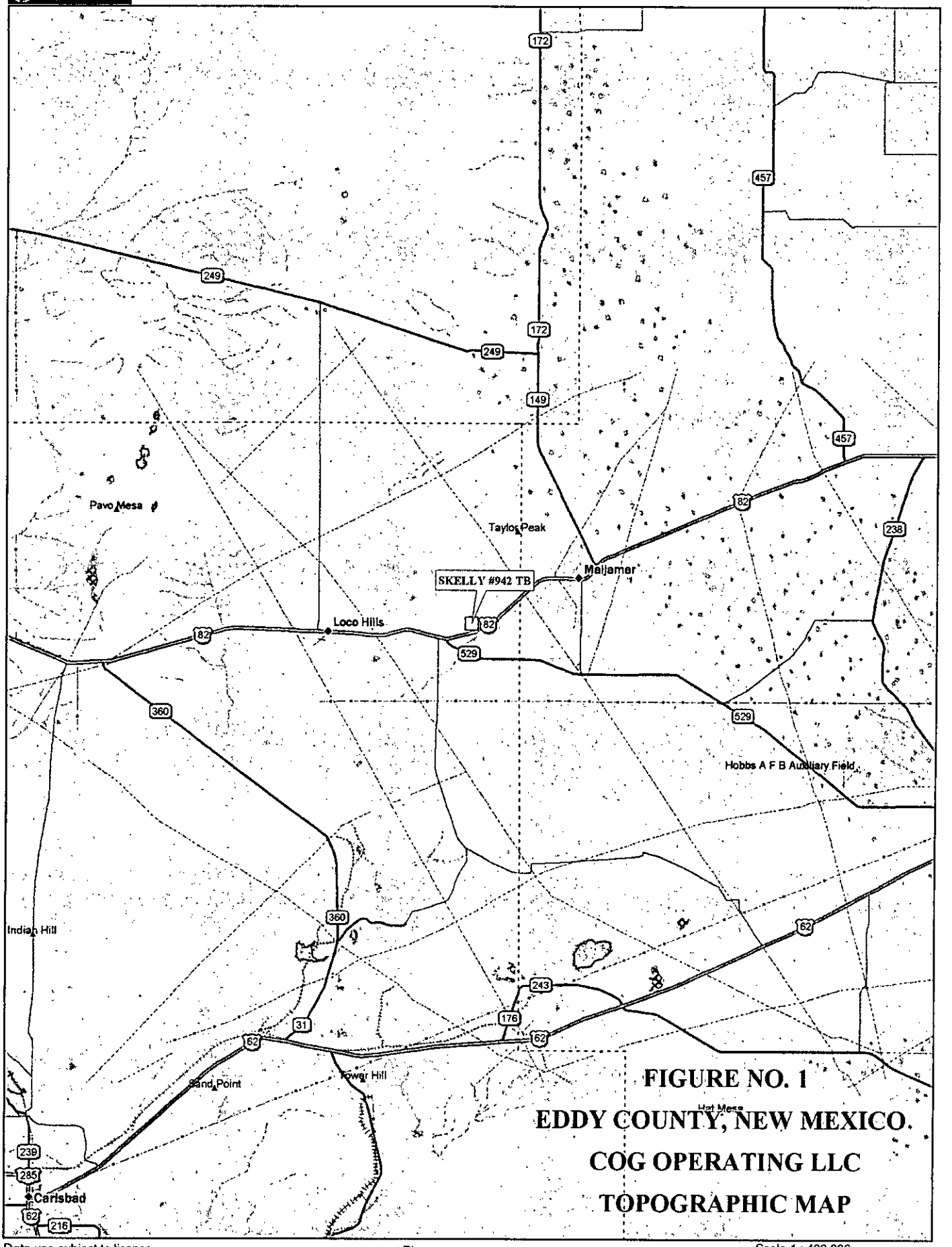


FIGURE NO. 1

EDDY COUNTY, NEW MEXICO.

COG OPERATING LLC

TOPOGRAPHIC MAP

TN
MN (7.9°E)

Scale 1 : 400,000
1" = 6.31 mi
Data Zoom 9-0

DeLORME

Topo USA® 8

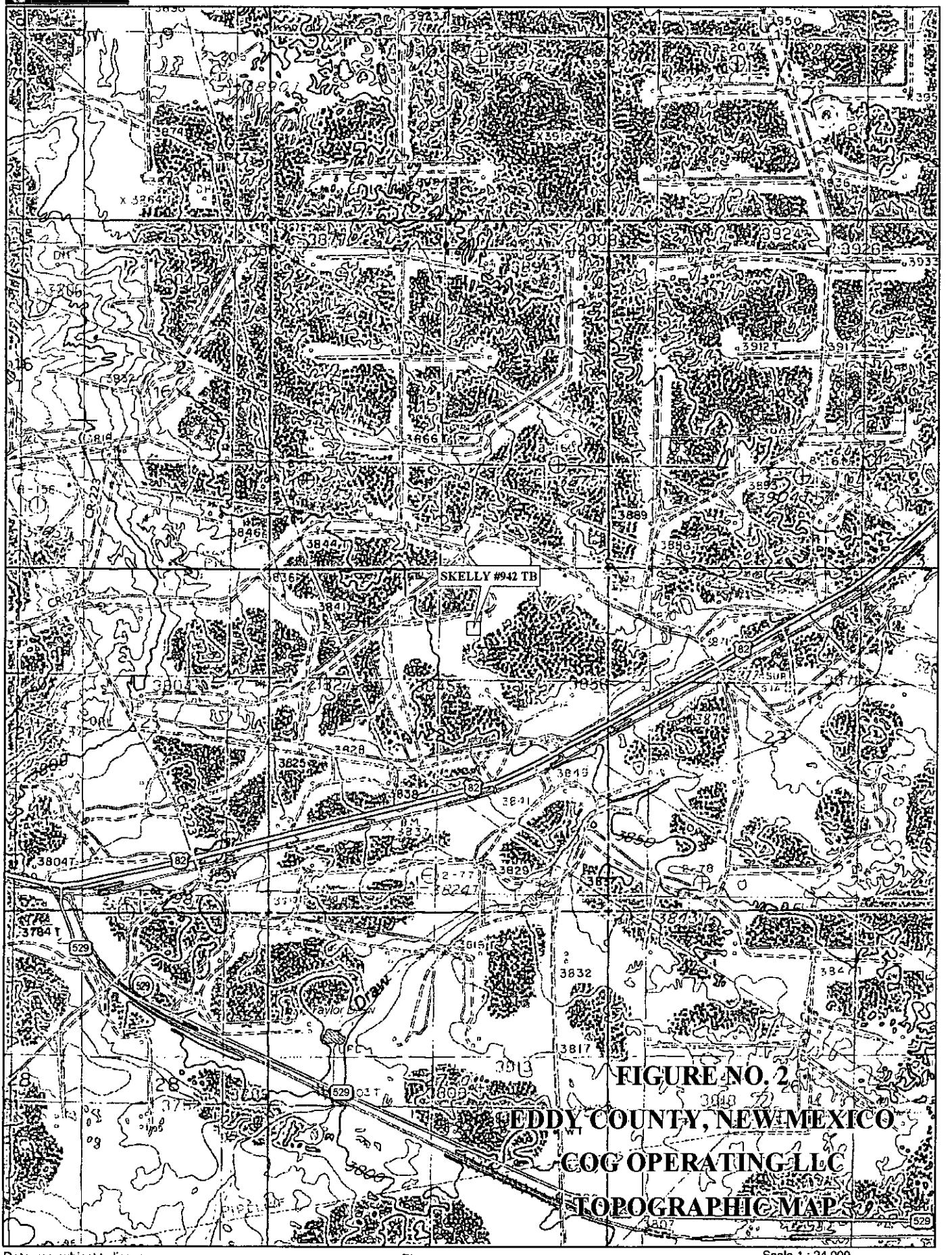


FIGURE NO. 2

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

TOPOGRAPHIC MAP

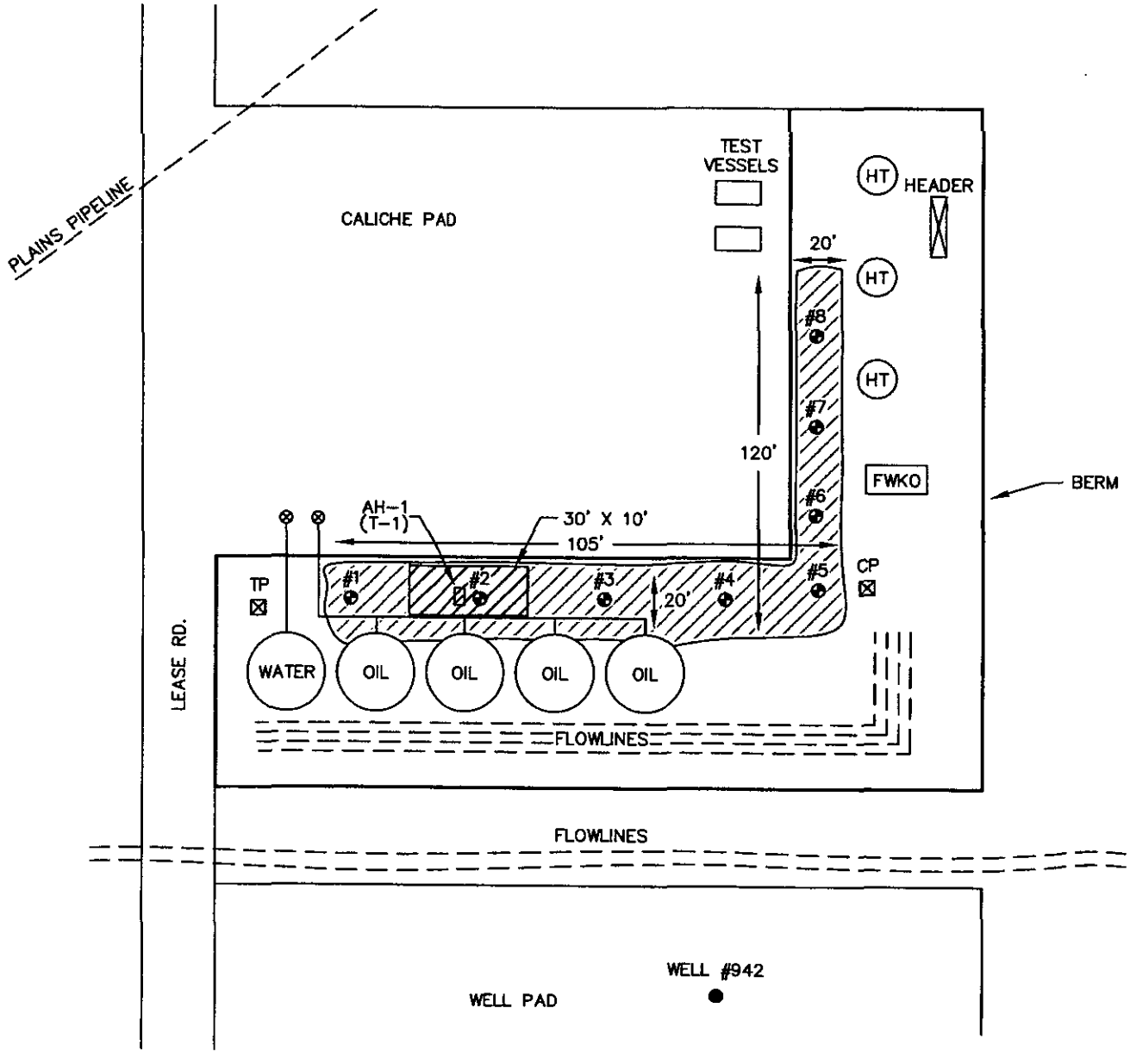
TN

MN (7.9°E)

Scale 1 : 24,000

1" = 2,000.0 ft

Data Zoom 13-0



- SPILL & ECAVATED AREA (SPILL #1)
- SAMPLE TRENCH
- SPILL & EXCAVATED AREA (SPILL #2)
- AUGER HOLE SAMPLE LOCATIONS

NOT TO SCALE

FIGURE NO. 3

EDDY COUNTY, NEW MEXICO

COG OPERATING

SKELLY #942 TB

TETRA TECH, INC.
MIDLAND, TEXAS

DATE: 11/20/09
DWN. BY: JJ
FILE:

TABLES

Table 1
COG Operating LLC.
SKELLY 942
Spill #1
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-1	11/18/2009	0-1'	6"		X	1,180	1,830	3,010	**2.11**	**35**	**38.4**	**46.4**	2,340
		1-1.5'	6"	X	X	-	-	-	-	-	-	-	784
		2-2.5'	6"	X		-	-	-	<0.0100	<0.0100	<0.0100	<0.0100	837
		3-3.5'	6"	X		-	-	-	-	-	-	-	1,370
CS-1	12/15/2009	0-1'	1'	X		-	-	-	<0.0100	<0.0100	<0.0100	0.205	-
AH-2	11/18/2009	0-1'	6"		X	3,180	1,110	4,290	-	-	-	-	2,560
		1-1.5'	6"		X	-	-	-	-	-	-	-	<200
		2-2.5'	6"		X	-	-	-	**2.36**	**61.90**	**61.10**	**6.94**	<200
		3-3.5'	6"		X	-	-	-	**0.69**	**28.00**	**36.30**	**45.60**	<200
		4-4.5'	6"	X		-	-	-	-	-	-	-	224
CS-2	12/15/2009	0-1'	3'	X		-	-	-	<0.0100	<0.0100	<0.0100	<0.0100	-
AH-3	11/18/2009	0-1'	6"		X	2,980	1,160	4,140	**20.8**	**102**	**76.4**	**79.2**	3,290
		1-1.5'	6"	X	X	-	-	-	-	-	-	-	<200
		2-2.5'	6"	X		-	-	-	<0.0100	0.2	1.54	3.13	<200
		3-3.5'	6"	X		-	-	-	-	-	-	-	<200
CS-3	12/15/2009	0-1'	1'	X		-	-	-	0.668	12.6	9.44	18.4	-

Table 1
COG Operating LLC.
SKELLY 942
Spill #1
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-4	11/18/2009	0-1'	6"		X	1,200	558	1,758	**3.4**	**38.4**	**39.7**	**40**	1,350
		1-1.5'	6"		X	-	-	-	-	-	-	-	1,760
		2-2.5'	6"	X		-	-	-	<0.0100	<0.0100	<0.0100	<0.0100	<200
		3-3.5'	6"	X		-	-	-	-	-	-	-	<200
		4-4.5'	6"	X		-	-	-	-	-	-	-	<200
CS-4	12/15/2009	0-1'	1.5'	X		-	-	-	<0.0100	0.0641	0.39	0.741	-
AH-5	11/18/2009	0-1'	6"		X	2,520	1,770	4,290	**1.68**	**53.2**	**73.8**	**79.9**	849
		1-1.5'	6"	X	X	-	-	-	-	-	-	-	<200
		2-2.5'	6"	X		-	-	-	<0.0100	<0.0100	<0.0100	<0.0100	<200
		3-3.5'	6"	X		-	-	-	-	-	-	-	<200
CS-5	12/15/2009	0-1'	1'		X	-	-	-	**4.02**	**58**	**74**	**82.5**	-
AH-6	11/18/2009	0-1'	6"		X	3,130	1,100	1,758	**3.49**	**75.2**	**78.3**	**90.7**	1,090
		1-1.5'	6"	X	X	-	-	-	-	-	-	-	<200
		2-2.5'	6"	X		-	-	-	<0.0100	<0.0100	<0.0100	<0.0100	<200
		3-3.5'	6"	X		-	-	-	-	-	-	-	<200
CS-6	12/15/2009	0-1'	1'			-	-	-	0.14	11.3	18.6	19.2	-

Table 1
COG Operating LLC.
SKELLY 942
Spill #1
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-7	11/18/2009	0-1'	6"		X	146	226	372	-	-	-	-	883
		1-1.5'	6"		X	-	-	-	-	-	-	-	2,950
		2-2.5'	6"		X	-	-	-	-	-	-	-	3,010
		3-3.5'	6"		X	-	-	-	-	-	-	-	482
		4-4.5'	6"	X		-	-	-	-	-	-	-	<200
CS-7	12/15/2009	0-1'	3'	X		-	-	-	<0.0100	<0.0100	<0.0100	<0.0100	
AH-8	11/18/2009	0-1'	6"		X	111	170	281	-	-	-	-	1,110
		1-1.5'	6"	X		-	-	-	-	-	-	-	<200
		2-2.5'	6"	X		-	-	-	-	-	-	-	361
	11/18/2009	3-3.5'	6"	X		-	-	-	-	-	-	-	422
CS-8	12/15/2009	0-1'	1'	X		-	-	-	<0.0100	0.29	1.86	1.72	-

☐ Impacted soil excavated and hauled to disposal

(-) Not Analyzed

Table 2
COG Operating LLC.
SKELLY 942
Spill #2
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
2nd Spill (12/27/09) - migrated into open excavation from first spill in area of AH-2													
AH-1	1/12/2010	0-1'	3'	X		-	-	-	**268**	**594**	**323**	**342**	-
		3.3.5	3'	X		-	-	-	**87.2**	**246**	**146**	**153**	-
T-1	1/13/2010	6'	3'	X		-	-	-	**3.37**	**39.9**	**34.9**	**37.9**	-
		7'	3'	X		-	-	-	<0.01	<0.01	<0.01	<0.01	-

☐ Impacted soil excavated and hauled to disposal

(-) Not Analyzed

APPENDIX A

(Spill #1)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company COG OPERATING LLC	Contact Chasity Jackson
Address 550 W. Texas, Suite 1300 Midland, TX 79701	Telephone No. 432-686-3087
Facility Name – Skelly Unit 942	Facility Type- Battery

Surface Owner Federal	Mineral Owner	Lease No. 30-015-34645

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	22	17S	31E	1210	North	2195	East	Eddy

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release-Oil	Volume of Release-170bbls	Volume Recovered- 160bbls
Source of Release- Production tank	Date and Hour of Occurrence- 11/12/09 Approx AM	Date and Hour of Discovery 11/12/09 Approx AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Terry Gregston BLM Mike Bratcher OCD	
By Whom? Rick Wright	Date and Hour 11/12/09 in the AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A safety gauge float malfunctioned causing the production oil tank to run over. The safety gauge has been repaired.

Describe Area Affected and Cleanup Action Taken.*
The area inside the dyke has been cleaned but not backfilled. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for your approval prior to any significant remediation work.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: CJackson	OIL CONSERVATION DIVISION	
Printed Name: Chasity Jackson	Approved by District Supervisor:	
Title: Agent for COG	Approval Date:	Expiration Date:
E-mail Address: cjackson@conchoresources.com	Conditions of Approval:	Attached ☐
Date: 11/17/09 Phone: 432-686-3087		

* Attach Additional Sheets If Necessary

#2

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
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Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Repo

Name of Company COG OPERATING LLC	Contact Kanicia Carrillo
Address 550 W. Texas, Suite 1300 Midland, TX 79701	Telephone No. 432-685-4332
Facility Name – Skelly Unit 942	Facility Type- Battery

Surface Owner Federal	Mineral Owner	Lease No. NMLC-029419A

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	22	17S	31E					Eddy

Latitude N32.49.479' Longitude W103.51.338

NATURE OF RELEASE

Type of Release-Oil	Volume of Release-38bbls	Volume Recovered- 35bbls
Source of Release- Oil tank	Date and Hour of Occurrence- 12/27/09	Date and Hour of Discovery 12/27/09
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher OCD	
By Whom? Rick Wright	Date and Hour 12/27/09 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Caused by a plugged water meter on a heater which then sent too much fluid to tank outrunning the equalizers.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for your approval prior to any significant remediation work.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Chasity Jackson	OIL CONSERVATION DIVISION
Printed Name: Chasity Jackson	Approved by District Supervisor:
Title: Agent for COG	Approval Date: / Expiration Date:
E-mail Address: cjackson@conchoresources.com	Conditions of Approval: / Attached ☐
Date: 1/7/10 Phone: 432-686-3087	

* Attach Additional Sheets If Necessary

District I
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Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company COG Operating LLC	Contact Pat Ellis
Address 550 W. Texas, Suite 1300 Midland, Texas 79701	Telephone No. (432) 685-4332
Facility Name Skelly 942	Facility Type Tank Battery

Surface Owner Federal	Mineral Owner	Lease No. 30-015-34645

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	22	17S	31E	1210	North	2195	East	Eddy

Latitude N 32°49.482 **Longitude** W 103°51.340

NATURE OF RELEASE

Type of Release Oil	Volume of Release 38 bbls	Volume Recovered 35 bbls
Source of Release Production tank	Date and Hour of Occurrence Unknown 12/27/09	Date and Hour of Discovery 12/27/09
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher OCD	
By Whom? Rick Wright	Date and Hour 12/27/09	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

Cause by a plugged water meter on a heater which then sent too much fluid to tank outrunning the equalizer.

Describe Area Affected and Cleanup Action Taken.*
The spill was contained inside the facility firewalls. The spill migrated into an open excavation (10' x 30') performed during a previous release, which was in progress. The area was assessed evaluate the spill. The impacted soils above the RRAL were removed and hauled to CRI for disposal. The excavations was been backfilled with clean soil. A closure report has been prepared and submitted to the NMOCD for review and approval.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: ike.tavarez@tetratech.com	Conditions of Approval:	Attached ☐
Date: 6-2-10 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company COG Operating LLC	Contact Pat Ellis
Address 550 W. Texas, Suite 1300 Midland, Texas 79701	Telephone No. (432) 685-4332
Facility Name Skelly 942	Facility Type Tank Battery

Surface Owner Federal	Mineral Owner	Lease No. 30-015-34645

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	22	17S	31E	1210	North	2195	East	Eddy

Latitude N 32°49.482 **Longitude** W 103°51.340

NATURE OF RELEASE

Type of Release Oil	Volume of Release 170 bbls	Volume Recovered 160 bbls
Source of Release Production tank	Date and Hour of Occurrence Unknown 11/12/09 AM	Date and Hour of Discovery 11/12/09 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher OCD Terry Gregston BLM	
By Whom? Rick Wright	Date and Hour 11/12/09 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

Safety gauge float malfunctioned causing the production oil tank to run over. The safety gauge has been repaired.

Describe Area Affected and Cleanup Action Taken.*
The spill was contained inside the facility firewalls. The spill area was assessed to evaluate the spill area. The impacted soils above the RRAL were removed and hauled to CRI for disposal. The excavation was backfilled with clean soil. A closure report has been prepared and submitted to the NMOCD for review and approval.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: ike.tavarez@tetratech.com	Conditions of Approval:	Attached ☐
Date: Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

APPENDIX B

Water Well Data
Average Depth to Groundwater (ft)
COG - Skelly 942 Tank Battery
Eddy County, New Mexico

16 South 30 East

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

16 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12 **288**
18	17	16	15	14	13 **113**
19	20	21	22	23	24
30	29	28	27	26	25
31 **290**	32	33	34	35	36

16 South 32 East

6	5	4	3 **65**	2 **265**	1 **265**
7	8	9	10	11	12 **215**
18	17	16 **221**	15	14	13 **215**
19 **220**	20	21 **210**	22	23 **210**	24
30	29	28	27	26 **243**	25
31	32	33	34	35	36 **260**

17 South 30 East

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

17 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22 SITE	23	24
30	29	28	27	26	25
31	32	33	34 **271**	35	36

17 South 32 East

6	5	4 **82**	3 **175**	2 **60**	1 **225**
7	8	9	10	11 **70** **88**	12
18	17	16	15	14	13
19	20	21	22	23	24
30 180 dry	29	28	27	26	25
31	32	33	34	35	36

18 South 30 East

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

18 South 31 East

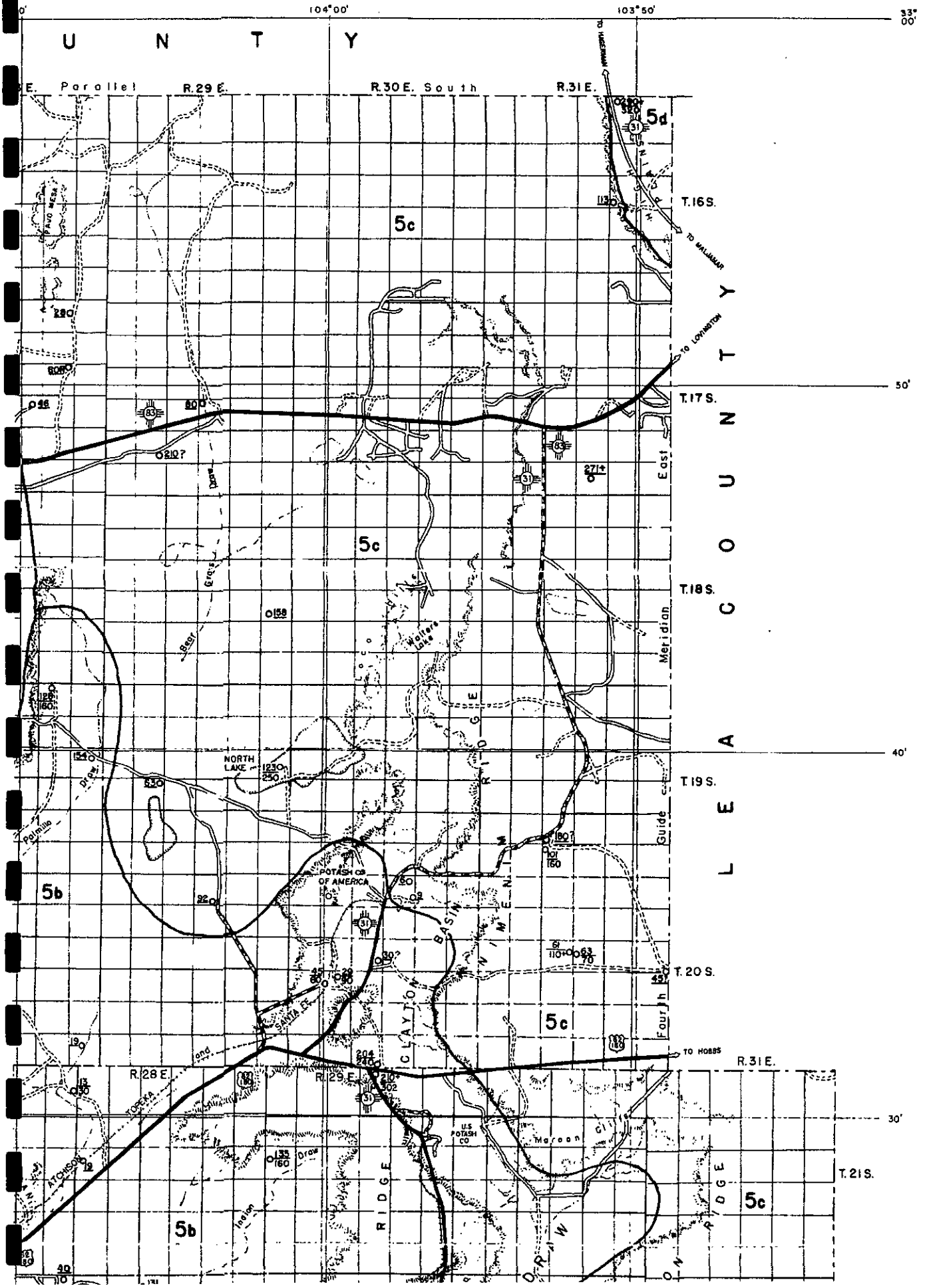
6	5	4	3	2	1
7	8	9	10	11	12 **400**
18	17	16	15	14 **317**	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35 **261**	36

18 South 32 East

6	5	4 **65**	3 TMW	2	1
7 **460** **82**	8	9	10	11	12
18	17	16 **84**	15	14	13
19	20 **164**	21	22 **429**	23	24
30	29	28	27	26	25
31	32	33	34 **117**	35	36

88 New Mexico State Engineers Well Reports
105 USGS Well Reports
90 Geology and Groundwater Conditions in Southern Lea, County, NM
34 NMOCD - Groundwater Data
123 Field water level
362 New Mexico Water and Infrastructure Data System

GROUND WATER REPORT 3 PLATE 4



APPENDIX C

Summary Report

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

Report Date: December 1, 2009

Work Order: 9111903

Project Location: Eddy County, NM
Project Name: COG/Skelly 942
Project Number: 114-6400369

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215203	AH-1 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215204	AH-1 1'-1.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215205	AH-1 2'-2.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215206	AH-1 3'-3.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215207	AH-2 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215208	AH-2 1'-1.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215209	AH-2 2'-2.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215210	AH-2 3'-3.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215211	AH-3 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215212	AH-3 1'-1.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215213	AH-3 2'-2.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215214	AH-4 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215215	AH-4 1'-1.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215216	AH-4 2'-2.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215217	AH-4 3'-3.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215218	AH-4 4'-4.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215219	AH-5 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215220	AH-5 1'-1.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215221	AH-5 2'-2.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215222	AH-5 3'-3.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215223	AH-6 0-1' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215224	AH-6 1'-1.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215225	AH-6 2'-2.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215226	AH-6 3'-3.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215227	AH-7 0-1' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215228	AH-7 1'-1.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215229	AH-7 2'-2.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215230	AH-7 3'-3.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215231	AH-7 4'-4.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215232	AH-8 0-1' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18

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

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215233	AH-8 1'-1.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215234	AH-8 2'-2.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215235	AH-8 3'-3.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215236	AH-2 4'-4.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215237	AH-3 3'-3.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18

Sample - Field Code	BTEX Benzene (mg/Kg)	BTEX Toluene (mg/Kg)	BTEX Ethylbenzene (mg/Kg)	BTEX Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
215203 - AH-1 0-1' 6 in. BEB					**1180**	**1830**
215205 - AH-1 2'-2.5' 6 in. BEB	<0.0100	<0.0100	<0.0100	<0.0100		
215207 - AH-2 0-1' 6 in. BEB					**1110**	**3180**
215209 - AH-2 2'-2.5' 6 in. BEB	**2.36**	**61.9**	**61.1**	**6.94**		
215210 - AH-2 3'-3.5' 6 in. BEB	**0.690**	**28.0**	**36.3**	**45.6**		
215211 - AH-3 0-1' 6 in. BEB					**1160**	**2980**
215213 - AH-3 2'-2.5' 6 in. BEB	<0.0100	**0.200**	**1.54**	**3.13**		
215214 - AH-4 0-1' 6 in. BEB					**558**	**1200**
215216 - AH-4 2'-2.5' 6 in. BEB	<0.0100	<0.0100	<0.0100	<0.0100		
215219 - AH-5 0-1' 6 in. BEB					**1770**	**2520**
215221 - AH-5 2'-2.5' 6 in. BEB	<0.0100	<0.0100	<0.0100	<0.0100		
215223 - AH-6 0-1' 6 in. BEB					**1100**	**3130**
215225 - AH-6 2'-2.5' 6 in. BEB	<0.0100	<0.0100	<0.0100	<0.0100		
215227 - AH-7 0-1' 6 in. BEB					**226**	**146**
215232 - AH-8 0-1' 6 in. BEB					**170**	**111**

Sample: 215203 - AH-1 0-1' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**2340**	mg/Kg	4.00

Sample: 215204 - AH-1 1'-1.5' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**784**	mg/Kg	4.00

Sample: 215205 - AH-1 2'-2.5' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**837**	mg/Kg	4.00

Sample: 215206 - AH-1 3'-3.5' 6 in. BEB

continued ...

sample 215206 continued ...

Param	Flag	Result	Units	RL

Param	Flag	Result	Units	RL
Chloride		**1370**	mg/Kg	4.00

Sample: 215207 - AH-2 0-1' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**2560**	mg/Kg	4.00

Sample: 215208 - AH-2 1'-1.5' 6 in. BEB

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

Sample: 215209 - AH-2 2'-2.5' 6 in. BEB

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

Sample: 215210 - AH-2 3'-3.5' 6 in. BEB

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

Sample: 215211 - AH-3 0-1' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**3290**	mg/Kg	4.00

Sample: 215212 - AH-3 1'-1.5' 6 in. BEB

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

Sample: 215213 - AH-3 2'-2.5' 6 in. BEB

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

Sample: 215214 - AH-4 0-1' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**1350**	mg/Kg	4.00

Sample: 215215 - AH-4 1'-1.5' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**1790**	mg/Kg	4.00

Sample: 215216 - AH-4 2'-2.5' 6 in. BEB

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

Sample: 215217 - AH-4 3'-3.5' 6 in. BEB

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

Sample: 215218 - AH-4 4'-4.5' 6 in. BEB

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

Sample: 215219 - AH-5 0-1' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**849**	mg/Kg	4.00

Sample: 215220 - AH-5 1'-1.5' 6 in. BEB

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

Sample: 215221 - AH-5 2'-2.5' 6 in. BEB

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

Sample: 215222 - AH-5 3'-3.5' 6 in. BEB

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

Sample: 215223 - AH-6 0-1' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**1090**	mg/Kg	4.00

Sample: 215224 - AH-6 1'-1.5' 6 in. BEB

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

Sample: 215225 - AH-6 2'-2.5' 6 in. BEB

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

Sample: 215226 - AH-6 3'-3.5' 6 in. BEB

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

Sample: 215227 - AH-7 0-1' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**883**	mg/Kg	4.00

Sample: 215228 - AH-7 1'-1.5' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**2950**	mg/Kg	4.00

Sample: 215229 - AH-7 2'-2.5' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**3010**	mg/Kg	4.00

Sample: 215230 - AH-7 3'-3.5' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**482**	mg/Kg	4.00

Sample: 215231 - AH-7 4'-4.5' 6 in. BEB

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

Sample: 215232 - AH-8 0-1' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**1110**	mg/Kg	4.00

Sample: 215233 - AH-8 1'-1.5' 6 in. BEB

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

Sample: 215234 - AH-8 2'-2.5' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**361**	mg/Kg	4.00

Sample: 215235 - AH-8 3'-3.5' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**422**	mg/Kg	4.00

Sample: 215236 - AH-2 4'-4.5' 6 in. BEB

Param	Flag	Result	Units	RL
Chloride		**224**	mg/Kg	4.00

Sample: 215237 - AH-3 3'-3.5' 6 in. BEB

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

TRACEANALYSIS, INC.

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200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

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

NELAP Certifications

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

Analytical and Quality Control Report

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

Report Date: December 1, 2009

Work Order: 9111903

Project Location: Eddy County, NM
Project Name: COG/Skelly 942
Project Number: 114-6400369

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
215203	AH-1 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215204	AH-1 1'-1.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215205	AH-1 2'-2.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215206	AH-1 3'-3.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215207	AH-2 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215208	AH-2 1'-1.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215209	AH-2 2'-2.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215210	AH-2 3'-3.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215211	AH-3 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215212	AH-3 1'-1.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215213	AH-3 2'-2.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215214	AH-4 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215215	AH-4 1'-1.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215216	AH-4 2'-2.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215217	AH-4 3'-3.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215218	AH-4 4'-4.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215219	AH-5 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215220	AH-5 1'-1.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215221	AH-5 2'-2.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215222	AH-5 3'-3.5' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215223	AH-6 0-1' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215224	AH-6 1'-1.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215225	AH-6 2'-2.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215226	AH-6 3'-3.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215227	AH-7 0-1' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215228	AH-7 1'-1.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215229	AH-7 2'-2.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215230	AH-7 3'-3.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215231	AH-7 4'-4.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215232	AH-8 0-1' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215233	AH-8 1'-1.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215234	AH-8 2'-2.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215235	AH-8 3'-3.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215236	AH-2 4'-4.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18
215237	AH-3 3'-3.5' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18

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.

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

Standard Flags

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

Case Narrative

Samples for project COG/Skelly 942 were received by TraceAnalysis, Inc. on 2009-11-18 and assigned to work order 9111903. Samples for work order 9111903 were received intact at a temperature of 4.0 deg. C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	56012	2009-11-23 at 13:00	65542	2009-11-23 at 17:16
BTEX	S 8021B	56089	2009-11-25 at 11:00	65629	2009-11-25 at 03:26
Chloride (Titration)	SM 4500-Cl B	55983	2009-11-23 at 10:15	65528	2009-11-23 at 15:46
Chloride (Titration)	SM 4500-Cl B	55984	2009-11-23 at 10:16	65529	2009-11-23 at 15:48
Chloride (Titration)	SM 4500-Cl B	55985	2009-11-23 at 10:16	65530	2009-11-23 at 15:48
Chloride (Titration)	SM 4500-Cl B	55986	2009-11-23 at 10:17	65531	2009-11-23 at 15:49
TPH DRO - NEW	Mod. 8015B	55929	2009-11-19 at 15:20	65453	2009-11-19 at 15:20
TPH GRO	S 8015B	55928	2009-11-19 at 11:00	65457	2009-11-20 at 00:23

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 9111903 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 215203 - AH-1 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65528	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55983	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**2340**		mg/Kg	100	4.00

Sample: 215203 - AH-1 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	65453	Date Analyzed:	2009-11-19	Analyzed By:	kg
Prep Batch:	55929	Sample Preparation:	2009-11-19	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**1180**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[1]	135	mg/Kg	1	100	135	70 - 130

Sample: 215203 - AH-1 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	65457	Date Analyzed:	2009-11-20	Analyzed By:	AG
Prep Batch:	55928	Sample Preparation:	2009-11-19	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		**1830**		mg/Kg	50	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		54.5	mg/Kg	50	50.0	109	65.3 - 115
4-Bromofluorobenzene (4-BFB)		60.2	mg/Kg	50	50.0	120	61.7 - 121.1

[1] High surrogate recovery due to peak interference.

Sample: 215213 - AH-3 2'-2.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	65542	Date Analyzed:	2009-11-23	Analyzed By:	tn
Prep Batch:	56012	Sample Preparation:	2009-11-23	Prepared By:	tn

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		**0.200**	mg/Kg	1	0.0100
Ethylbenzene		**1.54**	mg/Kg	1	0.0100
Xylene		**3.13**	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.20	mg/Kg	1	2.00	110	64.4 - 111.2
4-Bromofluorobenzene (4-BFB)	[6]	3.25	mg/Kg	1	2.00	162	43.1 - 128.4

Sample: 215213 - AH-3 2'-2.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65529	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55984	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Sample: 215214 - AH-4 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65529	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55984	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1350**	mg/Kg	50	4.00

[6] High surrogate recovery due to peak interference.

Sample: 215214 - AH-4 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	65453	Date Analyzed:	2009-11-19	Analyzed By:	kg
Prep Batch:	55929	Sample Preparation:	2009-11-19	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**558**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		116	mg/Kg	1	100	116	70 - 130

Sample: 215214 - AH-4 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	65457	Date Analyzed:	2009-11-20	Analyzed By:	AG
Prep Batch:	55928	Sample Preparation:	2009-11-19	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		**1200**		mg/Kg	50	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		54.1	mg/Kg	50	50.0	108	65.3 - 115
4-Bromofluorobenzene (4-BFB)		58.1	mg/Kg	50	50.0	116	61.7 - 121.1

Sample: 215215 - AH-4 1'-1.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65529	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55984	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1790**		mg/Kg	50	4.00

Sample: 215216 - AH-4 2'-2.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	65542	Date Analyzed:	2009-11-23	Analyzed By:	tn
Prep Batch:	56012	Sample Preparation:	2009-11-23	Prepared By:	tn

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	64.4 - 111.2
4-Bromofluorobenzene (4-BFB)		1.88	mg/Kg	1	2.00	94	43.1 - 128.4

Sample: 215216 - AH-4 2'-2.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65529	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55984	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Sample: 215217 - AH-4 3'-3.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65529	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55984	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Sample: 215218 - AH-4 4'-4.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65529	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55984	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Sample: 215219 - AH-5 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65529	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55984	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**849**		mg/Kg	50	4.00

Sample: 215219 - AH-5 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	65453	Date Analyzed:	2009-11-19	Analyzed By:	kg
Prep Batch:	55929	Sample Preparation:	2009-11-19	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**1770**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[7]	151	mg/Kg	1	100	151	70 - 130

Sample: 215219 - AH-5 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	65457	Date Analyzed:	2009-11-20	Analyzed By:	AG
Prep Batch:	55928	Sample Preparation:	2009-11-19	Prepared By:	AG

[7] High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**2520**	mg/Kg	50	1.00

Surrogate	*Flag*	*Result*	*Units*	*Dilution*	Spike *Amount*	Percent *Recovery*	Recovery *Limits*
Trifluorotoluene (TFT)		54.1	mg/Kg	50	50.0	108	65.3 - 115
4-Bromofluorobenzene (4-BFB)	[8]	69.5	mg/Kg	50	50.0	139	61.7 - 121.1

Sample: 215220 - AH-5 1'-1.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65529	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55984	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Sample: 215221 - AH-5 2'-2.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	65542	Date Analyzed:	2009-11-23	Analyzed By:	tn
Prep Batch:	56012	Sample Preparation:	2009-11-23	Prepared By:	tn

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.16	mg/Kg	1	2.00	108	64.4 - 111.2
4-Bromofluorobenzene (4-BFB)		1.92	mg/Kg	1	2.00	96	43.1 - 128.4

Sample: 215221 - AH-5 2'-2.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65529	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55984	Sample Preparation:	2009-11-23	Prepared By:	AR

[8]High surrogate recovery due to peak interference.

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

Sample: 215222 - AH-5 3'-3.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65529	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55984	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Sample: 215223 - AH-6 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65530	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55985	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1090**		mg/Kg	50	4.00

Sample: 215223 - AH-6 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	65453	Date Analyzed:	2009-11-19	Analyzed By:	kg
Prep Batch:	55929	Sample Preparation:	2009-11-19	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**1100**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		128	mg/Kg	1	100	128	70 - 130

Sample: 215223 - AH-6 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	65457	Date Analyzed:	2009-11-20	Analyzed By:	AG
Prep Batch:	55928	Sample Preparation:	2009-11-19	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**3130**	mg/Kg	50	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		53.8	mg/Kg	50	50.0	108	65.3 - 115
4-Bromofluorobenzene (4-BFB)	[9]	76.6	mg/Kg	50	50.0	153	61.7 - 121.1

Sample: 215224 - AH-6 1'-1.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65530	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55985	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Sample: 215225 - AH-6 2'-2.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	65542	Date Analyzed:	2009-11-23	Analyzed By:	tn
Prep Batch:	56012	Sample Preparation:	2009-11-23	Prepared By:	tn

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	64.4 - 111.2

continued ...

[9] High surrogate recovery due to peak interference.

sample continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		1.88	mg/Kg	1	2.00	94	43.1 - 128.4

Sample: 215225 - AH-6 2'-2.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65530	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55985	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Sample: 215226 - AH-6 3'-3.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65530	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55985	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Sample: 215227 - AH-7 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65530	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55985	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**883**	mg/Kg	50	4.00

Sample: 215227 - AH-7 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	65453	Date Analyzed:	2009-11-19	Analyzed By:	kg
Prep Batch:	55929	Sample Preparation:	2009-11-19	Prepared By:	kg

Parameter	Flag	Result	RL Result	Units	Dilution	RL
DRO			**226**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		108	mg/Kg	1	100	108	70 - 130

Sample: 215227 - AH-7 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	65457	Date Analyzed:	2009-11-20	Analyzed By:	AG
Prep Batch:	55928	Sample Preparation:	2009-11-19	Prepared By:	AG

Parameter	*Flag*	*Result*	RL *Result*	*Units*	*Dilution*	*RL*
GRO			**146**	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.41	mg/Kg	5	5.00	108	65.3 - 115
4-Bromofluorobenzene (4-BFB)	[10]	6.16	mg/Kg	5	5.00	123	61.7 - 121.1

Sample: 215228 - AH-7 1'-1.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65530	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55985	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	Result	RL Result	Units	Dilution	RL
Chloride			**2950**	mg/Kg	100	4.00

[10] High surrogate recovery due to peak interference.

Sample: 215229 - AH-7 2'-2.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65530	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55985	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**3010**	mg/Kg	100	4.00

Sample: 215230 - AH-7 3'-3.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65530	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55985	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**482**	mg/Kg	50	4.00

Sample: 215231 - AH-7 4'-4.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65530	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55985	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Sample: 215232 - AH-8 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65530	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55985	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1110**	mg/Kg	50	4.00

Sample: 215232 - AH-8 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	65453	Date Analyzed:	2009-11-19	Analyzed By:	kg
Prep Batch:	55929	Sample Preparation:	2009-11-19	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**170**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		107	mg/Kg	1	100	107	70 - 130

Sample: 215232 - AH-8 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	65457	Date Analyzed:	2009-11-20	Analyzed By:	AG
Prep Batch:	55928	Sample Preparation:	2009-11-19	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**111**	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.37	mg/Kg	5	5.00	107	65.3 - 115
4-Bromofluorobenzene (4-BFB)		5.32	mg/Kg	5	5.00	106	61.7 - 121.1

Sample: 215233 - AH-8 1'-1.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65531	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55986	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Sample: 215234 - AH-8 2'-2.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65531	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55986	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**361**	mg/Kg	50	4.00

Sample: 215235 - AH-8 3'-3.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65531	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55986	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**422**	mg/Kg	50	4.00

Sample: 215236 - AH-2 4'-4.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65531	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55986	Sample Preparation:	2009-11-23	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**224**	mg/Kg	50	4.00

Sample: 215237 - AH-3 3'-3.5' 6 in. BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	65531	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55986	Sample Preparation:	2009-11-23	Prepared By:	AR

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

Method Blank (1) QC Batch: 65453

QC Batch:	65453	Date Analyzed:	2009-11-19	Analyzed By:	kg
Prep Batch:	55929	QC Preparation:	2009-11-19	Prepared By:	kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		95.2	mg/Kg	1	100	95	70 - 130

Method Blank (1) QC Batch: 65457

QC Batch:	65457	Date Analyzed:	2009-11-20	Analyzed By:	AG
Prep Batch:	55928	QC Preparation:	2009-11-19	Prepared By:	AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.21	mg/Kg	1	2.00	110	66.2 - 125
4-Bromofluorobenzene (4-BFB)		1.82	mg/Kg	1	2.00	91	62 - 120.5

Method Blank (1) QC Batch: 65528

QC Batch:	65528	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55983	QC Preparation:	2009-11-23	Prepared By:	AR

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

Method Blank (1) QC Batch: 65529

QC Batch:	65529	Date Analyzed:	2009-11-23	Analyzed By:	AR
Prep Batch:	55984	QC Preparation:	2009-11-23	Prepared By:	AR

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

Method Blank (1) QC Batch: 65530

QC Batch: 65530 Date Analyzed: 2009-11-23 Analyzed By: AR
Prep Batch: 55985 QC Preparation: 2009-11-23 Prepared By: AR

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

Method Blank (1) QC Batch: 65531

QC Batch: 65531 Date Analyzed: 2009-11-23 Analyzed By: AR
Prep Batch: 55986 QC Preparation: 2009-11-23 Prepared By: AR

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

Method Blank (1) QC Batch: 65542

QC Batch: 65542 Date Analyzed: 2009-11-23 Analyzed By: tn
Prep Batch: 56012 QC Preparation: 2009-11-23 Prepared By: tn

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.14	mg/Kg	1	2.00	107	64.9 - 122.7
4-Bromofluorobenzene (4-BFB)		1.80	mg/Kg	1	2.00	90	43.9 - 121.9

Method Blank (1) QC Batch: 65629

QC Batch: 65629 | Date Analyzed: | Analyzed By:
Prep Batch: | QC Preparation: | Prepared By:

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	64.9 - 122.7
4-Bromofluorobenzene (4-BFB)		1.80	mg/Kg	1	2.00	90	43.9 - 121.9

Laboratory Control Spike (LCS-1)

QC Batch: 65453 | Date Analyzed: 2009-11-19 | Analyzed By: kg
Prep Batch: 55929 | QC Preparation: 2009-11-19 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	203	mg/Kg	1	250	<5.86	81	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	203	mg/Kg	1	250	<5.86	81	57.4 - 133.4	0	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	108	107	mg/Kg	1	100	108	107	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 65457 | Date Analyzed: 2009-11-20 | Analyzed By: AG
Prep Batch: 55928 | QC Preparation: 2009-11-19 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.5	mg/Kg	1	20.0	<0.396	72	52.5 - 114.3

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.4	mg/Kg	1	20.0	<0.396	72	52.5 - 114.3	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.17	2.16	mg/Kg	1	2.00	108	108	66.2 - 128.7
4-Bromofluorobenzene (4-BFB)	1.87	1.84	mg/Kg	1	2.00	94	92	64.1 - 127.4

Laboratory Control Spike (LCS-1)

QC Batch: 65528 | Date Analyzed: 2009-11-23 | Analyzed By: AR
Prep Batch: 55983 | QC Preparation: 2009-11-23 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	101	mg/Kg	1	100	<2.18	101	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 65529 | Date Analyzed: 2009-11-23 | Analyzed By: AR
Prep Batch: 55984 | QC Preparation: 2009-11-23 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.6	mg/Kg	1	100	<2.18	100	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	103	mg/Kg	1	100	<2.18	103	85 - 115	3	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: 65530 | Date Analyzed: 2009-11-23 | Analyzed By: AR
Prep Batch: 55985 | QC Preparation: 2009-11-23 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.8	mg/Kg	1	100	<2.18	99	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<2.18	101	85 - 115	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 65531 | Date Analyzed: 2009-11-23 | Analyzed By: AR
Prep Batch: 55986 | QC Preparation: 2009-11-23 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.7	mg/Kg	1	100	<2.18	100	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115	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: 65542 | Date Analyzed: 2009-11-23 | Analyzed By: tn
Prep Batch: 56012 | QC Preparation: 2009-11-23 | Prepared By: tn

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.97	mg/Kg	1	2.00	<0.00410	98	75.4 - 115.7
Toluene	1.96	mg/Kg	1	2.00	<0.00310	98	78.4 - 113.6
Ethylbenzene	1.93	mg/Kg	1	2.00	<0.00240	96	76 - 114.2
Xylene	5.76	mg/Kg	1	6.00	<0.00650	96	76.9 - 113.6

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.01	mg/Kg	1	2.00	<0.00410	100	75.4 - 115.7	2	20
Toluene	1.99	mg/Kg	1	2.00	<0.00310	100	78.4 - 113.6	2	20
Ethylbenzene	1.97	mg/Kg	1	2.00	<0.00240	98	76 - 114.2	2	20
Xylene	5.90	mg/Kg	1	6.00	<0.00650	98	76.9 - 113.6	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)	2.08	2.10	mg/Kg	1	2.00	104	105	65 - 122.9
4-Bromofluorobenzene (4-BFB)	1.88	1.88	mg/Kg	1	2.00	94	94	43.8 - 124.9

Laboratory Control Spike (LCS-1)

QC Batch: 65629 | Date Analyzed: | Analyzed By:
Prep Batch: | QC Preparation: | Prepared By:

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.00	mg/Kg	1	2.00	<0.00410	100	75.4 - 115.7
Toluene	1.99	mg/Kg	1	2.00	<0.00310	100	78.4 - 113.6
Ethylbenzene	1.95	mg/Kg	1	2.00	<0.00240	98	76 - 114.2
Xylene	5.82	mg/Kg	1	6.00	<0.00650	97	76.9 - 113.6

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.95	mg/Kg	1	2.00	<0.00410	98	75.4 - 115.7	2	20
Toluene	1.94	mg/Kg	1	2.00	<0.00310	97	78.4 - 113.6	2	20
Ethylbenzene	1.91	mg/Kg	1	2.00	<0.00240	96	76 - 114.2	2	20
Xylene	5.70	mg/Kg	1	6.00	<0.00650	95	76.9 - 113.6	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)	2.13	2.11	mg/Kg	1	2.00	106	106	65 - 122.9
4-Bromofluorobenzene (4-BFB)	1.91	1.88	mg/Kg	1	2.00	96	94	43.8 - 124.9

Matrix Spike (MS-1) Spiked Sample: 215283

QC Batch: 65453 | Date Analyzed: 2009-11-19 | Analyzed By: kg
Prep Batch: 55929 | QC Preparation: 2009-11-19 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	157	mg/Kg	1	250	<5.86	63	35.2 - 167.1

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	162	mg/Kg	1	250	<5.86	65	35.2 - 167.1	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	85.8	91.6	mg/Kg	1	100	86	92	70 - 130

Matrix Spike (MS-1) Spiked Sample: 214963

QC Batch: 65457 | Date Analyzed: 2009-11-20 | Analyzed By: AG
Prep Batch: 55928 | QC Preparation: 2009-11-19 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	13.9	mg/Kg	1	20.0	<0.396	70	10 - 198.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.0	mg/Kg	1	20.0	<0.396	75	10 - 198.3	8	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.04	2.12	mg/Kg	1	2	102	106	65.5 - 123
4-Bromofluorobenzene (4-BFB)	1.91	1.93	mg/Kg	1	2	96	96	58.6 - 140

Matrix Spike (MS-1) Spiked Sample: 215212

QC Batch: 65528 | Date Analyzed: 2009-11-23 | Analyzed By: AR
Prep Batch: 55983 | QC Preparation: 2009-11-23 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9730	mg/Kg	100	10000	<218	97	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10100	mg/Kg	100	10000	<218	101	85 - 115	4	20

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

Matrix Spike (MS-1) Spiked Sample: 215222

QC Batch: 65529 | Date Analyzed: 2009-11-23 | Analyzed By: AR
Prep Batch: 55984 | QC Preparation: 2009-11-23 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10500	mg/Kg	100	10000	<218	105	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10600	mg/Kg	100	10000	<218	106	85 - 115	1	20

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

Matrix Spike (MS-1) Spiked Sample: 215232

QC Batch: 65530 | Date Analyzed: 2009-11-23 | Analyzed By: AR
Prep Batch: 55985 | QC Preparation: 2009-11-23 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11500	mg/Kg	100	10000	1110	104	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11700	mg/Kg	100	10000	1110	106	85 - 115	2	20

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

Matrix Spike (MS-1) Spiked Sample: 215496

QC Batch: 65531 | Date Analyzed: 2009-11-23 | Analyzed By: AR
Prep Batch: 55986 | QC Preparation: 2009-11-23 | Prepared By: AR

continued ...

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10900	mg/Kg	100	10000	813	101	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11200	mg/Kg	100	10000	813	104	85 - 115	3	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: 215283

QC Batch: 65542 | Date Analyzed: 2009-11-23 | Analyzed By: tn
Prep Batch: 56012 | QC Preparation: 2009-11-23 | Prepared By: tn

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.20	mg/Kg	1	2.00	<0.00410	110	57.7 - 140.7
Toluene	2.22	mg/Kg	1	2.00	<0.00310	111	53.4 - 146.6
Ethylbenzene	2.26	mg/Kg	1	2.00	<0.00240	113	62.1 - 141.6
Xylene	6.77	mg/Kg	1	6.00	<0.00650	113	61.2 - 142.7

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	[11]	1.74	mg/Kg	1	2.00	<0.00410	87	57.7 - 140.7	23	20
Toluene	[12]	1.77	mg/Kg	1	2.00	<0.00310	88	53.4 - 146.6	23	20
Ethylbenzene	[13]	1.81	mg/Kg	1	2.00	<0.00240	90	62.1 - 141.6	22	20
Xylene	[14]	5.43	mg/Kg	1	6.00	<0.00650	90	61.2 - 142.7	22	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.11	2.09	mg/Kg	1	2	106	104	62.7 - 119.6
4-Bromofluorobenzene (4-BFB)	1.89	1.89	mg/Kg	1	2	94	94	49.6 - 136.7

[11] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[12] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[13] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[14] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

Matrix Spike (MS-1) Spiked Sample: 215596

QC Batch: 65629 | Date Analyzed: | Analyzed By:
Prep Batch: | QC Preparation: | Prepared By:

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	[15]	3.04	mg/Kg	1	2.00	<0.00410	152	57.7 - 140.7
Toluene	[16]	3.12	mg/Kg	1	2.00	<0.00310	156	53.4 - 146.6
Ethylbenzene	[17]	3.21	mg/Kg	1	2.00	<0.00240	160	62.1 - 141.6
Xylene	[18]	9.65	mg/Kg	1	6.00	<0.00650	161	61.2 - 142.7

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.51	mg/Kg	1	2.00	<0.00410	126	57.7 - 140.7	19	20
Toluene	2.56	mg/Kg	1	2.00	<0.00310	128	53.4 - 146.6	20	20
Ethylbenzene	2.65	mg/Kg	1	2.00	<0.00240	132	62.1 - 141.6	19	20
Xylene	7.92	mg/Kg	1	6.00	<0.00650	132	61.2 - 142.7	20	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.08	2.00	mg/Kg	1	2	104	100	62.7 - 119.6
4-Bromofluorobenzene (4-BFB)	1.94	1.82	mg/Kg	1	2	97	91	49.6 - 136.7

Standard (CCV-1)

QC Batch: 65453 | Date Analyzed: 2009-11-19 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	207	83	80 - 120	2009-11-19

Standard (CCV-2)

QC Batch: 65453 | Date Analyzed: 2009-11-19 | Analyzed By: kg

[15]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[16]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[17]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[18]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	206	82	80 - 120	2009-11-19

Standard (CCV-3)

QC Batch: 65453 Date Analyzed: 2009-11-19 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	214	86	80 - 120	2009-11-19

Standard (CCV-2)

QC Batch: 65457 Date Analyzed: 2009-11-20 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.921	92	80 - 120	2009-11-20

Standard (CCV-3)

QC Batch: 65457 Date Analyzed: 2009-11-20 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.987	99	80 - 120	2009-11-20

Standard (ICV-1)

QC Batch: 65528 Date Analyzed: 2009-11-23 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	106	106	85 - 115	2009-11-23

Standard (CCV-1)

QC Batch: 65528 Date Analyzed: 2009-11-23 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	94.2	94	85 - 115	2009-11-23

Standard (ICV-1)

QC Batch: 65529 Date Analyzed: 2009-11-23 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	96.2	96	85 - 115	2009-11-23

Standard (CCV-1)

QC Batch: 65529 Date Analyzed: 2009-11-23 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	104	104	85 - 115	2009-11-23

Standard (ICV-1)

QC Batch: 65530 Date Analyzed: 2009-11-23 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.1	98	85 - 115	2009-11-23

Standard (CCV-1)

QC Batch: 65530 Date Analyzed: 2009-11-23 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2009-11-23

Standard (ICV-1)

QC Batch: 65531 Date Analyzed: 2009-11-23 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2009-11-23

Standard (CCV-1)

QC Batch: 65531 Date Analyzed: 2009-11-23 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.9	98	85 - 115	2009-11-23

Standard (CCV-1)

QC Batch: 65542 Date Analyzed: 2009-11-23 Analyzed By: tn

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0984	98	80 - 120	2009-11-23
Toluene		mg/Kg	0.100	0.0972	97	80 - 120	2009-11-23
Ethylbenzene		mg/Kg	0.100	0.0968	97	80 - 120	2009-11-23
Xylene		mg/Kg	0.300	0.290	97	80 - 120	2009-11-23

Standard (CCV-2)

QC Batch: 65542 Date Analyzed: 2009-11-23 Analyzed By: tn

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0990	99	80 - 120	2009-11-23
Toluene		mg/Kg	0.100	0.0978	98	80 - 120	2009-11-23
Ethylbenzene		mg/Kg	0.100	0.0958	96	80 - 120	2009-11-23
Xylene		mg/Kg	0.300	0.287	96	80 - 120	2009-11-23

Standard (CCV-2)

QC Batch: 65629 Date Analyzed: Analyzed By:

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0979	98	80 - 120	2009-11-25
Toluene		mg/Kg	0.100	0.0973	97	80 - 120	2009-11-25
Ethylbenzene		mg/Kg	0.100	0.0957	96	80 - 120	2009-11-25
Xylene		mg/Kg	0.300	0.285	95	80 - 120	2009-11-25

Standard (CCV-3)

QC Batch: 65629 | Date Analyzed: | Analyzed By:

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.104	104	80 - 120	2009-11-25
Toluene		mg/Kg	0.100	0.103	103	80 - 120	2009-11-25
Ethylbenzene		mg/Kg	0.100	0.101	101	80 - 120	2009-11-25
Xylene		mg/Kg	0.300	0.300	100	80 - 120	2009-11-25

Order #: 9111903

Analysis Request of Chain of Custody Record

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6402 0369

PROJECT NAME: COG / Skelly 942 Eddy Co. NM

LAB I.D. NUMBER	DATE 2009	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
215203	11/17		S		X	AH-1	0-1'	6" BEB	1				X			X											X				
204						AH-1	1-1.5'	6" BEB																								
205						AH-1	2'-2.5'	6" BEB																								
206						AH-1	3'-3.5'	6" BEB																								
207						AH-2	0-1'	6" BEB								X																
208						AH-2	1-1.5'	6" BEB																								
209						AH-2	2'-2.5'	6" BEB																								
210						AH-2	3'-3.5'	6" BEB																								
211						AH-3	0-1'	6" BEB								X																
212						AH-3	1-1.5'	6" BEB																								

RELINQUISHED BY: (Signature) Date: 11/18/09 Time: 1702 RECEIVED BY: (Signature) Date: 11/18/09 Time: 1702

SAMPLED BY: (Print & Initial) Robert Gibbs Jr Date: 11/18/09 Time: 0833

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

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

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace RECEIVED BY: (Signature)

ADDRESS: CITY: Midland STATE: TX ZIP:

CONTACT: Mindo PHONE: DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact

REMARKS: Run deeper sample if TPH exceeds 5,000 mg/kg

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

Run (6) BTEX highest TPH, Run deeper (samples) Btex. if Benzene exceeds 10 mg/kg or total BTEX exceeds 50 mg/

Order #: 9111903

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6410036G
PROJECT NAME: COG / Shell 942 Eddy Co. NM

LAB I.D. NUMBER	DATE 2009	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
215213	4/17		S		X	AH-3	2'-2.5'	6" BEB	1				X	
214						AH-4	0-1'	6" BEB						
215						AH-4	1'-1.5'	6" BEB						
216						AH-4	2'-2.5'	6" BEB						
217						AH-4	3'-3.5'	6" BEB						
218						AH-4	4'-4.5'	6" BEB						
219						AH-5	0-1'	6" BEB						
220						AH-5	1'-1.5'	6" BEB						
221						AH-5	2'-2.5'	6" BEB						
222	↓		↓		↓	AH-5	3'-3.5'	6" BEB	↓				↓	

BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC:MS Vol. 8240/6260/624	GC:MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
	X											X				

RELINQUISHED BY: (Signature) Robert Gabbs Jr. Date: 11/18/09 Time: 1702
RECEIVED BY: (Signature) Date: 11/18/09 Time: 17:02
SAMPLED BY: (Print & Initial) Robert Gabbs Jr. Date: 11/18/09 Time: 0840

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

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez
Results by:
RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: Monda PHONE: RECEIVED BY: (Signature)
DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 4.0°c in Ice

REMARKS: Run deeper sample if TPH exceed 5,000 mg/kg

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

Run (6) BTEX - highest TPH, Run deeper BTEX, If Benzene exceed 10 mg/kg (combo) or Total BTEX exceeds 50

Order #: 9111903

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 4

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-42003.09

PROJECT NAME: COG / Skelly 942

LAB I.D. NUMBER	DATE 2009	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH TX1005 (Ext. to C35) / 8015 MOD	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
215223	11/18		S		X	AH-6	0-1'	6" BEB	1				1			X										X				
224						AH-6	1-1.5'	6" BEB																							
225						AH-6	2-2.5'	6" BEB																							
226						AH-6	3-3.5'	6" BEB																							
227						AH-7	0-1	6" BEB								X															
228						AH-7	1-1.5'	6" BEB																							
229						AH-7	2-2.5'	6" BEB																							
230						AH-7	3-3.5	6" BEB																							
231						AH-7	4-4.5'	6" BEB																							
232	✓		✓		✓	AH-8		6" BEB	✓				✓			X											✓				

RELINQUISHED BY: (Signature) Robert Gibbs Jr. Date: 11/18/05 Time: 1702

RECEIVED BY: (Signature) Date: 11/18/05 Time: 1752

SAMPLED BY: (Print & Initial) Robert Gibbs Jr. Date: 11/18/05 Time: 0830

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

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

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: Trace PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact

REMARKS: Run deeper sample if TPH exceed 5,000 MG/KG

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

Order #: 9111903

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-104-0369

PROJECT NAME: COG / Skelly 942

LAB I.D. NUMBER	DATE 2005	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/6260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
215233	11/18		S		X	AH-8	1'-1.5'	6" BER	1				X													X					
234	↓		↓		↓	AH-8	2'-2.5'	6" BER	↓				↓													↓					
235	↓		↓		↓	AH-8	3'-3.5'	6" BER	↓				↓													↓					
236	↓		↓		↓	AH-2	4'-4.5'	6' BER	↓				↓													↓					
237	↓		↓		↓	AH-3	3'-3.5'	6' BER	↓				↓													↓					

RELINQUISHED BY: (Signature) Robert Gobbs Jr — Date: 11/18/05 Time: 1702

RECEIVED BY: (Signature) — Date: 11/18/05 Time: 1702

SAMPLED BY: (Print & Initial) Robert Gobbs Jr — Date: 11/18/04 Time: 6400

RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: Time:

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

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: Time:

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: Monica PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0 c intact

REMARKS: Run deeper sample if TPH exceeds 5000 mg/kg

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

Summary Report

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

Report Date: December 9, 2009

Work Order: 9111903

Project Location: Eddy County, NM
Project Name: COG/Skelly 942
Project Number: 114-6400369

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215203	AH-1 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215211	AH-3 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215214	AH-4 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215219	AH-5 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215223	AH-6 0-1' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18

	BTEX			
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)
215203 - AH-1 0-1' 6 in. BEB	**2.11**	**35.0**	**38.4**	**46.4**
215211 - AH-3 0-1' 6 in. BEB	**20.8**	**102**	**76.4**	**79.2**
215214 - AH-4 0-1' 6 in. BEB	**3.40**	**38.4**	**39.7**	**40.0**
215219 - AH-5 0-1' 6 in. BEB	**1.68**	**53.2**	**73.8**	**79.9**
215223 - AH-6 0-1' 6 in. BEB	**3.49**	**75.2**	**78.3**	**90.7**

TRACEANALYSIS, INC.

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

Certifications

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

NELAP Certifications

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

Analytical and Quality Control Report

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

Report Date: December 9, 2009

Work Order: 9111903

Project Location: Eddy County, NM
Project Name: COG/Skelly 942
Project Number: 114-6400369

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
215203	AH-1 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215211	AH-3 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215214	AH-4 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215219	AH-5 0-1' 6 in. BEB	soil	2009-11-17	00:00	2009-11-18
215223	AH-6 0-1' 6 in. BEB	soil	2009-11-18	00:00	2009-11-18

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.

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

Standard Flags

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

Case Narrative

Samples for project COG/Skelly 942 were received by TraceAnalysis, Inc. on 2009-11-18 and assigned to work order 9111903. Samples for work order 9111903 were received intact at a temperature of 4.0 deg. C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	55928	2009-11-19 at 11:00	65456	2009-11-19 at 23:56

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 9111903 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 215203 - AH-1 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	65456	Date Analyzed:	2009-11-19	Analyzed By:	AG
Prep Batch:	55928	Sample Preparation:	2009-11-19	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**2.11**	mg/Kg	50	0.0100
Toluene		**35.0**	mg/Kg	50	0.0100
Ethylbenzene		**38.4**	mg/Kg	50	0.0100
Xylene		**46.4**	mg/Kg	50	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		54.4	mg/Kg	50	50.0	109	64.4 - 111.2
4-Bromofluorobenzene (4-BFB)		40.3	mg/Kg	50	50.0	81	43.1 - 128.4

Sample: 215211 - AH-3 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	65456	Date Analyzed:	2009-11-19	Analyzed By:	AG
Prep Batch:	55928	Sample Preparation:	2009-11-19	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**20.8**	mg/Kg	50	0.0100
Toluene		**102**	mg/Kg	50	0.0100
Ethylbenzene		**76.4**	mg/Kg	50	0.0100
Xylene		**79.2**	mg/Kg	50	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		52.3	mg/Kg	50	50.0	105	64.4 - 111.2
4-Bromofluorobenzene (4-BFB)		42.7	mg/Kg	50	50.0	85	43.1 - 128.4

Sample: 215214 - AH-4 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	65456	Date Analyzed:	2009-11-19	Analyzed By:	AG
Prep Batch:	55928	Sample Preparation:	2009-11-19	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**3.40**	mg/Kg	50	0.0100
Toluene		**38.4**	mg/Kg	50	0.0100
Ethylbenzene		**39.7**	mg/Kg	50	0.0100
Xylene		**40.0**	mg/Kg	50	0.0100

Surrogate	*Flag*	*Result*	*Units*	*Dilution*	Spike *Amount*	Percent *Recovery*	Recovery *Limits*
Trifluorotoluene (TFT)		53.8	mg/Kg	50	50.0	108	64.4 - 111.2
4-Bromofluorobenzene (4-BFB)		39.6	mg/Kg	50	50.0	79	43.1 - 128.4

Sample: 215219 - AH-5 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	65456	Date Analyzed:	2009-11-19	Analyzed By:	AG
Prep Batch:	55928	Sample Preparation:	2009-11-19	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**1.68**	mg/Kg	50	0.0100
Toluene		**53.2**	mg/Kg	50	0.0100
Ethylbenzene		**73.8**	mg/Kg	50	0.0100
Xylene		**79.9**	mg/Kg	50	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		53.8	mg/Kg	50	50.0	108	64.4 - 111.2
4-Bromofluorobenzene (4-BFB)		45.5	mg/Kg	50	50.0	91	43.1 - 128.4

Sample: 215223 - AH-6 0-1' 6 in. BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	65456	Date Analyzed:	2009-11-19	Analyzed By:	AG
Prep Batch:	55928	Sample Preparation:	2009-11-19	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**3.49**	mg/Kg	50	0.0100
Toluene		**75.2**	mg/Kg	50	0.0100
Ethylbenzene		**78.3**	mg/Kg	50	0.0100
Xylene		**90.7**	mg/Kg	50	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		53.6	mg/Kg	50	50.0	107	64.4 - 111.2
4-Bromofluorobenzene (4-BFB)		46.0	mg/Kg	50	50.0	92	43.1 - 128.4

Method Blank (1) QC Batch: 65456

QC Batch: 65456 | Date Analyzed: 2009-11-19 | Analyzed By: AG
Prep Batch: 55928 | QC Preparation: 2009-11-19 | Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.15	mg/Kg	1	2.00	108	64.9 - 122.7
4-Bromofluorobenzene (4-BFB)		1.31	mg/Kg	1	2.00	66	43.9 - 121.9

Laboratory Control Spike (LCS-1)

QC Batch: 65456 | Date Analyzed: 2009-11-19 | Analyzed By: AG
Prep Batch: 55928 | QC Preparation: 2009-11-19 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.92	mg/Kg	1	2.00	<0.00410	96	75.4 - 115.7
Toluene	1.90	mg/Kg	1	2.00	<0.00310	95	78.4 - 113.6
Ethylbenzene	1.86	mg/Kg	1	2.00	<0.00240	93	76 - 114.2
Xylene	5.57	mg/Kg	1	6.00	<0.00650	93	76.9 - 113.6

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.94	mg/Kg	1	2.00	<0.00410	97	75.4 - 115.7	1	20
Toluene	1.93	mg/Kg	1	2.00	<0.00310	96	78.4 - 113.6	2	20
Ethylbenzene	1.90	mg/Kg	1	2.00	<0.00240	95	76 - 114.2	2	20
Xylene	5.69	mg/Kg	1	6.00	<0.00650	95	76.9 - 113.6	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)	2.09	2.13	mg/Kg	1	2.00	104	106	65 - 122.9
4-Bromofluorobenzene (4-BFB)	1.34	1.37	mg/Kg	1	2.00	67	68	43.8 - 124.9

Matrix Spike (MS-1) Spiked Sample: 214963

QC Batch: 65456 | Date Analyzed: 2009-11-19 | Analyzed By: AG
Prep Batch: 55928 | QC Preparation: 2009-11-19 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.16	mg/Kg	1	2.00	<0.00410	108	57.7 - 140.7
Toluene	2.18	mg/Kg	1	2.00	<0.00310	109	53.4 - 146.6
Ethylbenzene	2.20	mg/Kg	1	2.00	<0.00240	110	62.1 - 141.6
Xylene	6.59	mg/Kg	1	6.00	<0.00650	110	61.2 - 142.7

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	[1]	1.29	mg/Kg	1	2.00	<0.00410	64	57.7 - 140.7	50	20
Toluene	[2]	1.32	mg/Kg	1	2.00	<0.00310	66	53.4 - 146.6	49	20
Ethylbenzene	[3]	1.35	mg/Kg	1	2.00	<0.00240	68	62.1 - 141.6	48	20
Xylene	[4]	4.03	mg/Kg	1	6.00	<0.00650	67	61.2 - 142.7	48	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.15	2.15	mg/Kg	1	2	108	108	62.7 - 119.6
4-Bromofluorobenzene (4-BFB)	1.39	1.39	mg/Kg	1	2	70	70	49.6 - 136.7

Standard (CCV-2)

QC Batch: 65456 | Date Analyzed: 2009-11-19 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0961	96	80 - 120	2009-11-19
Toluene		mg/Kg	0.100	0.0945	94	80 - 120	2009-11-19
Ethylbenzene		mg/Kg	0.100	0.0925	92	80 - 120	2009-11-19

continued ...

[1] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[2] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[3] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[4] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Xylene		mg/Kg	0.300	0.274	91	80 - 120	2009-11-19

Standard (CCV-3)

QC Batch: 65456 Date Analyzed: 2009-11-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0972	97	80 - 120	2009-11-19
Toluene		mg/Kg	0.100	0.0966	97	80 - 120	2009-11-19
Ethylbenzene		mg/Kg	0.100	0.0940	94	80 - 120	2009-11-19
Xylene		mg/Kg	0.300	0.280	93	80 - 120	2009-11-19

Order #: 9111903

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 4

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

ANALYSIS REQUEST (Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6440 0369

PROJECT NAME: COG / Skelly 942 Eddy Co. NM

LAB I.D. NUMBER	DATE 2009	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
215203	11/7		S		X	AH-1	0-1'	6" BEB	1				X			X											X				
204						AH-1	1-1.5'	6" BEB																								
205						AH-1	2-2.5'	6" BEB																								
206						AH-1	3-3.5'	6" BEB																								
207						AH-2	0-1'	6" BEB								X																
208						AH-2	1-1.5'	6" BEB																								
209						AH-2	2-2.5'	6" BEB																								
210						AH-2	3-3.5'	6" BEB																								
211						AH-3 BK	0-1'	6" BEB								X																
212						AH-3 BK	1-1.5'	6" BEB																								

RELINQUISHED BY: (Signature) Robert Gubbs — Date: 11/8/09 Time: 1702 — RECEIVED BY: (Signature) — Date: 11/8/09 Time: 1702

SAMPLED BY: (Print & Initial) Robert Gubbs Jr — Date: 11/08/09 Time: 0835

RELINQUISHED BY: (Signature) — Date: — Time: — RECEIVED BY: (Signature) — Date: — Time:

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

RELINQUISHED BY: (Signature) — Date: — Time: — RECEIVED BY: (Signature) — Date: — Time:

TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RECEIVING LABORATORY: Trace — RECEIVED BY: (Signature)

ADDRESS: — CITY: Midland STATE: TX ZIP: — CONTACT: Mundo PHONE: — DATE: — TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact

REMARKS: Run deeper sample if TPH exceeds 5,000 mg/kg

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

Run (6) BTEX higher TPH, Run deeper (samples) Btex. if Benzene exceeds 10 mg/kg or total BTEX exceeds 50 mg/kg

Order #: 9111903

Analysis Request of Chain of Custody Record

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401036G

PROJECT NAME: COG / Shell 942 Eddy Co. NM

LAB I.D. NUMBER	DATE 2009	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8082/608	Pest. 808/608	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
215213	4/17		S		X	AH-3 2'-2.5' 6" BEB	1				X													X				
214						AH-4 0-1' 6" BEB									X														
215						AH-4 1'-1.5' 6" BEB																							
216						AH4 2'-2.5' 6" BEB																							
217						AH-4 3'-3.5' 6" BEB																							
218						AH-4 4'-4.5' 6" BEB																							
219						AH-5 0-1' 6" BEB									X														
220						AH-5 1'-1.5' 6" BEB																							
221						AH-5 2'-2.5' 6" BEB																							
222	↓		↓		↓	AH-5 3'-3.5' 6" BEB	↓				↓													↓				

RELINQUISHED BY: (Signature) Robert Rivera Jr. Date: 11/18/09 Time: 1400

RECEIVED BY: (Signature) Date: 11/18/09 Time: 17:02

SAMPLED BY: (Print & Initial) Robert Gabbs, Jr. Date: 11/17/2009 Time: 0840

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

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

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: Hanna PHONE: DATE: TIME:

RECEIVED BY: (Signature)

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C in/ice

REMARKS: Run deeper sample if TPH exceed 5,000 mg/kg

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

Run (6) BTEX - highest TPH, Run deeper BTEX, If Benzene exceed 10 mg/kg (Composite) or Total BTEX exceed 50 mg/kg

Order #: 9111903

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 4

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-41003-05	COG / Shell 942

LAB I.D. NUMBER	DATE 2005	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8081/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
215223	11/18		S		X	AH-6	0-1'	6" BEB	1				1			X											X				
224						AH-6	1-1.5'	6" BEB																								
225						AH-6	2-2.5'	6" BEB																								
226						AH-6	3-3.5'	6" BEB																								
227						AH-7	0-1	6" BEB								X																
228						AH-7	1-1.5'	6" BEB																								
229						AH-7	2-2.5'	6" BEB																								
230						AH-7	3-3.5	6" BEB																								
231						AH-7	4-4.5'	6" BEB																								
232	↓		↓		↓	AH-8	0-1	6" BEB	↓				↓			X											↓				

RELINQUISHED BY: (Signature) Robert Gibbs Jr	Date: 11/18/05 Time: 1702	RECEIVED BY: (Signature)	Date: 11/18/05 Time: 17:02
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RECEIVING LABORATORY: Trace		RECEIVED BY: (Signature)	
ADDRESS:			
CITY: Midland STATE: TX ZIP:		DATE:	TIME:
CONTACT: PHONE:			

SAMPLED BY: (Print & Initial) Robert Gibbs Jr — Date: 11/18/05 Time: 0830

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

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°c intact

REMARKS: Run deeper sample if TPH exceed 5,000 mg/kg

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

Order #: 9111903

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 4

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-64402369	COG / Skelly 942

LAB I.D. NUMBER	DATE 2004	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
215233	11/18		S		X	AH-8	1'-1.5'	6" BEB	1				X														X				
234	↓		↓		↓	AH-8	2'-2.5'	6" BEB	↓				↓														↓				
235	↓		↓		↓	AH-8	3'-3.5'	6" BEB	↓				↓														↓				
236	↓		↓		↓	AH-2	4'-4.5'	6' BEB	↓				↓														↓				
237	↓		↓		↓	AH-3	3'-3.5'	6' BEB	↓				↓														↓				

RELINQUISHED BY: (Signature) Robert Grubbs Jr	Date: 11/18/04 Time: 1702	RECEIVED BY: (Signature)	Date: 11/18/04 Time: 7:02
SAMPLED BY: (Print & Initial) Robert Grubbs Jr	Date: 11/18/04 Time: 0900		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez	Results by: RUSH Charges Authorized: Yes No		
RECEIVING LABORATORY: Trace ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: Monte PHONE:	RECEIVED BY: (Signature) DATE: TIME:		

SAMPLE CONDITION WHEN RECEIVED: 4.0 c intact

REMARKS: Run deeper sample if TPH exceeds 5000 MG/KG

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

Summary Report

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

Report Date: December 31, 2009

Work Order: 9121601

Project Location: Eddy County, NM
Project Name: COG/Skelly 942
Project Number: 114-6400369

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
217285	CS-1 0-1' 1' BEB	soil	2009-12-15	00:00	2009-12-15
217287	CS-2 0-1' 3' BEB	soil	2009-12-15	00:00	2009-12-15
217288	CS-3 0-1' 1' BEB	soil	2009-12-15	00:00	2009-12-15
217290	CS-4 0-1' 1.5' BEB	soil	2009-12-15	00:00	2009-12-15
217291	CS-5 0-1' 1' BEB	soil	2009-12-15	00:00	2009-12-15
217292	CS-5 1-1.5' 1' BEB	soil	2009-12-15	00:00	2009-12-15
217293	CS-6 0-1' 1' BEB	soil	2009-12-15	00:00	2009-12-15
217295	CS-7 0-1' 3' BEB	soil	2009-12-15	00:00	2009-12-15
217296	CS-8 0-1' 1' BEB	soil	2009-12-15	00:00	2009-12-15

	BTEX			
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)
217285 - CS-1 0-1' 1' BEB	<0.0100	<0.0100	<0.0100	**0.205**
217287 - CS-2 0-1' 3' BEB	<0.0100	<0.0100	<0.0100	<0.0100
217288 - CS-3 0-1' 1' BEB	**0.668**	**12.6**	**9.44**	**18.4**
217290 - CS-4 0-1' 1.5' BEB	<0.0100	**0.0641**	**0.390**	**0.741**
217291 - CS-5 0-1' 1' BEB	**4.02**	**58.0**	**74.0**	**82.5**
217292 - CS-5 1-1.5' 1' BEB	<0.0200	<0.0200	**0.0239**	**0.0433**
217293 - CS-6 0-1' 1' BEB	**0.140**	**11.3**	**18.6**	**19.2**
217295 - CS-7 0-1' 3' BEB	<0.0100	<0.0100	<0.0100	<0.0100
217296 - CS-8 0-1' 1' BEB	<0.0100	**0.290**	**1.86**	**1.72**

TRACEANALYSIS, INC.

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

Certifications

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

NELAP Certifications

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

Analytical and Quality Control Report

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

Report Date: December 31, 2009

Work Order: 9121601

Project Location: Eddy County, NM
Project Name: COG/Skelly 942
Project Number: 114-6400369

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
217285	CS-1 0-1' 1' BEB	soil	2009-12-15	00:00	2009-12-15
217287	CS-2 0-1' 3' BEB	soil	2009-12-15	00:00	2009-12-15
217288	CS-3 0-1' 1' BEB	soil	2009-12-15	00:00	2009-12-15
217290	CS-4 0-1' 1.5' BEB	soil	2009-12-15	00:00	2009-12-15
217291	CS-5 0-1' 1' BEB	soil	2009-12-15	00:00	2009-12-15
217292	CS-5 1-1.5' 1' BEB	soil	2009-12-15	00:00	2009-12-15
217293	CS-6 0-1' 1' BEB	soil	2009-12-15	00:00	2009-12-15
217295	CS-7 0-1' 3' BEB	soil	2009-12-15	00:00	2009-12-15
217296	CS-8 0-1' 1' BEB	soil	2009-12-15	00:00	2009-12-15

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 12 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

Standard Flags

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

Case Narrative

Samples for project COG/Skelly 942 were received by TraceAnalysis, Inc. on 2009-12-15 and assigned to work order 9121601. Samples for work order 9121601 were received intact at a temperature of 4.0 deg. C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	56577	2009-12-21 at 15:00	66187	2009-12-21 at 12:51
BTEX	S 8021B	56739	2009-12-30 at 15:26	66373	2009-12-30 at 15:26

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 9121601 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 217285 - CS-1 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66187	Date Analyzed:	2009-12-21	Analyzed By:	AG
Prep Batch:	56577	Sample Preparation:	2009-12-21	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		**0.205**	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.54	mg/Kg	1	2.00	127	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.29	mg/Kg	1	2.00	114	43.1 - 158.4

Sample: 217287 - CS-2 0-1' 3' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66187	Date Analyzed:	2009-12-21	Analyzed By:	AG
Prep Batch:	56577	Sample Preparation:	2009-12-21	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.62	mg/Kg	1	2.00	131	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.25	mg/Kg	1	2.00	112	43.1 - 158.4

Sample: 217288 - CS-3 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66187	Date Analyzed:	2009-12-21	Analyzed By:	AG
Prep Batch:	56577	Sample Preparation:	2009-12-21	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**0.668**	mg/Kg	50	0.0100
Toluene		**12.6**	mg/Kg	50	0.0100
Ethylbenzene		**9.44**	mg/Kg	50	0.0100
Xylene		**18.4**	mg/Kg	50	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		57.5	mg/Kg	50	50.0	115	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		56.4	mg/Kg	50	50.0	113	43.1 - 158.4

Sample: 217290 - CS-4 0-1' 1.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66187	Date Analyzed:	2009-12-21	Analyzed By:	AG
Prep Batch:	56577	Sample Preparation:	2009-12-21	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		**0.0641**	mg/Kg	1	0.0100
Ethylbenzene		**0.390**	mg/Kg	1	0.0100
Xylene		**0.741**	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.80	mg/Kg	1	2.00	140	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.97	mg/Kg	1	2.00	148	43.1 - 158.4

Sample: 217291 - CS-5 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66187	Date Analyzed:	2009-12-21	Analyzed By:	AG
Prep Batch:	56577	Sample Preparation:	2009-12-21	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**4.02**	mg/Kg	20	0.0100
Toluene		**58.0**	mg/Kg	20	0.0100
Ethylbenzene		**74.0**	mg/Kg	20	0.0100
Xylene		**82.5**	mg/Kg	20	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		22.9	mg/Kg	20	20.0	114	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)	[1]	35.8	mg/Kg	20	20.0	179	43.1 - 158.4

Sample: 217292 - CS-5 1-1.5' 1' BEB

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66373	Date Analyzed:	2009-12-30	Analyzed By:	ER
Prep Batch:	56739	Sample Preparation:	2009-12-30	Prepared By:	ER

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene	B	**0.0239**	mg/Kg	1	0.0200
Xylene	B	**0.0433**	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.13	mg/Kg	1	2.00	106	71.8 - 112
4-Bromofluorobenzene (4-BFB)		2.17	mg/Kg	1	2.00	108	72.8 - 115

Sample: 217293 - CS-6 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66187	Date Analyzed:	2009-12-21	Analyzed By:	AG
Prep Batch:	56577	Sample Preparation:	2009-12-21	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**0.140**	mg/Kg	10	0.0100
Toluene		**11.3**	mg/Kg	10	0.0100
Ethylbenzene		**18.6**	mg/Kg	10	0.0100
Xylene		**19.2**	mg/Kg	10	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		11.4	mg/Kg	10	10.0	114	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		13.8	mg/Kg	10	10.0	138	43.1 - 158.4

[1] High surrogate recovery due to peak interference.

Sample: 217295 - CS-7 0-1' 3' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66187	Date Analyzed:	2009-12-21	Analyzed By:	AG
Prep Batch:	56577	Sample Preparation:	2009-12-21	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.40	mg/Kg	1	2.00	120	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.06	mg/Kg	1	2.00	103	43.1 - 158.4

Sample: 217296 - CS-8 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66187	Date Analyzed:	2009-12-21	Analyzed By:	AG
Prep Batch:	56577	Sample Preparation:	2009-12-21	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0100		mg/Kg	1	0.0100
Toluene		**0.290**		mg/Kg	1	0.0100
Ethylbenzene		**1.86**		mg/Kg	1	0.0100
Xylene		**1.72**		mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.51	mg/Kg	1	2.00	126	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		3.06	mg/Kg	1	2.00	153	43.1 - 158.4

Method Blank (1) QC Batch: 66187

QC Batch:	66187	Date Analyzed:	2009-12-21	Analyzed By:	AG
Prep Batch:	56577	QC Preparation:	2009-12-21	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.40	mg/Kg	1	2.00	120	64.9 - 142.7
4-Bromofluorobenzene (4-BFB)		1.95	mg/Kg	1	2.00	98	43.9 - 141.9

Method Blank (1) QC Batch: 66373

QC Batch: 66373 | Date Analyzed: 2009-12-30 | Analyzed By: ER
Prep Batch: 56739 | QC Preparation: 2009-12-30 | Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00331	mg/Kg	0.02
Toluene		0.0135	mg/Kg	0.02
Ethylbenzene		0.0210	mg/Kg	0.02
Xylene		0.0493	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.96	mg/Kg	1	2.00	98	71.8 - 112
4-Bromofluorobenzene (4-BFB)		1.99	mg/Kg	1	2.00	100	72.8 - 115

Laboratory Control Spike (LCS-1)

QC Batch: 66187 | Date Analyzed: 2009-12-21 | Analyzed By: AG
Prep Batch: 56577 | QC Preparation: 2009-12-21 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.87	mg/Kg	1	2.00	<0.00410	94	75.4 - 115.7
Toluene	1.95	mg/Kg	1	2.00	<0.00310	98	78.4 - 113.6
Ethylbenzene	1.96	mg/Kg	1	2.00	<0.00240	98	76 - 114.2
Xylene	5.84	mg/Kg	1	6.00	<0.00650	97	76.9 - 113.6

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.84	mg/Kg	1	2.00	<0.00410	92	75.4 - 115.7	2	20
Toluene	1.93	mg/Kg	1	2.00	<0.00310	96	78.4 - 113.6	1	20
Ethylbenzene	1.93	mg/Kg	1	2.00	<0.00240	96	76 - 114.2	2	20
Xylene	5.76	mg/Kg	1	6.00	<0.00650	96	76.9 - 113.6	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.42	2.32	mg/Kg	1	2.00	121	116	65 - 142.9
4-Bromofluorobenzene (4-BFB)	2.13	2.04	mg/Kg	1	2.00	106	102	43.8 - 144.9

Laboratory Control Spike (LCS-1)

QC Batch: 66373 | Date Analyzed: 2009-12-30 | Analyzed By: ER
Prep Batch: 56739 | QC Preparation: 2009-12-30 | Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.05	mg/Kg	1	2.00	<0.00331	102	78.9 - 113
Toluene	1.99	mg/Kg	1	2.00	0.0135	100	78.3 - 116
Ethylbenzene	2.01	mg/Kg	1	2.00	0.021	100	79.1 - 117
Xylene	6.22	mg/Kg	1	6.00	0.0493	104	79.6 - 116

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.04	mg/Kg	1	2.00	<0.00331	102	78.9 - 113	0	20
Toluene	1.99	mg/Kg	1	2.00	0.0135	100	78.3 - 116	0	20
Ethylbenzene	1.97	mg/Kg	1	2.00	0.021	98	79.1 - 117	2	20
Xylene	6.20	mg/Kg	1	6.00	0.0493	103	79.6 - 116	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.02	2.01	mg/Kg	1	2.00	101	100	70.8 - 111
4-Bromofluorobenzene (4-BFB)	2.03	2.03	mg/Kg	1	2.00	102	102	68.3 - 117

Matrix Spike (MS-1) Spiked Sample: 217295

QC Batch: 66187 | Date Analyzed: 2009-12-21 | Analyzed By: AG
Prep Batch: 56577 | QC Preparation: 2009-12-21 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.88	mg/Kg	1	2.00	<0.00410	94	57.7 - 140.7
Toluene	2.00	mg/Kg	1	2.00	<0.00310	100	53.4 - 146.6
Ethylbenzene	2.05	mg/Kg	1	2.00	<0.00240	102	62.1 - 141.6
Xylene	6.12	mg/Kg	1	6.00	<0.00650	102	61.2 - 142.7

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.01	mg/Kg	1	2.00	<0.00410	100	57.7 - 140.7	7	20
Toluene	2.15	mg/Kg	1	2.00	<0.00310	108	53.4 - 146.6	7	20
Ethylbenzene	2.20	mg/Kg	1	2.00	<0.00240	110	62.1 - 141.6	7	20
Xylene	6.56	mg/Kg	1	6.00	<0.00650	109	61.2 - 142.7	7	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.57	2.62	mg/Kg	1	2	128	131	62.7 - 139.6
4-Bromofluorobenzene (4-BFB)	2.12	2.15	mg/Kg	1	2	106	108	49.6 - 146.7

Matrix Spike (MS-1) Spiked Sample: 218603

QC Batch: 66373 | Date Analyzed: 2009-12-30 | Analyzed By: ER
Prep Batch: 56739 | QC Preparation: 2009-12-30 | Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.03	mg/Kg	1	2.00	<0.00331	102	61.5 - 134
Toluene	2.21	mg/Kg	1	2.00	<0.00528	110	64.2 - 143
Ethylbenzene	2.40	mg/Kg	1	2.00	<0.00448	120	67.7 - 152
Xylene	7.19	mg/Kg	1	6.00	0.0433	119	67.8 - 152

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.01	mg/Kg	1	2.00	<0.00331	100	61.5 - 134	1	20
Toluene	2.25	mg/Kg	1	2.00	<0.00528	112	64.2 - 143	2	20
Ethylbenzene	2.40	mg/Kg	1	2.00	<0.00448	120	67.7 - 152	0	20
Xylene	7.16	mg/Kg	1	6.00	0.0433	119	67.8 - 152	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.20	2.19	mg/Kg	1	2	110	110	65.3 - 134

continued ...

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	2.43	2.34	mg/Kg	1	2	122	117	61.9 - 143

Standard (CCV-1)

QC Batch: 66187 Date Analyzed: 2009-12-21 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0909	91	80 - 120	2009-12-21
Toluene		mg/Kg	0.100	0.0947	95	80 - 120	2009-12-21
Ethylbenzene		mg/Kg	0.100	0.0951	95	80 - 120	2009-12-21
Xylene		mg/Kg	0.300	0.284	95	80 - 120	2009-12-21

Standard (CCV-2)

QC Batch: 66187 Date Analyzed: 2009-12-21 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0828	83	80 - 120	2009-12-21
Toluene		mg/Kg	0.100	0.0865	86	80 - 120	2009-12-21
Ethylbenzene		mg/Kg	0.100	0.0859	86	80 - 120	2009-12-21
Xylene		mg/Kg	0.300	0.256	85	80 - 120	2009-12-21

Standard (CCV-3)

QC Batch: 66187 Date Analyzed: 2009-12-21 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0947	95	80 - 120	2009-12-21
Toluene		mg/Kg	0.100	0.0985	98	80 - 120	2009-12-21
Ethylbenzene		mg/Kg	0.100	0.0969	97	80 - 120	2009-12-21
Xylene		mg/Kg	0.300	0.289	96	80 - 120	2009-12-21

Standard (CCV-1)

QC Batch: 66373 Date Analyzed: 2009-12-30 Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.103	103	80 - 120	2009-12-30
Toluene		mg/Kg	0.100	0.102	102	80 - 120	2009-12-30
Ethylbenzene		mg/Kg	0.100	0.102	102	80 - 120	2009-12-30
Xylene		mg/Kg	0.300	0.315	105	80 - 120	2009-12-30

Standard (CCV-2)

QC Batch: 66373 Date Analyzed: 2009-12-30 Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0989	99	80 - 120	2009-12-30
Toluene		mg/Kg	0.100	0.0985	98	80 - 120	2009-12-30
Ethylbenzene		mg/Kg	0.100	0.0981	98	80 - 120	2009-12-30
Xylene		mg/Kg	0.300	0.301	100	80 - 120	2009-12-30

Order #: 9121601

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 2

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-640036 9

PROJECT NAME: COG/ Skelly 942 TB
Eddy Co, NM

LAB I.D. NUMBER	DATE 2009	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
217285	12/15		S		X	CS-1 0-1' 1'BEB	1				X		X															
286						CS-1 1'-1.5' 1'BEB																							
287						CS-2 0-1' 3'BEB								X															
288						CS-3 0-1' 1'BEB								X															
289						CS-3 1'-1.5' 1'BEB																							
290						CS-4 0-1' 1.5'BEB								X															
291						CS-5 0-1' 1'BEB								X															
292						CS-5 1'-1.5' 1'BEB								X															
293						CS-6 0-1' 1'BEB								X															
294						CS-6 1'-1.5' 1'BEB																							

RELINQUISHED BY: (Signature) — Date: 12/15/09 Time: 1640
RECEIVED BY: (Signature) — Date: 12/15/09 Time: 16:40

SAMPLED BY: (Print & Initial) JT — Date: 12/15/09 Time:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

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

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Carol Fox
DATE: 12-30-09 TIME: 9:45 AM

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact

REMARKS: Hold additional samples for further instructions 4.6 5.0 IR

DEC 23

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

LS 25868194 217292 X Added per IKe 12/30/09 BTEX-Cobb.

Order #: 9121601

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 2

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400369

PROJECT NAME: COG/Skelly 942 TB3 Eddy Co, NM

LAB I.D. NUMBER	DATE 2009	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
217295	12/5		S		X	CS-7 0-1' 3'BEB	1				X		X															
296	↓		↓		↓	CS-8 0-1' 1'BEB	↓				↓		X															
297	↓		↓		↓	CS-8 1'-1.5' 1'BEB	↓				↓																	

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 12/5/09 Time: 1640 — RECEIVED BY: (Signature) — Date: 12/5/09 Time: 16:40

SAMPLED BY: (Print & Initial) JT — Date: 12/5/09 Time:

RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

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

RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

RECEIVING LABORATORY: Trace — RECEIVED BY: (Signature)

ADDRESS: — CITY: Midland STATE: TX ZIP:

CONTACT: — PHONE: — DATE: — TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact

REMARKS: Hold for additional samples for further instructions

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

Summary Report

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

Report Date: January 25, 2010

Work Order: 10011804

Project Location: Eddy Co., NM
Project Name: COG/Skelly 942 TB (Spill 5)
Project Number: 114-6400407

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
219872	AH-1 0-1'	soil	2010-01-12	00:00	2010-01-15
219873	AH-1 1-1.5'	soil	2010-01-12	00:00	2010-01-15
219874	AH-1 2-2.5'	soil	2010-01-12	00:00	2010-01-15
219875	AH-1 3-3.5'	soil	2010-01-12	00:00	2010-01-15
219876	AH-1 4-4.5'	soil	2010-01-12	00:00	2010-01-15
219877	AH-1 5-5.5'	soil	2010-01-12	00:00	2010-01-15
219878	T-1 6'	soil	2010-01-13	00:00	2010-01-15
219879	T-1 7'	soil	2010-01-13	00:00	2010-01-15

Sample - Field Code	BTEX Benzene (mg/Kg)	BTEX Toluene (mg/Kg)	BTEX Ethylbenzene (mg/Kg)	BTEX Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
219872 - AH-1 0-1'	**268**	**594**	**323**	**342**		
219875 - AH-1 3-3.5'	**87.2**	**246**	**146**	**153**		
219878 - T-1 6'	**3.37**	**39.9**	**34.9**	**37.9**		
219879 - T-1 7'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00

Sample: 219872 - AH-1 0-1'

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

Sample: 219873 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**718**	mg/Kg	4.00

Sample: 219874 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**861**	mg/Kg	4.00

Sample: 219875 - AH-1 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**753**	mg/Kg	4.00

Sample: 219876 - AH-1 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**1530**	mg/Kg	4.00

Sample: 219877 - AH-1 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**1290**	mg/Kg	4.00

Sample: 219878 - T-1 6'

Param	Flag	Result	Units	RL
Chloride		**374**	mg/Kg	4.00

Sample: 219879 - T-1 7'

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

TRACEANALYSIS, INC.

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Certifications

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

NELAP Certifications

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

Analytical and Quality Control Report

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

Report Date: January 25, 2010

Work Order: 10011804

Project Location: Eddy Co., NM
Project Name: COG/Skelly 942 TB (Spill 5)
Project Number: 114-6400407

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
219872	AH-1 0-1'	soil	2010-01-12	00:00	2010-01-15
219873	AH-1 1-1.5'	soil	2010-01-12	00:00	2010-01-15
219874	AH-1 2-2.5'	soil	2010-01-12	00:00	2010-01-15
219875	AH-1 3-3.5'	soil	2010-01-12	00:00	2010-01-15
219876	AH-1 4-4.5'	soil	2010-01-12	00:00	2010-01-15
219877	AH-1 5-5.5'	soil	2010-01-12	00:00	2010-01-15
219878	T-1 6'	soil	2010-01-13	00:00	2010-01-15
219879	T-1 7'	soil	2010-01-13	00:00	2010-01-15

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch

basis. *All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.*

This report consists of a total of 17 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

Standard Flags

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

Case Narrative

Samples for project COG/Skelly 942 TB (Spill 5) were received by TraceAnalysis, Inc. on 2010-01-15 and assigned to work order 10011804. Samples for work order 10011804 were received intact at a temperature of 4.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	57175	2010-01-19 at 14:00	66862	2010-01-19 at 11:58
BTEX	S 8021B	57264	2010-01-22 at 14:00	66976	2010-01-22 at 12:08
Chloride (Titration)	SM 4500-Cl B	57185	2010-01-20 at 12:55	66902	2010-01-21 at 10:08
TPH DRO - NEW	Mod. 8015B	57147	2010-01-18 at 10:36	66823	2010-01-18 at 10:36
TPH GRO	S 8015B	57175	2010-01-19 at 14:00	66863	2010-01-19 at 12:26

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 10011804 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 219872 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66976	Date Analyzed:	2010-01-22	Analyzed By:	AG
Prep Batch:	57264	Sample Preparation:	2010-01-22	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**268**	mg/Kg	50	0.0100
Toluene		**594**	mg/Kg	50	0.0100
Ethylbenzene		**323**	mg/Kg	50	0.0100
Xylene		**342**	mg/Kg	50	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		46.4	mg/Kg	50	50.0	93	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)	[1]	108	mg/Kg	50	50.0	216	43.1 - 158.4

Sample: 219872 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	66902	Date Analyzed:	2010-01-21	Analyzed By:	AR
Prep Batch:	57185	Sample Preparation:	2010-01-20	Prepared By:	AR

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

Sample: 219873 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	66902	Date Analyzed:	2010-01-21	Analyzed By:	AR
Prep Batch:	57185	Sample Preparation:	2010-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**718**	mg/Kg	50	4.00

[1] High surrogate recovery due to peak interference.

Sample: 219874 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	66902	Date Analyzed:	2010-01-21	Analyzed By:	AR
Prep Batch:	57185	Sample Preparation:	2010-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**861**		mg/Kg	50	4.00

Sample: 219875 - AH-1 3-3.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66976	Date Analyzed:	2010-01-22	Analyzed By:	AG
Prep Batch:	57264	Sample Preparation:	2010-01-22	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		**87.2**		mg/Kg	20	0.0100
Toluene		**246**		mg/Kg	20	0.0100
Ethylbenzene		**146**		mg/Kg	20	0.0100
Xylene		**153**		mg/Kg	20	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		18.9	mg/Kg	20	20.0	94	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)	[2]	45.2	mg/Kg	20	20.0	226	43.1 - 158.4

Sample: 219875 - AH-1 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	66902	Date Analyzed:	2010-01-21	Analyzed By:	AR
Prep Batch:	57185	Sample Preparation:	2010-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**753**		mg/Kg	50	4.00

[2] High surrogate recovery due to peak interference.

Sample: 219876 - AH-1 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	66902	Date Analyzed:	2010-01-21	Analyzed By:	AR
Prep Batch:	57185	Sample Preparation:	2010-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1530**	mg/Kg	50	4.00

Sample: 219877 - AH-1 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	66902	Date Analyzed:	2010-01-21	Analyzed By:	AR
Prep Batch:	57185	Sample Preparation:	2010-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1290**	mg/Kg	50	4.00

Sample: 219878 - T-1 6'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66976	Date Analyzed:	2010-01-22	Analyzed By:	AG
Prep Batch:	57264	Sample Preparation:	2010-01-22	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**3.37**	mg/Kg	5	0.0100
Toluene		**39.9**	mg/Kg	5	0.0100
Ethylbenzene		**34.9**	mg/Kg	5	0.0100
Xylene		**37.9**	mg/Kg	5	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3.87	mg/Kg	5	5.00	77	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)	[3]	10.5	mg/Kg	5	5.00	210	43.1 - 158.4

[3] High surrogate recovery due to peak interference.

Sample: 219878 - T-1 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	66902	Date Analyzed:	2010-01-21	Analyzed By:	AR
Prep Batch:	57185	Sample Preparation:	2010-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**374**	mg/Kg	50	4.00

Sample: 219879 - T-1 7'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	66862	Date Analyzed:	2010-01-19	Analyzed By:	AG
Prep Batch:	57175	Sample Preparation:	2010-01-19	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.98	mg/Kg	1	2.00	99	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.93	mg/Kg	1	2.00	96	43.1 - 158.4

Sample: 219879 - T-1 7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	66902	Date Analyzed:	2010-01-21	Analyzed By:	AR
Prep Batch:	57185	Sample Preparation:	2010-01-20	Prepared By:	AR

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

Sample: 219879 - T-1 7'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	66823	Date Analyzed:	2010-01-18	Analyzed By:	kg
Prep Batch:	57147	Sample Preparation:	2010-01-18	Prepared By:	kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		98.8	mg/Kg	1	100	99	70 - 130

Sample: 219879 - T-1 7'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	66863	Date Analyzed:	2010-01-19	Analyzed By:	AG
Prep Batch:	57175	Sample Preparation:	2010-01-19	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.03	mg/Kg	1	2.00	102	61.7 - 131.1

Method Blank (1) QC Batch: 66823

QC Batch:	66823	Date Analyzed:	2010-01-18	Analyzed By:	kg
Prep Batch:	57147	QC Preparation:	2010-01-18	Prepared By:	kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		91.6	mg/Kg	1	100	92	70 - 130

Method Blank (1) QC Batch: 66862

QC Batch:	66862	Date Analyzed:	2010-01-19	Analyzed By:	AG
Prep Batch:	57175	QC Preparation:	2010-01-19	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.03	mg/Kg	1	2.00	102	64.9 - 142.7
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	1	2.00	95	43.9 - 141.9

Method Blank (1) QC Batch: 66863

QC Batch:	66863	Date Analyzed:	2010-01-19	Analyzed By:	AG
Prep Batch:	57175	QC Preparation:	2010-01-19	Prepared By:	AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	66.2 - 145
4-Bromofluorobenzene (4-BFB)		1.98	mg/Kg	1	2.00	99	62 - 120.5

Method Blank (1) QC Batch: 66902

QC Batch:	66902	Date Analyzed:	2010-01-21	Analyzed By:	AR
Prep Batch:	57185	QC Preparation:	2010-01-20	Prepared By:	AR

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

Method Blank (1) QC Batch: 66976

QC Batch:	66976	Date Analyzed:	2010-01-22	Analyzed By:	AG
Prep Batch:	57264	QC Preparation:	2010-01-22	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.93	mg/Kg	1	2.00	96	64.9 - 142.7
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	1	2.00	95	43.9 - 141.9

Laboratory Control Spike (LCS-1)

QC Batch: 66823 | Date Analyzed: 2010-01-18 | Analyzed By: kg
Prep Batch: 57147 | QC Preparation: 2010-01-18 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	284	mg/Kg	1	250	<5.86	114	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	295	mg/Kg	1	250	<5.86	118	57.4 - 133.4	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	102	105	mg/Kg	1	100	102	105	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 66862 | Date Analyzed: 2010-01-19 | Analyzed By: AG
Prep Batch: 57175 | QC Preparation: 2010-01-19 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.02	mg/Kg	1	2.00	<0.00410	101	75.4 - 115.7
Toluene	1.85	mg/Kg	1	2.00	<0.00310	92	78.4 - 113.6
Ethylbenzene	1.76	mg/Kg	1	2.00	<0.00240	88	76 - 114.2
Xylene	5.34	mg/Kg	1	6.00	<0.00650	89	76.9 - 113.6

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.06	mg/Kg	1	2.00	<0.00410	103	75.4 - 115.7	2	20
Toluene	1.89	mg/Kg	1	2.00	<0.00310	94	78.4 - 113.6	2	20
Ethylbenzene	1.80	mg/Kg	1	2.00	<0.00240	90	76 - 114.2	2	20
Xylene	5.44	mg/Kg	1	6.00	<0.00650	91	76.9 - 113.6	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)	1.94	1.92	mg/Kg	1	2.00	97	96	65 - 142.9
4-Bromofluorobenzene (4-BFB)	1.97	1.96	mg/Kg	1	2.00	98	98	43.8 - 144.9

Laboratory Control Spike (LCS-1)

QC Batch: 66863 | Date Analyzed: 2010-01-19 | Analyzed By: AG
Prep Batch: 57175 | QC Preparation: 2010-01-19 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.9	mg/Kg	1	20.0	<0.396	84	52.5 - 114.3

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.6	mg/Kg	1	20.0	<0.396	88	52.5 - 114.3	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.10	2.12	mg/Kg	1	2.00	105	106	66.2 - 148.7
4-Bromofluorobenzene (4-BFB)	2.03	2.06	mg/Kg	1	2.00	102	103	64.1 - 127.4

Laboratory Control Spike (LCS-1)

QC Batch: 66902 | Date Analyzed: 2010-01-21 | Analyzed By: AR
Prep Batch: 57185 | QC Preparation: 2010-01-20 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	99.9	mg/Kg	1	100	<2.18	100	85 - 115	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 66976 | Date Analyzed: 2010-01-22 | Analyzed By: AG
Prep Batch: 57264 | QC Preparation: 2010-01-22 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.95	mg/Kg	1	2.00	<0.00410	98	75.4 - 115.7
Toluene	1.83	mg/Kg	1	2.00	<0.00310	92	78.4 - 113.6
Ethylbenzene	1.81	mg/Kg	1	2.00	<0.00240	90	76 - 114.2
Xylene	5.44	mg/Kg	1	6.00	<0.00650	91	76.9 - 113.6

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.94	mg/Kg	1	2.00	<0.00410	97	75.4 - 115.7	0	20
Toluene	1.82	mg/Kg	1	2.00	<0.00310	91	78.4 - 113.6	0	20
Ethylbenzene	1.78	mg/Kg	1	2.00	<0.00240	89	76 - 114.2	2	20
Xylene	5.40	mg/Kg	1	6.00	<0.00650	90	76.9 - 113.6	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.88	1.80	mg/Kg	1	2.00	94	90	65 - 142.9
4-Bromofluorobenzene (4-BFB)	1.96	1.88	mg/Kg	1	2.00	98	94	43.8 - 144.9

Matrix Spike (MS-1) Spiked Sample: 219597

QC Batch: 66823 | Date Analyzed: 2010-01-18 | Analyzed By: kg
Prep Batch: 57147 | QC Preparation: 2010-01-18 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	323	mg/Kg	1	250	<5.86	129	35.2 - 167.1

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	328	mg/Kg	1	250	<5.86	131	35.2 - 167.1	2	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	97.8	98.0	mg/Kg	1	100	98	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 219728

QC Batch: 66862 | Date Analyzed: 2010-01-19 | Analyzed By: AG
Prep Batch: 57175 | QC Preparation: 2010-01-19 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.42	mg/Kg	1	2.00	<0.00410	121	57.7 - 140.7
Toluene	2.26	mg/Kg	1	2.00	<0.00310	113	53.4 - 146.6
Ethylbenzene	2.22	mg/Kg	1	2.00	<0.00240	111	62.1 - 141.6
Xylene	6.71	mg/Kg	1	6.00	<0.00650	112	61.2 - 142.7

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.32	mg/Kg	1	2.00	<0.00410	116	57.7 - 140.7	4	20
Toluene	2.17	mg/Kg	1	2.00	<0.00310	108	53.4 - 146.6	4	20
Ethylbenzene	2.12	mg/Kg	1	2.00	<0.00240	106	62.1 - 141.6	5	20
Xylene	6.42	mg/Kg	1	6.00	<0.00650	107	61.2 - 142.7	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.93	2.11	mg/Kg	1	2	96	106	62.7 - 139.6
4-Bromofluorobenzene (4-BFB)	1.93	2.11	mg/Kg	1	2	96	106	49.6 - 146.7

Matrix Spike (MS-1) Spiked Sample: 219879

QC Batch: 66863 | Date Analyzed: 2010-01-19 | Analyzed By: AG
Prep Batch: 57175 | QC Preparation: 2010-01-19 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.6	mg/Kg	1	20.0	<0.396	93	10 - 198.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	19.2	mg/Kg	1	20.0	<0.396	96	10 - 198.3	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
Trifluorotoluene (TFT)	2.29	2.13	mg/Kg	1	2	114	106	65.5 - 143
4-Bromofluorobenzene (4-BFB)	2.33	2.21	mg/Kg	1	2	116	110	58.6 - 140

Matrix Spike (MS-1) Spiked Sample: 219879

QC Batch: 66902 | Date Analyzed: 2010-01-21 | Analyzed By: AR
Prep Batch: 57185 | QC Preparation: 2010-01-20 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	*10000*	*mg/Kg*	*100*	*10000*	*<218*	*98*	*85 - 115*

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10200	mg/Kg	100	10000	<218	100	85 - 115	2	20

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

Matrix Spike (MS-1) Spiked Sample: 219995

QC Batch: 66976 | Date Analyzed: 2010-01-22 | Analyzed By: AG
Prep Batch: 57264 | QC Preparation: 2010-01-22 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.05	mg/Kg	1	2.00	<0.00410	102	57.7 - 140.7
Toluene	1.96	mg/Kg	1	2.00	<0.00310	98	53.4 - 146.6
Ethylbenzene	1.96	mg/Kg	1	2.00	<0.00240	98	62.1 - 141.6
Xylene	5.94	mg/Kg	1	6.00	<0.00650	99	61.2 - 142.7

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.19	mg/Kg	1	2.00	<0.00410	110	57.7 - 140.7	7	20
Toluene	2.10	mg/Kg	1	2.00	<0.00310	105	53.4 - 146.6	7	20
Ethylbenzene	2.13	mg/Kg	1	2.00	<0.00240	106	62.1 - 141.6	8	20
Xylene	6.46	mg/Kg	1	6.00	<0.00650	108	61.2 - 142.7	8	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.85	1.79	mg/Kg	1	2	92	90	62.7 - 139.6
4-Bromofluorobenzene (4-BFB)	1.91	1.84	mg/Kg	1	2	96	92	49.6 - 146.7

Standard (CCV-2)

QC Batch: 66823 Date Analyzed: 2010-01-18 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	290	116	80 - 120	2010-01-18

Standard (CCV-3)

QC Batch: 66823 Date Analyzed: 2010-01-18 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	295	118	80 - 120	2010-01-18

Standard (CCV-2)

QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.101	101	80 - 120	2010-01-19
Toluene		mg/Kg	0.100	0.0926	93	80 - 120	2010-01-19
Ethylbenzene		mg/Kg	0.100	0.0879	88	80 - 120	2010-01-19
Xylene		mg/Kg	0.300	0.265	88	80 - 120	2010-01-19

Standard (CCV-3)

QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.101	101	80 - 120	2010-01-19
Toluene		mg/Kg	0.100	0.0915	92	80 - 120	2010-01-19
Ethylbenzene		mg/Kg	0.100	0.0859	86	80 - 120	2010-01-19

continued ...

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Xylene		mg/Kg	0.300	0.259	86	80 - 120	2010-01-19

Standard (CCV-2)

QC Batch: 66863 Date Analyzed: 2010-01-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.994	99	80 - 120	2010-01-19

Standard (CCV-3)

QC Batch: 66863 Date Analyzed: 2010-01-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.13	113	80 - 120	2010-01-19

Standard (ICV-1)

QC Batch: 66902 Date Analyzed: 2010-01-21 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-01-21

Standard (CCV-1)

QC Batch: 66902 Date Analyzed: 2010-01-21 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.0	99	85 - 115	2010-01-21

Standard (CCV-2)

QC Batch: 66976 Date Analyzed: 2010-01-22 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0969	97	80 - 120	2010-01-22
Toluene		mg/Kg	0.100	0.0906	91	80 - 120	2010-01-22
Ethylbenzene		mg/Kg	0.100	0.0899	90	80 - 120	2010-01-22
Xylene		mg/Kg	0.300	0.271	90	80 - 120	2010-01-22

Standard (CCV-3)

QC Batch: 66976 Date Analyzed: 2010-01-22 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0994	99	80 - 120	2010-01-22
Toluene		mg/Kg	0.100	0.0949	95	80 - 120	2010-01-22
Ethylbenzene		mg/Kg	0.100	0.0929	93	80 - 120	2010-01-22
Xylene		mg/Kg	0.300	0.281	94	80 - 120	2010-01-22

Order #: 100 11804

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: IKE Tavarez

PROJECT NO.: 114-640 0407

PROJECT NAME: COG / Skelly 942 TB (Spill)
Eddy Co. NM.

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH TX1005 (Ext. to C35)	TPH 8015 MOD	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	(Chloride)	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
219872	1-12-10		S		G	AH-1 0-1	1				✓		X													X				
873	↓		S		G	AH-1 1-1.5	1				✓															X				
874			S		G	AH-1 2-2.5	1				✓															X				
875			S		G	AH-1 3-3.5	1				✓		X													X				
876			S		G	AH-1 4-4.5	1				✓															X				
877			S		G	AH-1 5-5.5	1				✓															X				
878	1-13-10		S		G	T-1 6'	1				✓		X													X				
879			S		G	T-1 7'	1				✓		X	X												X				
880	↓		S		G	T-1 8'	1				✓																			
881			S		G	T-1 9'	1				✓																			

RELINQUISHED BY: (Signature) — Date: 1-15-10 Time: 1625
RECEIVED BY: (Signature) — Date: 1/15/10 Time: 16:25
SAMPLED BY: (Print & Initial) TT — Date: Time:

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

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
TETRA TECH CONTACT PERSON: IKE Tavarez — Results by:

RECEIVING LABORATORY:
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4°c intact

REMARKS: All tests Midland

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