PLANTATION PETROLEUM
PPC OPERATING COMPANY LLC

January 13, 2016

FINAL REPORT
RUSTLER BLUFF #1
EDDY COUNTY, NEW MEXICO
LOST TANK DUE TO FLOODING – 12/22/2014

On September 22, 2014, flooding caused the oil tank on the Rustler Bluff #1 to be washed away. The tank was washed downstream approximately ¼ to ½ mile. The tank was retrieved from where it landed by the rancher of the property to be disposed of. There was no visible pollution at the battery site or the location where the tank landed due to the swift running water so no remediation was necessary. On December 23, 2015 Colter Fleming (field supervisor) took samples from the following locations:

Sample #1 is from the origination of Oil storage tank taken from Rustler Bluff #1 tank battery location with GPS coordinates 32*09'26.72" N 104*01'13.12" W

Sample #2 was taken from the location that the storage tank floated to with GPS coordinates 32*09'11.10" N 104*01'28.02" W

The samples were delivered to Trace Analysis, Inc. After the lab analyses were received they were reviewed by Greg Swindle with DBI Environmental. His report is attached.

Please note: Initially, it was thought that three tanks, two oil tanks and one water tank, had washed downstream but when the flood waters subsided, one oil tank and the water tank were found on location.
Attached is a C-141 Final Report, Google maps showing tank battery location along with location where the oil tank landed; pictures of sampled locations; and the environmental report with analyses.

1500 Industrial, Suite 102 • Abilene, TX 79603 • Tel: (325) 267-6046 • Fax: (325) 480-4954 • jspraberry@plantationpetro.com

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 PPC OPERATING COMPANY LLC	Contact JANA SPRABERRY
Address 1500 INDUSTRIAL BLVD, STE 304; ABILENE TX 79602	Telephone No. 325-267-6046
Facility Name RUSTLER BLUFF #001	Facility Type TANK BATTERY

Surface Owner STATE OF NEW MEXICO	Mineral Owner STATE OF NEW MEXICO	API No. 30-015-34839

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	06	25S	29E	1980	SOUTH	1680	EAST	EDDY

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release OIL & PRODUCED WATER	Volume of Release 256 OIL/193 WTR	Volume Recovered NONE
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery 9/23/14 - NOO
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? TOMAS OBERDING (HOBBS); MIKE BRATCHER (ARTESIA)	
By Whom? JANA SPRABERRY	Date and Hour 9/24/14; 8:00 AM	
Was a Watercourse Reached? ☒ Yes ☐ No	If YES, Volume Impacting the Watercourse. 256 OIL / 193 WATER	

If a Watercourse was Impacted, Describe Fully.*

SWIFT WATER FLOODING OCCURRED ALONG PECOS RIVER WASHING AWAY ONE 500 BBLS TANK BATTERY CONTAINING 256 BBLS OIL.

Describe Cause of Problem and Remedial Action Taken.*

SWIFT WATER FLOODING OF PECOS RIVER WASHED AWAY AN OIL TANK AT THE BATTERY; NM OCD WAS NOTIFIED. THE TANK WAS LOCATED BY THE NM OCD DOWNSTREAM OF THE BATTERY ON THE OPPOSITE SIDE OF RIVER. FURTHER ACTION WILL BE TAKEN AS SOON AREA DRIES OUT.

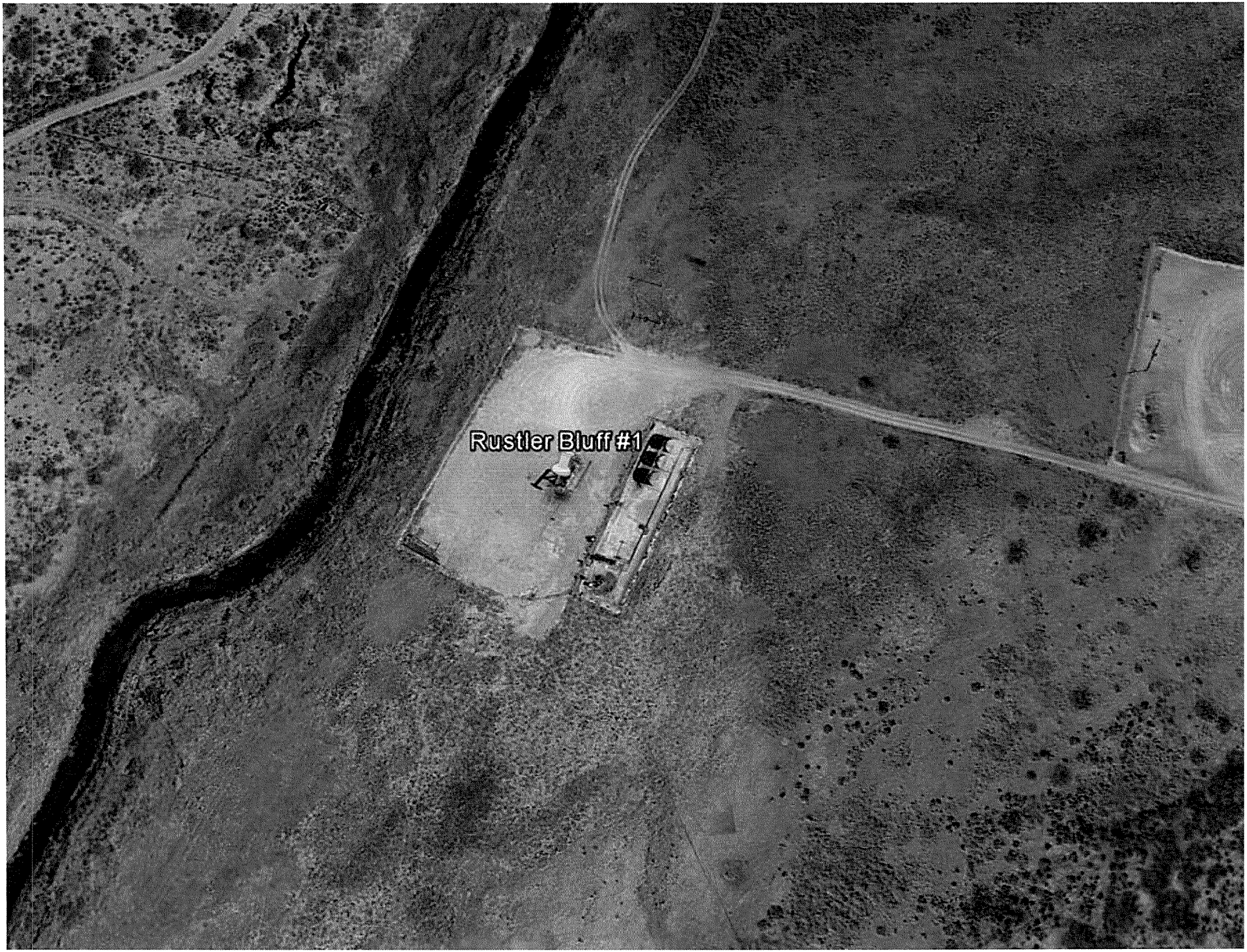
Describe Area Affected and Cleanup Action Taken.*

THE TANK WAS RECOVERED BY THE RANCHER WHEN CONDITIONS WERE DRY ENOUGH. WE CONTRACTED GREG SWINDLE WITH DBI ENVIRONMENTAL TO SAMPLE AND TEST THE BATTERY PAD WHERE THE TANK WAS WASHED AWAY FROM AND THE SITE WHERE THE TANK WAS FOUND AFTER THE FLOOD. THE LAB RESULTS INDICATE THERE ARE NO CONTAMINENTS PRESENT. A COPY OF THE LAB ANALYSES ARE ATTACHED.

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: Jana Spraberry	OIL CONSERVATION DIVISION	
Printed Name: JANA SPRABERRY	Approved by Environmental Specialist:	
Title: OFFICE ADMINISTRATOR	Approval Date:	Expiration Date:
E-mail Address: JSPRABERRY@PLANTATIONPETRO.COM	Conditions of Approval:	Attached ☐
Date: 01-11-2016 Phone: 325-267-6046		

* Attach Additional Sheets If Necessary


Rustler Bluff #1


PPC Rustler Bluff #1 Sample #1
Lost Tank Sample #2
© 2014 Google
Google
1997
Imagery Date: 2/13/2014 lat 32.147779° lon -104.023250° elev 2912 ft eye


Sample #1


Sample #1


Sample #2


Sample #2


Sample #2

Jana Spraberry

From: Taylor Russell
Sent: Wednesday, January 13, 2016 2:30 PM
To: Jana Spraberry
Subject: FW: Soil Sample Rustler Bluff Lease
Attachments: Sample #1 location.JPG; Sample #1 location1.JPG; Sample #2 location.JPG; Sample #2 location1.JPG; Sample #2location2.JPG

From: Colter Fleming [mailto:cfleming@plantationpetro.com]
Sent: Wednesday, December 23, 2015 11:49 AM
To: Johnaftrmth@aol.com
Cc: Taylor Russell <trussell@plantationpetro.com>; Kal Oppegard <KOppegard@plantationpetro.com>; jsprayberry@plantationpetro.com
Subject: Soil Sample Rustler Bluff Lease

Project: Pecos River Flood
Lease: Rustler Bluff #1 CTB
Company: PPC Operating Company LLC
1500 Industrial Blvd. Suite 304
Abilene, TX 79602

Sample #1 is from the origination of Oil storage tank taken from Rustler Bluff #1 tank battery location with GPS coordinates 32*09'26.72" N 104*01'13.12" W
Attached is location pictures where sample #1 was taken

Sample #2 was taken from the location that the storage tank floated to with GPS coordinates 32*09'11.10" N 104*01'28.02" W
Attached is location pictures where sample #2 was taken

DBI
Greg Swindle, President
4101 W Green Oaks Blvd
Suite 305-597
Arlington, Texas 76016
817-437-6438

DBI

January 11, 2016

Bob Cox
VP Operations
PPC Operating Company LLC
Abilene, Texas

Re: Soil Analysis from Pecos River Flood Rustler Bluff #1 CTB location

Dear Mr. Cox,

I am pleased to confirm that DBI has completed our review of the analysis collected on December 23, 2015. It appears that two soil samples were collected from the area by Colter of PPC on December 23, 2015 at approximately 7 am. The samples were then delivered to AMES Environmental Engineering later that day and then transferred to Trace Analysis for analysis.

- All samples were analyzed for BTEX, Chloride, and TRPH1005.
- All sample results were below detection limit.
- All QAQC results submitted by Trace Analysis appear to be in line with requirements as set forth by the EPA and NMOCD.
- No drawings, photos, sketches or other documentation were submitted for review.

After careful consideration on this I would suggest that we consider this location closed for remediation purposes based upon the submitted information. All results are below detection limit and thus no remediation or other assessments should be required by the regulatory authorities in this matter.

If you should have any further questions please do not hesitate to contact me.
Thank you,

Greg Swindle
Chemist DBI

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

John Flynn
Ames Environmental & Engineering
3303 67th St
Suite 102
Lubbock, Texas, 79423

Report Date: January 7, 2016

Work Order: 15122318

Project Location: Pecos River Flood-Rustlwer Bluff #1 CTB
Project Name: Pecos-River Flood
Project Number: 15-045

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
410988	001	soil	2015-12-23	07:00	2015-12-23
410989	002	soil	2015-12-23	07:00	2015-12-23

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.

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

Report Contents

Case Narrative

Samples for project Pecos-River Flood were received by TraceAnalysis, Inc. on 2015-12-23 and assigned to work order 15122318. Samples for work order 15122318 were received intact at a temperature of 10.4 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	107711	2015-12-30 at 12:58	127247	2015-12-30 at 12:58
Chloride (Titration)	SM 4500-Cl B	107737	2016-01-04 at 11:30	127277	2016-01-04 at 15:00
TX1005 Extended	TX1005	107683	2015-12-29 at 09:00	127213	2015-12-29 at 15:07
TX1005 Extended	TX1005	107683	2015-12-29 at 09:00	127222	2015-12-30 at 11:19

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 15122318 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: 410988 - 001

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	127247	Date Analyzed:	2015-12-30	Analyzed By:	MT
Prep Batch:	107711	Sample Preparation:	2015-12-30	Prepared By:	MT

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	2.36	mg/Kg	1	2.00	118	77.1 - 120
4-Bromofluorobenzene (4-BFB)		5	1.93	mg/Kg	1	2.00	96	71.2 - 123

Sample: 410988 - 001

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	127277	Date Analyzed:	2016-01-04	Analyzed By:	LQ
Prep Batch:	107737	Sample Preparation:		Prepared By:	LQ

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U	1	<250	mg/Kg	5	50.0

Sample: 410988 - 001

Laboratory:	Lubbock				
Analysis:	TX1005 Extended	Analytical Method:	TX1005	Prep Method:	N/A
QC Batch:	127222	Date Analyzed:	2015-12-30	Analyzed By:	HJ
Prep Batch:	107683	Sample Preparation:	2015-12-29	Prepared By:	HJ

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
C6-C12	U	1	<50.0	mg/Kg	1	50.0

continued ...

sample 410988 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
>C12-C35	U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			34.8	mg/Kg	1	25.0	139	59.5 - 171
n-Octane			31.3	mg/Kg	1	25.0	125	56.2 - 143
n-Tricosane			34.0	mg/Kg	1	25.0	136	57.2 - 161

Sample: 410989 - 002

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	127247	Date Analyzed:	2015-12-30	Analyzed By:	MT
Prep Batch:	107711	Sample Preparation:	2015-12-30	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	2.33	mg/Kg	1	2.00	116	77.1 - 120
4-Bromofluorobenzene (4-BFB)		5	2.13	mg/Kg	1	2.00	106	71.2 - 123

Sample: 410989 - 002

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	127277	Date Analyzed:	2016-01-04	Analyzed By:	LQ
Prep Batch:	107737	Sample Preparation:		Prepared By:	LQ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U	1	<250	mg/Kg	5	50.0

Sample: 410989 - 002

Laboratory:	Lubbock				
Analysis:	TX1005 Extended	Analytical Method:	TX1005	Prep Method:	N/A
QC Batch:	127213	Date Analyzed:	2015-12-29	Analyzed By:	HJ
Prep Batch:	107683	Sample Preparation:	2015-12-29	Prepared By:	HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
C6-C12	U	1	<50.0	mg/Kg	1	50.0
>C12-C35	U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			26.9	mg/Kg	1	25.0	108	59.5 - 171
n-Octane			26.2	mg/Kg	1	25.0	105	56.2 - 143
n-Tricosane			29.8	mg/Kg	1	25.0	119	57.2 - 161

Method Blanks

Method Blank (1) QC Batch: 127213

QC Batch: 127213 | Date Analyzed: 2015-12-29 | Analyzed By: HJ
Prep Batch: 107683 | QC Preparation: 2015-12-29 | Prepared By: HJ

Parameter	Flag	Cert	MDL Result	Units	RL
C6-C12		1	<5.43	mg/Kg	50
>C12-C35		1	<10.7	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			18.1	mg/Kg	1	25.0	72	59.5 - 171
n-Octane			26.8	mg/Kg	1	25.0	107	56.2 - 143
n-Tricosane			29.3	mg/Kg	1	25.0	117	57.2 - 161

Method Blank (1) QC Batch: 127222

QC Batch: 127222 | Date Analyzed: 2015-12-30 | Analyzed By: HJ
Prep Batch: 107683 | QC Preparation: 2015-12-29 | Prepared By: HJ

Parameter	Flag	Cert	MDL Result	Units	RL
C6-C12		1	<5.43	mg/Kg	50
>C12-C35		1	<10.7	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			18.1	mg/Kg	1	25.0	72	59.5 - 171
n-Octane			26.8	mg/Kg	1	25.0	107	56.2 - 143
n-Tricosane			29.3	mg/Kg	1	25.0	117	57.2 - 161

Method Blank (1) QC Batch: 127247

QC Batch: 127247 | Date Analyzed: 2015-12-30 | Analyzed By: MT
Prep Batch: 107711 | QC Preparation: 2015-12-30 | Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,5	<0.00444	mg/Kg	0.02
Toluene		1,2,3,4,5	<0.00457	mg/Kg	0.02
Ethylbenzene		1,2,3,4,5	<0.00762	mg/Kg	0.02
Xylene		1,2,3,4,5	<0.00367	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr Qsr	5	2.40	mg/Kg	1	2.00	120	77.1 - 120
4-Bromofluorobenzene (4-BFB)		5	2.36	mg/Kg	1	2.00	118	71.2 - 123

Method Blank (1) QC Batch: 127277

QC Batch: 127277 | Date Analyzed: 2016-01-04 | Analyzed By: LQ
Prep Batch: 107737 | QC Preparation: 2016-01-04 | Prepared By: LQ

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	<31.4	mg/Kg	50

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 127213 | Date Analyzed: 2015-12-29 | Analyzed By: HJ
Prep Batch: 107683 | QC Preparation: 2015-12-29 | Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
C6-C12		1	457	mg/Kg	1	500	<5.43	91	59.5 - 125
>C12-C35		1	447	mg/Kg	1	500	<10.7	89	59.2 - 132

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
C6-C12		1	441	mg/Kg	1	500	<5.43	88	59.5 - 125	4	20
>C12-C35		1	441	mg/Kg	1	500	<10.7	88	59.2 - 132	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	18.1	18.1	mg/Kg	1	25.0	72	72	59.5 - 171
n-Octane	30.9	30.6	mg/Kg	1	25.0	124	122	56.2 - 143
n-Tricosane	30.4	30.2	mg/Kg	1	25.0	122	121	57.2 - 161

Laboratory Control Spike (LCS-1)

QC Batch: 127222 | Date Analyzed: 2015-12-30 | Analyzed By: HJ
Prep Batch: 107683 | QC Preparation: 2015-12-29 | Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
C6-C12		1	457	mg/Kg	1	500	<5.43	91	59.5 - 125
>C12-C35		1	447	mg/Kg	1	500	<10.7	89	59.2 - 132

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
C6-C12		1	441	mg/Kg	1	500	<5.43	88	59.5 - 125	4	20
>C12-C35		1	441	mg/Kg	1	500	<10.7	88	59.2 - 132	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	18.1	18.1	mg/Kg	1	25.0	72	72	59.5 - 171
n-Octane	30.9	30.6	mg/Kg	1	25.0	124	122	56.2 - 143
n-Tricosane	30.4	30.2	mg/Kg	1	25.0	122	121	57.2 - 161

Laboratory Control Spike (LCS-1)

QC Batch: 127247 | Date Analyzed: 2015-12-30 | Analyzed By: MT
Prep Batch: 107711 | QC Preparation: 2015-12-30 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.98	mg/Kg	1	2.00	<0.00444	99	68.7 - 120
Toluene		1,2,3,4,5	1.88	mg/Kg	1	2.00	<0.00457	94	76.1 - 120
Ethylbenzene		1,2,3,4,5	2.18	mg/Kg	1	2.00	<0.00762	109	74.8 - 120
Xylene		1,2,3,4,5	6.38	mg/Kg	1	6.00	<0.00367	106	75.3 - 120

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		1,2,3,4,5	1.97	mg/Kg	1	2.00	<0.00444	98	68.7 - 120	0	20
Toluene		1,2,3,4,5	1.90	mg/Kg	1	2.00	<0.00457	95	76.1 - 120	1	20
Ethylbenzene		1,2,3,4,5	2.21	mg/Kg	1	2.00	<0.00762	110	74.8 - 120	1	20
Xylene		1,2,3,4,5	6.46	mg/Kg	1	6.00	<0.00367	108	75.3 - 120	1	20

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5	2.17	2.26	mg/Kg	1	2.00	108	113	77.1 - 120
4-Bromofluorobenzene (4-BFB)	5	2.22	2.22	mg/Kg	1	2.00	111	111	71.2 - 123

Laboratory Control Spike (LCS-1)

QC Batch: 127277 | Date Analyzed: 2016-01-04 | Analyzed By: LQ
Prep Batch: 107737 | QC Preparation: 2016-01-04 | Prepared By: LQ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	2480	mg/Kg	5	2500	<157	99	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		1	2530	mg/Kg	5	2500	<157	101	85 - 115	2	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: 410989

QC Batch: 127213 | Date Analyzed: 2015-12-29 | Analyzed By: HJ
Prep Batch: 107683 | QC Preparation: 2015-12-29 | Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
C6-C12		1	544	mg/Kg	1	500	<5.43	109	24.1 - 166
>C12-C35		1	473	mg/Kg	1	500	<10.7	95	27.1 - 170

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
C6-C12		1	530	mg/Kg	1	500	<5.43	106	24.1 - 166	3	20
>C12-C35		1	483	mg/Kg	1	500	<10.7	97	27.1 - 170	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	26.4	27.4	mg/Kg	1	25	106	110	59.5 - 171
n-Octane	26.5	27.2	mg/Kg	1	25	106	109	56.2 - 143
n-Tricosane	31.0	30.8	mg/Kg	1	25	124	123	57.2 - 161

Matrix Spike (xMS-1) Spiked Sample: 410989

QC Batch: 127222 | Date Analyzed: 2015-12-30 | Analyzed By: HJ
Prep Batch: 107683 | QC Preparation: 2015-12-29 | Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
C6-C12		1	596	mg/Kg	1	500	<5.43	119	24.1 - 166
>C12-C35		1	537	mg/Kg	1	500	<10.7	107	27.1 - 170

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
C6-C12		1	601	mg/Kg	1	500	<5.43	120	24.1 - 166	1	20
>C12-C35		1	556	mg/Kg	1	500	<10.7	111	27.1 - 170	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-Triacontane	26.7	28.0	mg/Kg	1	25	107	112	59.5 - 171
n-Octane	29.8	15.9	mg/Kg	1	25	119	64	56.2 - 143
n-Tricosane	33.2	33.7	mg/Kg	1	25	133	135	57.2 - 161

Matrix Spike (MS-1) Spiked Sample: 410988

QC Batch: 127247 | Date Analyzed: 2015-12-30 | Analyzed By: MT
Prep Batch: 107711 | QC Preparation: 2015-12-30 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.87	mg/Kg	1	2.00	<0.00444	94	61.8 - 120
Toluene		1,2,3,4,5	1.75	mg/Kg	1	2.00	<0.00457	88	64.6 - 122
Ethylbenzene		1,2,3,4,5	2.28	mg/Kg	1	2.00	<0.00762	114	62.2 - 130
Xylene		1,2,3,4,5	5.96	mg/Kg	1	6.00	<0.00367	99	62.2 - 126

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		1,2,3,4,5	1.87	mg/Kg	1	2.00	<0.00444	94	61.8 - 120	0	20
Toluene		1,2,3,4,5	1.75	mg/Kg	1	2.00	<0.00457	88	64.6 - 122	0	20
Ethylbenzene		1,2,3,4,5	2.04	mg/Kg	1	2.00	<0.00762	102	62.2 - 130	11	20
Xylene		1,2,3,4,5	5.96	mg/Kg	1	6.00	<0.00367	99	62.2 - 126	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)	5	2.12	2.13	mg/Kg	1	2	106	106	77.1 - 120
4-Bromofluorobenzene (4-BFB)	5	2.07	2.08	mg/Kg	1	2	104	104	71.2 - 123

Matrix Spike (MS-1) Spiked Sample: 411041

QC Batch: 127277 | Date Analyzed: 2016-01-04 | Analyzed By: LQ
Prep Batch: 107737 | QC Preparation: 2016-01-04 | Prepared By: LQ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	2580	mg/Kg	5	2500	<157	99	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	2580	mg/Kg	5	2500	<157	99	80 - 120	0	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: 127213 | Date Analyzed: 2015-12-29 | Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
C6-C12		1	mg/Kg	500	426	85	75 - 125	2015-12-29
>C12-C35		1	mg/Kg	500	432	86	75 - 125	2015-12-29

Standard (CCV-2)

QC Batch: 127213 | Date Analyzed: 2015-12-29 | Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
C6-C12		1	mg/Kg	500	455	91	75 - 125	2015-12-29
>C12-C35		1	mg/Kg	500	467	93	75 - 125	2015-12-29

Standard (CCV-1)

QC Batch: 127222 | Date Analyzed: 2015-12-30 | Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
C6-C12		1	mg/Kg	500	426	85	75 - 125	2015-12-30
>C12-C35		1	mg/Kg	500	432	86	75 - 125	2015-12-30

Standard (CCV-2)

QC Batch: 127222 | Date Analyzed: 2015-12-30 | Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
C6-C12		1	mg/Kg	500	454	91	75 - 125	2015-12-30
>C12-C35		1	mg/Kg	500	468	94	75 - 125	2015-12-30

Standard (CCV-1)

QC Batch: 127247 Date Analyzed: 2015-12-30 Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.115	115	80 - 120	2015-12-30
Toluene		1,2,3,4,5	mg/kg	0.100	0.0880	88	80 - 120	2015-12-30
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.0985	98	80 - 120	2015-12-30
Xylene		1,2,3,4,5	mg/kg	0.300	0.312	104	80 - 120	2015-12-30

Standard (CCV-2)

QC Batch: 127247 Date Analyzed: 2015-12-30 Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.113	113	80 - 120	2015-12-30
Toluene		1,2,3,4,5	mg/kg	0.100	0.0896	90	80 - 120	2015-12-30
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.0988	99	80 - 120	2015-12-30
Xylene		1,2,3,4,5	mg/kg	0.300	0.292	97	80 - 120	2015-12-30

Standard (ICV-1)

QC Batch: 127277 Date Analyzed: 2016-01-04 Analyzed By: LQ

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/Kg	100	100	100	85 - 115	2016-01-04

Standard (CCV-1)

QC Batch: 127277 | Date Analyzed: 2016-01-04 | Analyzed By: LQ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/Kg	100	100	100	85 - 115	2016-01-04

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-15-11	Lubbock
5		2015-066	Lubbock

Standard Flags

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

F	Description
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 # 1512238

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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200 East Sunset Rd., Suite E
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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: AMES Environmental & Engineering
Phone #: 806-790-4725
Address: (Street, City, Zip) 3303 67th Suite 102
Fax #:
Contact Person: John Flynn
E-mail: Johnaftrmth@aol.com
Invoice to: (If different from above) Same
Project #: 15-045
Project Name: Pecos River Flood
Project Location (including state): Pecos River Flood – Rustler Bluff #1 CTB
Sampler Signature: [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						Turn Around Time if different from standard	Hold
410988	001	1			✓							X		12/23/15	700	~~X~~	X	X															X								
989	002	1			✓							X		⟂	⟂		X	X															X								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Colter		12/23	1200					INST ____ OBS ____ °C COR ____ °C
John [illegible]	AMES	12/23	1445					INST ____ OBS ____ °C COR ____ °C
				Brenda Ward	TA Lubbock	12/23/15	1444	INST IR-3 OBS 10.0 °C COR 10.4 °C

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

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 # Courier