



Incident ID	nAB1819156522
District RP	2RP-4848
Facility ID	fAB1807457621
Application ID	NA

May 13, 2019

Mike Bratcher & Robert Hamlet  
 New Mexico Energy, Minerals and Natural Resources Department  
 Oil Conservation Division, District 2  
 811 S. First Street  
 Artesia, NM 88210

Ryan Mann  
 Hobbs Field Office  
 New Mexico State Land Office  
 2827 North Dal Paso Street, Suite 117  
 Hobbs, NM 88240

**Re: Site Assessment Report and Deferral Request**  
**Site Name: Avalon Compressor Station**  
**GPS: Latitude: 32.02618 Longitude: -104.11717**  
**Legals: UL "K", Sec. 20, T26S, R28E**  
**EddyCounty, New Mexico**  
**NMOCD Ref. No. 2RP-4848**

Lowry Environmental & Associates, LLC (LEA), on behalf of ETC Texas Pipeline, Ltd., has prepared this Site Assessment Report and Deferral Request for the Release Site known as the Avalon Compressor Station. Details of the release are summarized on the table below:

Nature and Volume of Release	
<b>Date Release Discovered</b>	7/5/2018
<b>Source of Release</b>	Compressor Station
<b>Type of Release</b>	Condensate and Produced Water
	<b>Volume Released</b>
	5.0 bbls (Condensate) 2.0 bbls (Produced Water)
<b>Volume Recovered</b>	None
<b>Cause of Release</b>	
The release was attributed to a tank equalizing valve being left closed, resulting in the tank being over run.	
<b>Affected Area</b>	
The release affected an area on the truck loading ramp measuring approximately 1,300 Sq. Ft. west of the above ground storage tanks.	
<b>Was this a major release?</b>	<b>If YES, for what reasons (s) is this considered a major release?</b>
No	N/A
<b>If Yes, was immediate notice given to the OCD? By whom? To whom? When and by what means?</b>	
N/A	

A copy of the Release Notification (NMOCD Form C-141) is provided as Attachment #8.

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### Site Assessment/Characterization

What is the shallowest depth to groundwater beneath the area affected by the release?	<50 Ft.
Did this release impact groundwater or surface water?	No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	No
Are the lateral extents of the release within 300 feet of a wetland?	No
Are the lateral extents of the release overlying a subsurface mine?	No
Are the lateral extents of the release overlying an unstable area such as karst geology?	Yes
Are the lateral extents of the release within a 100-year floodplain?	No
Did the release impact areas <b>not</b> on an exploration, development, production or storage site?	No

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey was conducted in an effort to determine the average depth to groundwater within a 1 Mile radius of the Site and identify any registered water wells within a 1/2 Mile radius of the Site. A search of NMOSE and USGS databases indicated no water wells were located within a 1-Mile radius of the Site. Wells with available information are located within low lying draws and are likely not representative of groundwater conditions of at the Site, which sits atop a hill.

Based on the volume and nature of the release, inferred depth to groundwater and NMOCD Siting Criteria, the NMOCD Closure Criteria for the Site is as follows:

Closure Criteria for Soil Impacted by a Release	
Benzene	10 mg/kg
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)	50 mg/kg
Total Petroleum Hydrocarbons	100 mg/kg
Chloride	600 mg/kg

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted on Figures 1 & 2. Depth to groundwater information is provided as Attachment #4. A Photographic Log is provided as Attachment #7.

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## INITIAL SITE ASSESSMENT

On **July 6, 2018**, an environmental contractor conducted an initial investigation in an effort to characterize soil impacts at the Site. During the initial site assessment, six (6) soil samples (V1 6", V2 6", V3 6", V4 6", H1 4" and H2 4") were collected and submitted to an NMOCD-approved laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX concentrations ranged from <0.3 mg/kg in soil sample V4 6" to 202 mg/kg in soil sample V2 6". Analytical results indicated TPH concentrations ranged from 2,170 mg/kg in soil sample V3 6" to 19,370 mg/kg in soil sample V2 6". Chloride concentrations ranged from 96 mg/kg in soil sample V4 6" to 24,000 mg/kg in soil sample H2 4".

On **July 12, 2019**, the Site was revisited in an effort to further characterize affected soil. During the site visit, a series of test trenches were advanced in an effort to determine the vertical and horizontal extent of soil impacts. During the advancement of the test trenches, soil samples were collected and field screened for concentrations of TPH and chloride. Nine (9) soil samples (TP-1-2, TP-1-4, TP-2-2, TP-2-8, TP-3-4, TP-4-2, TP-4-4, TP-5-2, TP-5-4, and TP-7-12) were submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples with the exception of soil sample TP-2-8, which exhibited a TPH concentration of 589 mg/kg.

On **August 20, 2019**, the Site was revisited in an effort to further characterize impacted soil in the area characterized by soil sample TP-2-8. During the site visit, a test trench (TP-7) was advanced in the area characterized by soil sample TP-2-8. One (1) soil sample (TP-7-12) was collected and submitted to the laboratory for analysis of TPH and chloride. Laboratory analytical results indicated soil sample TP-7-12 exhibited a TPH concentration of <62.6 mg/kg and a chloride concentration of 50.0 mg/kg.

Please reference the Site Assessment Report dated November 12, 2018, for additional details regarding the Avalon Compressor 2RP-4848.

A table summarizing laboratory analytical results from soil samples collected during the initial site assessment is provided on the following page:

Incident ID	nAB1819156522
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Application ID	NA

Concentrations of BTEX, TPH and/or Chloride in Soil - Initial Assessment(s)											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E300/4500Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
V1 6"	7/6/18	6"	Excavated	0.635	60.5	905	2,400	<b>3,305</b>	1,230	<b>4,535</b>	<b>5,840</b>
V2 6"	7/6/18	6"	Excavated	3.4	202	4450	9,980	<b>14,430</b>	4,940	<b>19,370</b>	<b>19,200</b>
V3 6"	7/6/18	6"	Excavated	0.369	<b>19.9</b>	337	1,170	<b>1,507</b>	663	<b>2,170</b>	<b>8,000</b>
V4 6"	7/6/18	6"	Excavated	<0.050	<0.3	32.3	4,440	<b>4,472.3</b>	887	<b>5,359.3</b>	96
H1 4"	7/6/18	4"	Excavated	<0.050	5.85	160	2,120	<b>2,280</b>	1,230	<b>3,510</b>	<b>992</b>
H2 4"	7/6/18	4"	Excavated	<2.0	<b>164</b>	4,000	9,700	<b>13,700</b>	5,050	<b>18,750</b>	<b>24,000</b>
TP-1-2	7/12/48	2'	Excavated	<0.025	<0.244	<5.0	<10.0	<16.0	<51.0	<66.0	42
TP-1-4	7/12/48	4'	Excavated	<0.024	<0.215	<4.8	<10.0	<14.8	<50.0	<64.8	34.0
TP-2-2	7/12/48	2'	Excavated	<0.023	<0.207	<4.6	<10.0	<14.6	<50.0	<64.6	300
TP-2-8	7/12/48	8'	Excavated	<0.024	<0.213	69	290	359	230	<b>589</b>	230
TP-3-4	7/12/48	4'	In-Situ	-	-	-	-	-	-	-	70.0
TP-4-2	7/12/48	2'	In-Situ	-	-	-	-	-	-	-	85.0
TP-4-4	7/12/48	4'	In-Situ	-	-	-	-	-	-	-	45.0
TP-5-2	7/12/48	2'	In-Situ	-	-	-	-	-	-	-	350
TP-5-4	7/12/48	4'	In-Situ	-	-	-	-	-	-	-	370
TP-7-12	8/20/18	12'	In-Situ	-	-	<3.9	<9.7	<13.6	<49	<62.6	50.0
<b>Closure Criteria</b>				<b>10</b>	<b>50</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100</b>	<b>600</b>

A "Site & Sample Location Map" is provided as Attachment #3. Field Data, if applicable, is provided as Attachment #9. Soil profile observations are provided on Attachment #5. Laboratory analytical reports are provided as Attachment #6.

### PROPOSED REMEDIATION PLAN

On November 12, 2018, a Site Assessment Report and Remediation Work Plan was submitted to the NMOCD and NMSLO detailing the results of the initial site assessment and proposing remediation activities designed to advance the site toward and NMOCD and NMSLO-approved closure.

### NMOCD APPROVALS/STIPULATIONS

The Site Assessment Report and Proposed Remediation Plan was subsequently approved. Please reference the associated Site Assessment Report and Proposed Remediation Plan that has been prepared for 2RP-4848 for additional details.

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## REMIEDIATION ACTIVITIES SUMMARY

On **April 17, 2019**, excavation activities commenced at the Site. During the initial excavation phase, the affected area was excavated to a depth of approximately 2 Ft. bgs to allow for continued and safe access to the loading zone. Sidewalls of the shallow excavation were advanced until field observations and field test results suggested BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria. Excavated soil was transported to an NMOCD-approved disposal facility.

On **April 22, 2019**, upon transporting a sufficient amount of locally sourced, non-impacted caliche to the site to immediately backfill the excavation within the truck loading zone, excavation activities resumed at the Site. Impacted soil within the truck loading zone adjacent to the load lines was excavated and transported to an NMOCD-approved disposal facility. The floor and sidewalls of the excavated area were advanced until field observations and field test results suggested BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria, a depth of approximately 9.5 Ft. bgs. Upon excavating impacted soil from within the affected area, **four (4)** excavation confirmation soil samples (SEF NSW, SEF SSW, SEF WSW and SE Floor @ 9.5') were collected from the floor and sidewalls of the deep excavation adjacent to and beneath the load lines within the truck loading zone. In addition, **one (1)** representative grab sample (EW Stain In-Situ) was collected a stain present on the east sidewall. Upon collecting and field screening the necessary soil samples, the deep excavation adjacent to and beneath the load lines was backfilled with locally sourced, non-impacted material, in an effort to mitigate safety concerns and allow transport trucks to continue to access the truck loading zone.

Upon backfilling the deep excavation beneath and adjacent to the load lines within the truck loading zone, **nine (9)** excavation confirmation soil samples (NE Floor @ 2', NC Floor @ 2', NW Floor @ 2', SC Floor @ 3', SW Floor @ 2', W. Floor @ 1', NSW, SSW and WSW) were collected from the shallow excavation. In addition, **one (1)** soil sample (ESW In-Situ) was collected from soil present in the east sidewall adjacent to the above ground storage tanks in an effort to characterize impacted soil remaining in-situ.

Upon backfilling the deep excavation beneath and adjacent to the load lines within the truck loading zone, **nine (9)** excavation confirmation soil samples (NE Floor @ 2', NC Floor @ 2', NW Floor @ 2', SC Floor @ 3', SW Floor @ 2', W. Floor @ 1', NSW, SSW and WSW) were collected from the shallow excavation. In addition, **one (1)** soil sample (ESW In-Situ) was collected from soil present in the east sidewall adjacent to the above ground storage tanks in an effort to characterize impacted soil remaining in-situ.

The collected soil samples were submitted to an NMOCD-approved laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples. TPH concentrations ranged from less than the applicable laboratory sample detection limit in soil samples NE Floor @ 2', SW Floor @ 2', W. Floor @ 1' and WSW to 2,6p;/66 mg/kg in soil sample EW Stain In-Situ. TPH concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples, with the exception of soil samples SEF NSW, SEF SSW, SEF WSW, ESW In-Situ and EW Stain In-Situ.

A table summarizing laboratory analytical results from confirmation soil samples is provided on the following page:

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Application ID	NA

Concentrations of BTEX, TPH and/or Chloride in Soil - Initial Investigation											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 C
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
SEF NSW	4/22/19	NA	In-Situ	<0.050	<0.300	<10.0	196	196	88.4	284.4	336
SEF SSW	4/22/19	NA	In-Situ	<0.025	<0.150	19.6	114	134	29.6	163.2	112
SEF WSW	4/22/19	NA	In-Situ	<0.025	0.213	19.3	137	156.3	56.7	213.0	208
SE Floor @ 9.5'	4/22/19	9.5'	In-Situ	<0.050	<0.300	<10.0	18.9	18.9	<10.0	18.9	288
NE Floor @ 2'	4/22/19	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
NC Floor @ 2'	4/22/19	2'	In-Situ	<0.050	<0.300	<10.0	67.5	67.5	19.0	86.5	416
NW Floor @ 2'	4/22/19	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	496
SC Floor @ 3'	4/22/19	3'	In-Situ	<0.050	<0.300	<10.0	149	149	70.2	219	352
SW Floor @ 2'	4/22/19	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	496
W Floor @ 1'	4/22/19	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
NSW	4/22/19	NA	In-Situ	0.095	1.02	<10.0	24.2	24.2	11.6	35.8	512
SSW	4/22/19	NA	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	16.3	16.3	208
WSW	4/22/19	NA	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
ESW In-Situ	4/22/19	NA	In-Situ	<0.100	16.5	734	1,180.0	1,914	281	2,195	288
EW Stain In-Situ	4/22/19	4'	In-Situ	<0.025	4.88	908	1,390	2,298	368	2,666	96.0
<b>Closure Criteria</b>				<b>10</b>	<b>50</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100</b>	<b>600</b>

A "Site & Sample Location Map" is provided as Attachment #3. Field Data, if applicable, is provided as Attachment #5. Soil profile observations are provided on Attachment #6. Laboratory analytical reports are provided as Attachment #7.

### DEFERRAL REQUEST

Approximately 168 cubic yards of impacted soil was excavated and transported to and NMOCD-approved disposal facility. Impacted soil affected above the NMOCD Closure Criteria remaining In-Situ is limited to an active oil and gas facility, affecting imported fill material utilized to construct the compressor station and associated truck loading zone. Laboratory analytical results from confirmation soil samples indicate BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples with the exception of soil samples SEF NSW, SEF SSW, SEF WSW, SC Floor @ 3', ESW In-Situ and EW Stain In-Situ, which exhibited TPH concentrations of 284.4 mg/kg, 163.2 mg/kg, 213.0 mg/kg, 219 mg/kg, 2,195 mg/kg and 2,666 mg/kg, respectively.

ETC maintains excavating impacted soil affected above the NMOCD Closure Criteria remaining in-situ would require a major facility deconstruction and/or poses a risk to human health and safety. ETC request NMOCD and NMSLO permission to defer remediation of impacted soil affected the NMOCD Closure Criteria in the areas characterized by soil samples SEF NSW, SEF SSW, SEF WSW, SC Floor @ 3', ESW In-Situ and EW Stain In-Situ until the facility is no longer in use.

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## RESTORATION, RECLAMATION AND RE-VEGETATION PLAN

The release was limited to an active oil and gas facility. Restoration, reclamation and re-vegetation will be conducted in accordance with NMAC 19.15.29.13 once the facility is no longer needed for production operations. Once the facility is no longer in use, restoration, reclamation and re-vegetation will include, but is not limited to the following:

- Removal, sampling and proper disposition of imported fill material.
- Excavation and removal of native soil affected above the NMOCD Closure Criteria.
- Backfill with non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg. Excavation backfill will include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.
- Upon reclaiming the facility, the Site will be reseeded in accordance with NMSLO during the first favorable growing season.
  
- Areas affected by restoration and reclamation activities will be monitored until a life-form ratio of plus or minimum fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds.

If you have any questions, or need any additional information, please feel free to contact Dean Ericson or the undersigned by phone or email.

Respectfully,



Joel W. Lowry  
Environmental Professional  
Lowry Environmental & Associates, LLC

- Attachments:**
- Attachment #1- Figure 1 - Topographic Map
  - Attachment #2- Figure 2 - Aerial Map
  - Attachment #3- Figure 3 - Site & Sample Location Map
  - Attachment #4- Depth to Groundwater Information
  - Attachment #5- Field Data
  - Attachment #6- Soil Profile
  - Attachment #7- Laboratory Analytical Reports
  - Attachment #8- Photographic Log
  - Attachment #9- Pages From Release Notification (FORM C-141)

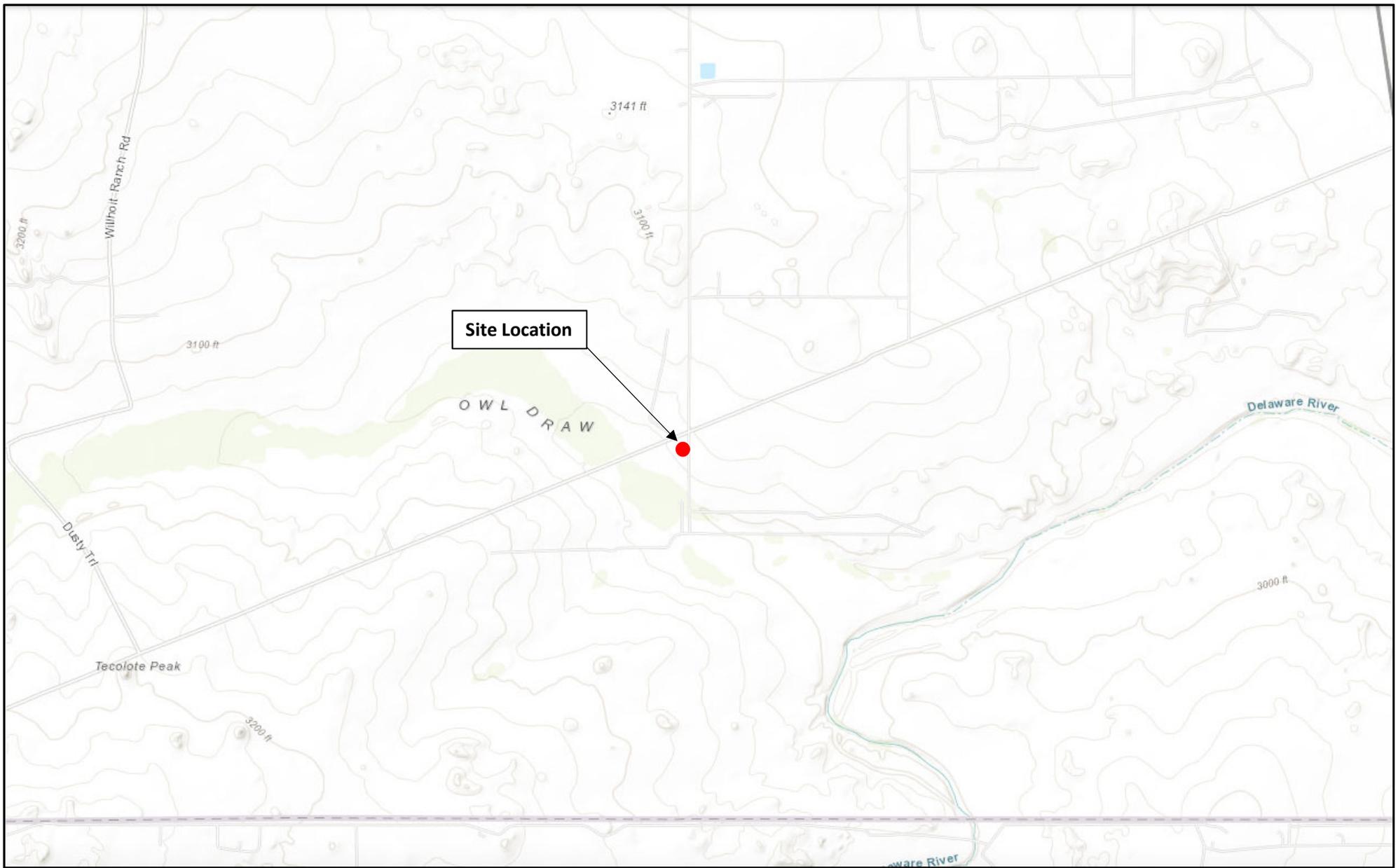
## **LIMITATIONS**

This document has been prepared on behalf of ETC Texas Pipeline, Ltd.. Use of information contained in this report, including exhibits and attachments, by any other party without the consent of LEA and/or ETC Texas Pipeline, Ltd. is prohibited.

This document has been prepared in a professional manner, using the degree of skill and care exercised by similar environmental professionals. LEA notes that the facts and conditions referenced in this document may change over time and that the conclusions and recommendations are only applicable to the facts and conditions as described at the time this

LEA has prepared this report to the best of its ability. No other warranty, expressed or implied, is made or intended.

**ATTACHMENT #1**  
**Figure 1 - Topographic Map**



**LEGEND:**

● Site Location

**Figure 1**

Topographic Map  
 ETC Texas Pipeline, Ltd.  
 Avalon Compressor Station  
 GPS: 32.02557, -104.11776  
 EddyCounty, New Mexico

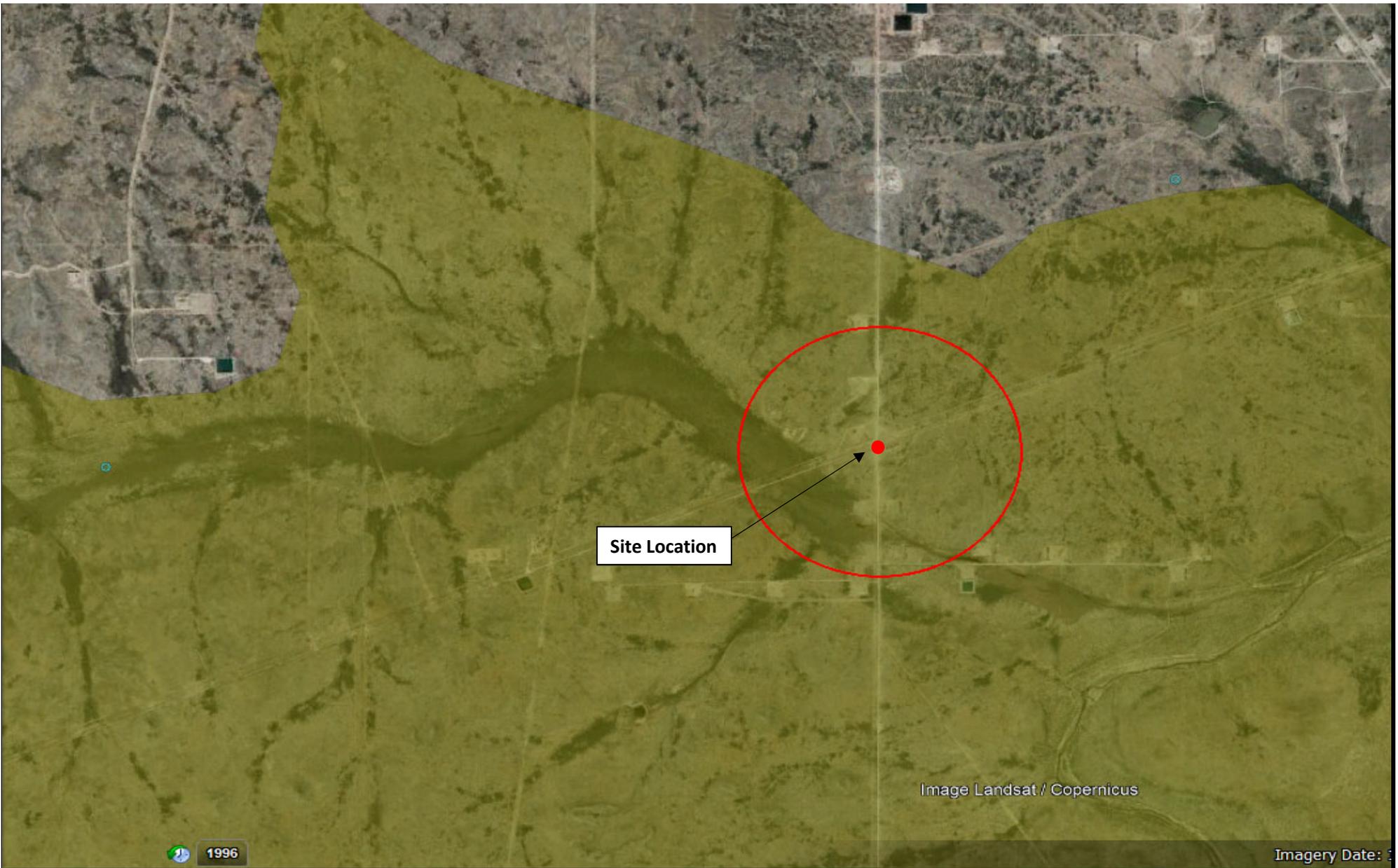


Drafted by: jwl

Checked by: client

Date: 4/24/2019

**ATTACHMENT #2**  
**Figure 2 - Aerial Map**



**LEGEND:**

	Site Location		Non-Industrial Building
	Fresh Water Well		Subsurface Mine
	100-Year Floodplain		
	High/Critical Karst		

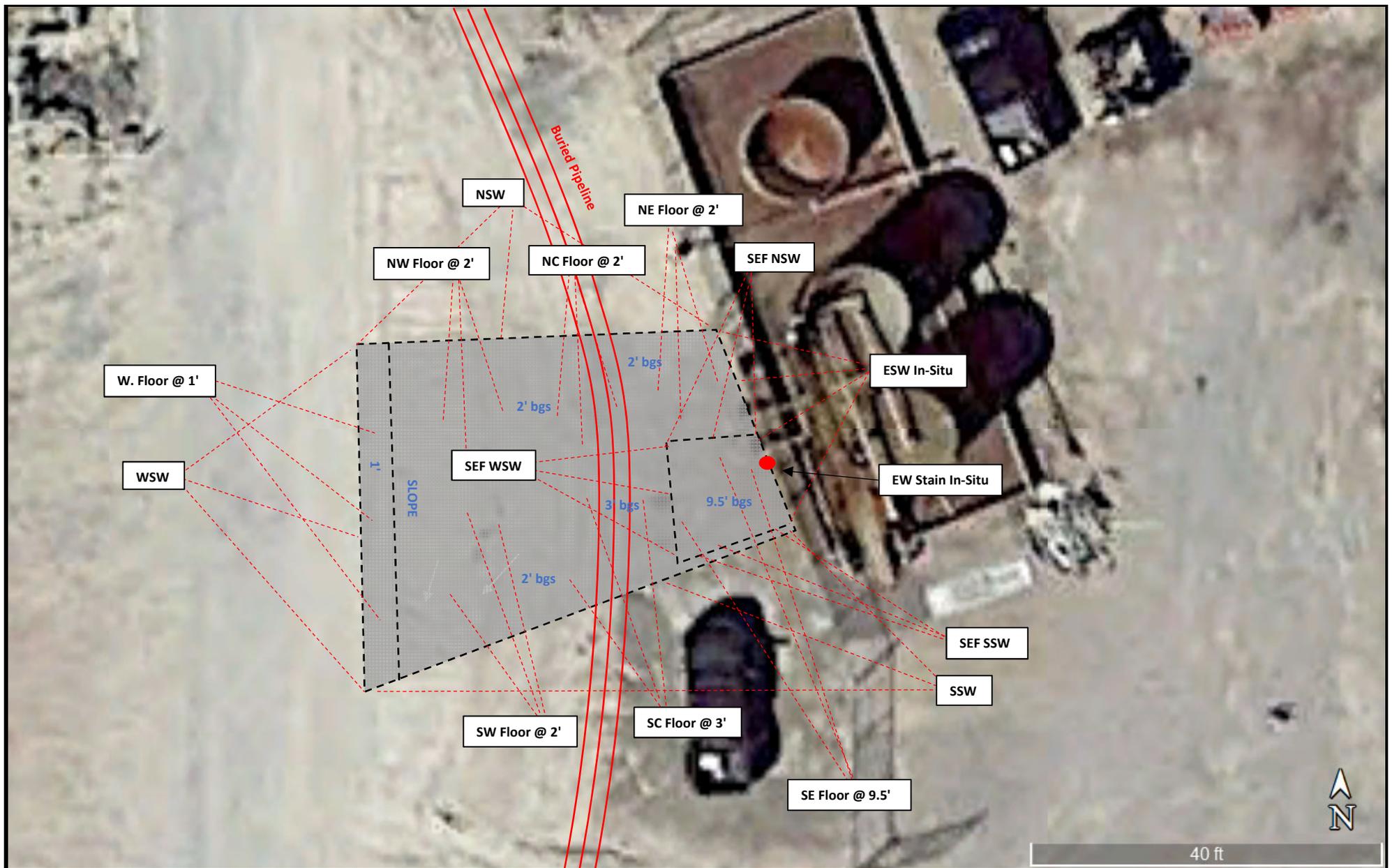
**Figure 2**  
 Aerial Map  
 ETC Texas Pipeline, Ltd.  
 Avalon Compressor Station  
 GPS: 32.02557, -104.11776  
 EddyCounty, New Mexico



Drafted by: jwl      Checked by: client      Date: 4/24/2019

**ATTACHMENT #3**

**Figure 3 - Site & Sample Location Map**



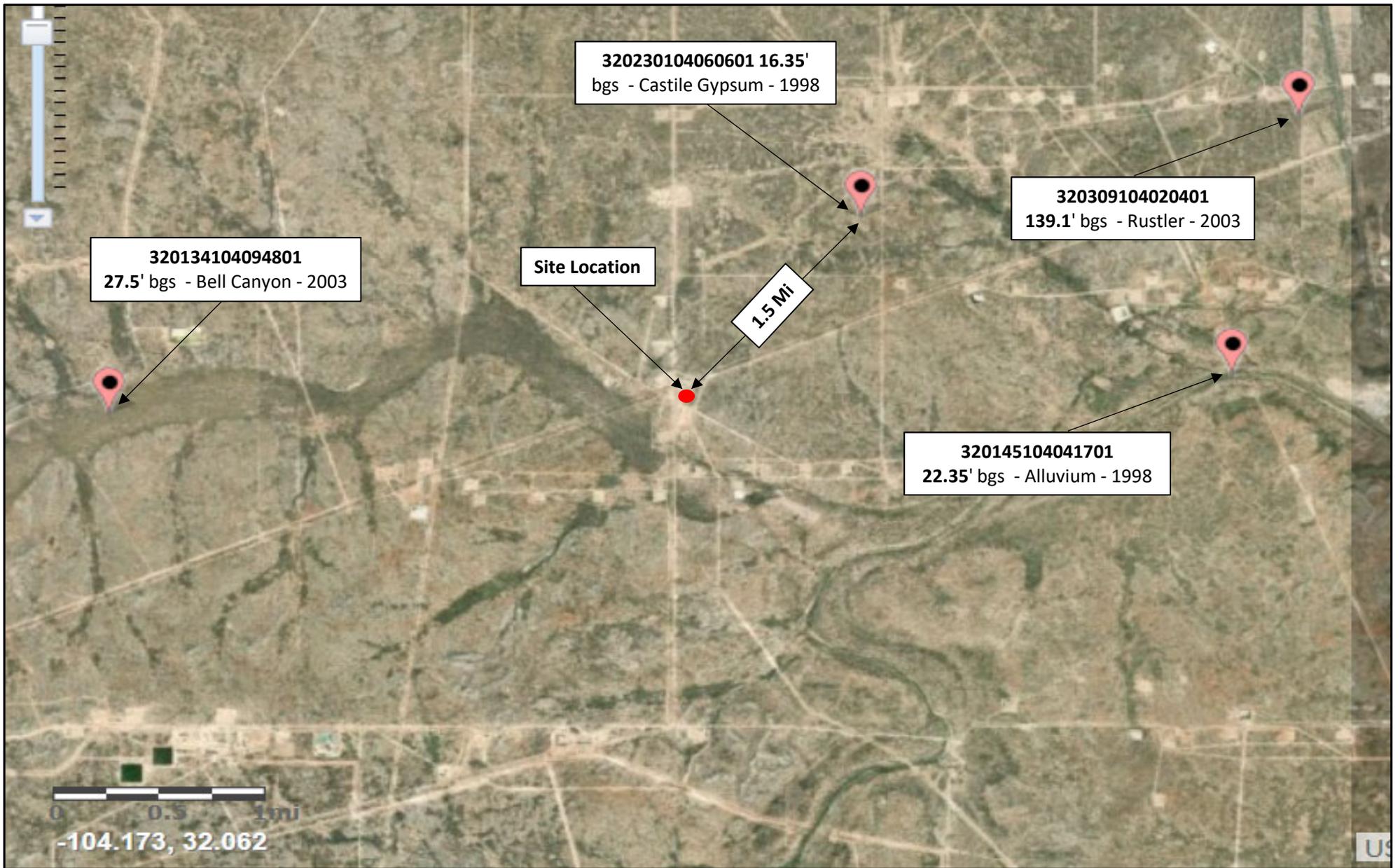
**LEGEND:**  
 ● Sample Point  
 - - - Composite Sample Location  
 — Buried Pipeline

**Figure 3**  
 Site & Sample Location Map  
 ETC Texas Pipeline, Ltd.  
 Avalon Compressor Station  
 GPS: 32.02618, -104.11717  
 EddyCounty, New Mexico

**LOWRY** environmental

Drafted by: jwl    Checked by: client    Date: 5/13/2019

**ATTACHMENT #4**  
**Depth to Groundwater Information**



**LEGEND:**

● Site Location

**Figure 5**

USGS Well Proximity Map  
 ETC Texas Pipeline, Ltd.  
 Avalon Compressor Station  
 GPS: 32.02557, -104.11776  
 EddyCounty, New Mexico



Drafted by: jwl

Checked by: client

Date: 4/24/2019



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*New Mexico Office of the State Engineer*  
**Water Column/Average Depth to Water**

---

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 583327.1

**Northing (Y):** 3543633.7

**Radius:** 1608

---

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

---

4/24/19 7:20 AM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:  Geographic Area:

Click to hideNews Bulletins

- [Introducing The Next Generation of USGS Water Data for the Nation](#)
- [Full News](#)

Groundwater levels for the Nation

**Search Results -- 1 sites found**

Agency code = usgs  
site\_no list = 

- 320134104094801

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

**USGS 320134104094801 26S.27E.23.321431**

Eddy County, New Mexico  
Latitude 32°01'34", Longitude 104°09'48" NAD27  
Land-surface elevation 3,065 feet above NGVD29  
This well is completed in the Bell Canyon Formation (313BLCN) local aquifer.

**Output formats**

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1992-11-04		D	19.65				2		S	
1998-01-13		D	25.62				2		S	
2003-01-29		D	27.55				2		S	USGS

**Explanation**

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	A	Reported by another government agency (do not use "A" if reported by owner, use "O").
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

- [Questions about sites/data?](#)  
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[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

**Title: Groundwater for USA: Water Levels**

**URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>**

Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2019-04-24 09:26:33 EDT

0.45 0.41 nadww02





National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:  Geographic Area:

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Groundwater levels for the Nation

**Search Results -- 1 sites found**

Agency code = usgs  
site\_no list = 

- 320230104060601

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

**USGS 320230104060601 26S.28E.18.33111**

Eddy County, New Mexico  
Latitude 32°02'30", Longitude 104°06'06" NAD27  
Land-surface elevation 3,070 feet above NAVD88  
This well is completed in the Castile Gypsum (312CSTL) local aquifer.

**Output formats**

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1981-05-01		D	17.52				2		U	
1983-01-25		D	16.25				2		U	
1987-10-13		D	15.13				2		U	
1992-11-03		D	17.63				2		S	
1998-01-22		D	16.35				2		S	

**Explanation**

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

- [Questions about sites/data?](#)  
[Feedback on this web site](#)  
[Automated retrievals](#)  
[Help](#)

[Data Tips](#)  
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**Title: Groundwater for USA: Water Levels**

**URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>**

Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2019-04-24 09:27:49 EDT

0.48 0.44 nadww01





### National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:	Geographic Area:	GO
Groundwater	United States	

Click to hide News Bulletins

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- [Full News](#)

Groundwater levels for the Nation

### Search Results -- 1 sites found

Agency code = usgs  
 site\_no list = 

- 320145104041701

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

### USGS 320145104041701 26S.28E.22.234431

Eddy County, New Mexico

Latitude 32°01'45", Longitude 104°04'17" NAD27

Land-surface elevation 2,980 feet above NGVD29

The depth of the well is 23.00 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

#### Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1987-12-12		D	21.02				2		S	
1998-01-22		D	22.35				2		S	

#### Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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**ATTACHMENT #5**  
**Soil Profile**

# SOIL PROFILE

Site Name: Avalone Comp. 4848

Date: 4/22/2019

Description	Depth (ft. bgs)
Imported Caliche for Truck Ramp/Compressor	1
..	2
..	3
..	4
..	5
..	6
..	7
..	8
..	9
Red Gypsum Rock	10
	1
	2
	3
	4
	5
	6
	7
	8
	9
	0
	1
	2
	3
	4
	5
	6
	7
	8
	9
	0
	1
	2
	3
	4
	5
	6
	7
	8
	9
	0

**ATTACHMENT #6**  
**Laboratory Analytical Reports**



July 10, 2018

DEAN ERICSON  
ENERGY TRANSFER  
P. O. BOX 1226  
JAL, NM 88252

RE: AVALON CS

Enclosed are the results of analyses for samples received by the laboratory on 07/09/18 11:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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](http://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".

Celey D. Keene  
Lab Director/Quality Manager

**Analytical Results For:**

 ENERGY TRANSFER  
 DEAN ERICSON  
 P. O. BOX 1226  
 JAL NM, 88252  
 Fax To:

 Received: 07/09/2018  
 Reported: 07/10/2018  
 Project Name: AVALON CS  
 Project Number: 32.026153  
 Project Location: AVALON CS

 Sampling Date: 07/06/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: V1 6" (H801843-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.635</b>	0.500	07/10/2018	ND	2.04	102	2.00	2.42	
<b>Toluene*</b>	<b>8.67</b>	0.500	07/10/2018	ND	2.02	101	2.00	2.40	
<b>Ethylbenzene*</b>	<b>5.36</b>	0.500	07/10/2018	ND	1.99	99.4	2.00	2.31	
<b>Total Xylenes*</b>	<b>45.8</b>	1.50	07/10/2018	ND	6.15	102	6.00	2.33	
<b>Total BTEX</b>	<b>60.5</b>	3.00	07/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>5840</b>	16.0	07/09/2018	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>905</b>	10.0	07/10/2018	ND	222	111	200	1.96		
<b>DRO &gt;C10-C28*</b>	<b>2400</b>	10.0	07/10/2018	ND	226	113	200	2.03		
<b>EXT DRO &gt;C28-C36</b>	<b>1230</b>	10.0	07/10/2018	ND						

Surrogate: 1-Chlorooctane 152 % 41-142

Surrogate: 1-Chlorooctadecane 133 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 ENERGY TRANSFER  
 DEAN ERICSON  
 P. O. BOX 1226  
 JAL NM, 88252  
 Fax To:

 Received: 07/09/2018  
 Reported: 07/10/2018  
 Project Name: AVALON CS  
 Project Number: 32.026153  
 Project Location: AVALON CS

 Sampling Date: 07/06/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: V2 6" (H801843-02)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>3.40</b>	2.00	07/10/2018	ND	2.04	102	2.00	2.42	
<b>Toluene*</b>	<b>31.6</b>	2.00	07/10/2018	ND	2.02	101	2.00	2.40	
<b>Ethylbenzene*</b>	<b>17.8</b>	2.00	07/10/2018	ND	1.99	99.4	2.00	2.31	
<b>Total Xylenes*</b>	<b>149</b>	6.00	07/10/2018	ND	6.15	102	6.00	2.33	
<b>Total BTEX</b>	<b>202</b>	12.0	07/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>19200</b>	16.0	07/09/2018	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	
<b>GRO C6-C10*</b>	<b>4450</b>	50.0	07/10/2018	ND	222	111	200	1.96		
<b>DRO &gt;C10-C28*</b>	<b>9980</b>	50.0	07/10/2018	ND	226	113	200	2.03		
<b>EXT DRO &gt;C28-C36</b>	<b>4940</b>	50.0	07/10/2018	ND						

Surrogate: 1-Chlorooctane 164 % 41-142

Surrogate: 1-Chlorooctadecane 270 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 ENERGY TRANSFER  
 DEAN ERICSON  
 P. O. BOX 1226  
 JAL NM, 88252  
 Fax To:

 Received: 07/09/2018  
 Reported: 07/10/2018  
 Project Name: AVALON CS  
 Project Number: 32.026153  
 Project Location: AVALON CS

 Sampling Date: 07/06/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: V3 6" (H801843-03)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.369</b>	0.200	07/10/2018	ND	2.04	102	2.00	2.42	
<b>Toluene*</b>	<b>3.50</b>	0.200	07/10/2018	ND	2.02	101	2.00	2.40	
<b>Ethylbenzene*</b>	<b>1.72</b>	0.200	07/10/2018	ND	1.99	99.4	2.00	2.31	
<b>Total Xylenes*</b>	<b>14.3</b>	0.600	07/10/2018	ND	6.15	102	6.00	2.33	
<b>Total BTEX</b>	<b>19.9</b>	1.20	07/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>8000</b>	16.0	07/09/2018	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
<b>GRO C6-C10*</b>	<b>337</b>	10.0	07/10/2018	ND	222	111	200	1.96	
<b>DRO &gt;C10-C28*</b>	<b>1170</b>	10.0	07/10/2018	ND	226	113	200	2.03	
<b>EXT DRO &gt;C28-C36</b>	<b>663</b>	10.0	07/10/2018	ND					

Surrogate: 1-Chlorooctane 130 % 41-142

Surrogate: 1-Chlorooctadecane 118 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 ENERGY TRANSFER  
 DEAN ERICSON  
 P. O. BOX 1226  
 JAL NM, 88252  
 Fax To:

 Received: 07/09/2018  
 Reported: 07/10/2018  
 Project Name: AVALON CS  
 Project Number: 32.026153  
 Project Location: AVALON CS

 Sampling Date: 07/06/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: V4 6" (H801843-04)**

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	07/10/2018	ND	2.04	102	2.00	2.42	
Toluene*	<0.050	0.050	07/10/2018	ND	2.02	101	2.00	2.40	
Ethylbenzene*	<0.050	0.050	07/10/2018	ND	1.99	99.4	2.00	2.31	
Total Xylenes*	<0.150	0.150	07/10/2018	ND	6.15	102	6.00	2.33	
Total BTEX	<0.300	0.300	07/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 141 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>96.0</b>	16.0	07/09/2018	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>32.3</b>	10.0	07/10/2018	ND	222	111	200	1.96		
<b>DRO &gt;C10-C28*</b>	<b>4440</b>	10.0	07/10/2018	ND	226	113	200	2.03		
<b>EXT DRO &gt;C28-C36</b>	<b>887</b>	10.0	07/10/2018	ND						

Surrogate: 1-Chlorooctane 96.9 % 41-142

Surrogate: 1-Chlorooctadecane 205 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 ENERGY TRANSFER  
 DEAN ERICSON  
 P. O. BOX 1226  
 JAL NM, 88252  
 Fax To:

 Received: 07/09/2018  
 Reported: 07/10/2018  
 Project Name: AVALON CS  
 Project Number: 32.026153  
 Project Location: AVALON CS

 Sampling Date: 07/06/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: H1 4" (H801843-05)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/10/2018	ND	2.04	102	2.00	2.42	
<b>Toluene*</b>	<b>0.245</b>	0.050	07/10/2018	ND	2.02	101	2.00	2.40	
<b>Ethylbenzene*</b>	<b>0.535</b>	0.050	07/10/2018	ND	1.99	99.4	2.00	2.31	
<b>Total Xylenes*</b>	<b>5.07</b>	0.150	07/10/2018	ND	6.15	102	6.00	2.33	
<b>Total BTEX</b>	<b>5.85</b>	0.300	07/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 153 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>992</b>	16.0	07/09/2018	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
<b>GRO C6-C10*</b>	<b>160</b>	10.0	07/10/2018	ND	222	111	200	1.96	
<b>DRO &gt;C10-C28*</b>	<b>2120</b>	10.0	07/10/2018	ND	226	113	200	2.03	
<b>EXT DRO &gt;C28-C36</b>	<b>1230</b>	10.0	07/10/2018	ND					

Surrogate: 1-Chlorooctane 122 % 41-142

Surrogate: 1-Chlorooctadecane 144 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 ENERGY TRANSFER  
 DEAN ERICSON  
 P. O. BOX 1226  
 JAL NM, 88252  
 Fax To:

 Received: 07/09/2018  
 Reported: 07/10/2018  
 Project Name: AVALON CS  
 Project Number: 32.026153  
 Project Location: AVALON CS

 Sampling Date: 07/06/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: H2 4" (H801843-06)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	07/10/2018	ND	2.04	102	2.00	2.42	
<b>Toluene*</b>	<b>26.7</b>	2.00	07/10/2018	ND	2.02	101	2.00	2.40	
<b>Ethylbenzene*</b>	<b>14.5</b>	2.00	07/10/2018	ND	1.99	99.4	2.00	2.31	
<b>Total Xylenes*</b>	<b>123</b>	6.00	07/10/2018	ND	6.15	102	6.00	2.33	
<b>Total BTEX</b>	<b>164</b>	12.0	07/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>24000</b>	16.0	07/09/2018	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	
<b>GRO C6-C10*</b>	<b>4000</b>	50.0	07/10/2018	ND	222	111	200	1.96		
<b>DRO &gt;C10-C28*</b>	<b>9770</b>	50.0	07/10/2018	ND	226	113	200	2.03		
<b>EXT DRO &gt;C28-C36</b>	<b>5050</b>	50.0	07/10/2018	ND						

Surrogate: 1-Chlorooctane 157 % 41-142

Surrogate: 1-Chlorooctadecane 257 % 37.6-147

Cardinal Laboratories

\* = Accredited Analyte

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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



---

Celey D. Keene, Lab Director/Quality Manager

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

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

**BILL TO**

**ANALYSIS REQUEST**

Company Name: ETC  
 Project Manager: Dean Ericson  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_  
 Project #: \_\_\_\_\_ Project Owner: \_\_\_\_\_  
 Project Name: Aurbon Compressor Station  
 Project Location: 32.026153  
 Sampler Name: Tyler R. Boies  
 P.O. #: \_\_\_\_\_ Company: \_\_\_\_\_  
 Attn: \_\_\_\_\_ Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH <sup>Ext</sup>	BTot	CL
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
<u>H501843</u>	<u>V1 6"</u>		<u>11</u>							<u>7/6/19</u>	<u>1143 AM</u>			
	<u>V2 2"</u>		<u>11</u>											
	<u>V3 6"</u>		<u>11</u>											
	<u>V4 6"</u>		<u>11</u>											
	<u>H1 4"</u>		<u>11</u>											
	<u>H2 4"</u>		<u>11</u>											

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 the client for the 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: \_\_\_\_\_  
 Date: 7/9/18  
 Time: 11:25 AM  
 Received By: Speli Shuman  
 Date: \_\_\_\_\_  
 Time: #75

Phone Result:  Yes  No  Add'l Phone #: \_\_\_\_\_  
 Fax Result:  Yes  No  Add'l Fax #: \_\_\_\_\_  
 REMARKS: Rush

Delivered By: (Circle One)  
 Sampler - UPS - Bus - Other: 3.50 / 3.750  
 Sample Condition  
 Cool  Intact   
 Yes  No   
 Checked By: [Signature]



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

July 23, 2018

Alan Brandon

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: Avalon Booster

OrderNo.: 1807773

Dear Alan Brandon:

Hall Environmental Analysis Laboratory received 10 sample(s) on 7/14/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: 1807773

Date Reported: 7/23/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Avalon Booster

Lab Order: 1807773

Lab ID: 1807773-001 Collection Date: 7/12/2018 9:48:00 AM
Client Sample ID: S-11135250-14-071218-MG-TP-1-2 Matrix: SOIL

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Includes sections for EPA METHOD 300.0: ANIONS, EPA METHOD 8015M/D: DIESEL RANGE ORGANICS, EPA METHOD 8015D: GASOLINE RANGE, and EPA METHOD 8021B: VOLATILES.

Lab ID: 1807773-002 Collection Date: 7/12/2018 9:50:00 AM
Client Sample ID: S-11135250-14-071218-MG-TP-1-4 Matrix: SOIL

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Includes sections for EPA METHOD 300.0: ANIONS, EPA METHOD 8015M/D: DIESEL RANGE ORGANICS, EPA METHOD 8015D: GASOLINE RANGE, and EPA METHOD 8021B: VOLATILES.

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

Table with columns: Qualifiers, \* Value exceeds Maximum Contaminant Level, B Analyte detected in the associated Method Blank, D Sample Diluted Due to Matrix, E Value above quantitation range, H Holding times for preparation or analysis exceeded, J Analyte detected below quantitation limits, ND Not Detected at the Reporting Limit, P Sample pH Not In Range, PQL Practical Quantitative Limit, RL Reporting Detection Limit. Page 1 of 8

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Avalon Booster

**Lab Order:** 1807773

**Lab ID:** 1807773-003 **Collection Date:** 7/12/2018 10:45:00 AM

**Client Sample ID:** S-11135250-14-071218-MG-TP-2-2 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SRM</b>
Chloride	300	30		mg/Kg	20	7/19/2018 4:44:45 PM	39295
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>lrm</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/19/2018 3:31:28 PM	39231
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/19/2018 3:31:28 PM	39231
Surr: DNOP	120	70-130		%Rec	1	7/19/2018 3:31:28 PM	39231
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/17/2018 3:23:46 PM	39222
Surr: BFB	95.0	15-316		%Rec	1	7/17/2018 3:23:46 PM	39222
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	7/17/2018 3:23:46 PM	39222
Toluene	ND	0.046		mg/Kg	1	7/17/2018 3:23:46 PM	39222
Ethylbenzene	ND	0.046		mg/Kg	1	7/17/2018 3:23:46 PM	39222
Xylenes, Total	ND	0.092		mg/Kg	1	7/17/2018 3:23:46 PM	39222
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	7/17/2018 3:23:46 PM	39222

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Analytical Report

Lab Order: 1807773

Date Reported: 7/23/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Avalon Booster

Lab Order: 1807773

Lab ID: 1807773-004 Collection Date: 7/12/2018 10:48:00 AM
Client Sample ID: S-11135250-14-071218-MG-TP-2-8 Matrix: SOIL

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Rows include EPA METHOD 300.0: ANIONS, EPA METHOD 8015M/D: DIESEL RANGE ORGANICS, EPA METHOD 8015D: GASOLINE RANGE, and EPA METHOD 8021B: VOLATILES.

Lab ID: 1807773-005 Collection Date: 7/12/2018 11:10:00 AM
Client Sample ID: S-11135250-14-071218-MG-TP-3-2 Matrix: SOIL

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Row includes EPA METHOD 300.0: ANIONS.

Lab ID: 1807773-006 Collection Date: 7/12/2018 11:12:00 AM
Client Sample ID: S-11135250-14-071218-MG-TP-3-4 Matrix: SOIL

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Row includes EPA METHOD 300.0: ANIONS.

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

Table with columns: Qualifiers, \* Value exceeds Maximum Contaminant Level, B Analyte detected in the associated Method Blank, D Sample Diluted Due to Matrix, E Value above quantitation range, H Holding times for preparation or analysis exceeded, J Analyte detected below quantitation limits, ND Not Detected at the Reporting Limit, P Sample pH Not In Range, PQL Practical Quantitative Limit, RL Reporting Detection Limit. Page 3 of 8

**Analytical Report**

Lab Order: 1807773

Date Reported: 7/23/2018

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** GHD**Lab Order:** 1807773**Project:** Avalon Booster**Lab ID:** 1807773-007**Collection Date:** 7/12/2018 11:38:00 AM**Client Sample ID:** S-11135250-14-071218-MG-TP-4-2**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
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**EPA METHOD 300.0: ANIONS**Analyst: **SRM**

Chloride	85	30		mg/Kg	20	7/19/2018 6:24:02 PM	39295
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**Lab ID:** 1807773-008**Collection Date:** 7/12/2018 11:40:00 AM**Client Sample ID:** S-11135250-14-071218-MG-TP-4-4**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
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**EPA METHOD 300.0: ANIONS**Analyst: **SRM**

Chloride	45	30		mg/Kg	20	7/19/2018 6:36:27 PM	39295
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**Lab ID:** 1807773-009**Collection Date:** 7/12/2018 11:55:00 AM**Client Sample ID:** S-11135250-14-071218-MG-TP-5-2**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
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**EPA METHOD 300.0: ANIONS**Analyst: **CJS**

Chloride	350	30		mg/Kg	20	7/20/2018 11:52:39 AM	39326
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**Lab ID:** 1807773-010**Collection Date:** 7/12/2018 11:58:00 AM**Client Sample ID:** S-11135250-14-071218-MG-TP-5-4**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
----------	--------	-----	------	-------	----	---------------	----------

**EPA METHOD 300.0: ANIONS**Analyst: **CJS**

Chloride	370	30		mg/Kg	20	7/20/2018 12:29:52 PM	39326
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Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1807773

23-Jul-18

**Client:** GHD  
**Project:** Avalon Booster

Sample ID <b>MB-39326</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>39326</b>	RunNo: <b>52859</b>								
Prep Date: <b>7/20/2018</b>	Analysis Date: <b>7/20/2018</b>	SeqNo: <b>1737713</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID <b>LCS-39326</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>39326</b>	RunNo: <b>52859</b>								
Prep Date: <b>7/20/2018</b>	Analysis Date: <b>7/20/2018</b>	SeqNo: <b>1737714</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	90	110			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1807773

23-Jul-18

**Client:** GHD  
**Project:** Avalon Booster

Sample ID <b>MB-39231</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>39231</b>		RunNo: <b>52744</b>							
Prep Date: <b>7/16/2018</b>	Analysis Date: <b>7/17/2018</b>		SeqNo: <b>1732326</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		99.5	70	130			

Sample ID <b>LCS-39231</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>39231</b>		RunNo: <b>52744</b>							
Prep Date: <b>7/16/2018</b>	Analysis Date: <b>7/17/2018</b>		SeqNo: <b>1732346</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.2	70	130			
Surr: DNOP	4.4		5.000		88.1	70	130			

Sample ID <b>1807773-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>S-11135250-14-0712</b>	Batch ID: <b>39231</b>		RunNo: <b>52744</b>							
Prep Date: <b>7/16/2018</b>	Analysis Date: <b>7/17/2018</b>		SeqNo: <b>1732375</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	49.85	2.953	74.3	62	120			
Surr: DNOP	3.3		4.985		66.5	70	130			S

Sample ID <b>1807773-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>S-11135250-14-0712</b>	Batch ID: <b>39231</b>		RunNo: <b>52744</b>							
Prep Date: <b>7/16/2018</b>	Analysis Date: <b>7/17/2018</b>		SeqNo: <b>1732376</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	10	50.30	2.953	72.3	62	120	1.64	20	
Surr: DNOP	3.3		5.030		65.4	70	130	0	0	S

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1807773

23-Jul-18

**Client:** GHD  
**Project:** Avalon Booster

Sample ID <b>MB-39222</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>39222</b>		RunNo: <b>52767</b>							
Prep Date: <b>7/16/2018</b>	Analysis Date: <b>7/17/2018</b>		SeqNo: <b>1733195</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		88.1	15	316			

Sample ID <b>LCS-39222</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>39222</b>		RunNo: <b>52767</b>							
Prep Date: <b>7/16/2018</b>	Analysis Date: <b>7/17/2018</b>		SeqNo: <b>1733196</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	75.9	131			
Surr: BFB	970		1000		96.6	15	316			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1807773

23-Jul-18

**Client:** GHD  
**Project:** Avalon Booster

Sample ID <b>MB-39222</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>39222</b>		RunNo: <b>52767</b>							
Prep Date: <b>7/16/2018</b>	Analysis Date: <b>7/17/2018</b>		SeqNo: <b>1733219</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID <b>LCS-39222</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>39222</b>		RunNo: <b>52767</b>							
Prep Date: <b>7/16/2018</b>	Analysis Date: <b>7/17/2018</b>		SeqNo: <b>1733220</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.3	77.3	128			
Toluene	0.97	0.050	1.000	0	97.2	79.2	125			
Ethylbenzene	0.95	0.050	1.000	0	94.7	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	97.1	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

**Qualifiers:**

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



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

# Sample Log-In Check List

Client Name: GHD

Work Order Number: 1807773

RcptNo: 1

Received By: **Ashley Gallegos** 7/14/2018 11:00:00 AM *AG*

Completed By: **Isaiah Ortiz** 7/16/2018 8:26:27 AM *IO*

Reviewed By: **JAB 07/16/18**

**LB: ENM 7/16/18**

**Chain of Custody**

1. Is Chain of Custody complete? Yes  No  Not Present
2. How was the sample delivered? Courier

**Log In**

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

# of preserved bottles checked for pH: 7/16/18

(≤ 12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

**Special Handling (if applicable)**

15. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

16. Additional remarks:

**Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	6.6	Good	Yes			





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

August 20, 2018

Alan Brandon

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: Avalon 1

OrderNo.: 1808A88

Dear Alan Brandon:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/17/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Analytical Report**Lab Order: **1808A88**Date Reported: **8/20/2018****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** GHD  
**Project:** Avalon 1**Lab Order:** 1808A88**Lab ID:** 1808A88-001  
**Client Sample ID:** S-11135250-14-081618-MG-TP-7-12'**Collection Date:** 8/16/2018 10:50:00 AM**Matrix:** MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	50	30		mg/Kg	20	8/17/2018 12:48:42 PM	39860
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>irm</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/17/2018 11:15:55 AM	39854
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/17/2018 11:15:55 AM	39854
Surr: DNOP	88.8	50.6-138		%Rec	1	8/17/2018 11:15:55 AM	39854
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/17/2018 9:59:20 AM	39838
Surr: BFB	94.5	15-316		%Rec	1	8/17/2018 9:59:20 AM	39838

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1808A88

20-Aug-18

**Client:** GHD  
**Project:** Avalon 1

Sample ID	<b>MB-39860</b>	SampType:	<b>mblk</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>39860</b>	RunNo:	<b>53528</b>					
Prep Date:	<b>8/17/2018</b>	Analysis Date:	<b>8/17/2018</b>	SeqNo:	<b>1765188</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	<b>LCS-39860</b>	SampType:	<b>lcs</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>39860</b>	RunNo:	<b>53528</b>					
Prep Date:	<b>8/17/2018</b>	Analysis Date:	<b>8/17/2018</b>	SeqNo:	<b>1765189</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.4	90	110			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1808A88

20-Aug-18

**Client:** GHD  
**Project:** Avalon 1

Sample ID <b>MB-39854</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>39854</b>		RunNo: <b>53521</b>							
Prep Date: <b>8/17/2018</b>	Analysis Date: <b>8/17/2018</b>		SeqNo: <b>1764303</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		87.0	50.6	138			

Sample ID <b>LCS-39854</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>39854</b>		RunNo: <b>53521</b>							
Prep Date: <b>8/17/2018</b>	Analysis Date: <b>8/17/2018</b>		SeqNo: <b>1764304</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.9	70	130			
Surr: DNOP	3.9		5.000		77.9	50.6	138			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1808A88

20-Aug-18

**Client:** GHD  
**Project:** Avalon 1

Sample ID <b>MB-39838</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>39838</b>		RunNo: <b>53515</b>							
Prep Date: <b>8/16/2018</b>	Analysis Date: <b>8/17/2018</b>		SeqNo: <b>1764497</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		90.9	15	316			

Sample ID <b>LCS-39838</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>39838</b>		RunNo: <b>53515</b>							
Prep Date: <b>8/16/2018</b>	Analysis Date: <b>8/17/2018</b>		SeqNo: <b>1764498</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.8	75.9	131			
Surr: BFB	1000		1000		101	15	316			

**Qualifiers:**

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



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

# Sample Log-In Check List

Client Name: GHD

Work Order Number: 1808A88

RcptNo: 1

Received By: Erin Melendrez

8/17/2018 8:35:00 AM

*EM*

Completed By: Ashley Gallegos

8/17/2018 8:56:25 AM

*AG*

Reviewed By:

*JAB 08/17/18*

*labeled by: ENM 8/17/18*

### Chain of Custody

1. Is Chain of Custody complete? Yes  No  Not Present
2. How was the sample delivered? Courier

### Log In

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

# of preserved bottles checked for pH: \_\_\_\_\_  
 Adjusted  (pH 7.2 unless noted)  
 Checked by: ENM 08/17/18

### Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.0	Good	Yes			





May 02, 2019

JOEL LOWRY

LOWRY ENVIROMENTAL & ASSOCIATES

PO BOX 296

LOVINGTON, NM 88260

RE: AVALON 4848

Enclosed are the results of analyses for samples received by the laboratory on 04/24/19 11:32.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NE FLOOR @ 2'	H901453-01	Soil	22-Apr-19 11:20	24-Apr-19 11:32
NC FLOOR @ 2'	H901453-02	Soil	22-Apr-19 11:20	24-Apr-19 11:32
NW FLOOR @ 2'	H901453-03	Soil	22-Apr-19 12:56	24-Apr-19 11:32
SE FLOOR @ 9.5'	H901453-04	Soil	22-Apr-19 12:31	24-Apr-19 11:32
SC FLOOR @ 3'	H901453-05	Soil	22-Apr-19 11:25	24-Apr-19 11:32
SW FLOOR @ 2'	H901453-06	Soil	22-Apr-19 11:25	24-Apr-19 11:32
W FLOOR @ 1'	H901453-07	Soil	22-Apr-19 12:10	24-Apr-19 11:32
NSW	H901453-08	Soil	22-Apr-19 11:30	24-Apr-19 11:32
ESW IN SIT4	H901453-09	Soil	22-Apr-19 11:35	24-Apr-19 11:32
SSW	H901453-10	Soil	22-Apr-19 12:10	24-Apr-19 11:32
WSW	H901453-11	Soil	22-Apr-19 12:15	24-Apr-19 11:32
SEF NSW	H901453-12	Soil	22-Apr-19 12:30	24-Apr-19 11:32
SEF SSW	H901453-13	Soil	22-Apr-19 12:30	24-Apr-19 11:32
SEF WSW	H901453-14	Soil	22-Apr-19 12:31	24-Apr-19 11:32
EW STAIN ( IN SITU )	H901453-15	Soil	22-Apr-19 12:35	24-Apr-19 11:32

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**NE FLOOR @ 2'**  
**H901453-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>192</b>		16.0	mg/kg	4	9042504	AC	26-Apr-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9042410	ms	25-Apr-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9042410	ms	25-Apr-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9042410	ms	25-Apr-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9042410	ms	25-Apr-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9042410	ms	25-Apr-19	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			96.8 %		73.3-129	9042410	ms	25-Apr-19	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9042503	MS	25-Apr-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9042503	MS	25-Apr-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9042503	MS	25-Apr-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			92.6 %		41-142	9042503	MS	25-Apr-19	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			99.2 %		37.6-147	9042503	MS	25-Apr-19	8015B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**NC FLOOR @ 2'**
**H901453-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>416</b>		16.0	mg/kg	4	9042504	AC	26-Apr-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9042501	ms	25-Apr-19	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			<i>94.4 %</i>		<i>73.3-129</i>	<i>9042501</i>	ms	<i>25-Apr-19</i>	<i>8021B</i>	
----------------------------------------------	--	--	---------------	--	-----------------	----------------	----	------------------	--------------	--

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9042503	MS	25-Apr-19	8015B	
<b>DRO &gt;C10-C28*</b>	<b>67.5</b>		10.0	mg/kg	1	9042503	MS	25-Apr-19	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>19.0</b>		10.0	mg/kg	1	9042503	MS	25-Apr-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			<i>96.3 %</i>		<i>41-142</i>	<i>9042503</i>	MS	<i>25-Apr-19</i>	<i>8015B</i>	
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<i>Surrogate: 1-Chlorooctadecane</i>			<i>104 %</i>		<i>37.6-147</i>	<i>9042503</i>	MS	<i>25-Apr-19</i>	<i>8015B</i>	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**NW FLOOR @ 2'**  
**H901453-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

Chloride	496		16.0	mg/kg	4	9042504	AC	26-Apr-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9042501	ms	25-Apr-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			93.7 %		73.3-129	9042501	ms	25-Apr-19	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9042503	MS	25-Apr-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9042503	MS	25-Apr-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9042503	MS	25-Apr-19	8015B	

Surrogate: 1-Chlorooctane			95.0 %		41-142	9042503	MS	25-Apr-19	8015B	
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Surrogate: 1-Chlorooctadecane			101 %		37.6-147	9042503	MS	25-Apr-19	8015B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**SE FLOOR @ 9.5'**
**H901453-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>288</b>		16.0	mg/kg	4	9042614	AC	26-Apr-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9042501	ms	25-Apr-19	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			<i>94.5 %</i>		<i>73.3-129</i>	<i>9042501</i>	<i>ms</i>	<i>25-Apr-19</i>	<i>8021B</i>	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>DRO &gt;C10-C28*</b>	<b>18.9</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			<i>101 %</i>		<i>41-142</i>	<i>9042505</i>	<i>MS</i>	<i>25-Apr-19</i>	<i>8015B</i>	
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<i>Surrogate: 1-Chlorooctadecane</i>			<i>96.2 %</i>		<i>37.6-147</i>	<i>9042505</i>	<i>MS</i>	<i>25-Apr-19</i>	<i>8015B</i>	
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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**SC FLOOR @ 3'**  
**H901453-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>352</b>		16.0	mg/kg	4	9042614	AC	26-Apr-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9042501	ms	25-Apr-19	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			92.6 %		73.3-129	9042501	ms	25-Apr-19	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>DRO &gt;C10-C28*</b>	<b>149</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>70.2</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			107 %		41-142	9042505	MS	25-Apr-19	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			105 %		37.6-147	9042505	MS	25-Apr-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**SW FLOOR @ 2'**
**H901453-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

Chloride	496		16.0	mg/kg	4	9042614	AC	26-Apr-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9042501	ms	25-Apr-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			94.5 %		73.3-129	9042501	ms	25-Apr-19	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	

Surrogate: 1-Chlorooctane			108 %		41-142	9042505	MS	25-Apr-19	8015B	
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Surrogate: 1-Chlorooctadecane			103 %		37.6-147	9042505	MS	25-Apr-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**W FLOOR @ 1'**  
**H901453-07 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

Chloride	352		16.0	mg/kg	4	9042614	AC	26-Apr-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9042501	ms	25-Apr-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			96.0 %		73.3-129	9042501	ms	25-Apr-19	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	

Surrogate: 1-Chlorooctane			100 %		41-142	9042505	MS	25-Apr-19	8015B	
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Surrogate: 1-Chlorooctadecane			95.5 %		37.6-147	9042505	MS	25-Apr-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**NSW**
**H901453-08 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>512</b>		16.0	mg/kg	4	9042614	AC	26-Apr-19	4500-Cl-B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>DRO &gt;C10-C28*</b>	<b>24.2</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>11.6</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	

Surrogate: 1-Chlorooctane 97.8 % 41-142 9042505 MS 25-Apr-19 8015B

Surrogate: 1-Chlorooctadecane 95.2 % 37.6-147 9042505 MS 25-Apr-19 8015B

**Volatile Organic Compounds by EPA Method 8260B**

<b>Benzene*</b>	<b>0.095</b>		0.025	mg/kg	50	9050121	ms	01-May-19	8260B	
<b>Toluene*</b>	<b>0.594</b>		0.025	mg/kg	50	9050121	ms	01-May-19	8260B	
<b>Ethylbenzene*</b>	<b>0.047</b>		0.025	mg/kg	50	9050121	ms	01-May-19	8260B	
<b>Total Xylenes*</b>	<b>0.285</b>		0.075	mg/kg	50	9050121	ms	01-May-19	8260B	
<b>Total BTEX</b>	<b>1.02</b>		0.150	mg/kg	50	9050121	ms	01-May-19	8260B	

Surrogate: Dibromofluoromethane 99.8 % 90.4-111 9050121 ms 01-May-19 8260B

Surrogate: Toluene-d8 102 % 85.3-114 9050121 ms 01-May-19 8260B

Surrogate: 4-Bromofluorobenzene 99.3 % 80.1-121 9050121 ms 01-May-19 8260B

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**ESW IN SIT4**  
**H901453-09 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>288</b>		16.0	mg/kg	4	9042614	AC	26-Apr-19	4500-Cl-B	
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**Petroleum Hydrocarbons by GC FID**
**S-04**

<b>GRO C6-C10*</b>	<b>734</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>DRO &gt;C10-C28*</b>	<b>1180</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>281</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	

Surrogate: 1-Chlorooctane 166 % 41-142 9042505 MS 25-Apr-19 8015B

Surrogate: 1-Chlorooctadecane 115 % 37.6-147 9042505 MS 25-Apr-19 8015B

**Volatile Organic Compounds by EPA Method 8260B**

<b>Benzene*</b>	<b>&lt;0.100</b>		0.100	mg/kg	200	9050121	ms	02-May-19	8260B	
<b>Toluene*</b>	<b>0.996</b>		0.100	mg/kg	200	9050121	ms	02-May-19	8260B	
<b>Ethylbenzene*</b>	<b>1.31</b>		0.100	mg/kg	200	9050121	ms	02-May-19	8260B	
<b>Total Xylenes*</b>	<b>14.2</b>		0.300	mg/kg	200	9050121	ms	02-May-19	8260B	
<b>Total BTEX</b>	<b>16.5</b>		0.600	mg/kg	200	9050121	ms	02-May-19	8260B	

Surrogate: Dibromofluoromethane 102 % 90.4-111 9050121 ms 02-May-19 8260B

Surrogate: Toluene-d8 105 % 85.3-114 9050121 ms 02-May-19 8260B

Surrogate: 4-Bromofluorobenzene 116 % 80.1-121 9050121 ms 02-May-19 8260B

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**SSW**  
**H901453-10 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>208</b>		16.0	mg/kg	4	9042614	AC	26-Apr-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9042501	ms	25-Apr-19	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			92.9 %		73.3-129	9042501	ms	25-Apr-19	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>16.3</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			93.7 %		41-142	9042505	MS	25-Apr-19	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			91.4 %		37.6-147	9042505	MS	25-Apr-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**WSW**
**H901453-11 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

Chloride	352		16.0	mg/kg	4	9042614	AC	30-Apr-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9042501	ms	25-Apr-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			94.1 %		73.3-129	9042501	ms	25-Apr-19	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	

Surrogate: 1-Chlorooctane			96.7 %		41-142	9042505	MS	25-Apr-19	8015B	
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Surrogate: 1-Chlorooctadecane			92.8 %		37.6-147	9042505	MS	25-Apr-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**SEF NSW**  
**H901453-12 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>336</b>		16.0	mg/kg	4	9042614	AC	30-Apr-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9042501	ms	25-Apr-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9042501	ms	25-Apr-19	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			<i>94.3 %</i>		<i>73.3-129</i>	<i>9042501</i>	<i>ms</i>	<i>25-Apr-19</i>	<i>8021B</i>	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>DRO &gt;C10-C28*</b>	<b>196</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>88.4</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			<i>105 %</i>		<i>41-142</i>	<i>9042505</i>	<i>MS</i>	<i>25-Apr-19</i>	<i>8015B</i>	
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<i>Surrogate: 1-Chlorooctadecane</i>			<i>110 %</i>		<i>37.6-147</i>	<i>9042505</i>	<i>MS</i>	<i>25-Apr-19</i>	<i>8015B</i>	
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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**SEF SSW**  
**H901453-13 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>112</b>		16.0	mg/kg	4	9042614	AC	30-Apr-19	4500-Cl-B	
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**Petroleum Hydrocarbons by GC FID**

<b>GRO C6-C10*</b>	<b>19.6</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>DRO &gt;C10-C28*</b>	<b>114</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>29.6</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<i>Surrogate: 1-Chlorooctane</i>			99.0 %	41-142		9042505	MS	25-Apr-19	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			95.1 %	37.6-147		9042505	MS	25-Apr-19	8015B	

**Volatile Organic Compounds by EPA Method 8260B**

Benzene*	<0.025		0.025	mg/kg	50	9050121	ms	01-May-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9050121	ms	01-May-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9050121	ms	01-May-19	8260B	
<b>Total Xylenes*</b>	<b>0.117</b>		0.075	mg/kg	50	9050121	ms	01-May-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9050121	ms	01-May-19	8260B	
<i>Surrogate: Dibromofluoromethane</i>			96.8 %	90.4-111		9050121	ms	01-May-19	8260B	
<i>Surrogate: Toluene-d8</i>			100 %	85.3-114		9050121	ms	01-May-19	8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			107 %	80.1-121		9050121	ms	01-May-19	8260B	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**SEF WSW**  
**H901453-14 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>208</b>		16.0	mg/kg	4	9042614	AC	30-Apr-19	4500-Cl-B	
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**Petroleum Hydrocarbons by GC FID**

<b>GRO C6-C10*</b>	<b>19.3</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>DRO &gt;C10-C28*</b>	<b>137</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>56.7</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			109 %	41-142		9042505	MS	25-Apr-19	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			105 %	37.6-147		9042505	MS	25-Apr-19	8015B	

**Volatile Organic Compounds by EPA Method 8260B**

<b>Benzene*</b>	<0.025		0.025	mg/kg	50	9050121	ms	01-May-19	8260B	
<b>Toluene*</b>	<0.025		0.025	mg/kg	50	9050121	ms	01-May-19	8260B	
<b>Ethylbenzene*</b>	<0.025		0.025	mg/kg	50	9050121	ms	01-May-19	8260B	
<b>Total Xylenes*</b>	<b>0.213</b>		0.075	mg/kg	50	9050121	ms	01-May-19	8260B	
<b>Total BTEX</b>	<b>0.213</b>		0.150	mg/kg	50	9050121	ms	01-May-19	8260B	

<i>Surrogate: Dibromofluoromethane</i>			97.0 %	90.4-111		9050121	ms	01-May-19	8260B	
<i>Surrogate: Toluene-d8</i>			101 %	85.3-114		9050121	ms	01-May-19	8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			109 %	80.1-121		9050121	ms	01-May-19	8260B	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**EW STAIN ( IN SITU )**
**H901453-15 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>96.0</b>		16.0	mg/kg	4	9042614	AC	30-Apr-19	4500-Cl-B	
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**Petroleum Hydrocarbons by GC FID**
**S-04**

<b>GRO C6-C10*</b>	<b>908</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>DRO &gt;C10-C28*</b>	<b>1390</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>368</b>		10.0	mg/kg	1	9042505	MS	25-Apr-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			159 %	41-142		9042505	MS	25-Apr-19	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			120 %	37.6-147		9042505	MS	25-Apr-19	8015B	
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**Volatile Organic Compounds by EPA Method 8260B**
**S-04**

<b>Benzene*</b>	<b>&lt;0.025</b>		0.025	mg/kg	50	9050121	ms	02-May-19	8260B	
<b>Toluene*</b>	<b>0.081</b>		0.025	mg/kg	50	9050121	ms	02-May-19	8260B	
<b>Ethylbenzene*</b>	<b>1.13</b>		0.025	mg/kg	50	9050121	ms	02-May-19	8260B	
<b>Total Xylenes*</b>	<b>3.67</b>		0.075	mg/kg	50	9050121	ms	02-May-19	8260B	
<b>Total BTEX</b>	<b>4.88</b>		0.150	mg/kg	50	9050121	ms	02-May-19	8260B	

<i>Surrogate: Dibromofluoromethane</i>			102 %	90.4-111		9050121	ms	02-May-19	8260B	
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<i>Surrogate: Toluene-d8</i>			124 %	85.3-114		9050121	ms	02-May-19	8260B	
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<i>Surrogate: 4-Bromofluorobenzene</i>			172 %	80.1-121		9050121	ms	02-May-19	8260B	
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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**Inorganic Compounds - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 9042504 - General Prep - Wet Chem**
**Blank (9042504-BLK1)**

Prepared &amp; Analyzed: 25-Apr-19

Chloride ND 16.0 mg/kg

**LCS (9042504-BS1)**

Prepared &amp; Analyzed: 25-Apr-19

Chloride 400 16.0 mg/kg 400 100 80-120

**LCS Dup (9042504-BSD1)**

Prepared &amp; Analyzed: 25-Apr-19

Chloride 400 16.0 mg/kg 400 100 80-120 0.00 20

**Batch 9042614 - General Prep - Wet Chem**
**Blank (9042614-BLK1)**

Prepared &amp; Analyzed: 26-Apr-19

Chloride ND 16.0 mg/kg

**LCS (9042614-BS1)**

Prepared &amp; Analyzed: 26-Apr-19

Chloride 400 16.0 mg/kg 400 100 80-120

**LCS Dup (9042614-BSD1)**

Prepared &amp; Analyzed: 26-Apr-19

Chloride 400 16.0 mg/kg 400 100 80-120 0.00 20

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**Volatile Organic Compounds by EPA Method 8021 - Quality Control**  
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 9042410 - Volatiles**
**Blank (9042410-BLK1)**

Prepared &amp; Analyzed: 24-Apr-19

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.0947</i>		<i>mg/kg</i>	<i>0.100</i>		<i>94.7</i>	<i>73.3-129</i>			

**LCS (9042410-BS1)**

Prepared &amp; Analyzed: 24-Apr-19

Benzene	1.87	0.050	mg/kg	2.00		93.7	72.2-131			
Toluene	2.02	0.050	mg/kg	2.00		101	71.7-126			
Ethylbenzene	1.95	0.050	mg/kg	2.00		97.4	68.9-126			
Total Xylenes	5.87	0.150	mg/kg	6.00		97.9	71.4-125			
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.0950</i>		<i>mg/kg</i>	<i>0.100</i>		<i>95.0</i>	<i>73.3-129</i>			

**LCS Dup (9042410-BSD1)**

Prepared &amp; Analyzed: 24-Apr-19

Benzene	1.83	0.050	mg/kg	2.00		91.5	72.2-131	2.30	6.91	
Toluene	1.97	0.050	mg/kg	2.00		98.4	71.7-126	2.70	7.12	
Ethylbenzene	1.90	0.050	mg/kg	2.00		94.8	68.9-126	2.64	7.88	
Total Xylenes	5.78	0.150	mg/kg	6.00		96.3	71.4-125	1.63	7.46	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.0946</i>		<i>mg/kg</i>	<i>0.100</i>		<i>94.6</i>	<i>73.3-129</i>			

**Batch 9042501 - Volatiles**
**Blank (9042501-BLK1)**

Prepared &amp; Analyzed: 25-Apr-19

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.0960</i>		<i>mg/kg</i>	<i>0.100</i>		<i>96.0</i>	<i>73.3-129</i>			

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**Volatile Organic Compounds by EPA Method 8021 - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 9042501 - Volatiles**
**LCS (9042501-BS1)**

Prepared &amp; Analyzed: 25-Apr-19

Benzene	1.96	0.050	mg/kg	2.00		98.0	72.2-131			
Toluene	2.11	0.050	mg/kg	2.00		105	71.7-126			
Ethylbenzene	2.02	0.050	mg/kg	2.00		101	68.9-126			
Total Xylenes	6.12	0.150	mg/kg	6.00		102	71.4-125			
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.0950</i>		mg/kg	<i>0.100</i>		<i>95.0</i>	<i>73.3-129</i>			

**LCS Dup (9042501-BSD1)**

Prepared &amp; Analyzed: 25-Apr-19

Benzene	1.94	0.050	mg/kg	2.00		97.2	72.2-131	0.810	6.91	
Toluene	2.08	0.050	mg/kg	2.00		104	71.7-126	1.05	7.12	
Ethylbenzene	2.00	0.050	mg/kg	2.00		100	68.9-126	0.928	7.88	
Total Xylenes	6.09	0.150	mg/kg	6.00		102	71.4-125	0.418	7.46	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.0945</i>		mg/kg	<i>0.100</i>		<i>94.5</i>	<i>73.3-129</i>			

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**Petroleum Hydrocarbons by GC FID - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 9042503 - General Prep - Organics**
**Blank (9042503-BLK1)**

Prepared &amp; Analyzed: 25-Apr-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
<i>Surrogate: 1-Chlorooctane</i>	48.2		mg/kg	50.0		96.4	41-142			
<i>Surrogate: 1-Chlorooctadecane</i>	53.9		mg/kg	50.0		108	37.6-147			

**LCS (9042503-BS1)**

Prepared &amp; Analyzed: 25-Apr-19

GRO C6-C10	178	10.0	mg/kg	200		89.2	76.5-133			
DRO >C10-C28	182	10.0	mg/kg	200		90.8	72.9-138			
Total TPH C6-C28	360	10.0	mg/kg	400		90.0	78-132			
<i>Surrogate: 1-Chlorooctane</i>	50.9		mg/kg	50.0		102	41-142			
<i>Surrogate: 1-Chlorooctadecane</i>	53.3		mg/kg	50.0		107	37.6-147			

**LCS Dup (9042503-BSD1)**

Prepared &amp; Analyzed: 25-Apr-19

GRO C6-C10	184	10.0	mg/kg	200		91.8	76.5-133	2.80	20.6	
DRO >C10-C28	188	10.0	mg/kg	200		94.2	72.9-138	3.69	20.6	
Total TPH C6-C28	372	10.0	mg/kg	400		93.0	78-132	3.25	18	
<i>Surrogate: 1-Chlorooctane</i>	50.8		mg/kg	50.0		102	41-142			
<i>Surrogate: 1-Chlorooctadecane</i>	52.9		mg/kg	50.0		106	37.6-147			

**Batch 9042505 - General Prep - Organics**
**Blank (9042505-BLK1)**

Prepared &amp; Analyzed: 25-Apr-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
<i>Surrogate: 1-Chlorooctane</i>	49.3		mg/kg	50.0		98.5	41-142			
<i>Surrogate: 1-Chlorooctadecane</i>	51.9		mg/kg	50.0		104	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**Petroleum Hydrocarbons by GC FID - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 9042505 - General Prep - Organics**
**LCS (9042505-BS1)**

Prepared &amp; Analyzed: 25-Apr-19

GRO C6-C10	188	10.0	mg/kg	200		94.0	76.5-133			
DRO >C10-C28	179	10.0	mg/kg	200		89.7	72.9-138			
Total TPH C6-C28	367	10.0	mg/kg	400		91.9	78-132			
<i>Surrogate: 1-Chlorooctane</i>	<i>54.2</i>		mg/kg	<i>50.0</i>		<i>108</i>	<i>41-142</i>			
<i>Surrogate: 1-Chlorooctadecane</i>	<i>53.0</i>		mg/kg	<i>50.0</i>		<i>106</i>	<i>37.6-147</i>			

**LCS Dup (9042505-BSD1)**

Prepared &amp; Analyzed: 25-Apr-19

GRO C6-C10	186	10.0	mg/kg	200		92.8	76.5-133	1.34	20.6	
DRO >C10-C28	179	10.0	mg/kg	200		89.4	72.9-138	0.308	20.6	
Total TPH C6-C28	364	10.0	mg/kg	400		91.1	78-132	0.834	18	
<i>Surrogate: 1-Chlorooctane</i>	<i>54.0</i>		mg/kg	<i>50.0</i>		<i>108</i>	<i>41-142</i>			
<i>Surrogate: 1-Chlorooctadecane</i>	<i>50.4</i>		mg/kg	<i>50.0</i>		<i>101</i>	<i>37.6-147</i>			

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LOWRY ENVIROMENTAL & ASSOCIATES  
 PO BOX 296  
 LOVINGTON NM, 88260

 Project: AVALON 4848  
 Project Number: NONE GIVEN  
 Project Manager: JOEL LOWRY  
 Fax To:

 Reported:  
 02-May-19 16:20

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 9050121 - Volatiles**
**Blank (9050121-BLK1)**

Prepared &amp; Analyzed: 01-May-19

Benzene	ND	0.025	mg/kg							
Toluene	ND	0.025	mg/kg							
Ethylbenzene	ND	0.025	mg/kg							
Total Xylenes	ND	0.075	mg/kg							
Total BTEX	ND	0.150	mg/kg							
<i>Surrogate: Dibromofluoromethane</i>	<i>1.21</i>		mg/kg	<i>1.25</i>		<i>96.9</i>	<i>90.4-111</i>			
<i>Surrogate: Toluene-d8</i>	<i>1.26</i>		mg/kg	<i>1.25</i>		<i>101</i>	<i>85.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>1.26</i>		mg/kg	<i>1.25</i>		<i>101</i>	<i>80.1-121</i>			

**LCS (9050121-BS1)**

Prepared &amp; Analyzed: 01-May-19

Benzene	1.83	0.025	mg/kg	2.00		91.3	75.1-126			
Toluene	1.94	0.025	mg/kg	2.00		96.8	71.7-121			
Ethylbenzene	2.00	0.025	mg/kg	2.00		99.9	80.2-118			
m+p - Xylene	4.14	0.050	mg/kg	4.00		104	83-124			
Total Xylenes	6.18	0.075	mg/kg	6.00		103	84.1-122			
o-Xylene	2.03	0.025	mg/kg	2.00		102	84.7-121			
<i>Surrogate: Dibromofluoromethane</i>	<i>1.21</i>		mg/kg	<i>1.25</i>		<i>96.9</i>	<i>90.4-111</i>			
<i>Surrogate: Toluene-d8</i>	<i>1.24</i>		mg/kg	<i>1.25</i>		<i>98.8</i>	<i>85.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>1.28</i>		mg/kg	<i>1.25</i>		<i>102</i>	<i>80.1-121</i>			

**LCS Dup (9050121-BSD1)**

Prepared &amp; Analyzed: 01-May-19

Benzene	1.88	0.025	mg/kg	2.00		93.8	75.1-126	2.76	15.7	
Toluene	2.06	0.025	mg/kg	2.00		103	71.7-121	6.21	14.4	
Ethylbenzene	2.16	0.025	mg/kg	2.00		108	80.2-118	7.95	14.1	
m+p - Xylene	4.44	0.050	mg/kg	4.00		111	83-124	6.81	14.6	
Total Xylenes	6.61	0.075	mg/kg	6.00		110	84.1-122	6.81	14.1	
o-Xylene	2.18	0.025	mg/kg	2.00		109	84.7-121	6.79	14	
<i>Surrogate: Dibromofluoromethane</i>	<i>1.23</i>		mg/kg	<i>1.25</i>		<i>98.4</i>	<i>90.4-111</i>			
<i>Surrogate: Toluene-d8</i>	<i>1.28</i>		mg/kg	<i>1.25</i>		<i>103</i>	<i>85.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>1.29</i>		mg/kg	<i>1.25</i>		<i>103</i>	<i>80.1-121</i>			

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

LOWRY ENVIROMENTAL & ASSOCIATES  
PO BOX 296  
LOVINGTON NM, 88260

Project: AVALON 4848  
Project Number: NONE GIVEN  
Project Manager: JOEL LOWRY  
Fax To:

Reported:  
02-May-19 16:20

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- 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

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Celey D. Keene, Lab Director/Quality Manager



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

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Company Name: ETC Texas Pipeline		<b>BILL TO</b>		P.O. #:		ANALYSIS REQUEST	
Project Manager: Joel Lowry		Company: ETC		Attn: Joel Lowry			
Address: PO Box 896		State: Lovington		Zip: #			
City: Lovington		Address: PO Box 896		City:			
Phone #: 432-466-4450		Fax #: Project Owner: ETC		State: Zip:			
Project #: Project Location: Eddy Co		Sample Name: Joel Lowry		Fax #:			
FOR LAB USE ONLY		Matrix		PRESERV		SAMPLING	
Lab I.D. Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS			
H901453		C		1			
1 NE Floor 02'						DATE TIME	
2 NW Floor 02'						4/22/06 11:20	
3 NW Floor 02'						12:56	
4 SE Floor 04.5'						12:31	
5 SC Floor 03'						11:25	
6 SW Floor 02'						11:25	
7 W. Floor 01'						12:10	
8 NW						11:30	
9 SW						11:35	
10 SW						12:10	
<p>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 the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>		<p>Relinquished By: <i>Joel Lowry</i></p>		<p>Received By: <i>Joanna Black</i></p>		<p>Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No Add'l Phone #:</p>	
<p>Relinquished By: <i>Joanna Black</i></p>		<p>Date: 4-24-16</p>		<p>Time: 11:32</p>		<p>Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No Add'l Fax #:</p>	
<p>Delivered By: (Circle One) <input type="checkbox"/> UPS <input type="checkbox"/> Bus <input type="checkbox"/> Other: <i>-1,4e #97</i></p>		<p>Sample Condition</p>		<p>Checked By: (Initials) <i>Jo</i></p>		<p>REMARKS:</p>	
<p>Cool <input type="checkbox"/> Intact <input type="checkbox"/></p>		<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>		<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>		<p>Time:</p>	

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476



**ATTACHMENT #7**  
**Photographic Log**

## PHOTOGRAPHIC LOG



**Figure 1** View of remediation activities, facing south.



**Figure 2** View of portion of the excavated area, facing southeast.

## PHOTOGRAPHIC LOG



**Figure 3** View of surface staining from the initial release and sample location, facing East.



**Figure 4** View of portion of the excavated area, facing northwest.

## PHOTOGRAPHIC LOG



**Figure 5** View of portion of the excavated area, facing northeast.



**Figure 6** View of the affected area after remediation activities, facing north.

## PHOTOGRAPHIC LOG

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**Figure 5** View of the affected area after remediation activities, facing northeast.

---



**Figure 6** View of the affected area after remediation activities, facing southeast.

---

**ATTACHMENT #8**  
**Release Notification (FORM C-141)**

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

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

JUL 09 2018  
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

PAB1807457621  
NAB1819156522

Release Notification and Corrective Action

OPERATOR  Initial Report  Final Report

Name of Company - Energy Transfer Partners	Contact - Dean D. Ericson
Address 600 N. Marienfeld Street Ste.700	Telephone No. 432-238-2142
Facility Name Avalon Compressor Station	Facility Type Compressor Station

Surface Owner: NMSLO	Mineral Owner N/A	API No.
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County:
K	20	26S	28E	N/A	N/A	N/A	N/A	Eddy

Latitude: 32.026186 Longitude: -104.117172

NATURE OF RELEASE *5.0 bbls Condensate*

Type of Release: Fluid - Condensate and Water	Volume of Release: 6.9bbls <i>2.0 bbls</i> Volume Recovered: 0
Source of Release: Tank Hatch	Date and Hour of Occurrence: <i>Water</i> Date and Hour of Discovery: 07/05/18 10:30am
Was Immediate Notice Given? Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required <input checked="" type="checkbox"/>	If YES, To Whom? Hobbs District Office
By Whom?	Date and Hour
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
Tank equalizing valve was closed. Tank Equalizing valve opened.

Describe Area Affected and Cleanup Action Taken.\*  
Impacted area is approximately 47' x 50' x 6". Spill contained within the "pad", no off-site impact occurred. All standing fluid was removed. Impacted soil will be removed and hauled to disposal.

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: <i>Dean D. Ericson</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Dean D. Ericson	Signed By: <i>[Signature]</i> Approved by Environmental Specialist:	
Title: Sr. Environmental Specialist	Approval Date: <i>7/9/18</i>	Expiration Date: <i>N/A</i>
E-mail Address: dean.ericson@energytransfer.com	Conditions of Approval: <i>See attached</i>	
Date: 07/09/18 Phone: 432-238-2142	Attached <input checked="" type="checkbox"/> <i>JRP-4848</i>	

\* Attach Additional Sheets If Necessary

Incident ID	nAB1819156522
District RP	2RP-4848
Facility ID	FAB1807457621
Application ID	NA

### Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discover date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	15-20 Ft. (ft. bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

**Characterization Report Checklist:** *Each of the following items must be included in the report.*

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs (NA, Field Work Completed during Transitional Period)
- Photographs including date and GIS information (NA, Field Work Completed during Transitional Period)
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico  
Oil Conservation Division

Incident ID	nAB1819156522
District RP	2RP-4848
Facility ID	fAB1807457621
Application ID	NA

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Dean Ericson Title: Sr. Environmental Specialist  
 Signature:  Date: 2/25/19  
 email: dean.ercison@energytransfer.com Telephone: 817-302-9758

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	nAB1819156522
District RP	2RP-4848
Facility ID	fAB1807457621
Application ID	NA

### Remediation Plan

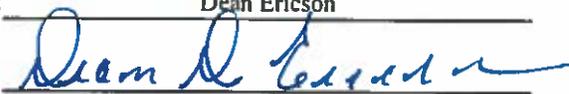
**Remediation Plan Checklist:** *Each of the following items must be included in the report.*

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table I specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Dean Ericson Title: Sr. Environmental Specialist  
 Signature:  Date: 2/25/2019  
 email: dean.ercison@energytransfer.com Telephone: 817-302-9758

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Approved       Approved with Attached Conditions of Approval       Denied       Deferral Approved

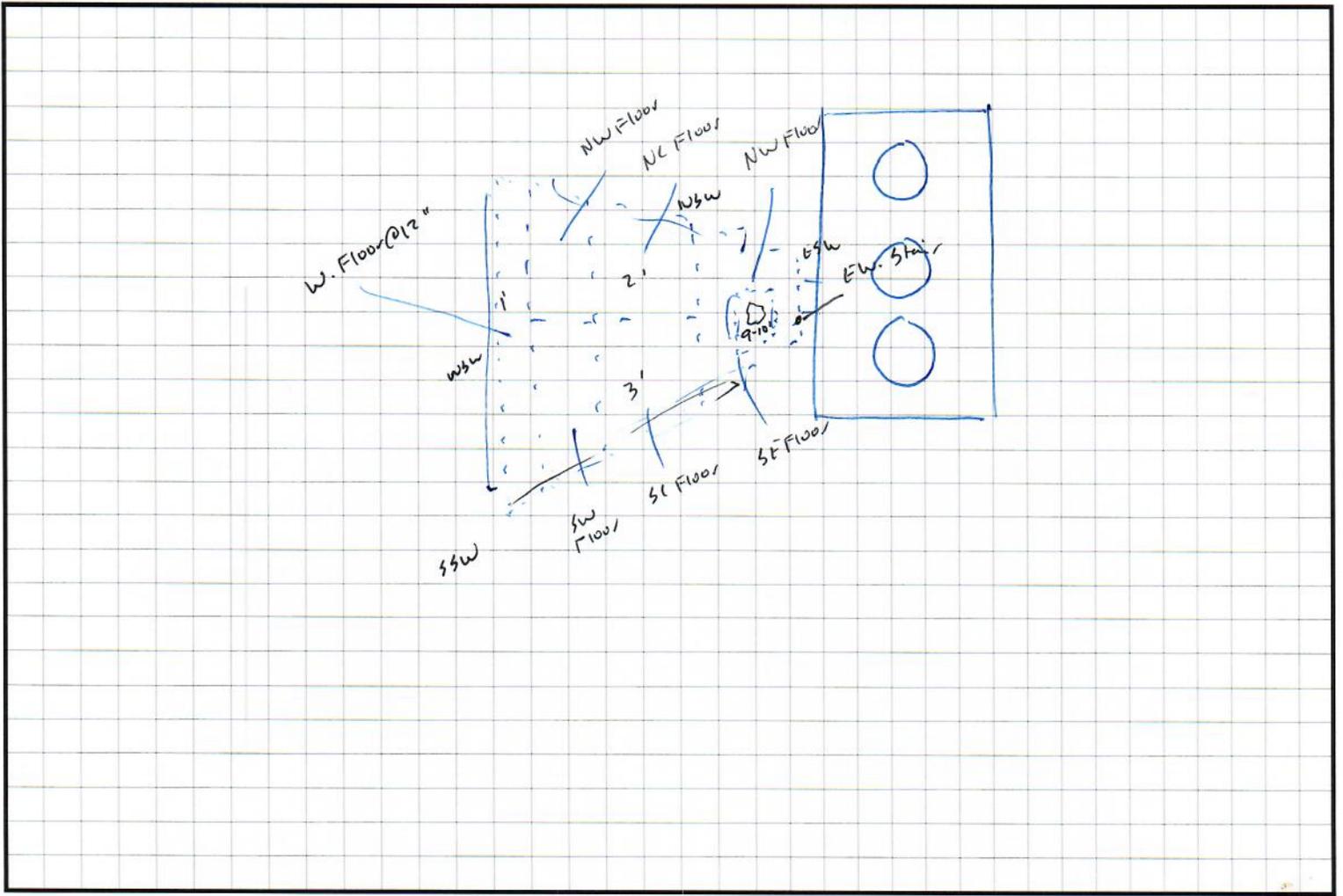
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**ATTACHMENT #9**  
**Field Data**

# FIELD NOTES

Site Name: Avalon 4848  
4857

Date: 4/22/19



Continuing Excavating @ Site, Set up Traffic Control  
 Take additional 1-2' from existing excavation  
 Field Screen for Chloride

Field ID	Odor/PID	Chloride
NE Floor @ 2'	None	132
NE Floor @ 2'	None	340
NW Floor @ 18"	None	744
NW Floor @ 2'	None	480
W. Floor	None	480

Field ID	Odor/PID	Chloride
SE Floor @ 3'	None	260
SW Floor @ 2'	None	430

Field ID	Odor/PID	Chloride
EW Stair	Strong	-

Field ID	Odor/PID	Chloride
SE Floor @ 9.5'	None	132
SEF NSW	None	300
SEF SSW	None	2120
SEF WSW	V. Slight	2170

Field ID	Odor/PID	Chloride
WSW	None	520
ESW	Strong	-
SSW	None	132
WSW	None	480

Field ID	Odor/PID	Chloride

