Incident ID	nAB1807457743
District RP	2RP-4657
Facility ID	fAB1807457621
Application ID	NA

April 24, 2019

Robert Hamlet & Victoria Venegas
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 and Closure Report**
Site Name: Avalon Compressor Station
GPS: Latitude: 32.02557 Longitude: -104.11776
Legals: UL "L", Sec. 20, T26S, R28E
EddyCounty, New Mexico
NMOCD Ref. No. 2RP-4657

Lowry Environmental & Associates, LLC (LEA), on behalf of ETC Texas Pipeline, Ltd., has prepared this Site Assessment and Closure Report 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			
Date Release Discovered	3/6/2018	**Source of Release**	Blowdown
Type of Release	Natural Gas	**Volume Released**	7,840 Mcf
		Volume Recovered	None
Cause of Release A cracked fitting on the discharge line was discovered. In order to make repairs, the line had to be isolated by blowing down the entirety of the discharge line. Once the line was blown down, a tee was welded on the fitting and the segment was fixed.			
Affected Area The release affected an area measuring approximately 2,000 Sq. Ft. on the south side of the of the compressor station.			
Was this a major release? Yes	**If YES, for what reasons (s) is this considered a major release?** Unauthorized release of a volume of gases exceeding 500 McF.		
If Yes, was immediate notice given to the OCD? By whom? To whom? When and by what means? Carolyn J. Blackaller, Crystal Weaver, Environmental Specialist, 3/8/2018, Email			

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 **not** on an exploration, development, production or storage site?	Yes

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 both databases indicated that there are no water wells within a 1/2 Mile radius of the Site. Available data from water wells within the vicinity suggests the depth to groundwater is less than 50 ft. bgs, as measure in wells advanced within low lying areas.

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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District RP	2RP-4657
Facility ID	fAB1807457621
Application ID	NA

INITIAL SITE ASSESSMENT

On **August 30, and September 5, 2018,** initial assessments were conducted at the Site. During the initial site assessments, ten (10) soil samples (TP-1 @ 2', TP-1 @ 4', TP-2 @ 2', TP-2 @ 4', TP-3 @ 2', TP-3 @ 3', TP-4 @ 2', TP-4 @ 4'. TP-5 @ 2' and TP-5 @ 4') were collected and submitted to an NMOCD-approved laboratory for analysis of BTEX, TPH and 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-1 @ 2', which exhibited a TPH concentration of 4,553 mg/kg and a BTEX concentration of 193 mg/kg; and soil sample TP-5 @ 2' which exhibited a TPH concentration of 340 mg/kg.

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

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
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C_6-C_{10} (mg/kg)	DRO C_{10}-C_{28} (mg/kg)	GRO + DRO C_6-C_{28} (mg/kg)	ORO C_{28}-C_{36} (mg/kg)	TPH C_6-C_{36} (mg/kg)	Chloride (mg/kg)
TP-1 @ 2'	9/5/18	2'	Excavated	<0.47	**193**	3,600	890	4,490	430	**4,920**	332
TP-1 @ 4'	9/5/18	4'	In-Situ	<0.024	<0.22	<4.9	<10.0	<14.9	<50	<64.9	<1.0
TP-2 @ 2'	9/5/18	2'	In-Situ	<0.024	<0.217	<4.8	<10.0	<14.9	<50	<64.8	<1.0
TP-2 @ 4'	9/5/18	4'	In-Situ	<0.023	<0.207	<4.6	<10.0	<14.6	<50	<64.6	<1.0
TP-3 @ 2'	9/5/18	2'	In-Situ	<0.025	<0.221	<4.9	<9.9	<14.8	<50	<64.8	<1.0
TP-3 @ 3'	9/5/18	3'	In-Situ	<0.024	<0.216	<4.8	<9.9	<14.7	<49	<64.7	<1.0
TP-4 @ 2'	9/5/18	2'	In-Situ	<0.025	<0.222	<4.9	<10	<14.9	<50	<64.9	<1.0
TP-4 @ 4'	9/5/18	4'	In-Situ	<0.024	<0.216	<4.8	<9.4	<14.2	<47	<61.2	<1.0
TP-5 @ 2'	9/5/18	2'	Excavated	<0.024	<0.219	<4.9	100	100	240	**340**	<1.0
TP-5 @ 4'	9/5/18	4'	In-Situ	<0.023	<0.207	<4.6	<9.8	<14.4	<49	<63.4	<1.0
Closure Criteria				**10**	**50**	**-**	**-**	**-**	**-**	**100**	**600**

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 Workplan* was submitted to the NMOCD and New Mexico State Land Office (NMSLO) detailing field activities and proposing remediation activities designed to advance the Site toward and approved closure. The *Site Assessment Report and Remediation Workplan* was subsequently approved. Please reference the *Site Assessment Report and Remediation Workplan* dated November 12, 2018, for additional details.

Incident ID	nAB1807457743
District RP	2RP-4657
Facility ID	fAB1807457621
Application ID	NA

REMEDIATION ACTIVITIES SUMMARY

On **April 5, 2019,** remediation activities commenced at the Site. Impacted soil affected above the NMOCD Closure Criteria in the areas represented by soil samples TP-1 @ 2' and TP-5 @ 2' was excavated. The floor and sidewalls of the excavated area were advanced until field tests and/or observations suggested impacted soil affected above the NMOCD Closure Criteria had been removed. Excavated soil was transported to an NMOCD-approved surface was facility for disposal.

On **April 8, 2019,** LEA collected seven (7) excavation confirmation soil samples (W. Floor, C. Floor, E. Floor, NSW, ESW, SWSW #1 and SWSW #2) from the floor and sidewalls of the excavated area. The collected soil samples were submitted to an NMOCD-approved laboratory for analysis of BTEX, TPH and chloride concentrations, which were determined to be below NMOCD Closure Criteria in each of the submitted soil samples.

A table summarizing laboratory analytical results from confirmation soil samples is provided below:

Concentrations of BTEX, TPH and/or Chloride in Soil - Initial Investigation

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E300
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C_6-C_{10} (mg/kg)	DRO C_{10}-C_{28} (mg/kg)	GRO + DRO C_6-C_{28} (mg/kg)	ORO C_{28}-C_{36} (mg/kg)	TPH C_6-C_{36} (mg/kg)	Chloride (mg/kg)
W. Floor	4/8/19	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
C. Floor	4/8/19	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
E. Floor	4/8/19	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
NSW	4/8/19	NA	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
ESW	4/8/19	NA	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	488
SWSW #1	4/8/19	NA	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
SWSW #2	4/8/19	NA	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
Closure Criteria				**10**	**50**	**-**	**-**	**-**	**-**	**100**	**600**

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 #6. Laboratory analytical reports are provided as Attachment #6.

Incident ID	nAB1807457743
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Facility ID	fAB1807457621
Application ID	NA

CLOSURE REQUEST

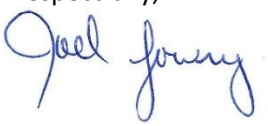
Impacted soil affected above the NMOCD Closure Criteria was excavated and transported to an NMOCD-approved facility for disposal. Laboratory analytical results from excavation confirmation soil samples collected from the floor and sidewalls of the excavated area indicated concentrations of BTEX, TPH and chloride were below the NMOCD Closure Criteria. Upon receiving laboratory analytical results from confirmation soil samples, the excavated area was backfilled with locally sourced, non-impacted "like' material. Approximately **288 cubic yards (cy**) of impacted soil was transported under manifest, to an NMOCD-approved surface waste facility for disposal. Prior to backfill, the final dimensions of the excavated area were approximately 50 ft. in length, 15 to 30 ft. in width and 4 ft. in depth.

SITE RESTORATION AND RE-VEGETATION PLAN

Upon receiving laboratory analytical results from confirmation soil samples, the excavated area was backfilled with locally sourced, non-impacted "like" material placed at or near original relative positions. The affected area was contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow, to the extent practicable. The area affected by remediation and closure activities will be reseeded with a NMSLO approved seed mixture during the first favorable growing season following closure of the site.

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	Soil Profile
Attachment #6-	Laboratory Analytical Reports
Attachment #7-	Photographic Log
Attachment #8-	Pages From Release Notification (FORM C-141)
Attachment #9-	Field Data

LIMITATIONS

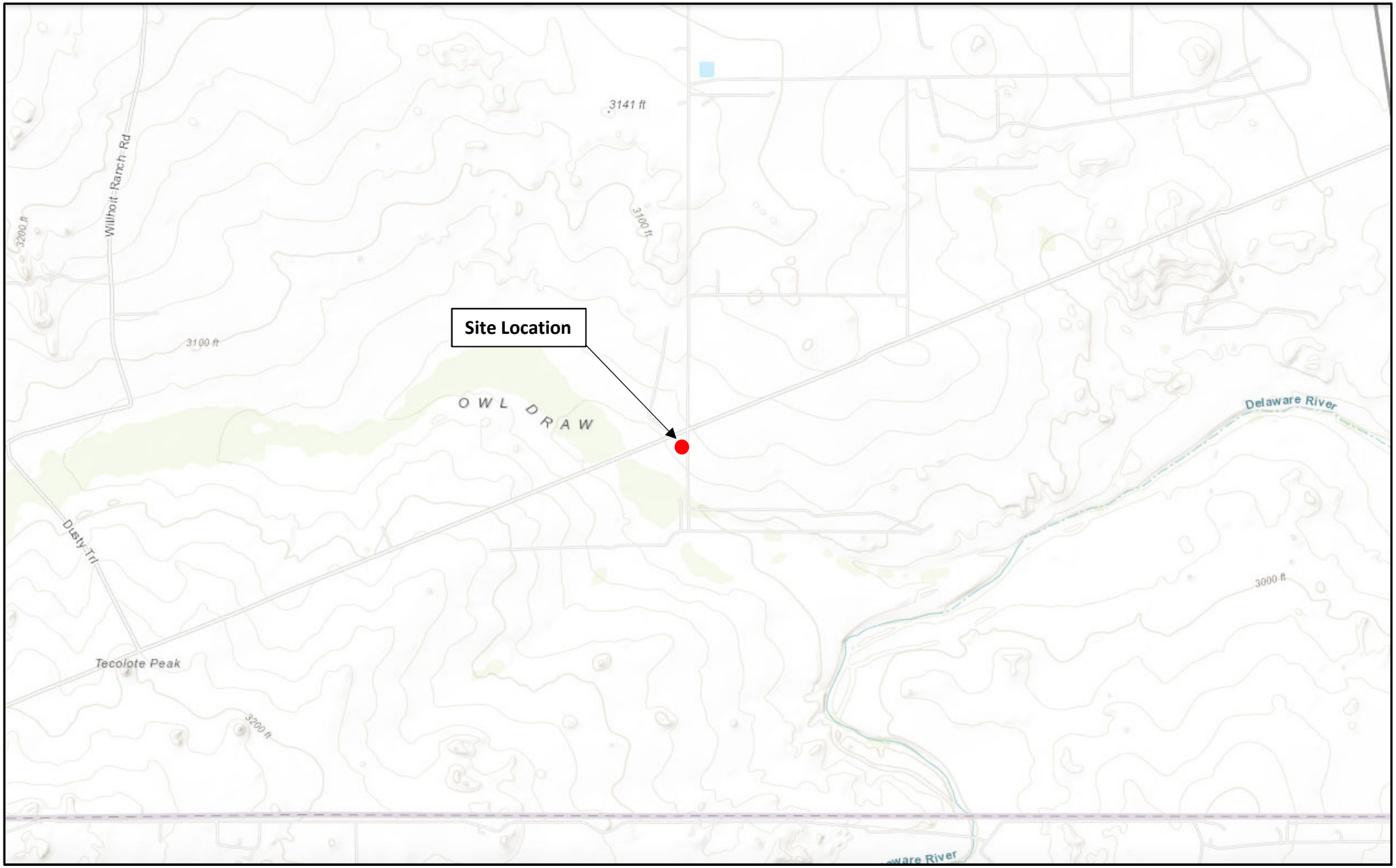
This document has been prepared on behalf of ETC Texas Pipeline, Ltd.. Use of information contained in this report, including exhibits and attachments, by any other party without the consent of LEA and/or ETC Texas Pipeline, Ltd. is prohibited.

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

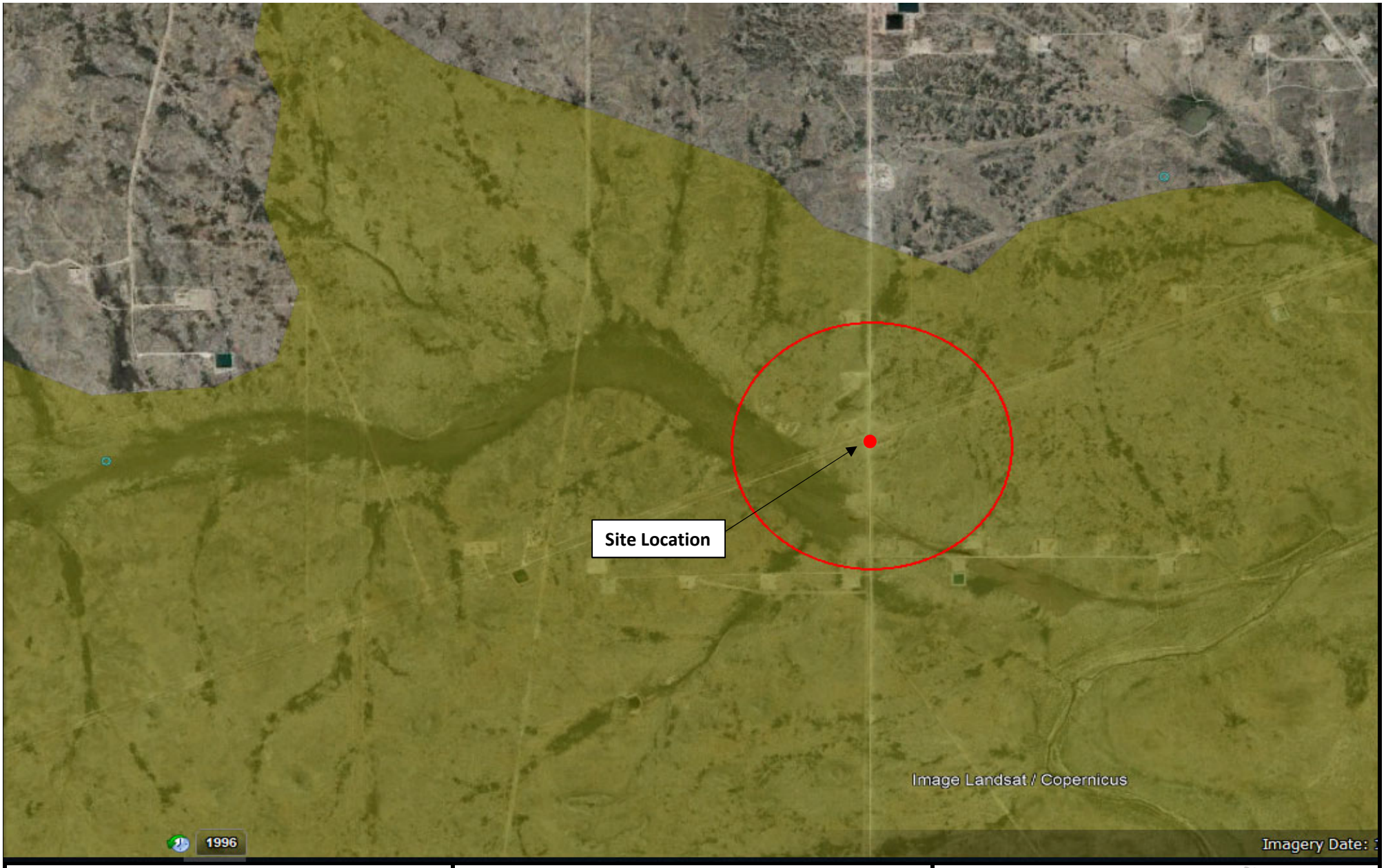
Figure 1
Topographic Map
ETC Texas Pipeline, Ltd.
Avalon Compressor Station
GPS: 32.02557, -104.11776
EddyCounty, New Mexico

LOWRY environmental

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

ATTACHMENT #2

Figure 2 - Aerial Map



LEGEND:

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

Figure 2

Aerial Map

ETC Texas Pipeline, Ltd.

Avalon Compressor Station

GPS: 32.02557, -104.11776

EddyCounty, New Mexico

LOWRY environmental

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

ATTACHMENT #3

Figure 3 - Site & Sample Location Map

LEGEND:

Sample Location

Excavated Area

Figure 3

Site & Sample Location Map

ETC Texas Pipeline, Ltd.

Avalon Compressor Station

GPS: 32.02557, -104.11776

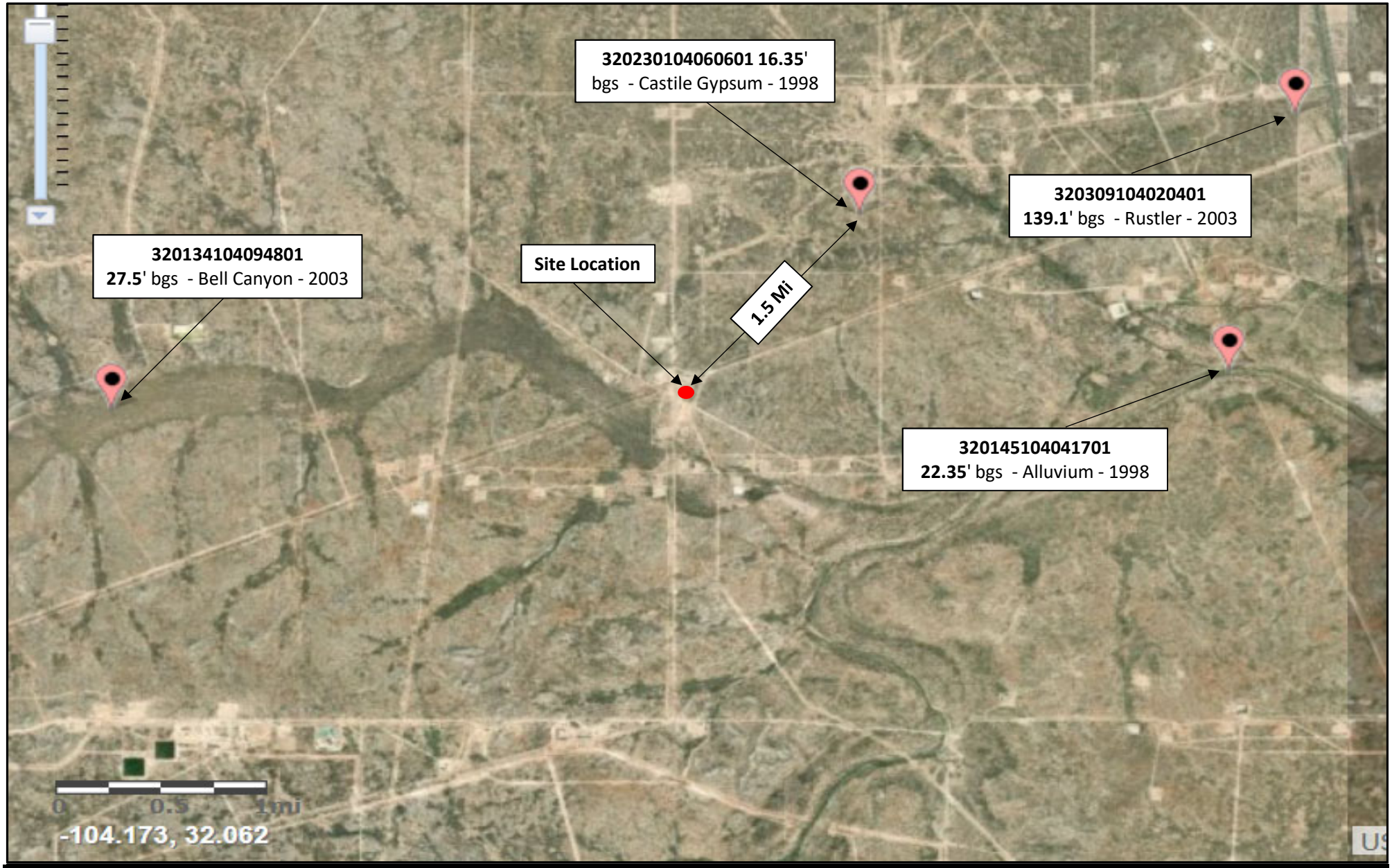
EddyCounty, New Mexico

LOWRY environmental

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

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

LOWRY environmental

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

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

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- 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

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
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.

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

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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

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
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.

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

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 =
- 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

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
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.

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

ATTACHMENT #5

Soil Profile

SOIL PROFILE

Site Name: Avalon Comp. 46057

Date: 4/8/2019

Description		Depth (ft. bgs)
Alkali Top Soil		1
Byp Rock- Unconsolidated		2
		3
	TD	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
		1
		2
		3
		4
		5
		6
		7
		8
		9
		0

ATTACHMENT #6

Laboratory Analytical Reports

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

September 11, 2018

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

RE: Avalon 2 OrderNo.: 1809378

Dear Christine Mathews:

Hall Environmental Analysis Laboratory received 10 sample(s) on 9/7/2018 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 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Lab Order:** 1809378
Project: Avalon 2

Lab ID: 1809378-001 **Collection Date:** 9/5/2018 9:45:00 AM
Client Sample ID: S-11135250-15-090518-MG-TP-1-2' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	460	30		mg/Kg	20	9/10/2018 6:08:34 PM	40252
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	890	10		mg/Kg	1	9/10/2018 11:10:06 AM	40215
Motor Oil Range Organics (MRO)	430	50		mg/Kg	1	9/10/2018 11:10:06 AM	40215
Surr: DNOP	115	50.6-138		%Rec	1	9/10/2018 11:10:06 AM	40215
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	3600	93		mg/Kg	20	9/9/2018 12:39:55 AM	40209
Surr: BFB	538	15-316	S	%Rec	20	9/9/2018 12:39:55 AM	40209
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.47		mg/Kg	20	9/9/2018 12:39:55 AM	40209
Toluene	32	0.93		mg/Kg	20	9/9/2018 12:39:55 AM	40209
Ethylbenzene	21	0.93		mg/Kg	20	9/9/2018 12:39:55 AM	40209
Xylenes, Total	140	1.9		mg/Kg	20	9/9/2018 12:39:55 AM	40209
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	20	9/9/2018 12:39:55 AM	40209

Lab ID: 1809378-002 **Collection Date:** 9/5/2018 9:49:00 AM
Client Sample ID: S-11135250-15-090518-MG-TP-1-4' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	32	30		mg/Kg	20	9/10/2018 6:20:59 PM	40252
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/10/2018 2:51:18 PM	40215
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/10/2018 2:51:18 PM	40215
Surr: DNOP	67.0	50.6-138		%Rec	1	9/10/2018 2:51:18 PM	40215
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/9/2018 1:03:16 AM	40209
Surr: BFB	96.6	15-316		%Rec	1	9/9/2018 1:03:16 AM	40209
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	9/9/2018 1:03:16 AM	40209
Toluene	ND	0.049		mg/Kg	1	9/9/2018 1:03:16 AM	40209
Ethylbenzene	ND	0.049		mg/Kg	1	9/9/2018 1:03:16 AM	40209
Xylenes, Total	ND	0.098		mg/Kg	1	9/9/2018 1:03:16 AM	40209
Surr: 4-Bromofluorobenzene	87.8	80-120		%Rec	1	9/9/2018 1:03:16 AM	40209

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Avalon 2

Lab Order: 1809378

Lab ID: 1809378-003
Collection Date: 9/5/2018 10:00:00 AM
Client Sample ID: S-11135250-15-090518-MG-TP-2-2'
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	52	30		mg/Kg	20	9/10/2018 7:23:01 PM	40252
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/10/2018 11:54:12 AM	40215
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/10/2018 11:54:12 AM	40215
Surr: DNOP	100	50.6-138		%Rec	1	9/10/2018 11:54:12 AM	40215
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/9/2018 1:26:39 AM	40209
Surr: BFB	92.4	15-316		%Rec	1	9/9/2018 1:26:39 AM	40209
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	9/9/2018 1:26:39 AM	40209
Toluene	ND	0.048		mg/Kg	1	9/9/2018 1:26:39 AM	40209
Ethylbenzene	ND	0.048		mg/Kg	1	9/9/2018 1:26:39 AM	40209
Xylenes, Total	ND	0.097		mg/Kg	1	9/9/2018 1:26:39 AM	40209
Surr: 4-Bromofluorobenzene	87.3	80-120		%Rec	1	9/9/2018 1:26:39 AM	40209

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Lab Order:** 1809378
Project: Avalon 2

Lab ID: 1809378-004 **Collection Date:** 9/5/2018 10:05:00 AM
Client Sample ID: S-11135250-15-090518-MG-TP-2-4' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	36	30		mg/Kg	20	9/10/2018 7:35:25 PM	40252
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/10/2018 12:16:13 PM	40215
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/10/2018 12:16:13 PM	40215
Surr: DNOP	88.9	50.6-138		%Rec	1	9/10/2018 12:16:13 PM	40215
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/9/2018 1:50:01 AM	40209
Surr: BFB	93.3	15-316		%Rec	1	9/9/2018 1:50:01 AM	40209
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	9/9/2018 1:50:01 AM	40209
Toluene	ND	0.046		mg/Kg	1	9/9/2018 1:50:01 AM	40209
Ethylbenzene	ND	0.046		mg/Kg	1	9/9/2018 1:50:01 AM	40209
Xylenes, Total	ND	0.092		mg/Kg	1	9/9/2018 1:50:01 AM	40209
Surr: 4-Bromofluorobenzene	88.4	80-120		%Rec	1	9/9/2018 1:50:01 AM	40209

Lab ID: 1809378-005 **Collection Date:** 9/5/2018 10:35:00 AM
Client Sample ID: S-11135250-15-090518-MG-TP-3-2' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	9/10/2018 7:47:50 PM	40252
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/10/2018 12:38:28 PM	40215
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/10/2018 12:38:28 PM	40215
Surr: DNOP	75.2	50.6-138		%Rec	1	9/10/2018 12:38:28 PM	40215
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/9/2018 2:13:20 AM	40209
Surr: BFB	93.8	15-316		%Rec	1	9/9/2018 2:13:20 AM	40209
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	9/9/2018 2:13:20 AM	40209
Toluene	ND	0.049		mg/Kg	1	9/9/2018 2:13:20 AM	40209
Ethylbenzene	ND	0.049		mg/Kg	1	9/9/2018 2:13:20 AM	40209
Xylenes, Total	ND	0.098		mg/Kg	1	9/9/2018 2:13:20 AM	40209
Surr: 4-Bromofluorobenzene	88.7	80-120		%Rec	1	9/9/2018 2:13:20 AM	40209

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Avalon 2
Lab Order: 1809378

Lab ID: 1809378-006
Collection Date: 9/5/2018 10:38:00 AM
Client Sample ID: S-11135250-15-090518-MG-TP-3-3'
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	9/10/2018 8:00:15 PM	40252
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/10/2018 1:00:28 PM	40215
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/10/2018 1:00:28 PM	40215
Surr: DNOP	87.8	50.6-138		%Rec	1	9/10/2018 1:00:28 PM	40215
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/9/2018 2:36:40 AM	40209
Surr: BFB	91.2	15-316		%Rec	1	9/9/2018 2:36:40 AM	40209
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	9/9/2018 2:36:40 AM	40209
Toluene	ND	0.048		mg/Kg	1	9/9/2018 2:36:40 AM	40209
Ethylbenzene	ND	0.048		mg/Kg	1	9/9/2018 2:36:40 AM	40209
Xylenes, Total	ND	0.096		mg/Kg	1	9/9/2018 2:36:40 AM	40209
Surr: 4-Bromofluorobenzene	85.5	80-120		%Rec	1	9/9/2018 2:36:40 AM	40209

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Lab Order:** 1809378
Project: Avalon 2

Lab ID: 1809378-007 **Collection Date:** 9/5/2018 10:50:00 AM
Client Sample ID: S-11135250-15-090518-MG-TP-4-2' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	56	30		mg/Kg	20	9/10/2018 8:12:40 PM	40252
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/10/2018 1:22:36 PM	40215
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/10/2018 1:22:36 PM	40215
Surr: DNOP	70.0	50.6-138		%Rec	1	9/10/2018 1:22:36 PM	40215
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/9/2018 2:59:57 AM	40209
Surr: BFB	93.2	15-316		%Rec	1	9/9/2018 2:59:57 AM	40209
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	9/9/2018 2:59:57 AM	40209
Toluene	ND	0.049		mg/Kg	1	9/9/2018 2:59:57 AM	40209
Ethylbenzene	ND	0.049		mg/Kg	1	9/9/2018 2:59:57 AM	40209
Xylenes, Total	ND	0.099		mg/Kg	1	9/9/2018 2:59:57 AM	40209
Surr: 4-Bromofluorobenzene	87.9	80-120		%Rec	1	9/9/2018 2:59:57 AM	40209

Lab ID: 1809378-008 **Collection Date:** 9/5/2018 10:52:00 AM
Client Sample ID: S-11135250-15-090518-MG-TP-4-4' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	9/10/2018 8:25:04 PM	40252
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/10/2018 1:44:43 PM	40215
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/10/2018 1:44:43 PM	40215
Surr: DNOP	67.0	50.6-138		%Rec	1	9/10/2018 1:44:43 PM	40215
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/9/2018 3:23:13 AM	40209
Surr: BFB	94.3	15-316		%Rec	1	9/9/2018 3:23:13 AM	40209
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	9/9/2018 3:23:13 AM	40209
Toluene	ND	0.048		mg/Kg	1	9/9/2018 3:23:13 AM	40209
Ethylbenzene	ND	0.048		mg/Kg	1	9/9/2018 3:23:13 AM	40209
Xylenes, Total	ND	0.096		mg/Kg	1	9/9/2018 3:23:13 AM	40209
Surr: 4-Bromofluorobenzene	88.4	80-120		%Rec	1	9/9/2018 3:23:13 AM	40209

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Avalon 2

Lab Order: 1809378

Lab ID: 1809378-009
Collection Date: 9/5/2018 10:13:00 AM
Client Sample ID: S-11135250-15-090518-MG-TP-5-2'
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	49	30		mg/Kg	20	9/10/2018 8:37:29 PM	40252
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	100	9.5		mg/Kg	1	9/10/2018 2:06:59 PM	40215
Motor Oil Range Organics (MRO)	240	48		mg/Kg	1	9/10/2018 2:06:59 PM	40215
Surr: DNOP	74.0	50.6-138		%Rec	1	9/10/2018 2:06:59 PM	40215
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/9/2018 3:46:27 AM	40209
Surr: BFB	98.6	15-316		%Rec	1	9/9/2018 3:46:27 AM	40209
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	9/9/2018 3:46:27 AM	40209
Toluene	ND	0.049		mg/Kg	1	9/9/2018 3:46:27 AM	40209
Ethylbenzene	ND	0.049		mg/Kg	1	9/9/2018 3:46:27 AM	40209
Xylenes, Total	ND	0.097		mg/Kg	1	9/9/2018 3:46:27 AM	40209
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	1	9/9/2018 3:46:27 AM	40209

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Avalon 2
Lab Order: 1809378

Lab ID: 1809378-010
Collection Date: 9/5/2018 10:15:00 AM
Client Sample ID: S-11135250-15-090518-MG-TP-5-4'
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	9/10/2018 8:49:54 PM	40252
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/10/2018 2:29:06 PM	40215
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/10/2018 2:29:06 PM	40215
Surr: DNOP	64.8	50.6-138		%Rec	1	9/10/2018 2:29:06 PM	40215
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/9/2018 4:09:46 AM	40209
Surr: BFB	91.7	15-316		%Rec	1	9/9/2018 4:09:46 AM	40209
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	9/9/2018 4:09:46 AM	40209
Toluene	ND	0.046		mg/Kg	1	9/9/2018 4:09:46 AM	40209
Ethylbenzene	ND	0.046		mg/Kg	1	9/9/2018 4:09:46 AM	40209
Xylenes, Total	ND	0.092		mg/Kg	1	9/9/2018 4:09:46 AM	40209
Surr: 4-Bromofluorobenzene	86.3	80-120		%Rec	1	9/9/2018 4:09:46 AM	40209

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809378**

11-Sep-18

Client: GHD

Project: Avalon 2

Sample ID	**MB-40252**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**40252**	RunNo:	**54055**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/10/2018**	SeqNo:	**1786008**	Units:	**mg/Kg**			

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

Sample ID	**LCS-40252**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**40252**	RunNo:	**54055**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/10/2018**	SeqNo:	**1786009**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	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 Quanitative 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#: **1809378**

11-Sep-18

Client: GHD

Project: Avalon 2

Sample ID **1809378-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-11135250-15-0905** Batch ID: **40215** RunNo: **54038**

Prep Date: **9/7/2018** Analysis Date: **9/10/2018** SeqNo: **1785135** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	910	10	50.61	893.3	32.5	53.5	126			S
Surr: DNOP	5.0		5.061		98.8	50.6	138			

Sample ID **1809378-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-11135250-15-0905** Batch ID: **40215** RunNo: **54038**

Prep Date: **9/7/2018** Analysis Date: **9/10/2018** SeqNo: **1785192** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	870	10	50.05	893.3	-43.5	53.5	126	4.29	21.7	S
Surr: DNOP	3.3		5.005		66.9	50.6	138	0	0	

Sample ID **LCS-40215** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **40215** RunNo: **54038**

Prep Date: **9/7/2018** Analysis Date: **9/11/2018** SeqNo: **1785644** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	70	130			
Surr: DNOP	4.4		5.000		88.0	50.6	138			

Sample ID **MB-40215** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **40215** RunNo: **54038**

Prep Date: **9/7/2018** Analysis Date: **9/11/2018** SeqNo: **1785645** Units: **mg/Kg**

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	9.8		10.00		98.5	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 Quanitative 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#: **1809378**

11-Sep-18

Client: GHD

Project: Avalon 2

Sample ID	**MB-40209**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**PBS**	Batch ID:	**40209**		RunNo:	**54007**				
Prep Date:	**9/7/2018**	Analysis Date:	**9/8/2018**		SeqNo:	**1783993**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		94.2	15	316			

Sample ID	**LCS-40209**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSS**	Batch ID:	**40209**		RunNo:	**54007**				
Prep Date:	**9/7/2018**	Analysis Date:	**9/8/2018**		SeqNo:	**1783994**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	75.9	131			
Surr: BFB	1000		1000		103	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 Quanitative 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#: **1809378**

11-Sep-18

Client: GHD

Project: Avalon 2

Sample ID	**MB-40209**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**40209**	RunNo:	**54007**					
Prep Date:	**9/7/2018**	Analysis Date:	**9/8/2018**	SeqNo:	**1784036**	Units:	**mg/Kg**			

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	0.89		1.000		89.2	80	120			

Sample ID	**LCS-40209**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**40209**	RunNo:	**54007**					
Prep Date:	**9/7/2018**	Analysis Date:	**9/8/2018**	SeqNo:	**1784037**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.5	77.3	128			
Toluene	0.93	0.050	1.000	0	93.3	79.2	125			
Ethylbenzene	0.92	0.050	1.000	0	92.4	80.7	127			
Xylenes, Total	2.8	0.10	3.000	0	93.5	81.6	129			
Surr: 4-Bromofluorobenzene	0.93		1.000		93.3	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 Quanitative 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

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: **1809378** RcptNo: **1**

Received By: **Michelle Garcia** **9/7/2018 8:45:00 AM** Michelle Garcia

Completed By: **Ashley Gallegos** **9/7/2018 9:32:20 AM**

Reviewed By: ENM 9/7/18 Labeled by: JAB 09/07/18

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? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
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? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: JAB 09/07/18

Special Handling (if applicable)

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

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

Chain-of-Custody Record

Client: GHD Services

Mailing Address: 6121 Indian School Rd Ste 200 NE Albuquerque, NM 87110

Phone #: 505 884 0672

email or Fax#: Christine.Mathews@ghd.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☒ Rush 48hr

Project Name: Avalon 2

Project #: 11135250.15

Project Manager: Christine Mathews

Sampler: MG

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.3°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809378	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300				Air Bubbles (Y or N)
9/5/18	0945	S	S-11135250.15-090518-MG-TP-1-2'	4oz Soil Jar	ICE	-001	X		X									X				
	0949		S-11135250-15-090518-MG-TP-1-4'			-002	X		X									X				
	1000		S-11135250.15-090518-MG-TP-2-2'			-003	X		X									X				
	1005		S-11135250-15-090518-MG-TP-2-4'			-004	X		X									X				
	1035		S-11135250-15-090518-MG-TP-3-2'			-005	X		X									X				
	1038		S-11135250-15-090518-MG-TP-3-3'			-006	X		X									X				
	1050		S-11135250-15-090518-MG-TP-4-2'			-007	X		X									X				
	1052		S-11135250-15-090518-MG-TP-4-4'			-008	X		X									X				
	1013		S-11135250-15-090518-MG-TP-5-2'			-009	X		X									X				
	1015		S-11135250-15-090518-MG-TP-5-4'			-010	X		X									X				

Date	Time	Relinquished by:	Received by:	Date	Time
9/6/18				9/6/18	1000
9/6/18	1900			09/07/18	0845

Remarks: Michael.gant@ghd.com

Courier

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

CARDINAL Laboratories

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

April 09, 2019

JOEL LOWRY

ENERGY TRANSFER

P. O. BOX 1226

JAL, NM 88252

RE: AVALON COMPRESSOR L

Enclosed are the results of analyses for samples received by the laboratory on 04/08/19 14:22.

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/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
JOEL LOWRY
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	04/08/2019	Sampling Date:	04/08/2019
Reported:	04/09/2019	Sampling Type:	Soil
Project Name:	AVALON COMPRESSOR L	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: W FLOOR (H901272-01)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2019	ND	1.80	89.9	2.00	0.879	
Toluene*	<0.050	0.050	04/09/2019	ND	1.68	84.2	2.00	0.693	
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	1.77	
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.27	87.8	6.00	2.01	
Total BTEX	<0.300	0.300	04/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.3 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	04/09/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2019	ND	194	97.1	200	5.64	
DRO >C10-C28*	<10.0	10.0	04/08/2019	ND	195	97.5	200	0.423	
EXT DRO >C28-C36	<10.0	10.0	04/08/2019	ND					

Surrogate: 1-Chlorooctane *92.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *97.3 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
JOEL LOWRY
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	04/08/2019	Sampling Date:	04/08/2019
Reported:	04/09/2019	Sampling Type:	Soil
Project Name:	AVALON COMPRESSOR L	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: C FLOOR (H901272-02)

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	04/09/2019	ND	1.80	89.9	2.00	0.879	
Toluene*	<0.050	0.050	04/09/2019	ND	1.68	84.2	2.00	0.693	
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	1.77	
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.27	87.8	6.00	2.01	
Total BTEX	<0.300	0.300	04/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	04/09/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2019	ND	194	97.1	200	5.64	
DRO >C10-C28*	<10.0	10.0	04/08/2019	ND	195	97.5	200	0.423	
EXT DRO >C28-C36	<10.0	10.0	04/08/2019	ND					

Surrogate: 1-Chlorooctane *107 %* *41-142*

Surrogate: 1-Chlorooctadecane *110 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
JOEL LOWRY
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	04/08/2019	Sampling Date:	04/08/2019
Reported:	04/09/2019	Sampling Type:	Soil
Project Name:	AVALON COMPRESSOR L	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: E FLOOR (H901272-03)

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	04/09/2019	ND	1.80	89.9	2.00	0.879	
Toluene*	<0.050	0.050	04/09/2019	ND	1.68	84.2	2.00	0.693	
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	1.77	
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.27	87.8	6.00	2.01	
Total BTEX	<0.300	0.300	04/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *91.3 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	04/09/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2019	ND	194	97.1	200	5.64	
DRO >C10-C28*	<10.0	10.0	04/08/2019	ND	195	97.5	200	0.423	
EXT DRO >C28-C36	<10.0	10.0	04/08/2019	ND					

Surrogate: 1-Chlorooctane *101 %* *41-142*

Surrogate: 1-Chlorooctadecane *103 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
JOEL LOWRY
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	04/08/2019	Sampling Date:	04/08/2019
Reported:	04/09/2019	Sampling Type:	Soil
Project Name:	AVALON COMPRESSOR L	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: NSW (H901272-04)

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	04/09/2019	ND	1.80	89.9	2.00	0.879	
Toluene*	<0.050	0.050	04/09/2019	ND	1.68	84.2	2.00	0.693	
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	1.77	
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.27	87.8	6.00	2.01	
Total BTEX	<0.300	0.300	04/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	04/09/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2019	ND	194	97.1	200	5.64	
DRO >C10-C28*	<10.0	10.0	04/08/2019	ND	195	97.5	200	0.423	
EXT DRO >C28-C36	<10.0	10.0	04/08/2019	ND					

Surrogate: 1-Chlorooctane *107 %* *41-142*

Surrogate: 1-Chlorooctadecane *109 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
JOEL LOWRY
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	04/08/2019	Sampling Date:	04/08/2019
Reported:	04/09/2019	Sampling Type:	Soil
Project Name:	AVALON COMPRESSOR L	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: ESW (H901272-05)

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	04/09/2019	ND	1.80	89.9	2.00	0.879	
Toluene*	<0.050	0.050	04/09/2019	ND	1.68	84.2	2.00	0.693	
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	1.77	
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.27	87.8	6.00	2.01	
Total BTEX	<0.300	0.300	04/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.6 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**448**	16.0	04/09/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2019	ND	194	97.1	200	5.64	
DRO >C10-C28*	<10.0	10.0	04/08/2019	ND	195	97.5	200	0.423	
EXT DRO >C28-C36	<10.0	10.0	04/08/2019	ND					

Surrogate: 1-Chlorooctane *106 %* *41-142*

Surrogate: 1-Chlorooctadecane *109 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
JOEL LOWRY
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	04/08/2019	Sampling Date:	04/08/2019
Reported:	04/09/2019	Sampling Type:	Soil
Project Name:	AVALON COMPRESSOR L	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: SWSW #1 (H901272-06)

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	04/09/2019	ND	1.80	89.9	2.00	0.879	
Toluene*	<0.050	0.050	04/09/2019	ND	1.68	84.2	2.00	0.693	
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	1.77	
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.27	87.8	6.00	2.01	
Total BTEX	<0.300	0.300	04/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.6 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	04/09/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2019	ND	194	97.1	200	5.64	
DRO >C10-C28*	<10.0	10.0	04/08/2019	ND	195	97.5	200	0.423	
EXT DRO >C28-C36	<10.0	10.0	04/08/2019	ND					

Surrogate: 1-Chlorooctane *105 %* *41-142*

Surrogate: 1-Chlorooctadecane *104 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
JOEL LOWRY
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	04/08/2019	Sampling Date:	04/08/2019
Reported:	04/09/2019	Sampling Type:	Soil
Project Name:	AVALON COMPRESSOR L	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: SWSW #2 (H901272-07)

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	04/09/2019	ND	1.80	89.9	2.00	0.879	
Toluene*	<0.050	0.050	04/09/2019	ND	1.68	84.2	2.00	0.693	
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	1.77	
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.27	87.8	6.00	2.01	
Total BTEX	<0.300	0.300	04/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *91.9 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	04/09/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2019	ND	194	97.1	200	5.64	
DRO >C10-C28*	<10.0	10.0	04/08/2019	ND	195	97.5	200	0.423	
EXT DRO >C28-C36	<10.0	10.0	04/08/2019	ND					

Surrogate: 1-Chlorooctane *105 %* *41-142*

Surrogate: 1-Chlorooctadecane *108 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: ETC Texas Pipeline	BILL TO		
Project Manager: Joel Lowry	P.O. #: ETC Texas		
Address:	Company: C/O Dean Ericson		
City: State: Zip:	Attn:		
Phone #: Fax #:	Address:		
Project #: Project Owner:	City:		
Project Name: Avalon Compressor C	State: Zip:		
Project Location: Eddy Co NM	Phone #:		
Sampler Name:	Fax #:		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	BTEX	TPH	Cl-	Rush						
H901272																								
1	W. Floor	C	1			X							4/8/14	9:20	X	X	X	X						
2	C. Floor													9:25										
3	E. Floor													9:31										
4	NSW													9:36										
5	ESW													9:42										
6	SWSW #1													9:55										
7	SWSW #2													9:57	X	X	X	X						

Relinquished By: Joel Lowry	Date: 4/8/14	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 14:22		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Email to Dean Ericson : Joel Lowry
	Time:		

Delivered By: (Circle One) Sampler - UPS - Bus - Other: 10.3° #97	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO

ATTACHMENT #7

Photographic Log

PHOTOGRAPHIC LOG

Figure 1 View of portion of the excavated area, facing Northeast.

Figure 2 View of portion of the excavated area, facing Northwest.

PHOTOGRAPHIC LOG

Figure 3 View of portion of the excavated area, facing North.

Figure 4 View of portion of the excavated area, facing Northwest.

PHOTOGRAPHIC LOG

Figure 5 View of portion of the excavated area, facing Southeast.

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

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 April 3, 2017

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

fAB1807457621
nAB1807457743 #210256

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Energy Transfer	Contact: Carolyn J. Blackaller
Address: 600 N. Marienfeld Street, Suite 700, Midland, TX 79701	Telephone No.: (817) 302-9766
Facility Name: Avalon Compressor Station	Facility Type: Natural Gas Compressor Station

Surface Owner	Mineral Owner	API No.

LOCATION OF RELEASE

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

Latitude 32.02557 **Longitude** 104.11776 NAD83

NATURE OF RELEASE

Type of Release: Natural Gas	Volume of Release: 7,840 Mcf	Volume Recovered: 0 Mcf
Source of Release: Blowdown due to cracked fitting on discharge line	Date and Hour of Occurrence: 3/6/2018 at 14:30	Date and Hour of Discovery: 3/6/2018 at 14:00
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Crystal Weaver, Environmental Specialist, OCD – Artesia District II	
By Whom? Carolyn J. Blackaller, Sr. Environmental Specialist	Date and Hour: 3/8/2018 at 10:38	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. Not Applicable	

If a Watercourse was Impacted, Describe Fully.*
Not Applicable

Describe Cause of Problem and Remedial Action Taken.*
A cracked fitting on the discharge line was discovered. In order to make repairs, the line had to be isolated by blowing down the entirety of the discharge line. Once the line was blown down, a tee was welded on the fitting and the segment was fixed.

Describe Area Affected and Cleanup Action Taken.*

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

Signature: Carolyn J Blackaller	OIL CONSERVATION DIVISION
Printed Name: Carolyn J. Blackaller	Approved by Environmental Specialist: Signed By [signature]
Title: Sr. Environmental Specialist	Approval Date: 3/13/18 Expiration Date: N/A
E-mail Address: carolyn.blackaller@energytransfer.com	Conditions of Approval: FINAL Attached ☐ 2RP-4057
Date: 3/9/2018 Phone: (817) 302-9766	

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

Incident ID	nAB1807457743
District RP	2RP-4657
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?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ 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)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ 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?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production or storage site?	☑ Yes ☐ 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 **(NA, Field Work Completed during Transistional Period)**
- ☑ 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 Transistional Period)**
- ☐ Photographs including date and GIS information **(NA, Field Work Completed during Transistional 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. Than 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 modifies by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	nAB1807457743
District RP	2RP-4657
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: Dean R Ericson Date: 2/25/19

email: dean.ercison@energytransfer.com Telephone: 817-302-9758

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAB1807457743
District RP	2RP-4657
Facility ID	fAB1807457621
Application ID	NA

Remediation Plan

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

- [x] Detailed description of proposed remediation technique
- [x] Scaled sitemap with GPS coordinates showing delineation points
- [x] Estimated volume of material to be remediated
- [x] Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- [x] 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: _____

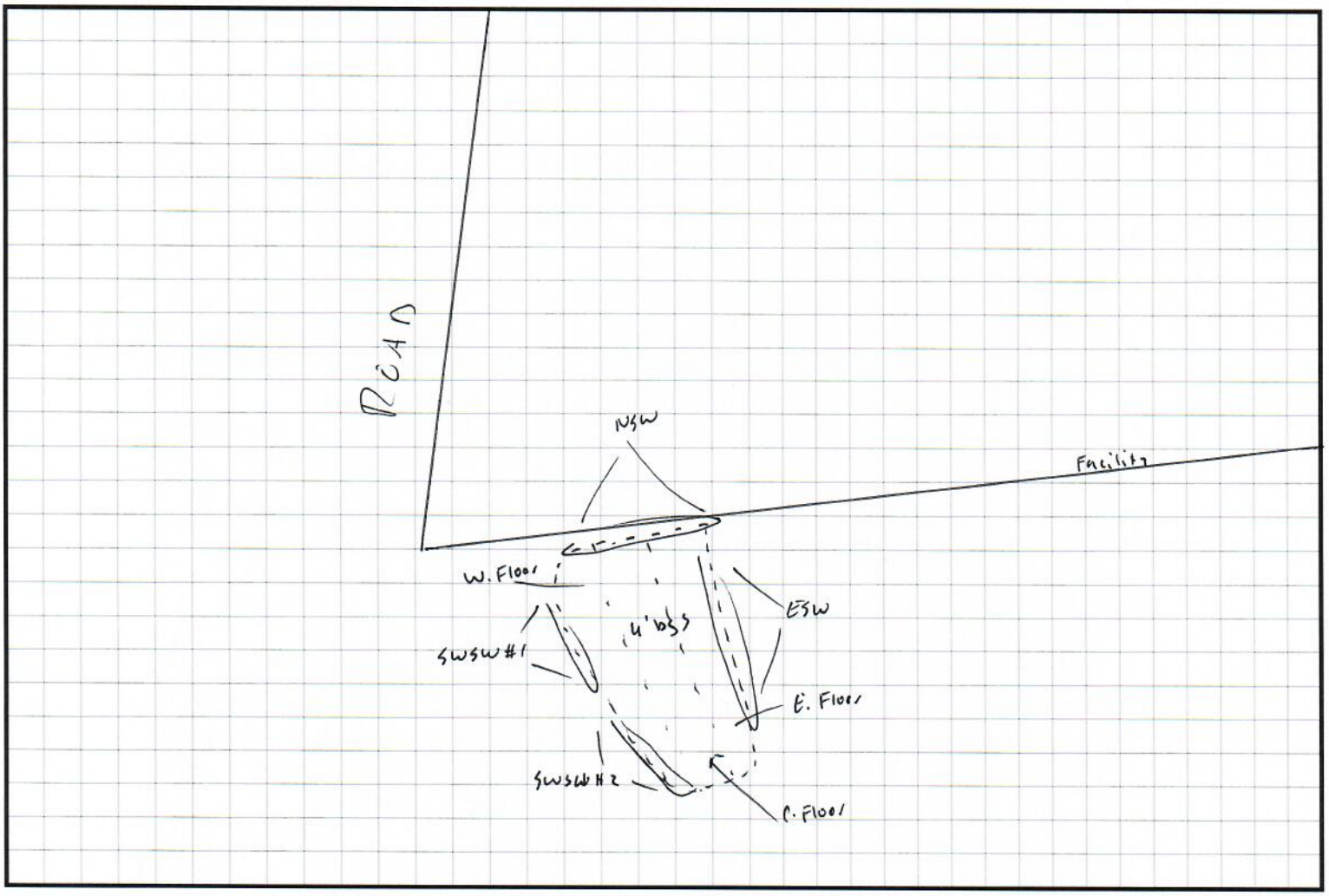
ATTACHMENT #9

Field Data

FIELD NOTES

Site Name: Avalon Comp. 4657

Date: 4/8/2019



Overspe Excavation, Collect Confirmation Soil Samples, / Field Screen for Cl⁻

Field ID	Odor/PID	Chloride
W. Floor	None	192
C. Floor	None	126
E. Floor	None	126

Field ID	Odor/PID	Chloride

Field ID	Odor/PID	Chloride

Field ID	Odor/PID	Chloride
NSW	None	268
SWSW #1	None	308
SWSW #2	None	112
ESW	None	528

Field ID	Odor/PID	Chloride

Field ID	Odor/PID	Chloride