APPROVED
By Olivia Yu at 11:11 am, Mar 13, 2018

May 31, 2017

Reference No. 088210-22

Ms. Olivia Yu
New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240

NMOCD grants closure to 1RP-3460.

Ms. Amber Groves
New Mexico State Land Office
Field Operations Division
2827 N. Dal Paso, Suite 117
Hobbs, NM

Dear Ms. Groves and Ms. Yu:

Re: Closure Request
Fox State #3 and #4
1RP-3460
EOG Resources, Inc.
Site Location: Unit H, Sec. 30, T 25-S, R 34-E
(Lat 32.1029°, Long -103.5027°)
Lea County, New Mexico

GHD Services, Inc. (GHD), on behalf of EOG Resources (EOG) is requesting that no further action status be granted for the Fox State #3 and #4 (hereafter referred to as the "Site").

In an Assessment Report dated August 23, 2016 (attached) GHD recommended the following scope items be completed following delineation of the soil impacts in order to achieve no further action;

- Complete the excavation of the eastern extent of the release to a depth of 4 ft bgs.
- Placement of a 20-mil polyethylene liner in the bottom of the excavation at a depth of 4 ft bgs at the location indicated on Figure 2.
- Backfilling of the excavation with clean fill material and wheel compacting to grade.
- Fertilizing and reseeding of the disturbed area with a New Mexico State Land Office approved seed mix.
- Perform noxious weed and vegetative growth monitoring quarterly.

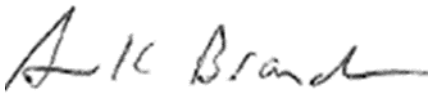
The work scope was approved by Ms. Jamie Keyes with the New Mexico Oil Conservation Division on May 11, 2016. The New Mexico State Land Office approved the report on June 29, 2016. As of the date of this letter, the above scope items, except the quarterly monitoring of vegetation, have been completed and are documented in the attached completion photos and final C-141 for the Site; therefore, No Further Action is being requested.

GHD
6121 Indian School Road NE Suite 200 Albuquerque New Mexico 87110 USA
T 505 884 0672 F 505 884 4932 W www.ghd.com

Should you have any questions, or require additional information regarding this submittal, please feel free to contact myself or Bernie Bockisch at (505) 884-0672 or Bernard.Bockisch@ghd.com.

Sincerely,

GHD



Alan Brandon
Senior Project Manager

Bernard Bockisch
Senior Project Manager

AB/mc/03

Attachments

Attachment A
Form C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company EOG Resources, Inc.	Contact Zane Kurtz
Address 5509 Champions Drive, Midland, TX 79706	Telephone No. 432-425-2023
Facility Name Fox 30 State #3 and #4	Facility Type lease road near active well

Surface Owner Mark McCloy	Mineral Owner	API No. 30-025-41249 (#3) 30-025-41244 (#4)

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	30	25S	34E	2140'	N	715'	E	Lea

Latitude 32.1029 **Longitude** -103.5027

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 50 bbls	Volume Recovered 40 bbls
Source of Release Produced Water Poly Line	Date and Hour of Occurrence 11-21-2014	Date and Hour of Discovery 1500
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Lease op found leaking 4 inch poly line on lease road near well. About 50 bbls of produced water was spilled and 40 bbls was recovered by vacuum truck. Impacted area was excavated with backhoe and CH2M HILL was onsite to collect soil samples to delineate vertical and horizontal impacts. Soil is stockpiled on poly plastic and will be hauled off for proper disposal and clean soil will be used to backfill excavated area.

Describe Area Affected and Cleanup Action Taken.*

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: Zane Kurtz	OIL CONSERVATION DIVISION
Printed Name: Zane Kurtz	Approved by Environmental Specialist:
Title: Sr. Environmental Rep.	Approval Date: / Expiration Date:
E-mail Address: zane_kurtz@eogresources.com	Conditions of Approval: / Attached ☐
Date: 12-16-2014 Phone: 432-425-2023	

* Attach Additional Sheets If Necessary

Attachment B
Photo Log

Photo 1 - Site location

Photo 2 - Liner placement

Site Photographs

Photo 3 - Backfilled excavation, wheel compacted, re-seeded

Photo 4 - Backfilled excavation, wheel compacted, re-seeded

Attachment C
Assessment Summary Report

August 23, 2016 Reference No. 088210-22

Mr. Zane Kurtz
Sr. Safety and Environmental Representative
5509 Champions Dr.
Midland, TX 79706
VIA E-Mail: zane_kurtz@eogresources.com

Dear Mr. Kurtz:

Re: Assessment Summary Report
Fox State #3 and #4
1RP-3460
EOG Resources, Inc.
Site Location: Unit H, Sec. 30, T 25-S, R 34-E
(Lat 32.1029°, Long -103.5027°)
Lea County, New Mexico

On behalf of EOG Resources Inc. (EOG), GHD Services, Inc. (GHD, formerly Conestoga Rovers & Associates) is pleased to present this report for the above referenced site. Assessment activities were performed at the Fox State #3 and #4 (hereafter referred to as the "Site"). Field work and data collected for the Site was performed by CH2M Hill staff. The Site is located within Unit H, Section 30, Township 25 South, Range 34 East, in Lea County, New Mexico (Figure 1). According to the New Mexico State Land Office Interactive Oil and Gas Map, the State of New Mexico is the surface and subsurface estate owner.

The Site is located approximately 18 miles west of Jal, New Mexico. The release occurred from a leaking 4 inch diameter flow line located adjacent to the access road to the well. According to EOG personnel, a release of approximately 50 barrels (bbls) of produced water was released from a split in the line. Approximately 40 bbls of produced water was recovered. The release occurred on November 21, 2014. A C 141 Form was submitted to the New Mexico Oil Conservation Division (NMOCD) and remediation permit (RP) number 1RP 3460 was assigned.

1. Recommended Remediation Action Limits

There are relatively few groundwater wells in the area of the Site with which to obtain a depth to groundwater. Based on information available from the NMOCD GIS Oil and Gas Map, the depth to groundwater in well C 02317 located approximately 0.68 miles southeast of the Site is 50 feet (ft) below ground surface (bgs). Based on the information provided, it appears the well was installed in 1880 and the current depth to groundwater is most likely deeper than this.

In order to obtain more current depth to groundwater data, the United States Geologic Survey (USGS) National Water Information Service (NWIS) was checked. The USGS NWIS database indicated the presence of two wells that were screened within the alluvial aquifer in the vicinity of the Site. Well USGS

320059103333501 26S.33E.27.21112 is located approximately 6.3 miles to the southwest of the Site (Figure 2). The depth to groundwater in this well was 76.60 ft bgs in 2001. Well USGS 320918103211701 25S.35E.03.233244 is located approximately 9.7 miles to the northeast of the Site. The depth to groundwater in this well was 107.77 ft bgs in 1996. Extrapolating the distances and depths of these wells in relation to the Site, the depth to groundwater in the vicinity of the Site should be approximately 90 ft bgs. Based on this, the depth to groundwater appears to be between 50 and 100 ft bgs.

There do not appear to be any well head protection areas and no surface water bodies within 200 to 1000 ft of the Site. Therefore, the preliminary total ranking score for the Site is 10 (see table below).

Based on this score, the applicable NMOCD Site specific Recommended Remediation Action Limits (RRALs) are 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total benzene, toluene, ethylbenzene, and xylenes (BTEX), 1000 mg/kg for total petroleum hydrocarbons (TPH), and 250 mg/kg for chlorides.

New Mexico Oil Conservation Division Site Assessment	
Ranking Criteria	Score
Depth to Ground Water (> 50 ft bgs, <100 ft bgs)	10
Wellhead Protection Area (> 1000 ft from water source, > 200 ft from domestic source)	0
Distance to Surface Body Water (200-1000 ft)	0
Ranking Criteria Total Score	**10***
*The ranking criteria total score of 10 equates to NMOCD established RRALs of 10 mg/kg for benzene, 50 mg/kg for total BTEX, 1,000 mg/kg for TPH[1], and 250 mg/kg for chlorides.	

1. NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993

2. Assessment Activities

On November 25, 2014, EOG contracted CH2M HILL to assess the extent of the release. Watson Construction was contracted to excavate impacted soils and assist with the assessment. CH2M HILL provided contractor oversight and field screening activities. Initial assessment activities were performed using field screening methods.

On December 4, 2014 CH2M HILL returned to the site to perform further excavation and site assessment activities. Soil samples were collected for laboratory analysis of benzene, toluene, ethylbenzene and xylene by EPA Method 8015, total petroleum hydrocarbon (TPH) diesel range organics (DRO) and gasoline range organics (GRO) by EPA Method 8015, and chloride by EPA Method 300. Additional hand auger borings were advanced to assess the horizontal extent of concentrations (Figure 3).

On May 19, 2015, CH2M HILL returned to the site to further assess the vertical extent of chloride concentrations at the Site. Soil samples were collected at 7, 9, and 11 feet (ft) below ground surface (bgs). Chloride concentrations observed from this assessment were above the RRAL at a depth of 11 ft bgs.

Due to this, CH2M HILL and Watson mobilized a track hoe to the site. Additional samples were collected at 11 ft bgs, 16 ft bgs, and 21 ft bgs. Chloride concentrations were observed to decrease with depth (Table 1). The concentration at 21 ft bgs was 304 mg/kg, above the RRAL.

In order to assess the vertical extent of the chloride concentrations to below 250 mg/kg, a soil boring was advanced adjacent to the track hoe test pit that was excavated by Watson (see Figure 3). The soil boring was advanced by EnviroDrill, Inc. of Albuquerque, New Mexico using air rotary drilling methods. Soil samples were collected every 5 feet of depth beginning at 25 ft bgs to a depth of 40 ft bgs. Soil samples were field screened for the presence of chloride. These soil samples were submitted to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for analysis of chloride by EPA Method 300.

The analytical results of the soil samples collected from the soil boring indicated that chloride concentrations from 30, 35, and 40 ft bgs were less than 250 mg/kg. Based on this, it appears that the vertical extent of petroleum hydrocarbons and chloride has been assessed. The horizontal extent of chlorides has been assessed in the northern, southern, and western directions of the release (Figure 3).

The horizontal delineation of chloride was confirmed for the eastern extent by two confirmation samples collected on August 1, 2016. Two samples were collected outside the excavation perimeter at a depth of four feet bgs (Figure 3). Analytical results of the two samples were non-detect for chloride with a result of <30 mg/kg.

Based on this, GHD is requesting permission to install a 20 mil liner within the excavation. Backfilling of the excavation with clean soil will be performed following placement of the liner. Reseeding of the site will be performed in accordance with Section 3, Site Revegetation (below).

3. Site Revegetation

Following completion of liner placement and excavation backfill, revegetation of the site will be performed as follows:

Disturbed areas associated with the remediation efforts will be reseeded. If after one growing season the vegetation has not taken hold, seeding may need to be repeated until revegetation is successful, as determined by the State Land Office. The seed will be spread using a hand held broadcaster and the area raked or dragged to cover the seed. Because the seed will be broadcast, the pounds per acre will be doubled. The following seed mix will be used:

Seed Type	Pounds of pure live seed (PLS) per Acre	
	Broadcast Rate	Drill Rate
Black or Blue Grama	3 lbs	1.5 lbs

Seed Type	Pounds of pure live seed (PLS) per Acre	
Sideoats Grama	2 lbs	1.0 lbs
Sand Dropseed	1 lbs	0.5 lbs
Sand Bluestem	1 lbs	0.5 lbs
FORBS		
*Globemallow	1 lbs	0.5 lbs
*Buckwheat	1 lbs	0.5 lbs
Total pounds pure live seed per acre: 9 lbs		

The seed mixture will be planted in the amounts specified in pounds of pure live seed (PLS) per acre. Commercially sold seed will be either certified or registered. If one species is not available, the other species will be increased proportionately. No less than four species, including one forb, will be included in the seed mix. No less than 9 pounds per PLS acres shall be applied. The area will be seeded following backfilling of the excavated area.

3.1 Growth Monitoring and Noxious Weed Management

The site will be visited on a quarterly basis to assess the establishment of vegetative growth. Staff personnel performing the site visit will also look for the presence of noxious weeds at the site as indicated on the New Mexico Noxious Weeds List specified on the United States Department of Agriculture website. If a noxious weed is observed at the site, the NMSLO will be contacted to determine the most effective manner to eradicate it.

4. Summary and Recommendations

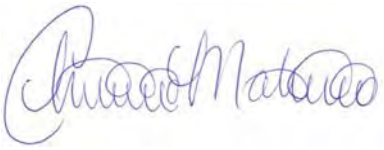
Based on the assessment of the petroleum hydrocarbon and chloride concentrations, GHD recommends the following:

- Complete the excavation of the eastern extent of the release to a depth of 4 ft bgs.
- Placement of a 20 mil polyethylene liner in the bottom of the excavation at a depth of 4 ft bgs.
- Backfilling of the excavation with clean fill material and wheel compacting to grade.
- Fertilizing and reseeding of the disturbed area with a New Mexico State Land Office approved seed mix as described above.
- Perform noxious weed and vegetative growth monitoring as described above.

Following completion of the above activities EOG will request that no further action be required for the Site. Should you have any questions, or require additional information regarding this submittal, please feel free to contact Bernie Bockisch at (505) 884 0672 or Bernard.Bockisch@ghd.com.

Sincerely,

GHD

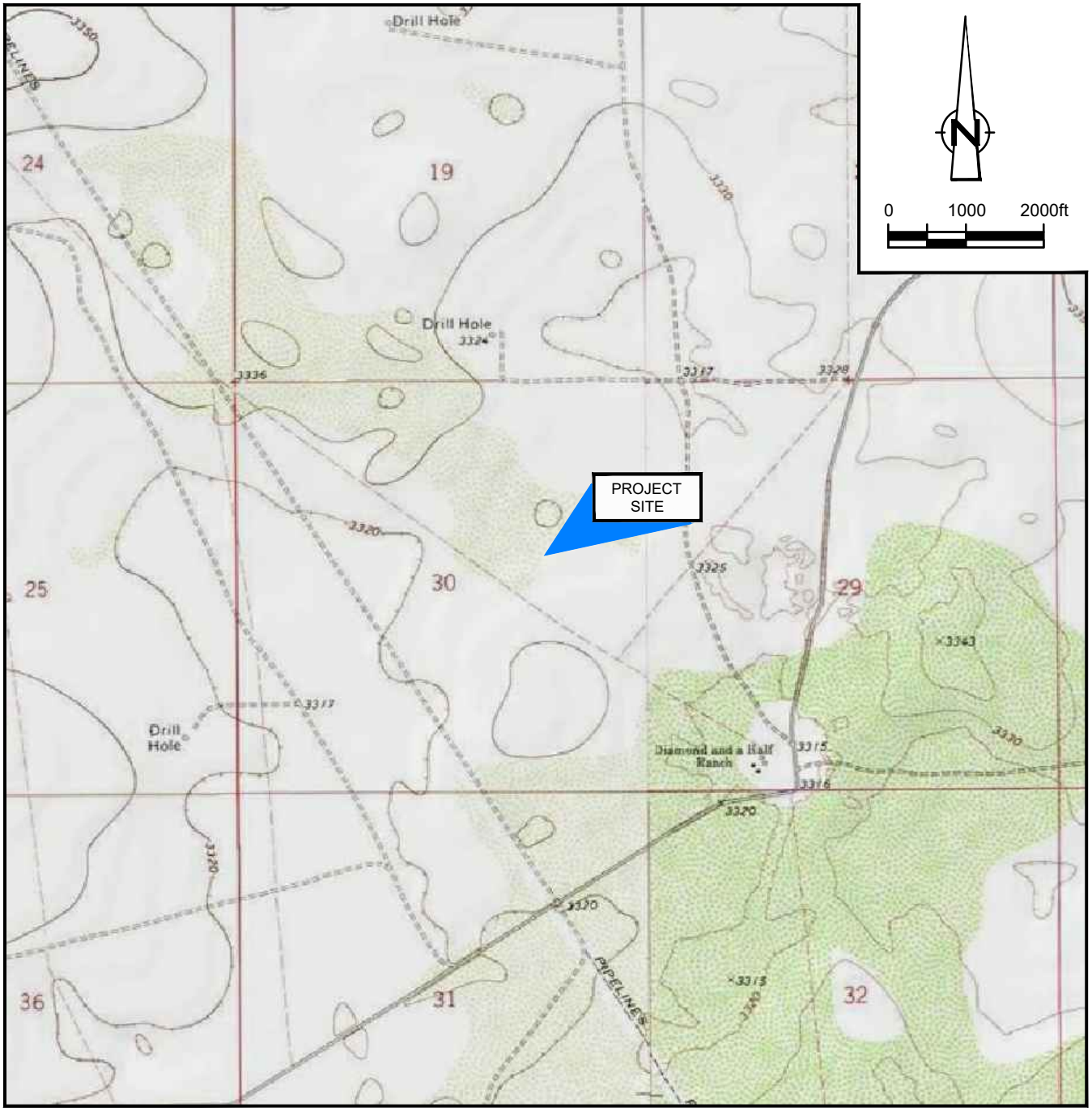


Christine Mathews
Project Scientist

Bernard Bockisch
Project Manager PPM

BB/mc/02

Figures



SOURCE: USGS 7.5 MINUTE QUAD
"PADUCA BREAKS EAST AND ANDREWS PLACE, NEW MEXICO"

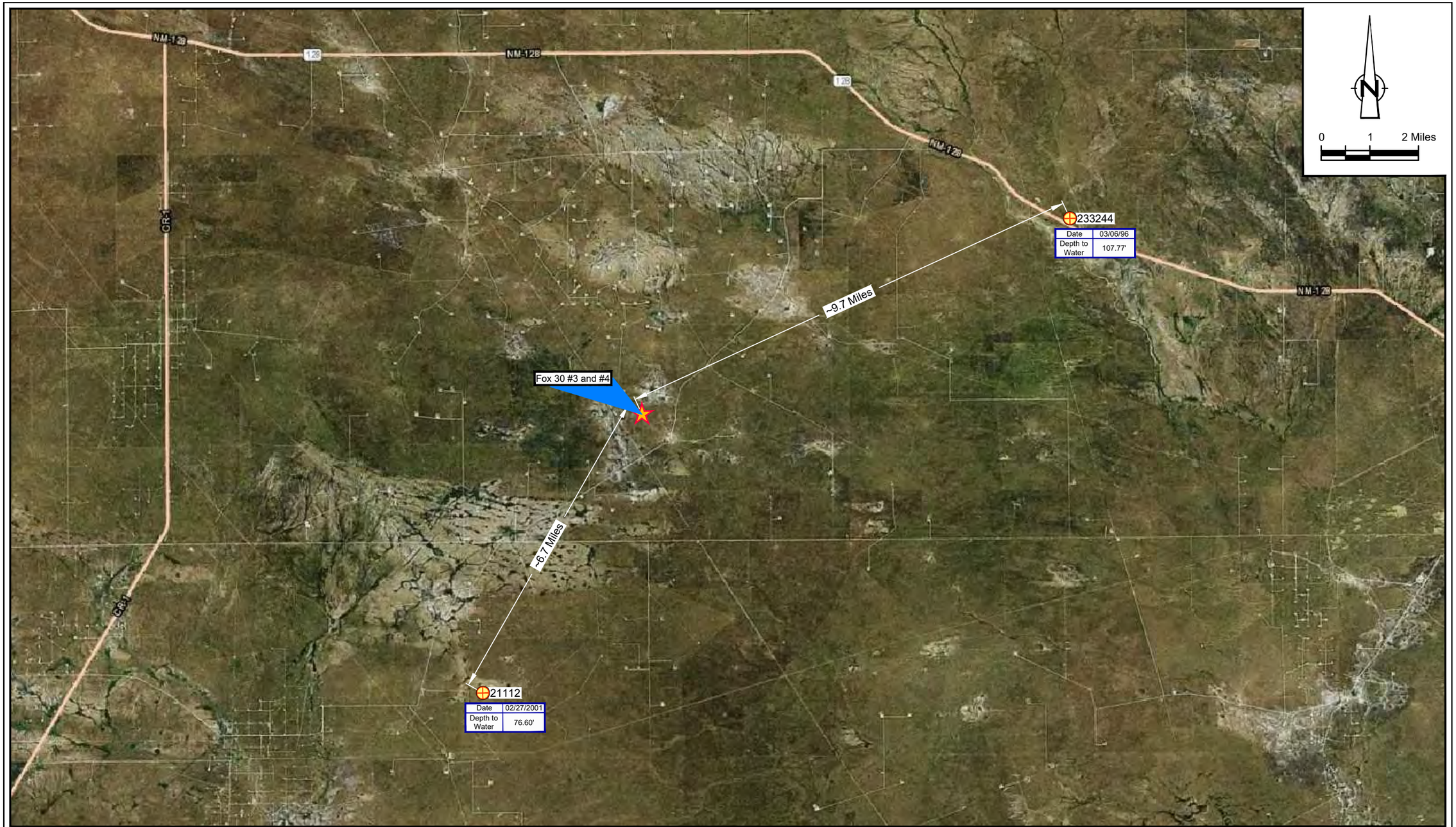
LAT/LONG: 32.10255° NORTH, 103.50457° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

Figure 1

SITE LOCATION MAP
FOX 30 STATE #3 AND #4 (1RP3460)
LEA COUNTY, NEW MEXICO
EOG Resources

GHD

088210-22(000)GN-DL001 MAY 5/2016



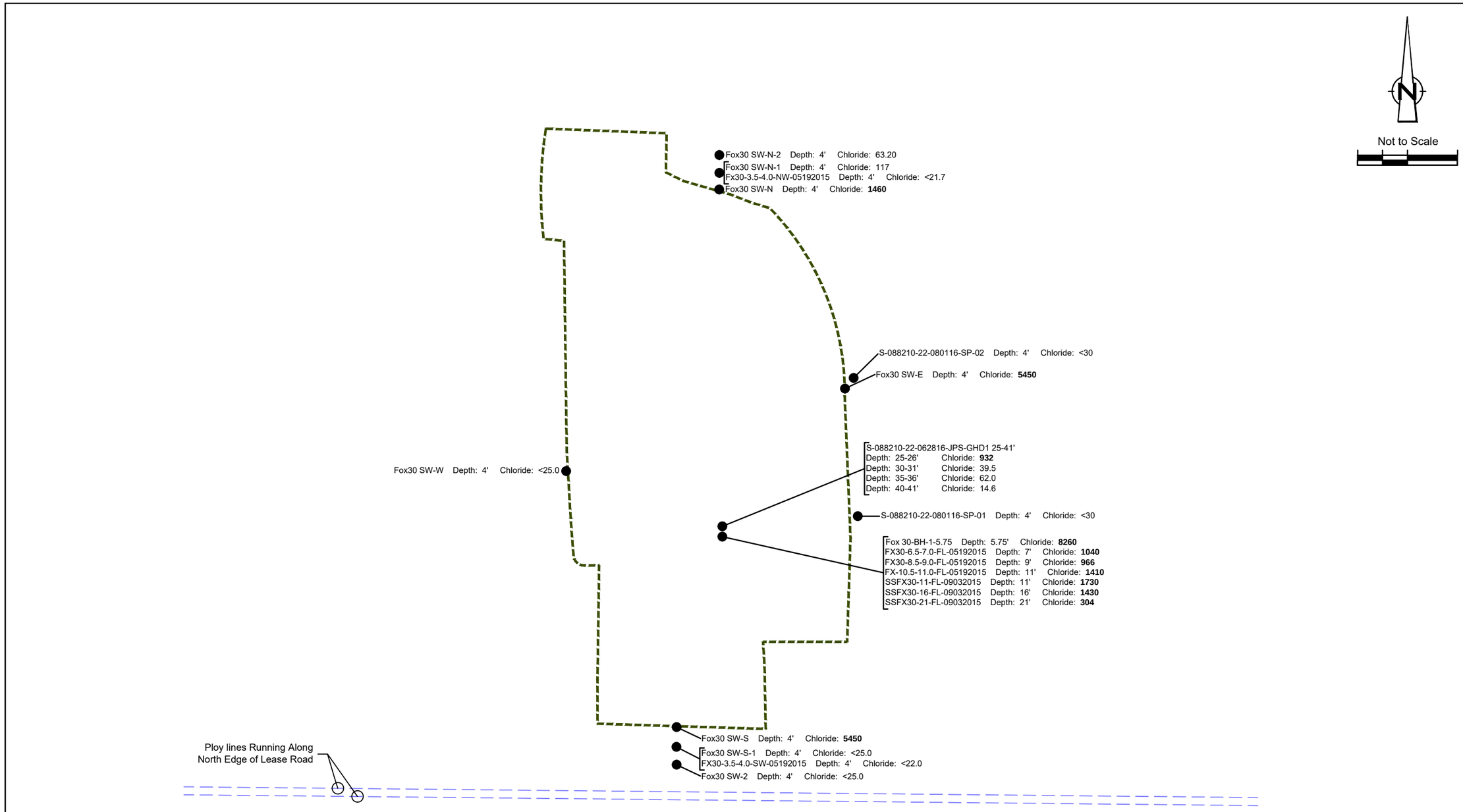
LEGEND

Well Location

Figure 2

WELL LOCATION MAP
FOX 30 STATE #3 AND #4 (1RP3460)
LEA COUNTY, NEW MEXICO
EOG Resources

088210-22(000)GN-DL001 AUG 24, 2016



LEGEND

- Soil Sample Location
- Excavation Outline

NOTES:

1. Chloride concentrations in milligrams/kilogram.
2. Concentrations in bold indicates it is above the recommended remediation action limit.
3. All data collected by CH2M Hill.

Figure 3

SITE DETAIL MAP
FOX 30 STATE #3 AND #4 (1RP3460)
LEA COUNTY, NEW MEXICO
EOG Resources

Tables

Table 1
Fox State 30 #3 and #4
Summary of Analytical Data

			Analyte and Recommended Remediation Action Level								
			Benzene 10	***Toluene*** ---	***Ethylbenzene*** ---	***Xylenes*** ---	***BTEX 50***	***TPH (GRO)*** ---	***TPH (DRO)*** ---	***TPH2 1000***	***Chloride 250***
Sample ID	***Depth (ft. bgs)***	***Date***									
Fox 30-SW-W	4	12/4/2014	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<4.00	<25.0
Fox 30-SW-N	4	12/4/2014	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<4.00	**1460**
Fox 30-SW-N-1	4	12/4/2014	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<4.00	**117**
Fox 30-SW-N-2	4	12/4/2014	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<4.00	**63.2**
Fox 30-SW-E	4	12/4/2014	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<4.00	<25.0
Fox 30-SW-S	4	12/4/2014	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<4.00	**5450**
Fox 30-SW-S-1	4	12/4/2014	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<4.00	<25.0
Fox 30-SW-S-2	4	12/4/2014	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<4.00	<25.0
Fox 30-BH-1-5.75	5.75	12/4/2014	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<4.00	**8260**
FX30-3.5-4.0-NW-05192015	3.5-4.0	5/19/2015	NA	NA	NA	NA	NA	NA	NA	NA	<21.7
FX30-3.5-4.0-SW-05192015	3.5-4.0	5/19/2015	NA	NA	NA	NA	NA	NA	NA	NA	<22.0
FX30-6.5-7.0-FL-05192015	6.5-7.0	5/19/2015	NA	NA	NA	NA	NA	NA	NA	NA	**1040**
FX30-8.5-9.0-FL-05192015	8.5-9.0	5/19/2015	NA	NA	NA	NA	NA	NA	NA	NA	**966**
FX30-10.5-11.0-FL-05192015	10.5-11.0	5/19/2015	NA	NA	NA	NA	NA	NA	NA	NA	**1410**
SSFX30-11-FL-09032015	11	9/3/2015	NA	NA	NA	NA	NA	NA	NA	NA	**1730**
SSFX30-16-FL-09032015	16	9/3/2015	NA	NA	NA	NA	NA	NA	NA	NA	**1430**
SSFX30-21-FL-09032015	21	9/3/2015	NA	NA	NA	NA	NA	NA	NA	NA	**304**
S-088210-22-06-2816-JPS-GHD1 25-26	25-26	6/28/2016	NA	NA	NA	NA	NA	NA	NA	NA	**932**
S-088210-22-06-2816-JPS-GHD1 30-31	30-31	6/28/2016	NA	NA	NA	NA	NA	NA	NA	NA	39.5
S-088210-22-06-2816-JPS-GHD1 35-36	35-36	6/28/2016	NA	NA	NA	NA	NA	NA	NA	NA	62.0
S-088210-22-06-2816-JPS-GHD1 40-41	40-41	6/28/2016	NA	NA	NA	NA	NA	NA	NA	NA	14.6
S-088210-22-080116-SP-01	4	8/1/2016	NA	NA	NA	NA	NA	NA	NA	NA	<30
S-088210-22-080116-SP-02	4	8/1/2016	NA	NA	NA	NA	NA	NA	NA	NA	<30

Notes:
All samples were collected by CH2M Hill personnel prior to 9/3/2015.
BTEX indicates benzene, toluene, ethylbenzene, and xylene.
< indicates less than the laboratory reporting limit. TPH indicates total petroleum hydrocarbons
All concentrations in milligrams per kilogram

Attachments

Attachment A
Well Records

Click to hideNews Bulletins

- **Effective May 5, 2016, we are experiencing a network outage in North Carolina which is impacting the real-time data display for that Water Science Center. Thank you for your patience as we work to resolve the issue.**
- Try our new Mobile-friendly water data site from your mobile device!
- New improved user interface.
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 320918103211701

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 320918103211701 25S.35E.03.233244

Lea County, New Mexico
Latitude 32°09'36", Longitude 103°21'14" NAD27
Land-surface elevation 3,219.20 feet above NGVD29
The depth of the well is 122 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
1965-10-21		D	100.35			2		U		
1968-06-12		D	107.96			2	R	U		
1970-12-09		D	107.99			2		U		
1976-01-09		D	107.90			2		U		
1981-03-27		D	108.04			2		U		
1986-03-18		D	107.77			2		U		
1991-06-12		D	107.65			2		U		
1996-03-06		D	107.77			2		S		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Status	R	Site had been pumped recently.
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown

Section	Code	Description
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility Plug-Ins FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: http://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2016-05-05 12:45:48 EDT
0.66 0.53 nadww02

Click to hideNews Bulletins

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- New improved user interface.
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 320059103333501

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 320059103333501 26S.33E.27.21112

Lea County, New Mexico
Latitude 32°01'16.0", Longitude 103°33'33.9" NAD83
Land-surface elevation 3,252.00 feet above NGVD29
The depth of the well is 200 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
1954-07-26		D	79.71			2		U		
1976-01-08		D	76.52			2		U		
1986-03-04		D	77.14			2		U		
1990-11-27		D	76.54			2		U		
1996-03-05		D	77.39			2		S		
2001-02-27		D	76.60			2		S		
2013-01-16	11:30 MST	m					O	S	USGS	
2013-02-14	09:50 MDT	m					P	S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Water-level accuracy		Not determined
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Status	O	Obstruction was encountered in the well (no water level was recorded).

Section	Code	Description
Status	P	Site was being pumped.
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	A	Reported by another government agency (do not use "A" if reported by owner, use "O").
Source of measurement	R	Reported by person other than the owner, driller, or another government agency.
Source of measurement	S	Measured by personnel of reporting agency.
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.
Water-level approval status	P	Provisional data subject to revision.

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U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for USA: Water Levels
URL: http://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2016-05-05 12:51:15 EDT
0.53 0.4 nadww02

Attachment B
Laboratory Analytical Reports

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 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

(Corrected Report)

Leslie Voss
CH2M Hill
700 Main St.
Suite 400
Baton Rouge, LA, 70802

Report Date: May 4, 2015

Work Order: 14120801

Project Location: Lea County, NM
Project Name: Fox 30 #3 and #4
Project Number: Fox 30 #3 and #4

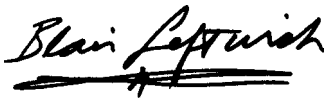
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
381458	Fox 30-SW-W	soil	2014-12-04	15:40	2014-12-05
381459	Fox 30-SW-N	soil	2014-12-04	16:00	2014-12-05
381460	Fox 30-SW-E	soil	2014-12-04	16:25	2014-12-05
381461	Fox 30-SW-S	soil	2014-12-04	16:50	2014-12-05
381462	Fox 30-BH-1-5.75	soil	2014-12-04	17:20	2014-12-05
381463	Fox 30-SW-W-1	soil	2014-12-04	15:45	2014-12-05
381464	Fox 30-SW-W-2	soil	2014-12-04	15:50	2014-12-05
381465	Fox 30-SW-N-1	soil	2014-12-04	16:05	2014-12-05
381466	Fox 30-SW-N-2	soil	2014-12-04	16:10	2014-12-05
381467	Fox 30-SW-E-1	soil	2014-12-04	16:30	2014-12-05
381468	Fox 30-SW-E-2	soil	2014-12-04	16:35	2014-12-05
381469	Fox 30-SW-S-1	soil	2014-12-04	16:55	2014-12-05
381470	Fox 30-SW-S-2	soil	2014-12-04	17:00	2014-12-05

Report Corrections (Work Order 14120801)

- 1/9/15: Added BTEX and TPH DRO/GRO to samples 381465, 381466, 381469, and 381470.
- 1/16/15: Added Chlorides to samples 381465, 381466, 381469, and 381470.
- 5/4/15: Dilution corrected for sample 381461

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
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative

Samples for project Fox 30 #3 and #4 were received by TraceAnalysis, Inc. on 2014-12-05 and assigned to work order 14120801. Samples for work order 14120801 were received intact at a temperature of 8.5 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	99649	2014-12-08 at 16:00	117866	2014-12-09 at 16:00
BTEX	S 8021B	100163	2015-01-07 at 11:20	118545	2015-01-09 at 12:40
Chloride (IC)	E 300.0	99742	2014-12-12 at 08:30	117983	2014-12-12 at 08:55
Chloride (IC)	E 300.0	100349	2015-01-15 at 13:00	118679	2015-01-15 at 14:21
TPH DRO - NEW	S 8015 D	99656	2014-12-09 at 10:13	117872	2014-12-10 at 10:24
TPH DRO - NEW	S 8015 D	100120	2015-01-05 at 18:55	118409	2015-01-06 at 08:24
TPH GRO	S 8015 D	99649	2014-12-08 at 16:00	117867	2014-12-09 at 16:30
TPH GRO	S 8015 D	100163	2015-01-07 at 11:20	118546	2015-01-09 at 12:46

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 14120801 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: 381458 - Fox 30-SW-W

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	117866	Date Analyzed:	2014-12-09	Analyzed By:	AK
Prep Batch:	99649	Sample Preparation:	2014-12-08	Prepared By:	AK

Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Toluene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Xylene	Qs,U	3	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.75	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)			2.09	mg/Kg	1	2.00	104	70 - 130

Sample: 381458 - Fox 30-SW-W

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	117983	Date Analyzed:	2014-12-12	Analyzed By:	RL
Prep Batch:	99742	Sample Preparation:		Prepared By:	RL

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs	1,2,4	<25.0	mg/Kg	1	25.0

Sample: 381458 - Fox 30-SW-W

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	117872	Date Analyzed:	2014-12-10	Analyzed By:	SC
Prep Batch:	99656	Sample Preparation:		Prepared By:	SC

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

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

Sample: 381458 - Fox 30-SW-W

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	117867	Date Analyzed:	2014-12-09	Analyzed By:	AK
Prep Batch:	99649	Sample Preparation:	2014-12-08	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.79	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	1.32	mg/Kg	1	2.00	66	70 - 130

Sample: 381459 - Fox 30-SW-N

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	117866	Date Analyzed:	2014-12-09	Analyzed By:	AK
Prep Batch:	99649	Sample Preparation:	2014-12-08	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Toluene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Xylene	Qs,U	3	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.80	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			2.34	mg/Kg	1	2.00	117	70 - 130

Sample: 381459 - Fox 30-SW-N

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	117983	Date Analyzed:	2014-12-12	Analyzed By:	RL
Prep Batch:	99742	Sample Preparation:		Prepared By:	RL

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs	1,2,4	**1460**	mg/Kg	5	25.0

Sample: 381459 - Fox 30-SW-N

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	117872	Date Analyzed:	2014-12-10	Analyzed By:	SC
Prep Batch:	99656	Sample Preparation:		Prepared By:	SC

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	70 - 130

Sample: 381459 - Fox 30-SW-N

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	117867	Date Analyzed:	2014-12-09	Analyzed By:	AK
Prep Batch:	99649	Sample Preparation:	2014-12-08	Prepared By:	AK

Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO	U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.47	mg/Kg	1	2.00	74	70 - 130

Sample: 381460 - Fox 30-SW-E

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	117866	Date Analyzed:	2014-12-09	Analyzed By:	AK
Prep Batch:	99649	Sample Preparation:	2014-12-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Toluene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Xylene	Qs,U	3	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.78	mg/Kg	1	2.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)			2.31	mg/Kg	1	2.00	116	70 - 130

Sample: 381460 - Fox 30-SW-E

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	117983	Date Analyzed:	2014-12-12	Analyzed By:	RL
Prep Batch:	99742	Sample Preparation:		Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs	1,2,4	<25.0	mg/Kg	1	25.0

Sample: 381460 - Fox 30-SW-E

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	117872	Date Analyzed:	2014-12-10	Analyzed By:	SC
Prep Batch:	99656	Sample Preparation:		Prepared By:	SC

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

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

Sample: 381460 - Fox 30-SW-E

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	117867	Date Analyzed:	2014-12-09	Analyzed By:	AK
Prep Batch:	99649	Sample Preparation:	2014-12-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.83	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.43	mg/Kg	1	2.00	72	70 - 130

Sample: 381461 - Fox 30-SW-S

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	117866	Date Analyzed:	2014-12-09	Analyzed By:	AK
Prep Batch:	99649	Sample Preparation:	2014-12-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Toluene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Xylene	Qs,U	3	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.75	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)			2.29	mg/Kg	1	2.00	114	70 - 130

Sample: 381461 - Fox 30-SW-S

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	117983	Date Analyzed:	2014-12-12	Analyzed By:	RL
Prep Batch:	99742	Sample Preparation:		Prepared By:	RL

continued ...

sample 381461 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	1,2,4	**5450**	mg/Kg	50	25.0

Sample: 381461 - Fox 30-SW-S

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	117872	Date Analyzed:	2014-12-10	Analyzed By:	SC
Prep Batch:	99656	Sample Preparation:		Prepared By:	SC

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			110	mg/Kg	1	100	110	70 - 130

Sample: 381461 - Fox 30-SW-S

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	117867	Date Analyzed:	2014-12-09	Analyzed By:	AK
Prep Batch:	99649	Sample Preparation:	2014-12-08	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.84	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.43	mg/Kg	1	2.00	72	70 - 130

Sample: 381462 - Fox 30-BH-1-5.75

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	117866	Date Analyzed:	2014-12-09	Analyzed By:	AK
Prep Batch:	99649	Sample Preparation:	2014-12-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Toluene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Xylene	Qs,U	3	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.74	mg/Kg	1	2.00	87	70 - 130
4-Bromofluorobenzene (4-BFB)			2.28	mg/Kg	1	2.00	114	70 - 130

Sample: 381462 - Fox 30-BH-1-5.75

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	117983	Date Analyzed:	2014-12-12	Analyzed By:	RL
Prep Batch:	99742	Sample Preparation:		Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs	1,2,4	**8260**	mg/Kg	100	25.0

Sample: 381462 - Fox 30-BH-1-5.75

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	117872	Date Analyzed:	2014-12-10	Analyzed By:	SC
Prep Batch:	99656	Sample Preparation:		Prepared By:	SC

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	70 - 130

Sample: 381462 - Fox 30-BH-1-5.75

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	117867	Date Analyzed:	2014-12-09	Analyzed By:	AK
Prep Batch:	99649	Sample Preparation:	2014-12-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.83	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.42	mg/Kg	1	2.00	71	70 - 130

Sample: 381465 - Fox 30-SW-N-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	118545	Date Analyzed:	2015-01-09	Analyzed By:	AK
Prep Batch:	100163	Sample Preparation:	2015-01-07	Prepared By:	AK

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene [1]	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Toluene	U	3	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	3	<0.0200	mg/Kg	1	0.0200
Xylene	U	3	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.75	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)			1.97	mg/Kg	1	2.00	98	70 - 130

Sample: 381465 - Fox 30-SW-N-1

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	118679	Date Analyzed:	2015-01-15	Analyzed By:	RL
Prep Batch:	100349	Sample Preparation:		Prepared By:	RL

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride		1,2,4	**117**		mg/Kg	1	25.0

Sample: 381465 - Fox 30-SW-N-1

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	118409	Date Analyzed:	2015-01-06	Analyzed By:	SC
Prep Batch:	100120	Sample Preparation:	2015-01-05	Prepared By:	SC

Comment: Client added 12/31/2014.

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			91.9	mg/Kg	1	100	92	70 - 130

Sample: 381465 - Fox 30-SW-N-1

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	118546	Date Analyzed:	2015-01-09	Analyzed By:	AK
Prep Batch:	100163	Sample Preparation:	2015-01-07	Prepared By:	AK

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
GRO [2]	Qs,U	3	<4.00		mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.80	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.88	mg/Kg	1	2.00	94	70 - 130

Sample: 381466 - Fox 30-SW-N-2

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	118545	Date Analyzed:	2015-01-09	Analyzed By:	AK
Prep Batch:	100163	Sample Preparation:	2015-01-07	Prepared By:	AK

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [3]	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Toluene	U	3	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	3	<0.0200	mg/Kg	1	0.0200
Xylene	U	3	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.74	mg/Kg	1	2.00	87	70 - 130
4-Bromofluorobenzene (4-BFB)			1.92	mg/Kg	1	2.00	96	70 - 130

Sample: 381466 - Fox 30-SW-N-2

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	118679	Date Analyzed:	2015-01-15	Analyzed By:	RL
Prep Batch:	100349	Sample Preparation:		Prepared By:	RL

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	**63.2**	mg/Kg	1	25.0

Sample: 381466 - Fox 30-SW-N-2

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	118409	Date Analyzed:	2015-01-06	Analyzed By:	SC
Prep Batch:	100120	Sample Preparation:	2015-01-05	Prepared By:	SC

Comment: Client added 12/31/2014.

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			96.4	mg/Kg	1	100	96	70 - 130

Sample: 381466 - Fox 30-SW-N-2

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	118546	Date Analyzed:	2015-01-09	Analyzed By:	AK
Prep Batch:	100163	Sample Preparation:	2015-01-07	Prepared By:	AK

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO [4]	Qs,U	3		<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.74	mg/Kg	1	2.00	87	70 - 130
4-Bromofluorobenzene (4-BFB)			1.86	mg/Kg	1	2.00	93	70 - 130

Sample: 381469 - Fox 30-SW-S-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	118545	Date Analyzed:	2015-01-09	Analyzed By:	AK
Prep Batch:	100163	Sample Preparation:	2015-01-07	Prepared By:	AK

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [5]	Qs,U	3	<0.0200	mg/Kg	1	0.0200
Toluene	U	3	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	3	<0.0200	mg/Kg	1	0.0200
Xylene	U	3	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.73	mg/Kg	1	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			1.98	mg/Kg	1	2.00	99	70 - 130

Sample: 381469 - Fox 30-SW-S-1

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	118679	Date Analyzed:	2015-01-15	Analyzed By:	RL
Prep Batch:	100349	Sample Preparation:		Prepared By:	RL

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<25.0	mg/Kg	1	25.0

Sample: 381469 - Fox 30-SW-S-1

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	118409	Date Analyzed:	2015-01-06	Analyzed By:	SC
Prep Batch:	100120	Sample Preparation:	2015-01-05	Prepared By:	SC

Comment: Client added 12/31/2014.

continued ...

sample 381469 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			91.9	mg/Kg	1	100	92	70 - 130

Sample: 381469 - Fox 30-SW-S-1

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	118546	Date Analyzed:	2015-01-09	Analyzed By:	AK
Prep Batch:	100163	Sample Preparation:	2015-01-07	Prepared By:	AK

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO [6]	Qs,U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.81	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.88	mg/Kg	1	2.00	94	70 - 130

Sample: 381470 - Fox 30-SW-S-2

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	118545	Date Analyzed:	2015-01-09	Analyzed By:	AK
Prep Batch:	100163	Sample Preparation:	2015-01-07	Prepared By:	AK

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [7]	Qs,U	3	<0.0200	mg/Kg	1	0.0200

continued ...

sample 381470 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Toluene	U	3	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	3	<0.0200	mg/Kg	1	0.0200
Xylene	U	3	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.68	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	70 - 130

Sample: 381470 - Fox 30-SW-S-2

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	118679	Date Analyzed:	2015-01-15	Analyzed By:	RL
Prep Batch:	100349	Sample Preparation:		Prepared By:	RL

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<25.0	mg/Kg	1	25.0

Sample: 381470 - Fox 30-SW-S-2

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	118409	Date Analyzed:	2015-01-06	Analyzed By:	SC
Prep Batch:	100120	Sample Preparation:	2015-01-05	Prepared By:	SC

Comment: Client added 12/31/2014.

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			92.9	mg/Kg	1	100	93	70 - 130

Sample: 381470 - Fox 30-SW-S-2

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	118546	Date Analyzed:	2015-01-09	Analyzed By:	AK
Prep Batch:	100163	Sample Preparation:	2015-01-07	Prepared By:	AK

Comment: Client added 12/31/2014.

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO [8]	Qs,U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.71	mg/Kg	1	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			1.79	mg/Kg	1	2.00	90	70 - 130

Method Blanks

Method Blank (1) QC Batch: 117866

QC Batch: 117866 | Date Analyzed: 2014-12-09 | Analyzed By: AK
Prep Batch: 99649 | QC Preparation: 2014-12-08 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		3	<0.00533	mg/Kg	0.02
Toluene		3	<0.00645	mg/Kg	0.02
Ethylbenzene		3	<0.0116	mg/Kg	0.02
Xylene		3	<0.00874	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.81	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			2.32	mg/Kg	1	2.00	116	70 - 130

Method Blank (1) QC Batch: 117867

QC Batch: 117867 | Date Analyzed: 2014-12-09 | Analyzed By: AK
Prep Batch: 99649 | QC Preparation: 2014-12-08 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		3	<2.32	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.83	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.43	mg/Kg	1	2.00	72	70 - 130

Method Blank (1) QC Batch: 117872

QC Batch: 117872 | Date Analyzed: 2014-12-10 | Analyzed By: SC
Prep Batch: 99656 | QC Preparation: 2014-12-09 | Prepared By: SC

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		3	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			98.6	mg/Kg	1	100	99	70 - 130

Method Blank (1) QC Batch: 117983

QC Batch:	117983	Date Analyzed:	2014-12-12	Analyzed By:	RL
Prep Batch:	99742	QC Preparation:	2014-12-12	Prepared By:	RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1,2,4	<2.66	mg/Kg	25

Method Blank (1) QC Batch: 118409

QC Batch:	118409	Date Analyzed:	2015-01-06	Analyzed By:	SC
Prep Batch:	100120	QC Preparation:	2015-01-05	Prepared By:	SC

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		3	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			89.8	mg/Kg	1	100	90	70 - 130

Method Blank (1) QC Batch: 118545

QC Batch:	118545	Date Analyzed:	2015-01-09	Analyzed By:	AK
Prep Batch:	100163	QC Preparation:	2015-01-07	Prepared By:	AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		3	<0.00533	mg/Kg	0.02

continued . . .

method blank continued ...

Parameter	Flag	Cert	MDL Result	Units	RL
Toluene		3	<0.00645	mg/Kg	0.02
Ethylbenzene		3	<0.0116	mg/Kg	0.02
Xylene		3	<0.00874	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.74	mg/Kg	1	2.00	87	70 - 130
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70 - 130

Method Blank (1) QC Batch: 118546

QC Batch: 118546 Date Analyzed: 2015-01-09 Analyzed By: AK
Prep Batch: 100163 QC Preparation: 2015-01-07 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		3	<2.32	mg/Kg	4

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

Method Blank (1) QC Batch: 118679

QC Batch: 118679 Date Analyzed: 2015-01-15 Analyzed By: RL
Prep Batch: 100349 QC Preparation: 2015-01-15 Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1,2,4	<2.66	mg/Kg	25

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 117866 | Date Analyzed: 2014-12-09 | Analyzed By: AK
Prep Batch: 99649 | QC Preparation: 2014-12-08 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		3	1.98	mg/Kg	1	2.00	<0.00533	99	70 - 130
Toluene		3	1.98	mg/Kg	1	2.00	<0.00645	99	70 - 130
Ethylbenzene		3	1.94	mg/Kg	1	2.00	<0.0116	97	70 - 130
Xylene		3	5.90	mg/Kg	1	6.00	<0.00874	98	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		3	1.94	mg/Kg	1	2.00	<0.00533	97	70 - 130	2	20
Toluene		3	2.00	mg/Kg	1	2.00	<0.00645	100	70 - 130	1	20
Ethylbenzene		3	2.06	mg/Kg	1	2.00	<0.0116	103	70 - 130	6	20
Xylene		3	6.30	mg/Kg	1	6.00	<0.00874	105	70 - 130	7	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)	1.77	1.68	mg/Kg	1	2.00	88	84	70 - 130
4-Bromofluorobenzene (4-BFB)	2.25	2.51	mg/Kg	1	2.00	112	126	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 117867 | Date Analyzed: 2014-12-09 | Analyzed By: AK
Prep Batch: 99649 | QC Preparation: 2014-12-08 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		3	18.3	mg/Kg	1	20.0	<2.32	92	70 - 130

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

continued . . .

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		[3]	21.0	mg/Kg	1	20.0	<2.32	105	70 - 130	14	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)	1.70	1.72	mg/Kg	1	2.00	85	86	70 - 130
4-Bromofluorobenzene (4-BFB)	1.47	1.57	mg/Kg	1	2.00	74	78	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 117872 | Date Analyzed: 2014-12-10 | Analyzed By: SC
Prep Batch: 99656 | QC Preparation: 2014-12-09 | Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		[3]	254	mg/Kg	1	250	<7.41	102	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		[3]	266	mg/Kg	1	250	<7.41	106	70 - 130	5	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	96.5	97.8	mg/Kg	1	100	96	98	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 117983 | Date Analyzed: 2014-12-12 | Analyzed By: RL
Prep Batch: 99742 | QC Preparation: 2014-12-12 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		[1,2,4]	239	mg/Kg	1	250	<2.66	96	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	240	mg/Kg	1	250	<2.66	96	90 - 110	0	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 118409 | Date Analyzed: 2015-01-06 | Analyzed By: SC
Prep Batch: 100120 | QC Preparation: 2015-01-05 | Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		3	210	mg/Kg	1	250	<7.41	84	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		3	210	mg/Kg	1	250	<7.41	84	70 - 130	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	90.5	91.0	mg/Kg	1	100	90	91	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 118545 | Date Analyzed: 2015-01-09 | Analyzed By: AK
Prep Batch: 100163 | QC Preparation: 2015-01-07 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		3	1.71	mg/Kg	1	2.00	<0.00533	86	70 - 130
Toluene		3	1.79	mg/Kg	1	2.00	<0.00645	90	70 - 130
Ethylbenzene		3	1.88	mg/Kg	1	2.00	<0.0116	94	70 - 130
Xylene		3	5.67	mg/Kg	1	6.00	<0.00874	94	70 - 130

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

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		3	1.55	mg/Kg	1	2.00	<0.00533	78	70 - 130	10	20
Toluene		3	1.64	mg/Kg	1	2.00	<0.00645	82	70 - 130	9	20
Ethylbenzene		3	1.74	mg/Kg	1	2.00	<0.0116	87	70 - 130	8	20
Xylene		3	5.29	mg/Kg	1	6.00	<0.00874	88	70 - 130	7	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)	1.73	1.66	mg/Kg	1	2.00	86	83	70 - 130
4-Bromofluorobenzene (4-BFB)	2.02	1.89	mg/Kg	1	2.00	101	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 118546 | Date Analyzed: 2015-01-09 | Analyzed By: AK
Prep Batch: 100163 | QC Preparation: 2015-01-07 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		3	14.3	mg/Kg	1	20.0	<2.32	72	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		3	16.3	mg/Kg	1	20.0	<2.32	82	70 - 130	13	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)	1.62	1.77	mg/Kg	1	2.00	81	88	70 - 130
4-Bromofluorobenzene (4-BFB)	1.94	1.96	mg/Kg	1	2.00	97	98	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 118679 | Date Analyzed: 2015-01-15 | Analyzed By: RL
Prep Batch: 100349 | QC Preparation: 2015-01-15 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	235	mg/Kg	1	250	<2.66	94	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	234	mg/Kg	1	250	<2.66	94	90 - 110	0	20

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

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 380974

QC Batch: 117866 | Date Analyzed: 2014-12-09 | Analyzed By: AK
Prep Batch: 99649 | QC Preparation: 2014-12-08 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene [9] Qs	Qs	3	<0.00533	mg/Kg	1	2.00	<0.00533	0	70 - 130
Toluene Qs	Qs	3	<0.00645	mg/Kg	1	2.00	<0.00645	0	70 - 130
Ethylbenzene Qs	Qs	3	<0.0116	mg/Kg	1	2.00	<0.0116	0	70 - 130
Xylene Qs	Qs	3	<0.00874	mg/Kg	1	6.00	<0.00874	0	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene [10] Qs	Qs	3	<0.00533	mg/Kg	1	2.00	<0.00533	0	70 - 130	0	20
Toluene Qs	Qs	3	<0.00645	mg/Kg	1	2.00	<0.00645	0	70 - 130	0	20
Ethylbenzene Qs	Qs	3	<0.0116	mg/Kg	1	2.00	<0.0116	0	70 - 130	0	20
Xylene Qs	Qs	3	<0.00874	mg/Kg	1	6.00	<0.00874	0	70 - 130	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)	1.77	1.74	mg/Kg	1	2	89	87	70 - 130
4-Bromofluorobenzene (4-BFB)	2.28	2.33	mg/Kg	1	2	114	116	70 - 130

Matrix Spike (MS-1) Spiked Sample: 381449

QC Batch: 117867 | Date Analyzed: 2014-12-09 | Analyzed By: AK
Prep Batch: 99649 | QC Preparation: 2014-12-08 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		3	18.7	mg/Kg	1	20.0	<2.32	94	70 - 130

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

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		[3]	19.4	mg/Kg	1	20.0	<2.32	97	70 - 130	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)	1.67	1.70	mg/Kg	1	2	84	85	70 - 130
4-Bromofluorobenzene (4-BFB)	1.55	1.55	mg/Kg	1	2	78	78	70 - 130

Matrix Spike (MS-1) Spiked Sample: 381449

QC Batch: 117872 | Date Analyzed: 2014-12-10 | Analyzed By: SC
Prep Batch: 99656 | QC Preparation: 2014-12-09 | Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		[3]	591	mg/Kg	1	250	372	88	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		[3]	590	mg/Kg	1	250	372	87	70 - 130	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
n-Tricosane [Qsr] [Qsr]	133	137	mg/Kg	1	100	133	137	70 - 130

Matrix Spike (MS-1) Spiked Sample: 381460

QC Batch: 117983 | Date Analyzed: 2014-12-12 | Analyzed By: RL
Prep Batch: 99742 | QC Preparation: 2014-12-12 | Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		[1,2,4]	233	mg/Kg	1	250	21.7	84	80 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	231	mg/Kg	1	250	21.7	84	80 - 120	1	20

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

Matrix Spike (MS-2) Spiked Sample: 381462

QC Batch: 117983 | Date Analyzed: 2014-12-12 | Analyzed By: RL
Prep Batch: 99742 | QC Preparation: 2014-12-12 | Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Qs	Qs	11200	mg/Kg	100	250	8260	1176	80 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Qs	Qs	11200	mg/Kg	100	250	8260	1176	80 - 120	0	20

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

Matrix Spike (xMS-1) Spiked Sample: 383619

QC Batch: 118409 | Date Analyzed: 2015-01-06 | Analyzed By: SC
Prep Batch: 100120 | QC Preparation: 2015-01-05 | Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs	Qs	3	2240	mg/Kg	2	250	2460	-88	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	Qs	Qs	3	2150	mg/Kg	2	250	2460	-124	70 - 130	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
n-Tricosane	Qsr	Qsr	156	159	mg/Kg	2	100	156	159	70 - 130

Matrix Spike (MS-1) Spiked Sample: 383642

QC Batch: 118545 | Date Analyzed: 2015-01-09 | Analyzed By: AK
Prep Batch: 100163 | QC Preparation: 2015-01-07 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene Qs	Qs	3	1.37	mg/Kg	1	2.00	<0.00533	68	70 - 130
Toluene		3	1.48	mg/Kg	1	2.00	<0.00645	74	70 - 130
Ethylbenzene		3	1.59	mg/Kg	1	2.00	<0.0116	80	70 - 130
Xylene		3	4.81	mg/Kg	1	6.00	<0.00874	80	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene Qs	Qs	3	1.34	mg/Kg	1	2.00	<0.00533	67	70 - 130	2	20
Toluene		3	1.43	mg/Kg	1	2.00	<0.00645	72	70 - 130	3	20
Ethylbenzene		3	1.52	mg/Kg	1	2.00	<0.0116	76	70 - 130	4	20
Xylene		3	4.65	mg/Kg	1	6.00	<0.00874	78	70 - 130	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)	1.62	1.69	mg/Kg	1	2	81	84	70 - 130
4-Bromofluorobenzene (4-BFB)	1.84	1.90	mg/Kg	1	2	92	95	70 - 130

Matrix Spike (MS-1) Spiked Sample: 383703

QC Batch: 118546 | Date Analyzed: 2015-01-09 | Analyzed By: AK
Prep Batch: 100163 | QC Preparation: 2015-01-07 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO Qs	Qs	3	13.0	mg/Kg	1	20.0	<2.32	65	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		3	15.6	mg/Kg	1	20.0	<2.32	78	70 - 130	18	20

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

continued . . .

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.65	1.72	mg/Kg	1	2	82	86	70 - 130
4-Bromofluorobenzene (4-BFB)	1.81	1.82	mg/Kg	1	2	90	91	70 - 130

Matrix Spike (MS-1) Spiked Sample: 383755

QC Batch: 118679 | Date Analyzed: 2015-01-15 | Analyzed By: RL
Prep Batch: 100349 | QC Preparation: 2015-01-15 | Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	428	mg/Kg	5	250	194	94	80 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	434	mg/Kg	5	250	194	96	80 - 120	1	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 117866 Date Analyzed: 2014-12-09 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		3	mg/kg	0.100	0.0932	93	80 - 120	2014-12-09
Toluene		3	mg/kg	0.100	0.0956	96	80 - 120	2014-12-09
Ethylbenzene		3	mg/kg	0.100	0.0947	95	80 - 120	2014-12-09
Xylene		3	mg/kg	0.300	0.284	95	80 - 120	2014-12-09

Standard (CCV-2)

QC Batch: 117866 Date Analyzed: 2014-12-09 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		3	mg/kg	0.100	0.0962	96	80 - 120	2014-12-09
Toluene		3	mg/kg	0.100	0.0968	97	80 - 120	2014-12-09
Ethylbenzene		3	mg/kg	0.100	0.0960	96	80 - 120	2014-12-09
Xylene		3	mg/kg	0.300	0.292	97	80 - 120	2014-12-09

Standard (CCV-1)

QC Batch: 117867 Date Analyzed: 2014-12-09 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	0.913	91	80 - 120	2014-12-09

Standard (CCV-2)

QC Batch: 117867 Date Analyzed: 2014-12-09 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	0.861	86	80 - 120	2014-12-09

Standard (CCV-1)

QC Batch: 117872 Date Analyzed: 2014-12-10 Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		3	mg/Kg	250	276	110	80 - 120	2014-12-10

Standard (CCV-2)

QC Batch: 117872 Date Analyzed: 2014-12-10 Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		3	mg/Kg	250	295	118	80 - 120	2014-12-10

Standard (CCV-1)

QC Batch: 117983 Date Analyzed: 2014-12-12 Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	23.9	96	90 - 110	2014-12-12

Standard (CCV-2)

QC Batch: 117983 Date Analyzed: 2014-12-12 Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	24.0	96	90 - 110	2014-12-12

Standard (CCV-3)

QC Batch: 117983 Date Analyzed: 2014-12-12 Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	24.2	97	90 - 110	2014-12-12

Standard (CCV-1)

QC Batch: 118409 Date Analyzed: 2015-01-06 Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		3	mg/Kg	250	211	84	80 - 120	2015-01-06

Standard (CCV-2)

QC Batch: 118409 Date Analyzed: 2015-01-06 Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		3	mg/Kg	250	216	86	80 - 120	2015-01-06

Standard (CCV-1)

QC Batch: 118545 Date Analyzed: 2015-01-09 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		3	mg/kg	0.100	0.0930	93	80 - 120	2015-01-09
Toluene		3	mg/kg	0.100	0.0940	94	80 - 120	2015-01-09
Ethylbenzene		3	mg/kg	0.100	0.0928	93	80 - 120	2015-01-09
Xylene		3	mg/kg	0.300	0.280	93	80 - 120	2015-01-09

Standard (CCV-2)

QC Batch: 118545 Date Analyzed: 2015-01-09 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		3	mg/kg	0.100	0.0945	94	80 - 120	2015-01-09
Toluene		3	mg/kg	0.100	0.0941	94	80 - 120	2015-01-09
Ethylbenzene		3	mg/kg	0.100	0.0932	93	80 - 120	2015-01-09
Xylene		3	mg/kg	0.300	0.279	93	80 - 120	2015-01-09

Standard (CCV-1)

QC Batch: 118546 Date Analyzed: 2015-01-09 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	1.03	103	80 - 120	2015-01-09

Standard (CCV-2)

QC Batch: 118546 Date Analyzed: 2015-01-09 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	0.928	93	80 - 120	2015-01-09

Standard (CCV-1)

QC Batch: 118679 | Date Analyzed: 2015-01-15 | Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	23.4	94	90 - 110	2015-01-15

Standard (CCV-2)

QC Batch: 118679 | Date Analyzed: 2015-01-15 | Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	23.6	94	90 - 110	2015-01-15

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	LELAP	LELAP-02003	Lubbock
2	NELAP	T104704219-15-11	Lubbock
3	NELAP	T104704392-14-8	Midland
4		2014-018	Lubbock

Standard Flags

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

Result Comments

1 Sample added out of hold.
2 Sample added after hold expired.
3 Sample added out of hold.
4 Sample added after hold expired.
5 Sample added out of hold.
6 Sample added after hold expired.
7 Sample added out of hold.
8 Sample added after hold expired.
9 Analyst prep error; LCS/LCSD shows recovery for batch.
10 Analyst prep error; LCS/LCSD shows recovery for batch.

Attachments

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

LAB Order ID # 14120801

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: CH2M HILL **Phone #:**

Address: (Street, City, Zip) 306 W. Wall St. Suite 1107 Midland **Fax #:**

Contact Person: Leslie Voss / Zane Kurtz **E-mail:** Leslie.Voss@CH2M.com

Invoice to: (If different from above) EOG Resources Zane_kurtz@eogresources.com

Project #: **Project Name:** Fox 30 #3 and #4

Project Location (including state): Lea County NM **Sampler Signature:** W M

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
381458	Fox30-SW-W	1			X								X	12/4	1540
459	Fox30-SW-N				X								X		1600
460	Fox30-SW-E				X								X		1625
461	Fox30-SW-S				X								X		1650
462	BH Fox30-BH-1-5.5				X								X		1720
463	SW Fox30-SW-W-1				X								X		1545
464	Fox30-SW-W-2				X								X		1550
465	SW Fox30-SW-N-1				X								X		1605
466	Fox30-SW-N-2				X								X		1610
467	Fox30-SW-E-1				X								X		1630
468	Fox30-SW-E-2	1			X								X		1635

ANALYSIS REQUEST (Circle or Specify Method No.)	Turn Around Time If different from standard	Hold – Hold Pending Analytical Results
MTBE 8021 / 602 / 8260 / 624		
(BTEX) 8021 / 602 / 8260 / 624		
(TPH) 418.1 / TX1005 / TX1005 Ext(C35)		
(TPH) 8015 GRO / DRO / TVHC		
PAH 8270 / 625		
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7		
TCLP Metals Ag As Ba Cd Cr Pb Se Hg		
TCLP Volatiles		
TCLP Semi Volatiles		
TCLP Pesticides		
RCI		
GC/MS Vol. 8260 / 624		
GC/MS Semi. Vol. 8270 / 625		
PCB's 8082 / 608		
Pesticides 8081 / 608		
BOD, TSS, pH		
Moisture Content		
(Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity)		
Na, Ca, Mg, K, TDS, EC		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Warren Mauver	CH2M HILL	12/5	1605	AMTA		12-5-14	16:36	INST IR1 OBS 86 °C COR 85 °C
AMTA		12-8-14	09:31					INST ____ OBS ____ °C COR ____ °C
				Brenda Ward	TA Lubbock	12/8/14	5:30 pm	INST IR3 OBS 4.0 °C COR 3.9 °C

LAB USE ONLY
Intact (Y) N
Headspace Y (N) NA
Log-in-Review ____

REMARKS: Cl – (IC) – Lubbock

- [ ] Dry Weight Basis Required
- [ ] TRRP Report Required
- [ ] Check If Special Reporting Limits Are Needed

Carrier # Carty In

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LAB Order ID # 1412080l

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

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2501 Mayes Rd., Ste 100
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Tel (972) 242-7750

Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: CH2M HILL **Phone #:**

Address: (Street, City, Zip) **Fax #:**

Contact Person: **E-mail:**

Invoice to: (If different from above) EOG Resources

Project #: **Project Name:** Fox 30 #3and#4

Project Location (including state): **Sampler Signature:** RA WM

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC						Turn Around Time if different from standard	Hold
469	Fox 30-SW-S-1	1			X							X	X	12/4	1655	X		X													X								X
470	Fox 30-SW-S-2	1			X							X	X	12/4	1700	X		X													X								X

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Warren Mauver	CH2M HILL	12/5	1605	AM TA		12-5-14	16:36	INST FR / OBS 6.6 °C / COR 8.8 °C
AM TA		12-8-14	09:31					INST ____ / OBS ____ °C / COR ____ °C
				Brenda Ward	TA Lubbock	12/8/14	5:30 pm	INST IR3 / OBS 4.0 °C / COR 3.9 °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review

REMARKS:

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # Carry in

ORIGINAL COPY

Summary Report

(Corrected Report)

Leslie Voss
CH2M Hill
700 Main St.
Suite 400
Baton Rouge, LA 70802

Report Date: May 4, 2015

Work Order: 14120801

Project Location: Lea County, NM
Project Name: Fox 30 #3 and #4

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
381458	Fox 30-SW-W	soil	2014-12-04	15:40	2014-12-05
381459	Fox 30-SW-N	soil	2014-12-04	16:00	2014-12-05
381460	Fox 30-SW-E	soil	2014-12-04	16:25	2014-12-05
381461	Fox 30-SW-S	soil	2014-12-04	16:50	2014-12-05
381462	Fox 30-BH-1-5.75	soil	2014-12-04	17:20	2014-12-05
381463	Fox 30-SW-W-1	soil	2014-12-04	15:45	2014-12-05
381464	Fox 30-SW-W-2	soil	2014-12-04	15:50	2014-12-05
381465	Fox 30-SW-N-1	soil	2014-12-04	16:05	2014-12-05
381466	Fox 30-SW-N-2	soil	2014-12-04	16:10	2014-12-05
381467	Fox 30-SW-E-1	soil	2014-12-04	16:30	2014-12-05
381468	Fox 30-SW-E-2	soil	2014-12-04	16:35	2014-12-05
381469	Fox 30-SW-S-1	soil	2014-12-04	16:55	2014-12-05
381470	Fox 30-SW-S-2	soil	2014-12-04	17:00	2014-12-05

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
381458 - Fox 30-SW-W	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
381459 - Fox 30-SW-N	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
381460 - Fox 30-SW-E	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
381461 - Fox 30-SW-S	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
381462 - Fox 30-BH-1-5.75	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
381465 - Fox 30-SW-N-1	<0.0200 [1]Qs	<0.0200	<0.0200	<0.0200	<50.0 H,Qs	<4.00 [2]Qs

continued ...

[1]Sample added out of hold.
[2]Sample added after hold expired.

. . . continued

Sample - Field Code	BTEX Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
381466 - Fox 30-SW-N-2	<0.0200 [3] Qs	<0.0200	<0.0200	<0.0200	<50.0 H,Qs	<4.00 [4] Qs
381469 - Fox 30-SW-S-1	<0.0200 [5] Qs	<0.0200	<0.0200	<0.0200	<50.0 H,Qs	<4.00 [6] Qs
381470 - Fox 30-SW-S-2	<0.0200 [7] Qs	<0.0200	<0.0200	<0.0200	<50.0 H,Qs	<4.00 [8] Qs

Sample: 381458 - Fox 30-SW-W

Param	Flag	Result	Units	RL
Chloride	Qs	<25.0	mg/Kg	25

Sample: 381459 - Fox 30-SW-N

Param	Flag	Result	Units	RL
Chloride	Qs	**1460**	mg/Kg	25

Sample: 381460 - Fox 30-SW-E

Param	Flag	Result	Units	RL
Chloride	Qs	<25.0	mg/Kg	25

Sample: 381461 - Fox 30-SW-S

Param	Flag	Result	Units	RL
Chloride	Qs	**5450**	mg/Kg	25

Sample: 381462 - Fox 30-BH-1-5.75

Param	Flag	Result	Units	RL
Chloride	Qs	**8260**	mg/Kg	25

Sample: 381463 - Fox 30-SW-W-1 Sample: 381464 - Fox 30-SW-W-2 Sample: 381465 - Fox 30-SW-N-1

[3]Sample added out of hold.
[4]Sample added after hold expired.
[5]Sample added out of hold.
[6]Sample added after hold expired.
[7]Sample added out of hold.
[8]Sample added after hold expired.

Param	Flag	Result	Units	RL
Chloride		**117**	mg/Kg	25

Sample: 381466 - Fox 30-SW-N-2

Param	Flag	Result	Units	RL
Chloride		**63.2**	mg/Kg	25

Sample: 381467 - Fox 30-SW-E-1 Sample: 381468 - Fox 30-SW-E-2 Sample: 381469 - Fox 30-SW-S-1

Param	Flag	Result	Units	RL
Chloride		<25.0	mg/Kg	25

Sample: 381470 - Fox 30-SW-S-2

Param	Flag	Result	Units	RL
Chloride		<25.0	mg/Kg	25

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 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Leslie Voss
CH2M Hill
700 Main St.
Suite 400
Baton Rouge, LA, 70802

Report Date: June 5, 2015

Work Order: 15052706

Project Location: Lea Co, NM
Project Name: FOX 30 #3 & #4
Project Number: 653209.TM.18

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

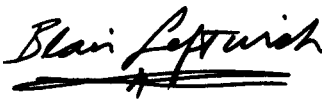
Sample	Description	Matrix	Date Taken	Time Taken	Date Received
393982	FX30-3.5-4.0-NW-05192015	soil	2015-05-19	12:35	2015-05-26
393983	FX30-3.5-4.0-SW-05192015	soil	2015-05-19	12:25	2015-05-26
393984	FX30-6.5-7.0-FL-05192015	soil	2015-05-19	10:50	2015-05-26
393985	FX30-8.5-9.0-FL-05192015	soil	2015-05-19	11:30	2015-05-26
393986	FX30-10.5-11.0-FL-05192015	soil	2015-05-19	12:00	2015-05-26

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

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

Notes:
All sample results are reported on a dry weight basis.

For inorganic analyses, the term MQL should actually read PQL.



Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative

Samples for project FOX 30 #3 & #4 were received by TraceAnalysis, Inc. on 2015-05-26 and assigned to work order 15052706. Samples for work order 15052706 were received intact at a temperature of 2.3 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	103095	2015-05-29 at 08:58	121840	2015-05-29 at 08:58
Moisture Content	ASTM D 2216-05	103206	2015-06-03 at 16:17	122014	2015-06-04 at 14:03

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 15052706 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

Note: *All sample results are reported on a dry weight basis.*

Sample: 393982 - FX30-3.5-4.0-NW-05192015

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	121840	Date Analyzed:	2015-05-29	Analyzed By:	AK
Prep Batch:	103095	Sample Preparation:	2015-05-29	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	Qs,U		<21.7	<22.5	<21.7	mg/Kg	5	21.7	4	3.85

Sample: 393982 - FX30-3.5-4.0-NW-05192015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	122014	Date Analyzed:	2015-06-04	Analyzed By:	AK
Prep Batch:	103206	Sample Preparation:	2015-06-03	Prepared By:	AK

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		1	11.2	%	1	0

Sample: 393983 - FX30-3.5-4.0-SW-05192015

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	121840	Date Analyzed:	2015-05-29	Analyzed By:	AK
Prep Batch:	103095	Sample Preparation:	2015-05-29	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	Qs,U		<22.0	<22.9	<22.0	mg/Kg	5	22.0	4	3.85

Sample: 393983 - FX30-3.5-4.0-SW-05192015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A

QC Batch: 122014 | Date Analyzed: 2015-06-04 | Analyzed By: AK
Prep Batch: 103206 | Sample Preparation: 2015-06-03 | Prepared By: AK

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		1	12.6	%	1	0

Sample: 393984 - FX30-6.5-7.0-FL-05192015

Laboratory: Midland
Analysis: Chloride (Titration) | Analytical Method: SM 4500-Cl B | Prep Method: N/A
QC Batch: 121840 | Date Analyzed: 2015-05-29 | Analyzed By: AK
Prep Batch: 103095 | Sample Preparation: 2015-05-29 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	Qs		**1040**	**1040**	<23.0	mg/Kg	5	23.0	4	3.85

Sample: 393984 - FX30-6.5-7.0-FL-05192015

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2216-05 | Prep Method: N/A
QC Batch: 122014 | Date Analyzed: 2015-06-04 | Analyzed By: AK
Prep Batch: 103206 | Sample Preparation: 2015-06-03 | Prepared By: AK

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		1	16.2	%	1	0

Sample: 393985 - FX30-8.5-9.0-FL-05192015

Laboratory: Midland
Analysis: Chloride (Titration) | Analytical Method: SM 4500-Cl B | Prep Method: N/A
QC Batch: 121840 | Date Analyzed: 2015-05-29 | Analyzed By: AK
Prep Batch: 103095 | Sample Preparation: 2015-05-29 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	Qs		**966**	**966**	<21.4	mg/Kg	5	21.4	4	3.85

Sample: 393985 - FX30-8.5-9.0-FL-05192015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	122014	Date Analyzed:	2015-06-04	Analyzed By:	AK
Prep Batch:	103206	Sample Preparation:	2015-06-03	Prepared By:	AK

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		[1]	9.93	%	1	0

Sample: 393986 - FX30-10.5-11.0-FL-05192015

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	121840	Date Analyzed:	2015-05-29	Analyzed By:	AK
Prep Batch:	103095	Sample Preparation:	2015-05-29	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	[Qs]		**1410**	**1410**	<21.5	mg/Kg	5	21.5	4	3.85

Sample: 393986 - FX30-10.5-11.0-FL-05192015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	122014	Date Analyzed:	2015-06-04	Analyzed By:	AK
Prep Batch:	103206	Sample Preparation:	2015-06-03	Prepared By:	AK

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		[1]	10.4	%	1	0

Method Blanks

Method Blank (1)

QC Batch:	121840	Date Analyzed:	2015-05-29	Analyzed By:	AK
Prep Batch:	103095	QC Preparation:	2015-05-29	Prepared By:	AK

Parameter	F	C	Result	Units	Reporting Limits
Chloride			<3.85	mg/Kg	3.85

Duplicates

Duplicate (1) Duplicated Sample: 393995

QC Batch:	122014	Date Analyzed:	2015-06-04	Analyzed By:	AK
Prep Batch:	103206	QC Preparation:	2015-06-03	Prepared By:	AK

Param	F	C	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture		1	8.52	9.53	%	1	11	20

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 121840 | Date Analyzed: 2015-05-29 | Analyzed By: AK
Prep Batch: 103095 | QC Preparation: 2015-05-29 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2420	mg/Kg	5	2500	<19.2	97	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2610	mg/Kg	5	2500	<19.2	104	85 - 115	8	20

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

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 394173

QC Batch:	121840	Date Analyzed:	2015-05-29	Analyzed By:	AK
Prep Batch:	103095	QC Preparation:	2015-05-29	Prepared By:	AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Qs		16800	mg/Kg	5	2500	13300	140	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Qs		16800	mg/Kg	5	2500	13300	140	78.9 - 121	0	20

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

Calibration Standards

Standard (ICV-1)

QC Batch: 121840 Date Analyzed: 2015-05-29 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-05-29

Standard (CCV-1)

QC Batch: 121840 Date Analyzed: 2015-05-29 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-05-29

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike Amount	Pass
Chloride (Titration)	SM 4500-Cl B	soil	N/A	Chloride	10.0	Pass

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-14-8	Midland

Standard Flags

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

Attachments

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

LAB Order ID # 1505270.6

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Ave, Ste 9, Lubbock, Texas 79424, Tel (806) 794-1296, Fax (806) 794-1298, 1 (800) 378-1296

5002 Basin Street, Suite A1, Midland, Texas 79703, Tel (432) 689-6301, Fax (432) 689-6313

200 East Sunset Rd., Suite E, El Paso, Texas 79922, Tel (915) 585-3443, Fax (915) 585-4944

BioAquatic Testing, 2501 Mayes Rd., Ste 100, Carrollton, Texas 75006, Tel (972) 242-7750

Company Name:	CH2M HILL	Phone #:	Leslie Voss: 469-352-6022 Jennifer Dussor: 520-954-2274
Address:	306 West Wall Street, Suite 1107 Midland TX, 79701	Fax #:	
Contact Person(s):	Leslie Voss Jennifer Dussor	E-mail:	Leslie.Voss@ch2m.com Jennifer.Dussor@ch2m.com
Invoice to:	Direct Bill EOG Resources, Zane Kurtz		
Project #:	663209.TM.18	Project Name:	FOX 30 #3 & #4
Project Location: (Include state)	Lea County, New Mexico	Sampler Signature:	

AP 5/27/15

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
393982	FX30-2.5-3.0-NW-05192015 3.5-4.0	1	4OZ		X							X		5/19/15	1235
393983	FX30-2.5-3.0-SW-05192015	1	4OZ		X							X		5/19/15	1225
393984	FX30-6.5-7.0-FL-05192015	1	4OZ		X							X		5/19/15	1050
393985	FX30-8.5-9.0-FL-05192015	1	4OZ		X							X		5/19/15	1130
393986	FX30-10.5-11.0-FL-05192015	1	4OZ		X							X		5/19/15	1200

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B / 602 / 8260B / 624	BTEX 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005 / 8015D GRO-DRO / TVHC	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	Pesticides 8081A / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC	Chloride	Turn Around Time if different from standard	Hold
															X			X		
															X			X		
															X			X		
															X			X		
															X			X		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
RJ WM	CH2M	5/26	1645	NAlley	True	5/26	16:45	INST IR OBS 23 °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ OBS ____ °C COR ____ °C

LAB USE ONLY

Intact (Y) N

Headspace Y / N (NA)

Log-in Review DRC

REMARKS:

Revised COC

[X] Dry Weight Basis Required

[ ] TRRP Report Required

[X] Check if Special Reporting Limits Are Needed (NMOC)

Carrier # ____

Submittal of samples constitutes agreement to Terms and Conditions

ORIGINAL COPY

Summary Report

Leslie Voss
CH2M Hill
700 Main St.
Suite 400
Baton Rouge, LA 70802

Report Date: June 5, 2015

Work Order: 15052706

Project Location: Lea Co, NM
Project Name: FOX 30 #3 & #4
Project Number: 653209.TM.18

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
393982	FX30-3.5-4.0-NW-05192015	soil	2015-05-19	12:35	2015-05-26
393983	FX30-3.5-4.0-SW-05192015	soil	2015-05-19	12:25	2015-05-26
393984	FX30-6.5-7.0-FL-05192015	soil	2015-05-19	10:50	2015-05-26
393985	FX30-8.5-9.0-FL-05192015	soil	2015-05-19	11:30	2015-05-26
393986	FX30-10.5-11.0-FL-05192015	soil	2015-05-19	12:00	2015-05-26

Sample: 393982 - FX30-3.5-4.0-NW-05192015

Param	Flag	SDL Result	MQL Result	Units
Chloride	Qs,U	<21.7	<22.5	mg/Kg
Moisture		**11.2**	**11.2**	%

Sample: 393983 - FX30-3.5-4.0-SW-05192015

Param	Flag	SDL Result	MQL Result	Units
Chloride	Qs,U	<22.0	<22.9	mg/Kg
Moisture		**12.6**	**12.6**	%

Sample: 393984 - FX30-6.5-7.0-FL-05192015

Param	Flag	SDL Result	MQL Result	Units
Chloride	Qs	**1040**	**1040**	mg/Kg
Moisture		**16.2**	**16.2**	%

Sample: 393985 - FX30-8.5-9.0-FL-05192015

Param	Flag	SDL Result	MQL Result	Units
Chloride	Qs	**966**	**966**	mg/Kg
Moisture		**9.93**	**9.93**	%

Sample: 393986 - FX30-10.5-11.0-FL-05192015

Param	Flag	SDL Result	MQL Result	Units
Chloride	Qs	**1410**	**1410**	mg/Kg
Moisture		**10.4**	**10.4**	%

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 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Leslie Voss
CH2M Hill
12750 Merit Dr.
Ste. 1100
Dallas, Tx, 75251

Report Date: September 11, 2015

Work Order: 15090334

Project Location: Lea Co, NM
Project Name: FOX 30 #3
Project Number: 653209.TM.18

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
403891	SSFX30-11-FL-09032015	soil	2015-09-03	10:15	2015-09-03
403892	SSFX30-16-FL-09032015	soil	2015-09-03	10:30	2015-09-03
403893	SSFX30-21-FL-09032015	soil	2015-09-03	10:55	2015-09-03

Notes

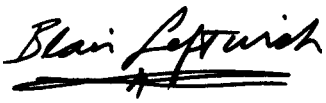
- **Work Order 15090334:** Dry Weight Basis Required. Check if special Reporting Limits are needed

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

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

Notes:
All sample results are reported on a dry weight basis.

For inorganic analyses, the term MQL should actually read PQL.



Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative

Samples for project FOX 30 #3 were received by TraceAnalysis, Inc. on 2015-09-03 and assigned to work order 15090334. Samples for work order 15090334 were received intact at a temperature of 33.4 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (IC)	E 300.0	105533	2015-09-10 at 15:00	124791	2015-09-10 at 16:23
Moisture Content	ASTM D 2216-05	105436	2015-09-04 at 11:13	124681	2015-09-05 at 10:04

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 15090334 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

Note: *All sample results are reported on a dry weight basis.*

Sample: 403891 - SSFX30-11-FL-09032015

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	124791	Date Analyzed:	2015-09-10	Analyzed By:	RL
Prep Batch:	105533	Sample Preparation:		Prepared By:	RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		1,2,4	**1730**	**1730**	<27.8	mg/Kg	5	27.8	25	4.69

Sample: 403891 - SSFX30-11-FL-09032015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	124681	Date Analyzed:	2015-09-05	Analyzed By:	AM
Prep Batch:	105436	Sample Preparation:		Prepared By:	AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		3	15.5	%	1	0

Sample: 403892 - SSFX30-16-FL-09032015

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	124791	Date Analyzed:	2015-09-10	Analyzed By:	RL
Prep Batch:	105533	Sample Preparation:		Prepared By:	RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		1,2,4	**1430**	**1430**	<26.4	mg/Kg	5	26.4	25	4.69

Sample: 403892 - SSFX30-16-FL-09032015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A

QC Batch: 124681 | Date Analyzed: 2015-09-05 | Analyzed By: AM
Prep Batch: 105436 | Sample Preparation: | Prepared By: AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		3	11.1	%	1	0

Sample: 403893 - SSFX30-21-FL-09032015

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 124791 | Date Analyzed: 2015-09-10 | Analyzed By: RL
Prep Batch: 105533 | Sample Preparation: | Prepared By: RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		1,2,4	**304**	**304**	<4.91	mg/Kg	1	4.91	25	4.69

Sample: 403893 - SSFX30-21-FL-09032015

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2216-05 | Prep Method: N/A
QC Batch: 124681 | Date Analyzed: 2015-09-05 | Analyzed By: AM
Prep Batch: 105436 | Sample Preparation: | Prepared By: AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		3	4.47	%	1	0

Method Blanks

Method Blank (1)

QC Batch:	124791	Date Analyzed:	2015-09-10	Analyzed By:	RL
Prep Batch:	105533	QC Preparation:	2015-09-10	Prepared By:	RL

Parameter	F	C	Result	Units	Reporting Limits
Chloride		1,2,4	<4.69	mg/Kg	4.69

Duplicates

Duplicate (1) Duplicated Sample: 403891

QC Batch:	124681	Date Analyzed:	2015-09-05	Analyzed By:	AM
Prep Batch:	105436	QC Preparation:	2015-09-04	Prepared By:	AM

Param	F	C	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture		3	15.2	15.5	%	1	2	20

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 124791 | Date Analyzed: 2015-09-10 | Analyzed By: RL
Prep Batch: 105533 | QC Preparation: 2015-09-10 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	258	mg/Kg	1	250	<4.69	103	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	258	mg/Kg	1	250	<4.69	103	90 - 110	0	20

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

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 403958

QC Batch:	124791	Date Analyzed:	2015-09-10	Analyzed By:	RL
Prep Batch:	105533	QC Preparation:	2015-09-10	Prepared By:	RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	1380	mg/Kg	5	1250	65.2	105	80 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	1350	mg/Kg	5	1250	65.2	103	80 - 120	2	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 124791 | Date Analyzed: 2015-09-10 | Analyzed By: RL

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	24.1	96	90 - 110	2015-09-10

Standard (CCV-2)

QC Batch: 124791 | Date Analyzed: 2015-09-10 | Analyzed By: RL

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	25.9	104	90 - 110	2015-09-10

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike Amount	Pass
Chloride (IC)	E 300.0	soil	Dionex IC	Chloride	10.0	Pass

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	LELAP	LELAP-02003	Lubbock
2	NELAP	T104704219-15-11	Lubbock
3	NELAP	T104704392-14-8	Midland
4		2014-018	Lubbock

Standard Flags

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

Attachments

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

LAB Order ID # 150903334

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: CH2M Hill
Phone #: Leslie Voss 469-352-5022; J. Dussor 520-954-2274
Address: (Street, City, Zip) 306 W. Wall St. Suite 1107 Midland, TX 79701
Fax #:
Contact Person: Leslie Voss; Jennifer Dussor
E-mail: Leslie.Voss@ch2m.com; Jennifer.Dussor@ch2m.com
Invoice to: (If different from above) Direct Bill EOG Resources, Zane Kurtz
Project #: 653209.TM.18
Project Name: Fox 30
Project Location (including state): Lea County, NM
Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
403891	SSFX30-11-FL-09032015	1	4oz		X								X	9/3	1015
403892	SSFX30-16-FL-09032015	1	4oz		X								X	9/3	1030
403893	SSFX30-21-FL-09032015	1	4oz		X								X	9/3	1055

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
																			Chlorides					
																			X				48hrs	
																			X				48hrs	
																			X				48hrs	

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Amanda West	CH2M	9/3/15	1700		TA	9-3-15	17:00	INST 3.2 °C; OBS 33.4 °C; COR 33.2 °C
				Received by:	Company:	Date:	Time:	INST ___ °C; OBS ___ °C; COR ___ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ___ °C; OBS ___ °C; COR ___ °C
	TA	9-4-15	10:29					
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ___ °C; OBS ___ °C; COR ___ °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review AJ

REMARKS:
- [X] Dry Weight Basis Required
- [ ] TRRP Report Required
- [X] Check If Special Reporting Limits Are Needed (NMOC)

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # Courier

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LAB Order ID # 150903 34

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
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Tel (972) 242-7750

Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: CH2M Hill
Phone #: Leslie Voss 469-352-5022 J. Dussor 520-954-2274
Address: (Street, City, Zip) 306 W. Wall St. Suite 1107 Midland, TX 79701
Fax #:
Contact Person: Leslie Voss, Jennifer Dussor
E-mail: Leslie.Voss@ch2m.com, Jennifer.Dussor@ch2m.com
Invoice to: (If different from above) Direct Bill EOG Resources, Zane Kurtz
Project #: 653209.TM.18
Project Name: Fox 30
Project Location (including state): Lea County, NM
Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC	Chlorides			Turn Around Time if different from standard	Hold
403891	SSFX30-11-FL-09032015	1	4oz		X								X	9/3	1015																		X			48hrs	
403892	SSFX30-16-FL-09032015	1	4oz		X								X	9/3	1030																		X			48hrs	
403893	SSFX30-21-FL-09032015	1	4oz		X								X	9/3	1055																		X			48hrs	

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Amanda West	CH2M	9/3/15	1700	[illegible]	TA	9-3-15	17:00	INST 3.2 °C, OBS 33.4 °C, COR 33.2 °C
[illegible]	TA	9-4-15	10:29					INST ___ °C, OBS ___ °C, COR ___ °C
				Brenda Ward	TA Lubbock	9/4/15	9:00	INST 3.3 °C, OBS 3.4 °C, COR 3.2 °C

LAB USE ONLY
Intact Y N
Headspace Y / N (NA)
Log-in-Review AJ

REMARKS:
- [X] Dry Weight Basis Required
- [ ] TRRP Report Required
- [X] Check If Special Reporting Limits Are Needed (NMOC)

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # Courier

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Summary Report

Leslie Voss
CH2M Hill
12750 Merit Dr.
Ste. 1100
Dallas, Tx 75251

Report Date: September 11, 2015

Work Order: 15090334

Project Location: Lea Co, NM
Project Name: FOX 30 #3
Project Number: 653209.TM.18

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
403891	SSFX30-11-FL-09032015	soil	2015-09-03	10:15	2015-09-03
403892	SSFX30-16-FL-09032015	soil	2015-09-03	10:30	2015-09-03
403893	SSFX30-21-FL-09032015	soil	2015-09-03	10:55	2015-09-03

Sample: 403891 - SSFX30-11-FL-09032015

Param	Flag	SDL Result	MQL Result	Units
Chloride		**1730**	**1730**	mg/Kg
Moisture		**15.5**	**15.5**	%

Sample: 403892 - SSFX30-16-FL-09032015

Param	Flag	SDL Result	MQL Result	Units
Chloride		**1430**	**1430**	mg/Kg
Moisture		**11.1**	**11.1**	%

Sample: 403893 - SSFX30-21-FL-09032015

Param	Flag	SDL Result	MQL Result	Units
Chloride		**304**	**304**	mg/Kg
Moisture		**4.47**	**4.47**	%

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 05, 2016

Bernie Bockish

GHD
6121 Indian School Road, NE #200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX

RE: Fox 30 State #3 and #4 OrderNo.: 1608085

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/2/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1608085**
Date Reported: **8/5/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Fox 30 State #3 and #4
Lab Order: 1608085

Lab ID: 1608085-001
Collection Date: 8/1/2016 11:09:00 AM
Client Sample ID: S-088210-22-080116-SP-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	8/3/2016 11:41:59 AM	26766

Lab ID: 1608085-002
Collection Date: 8/1/2016 11:12:00 AM
Client Sample ID: S-088210-22-080116-SP-02
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	8/3/2016 12:19:12 PM	26766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1608085**

05-Aug-16

Client: GHD

Project: Fox 30 State #3 and #4

Sample ID	**MB-26766**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**26766**	RunNo:	**36217**					
Prep Date:	**8/3/2016**	Analysis Date:	**8/3/2016**	SeqNo:	**1121709**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-26766**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**26766**	RunNo:	**36217**					
Prep Date:	**8/3/2016**	Analysis Date:	**8/3/2016**	SeqNo:	**1121710**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1608085 | RcptNo: 1

Received by/date: AS 08/02/16

Logged By: **Lindsay Mangin** 8/2/2016 10:00:00 AM

Completed By: **Lindsay Mangin** 8/2/2016 10:42:51 AM

Reviewed By: JO 08/02/16

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.2	Good	Yes			

Chain-of-Custody Record

Client: CHP - Albuquerque

Mailing Address: 612 Indian School Rd NE Ste 200 Albuquerque NM 87110

Phone #: 505-884-0672

email or Fax#: Bernard.Bochnsch@chd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☑ Rush 48-hr

Project Name: Fox 30 State #3 & #4

Project #: 088210/22

Project Manager: Bernard Bochnsch 505-280-0572

Sampler: Steve Perez

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.2°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300.0				Air Bubbles (Y or N)
8-1-16	1109	Soil	S088210-22-080116-SP01	4oz glass-1	ICE	-001												X				
8-1-16	1112	Soil	S-08820-22-080116-SP02	↓	↓	-002												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/1/16	1455			8/1/16	1935
Date:	Time:	Relinquished by:	Received by:	Date	Time
8/1/16	1940			08/02/16	1000

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.