



APPROVED NMOCD CAP

By Kristen Lynch at 7:16 am, Nov 22, 2016

PO Box 2948 | Hobbs, NM 88241 | Phone 575.393.2967

October 17, 2016

Attn. Kristen Lynch

Environmental Specialists, District 1
Oil Conservation Division, EMNRD
1625 N. French Drive
Hobbs, NM 88240

**RE: Updated Corrective Action Plan (CAP)
Aspen Operating Company, LLC
Gainer Unit #1
UL/A&H sec. 21 and UL/D&E sec. 22 T10S R36E
1RP – 2-13-2903**

Ms. Lynch:

Aspen Operating Company (Aspen) has retained Basin Environmental Service Technologies (Basin) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately twelve and one-half (12.5) miles northeast of Tatum, New Mexico at Unit Letter A and H of Section 21 and Unit Letter D and E of Section 22 in Township 10 South of Range 36 East. The landowner has a well near this site with a groundwater depth of approximately one hundred and twenty (120) feet below ground surface (bgs). However, a temporary soil bore was advanced adjacent to the release site and it was determined that groundwater, if present, was greater than one hundred and thirty-eight (138) feet bgs.

On January 17th, 2013, Aspen noticed that the tank at the battery had overflowed due to a mechanical failure releasing an unknown quantity of produced water and oil. The release affected approximately twenty-nine thousand, four hundred and eighteen (29,418) square feet (ft²) of battery, lease pad and pasture area. New Mexico Oil Conservation Division (NMOCD) was notified of the release on January 19th, 2013 and an initial C-141 (Release Notification and Corrective Action) was sent to NMOCD on January 22nd, 2013 (Appendix A).

RECS (now Basin) personnel were on site beginning on May 11th, 2013, to sample the release. Fifteen samples points were established throughout the release. Spoil piles were also field tested for chlorides and organic vapors (Figure 1). Representative samples were taken to a commercial laboratory for analysis (Appendix B). Field and laboratory data showed evidence of elevated chlorides, Gasoline Range Organics (GRO) and Diesel Range Organics (DRO). To further delineate the site, two verticals were installed at Points 2 and 10 (Figure 2). The vertical at Pt. 2 was installed to a depth of fifteen (15) feet bgs and the vertical at Pt. 10 was installed to a depth

of seven (7) ft bgs. As the verticals were installed, samples were taken every foot and field tested for chlorides and organic vapors. Representative samples from each vertical were taken to a commercial laboratory for analysis (Appendix C). The verticals indicated no decline in chloride levels as the bores were advanced; however, TPH values did decline with depth.

Given that the chloride levels in the verticals remained elevated above recommended remediation action levels (RRAL), soil bores were installed at the site on June 20th, 2013 and September 26th, 2013 to determine the vertical impact of the release. A total of five soil bores were installed at the site over the two days (Figure 3). As the bores were advanced, samples were taken every three feet and field tested for chlorides and hydrocarbons. Representative samples from each soil bore were taken to a commercial laboratory for analysis (Appendix D). Based on the laboratory data, the chloride concentrations were below 250 mg/kg and the GRO and DRO concentrations were below the appropriate method detection limit (MDL) for the laboratory at a depth of twelve (12) and eighteen (18) feet bgs in each soil bore. An exception in SB-2, the DRO concentration at 12 feet bgs was 87.8 mg/kg.

To determine if the residual chlorides in the vadose zone pose a threat to groundwater quality, RECS (now Basin) ran the U.S. Environmental Protection Agency Exposure Assessment Multimedia Model (MULTIMED Version 1.5, 2005). Model outputs and the graph are included in Appendix E. With the impact area of approximately 29,419 ft², the model output concludes that the peak concentration of chlorides in groundwater contributed by the vadose zone soils would be approximately 214.4 mg/L in 275 years. Since the estimated increase in chloride concentrations in groundwater from residual chloride migration is below the WQCC standard of 250 mg/L, no action is warranted for groundwater at this site.

Corrective Action Plan

Based on the sampling data, Basin plans to remediate the site in two (2) phases:

Phase 1: The pasture area south of the battery will be addressed to mitigate any future impact to the possible groundwater by the residual constituents. This area will be excavated to four (4) foot bgs, the excavation contoured with six inches of sand to protect the liner from incidental puncture. A 20-mil reinforced poly liner will be installed and properly seated at the base of the excavation. The area will be backfilled with clean top soil. The excavated soil will be disposed of at an NMOCD approved facility.

All backfilled areas of the pasture will be contoured to the surrounding area. The affected area will be seeded with a seed mix acceptable to the landowner.

Phase 2: The berm encompassing the tank battery will be removed and replaced with clean, non-impacted soil on three (3) sides. The accessible area inside the berm will be excavated to a depth of approximately one (1) foot to remove the most heavily impacted soil. The northern berm will be removed and then replaced approximately ten (10) feet further north on the pad with clean, non-impacted material to a minimum height of at least two (2) feet.

The impacted part of the battery pad will be excavated to approximately one (1) foot bgs and backfilled and compacted with non-impacted material.

The area northwest of the pad in the pasture will be excavated down to four (4) feet bgs and backfilled with clean top soil. This area will be seeded with a landowner approved seed mix. All excavated soils will be disposed at an approved NMOCD facility.

The supporting documentation for this Corrective Action Plan is attached.

Basin appreciates the opportunity to work with you on this project. Please contact me if you have any questions or wish to discuss the site.

Sincerely,

A handwritten signature in black ink, appearing to read 'Robbie Runnels', followed by a long horizontal line.

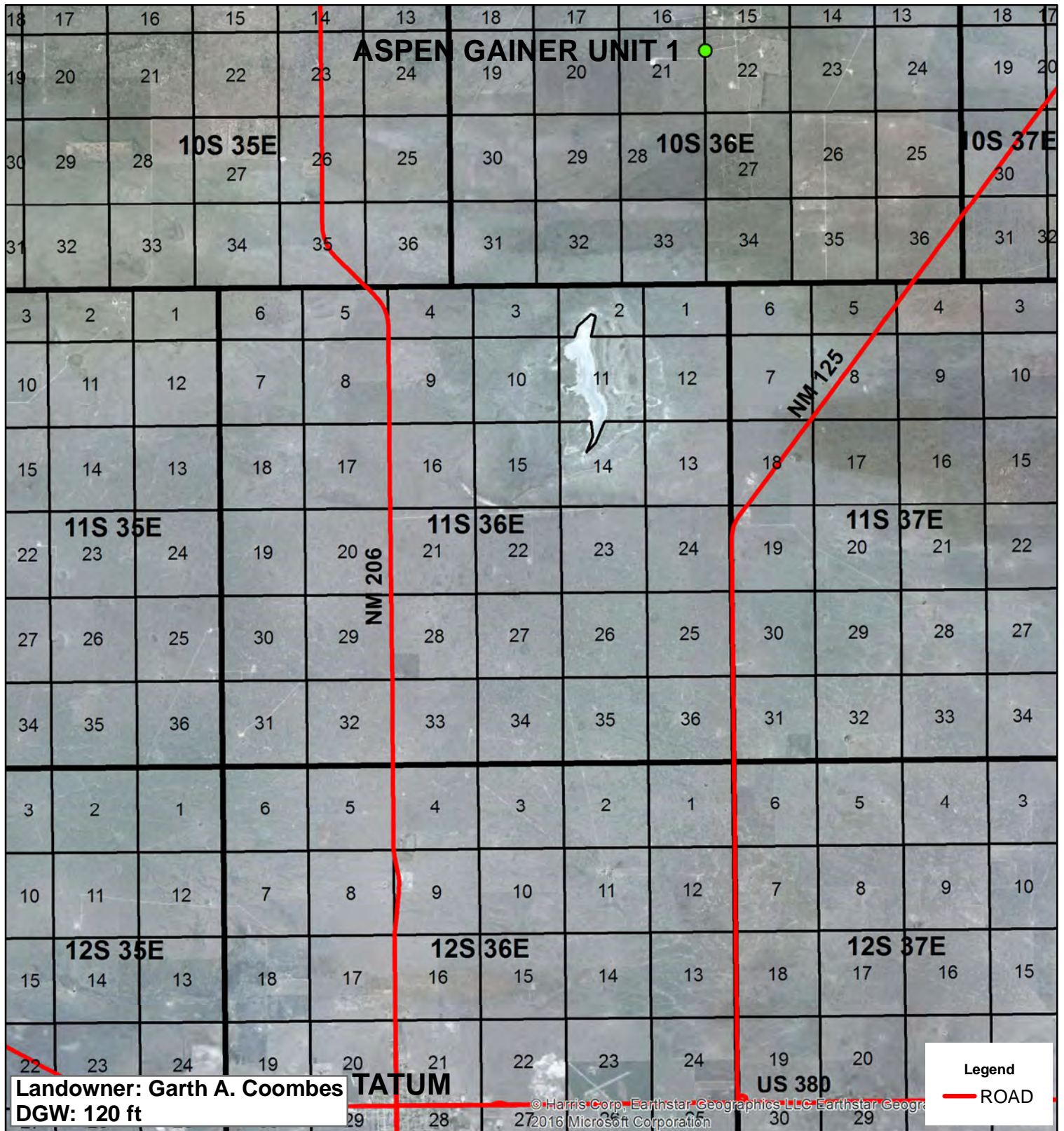
Robbie Runnels
Project Manager
Basin Environmental Service Technologies
(575) 393-2967

Attachments:

- Figure 1 – Site Location Map
- Figure 2 - Initial Sampling Data
- Appendix A – Initial C-141
- Appendix B – Laboratory Analysis
- Appendix C – Photo Documentation

FIGURES

Geographic Location



ASPEN GAINER UNIT #1

1RP-2-13-2903

UL/A,H - SEC 21
UL/ D,E - SEC 22
T10S R36E
LEA COUNTY, NM

GPS: 33.436043 -103.252912

Figure 1

0 1 2
Miles

Drawing date: 10/17/16
Drafted by: T. Grieco



3' 321 616.4
4' 656 1338 441 2180 <0.2 0.64 0.297 15.4 16.3

PT 11 NORTH

DEPTH	CI-	PID	GRO	DRO
SURF	60	1.2		
6"	60	0		
1'	<16	0	<10	<10

PT 11 WEST

DEPTH	CI-	PID	GRO	DRO
SURF	60	4.7		
6"	59	2.1		
1'	<16	0	<10	<10

PT 11 SOUTH

DEPTH	CI-	PID	GRO	DRO
SURF	57	0		
6"	60	0		
1'	<16	0	<10	<10

PT 10 NORTH

DEPTH	CI-	PID	GRO	DRO
SURF	143	0		
6"	151	0		
1'	<16	0	<10	<10

PT 10 SOUTH

DEPTH	CI-	PID	GRO	DRO
SURF	116	0		
6"	147	0		
1'	114	0	<10	<10

PT 10 WEST

DEPTH	CI-	PID	GRO	DRO
SURF	148	0		
6"	182	0		
1'	112	0	<10	<10

SB-3 (June 20, 2013)

DEPTH	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	1180	422	<10	8190	<0.05	<0.05	<0.05	<0.15	<0.3
3	587	55.9							
6	1070	30	<10	<10					
9	514	3.3							
12	112	16.5	<10	<10					
15	114	41.8	<10	<10					

SB-5 (September 26, 2014)

DEPTH	CI-	PID	GRO	DRO
SS	<16	2.2	<10	44.3
3	834	5		
6	1428	3.7		
9	1960	4.2	<10	<10
12	1011	4.2		
15	420	4		
18	112	3.3	<10	<10
21	176	3.4	<10	<10

3' 57 1534
4' 58 660.8
5' 59 112.4
6' <16 1984 3680 6660 <2.5 14 <2.5 154 168
7' 55 26.8
8' <16 24 11.6 <10

PT 8 EAST

DEPTH	CI-	PID	GRO	DRO
SURF	57	13.1		
6"	60	0.8		
1'	<16	0.8	<10	<10

PT 8 WEST

DEPTH	CI-	PID	GRO	DRO
SURF	56	0		
6"	59	0		
1'	<16	0	<10	<10

PT 8 SOUTH

DEPTH	CI-	PID	GRO	DRO
SURF	56	1.1		
6"	57	0		
1'	<16	0	<10	<10

PT 8 NORTH

DEPTH	CI-	PID	GRO	DRO
SURF	56	0.2		
6"	59	0		
1'	32	0	<10	<10

PT 3

DEPTH	CI-	PID	GRO	DRO	B	T	E	X	TOTAL
1'	715	1871							
2'	418	2094							
3'	677	3113							
4'	950	596.4							
5'	1289	59.6							
7'	1101	216.6							
8'	1350	179.9							
9'	1227	39.9							
10'	1225	112.9							
11'	1490	121.1	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3

PT 3 EAST

DEPTH	CI-	PID	GRO	DRO
SURF	85	0		
6"	85	0		
1'	<16	0.1	<10	<10

PT 3 WEST

DEPTH	CI-	PID	GRO	DRO
SURF	111	0.4		
6"	89	0		
1'	<16	0	<10	<10

Legend

- SOIL BORES
- SAMPLE POINT
- DEADMAN
- ELECTRIC BOX
- WELLHEAD
- FENCE
- BERM
- ROAD SURFACE
- SURFACE PIPELINE
- TANK
- PHASE 2 - 15,456 SQ FT
- PHASE 1 - 13,964 SQ FT

Landowner - Garth A. Coombes
DGW 120 ft

ASPEN GAINER UNIT #1

Underground facilities are
spatially projected
and need to be field verified.



APPENDICES

APPENDIX A

C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1025 Rue Bruneau Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2005

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Aspen Operating Co. LLC	Contact: Mike Wilson
Address: 301 Cherry Street Suite #10 Unit 23 FORT WORTH, TX 76102	Telephone No.: Office: 817-882-9063, ext. 19
Facility Name: Aspen Gainer 1	Facility Type: oil well
Surface Owner: Garth A. Coombes	Mineral Owner: New Mexico State Land Office
Lease No.: 1	

API # 30-025-34201

LOCATION OF RELEASE

Unit Letter D	Section 22	Township 10S	Range 36E	Feet from the 1294'	North/South Line NORTH	Feet from the 19'	East/West Line WEST	County LEA
------------------	---------------	-----------------	--------------	------------------------	---------------------------	----------------------	------------------------	---------------

Latitude: 32.4363059840746

Longitude: -103.252897686452

NATURE OF RELEASE

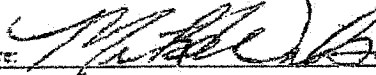

Type of Release: produce water & oil	Volume of Release: Unknown	Volume Recovered: 0
Source of Release: tank overflow due to mechanical failure at battery	Date and Hour of Occurrence: 1-17-13 / unknown	Date and Hour of Discovery: 1-17-13 / unknown
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Geoffrey Leking	
By Whom? Roy R. Rascon Earth Technologies of New Mexico Inc.	Date and Hour: 1-19-13 3:54pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully: *

Describe Cause of Problem and Remedial Action Taken: * overflow of tanks into tank berm area, overflow from tank berm area into pasture south of tank battery. Stop overflow, begin immediate cleanup of surrounding area within berm area, mix up solidify area in pasture area.

Describe Area Affected and Cleanup Action Taken: * area within tank battery berm, with overflow breaking berm on east side and flowing out to south of battery and traveling path along old reclaimed road area and fingering to the west. ETNM contracted by Mike Wilson to perform EM38 survey and sample leak area. Clean up action will be determined after ETNM submits approved protocol by Aspen to NMOCD.

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Michael Wilson	Approved by District Supervisor: 	Environmental Specialist
Title: Production Manager	Approval Date: 2/1/13	Expiration Date: 4/1/13
E-mail Address: mwilson@aspen-oil.com	Conditions of Approval: FULLY DELINEATE THE RELEASE HORIZONTALLY AND VERTICALLY AND REMEDIATE	Attached <input type="checkbox"/>
Date: 1-22-13	Phone: 817-882-9063	1 RP-2-13-2903

* Attach Additional Sheets If Necessary

PER RRALS, SUBMIT FINAL
C-141 BY 4/1/13

APPENDIX B

Laboratory Analysis

Analytical Report 459438

for
Aspen Operating Co., LLC.

Project Manager: Bruce Baker

Gainer Unit #1

25-MAR-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



25-MAR-13

Project Manager: **Bruce Baker**

Aspen Operating Co., LLC.

210 W. 6th St., Suite 301

Ft. Worth, TX 76102

Reference: XENCO Report No(s): **459438**

Gainer Unit #1

Project Address: Fort Worth

Bruce Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 459438. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 459438 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Nicholas Straccione

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 459438



Aspen Operating Co., LLC., Ft. Worth, TX

Gainer Unit #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sample PT 3 Surface	S	03-11-13 10:15		459438-001
Sample PT 8 Surface	S	03-11-13 10:43		459438-002
Sample PT 10 Surface	S	03-11-13 11:07		459438-003
Sample PT 11 Surface	S	03-11-13 11:15		459438-004



CASE NARRATIVE

Client Name: Aspen Operating Co., LLC.

Project Name: Gainer Unit #1



Project ID:
Work Order Number(s): 459438

Report Date: 25-MAR-13
Date Received: 03/15/2013

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 459438

Aspen Operating Co., LLC., Ft. Worth, TX

Project Name: Gainer Unit #1



Project Id:

Contact: Bruce Baker

Project Location: Fort Worth

Date Received in Lab: Fri Mar-15-13 11:20 am

Report Date: 25-MAR-13

Project Manager: Nicholas Straccione

<i>Analysis Requested</i>	<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	459438-001 Sample PT 3 Surface SOIL Mar-11-13 10:15	459438-002 Sample PT 8 Surface SOIL Mar-11-13 10:43	459438-003 Sample PT 10 Surface SOIL Mar-11-13 11:07	459438-004 Sample PT 11 Surface SOIL Mar-11-13 11:15		
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	Mar-22-13 10:00 Mar-22-13 15:04 mg/kg RL	Mar-22-13 10:00 Mar-22-13 15:47 mg/kg RL	Mar-22-13 10:00 Mar-22-13 16:09 mg/kg RL	Mar-22-13 10:00 Mar-22-13 16:31 mg/kg RL		
Chloride		621 10.3	61.5 2.85	5.94 2.84	161 2.70		
Percent Moisture	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	Mar-20-13 17:00 % RL	Mar-20-13 17:00 % RL	Mar-20-13 17:00 % RL	Mar-20-13 17:00 % RL		
Percent Moisture		3.32 1.00	6.62 1.00	6.25 1.00	1.56 1.00		
TPH By SW8015B Mod	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	Mar-20-13 09:00 Mar-20-13 15:07 mg/kg RL	Mar-20-13 09:00 Mar-20-13 15:57 mg/kg RL	Mar-20-13 09:00 Mar-20-13 13:01 mg/kg RL	Mar-20-13 09:00 Mar-20-13 13:26 mg/kg RL		
C6-C10 Gasoline Range Hydrocarbons		1050 77.3	1510 80.5	1990 79.9	191 75.9		
C10-C28 Diesel Range Hydrocarbons		23500 77.3	20800 80.5	17900 79.9	17300 75.9		
Total TPH		25000 77.3	22600 80.5	19900 79.9	17800 75.9		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi



Nicholas Straccione
Project Manager

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - San Antonio - Atlanta - Midland/Odessa - Tampa/Lakeland - Phoenix - Latin America

4143 Greenbriar Dr, Stafford, TX 77477
 9701 Harry Hines Blvd , Dallas, TX 75220
 5332 Blackberry Drive, San Antonio TX 78238
 2505 North Falkenburg Rd, Tampa, FL 33619
 12600 West I-20 East, Odessa, TX 79765
 6017 Financial Drive, Norcross, GA 30071
 3725 E. Atlanta Ave, Phoenix, AZ 85040

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: Gainer Unit #1

Work Orders : 459438,

Project ID:

Lab Batch #: 909487

Sample: 459438-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 03/20/13 13:01		SURROGATE RECOVERY STUDY			
TPH By SW8015B Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		109	99.9	109	70-135
o-Terphenyl		43.9	50.0	88	70-135

Lab Batch #: 909487

Sample: 459438-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 03/20/13 13:26		SURROGATE RECOVERY STUDY			
TPH By SW8015B Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		105	99.6	105	70-135
o-Terphenyl		40.9	49.8	82	70-135

Lab Batch #: 909487

Sample: 459438-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 03/20/13 15:07		SURROGATE RECOVERY STUDY			
TPH By SW8015B Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		108	99.6	108	70-135
o-Terphenyl		54.1	49.8	109	70-135

Lab Batch #: 909487

Sample: 459438-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 03/20/13 15:57		SURROGATE RECOVERY STUDY			
TPH By SW8015B Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		110	100	110	70-135
o-Terphenyl		43.9	50.1	88	70-135

Lab Batch #: 909487

Sample: 635423-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 03/20/13 10:56		SURROGATE RECOVERY STUDY			
TPH By SW8015B Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		102	100	102	70-135
o-Terphenyl		51.3	50.1	102	70-135

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Gainer Unit #1

Work Orders : 459438,

Project ID:

Lab Batch #: 909487

Sample: 635423-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03/20/13 10:04

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	58.7	50.1	117	70-135	

Lab Batch #: 909487

Sample: 635423-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03/20/13 10:30

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.7	100	99	70-135	
o-Terphenyl	54.1	50.2	108	70-135	

Lab Batch #: 909487

Sample: 459439-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/20/13 19:00

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.1	99.9	98	70-135	
o-Terphenyl	57.5	50.0	115	70-135	

Lab Batch #: 909487

Sample: 459439-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/20/13 19:28

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	100	99.9	100	70-135	
o-Terphenyl	59.0	50.0	118	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Project Name: Gainer Unit #1

Work Order #: 459438

Analyst: AMB

Date Prepared: 03/22/2013

Project ID:

Date Analyzed: 03/22/2013

Lab Batch ID: 909765

Sample: 635609-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<2.00	50.0	51.4	103	50.0	51.4	103	0	80-120	20	

Analyst: KEB

Date Prepared: 03/20/2013

Date Analyzed: 03/20/2013

Lab Batch ID: 909487

Sample: 635423-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	985	99	1000	959	96	3	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	1030	103	1000	1010	101	2	70-135	35	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Gainer Unit #1

Work Order #: 459438

Lab Batch #: 909765

Date Analyzed: 03/22/2013

QC- Sample ID: 459738-005 S

Reporting Units: mg/kg

Date Prepared: 03/22/2013

Batch #: 1

Project ID:

Analyst: AMB

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	5.07	107	116	104	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Gainer Unit #1

Work Order # : 459438

Project ID:

Lab Batch ID: 909487

QC- Sample ID: 459439-001 S

Batch #: 1 **Matrix:** Soil

Date Analyzed: 03/20/2013

Date Prepared: 03/20/2013

Analyst: KEB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<16.5	1100	1040	95	1100	1080	98	4	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<16.5	1100	1100	100	1100	1140	104	4	70-135	35	

Matrix Spike Percent Recovery $[D] = 100 * (C - A) / B$
Relative Percent Difference $RPD = 200 * [(C - F) / (C + F)]$

Matrix Spike Duplicate Percent Recovery $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not

ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Project Name: Gainer Unit #1

Work Order #: 459438

Lab Batch #: 909467

Project ID:

Date Analyzed: 03/20/2013 17:00

Date Prepared: 03/20/2013

Analyst: WRU

QC- Sample ID: 459439-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.98	9.20	2	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit



Prelogin/Nonconformance Report- Sample Log-In

Client: Aspen Operating Co., LLC.

Date/ Time Received: 03/15/2013 11:20:00 AM

Work Order #: 459438

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: _____

Date: 03/18/2013 _____

Checklist reviewed by: _____

Date: 03/18/2013 _____

Analytical Report 461177

for
Aspen Operating Co., LLC.

Project Manager: Bruce Baker

Gainer Unit #1

19-APR-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



19-APR-13

Project Manager: **Bruce Baker**

Aspen Operating Co., LLC.

210 W. 6th St., Suite 301

Ft. Worth, TX 76102

Reference: XENCO Report No(s): **461177**

Gainer Unit #1

Project Address: Fort Worth

Bruce Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 461177. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 461177 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Keith Anding

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 461177



Aspen Operating Co., LLC., Ft. Worth, TX

Gainer Unit #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Vertical 1 @ 3'	S	04-08-13 10:15		461177-001
Vertical 1 @ 7'	S	04-08-13 10:40		461177-002
Vertical 2 @ 2'	S	04-08-13 10:50		461177-003
Vertical 2 @ 8'	S	04-08-13 11:20		461177-004
Vertical 2 @ 15'	S	04-08-13 12:00		461177-005



CASE NARRATIVE

Client Name: Aspen Operating Co., LLC.

Project Name: Gainer Unit #1



Project ID:

Work Order Number(s): 461177

Report Date: 19-APR-13

Date Received: 04/11/2013

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-911642 TPH By SW8015B Mod

SW8015B_NM

Batch 911642, 1-Chlorooctane recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 461177-005 S.

SW8015B_NM

Batch 911642, C10-C28 Diesel Range Hydrocarbons recovered above QC limits in the Matrix Spike.

Samples affected are: 461177-003, -001, -004, -002, -005.

The Laboratory Control Sample for C10-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

Certificate of Analysis Summary 461177

Aspen Operating Co., LLC., Ft. Worth, TX

Project Name: Gainer Unit #1



Project Id:

Contact: Bruce Baker

Project Location: Fort Worth

Date Received in Lab: Thu Apr-11-13 09:20 am

Report Date: 19-APR-13

Project Manager: Nicholas Straccione

<i>Analysis Requested</i>	<i>Lab Id:</i>	461177-001	461177-002	461177-003	461177-004	461177-005	
	<i>Field Id:</i>	Vertical 1 @ 3'	Vertical 1 @ 7'	Vertical 2 @ 2'	Vertical 2 @ 8'	Vertical 2 @ 15'	
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Apr-08-13 10:15	Apr-08-13 10:40	Apr-08-13 10:50	Apr-08-13 11:20	Apr-08-13 12:00	
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Apr-17-13 10:00	Apr-17-13 10:00	Apr-17-13 10:00	Apr-17-13 10:00	Apr-17-13 10:00	
	<i>Analyzed:</i>	Apr-18-13 03:16	Apr-18-13 03:59	Apr-18-13 04:21	Apr-18-13 04:42	Apr-18-13 05:04	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		393 21.7	945 42.0	1660 43.9	836 21.8	1860 43.6	
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Apr-15-13 17:00	Apr-15-13 17:00	Apr-15-13 17:00	Apr-15-13 17:00	Apr-15-13 17:00	
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		7.97 1.00	4.82 1.00	8.81 1.00	8.14 1.00	8.28 1.00	
TPH By SW8015B Mod	<i>Extracted:</i>	Apr-17-13 14:45	Apr-17-13 14:45	Apr-17-13 14:45	Apr-17-13 14:45	Apr-17-13 14:45	
	<i>Analyzed:</i>	Apr-18-13 10:01	Apr-18-13 00:12	Apr-18-13 00:44	Apr-18-13 01:15	Apr-18-13 01:44	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C10 Gasoline Range Hydrocarbons		2380 81.4	31.3 15.7	1610 16.4	21.3 16.3	ND 16.3	
C10-C28 Diesel Range Hydrocarbons		9750 81.4	621 15.7	4740 16.4	389 16.3	85.4 16.3	
Total TPH		12100 81.4	652 15.7	6350 16.4	410 16.3	85.4 16.3	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi



Keith Anding
Project Manager

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - San Antonio - Atlanta - Midland/Odessa - Tampa/Lakeland - Phoenix - Latin America

4143 Greenbriar Dr, Stafford, TX 77477
 9701 Harry Hines Blvd, Dallas, TX 75220
 5332 Blackberry Drive, San Antonio TX 78238
 2505 North Falkenburg Rd, Tampa, FL 33619
 12600 West I-20 East, Odessa, TX 79765
 6017 Financial Drive, Norcross, GA 30071
 3725 E. Atlanta Ave, Phoenix, AZ 85040

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: Gainer Unit #1

Work Orders : 461177,

Project ID:

Lab Batch #: 911642

Sample: 461177-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/18/13 00:12

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	99.7	97	70-135	
o-Terphenyl	49.4	49.9	99	70-135	

Lab Batch #: 911642

Sample: 461177-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/18/13 00:44

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	99.6	124	70-135	
o-Terphenyl	52.2	49.8	105	70-135	

Lab Batch #: 911642

Sample: 461177-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/18/13 01:15

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.0	99.7	96	70-135	
o-Terphenyl	49.1	49.9	98	70-135	

Lab Batch #: 911642

Sample: 461177-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/18/13 01:44

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.9	99.6	100	70-135	
o-Terphenyl	51.8	49.8	104	70-135	

Lab Batch #: 911642

Sample: 461177-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/18/13 10:01

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	99.9	128	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Gainer Unit #1

Work Orders : 461177,

Project ID:

Lab Batch #: 911642

Sample: 636783-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/17/13 23:10

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.2	99.6	92	70-135	
o-Terphenyl	47.7	49.8	96	70-135	

Lab Batch #: 911642

Sample: 636783-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/17/13 22:08

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	54.3	50.1	108	70-135	

Lab Batch #: 911642

Sample: 636783-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/17/13 22:38

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.6	117	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 911642

Sample: 461177-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/18/13 09:00

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	161	99.6	162	70-135	**
o-Terphenyl	58.8	49.8	118	70-135	

Lab Batch #: 911642

Sample: 461177-005 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/18/13 09:31

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.9	111	70-135	
o-Terphenyl	49.1	50.0	98	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Project Name: Gainer Unit #1

Work Order #: 461177

Analyst: AMB

Date Prepared: 04/17/2013

Project ID:

Date Analyzed: 04/18/2013

Lab Batch ID: 911725

Sample: 636828-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<2.00	50.0	49.9	100	50.0	50.1	100	0	80-120	20	

Analyst: KEB

Date Prepared: 04/17/2013

Date Analyzed: 04/17/2013

Lab Batch ID: 911642

Sample: 636783-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	993	99	996	955	96	4	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	1090	109	996	1060	106	3	70-135	35	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Gainer Unit #1

Work Order #: 461177

Lab Batch #: 911725

Date Analyzed: 04/18/2013

Date Prepared: 04/17/2013

Project ID:

Analyst: AMB

QC- Sample ID: 461177-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	393	543	980	108	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Gainer Unit #1

Work Order # : 461177

Project ID:

Lab Batch ID: 911642

QC- Sample ID: 461177-005 S

Batch #: 1 Matrix: Soil

Date Analyzed: 04/18/2013

Date Prepared: 04/17/2013

Analyst: KEB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<16.3	1090	1420	130	1090	1020	94	33	70-135	35	
C10-C28 Diesel Range Hydrocarbons	85.4	1090	1610	140	1090	1140	97	34	70-135	35	X

Matrix Spike Percent Recovery $[D] = 100 * (C - A) / B$
Relative Percent Difference $RPD = 200 * [(C - F) / (C + F)]$

Matrix Spike Duplicate Percent Recovery $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not

ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Project Name: Gainer Unit #1

Work Order #: 461177

Lab Batch #: 911378

Date Analyzed: 04/15/2013 17:00

Date Prepared: 04/15/2013

Project ID:

Analyst: WRU

QC- Sample ID: 461058-001 D

Batch #: 1

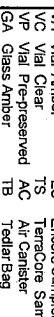
Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	<1.00	<1.00	0	20	U

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit



VC	Vial Clear	TS	TerraCore Sam
VP	Vial Pre-preserved	AC	Air Canister
GA	Glass Amber	TB	Tedlar Bag



Prelogin/Nonconformance Report- Sample Log-In

Client: Aspen Operating Co., LLC.

Date/ Time Received: 04/11/2013 09:20:00 AM

Work Order #: 461177

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: _____

Date: _____

Checklist reviewed by: _____

Date: _____



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 08, 2014

LAURA FLORES

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: GAINES UNIT #1

Enclosed are the results of analyses for samples received by the laboratory on 12/04/14 15:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	12/04/2014	Sampling Date:	12/02/2014
Reported:	12/08/2014	Sampling Type:	Soil
Project Name:	GAINES UNIT #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 8 @ 6' (H403704-01)

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.50	2.50	12/08/2014	ND	1.91	95.3	2.00	1.78	
Toluene*	14.0	2.50	12/08/2014	ND	1.88	93.8	2.00	1.90	
Ethylbenzene*	<2.50	2.50	12/08/2014	ND	1.76	87.8	2.00	3.30	
Total Xylenes*	154	7.50	12/08/2014	ND	5.35	89.2	6.00	3.55	
Total BTX	168	15.0	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/05/2014	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	3680	50.0	12/05/2014	ND	201	101	200	0.950		
DRO >C10-C28	6660	50.0	12/05/2014	ND	209	105	200	2.49		

Surrogate: 1-Chlorooctane 231 % 47.2-157

Surrogate: 1-Chlorooctadecane 224 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
LAURA FLORES
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	12/04/2014	Sampling Date:	12/02/2014
Reported:	12/08/2014	Sampling Type:	Soil
Project Name:	GAINES UNIT #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 8 @ 8' (H403704-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/05/2014	ND	400	100	400	3.92	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	11.6	10.0	12/05/2014	ND	201	101	200	0.950	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	209	105	200	2.49	
Surrogate: 1-Chlorooctane									
	123 %	47.2-157							
Surrogate: 1-Chlorooctadecane									
	134 %	52.1-176							

Sample ID: PT. 8 WEST 1' (H403704-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/05/2014	ND	400	100	400	3.92	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/05/2014	ND	201	101	200	0.950	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	209	105	200	2.49	
Surrogate: 1-Chlorooctane	119 %	47.2-157							
Surrogate: 1-Chlorooctadecane	135 %	52.1-176							

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
LAURA FLORES
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	12/04/2014	Sampling Date:	12/02/2014
Reported:	12/08/2014	Sampling Type:	Soil
Project Name:	GAINES UNIT #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 8 EAST 1' (H403704-04)

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/05/2014	ND	400	100	400	3.92		
TPH 8015M			mg/kg							
			Analyzed By: CK							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648		
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371		
<hr/>										
Surrogate: 1-Chlorooctane	121 %	47.2-157								
Surrogate: 1-Chlorooctadecane	137 %	52.1-176								

Sample ID: PT. 8 SOUTH 1' (H403704-05)

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/05/2014	ND	432	108	400	3.77		
TPH 8015M			mg/kg							
			Analyzed By: CK							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648		
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371		
<hr/>										
Surrogate: 1-Chlorooctane	123 %	47.2-157								
Surrogate: 1-Chlorooctadecane	141 %	52.1-176								

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
LAURA FLORES
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	12/04/2014	Sampling Date:	12/02/2014
Reported:	12/08/2014	Sampling Type:	Soil
Project Name:	GAINES UNIT #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 8 NORTH 1' (H403704-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/05/2014	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371	
Surrogate: 1-Chlorooctane	123 %	47.2-157							
Surrogate: 1-Chlorooctadecane	141 %	52.1-176							

Sample ID: PT. 11 NORTH 1' (H403704-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/05/2014	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371	
Surrogate: 1-Chlorooctane	127 %	47.2-157							
Surrogate: 1-Chlorooctadecane	147 %	52.1-176							

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
LAURA FLORES
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	12/04/2014	Sampling Date:	12/03/2014
Reported:	12/08/2014	Sampling Type:	Soil
Project Name:	GAINES UNIT #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 11 WEST 1' (H403704-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/05/2014	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371	
Surrogate: 1-Chlorooctane									
	120 %	47.2-157							
Surrogate: 1-Chlorooctadecane									
	140 %	52.1-176							

Sample ID: PT. 11 SOUTH 1' (H403704-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/05/2014	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371	
Surrogate: 1-Chlorooctane	115 %	47.2-157							
Surrogate: 1-Chlorooctadecane	133 %	52.1-176							

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
LAURA FLORES
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	12/04/2014	Sampling Date:	12/03/2014
Reported:	12/08/2014	Sampling Type:	Soil
Project Name:	GAINES UNIT #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 11 4' (H403704-10)

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	12/08/2014	ND	1.91	95.3	2.00	1.78	
Toluene*	0.643	0.200	12/08/2014	ND	1.88	93.8	2.00	1.90	
Ethylbenzene*	0.297	0.200	12/08/2014	ND	1.76	87.8	2.00	3.30	
Total Xylenes*	15.4	0.600	12/08/2014	ND	5.35	89.2	6.00	3.55	
Total BTEX	16.3	1.20	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	656	16.0	12/05/2014	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: CK					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	441	10.0	12/05/2014	ND	195	97.3	200	0.648		
DRO >C10-C28	2180	10.0	12/05/2014	ND	199	99.5	200	0.371		

Surrogate: 1-Chlorooctane 173 % 47.2-157

Surrogate: 1-Chlorooctadecane 162 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
LAURA FLORES
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	12/04/2014	Sampling Date:	12/03/2014
Reported:	12/08/2014	Sampling Type:	Soil
Project Name:	GAINES UNIT #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 10 NORTH 1' (H403704-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/05/2014	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371	
Surrogate: 1-Chlorooctane	115 %	47.2-157							
Surrogate: 1-Chlorooctadecane	132 %	52.1-176							

Sample ID: PT. 10 SOUTH 1' (H403704-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	12/05/2014	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371	
Surrogate: 1-Chlorooctane	126 %	47.2-157							
Surrogate: 1-Chlorooctadecane	142 %	52.1-176							

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
LAURA FLORES
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	12/04/2014	Sampling Date:	12/03/2014
Reported:	12/08/2014	Sampling Type:	Soil
Project Name:	GAINES UNIT #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 10 WEST 1' (H403704-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	12/05/2014	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371	
Surrogate: 1-Chlorooctane	125 %	47.2-157							
Surrogate: 1-Chlorooctadecane	141 %	52.1-176							

Sample ID: PT. 3 EAST (H403704-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/05/2014	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371	
Surrogate: 1-Chlorooctane	122 %	47.2-157							
Surrogate: 1-Chlorooctadecane	139 %	52.1-176							

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	12/04/2014	Sampling Date:	12/03/2014
Reported:	12/08/2014	Sampling Type:	Soil
Project Name:	GAINES UNIT #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 3 WEST (H403704-15)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/05/2014	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371	
Surrogate: 1-Chlorooctane		115 %	47.2-157						
Surrogate: 1-Chlorooctadecane		130 %	52.1-176						

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	12/04/2014	Sampling Date:	12/03/2014
Reported:	12/08/2014	Sampling Type:	Soil
Project Name:	GAINES UNIT #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 3 11' (H403704-16)

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/08/2014	ND	1.91	95.3	2.00	1.78		
Toluene*	<0.050	0.050	12/08/2014	ND	1.88	93.8	2.00	1.90		
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.76	87.8	2.00	3.30		
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.35	89.2	6.00	3.55		
Total BTEx	<0.300	0.300	12/08/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1490	16.0	12/05/2014	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/05/2014	ND	195	97.3	200	0.648	
DRO >C10-C28	<10.0	10.0	12/05/2014	ND	199	99.5	200	0.371	

Surrogate: 1-Chlorooctane 119 % 47.2-157

Surrogate: 1-Chlorooctadecane 135 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>PGCS</u>		P.O. #:		BILL TO		ANALYSIS REQUEST					
Project Manager: <u>Laura Flores</u>		Company:									
Address:		City:		State:		Zip:		Attn:		Company:	
Phone #:		Fax #:		Project Owner:		City:		State:		Zip:	
Project #:		Project Location: <u>Aspen</u>		Project Name: <u>Aspen</u>		Project Location: <u>Garage Unit #1</u>		Project Name: <u>Aspen</u>		Project Location: <u>Garage Unit #1</u>	
Sampler Name: <u>Joshua Belar</u>		Fax #:		PRESERV		SAMPLING		DATE		TIME	
FOR LAB USE ONLY		Lab I.D. <u>H4D3704</u>		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX	
1		P.L. at 6'		G		1		GROUNDWATER		WASTEWATER	
2		P.L. at 8'		G		1		SOIL		OIL	
3		P.L. West 1'		G		1		SLUDGE		OTHER :	
4		P.L. East 1'		G		1		ACID/BASE:		ICE / COOL	
5		P.L. South 1'		G		1		OTHER :			
6		P.L. North 1'		G		1					
7		P.L. North 1'		G		1					
8		P.L. West 1'		G		1					
9		P.L. South 1'		G		1					
10		P.L. 4'		G		1					
11		P.L. 4'		G		1					
12		P.L. 4'		G		1					
13		P.L. 4'		G		1					
14		P.L. 4'		G		1					
15		P.L. 4'		G		1					
16		P.L. 4'		G		1					
17		P.L. 4'		G		1					
18		P.L. 4'		G		1					
19		P.L. 4'		G		1					
20		P.L. 4'		G		1					
21		P.L. 4'		G		1					
22		P.L. 4'		G		1					
23		P.L. 4'		G		1					
24		P.L. 4'		G		1					
25		P.L. 4'		G		1					
26		P.L. 4'		G		1					
27		P.L. 4'		G		1					
28		P.L. 4'		G		1					
29		P.L. 4'		G		1					
30		P.L. 4'		G		1					
31		P.L. 4'		G		1					
32		P.L. 4'		G		1					
33		P.L. 4'		G		1					
34		P.L. 4'		G		1					
35		P.L. 4'		G		1					
36		P.L. 4'		G		1					
37		P.L. 4'		G		1					
38		P.L. 4'		G		1					
39		P.L. 4'		G		1					
40		P.L. 4'		G		1					
41		P.L. 4'		G		1					
42		P.L. 4'		G		1					
43		P.L. 4'		G		1					
44		P.L. 4'		G		1					
45		P.L. 4'		G		1					
46		P.L. 4'		G		1					
47		P.L. 4'		G		1					
48		P.L. 4'		G		1					
49		P.L. 4'		G		1					
50		P.L. 4'		G		1					
51		P.L. 4'		G		1					
52		P.L. 4'		G		1					
53		P.L. 4'		G		1					
54		P.L. 4'		G		1					
55		P.L. 4'		G		1					
56		P.L. 4'		G		1					
57		P.L. 4'		G		1					
58		P.L. 4'		G		1					
59		P.L. 4'		G		1					
60		P.L. 4'		G		1					
61		P.L. 4'		G		1					
62		P.L. 4'		G		1					
63		P.L. 4'		G		1					
64		P.L. 4'		G		1					
65		P.L. 4'		G		1					
66		P.L. 4'		G		1					
67		P.L. 4'		G		1					
68		P.L. 4'		G		1					
69		P.L. 4'		G		1					
70		P.L. 4'		G		1					
71		P.L. 4'		G		1					
72		P.L. 4'		G		1					
73		P.L. 4'		G		1					
74		P.L. 4'		G		1					
75		P.L. 4'		G		1					
76		P.L. 4'		G		1					
77		P.L. 4'		G		1					
78		P.L. 4'		G		1					
79		P.L. 4'		G		1					
80		P.L. 4'		G		1					
81		P.L. 4'		G		1					
82		P.L. 4'		G		1					
83		P.L. 4'		G		1					
84		P.L. 4'		G		1					
85		P.L. 4'		G		1					
86		P.L. 4'		G		1					
87		P.L. 4'		G		1					
88		P.L. 4'		G		1					
89		P.L. 4'		G		1					
90		P.L. 4'		G		1					
91		P.L. 4'		G		1					
92		P.L. 4'		G		1					
93		P.L. 4'		G		1					
94		P.L. 4'		G		1					
95		P.L. 4'		G		1					
96		P.L. 4'		G		1					
97		P.L. 4'		G		1					
98		P.L. 4'		G		1					
99		P.L. 4'		G		1					
100		P.L. 4'		G		1					
101		P.L. 4'		G		1					
102		P.L. 4'		G		1					
103		P.L. 4'		G		1					
104		P.L. 4'		G		1					
105		P.L. 4'		G		1					
106		P.L. 4'		G		1					
107		P.L. 4'		G		1					
108		P.L. 4'		G		1					
109		P.L. 4'		G		1					
110		P.L. 4'		G		1					
111		P.L. 4'		G		1					
112		P.L. 4'		G		1					
113		P.L. 4'		G		1					
114		P.L. 4'		G		1					
115		P.L. 4'		G		1					
116		P.L. 4'		G		1					
117		P.L. 4'		G		1					
118		P.L. 4'		G		1					
119		P.L. 4'		G		1					
120		P.L. 4'		G		1					
121		P.L. 4'		G		1					
122		P.L. 4'		G		1					
123		P.L. 4'		G		1					
124		P.L. 4'		G		1					
125		P.L. 4'		G		1					
126		P.L. 4'		G		1					
127		P.L. 4'		G		1					
128		P.L. 4'		G		1					
129		P.L. 4'		G		1					
130		P.L. 4'		G		1					
131		P.L. 4'		G		1					
132		P.L. 4'		G		1					
133		P.L. 4'		G		1					
134		P.L. 4'		G		1					
135		P.L. 4'		G		1					
136		P.L. 4'		G		1					
137		P.L. 4'		G		1					
138		P.L. 4'		G		1					
139		P.L. 4'		G		1					
140		P.L. 4'		G		1					
141		P.L. 4'		G		1					
142		P.L. 4'		G		1					
143		P.L. 4'		G		1					
144		P.L. 4'		G		1					
145		P.L. 4'		G		1					
146		P.L. 4'		G		1					
147		P.L. 4'		G		1					
148		P.L. 4'		G		1					
149		P.L. 4'		G		1					
150		P.L. 4'		G		1					
151		P.L. 4'		G		1					
152		P.L. 4'		G		1					
153		P.L. 4'		G		1					
154		P.L. 4'		G		1					
155		P.L. 4'		G		1					
156		P.L. 4'		G		1					
157		P.L. 4'		G		1					
158		P.L. 4'		G		1					
159		P.L. 4'		G		1					
160		P.L. 4'		G		1					
161		P.L. 4'		G		1					
162		P.L. 4'		G		1					
163		P.L. 4'		G		1					
164		P.L. 4'		G		1					
165		P.L. 4'		G		1					
166		P.L. 4'		G		1					
167		P.L. 4'		G		1					
168		P.L. 4'		G		1					
169		P.L. 4'		G		1					
170		P.L. 4'		G		1					
171		P.L. 4'		G		1					
172		P.L. 4'		G		1					
173		P.L. 4'		G		1					
174		P.L. 4'		G		1					
175		P.L. 4'		G		1					
176		P.L. 4'		G		1					
177		P.L. 4'		G		1					
178		P.L. 4'		G		1					
179		P.L. 4'		G		1					
180		P.L. 4'		G		1					
181		P.L. 4'		G		1					
182		P.L. 4'		G		1					
183		P.L. 4'		G		1					
184		P.L. 4'		G		1					
185		P.L. 4'		G		1					
186		P.L. 4'		G		1					
187		P.L. 4'		G		1					
188		P.L. 4'		G		1					
189		P.L. 4'		G		1					
190		P.L. 4'		G		1					
191		P.L. 4'		G		1					
192		P.L. 4'		G		1					
193		P.L. 4'		G		1					
194		P.L. 4'		G		1					
195		P.L. 4'		G							



ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: <u>HCS</u>		P.O. #:					
Project Manager: <u>Cona Flores</u>		Company:					
Address:		Attn:					
City:		State:	Zip:				
Phone #:		Fax #:					
Project #:		Project Owner:					
Project Name: <u>Aspen</u>		City:	State:	Zip:			
Project Location: <u>Gair UNIT #1</u>		Phone #:					
Sample Name: <u>Johna Bden</u>		Fax #:					
FOR LAB USE ONLY							
Lab I.D. <u>H403704</u>	Sample I.D.						
11 P110 North 2		(G)RAB OR (C)OMP.					
12 P110 South 2		# CONTAINERS					
13 P110 West 1		GROUNDWATER					
14 P110 East 1		WASTEWATER					
15 P110 West 1		SOIL					
16 P110 East 1		OIL					
		SLUDGE					
		OTHER:					
		ACID/BASE:					
		ICE / COOL					
		OTHER:					
		DATE	TIME				
		12-3-19	11:00				
		12-3-19	11:15				
		12-3-19	11:30				
		12-3-19	11:45				
		12-3-19	12:00				
		12-3-19	12:15				
					Chlorides		
					TPH 8015 M		
					BTEX		
					Texas TPH		
					Complete Cations/Anions		
					TDS		

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54

Volcano-ECS



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 01, 2016

ROBBIE RUNNELS

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: GAINER UNIT #1

Enclosed are the results of analyses for samples received by the laboratory on 09/27/16 14:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

Basin Environmental Service
ROBBIE RUNNELS
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received: 09/27/2016
Reported: 10/01/2016
Project Name: GAINER UNIT #1
Project Number: ASPEN
Project Location: LEA COUNTY, NM

Sampling Date: 09/27/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB-6 @ SURFACE (H602168-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2016	ND	2.09	104	2.00	0.598	
Toluene*	<0.050	0.050	09/29/2016	ND	2.13	106	2.00	0.937	
Ethylbenzene*	0.059	0.050	09/29/2016	ND	2.08	104	2.00	1.22	
Total Xylenes*	<0.150	0.150	09/29/2016	ND	6.29	105	6.00	1.76	
Total BTEX	<0.300	0.300	09/29/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	09/29/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<100	100	09/28/2016	ND	200	100	200	1.49		
DRO >C10-C28	19800	100	09/28/2016	ND	212	106	200	0.299		
EXT DRO >C28-C35	4370	100	09/28/2016	ND						

Surrogate: 1-Chlorooctane 75.2 % 35-147

Surrogate: 1-Chlorooctadecane 1050 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Basin Environmental Service
ROBBIE RUNNELS
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received: 09/27/2016
Reported: 10/01/2016
Project Name: GAINER UNIT #1
Project Number: ASPEN
Project Location: LEA COUNTY, NM

Sampling Date: 09/27/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB-6 @ 2' (H602168-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	09/29/2016	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	170	10.0	09/28/2016	ND	200	100	200	1.49	
DRO >C10-C28	3040	10.0	09/28/2016	ND	212	106	200	0.299	
EXT DRO >C28-C35	391	10.0	09/28/2016	ND					
Surrogate: 1-Chlorooctane	140 %	35-147							
Surrogate: 1-Chlorooctadecane	160 %	28-171							

Sample ID: SB-6 @ 4' (H602168-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	09/29/2016	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	138	10.0	09/28/2016	ND	200	100	200	1.49	
DRO >C10-C28	2710	10.0	09/28/2016	ND	212	106	200	0.299	
EXT DRO >C28-C35	314	10.0	09/28/2016	ND					
Surrogate: 1-Chlorooctane									
	130 %	35-147							
Surrogate: 1-Chlorooctadecane									
	140 %	28-171							

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Basin Environmental Service
ROBBIE RUNNELS
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received: 09/27/2016
Reported: 10/01/2016
Project Name: GAINER UNIT #1
Project Number: ASPEN
Project Location: LEA COUNTY, NM

Sampling Date: 09/27/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB-6 @ 6' (H602168-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	09/29/2016	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	103	10.0	09/28/2016	ND	200	100	200	1.49	
DRO >C10-C28	1170	10.0	09/28/2016	ND	212	106	200	0.299	
EXT DRO >C28-C35	119	10.0	09/28/2016	ND					
Surrogate: 1-Chlorooctane	116 %	35-147							
Surrogate: 1-Chlorooctadecane	114 %	28-171							

Sample ID: SB-6 @ 8' (H602168-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	624	16.0	09/29/2016	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	531	50.0	09/28/2016	ND	200	100	200	1.49		
DRO >C10-C28	6160	50.0	09/28/2016	ND	212	106	200	0.299		
EXT DRO >C28-C35	712	50.0	09/28/2016	ND						
Surrogate: 1-Chlorooctane		162 %	35-147							
Surrogate: 1-Chlorooctadecane		172 %	28-171							

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report



Celey D. Keene, Lab Director/Quality Manager

ORDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

October 05, 2016

ROBBIE RUNNELS

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: GAINER UNIT #1

Enclosed are the results of analyses for samples received by the laboratory on 10/03/16 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 Basin Environmental Service
 ROBBIE RUNNELS
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

 Received: 10/03/2016
 Reported: 10/05/2016
 Project Name: GAINER UNIT #1
 Project Number: ASPEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 09/27/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SB-6 @ 10' (H602209-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	608	16.0	10/04/2016	ND	416	104	400	0.00			
TPH 8015M		mg/kg		Analyzed By: MS							S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
GRO C6-C10	283	50.0	10/04/2016	ND	198	98.8	200	2.21			
DRO >C10-C28	5030	50.0	10/04/2016	ND	182	90.8	200	2.55			
EXT DRO >C28-C35	545	50.0	10/04/2016	ND							
Surrogate: 1-Chlorooctane	162 %	35-147									
Surrogate: 1-Chlorooctadecane	147 %	28-171									

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Basin Environmental Service Technologies, LLC		BILL TO		ANALYSIS REQUEST																																			
Project Manager: Robbie Runnels		P.O. #:																																					
Address: P.O. Box 301		Company: Aspen																																					
City: Lovington		Attn: Larry Spittler																																					
Phone #: (575)396-2378		Address:																																					
Fax #: (575)396-1429		City:																																					
Project #:		State: NM																																					
Project Name: Gainer Unit #1		Zip: 88260																																					
Project Location: Lea County, NM		Phone #:																																					
Sampler Name: Robbie Runnels		Fax #:																																					
FOR LAB USE ONLY		MATRIX		PRESERVATION		SAMPLING																																	
Lab I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME													
Sample I.D.																																							
1 SB-6 @ 10'		9		1		X																																	

APPENDIX C

Photo Documentation

Aspen Gainer Unit #1

Unit Letter A, D, H, G, Section 22, T10S, R36E



Initial release south area, facing west 3/11/13



Initial release east area, facing west 3/11/12



Initial release south area, facing south 3/11/13



Initial release south area, facing north 3/11/13



Northeast spoil piles, facing southwest 3/11/13



Initial release west area, facing east 3/11/13



Digging verticals, facing north 4/8/13



Drilling SB-1, facing west 6/20/13



Plugging SB-1 in total with bentonite

6/20/13



Completed SB-1, facing north

6/20/13



Drilling SB-2, facing west

6/20/13



Plugging SB-2 in total with bentonite

6/20/13



Completed SB-2, facing north

6/20/13



Drilling SB-3, facing north-northwest

6/20/13



Plugging SB-3 in total with bentonite

6/20/13



Completed SB-3, facing east

6/20/13



Drilling SB-4, facing west

9/26/13



Plug SB-4 in total with bentonite

9/26/13



SB-4 completed, facing north

9/26/13



Drilling SB-5, facing north

9/26/13



Plugging SB-5 in total with bentonite

9/26/13



SB-5 completed, facing north

9/26/13