X Topographic/Aerial maps

X Laboratory data including chain of custody

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Incident ID	nRM2006451912
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Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)	
Did this release impact groundwater or surface water?	Yes X No	
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	Yes X 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 X No	
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	Yes X 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 X No	
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	Yes X No	
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	Yes X No	
Are the lateral extents of the release within 300 feet of a wetland?	Yes X No	
Are the lateral extents of the release overlying a subsurface mine?	Yes X No	
Are the lateral extents of the release overlying an unstable area such as karst geology?	Yes X No	
Are the lateral extents of the release within a 100-year floodplain?	Yes X No	
Did the release impact areas not on an exploration, development, production, or storage site?	Yes X 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 Depth to water determination Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release Boring or excavation logs Photographs including date and GIS information 		

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.

Received by OCD: 6/2/2020 9:12:27 AM Form C-141 State of New Mexico Page 4 Oil Conservation Division

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Incident ID	nRM2006451912
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Application ID	

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: Halie Butler	Title: Sr. Corporate Compliance and Environmental Manager	
Signature: ## Signature:	Date: <u>6/1/2020</u>	
email: HButler@selectenergyservices.com	Telephone: <u>281-467-3153</u>	
OCD Only		
Received by:	Date:	

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

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District RP
Facility ID
Application ID

Remediation Plan

 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 1 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 con-	firmed as part of any request for deferral of remediation.	
Contamination must be in areas immediately under or around predeconstruction.	oduction equipment where remediation could cause a major facility	
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: Halie Butler Title: Sr. Corporate Compliance and Environmental Manager		
Signature:	Date: 6/1/2020	
email: HButler@selectenergyservices.com	Telephone: <u>281-467-3153</u>	
OCD Only		
Received by:	Date:	
Approved	Approval	
Signature:	Date:	

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Incident ID	nRM2006451912
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Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.

X A scaled site and sampling diagram as described in 19.15.29.1	X A scaled site and sampling diagram as described in 19.15.29.11 NMAC		
X Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)			
X Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)			
X Description of remediation activities			
and regulations all operators are required to report and/or file certai may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rer human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regular restore, reclaim, and re-vegetate the impacted surface area to the coaccordance with 19.15.29.13 NMAC including notification to the Orinted Name: Halie Butler Signature:	ntions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in CD when reclamation and re-vegetation are complete. Title: Sr. Corporate Compliance and Environmental Manager		
email: HButler@selectservices.com	Telephone: 281-467-3153		
email: HButler@selectservices.com	Telephone: <u>281-467-3153</u>		
email: HButler@selectservices.com OCD Only	Telephone: <u>281-467-3153</u>		
	•		
OCD Only Received by: Closure approval by the OCD does not relieve the responsible party	Date: of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible		
OCD Only Received by: Closure approval by the OCD does not relieve the responsible party remediate contamination that poses a threat to groundwater, surface	Date: of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.		

nRM2006451912 CLOSURE REPORT Cowtown South Produced Water Spill Otero County, New Mexico

Latitude: 32.703703° North Longitude: -104.12175° West

LAI Project No. 19-0179-03

June 1, 2020

Prepared for: Select Energy Services, LLC 5721 NW 132nd Street Oklahoma City, OK 73142

Prepared by: Larson & Associates, Inc. 507 North Marienfeld Street, Suite 202 Midland, Texas 79701

Mark J. Larson, P.G. Certified Professional Geologist #10490 Robert Nelson Staff Geoscientist This Page Intentionally Left Blank

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Figure 3 Aerial Map Showing Excavation Areas and Confirmation Samples

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Appendix B Laboratory Reports

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nRM2006451912 Closure Report Cowtown South Produced Water Release June 1, 2020

1.0 INTRODUCTION

Larson & Associates Inc. (LAI) has prepared this closure report on behalf of Select Energy Services (Select) for submittal to the New Mexico Oil Conservation Division (OCD) District 1 for a produced water release at the Cowtown South (Site) located in Lot 3, Section 31, Township 18 South, Range 29 East in Otero County, New Mexico. The geodetic position is 32.703703° North and -104.12175° West. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

The release occurred on October 10, 2019, due to a leak in the water transfer line allowing for approximately 50 barrels (bbls) of produced water to be released into the nearby pasture. Approximately 30 bbls were recovered. The spill area measured approximately 5,451 square feet. The initial C-141 was submitted to OCD District II in Artesia, New Mexico on March 4, 2020.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,398 feet above mean sea level (msl);
- The topography slopes gently to the south;
- There are no surface water features within 1,000 feet of the Site;
- The soils are designated as Berino-Dune land complex, 0 to 3 percent slopes, consisting of 0 to 17 inches of fine sandy loam sand underlain by 17 to 50 inches of sandy clay loam and 50 to 60 inches of loamy sand;
- The geology is the Eolian and piedmont deposits (Holocene to middle Pleistocene);
- Groundwater is reported in the Ogallala formation at approximately 180 feet below ground surface (bgs)(2016);
- According to the United States Geologic Survey (USGS) the nearest water well is located in Unit A
 (SE/4, NE/4), Section 29, Township 18 South, Range 29 East, approximately 2.06 miles or 10,859
 feet northeast of the Site.

1.3 Remediation Action Levels

The following remediation standards are based on closure criteria for soils impacted by a release as presented in Table 1 of 19.15.29 NMAC:

Benzene 10 mg/Kg
 BTEX 50 mg/Kg
 TPH 2,500 mg/Kg
 Chloride 20,000 mg/Kg

Further, 19.15.29.13 NMAC (Restoration, Reclamation and Re-Vegetation) requires the operator to restore the impacted surface area that existed prior to the release or their final land use.

nRM2006451912 Closure Report Cowtown South Produced Water Release June 1, 2020

2.0 DELINEATION

On October 11, 2019, LAI personnel collected soil samples from five (5) locations within the spill area (HA-1 through HA-5) and four (4) locations in each cardinal direction (north, east, south, west) outside of the spill area (HA-6 through HA-9) using a stainless steel hand auger. The samples were collected at a depth of approximately 0.5 and 1 foot below ground surface (bgs). The soil samples were delivered under preservation and chain of custody to Permian Basin Environmental Laboratory (PBEL) in Midland, Texas. The upper sample from each location was analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) and total petroleum hydrocarbons (TPH), including gasoline range organics (GRO), diesel range organics (DRO) and oil range organics (ORO) by EPA SW-846 Methods 8021B and 8015M, respectively. All samples were analyzed for chloride by EPA Method 300. Benzene, BTEX, and TPH were below the analytical method reporting limits and OCD delineation limits of 10 mg/Kg, 50 mg/Kg, and 100 mg/Kg respectively. Chloride reported above the delineation limit of 600 mg/Kg in the following samples:

HA-2, 0.5 feet bgs (671 mg/Kg)	HA-4, 1 foot bgs (8,070 mg/Kg)
HA-3, 0.5 feett bgs (7,210 mg/Kg)	HA-5, 0.5 feet bgs (7,080 mg/Kg)
HA-3, 1 foot bgs (7,560 mg/Kg)	HA-5, 1 foot bgs (6,650 mg/Kg)
HA-4, 0.5 feet bgs (7,680 mg/Kg)	HA-8, 0.5 feet bgs (5,070) mg/Kg)

On November 4, 2019, LAI personnel used a Geoprobe® 7822 DT direct push rig to collect soil samples at six (6) locations (HA-1 through HA-5 and HA-8). The samples were collected every 5 feet to 15 feet bgs, depending on subsurface conditions. The samples were analyzed for chloride by EPA Method 300. Laboratory analysis reported chloride concentrations above 600 mg/Kg in the following samples.

HA-3, 5 feet bgs (7,080 mg/Kg)	HA-5, 5 feet bgs (7,560 mg/Kg)
HA-4, 5 feet bgs (13,800 mg/Kg)	HA-5, 10 feet bgs (6,830 mg/Kg)
HA-4, 8 feet bgs (7,000 mg/Kg)	

Table 1 presents the delineation soil sample analytical data summary. Figure 2 presents an aerial map with soil sample locations. Appendix B presents the laboratory reports.

3.0 REMEDIATION

During December 2019 and January 2020, BDS Enterprises (BDS) used a backhoe to excavate soil from an area measuring about 6,103 square feet encompassing delineation samples HA-2 and HA-8 to a depth of approximately 2 feet bgs and HA-3 through HA-5 and to a depth of approximately 4.1 feet bgs.

On January 16 and January 22, 2020, LAI personnel collected forty-seven (47) five-point composite confirmation soil samples from about 200 square feet of sidewalls (north, east, south, and west) and bottom of the excavation. The samples were delivered under preservation and chain of custody to PBEL and were analyzed for BTEX, TPH and chloride by EPA SW-846 Methods 8021B, 8015M and Method 300, respectively. All confirmation soil samples reported benzene, BTEX and TPH below the analytical method reporting limits and OCD remediation levels. Chloride reported above OCD remediation levels in the following confirmation samples:

nRM2006451912 Closure Report Cowtown South Produced Water Release June 1, 2020

2.3 Sidewall West,	0 – 2 feet bgs (998 mg/Kg)	2.12 Bottom, 2 feet bgs (2,590 mg/Kg)
2.4 Sidewall West,	0 – 2 feet bgs (2,980 mg/Kg)	2.13 Bottom, 2 feet bgs (5,310 mg/Kg)
2.6 Sidewall East,	0 – 2 feet bgs (1,030 mg/Kg)	2.14 Bottom, 2 feet bgs (2,400 mg/Kg)
2.7 Bottom, 2 feet	bgs (4,250 mg/Kg)	2.15 Bottom, 2 feet bgs (3,060 mg/Kg)
2.9 Bottom, 2 feet	bgs (5,190 mg/Kg)	2.16 Bottom, 2 feet bgs (2,110 mg/Kg)
2.11 Bottom, 2 fee	t bgs (2,350 mg/Kg)	4.2 Sidewall South, 0 – 4 feet bgs (5,570 mg/Kg)

In January and February 2020, BDS excavated an additional 2.1 feet of soil from the bottom around samples points 2.7, 2.9, and 2.11 through 2.16. The sidewalls were excavated approximately 2 feet around samples points 2.3 through 2.6 and 4.2. On February 4, 2020, LAI personnel collected a confirmation soil samples and laboratory analysis reported chloride below the OCD remediation levels, except sample 4.2 which report 1,030 mg/Kg.

In February 2020, BDS excavated an additionally two (2) feet from the sidewall of sample point 4.2. On February 27, 2020, LAI personnel collected a confirmation soil sample and laboratory analysis reported chloride below the OCD remediation level. Approximately 13,930 cubic yards of soil were disposed at Lea Land Landfill, Inc., located at mile marker 64 south of US Highway 62/180 east of Carlsbad, New Mexico. Appendix A presents the waste manifests.

Nine (9) composite samples each of clean sand and caliche were collected from a nearby pit. BTEX and TPH were below the analytical method reporting limits and chloride was less 600 mg/Kg in the backfill composite samples. Table 2 presents the confirmation soil analytical data summary. Figure 3 presents the excavations and confirmation sample locations. Appendix B presents laboratory reports. Appendix C presents photographs.

The excavations were backfilled up to 4 feet bgs with clean caliche and to ground surface with clean sand from a nearby landowner's pit. On March 27, 2020, LAI personnel seeded the backfilled areas with BLM Mix No 3.

4.0 CLOSURE REQUEST

Select Energy requests no further action for nRM2006451912.

Tables

Table 1
Delineation Soil Sample Analytical Data Summary
Select Energy Services, Cowtown South Release
Otero County, New Mexico
N32° 42′ 13.33″ W104° 07′ 18.30"

Sample ID	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:										20,000
					Hand Auge	er Soil Sampl	es			
HA-1	0 - 0.5	10/11/2019	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	4.37
	0.5 - 1	10/11/2019	In-Situ							80.0
	5	11/4/2019	In-Situ							104.0
HA-2	0 - 0.5	10/11/2019	In-Situ	<0.00108	<0.00647	<26.9	<26.9	<26.9	<26.9	671
	0.5 - 1	10/11/2019	In-Situ							240
	8	11/4/2019	In-Situ							6.07
HA-3	0 - 0.5	10/11/2019	In-Situ	<0.00110	<0.00660	<27.5	<27.5	<27.5	<27.5	7,210
	0.5 - 1	10/11/2019	In-Situ							7,560
	5	11/4/2019	In-Situ							7,080
HA-4	0 - 0.5	10/11/2019	In-Situ	<0.00106	<0.00637	<26.6	<26.6	<26.6	<26.6	7,680
	0.5 - 1	10/11/2019	In-Situ							8,070
	5	11/4/2019	In-Situ							13,800
	8	11/4/2019	In-Situ							7,000
HA-5	0 - 0.5	10/11/2019	In-Situ	<0.00108	<0.00647	<26.9	<26.9	<26.9	<26.9	7,080
	0.5 - 1	10/11/2019	In-Situ							6,650
	5	11/4/2019	In-Situ							7,560
	10	11/4/2019	In-Situ							6,830
	15	11/4/2019	In-Situ							38

Table 1
Delineation Soil Sample Analytical Data Summary
Select Energy Services, Cowtown South Release
Otero County, New Mexico
N32° 42′ 13.33″ W104° 07′ 18.30"

HA-6	0 - 0.5	10/11/2019	In-Situ	<0.00105	0.00631	<26.3	<26.3	<26.3	<26.3	8.45
	0.5 - 1	10/11/2019	In-Situ							6.66
HA-7	0 - 0.5	10/11/2019	In-Situ	<0.00104	<0.00624	<26.0	<26.0	<26.0	<26.0	33.8
	0.5 - 1	10/11/2019	In-Situ							13.1
HA-8	0 - 0.5	10/11/2019	In-Situ	<0.00105	0.00631	<26.3	<26.3	<26.3	<26.3	5,070
	0.5 - 1	10/11/2019	In-Situ							25.3
	5	11/4/2019	In-Situ							15.20
	10	11/4/2019	In-Situ							11.30
	15	11/4/2019	In-Situ							3.97
HA-9	0 - 0.5	10/11/2019	In-Situ	<0.00108	<0.00647	<26.9	<26.9	<26.9	<26.9	47.5
	0.5 - 1	10/11/2019	In-Situ							23.2

Notes: Laboratory analysis performed by Permian Basin Environmental Lab (PBEL), Midland, Texas by EPA Method 300 (chloride). Depth in feet below ground surface (bgs)

mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

Bold and highlighted indicates that analyte was detected above the OCD Delineation limit (600 mg/Kg)

Table 2
Confirmation Soil Sample Analytical Data Summary
Apache Cowtown South, Select Energy Produced Water Spill
Otero County, New Mexico
N32° 42′ 13.33″ W104° 7′ 18.30"

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					10	50				100/2,500	600/20,000
2.1	Sidewall North	0 - 2	1/16/2020	In-Situ	<0.00101	<0.00606	<25.3	<25.3	<25.3	<25.3	47.1
2.2	Sidewall North	0 -2	1/16/2020	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	8.74
2.3	Sidewall West	0 -2	1/16/2020	Excavated		< 0.00637	<26.6	<26.6	<26.6	<26.6	998.0
		0 - 4	2/3/2020	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	181
2.4	Sidewall West	0 - 2	1/16/2020	Excavated	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	2,980.0
		0 - 4	2/3/2020	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	28.7
2.5	Sidewall East	0 -2	1/16/2020	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	487.0
2.6	Sidewall East	0 -2	1/16/2020	Excavated		<0.00606	<25.3	<25.3	<25.3	<25.3	1,030.0
		0 - 4	2/3/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	47.6
2.7	Bottom	2	1/16/2020	Excavated	<0.00106	<0.00637	<26.6	<26.6	<26.6	<26.6	4,250.0
		4.1	2/4/2020	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	178.0
2.8	Bottom	2	1/16/2020	Excavated		<0.00618	<25.8	<25.8	<25.8	<25.8	59.0
		4.1	2/4/2020	In-Situ	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	55.9
2.9	Bottom	2	1/16/2020	Excavated	<0.00109	<0.00653	<27.2	<27.2	<27.2	<27.2	5,190.0
		4.1	2/4/2020	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	1,470.0
2.10	Bottom	2	1/16/2020	Excavated	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	22.8
		4.1	2/4/2020	In-Situ	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	4,790.0
2.11	Bottom	2	1/22/2020	Excavated	<0.00104	<0.00624	<26.0	<26.0	<26.0	<26.0	2,350.0
		4.1	2/4/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	2,590.0
2.12	Bottom	2	1/22/2020	Excavated	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	2,590.0
		4.1	2/4/2020	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	2,770.0
2.13	Bottom	2	1/22/2020	Excavated		<0.00637	<26.6	<26.6	<26.6	<26.6	5,310.0
		4.1	2/4/2020	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	2,980.0
2.14	Bottom	2	1/22/2020	Excavated		<0.00631	<26.3	<26.3	<26.3	<26.3	2,400.0
		4.1	2/4/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	3,980.0
2.15	Bottom	2	1/22/2020	Excavated	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	3,060.0
		4.1	2/4/2020	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	3,540.0
2.16	Bottom	2	1/22/2020	Excavated		<0.00624	<26.0	<26.0	<26.0	<26.0	2,110.0
		4.1	2/4/2020	In-Situ	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	3,730.0
4.1	Sidewall South	0 - 4	1/16/2020	In-Situ	<0.00101	<0.00606	<25.3	<25.3	<25.3	<25.3	64.8

Table 2
Confirmation Soil Sample Analytical Data Summary
Apache Cowtown South, Select Energy Produced Water Spill
Otero County, New Mexico

N32° 42′ 13.33″ W104° 7′ 18.30"

4.2	Sidewall South	0 - 4	1/16/2020	Excavated	<0.00104	< 0.00624	<26.0	<26.0	<26.0	<26.0	5,570.0
		0 - 4	2/3/2020	Excavated	<0.00201	< 0.00201	<50.0	<50.0	<50.0	<50.0	1,030.0
		0 - 4	2/27/2020	In-Situ	< 0.00104	< 0.00624	<26.0	34.6	28.5	63.1	17.4
4.3	Sidewall South	0 - 4	1/16/2020	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	7.0
4.4	Sidewall South	0 - 4	1/16/2020	In-Situ	<0.00101	< 0.00606	<25.3	<25.3	<25.3	<25.3	9.43
4.5	Sidewall East	4.1	1/16/2020	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	7.93
4.6	Sidewall East	4.1	1/16/2020	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	13.6
4.7	Sidewall North	4.1	1/16/2020	In-Situ	<0.00101	<0.00606	<25.3	<25.3	<25.3	<25.3	5.71
4.8	Sidewall North	4.1	1/16/2020	In-Situ	<0.00101	<0.00606	<25.3	<25.3	<25.3	<25.3	9.01
4.9	Sidewall North	4.1	1/16/2020	In-Situ	<0.00103	<0.00618	<25.8	<25.8	<25.8	<25.8	14.2
4.10	Sidewall North	4.1	1/16/2020	In-Situ	<0.00101	<0.00606	<25.3	<25.3	<25.3	<25.3	10.9
4.11	Bottom	4.1	1/16/2020	In-Situ	<0.00104	< 0.00624	<26.0	<26.0	<26.0	<26.0	5,720.0
4.12	Bottom	4.1	1/16/2020	In-Situ	<0.00104	<0.00624	<26.0	<26.0	<26.0	<26.0	4,460.0
4.13	Bottom	4.1	1/16/2020	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	6,400.0
4.14	Bottom	4.1	1/16/2020	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	5,960.0
4.15	Bottom	4.1	1/16/2020	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	5,510.0
4.16	Bottom	4.1	1/16/2020	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	6,400.0
4.17	Bottom	4.1	1/16/2020	In-Situ	<0.00104	<0.00624	<26.0	<26.0	<26.0	<26.0	2,080.0
4.18	Bottom	4.1	1/16/2020	In-Situ	<0.00104	<0.00624	<26.0	<26.0	<26.0	<26.0	4,090.0
4.19	Bottom	4.1	1/16/2020	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	6,480
4.20	Bottom	4.1	1/16/2020	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	5,470.0
4.21	Bottom	4.1	1/16/2020	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	16.2
4.22	Bottom	4.1	1/16/2020	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	5,500.0
4.23	Bottom	4.1	1/16/2020	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	5,740.0
4.24	Bottom	4.1	1/16/2020	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	4,920.0
4.25	Bottom	4.1	1/16/2020	In-Situ	<0.00104	<0.00624	<26.0	<26.0	<26.0	<26.0	4,860.0
4.26	Bottom	4.1	1/16/2020	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	49.1
8.1	Sidewall East	(0-2)	1/22/2020	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	34.5
8.2	Sidewall West	(0-2)	1/22/2020	In-Situ	<0.00104	<0.00624	<26.0	<26.0	<26.0	<26.0	13.5
8.3	Bottom	2	1/22/2020	In-Situ	<0.00104	<0.00624	<26.0	<26.0	<26.0	<26.0	14.2
8.4	Bottom	2	1/22/2020	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	9.55
8.5	Bottom	2	1/22/2020	In-Situ	<0.00103		<25.8	<25.8	<25.8	<25.8	17.6
Backfill Sand 1			3/6/2020	In-Situ	<0.00106		<26.6	<26.6	<26.6	<26.6	4.01
Backfill Sand 2			3/6/2020	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	3.02
Backfill Sand 3			3/6/2020	In-Situ	<0.00103	<0.00618	<25.8	<25.8	<25.8	<25.8	6.47

Table 2

Confirmation Soil Sample Analytical Data Summary Apache Cowtown South, Select Energy Produced Water Spill Otero County, New Mexico N32° 42′ 13.33″ W104° 7′ 18.30"

Backfill Sand 4	3/6/2020	In-Situ	<0.00106	<0.00637	<26.6	<26.6	<26.6	<26.6	14.8
Backfill Sand 5	3/6/2020	In-Situ	<0.00103	<0.00618	<25.8	<25.8	<25.8	<25.8	5.99
Backfill 6	3/6/2020	In-Situ	<0.00103	<0.00618	<25.8	<25.8	<25.8	<25.8	4.82
Backfill 7	3/6/2020	In-Situ	<0.00103 <	<0.00618	<25.8	<25.8	<25.8	<25.8	5.28
Backfill 8	3/6/2020	In-Situ	<0.00106 <	< 0.00637	<26.6	<26.6	<26.6	<26.6	3.56
Backfill 9	3/6/2020	In-Situ	<0.00103	<0.00618	<25.8	<25.8	<25.8	<25.8	6.22

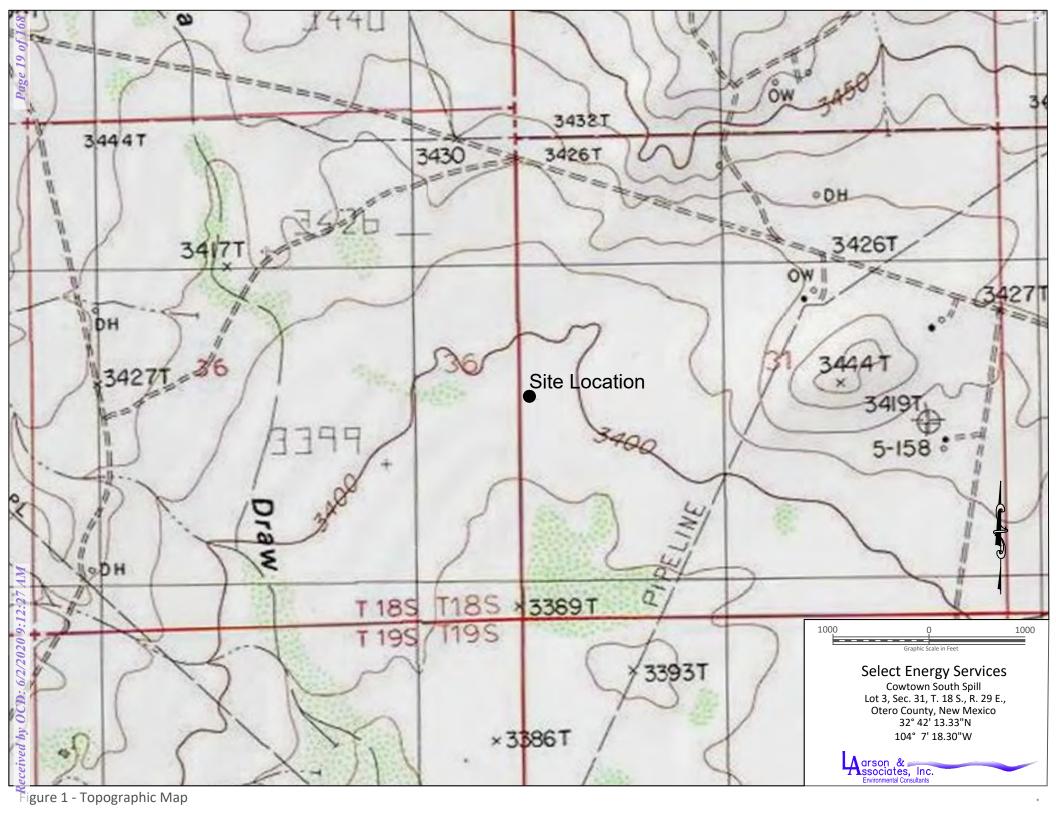
Notes: analysis performed by Permian Basin Environmental Lab (PBEL), Midland, Texas by EPA SW-846 Methods 8021B (BTEX) and 8015M (TPH), and

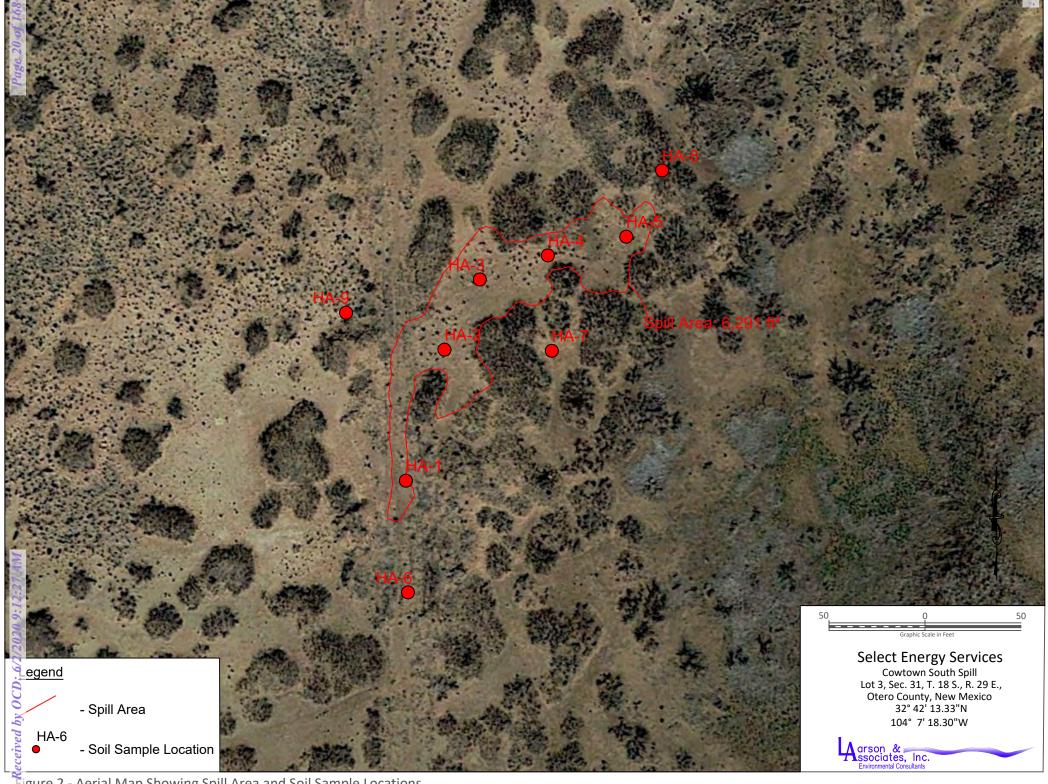
Method 300 (chloride)

Depth in feet below ground surface (bgs)

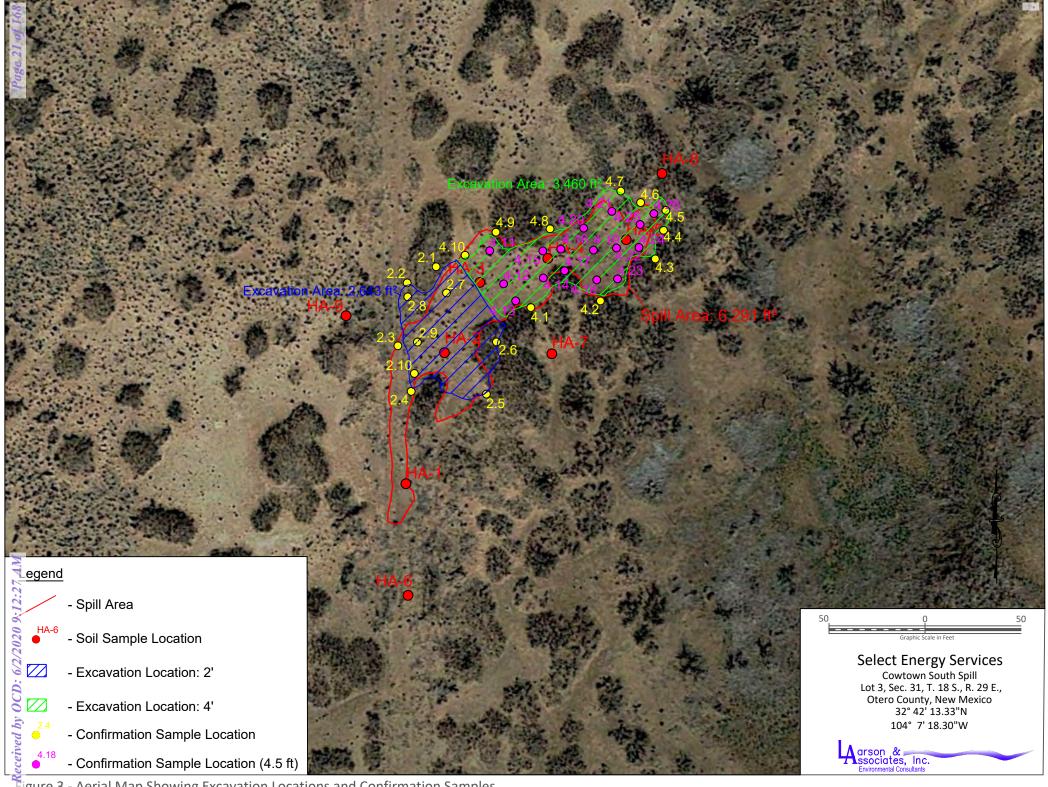
mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

Figures





igure 2 - Aerial Map Showing Spill Area and Soil Sample Locations



igure 3 - Aerial Map Showing Excavation Locations and Confirmation Samples

Appendix A

Waste Manifests

Iron Horse Services LLC 418 W ave C Lovington NM 88260

Bill To
BDS Enterprises LLC
PO Box 2286
Carlsbad, NM 88221

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FEB 26 2020
313578



Invoice

Date 2/25/2020

Invoice #/

P.O. No.	Terms	Project
Louie Barnes	Net 30	Cimarex

			O Deck	110130	Cimarex
Description		Quantity	Rate	Project	Amount
Cimarex - Burgoo King pad Extention Truck# 001 I.H.S 20yds Loads - 9 Field ticket # 1001	2-19-20	13	85.00	Belly Dump	1,105.00T
Cimarex - Burgoo King pad Extention Truck # Tomahawk trucking 20yds Loads - 8 Field ticket # 1803	2-19-20	13	85.00	Belly Dump	1,105.001
Cimarex - Burgoo King pad Extention Truck # AM Transport 20yds Loads - 9 Field ticket # 144	2-19-20	13.	85.00	Belly Dump	1,105.00T
Cimarex - Burgoo King pad Extention Truck # StarCo 20yds Loads - 8 Field ticket # 487	2-19-20	13	85.00	Belly Dump	1,105.00T
Cimarex - Burgoo King pad Extention Fruck # StarCo 20yds Loads - 8 Field ticket # 677	2-19-20	13	85.00	Belly Dump	1,105.00T
ax exempt			0.00%		0.00
				EN	TERED R 0 9 2020
				M	IR 0 9 2020

Total

\$5,525.00

Iron Horse Services, LLC 418 W Avenue C Lovington, NM 88260



Phone: (806) 632-5616 ironhorseserviceslic@gmail.com

FIELD ORDER NUMBER CONTRACT / JOB NUMBER COMPANY NAME: BOS Enter Prise A.F.E. NUMBER OIL COMPANY NAME: CIMA YE ORDERED BY DRIVER NAME WELL OR LEASE RIG NO. Extension TIME A AM HOURS CHARGED AMOUNT AM TIME TRUCK OR UNIT NO. HAULED DESCRIPTION RATE **AMOUNT** Material f/w bbls b/w bbls p/w bbls Flowback City Water KCL gal Packer Fluid Solids bbl OBM yards TOP GAUGE **BOTTOM GAUGE** 18 19 12 13 14 15 16 17 2 3 4 5 6 7 8 9 10 11 TAX NET TOTAL Thank You! TOTAL HOURS CHARGED: OPERATOR OR DRIVER FOREMAN / SUPERVISOR

301 W. Rojo Hobbs, NM 88240



Tomahawk Trucking, LLC



Cell: (575) 441-0725 Office: (575) 393-4246

CUSTOMER INFO. NAME: LIMATOR LOCATION: BUIGOO FRING FA		uck - Belly Du	imp	DATE: 2	No. 1803
DRIVER NAME: When To Make		. UNIT #: 4	17	TOTAL HOL	JRS: 13
EQUIPMENT USED: BeLLY	Demp	VACUU	M TRUCK	BE	ELLY DUMP
0 0		UNIT PRICE	TOTAL FROM	TICKET	
Customer Representative Signature	VACUUM TRUCK	\$	SALES TAX	(
	BELLY DUMP	\$ GRAN		AND TOTAL	
		1		su	PERIOR PRINTING SERVICE, IN

0144

AM Transport LLC 105 E Washington

Lovington, NM 88260

Cell (575) 399-4208 Office (575) 749-7547

Date: 2-/9-20
Driver: Goilprmo martina
Truck # 4
Company: Cinarie
Location: Burgo King Pad Extension
Location For:
Job/PO/AFE #
Material(s) Hauled: Base
Loads# MIII
Quantity:
Start Time: End Time: Total Hours:
Work Performed:
Approved By:
17/2
//

721	W.	Bird	ch	
Lov	ing	ton,	NM	88280



575-605-4363

COMPANY NAME: BOS ENTERPRISES	CONTRA	CT / JOB MBER		PIE OR NU	DER 04	187
DIL COMPANY NAME:	NUR	F E. AGER			702-1	
	OPIDE	RED BY			-	
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TRUCK OR 37 AMOUNT TIME OUT	AM TIME	. AM	OURS CHARG	ED		
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		b/w bbls				
		p/w bble				
To bockechon		Flowback				
		City Water				1
		KCL gal				
		Packer Fluid				
		Solida bbl				T
		ОВМ				
TOP GAUGE BOTTOM GAUGE		yerde	20	1		1
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11/1///			MET	TOTAL	_	+
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					Thank	You!
	\forall					
	+					
TOTAL HOURS CHARGED:						
OPERATOR OR DRIVER FOREMAN /	SUPERVISA	n _				
Jaime x D'E	2	5				

OMPANY NAME BOS EN +CIPISES	CONTRAC	T/J08		PIELD OPOEI NUMB	En 067	7
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EVER NAME					P	
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Drigod hing Pad Exersion	AM TIME		PS OWNGED	12		:
DESCRIPTION	PM N	Pu	RATE	-	AMOUNT	
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A		City Weber	-			
23. 423	1	KCX, gad				
25 43	in	Pacher Fluid			74	
		Suitch total				
		OBM				L
TOP GAUGE BOTTOM		yerds			* -	
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		16 7				
12 4-60		denm II			10.0	
OTAL HOURS CHARGED:					, .	+

Iron Horse Services LLC

418 W ave C Lovington NM 88260

RECEIVED MAR 0 4 2020



Bill To

BDS Enterprises LLC PO Box 2286 Carlsbad, NM 88221

Invoice

Date 3/2/2020

Invoice #

Jeb.

P.O. No. Terms Project

Louie Barnes Net 30 Cowtown south

Description	Quantity	Rate	Project	Amount
Select Energy Cowtown South Truck # 02 Reyes 12yd Loads-1 Field ticket # 094125 R360 Manifest # 444585	6	75.00	Dump Truck	450,001
Select Energy Cowtown South Truck # 1 Montana 12yd Loads-1 Field ticket # 273 R360 Manifest # 273 Ticket # 700-111-8244	6	75.00	Dump Truck	450.001
Select Energy Cowtown South Truck # 2 Montana 12yd Loads-1 Field ticket # 272	6	75.00	Dump Truck	450.00T
R360 Manifest # 272 Ticket # 700-111-8245 ax exempt		0.00%		0.00
			EN	TERED R 0 9 2020

Total

\$1,350.00

de adams 6040	Com		ORDERED	ADDRESS West	Invoice
	sery sery		SHIPPED	85. 5	Ď
Douglas Luring	Select Energy Courtown South	Houled (1) Location to R360	DESCRIPTION	Horse Services LLC SHIPTO - 12 West Are C ADDRESS OLD BY 88260 TERMS FO.B.	1-12 Trocking
			PRICE	BOX 2353	
			UNIT 23	19 2353 DATE	09
		-	L-75-3	241	094125



Permian Basin

SELECT ENERGY SERVICES Customer:

Customer #: CRI5255

Ordered by: RICK FOUCH

AFE #:

PO #:

Manifest #: 444585

Manif. Date: 2/27/2020 LR TRUCKING

Hauler: Driver Truck #

LUIS 02

Card # Job Ref# Ticket#: Bid #:

700-1118249 Walk-in Bid

2/27/2020

Date: Generator:

SELECT ENERGY SERVICES

Generator #:

Well Ser. #: 999908

Well Name: COWTOWN SOUTH

Well#: Field:

Field #:

Rig: NON-DRILLING

County EDDY (NM)

Facility: CRI

Product / Serv	ice			10 10 10 10 10 10 10 10 10 10 10 10 10 1		Q	uantity Uni	ts			
Contaminated	Soil (F	CRA Exe	mpt)				12.00 ya	rds			
	Cell	рН	CI	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	10	0.00	0.00	0.00	0					0	

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste _ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items): _ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature	R360 Representative Signature
1 - 0	
Tues Manon	7/
year jugiz	
Customer Approval	

THIS IS NOT AN INVOICE!

Approved By:

Scient e	neigy			CONTRACT			FIELD ORDER NUMBER	273
				A.F.E. NUMBER			DATE 92 - 2	7-20
				REQ. OR PURCHASE ORD NUMBER	DER		ORDERED 8	
LIVERED FROM RICK F	outh		Т	360)			
COW TOWN	South	4	,				WELL OR RIG NO.	
RUCK OR INIT NO. 7 1	12 Yrs	AMOUNT HAULED	TIME		TIME N	AM HOURS	3	DELIVERED BY
	DES	CRIPTION			OHR.	O BBL.	RATE	AMOUNT
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						bbls		
						#KCL		
6	hours					Disp		
						Disp		
						Loads		
						Yards		
	M GAUGE					Other		
HIGHWAY MI	UNLOADED	TERMS:					TAX	
LOADED	CHECHDED	TEDMC.						



Permian Basin

Customer: SELECT ETERGY SERVICES

Customer # CRI5255

Ordered by: RICK FOUCH

AFE #: PO #:

Manifest #: 273 Manif. Date: 2/27/2020

Hauler: Driver Truck # MONTANA TRUCKING, LLC RAMERIEZ

Card # Job Ref # ES Ticket #:

700-1118244 Walk-in Bid

 Bid #:
 Walk-in Bid

 Date:
 2/27/2020

 Generator:
 SELECT ENERGY SERVICES

Generator #:

Well Ser. #: 999908

Well Name: COWTOWN SOUTH

Well #: Field:

Field #:

Rig: County

MR/HR

NON-DRILLING EDDY (NM)

H2S

% Oil

Weight

Facility: CRI

Product / Service

Quantity Units

PCI/GM

Contaminated Soil (RCRA Exempt)

12.00 yards

 Cell
 pH
 Cl
 Cond.
 %Solids

 Lab Analysis.
 50/51
 0.00
 0.00
 0.00
 0

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

TDS

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature

R360 Representative Signature

Customer Approval

THIS IS NOT AN INVOICE!

and the second s		
Approved By:	Date:	
	Date.	

		1015 E. Broadwa	y · Hobbs, N	M 88240	• (575) 263-	9630		
Scient	enercy			CONTRA NUMBE			FIELD ORDER NUMBER	272
				A.F.E. NUMBE			DATE 02-2	7-20
				PURCHASE O NUMBE	DADER		ORDERED 8	
LIVERED FROM BICK	forch			TO 30	60			
CATION TOU	n South						WELL OR RIG NO.	
RUCK OR NIT NO. ##	CAPACITY /2 Y 15	AMOUNT HAULED	TIME	AM PM	TIME	AM HOUR CHGD		DELIVERED BY
	DESC	CRIPTION			OHR.	OBBL.	RATE	AMOUNT
2 101	ids fix	ing Cont	amina	da		Hrs.		
						bbls		
						#KCL		
	6 Hou	rs		14		Disp		
						Disp		
						Loads		
						Yards		
	TTOM GAUGE					Other		
LOADED	Y MILES UNLOADED	-					TAX	
LUNDED	UNLUADED	TERMS:					NET TOTAL	
							NEI TOTAL	



Permian Basin

SELECT ENERGY SERVICES Customer:

Ticket #: 700-1118245 Customer #: CRI5255 Bid #: Walk-in Bid Ordered by: RICK FOUCH Date: 2/27/2020

AFE #: SELECT ENERGY SERVICES Generator: PO #

Generator #: Manifest #: 272 Well Ser. #: 999908

Manif. Date: 2/27/2020 Well Name: COWTOWN SOUTH

MONTANA TRUCKING, LLC Hauler Well# Driver BENITO Field: Truck # Field #:

Card # Rig: NON-DRILLING Job Ref# County EDDY (NM)

Facility: CRI

Product / Service Quantity Units

Contaminated Soil (RCRA Exempt) 12.00 yards

Cond. %Solids TDS PCI/GM MR/HR H₂S % Oil Lab Analysis.

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature R360 Representative Signature

Customer Approval

THIS IS NOT AN INVOICE!

Approved By:	Dete
	Date:

Iron Horse Services LLC
418 W ave C
Lovington
RECEIVED

NM 88260





Bill To BDS Enterprises LLC PO Box 2286 Carlsbad, NM 88221

Invoice

Invoice # Date 1354 3/10/2020

P.O. No.	Terms	Project
Brent Wilson	Net 30	Cowtown South

	Quantity	Rate	Project	Amount
Description Select Energy - Cowtown South 3-9-20	11	75.00	Dump Truck	825.00T
Truck # 3 Montana Loads -16 Field Ticket # 477				
Select Energy - Cowtown South 3-9-20 Truck # 1 Montana	11	75.00	Dump Truck	825.00T
Loads -16 Field Ticket # 477 tax exempt		0.00%		0.00
				CO.
			E	PR 0 2 2020
			Total	\$1,650.00

A.F.E. NUMBER REQ. OR		DATE	1 - 1 -
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08-	DATE 03_09	1	HERMUN RO DER RECORDINATION OF THE PROPERTY OF		soslodoofug	509

Iron Horse Services LLC
418 W ave C
Lovington
NM 88260 RECEIVED

MAR 1 8 2020

Bill To

BDS Enterprises LLC PO Box 2286 Carlsbad, NM 88221





Invoice

Date Invoice # 3/10/2020 1355

P.O. No. Terms Project

Brent Wilson Net 30 Cowtown South

Descript	tion	Quantity	Rate	Project	Amount
Select Energy - Cowtown South Truck # J53 JTS Trucking Loads -6 Field Ticket # 247473	3-10-20	5	75.00	Dump Truck	375.00T
Select Energy - Cowtown South Truck # J54 JTS Trucking Loads -6 Field Ticket # 440120	3-10-20	:5	75.00	Dump Truck	375.00T
Select Energy - Cowtown South Truck #3 Montana Trucking Loads -5 Field Ticket #478	3-10-20	5	75.00	Dump Truck	375.00T
Select Energy - Cowtown South Truck # 8 Perazas Transport Loads -3 Field Ticket # 1392	3-10-20	5	75.00	Dump Truck	375.00T
Select Energy - Cowtown South Truck # 9 Perazas Transport Loads -3 Field Ticket # 1391	3-10-20	5	75.00	Dump Truck	375.00T
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PERAZA'S TRANSPORT, LLC RO. BOX 3243 • HOBBS, NM 88241

P.O. BOX 3243 • HOBBS, NM 8824 blancaperaza0070@gmail.com Ph 575-441-2129 / 575-408-3735

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P.O. BOX 3243 • HOBBS, NM 88241 blancaperaza0070@gmail.com Ph 575-441-2129 / 575-408-3735 INVOICE 1391 Bds Enterprises Deliver to TOTAL AM AM END TIME START TIME PO # Job # EQUIPMENT PROVIDED BY: # Flatbed Belly Dump Dump Truck Lowboy 3 Axle Lowboy 4 Axle Pipa Trailer Other Scale #'s WORK DESCRIPTION Other 3 loads. + cowtown south Work Performed By Company Man Signature

Iron Horse Services LLC

418 W ave C Lovington NM 88260

RECEIVED MAR 1 8 2020

Bill To

BDS Enterprises LLC PO Box 2286 Carlsbad, NM 88221





Invoice

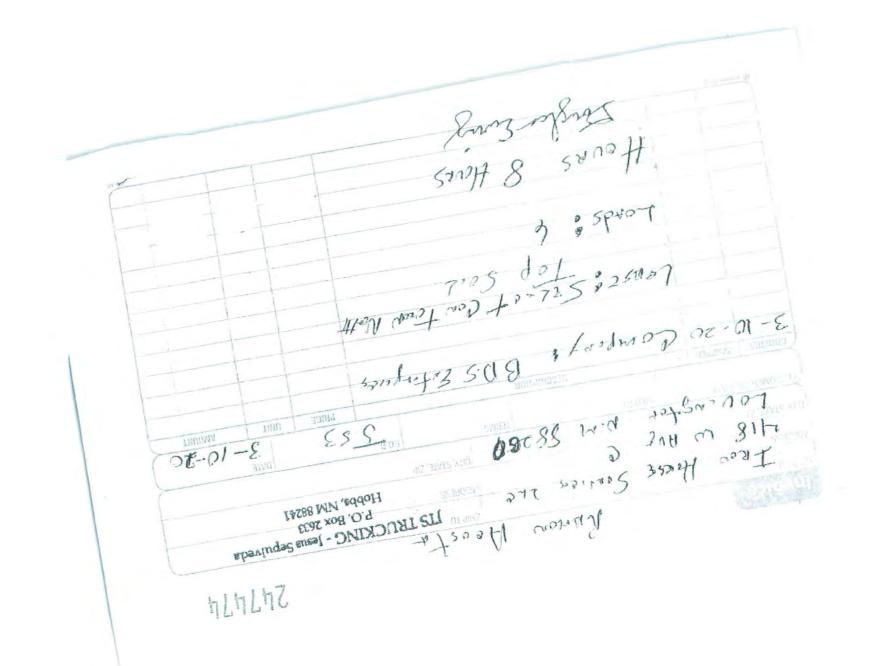
Date 3/10/2020 Invoice # 1356

P.O. No.	Terms	Project
Brent Wilson	Net 30	Cowtown North

Descript	ion	Quantity	Rate	Project	Amount
Select Energy - Cowtown North Truck # J53 JTS Trucking Loads -6 Field Ticket # 247474	3-10-20	8	75.00	Dump Truck	600.007
Select Energy - Cowtown South Truck # J54 JTS Trucking Loads -6 Field Ticket # 440121	3-10-20	8	75.00	Dump Truck	600.007
Select Energy - Cowtown South Truck # 3 Montana Trucking Loads -6 Field Ticket # 479	3-10-20	8	75.00	Dump Truck	600.001
Select Energy - Cowtown South Truck # 8 Perazas Transport Loads -6 Field Ticket # 1394	3-10-20	8	75.00	Dump Truck	600.007
Select Energy - Cowtown South Truck # 9 Perazas Transport Loads -6 Field Ticket # 1393	3-10-20	8	75.00	Dump Truck	600.007
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P.O. BOX 3243 • HOBBS, NM 88241 blancaperaza0070@gmail.com Ph 575-441-2129 / 575-408-3735

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P.O. BOX 3243 • HOBBS, NM 88241 blancaperaza0070@gmail.com Ph 575-441-2129 / 575-408-3735

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Iron Horse Services LLC

418 W ave C Lovington NM 88260

RECEIVED

MAR 1 8 2020

Bill To

BDS Enterprises LLC PO Box 2286 Carlsbad, NM 88221





Invoice

Date 3/11/2020 Invoice # 1357

APR 0 2 2020

P.O. No.	Terms	Project
	Net 30	

Description		Quantity Rate		Amount	
3-11-20	12	75.00	Dump Truck	900.00	
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Iron Horse Services LLC 418 W ave C Lovington NM 88260

Bill To
BDS Enterprises LLC
PO Box 2286
Carlsbad, NM 88221



Invoice

Date Invoice # 3/11/2020 1357

P.O. No. Terms Project
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Ph 575-441-2129 / 575-408-3735 blancaperaza0070@gmail.com PO. BOX 3243 • HOBBS, NM 88241

Work Performed By Lease = Select Com Locids **MOHK DESCRIPTION** S.# PIBOS Other Other Pipe Trailer Lowboy 4 Axle Lowboy 3 Axle 80# Dump Truck Belly Dump Flatbad Ħ **EQUIPMENT PROVIDED BY:** # Od MA M9 JATOT PAUDHS. START TIME **END TIME** Wd Deliver to FOY - CO - 407 96EI Date (3-11-20) INVOICE

Company Man Signature,

PERAZA'S TRANSPORT, LLC PO. BOX 3243 • HOBBS, NM 88241 Clanceperaza00705@gmail.com

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P.O. BOX 3243 • HOBBS, NM 88241 blancaperaza0070@gmail.com Ph 575-441-2129 / 575-408-3735

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Iron Horse Services LLC

418 W ave C Lovington NM 88260 RECEIVED

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Bill To

BDS Enterprises LLC PO Box 2286 Carlsbad, NM 88221

Invoice

Date 3/13/2020

Invoice #

288

APR 0 2 2020

P.O. No. Terms Project

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Descrip	tion	Quantity	Rate	Project	Amount
Select Energy - Cowtown South Truck # J53 JTS Trucking Loads -6 Field Ticket # 247476	3-12-20	10	75.00	Dump Truck	750.001
Select Energy - Cowtown South Truck # J54 JTS Trucking Loads -6 Field Ticket # 440123	3-12-20	10	75.00	Dump Truck	750.001
Select Energy - Cowtown South Truck #3 Montana Trucking Loads -6 Field Ticket #481	3-11-20	10	75.00	Dump Truck	750.001
Select Energy - Cowtown South Truck # 1 Montana Trucking Loads -5 Field Ticket # 579	3-11-20	10	75.00	Dump Truck	750.001
Select Energy - Cowtown South Truck # 10 Perazas Transport Loads -6 Field Ticket # 1399	3-11-20	10	75.00	Dump Truck	750.001
Select Energy - Cowtown South Truck # 9 Perazas Transport Loads -6 Field Ticket # 1400	3-11-20	10	75.00	Dump Truck	750.00T
Select Energy - Cowtown South Truck # 8 Perazas Transport Loads -6 Field Ticket # 1398	3-11-20	10	75.00	Dump Truck	750.00T

Iron Horse Services LLC 418 W ave C Lovington NM 88260

BDS Enterprises LLC	
PO Box 2286 Carlsbad, NM 88221	
Carisbad, INVI 60221	

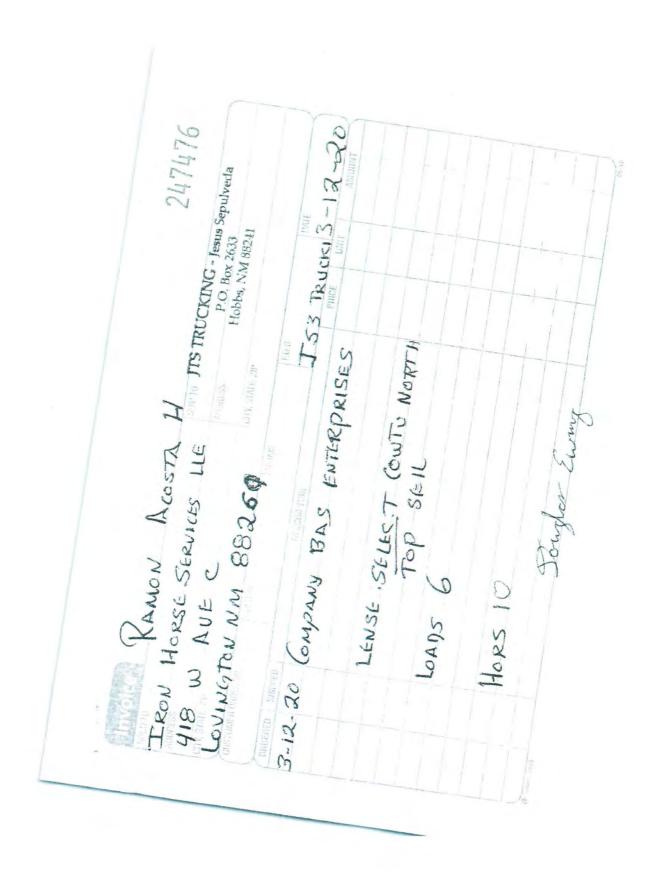


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P.O. BOX 3243 • HOBBS, NM 88241 blancaperaza0070@gmail.com Ph 575-441-2129 / 575-408-3735

INVOICE

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P.O. BOX 3243 • HOBBS, NM 88241 blancaperaza0070@gmail.com Ph 575-441-2129 / 575-408-3735

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P.O. BOX 3243 • HOBBS, NM 88241 Plancaperaza0070@gmail.com Ph 575-441-2129 / 575-408-3735

Work Performed By Drivet Everardo **MORK DESCRIPTION** S,# BIRDS Other Olher Pipe Trailer Lowboy 4 Axie Lowboy 3 Axle 80世 Dump Truck Belly Dump Fistbed # **EQUIPMENT PROVIDED BY:** # Od # dot OL SAUOH SMIT TRATZ MA END LINE Mid MA Deliver to Company 13.05 1398 D2-21-50 ets0 INVOICE

Company Man Signature

Appendix B

Laboratory Reports

PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: Select Energy Cowtown South
Project Number: 19-0179-03
Location:

Lab Order Number: 0A23004



NELAP/TCEQ # T104704516-18-9

Report Date: 01/27/20

Fax: (432) 687-0456

Larson & Associates, Inc.

Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03 Midland TX, 79710

Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
2.11	0A23004-01	Soil	01/22/20 11:37	01-23-2020 09:45
2.12	0A23004-02	Soil	01/22/20 11:38	01-23-2020 09:45
2.13	0A23004-03	Soil	01/22/20 11:39	01-23-2020 09:45
2.14	0A23004-04	Soil	01/22/20 11:40	01-23-2020 09:45
2.15	0A23004-05	Soil	01/22/20 11:41	01-23-2020 09:45
2.16	0A23004-06	Soil	01/22/20 11:42	01-23-2020 09:45
8.1	0A23004-07	Soil	01/22/20 11:50	01-23-2020 09:45
8.2	0A23004-08	Soil	01/22/20 11:52	01-23-2020 09:45
8.3	0A23004-09	Soil	01/22/20 11:53	01-23-2020 09:45
8.4	0A23004-10	Soil	01/22/20 11:54	01-23-2020 09:45
8.5	0A23004-11	Soil	01/22/20 11:55	01-23-2020 09:45

Larson & Associates, Inc.

Project: Select Energy Cowtown South

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson Fax: (432) 687-0456

2.11 0A23004-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
Permian Basin Environmental Lab, L.P.										
Organics by GC										
Benzene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B		
Toluene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B		
Ethylbenzene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B		
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B		
Xylene (o)	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		108 %	75-12	25	P0A2303	01/23/20	01/23/20	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		99.0 %	75-12	25	P0A2303	01/23/20	01/23/20	EPA 8021B		
General Chemistry Parameters by EPA /	Standard Method	S								
Chloride	2350	5.21	mg/kg dry	5	P0A2306	01/23/20	01/24/20	EPA 300.0		
% Moisture	4.0	0.1	%	1	P0A2401	01/24/20	01/24/20	ASTM D2216		
Total Petroleum Hydrocarbons C6-C35 b	y EPA Method 80	15M								
C6-C12	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M		
>C12-C28	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M		
>C28-C35	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M		
Surrogate: 1-Chlorooctane		112 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M		
Surrogate: o-Terphenyl		127 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M		
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	01/23/20	01/23/20	calc		

P.O. Box 50685

Midland TX, 79710

Larson & Associates, Inc.

Project Number: 19-0179-03 Project Manager: Mark Larson

Project: Select Energy Cowtown South

Fax: (432) 687-0456

2.12 0A23004-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin E	Environme	ntal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		108 %	75-1	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		99.1 %	75-1	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ds							
Chloride	2590	5.26	mg/kg dry	5	P0A2306	01/23/20	01/24/20	EPA 300.0	
% Moisture	5.0	0.1	%	1	P0A2401	01/24/20	01/24/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 b	oy EPA Method 80	015M							
C6-C12	ND	26.3	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: 1-Chlorooctane		104 %	70-1	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: o-Terphenyl		118 %	70-1	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	01/23/20	01/23/20	calc	

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

> 2.13 0A23004-03 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin E	Environmen	tal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00106	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		111 %	75-1.	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.7 %	75-1.	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ls							
Chloride	5310	10.6	mg/kg dry	10	P0A2306	01/23/20	01/24/20	EPA 300.0	
% Moisture	6.0	0.1	%	1	P0A2401	01/24/20	01/24/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	oy EPA Method 80	15M							
C6-C12	ND	26.6	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: 1-Chlorooctane		99.3 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: o-Terphenyl		112 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	01/23/20	01/23/20	calc	

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

> 2.14 0A23004-04 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin F	Environmen	ital Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		99.5 %	75-1.	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		109 %	75-1.	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ls							
Chloride	2400	5.26	mg/kg dry	5	P0A2306	01/23/20	01/24/20	EPA 300.0	
% Moisture	5.0	0.1	%	1	P0A2401	01/24/20	01/24/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	oy EPA Method 80	15M							
C6-C12	ND	26.3	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: 1-Chlorooctane		102 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: o-Terphenyl		118 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	01/23/20	01/23/20	calc	

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

> 2.15 0A23004-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin I	Environmer	ıtal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.8 %	75-1	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		107 %	75-1	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ls							
Chloride	3060	5.26	mg/kg dry	5	P0A2306	01/23/20	01/24/20	EPA 300.0	
% Moisture	5.0	0.1	%	1	P0A2401	01/24/20	01/24/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	oy EPA Method 80	15M							
C6-C12	ND	26.3	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: 1-Chlorooctane		107 %	70-1	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: o-Terphenyl		123 %	70-1	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	01/23/20	01/23/20	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03

Midland TX, 79710 Project Manager: Mark Larson

Fax: (432) 687-0456

2.16 0A23004-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin F	Environmen	tal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		100 %	75-1.	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		107 %	75-1.	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
General Chemistry Parameters by EPA /	Standard Method	ls							
Chloride	2110	5.21	mg/kg dry	5	P0A2306	01/23/20	01/24/20	EPA 300.0	
% Moisture	4.0	0.1	%	1	P0A2401	01/24/20	01/24/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 b	oy EPA Method 80)15M							
C6-C12	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: 1-Chlorooctane		116 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: o-Terphenyl		136 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	01/23/20	01/23/20	calc	

Fax: (432) 687-0456

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

8.1 0A23004-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
	Peri	nian Basin F	Environmer	ıtal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.7 %	75-1	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		105 %	75-1	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ds							
Chloride	34.5	1.02	mg/kg dry	1	P0A2306	01/23/20	01/24/20	EPA 300.0	
% Moisture	2.0	0.1	%	1	P0A2401	01/24/20	01/24/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	oy EPA Method 80	015M							
C6-C12	ND	25.5	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: 1-Chlorooctane		95.9 %	70-1	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: o-Terphenyl		110 %	70-1	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	01/23/20	01/23/20	calc	

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

8.2 0A23004-08 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	Environmer	ıtal Lab, l	P.				
Organics by GC									
Benzene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.6 %	75-1	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		107 %	75-1	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ls							
Chloride	13.5	1.04	mg/kg dry	1	P0A2306	01/23/20	01/24/20	EPA 300.0	
% Moisture	4.0	0.1	%	1	P0A2401	01/24/20	01/24/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	oy EPA Method 80	15M							
C6-C12	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: 1-Chlorooctane		99.7 %	70-1	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: o-Terphenyl		112 %	70-1	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	01/23/20	01/23/20	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

Fax: (432) 687-0456

8.3 0A23004-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	nvironmen	ıtal Lab, I					
Organics by GC									
Benzene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		104 %	75-1.	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.8 %	75-1.	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
General Chemistry Parameters by EPA/	Standard Method	<u>ls</u>							
Chloride	14.2	1.04	mg/kg dry	1	P0A2306	01/23/20	01/24/20	EPA 300.0	
% Moisture	4.0	0.1	%	1	P0A2401	01/24/20	01/24/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 b	y EPA Method 80)15M							
C6-C12	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: 1-Chlorooctane		114 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: o-Terphenyl		131 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	01/23/20	01/23/20	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

Fax: (432) 687-0456

8.4 0A23004-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	Environmen	tal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		105 %	75-1.	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.7 %	75-1.	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ls							
Chloride	9.55	1.02	mg/kg dry	1	P0A2306	01/23/20	01/24/20	EPA 300.0	
% Moisture	2.0	0.1	%	1	P0A2401	01/24/20	01/24/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 h	oy EPA Method 80	15M							
C6-C12	ND	25.5	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: 1-Chlorooctane		111 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: o-Terphenyl		129 %	70-1.	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	01/23/20	01/23/20	calc	

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Larson & Associates, Inc.

Project: Select Energy Cowtown South

Project Number: 19-0179-03 Project Manager: Mark Larson

> 8.5 0A23004-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin E	Environme	ıtal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00103	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		102 %	75-1	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		97.2 %	75-1	25	P0A2303	01/23/20	01/23/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ls							
Chloride	17.6	1.03	mg/kg dry	1	P0A2306	01/23/20	01/24/20	EPA 300.0	
% Moisture	3.0	0.1	%	1	P0A2401	01/24/20	01/24/20	ASTM D2216	
<u> Fotal Petroleum Hydrocarbons C6-C35 l</u>	oy EPA Method 80	15M							
C6-C12	ND	25.8	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: 1-Chlorooctane		104 %	70-1	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Surrogate: o-Terphenyl		118 %	70-1	30	P0A2305	01/23/20	01/23/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	01/23/20	01/23/20	calc	

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Larson & Associates, Inc.

Project: Select Energy Cowtown South

P.O. Box 50685 Midland TX, 79710

Project Number: 19-0179-03 Project Manager: Mark Larson

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

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

Blank (P0A2303-BLK1)				Prepared & Anal	yzed: 01/23/20				
Benzene	ND	0.00100	mg/kg wet	-	-				
Toluene	ND	0.00100	"						
Ethylbenzene	ND	0.00100	"						
Xylene (p/m)	ND	0.00200	"						
Xylene (o)	ND	0.00100	"						
Surrogate: 1,4-Difluorobenzene	0.116		"	0.120	96.9	75-125			
Surrogate: 4-Bromofluorobenzene	0.125		"	0.120	104	75-125			
LCS (P0A2303-BS1)				Prepared & Anal	yzed: 01/23/20				
Benzene	0.103	0.00100	mg/kg wet	0.100	103	70-130			
Toluene	0.104	0.00100	"	0.100	104	70-130			
Ethylbenzene	0.102	0.00100	"	0.100	102	70-130			
Xylene (p/m)	0.225	0.00200	"	0.200	112	70-130			
Xylene (o)	0.113	0.00100	"	0.100	113	70-130			
Surrogate: 4-Bromofluorobenzene	0.130		"	0.120	108	75-125			
Surrogate: 1,4-Difluorobenzene	0.126		"	0.120	105	75-125			
LCS Dup (P0A2303-BSD1)				Prepared & Anal	yzed: 01/23/20				
Benzene	0.109	0.00100	mg/kg wet	0.100	109	70-130	5.78	20	
Toluene	0.113	0.00100	"	0.100	113	70-130	8.22	20	
Ethylbenzene	0.108	0.00100	"	0.100	108	70-130	5.78	20	
Xylene (p/m)	0.223	0.00200	"	0.200	111	70-130	0.791	20	
Xylene (o)	0.106	0.00100	"	0.100	106	70-130	6.30	20	
Surrogate: 1,4-Difluorobenzene	0.123		"	0.120	103	75-125			
Surrogate: 4-Bromofluorobenzene	0.129		"	0.120	107	75-125			
Calibration Blank (P0A2303-CCB1)				Prepared & Anal	yzed: 01/23/20				
Benzene	0.00		mg/kg wet						
Toluene	0.00		"						
Ethylbenzene	0.00		"						
Xylene (p/m)	0.00		"						
Xylene (o)	0.00		"						
Surrogate: 1,4-Difluorobenzene	0.118		"	0.120	98.2	75-125			_
Surrogate: 4-Bromofluorobenzene	0.125		"	0.120	104	75-125			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Project: Select Energy Cowtown South

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P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	Kesuit	Lillit	Omis	Levei	Kesuit	/0KEC	Lillius	KLD	LIIIII	INUICS
Batch P0A2303 - General Preparation (GC)										
Calibration Blank (P0A2303-CCB2)				Prepared &	Analyzed:	01/23/20				
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.126		"	0.120		105	75-125			
Surrogate: 1,4-Difluorobenzene	0.115		"	0.120		95.9	75-125			
Calibration Blank (P0A2303-CCB3)				Prepared &	Analyzed:	01/23/20				
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.123		"	0.120		103	75-125			
Surrogate: 1,4-Difluorobenzene	0.115		"	0.120		95.5	75-125			
Calibration Check (P0A2303-CCV1)				Prepared &	: Analyzed:	01/23/20				
Benzene	0.102	0.00100	mg/kg wet	0.100		102	80-120			
Toluene	0.105	0.00100	"	0.100		105	80-120			
Ethylbenzene	0.105	0.00100	"	0.100		105	80-120			
Xylene (p/m)	0.223	0.00200	"	0.200		111	80-120			
Xylene (o)	0.113	0.00100	"	0.100		113	80-120			
Surrogate: 1,4-Difluorobenzene	0.125		"	0.120		104	75-125			
Surrogate: 4-Bromofluorobenzene	0.124		"	0.120		103	75-125			
Calibration Check (P0A2303-CCV2)				Prepared &	: Analyzed:	01/23/20				
Benzene	0.108	0.00100	mg/kg wet	0.100		108	80-120			
Toluene	0.105	0.00100	"	0.100		105	80-120			
Ethylbenzene	0.102	0.00100	"	0.100		102	80-120			
Xylene (p/m)	0.216	0.00200	"	0.200		108	80-120			
Xylene (o)	0.102	0.00100	"	0.100		102	80-120			

Surrogate: 4-Bromofluorobenzene

Surrogate: 1,4-Difluorobenzene

101

102

75-125

75-125

0.120

0.120

0.121

0.122

Project: Select Energy Cowtown South

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P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P0A2303 - General Preparation (G	C)									
Calibration Check (P0A2303-CCV3)				Prepared &	k Analyzed:	01/23/20				
Benzene	0.104	0.00100	mg/kg wet	0.100		104	80-120			
Toluene	0.106	0.00100	"	0.100		106	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.218	0.00200	"	0.200		109	80-120			
Xylene (o)	0.114	0.00100	"	0.100		114	80-120			
Surrogate: 4-Bromofluorobenzene	0.127		"	0.120		106	75-125			
Surrogate: 1,4-Difluorobenzene	0.126		"	0.120		105	75-125			
Matrix Spike (P0A2303-MS1)	Sou	rce: 0A23004	I-01	Prepared &	ն Analyzed:	01/23/20				
Benzene	0.0895	0.00104	mg/kg dry	0.104	ND	85.9	80-120			
Toluene	0.0805	0.00104	"	0.104	ND	77.3	80-120			QM-07
Ethylbenzene	0.0927	0.00104	"	0.104	ND	89.0	80-120			
Xylene (p/m)	0.162	0.00208	"	0.208	ND	78.0	80-120			QM-07
Xylene (o)	0.0855	0.00104	"	0.104	ND	82.0	80-120			
Surrogate: 4-Bromofluorobenzene	0.122		"	0.125		97.8	75-125			
Surrogate: 1,4-Difluorobenzene	0.120		"	0.125		96.2	75-125			
Matrix Spike Dup (P0A2303-MSD1)	Sou	rce: 0A23004	4-01	Prepared &	k Analyzed:	01/23/20				
Benzene	0.0868	0.00104	mg/kg dry	0.104	ND	83.3	80-120	3.06	20	
Toluene	0.0800	0.00104	"	0.104	ND	76.8	80-120	0.662	20	QM-07
Ethylbenzene	0.0926	0.00104	"	0.104	ND	88.9	80-120	0.0787	20	
Xylene (p/m)	0.161	0.00208	"	0.208	ND	77.3	80-120	0.915	20	QM-07
Xylene (o)	0.0798	0.00104	"	0.104	ND	76.6	80-120	6.90	20	QM-07
Surrogate: 1,4-Difluorobenzene	0.126		"	0.125		100	75-125			
Surrogate: 4-Bromofluorobenzene	0.125		"	0.125		100	75-125			

Project: Select Energy Cowtown South

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P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

	·	Reporting	·	Spike	Source	·	%REC	·	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P0A2306 - *** DEFAULT PREP ***										
Blank (P0A2306-BLK1)				Prepared: 0	01/23/20 At	nalyzed: 01	/24/20			
Chloride	ND	0.100	mg/kg wet							
LCS (P0A2306-BS1)				Prepared: 0	01/23/20 A	nalyzed: 01	/24/20			
Chloride	439	1.00	mg/kg wet	400		110	80-120			
LCS Dup (P0A2306-BSD1)				Prepared: 0	01/23/20 A	nalyzed: 01	/24/20			
Chloride	440	1.00	mg/kg wet	400		110	80-120	0.357	20	
Calibration Blank (P0A2306-CCB1)				Prepared: 0	01/23/20 At	nalyzed: 01	/24/20			
Chloride	0.00		mg/kg wet							
Calibration Blank (P0A2306-CCB2)				Prepared: 0	01/23/20 At	nalyzed: 01	/24/20			
Chloride	0.00		mg/kg wet							
Calibration Check (P0A2306-CCV1)				Prepared: 0	01/23/20 At	nalyzed: 01	/24/20			
Chloride	22.4		mg/kg	20.0		112	0-200			
Calibration Check (P0A2306-CCV2)				Prepared: 0	01/23/20 At	nalyzed: 01	/24/20			
Chloride	22.3		mg/kg	20.0		112	0-200			
Calibration Check (P0A2306-CCV3)				Prepared: 0	01/23/20 At	nalyzed: 01	/24/20			
Chloride	21.8		mg/kg	20.0		109	0-200			
Matrix Spike (P0A2306-MS1)	Sou	rce: 0A23004	1-01	Prepared: 0	01/23/20 A	nalyzed: 01	/24/20			
Chloride	2880	5.21	mg/kg dry	521	2350	103	80-120			
Matrix Spike (P0A2306-MS2)	Sou	rce: 0A10004	1- 01	Prepared: 0	01/23/20 At	nalyzed: 01	/24/20			
Chloride	6710	29.4	mg/kg dry	5880	1320	91.6	80-120			

Project: Select Energy Cowtown South

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P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	result	Limit	Cints	Level	resurt	/MEC	Limits	МЪ	Limit	11003
Batch P0A2306 - *** DEFAULT PREP ***										
Matrix Spike Dup (P0A2306-MSD1)	Sour	ce: 0A23004	-01	Prepared: (01/23/20 A	nalyzed: 01	/24/20			
Chloride	2940	5.21	mg/kg dry	521	2350	114	80-120	1.94	20	
Matrix Spike Dup (P0A2306-MSD2)	Sour	ce: 0A10004	-01	Prepared: (01/23/20 A	nalyzed: 01	/24/20			
Chloride	6860	29.4	mg/kg dry	5880	1320	94.1	80-120	2.23	20	
Batch P0A2401 - *** DEFAULT PREP ***										
Blank (P0A2401-BLK1)				Prepared &	z Analyzed:	01/24/20				
% Moisture	ND	0.1	%		-					
Duplicate (P0A2401-DUP1)	Sour	ce: 0A23003	-20	Prepared &	z Analyzed:	01/24/20				
% Moisture	11.0	0.1	%		11.0			0.00	20	
Duplicate (P0A2401-DUP2)	Sour	ce: 0A23004	-11	Prepared &	. Analyzed:	01/24/20				
% Moisture	3.0	0.1	%		3.0			0.00	20	

Project: Select Energy Cowtown South

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P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

Batch P0A2305 - TX 1005 Blank (P0A2305 - BLK1) Prepared & Analyzed: 01/23/20 Prepared			Reporting		Spike	Source		%REC		RPD	
Prepared & Analyzed: 01/23/20	Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
ND	Batch P0A2305 - TX 1005										
ND 25.0 "	Blank (P0A2305-BLK1)				Prepared &	k Analyzed:	01/23/20				
ND 25.0 "	C6-C12	ND	25.0	mg/kg wet							
Surrogate: I-Chlorooctane	>C12-C28	ND	25.0	"							
Surrogate: 0-Terphenyl S5.3 " S0.0 111 70-130	>C28-C35	ND	25.0	"							
Prepared & Analyzed: 01/23/20 Prepared & Analyzed: 01/23/2	Surrogate: 1-Chlorooctane	110		"	100		110	70-130			
Surrogate: 1-Chlorooctane 106 25.0 mg/kg wet 1000 87.2 75-125 1030 25.0 " 1000 103 75-125 1030 25.0 " 1000 106 70-130 106 106 70-130 106 106 70-130 106 106 70-130 106 1	Surrogate: o-Terphenyl	55.3		"	50.0		111	70-130			
C12-C28	LCS (P0A2305-BS1)				Prepared &	ն Analyzed:	01/23/20				
Surrogate: 1-Chlorooctane 106	C6-C12	872	25.0	mg/kg wet	1000		87.2	75-125			
Surrogate: o-Terphenyl So.7 " So.0 101 70-130	>C12-C28	1030	25.0	"	1000		103	75-125			
Prepared & Analyzed: 01/23/20 10.0 70-130 10.0 2.0	Surrogate: 1-Chlorooctane	106		"	100		106	70-130			
C6-C12	Surrogate: o-Terphenyl	50.7		"	50.0		101	70-130			
Surrogate: 1-Chlorooctane 120	LCS Dup (P0A2305-BSD1)				Prepared &	ն Analyzed:	01/23/20				
Surrogate: 1-Chlorooctane 120	C6-C12	966	25.0	mg/kg wet	1000		96.6	75-125	10.3	20	
Surrogate: o-Terphenyl 61.0 " 50.0 122 70-130 Calibration Blank (P0A2305-CCB1) Prepared & Analyzed: 01/23/20 C6-C12	>C12-C28	1160	25.0	"	1000		116	75-125	11.7	20	
Prepared & Analyzed: 01/23/20 C6-C12 16.7 mg/kg wet	Surrogate: 1-Chlorooctane	120		"	100		120	70-130			
16.7 mg/kg wet 16.7 mg/k	Surrogate: o-Terphenyl	61.0		"	50.0		122	70-130			
Surrogate: I-Chlorooctane	Calibration Blank (P0A2305-CCB1)				Prepared &	k Analyzed:	01/23/20				
Surrogate: I-Chlorooctane	C6-C12	16.7		mg/kg wet							
Surrogate: o-Terphenyl 58.4 " 50.0 117 70-130 Calibration Blank (P0A2305-CCB2) Prepared & Analyzed: 01/23/20 C6-C12 15.1 mg/kg wet >C12-C28 4.87 " Surrogate: 1-Chlorooctane 115 " 100 115 70-130	>C12-C28	5.65		"							
Calibration Blank (P0A2305-CCB2) Prepared & Analyzed: 01/23/20 C6-C12 15.1 mg/kg wet >C12-C28 4.87 " Surrogate: 1-Chlorooctane 115 " 100 115 70-130	Surrogate: 1-Chlorooctane	113		"	100		113	70-130			
C6-C12 15.1 mg/kg wet > C12-C28 4.87 " Surrogate: 1-Chlorooctane 115 " 100 115 70-130	Surrogate: o-Terphenyl	58.4		"	50.0		117	70-130			
>C12-C28 4.87 " Surrogate: 1-Chlorooctane 115 " 100 115 70-130	Calibration Blank (P0A2305-CCB2)				Prepared &	k Analyzed:	01/23/20				
Surrogate: 1-Chlorooctane 115 " 100 115 70-130	C6-C12	15.1		mg/kg wet							
mrogate. 1-Chioroociane 113 100 113 70-130	>C12-C28	4.87		"							
Surrogate: o-Terphenyl 59.8 " 50.0 120 70-130	Surrogate: 1-Chlorooctane	115		"	100		115	70-130			
	Surrogate: o-Terphenyl	59.8		"	50.0		120	70-130			

Project: Select Energy Cowtown South

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P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P0A2305 - TX 1005										
Calibration Check (P0A2305-CCV1)				Prepared &	z Analyzed:	01/23/20				
C6-C12	538	25.0	mg/kg wet	500		108	85-115			
>C12-C28	562	25.0	"	500		112	85-115			
Surrogate: 1-Chlorooctane	116		"	100		116	70-130			
Surrogate: o-Terphenyl	57.7		"	50.0		115	70-130			
Calibration Check (P0A2305-CCV2)				Prepared &	Analyzed:	01/23/20				
C6-C12	549	25.0	mg/kg wet	500		110	85-115			
>C12-C28	536	25.0	"	500		107	85-115			
Surrogate: 1-Chlorooctane	117		"	100		117	70-130			
Surrogate: o-Terphenyl	58.4		"	50.0		117	70-130			
Calibration Check (P0A2305-CCV3)				Prepared: (01/23/20 At	nalyzed: 01	/24/20			
C6-C12	550	25.0	mg/kg wet	500		110	85-115			
>C12-C28	560	25.0	"	500		112	85-115			
Surrogate: 1-Chlorooctane	119		"	100		119	70-130			
Surrogate: o-Terphenyl	58.2		"	50.0		116	70-130			
Matrix Spike (P0A2305-MS1)	Sourc	e: 0A22003	3-24	Prepared &	Analyzed:	01/23/20				
C6-C12	894	26.0	mg/kg dry	1040	15.7	84.3	75-125			
>C12-C28	1070	26.0	"	1040	16.1	101	75-125			
Surrogate: 1-Chlorooctane	103		"	104		99.0	70-130			
Surrogate: o-Terphenyl	51.4		"	52.1		98.7	70-130			
Matrix Spike Dup (P0A2305-MSD1)	Sourc	e: 0A22003	3-24	Prepared &	Analyzed:	01/23/20				
C6-C12	877	26.0	mg/kg dry	1040	15.7	82.7	75-125	1.89	20	
>C12-C28	1050	26.0	"	1040	16.1	99.7	75-125	1.20	20	
Surrogate: 1-Chlorooctane	106		"	104		102	70-130			
Surrogate: o-Terphenyl	55.0		"	52.1		106	70-130			

Fax: (432) 687-0456

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03 Midland TX, 79710 Project Manager: Mark Larson

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

	Drew	Darron			
Report Approved By:			Date:	1/27/2020	

0 02

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc. Project: Select Energy Cowtown South Fax: (432) 687-0456

P.O. Box 50685 Project Number: 19-0179-03 Midland TX, 79710 Project Manager: Mark Larson

PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: Cowtown South-Select Energy

Project Number: 19-0179-03

Location: NM

Lab Order Number: 0C09002



NELAP/TCEQ # T104704516-17-8

Report Date: 03/13/20

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BF Sand 1	0C09002-01	Soil	03/06/20 12:20	03-09-2020 09:33
BF Sand 2	0C09002-02	Soil	03/06/20 12:21	03-09-2020 09:33
BF Sand 3	0C09002-03	Soil	03/06/20 12:22	03-09-2020 09:33
BF Sand 4	0C09002-04	Soil	03/06/20 12:23	03-09-2020 09:33
BF Sand 5	0C09002-05	Soil	03/06/20 12:24	03-09-2020 09:33
BF Sand 6	0C09002-06	Soil	03/06/20 12:25	03-09-2020 09:33
BF Sand 7	0C09002-07	Soil	03/06/20 12:26	03-09-2020 09:33
BF Sand 8	0C09002-08	Soil	03/06/20 12:27	03-09-2020 09:33
BF Sand 9	0C09002-09	Soil	03/06/20 12:28	03-09-2020 09:33

Project: Cowtown South-Select Energy

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson Fax: (432) 687-0456

BF Sand 1 0C09002-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin E	Environmen	ıtal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		103 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		95.0 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
General Chemistry Parameters by EPA / S	tandard Metho	ds							
Chloride	4.01	1.06	mg/kg dry	1	P0C0905	03/09/20	03/09/20	EPA 300.0	
% Moisture	6.0	0.1	%	1	P0C1002	03/10/20	03/10/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 8	015M							
C6-C12	ND	26.6	mg/kg dry	1	P0C0909	03/09/20	03/10/20	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P0C0909	03/09/20	03/10/20	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P0C0909	03/09/20	03/10/20	TPH 8015M	
Surrogate: 1-Chlorooctane		58.9 %	70-1	30	P0C0909	03/09/20	03/10/20	TPH 8015M	S-GC1
Surrogate: o-Terphenyl		67.1 %	70-1	30	P0C0909	03/09/20	03/10/20	TPH 8015M	S-GC1
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	03/09/20	03/10/20	calc	

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

BF Sand 2 0C09002-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	Environmen	tal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		96.0 %	75-1.	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		102 %	75-1.	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ls							
Chloride	3.02	1.02	mg/kg dry	1	P0C0905	03/09/20	03/09/20	EPA 300.0	
% Moisture	2.0	0.1	%	1	P0C1002	03/10/20	03/10/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	by EPA Method 80	015M							
C6-C12	ND	25.5	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: 1-Chlorooctane		81.3 %	70-1.	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: o-Terphenyl		91.9 %	70-1.	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	03/09/20	03/09/20	calc	

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

BF Sand 3 0C09002-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	iian Basin E	nvironmen	ıtal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		102 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		95.3 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ls							
Chloride	6.47	1.03	mg/kg dry	1	P0C0905	03/09/20	03/09/20	EPA 300.0	
% Moisture	3.0	0.1	%	1	P0C1002	03/10/20	03/10/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	15M							
C6-C12	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/11/20	TPH 8015M	
>C12-C28	25.8	25.8	mg/kg dry	1	P0C0909	03/09/20	03/11/20	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/11/20	TPH 8015M	
Surrogate: 1-Chlorooctane		69.8 %	70-1	30	P0C0909	03/09/20	03/11/20	TPH 8015M	S-GC
Surrogate: o-Terphenyl		80.2 %	70-1	30	P0C0909	03/09/20	03/11/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	03/09/20	03/11/20	calc	

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

BF Sand 4 0C09002-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	Environmen	tal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		101 %	75-1.	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		95.4 %	75-1.	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Method	ls							
Chloride	14.8	1.06	mg/kg dry	1	P0C0905	03/09/20	03/09/20	EPA 300.0	
% Moisture	6.0	0.1	%	1	P0C1002	03/10/20	03/10/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80)15M							
C6-C12	ND	26.6	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: 1-Chlorooctane		78.0 %	70-1.	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: o-Terphenyl		88.1 %	70-1.	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	03/09/20	03/09/20	calc	

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

BF Sand 5 0C09002-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Analyte	Result	Lillit	Onits	Dilution	Datell	ricpareu	Analyzeu	iviculou	INOICS
	Pern	nian Basin E	Environmen	ıtal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		93.7 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		102 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ds							
Chloride	5.99	1.03	mg/kg dry	1	P0C0905	03/09/20	03/09/20	EPA 300.0	
% Moisture	3.0	0.1	%	1	P0C1002	03/10/20	03/10/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	015M							
C6-C12	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: 1-Chlorooctane		84.1 %	70-1	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: o-Terphenyl		94.5 %	70-1	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	03/09/20	03/09/20	calc	

Project: Cowtown South-Select Energy

P.O. Box 50685

Fax: (432) 687-0456

Project Number: 19-0179-03 Midland TX, 79710 Project Manager: Mark Larson

BF Sand 6 0C09002-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
maye						repared	Anaryzeu	Method	TNOTES
	Peri	nian Basin E	invironmen	tal Lab, I	L .P.				
Organics by GC									
Benzene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		94.3 %	75-1.	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		103 %	75-1.	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
General Chemistry Parameters by EPA / Sta	andard Metho	ds							
Chloride	4.82	1.03	mg/kg dry	1	P0C0905	03/09/20	03/09/20	EPA 300.0	
% Moisture	3.0	0.1	%	1	P0C1002	03/10/20	03/10/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by I	EPA Method 8	015M							
C6-C12	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: 1-Chlorooctane		100 %	70-1.	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: o-Terphenyl		112 %	70-1.	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	03/09/20	03/09/20	calc	

Project: Cowtown South-Select Energy

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson Fax: (432) 687-0456

BF Sand 7 0C09002-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Allalyte	Kesuit	Lillit	Units	Dilution	Dateii	ricparcu	Allalyzeu	Menion	inotes
	Pern	nian Basin E	Invironmer	ıtal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		94.1 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		102 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ls							
Chloride	5.28	1.03	mg/kg dry	1	P0C0905	03/09/20	03/09/20	EPA 300.0	
% Moisture	3.0	0.1	%	1	P0C1002	03/10/20	03/10/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	015M							
C6-C12	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: 1-Chlorooctane		87.2 %	70-1	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: o-Terphenyl		96.5 %	70-1	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	03/09/20	03/09/20	calc	

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

BF Sand 8 0C09002-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	Invironmen	ıtal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		95.0 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		103 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ds							
Chloride	3.56	1.06	mg/kg dry	1	P0C0905	03/09/20	03/09/20	EPA 300.0	
% Moisture	6.0	0.1	%	1	P0C1002	03/10/20	03/10/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	oy EPA Method 8	015M							
C6-C12	ND	26.6	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: 1-Chlorooctane		121 %	70-1	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: o-Terphenyl		133 %	70-1	30	P0C0909	03/09/20	03/09/20	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	03/09/20	03/09/20	calc	

Fax: (432) 687-0456

Larson & Associates, Inc.

Project: Cowtown South-Select Energy

P.O. Box 50685 Midland TX, 79710

Project Number: 19-0179-03 Project Manager: Mark Larson

BF Sand 9 0C09002-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Analyte						ricpared	Anaryzeu	Wichiod	110105
	Pern	nian Basin E	invironmer	ıtal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		103 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		94.5 %	75-1	25	P0C0907	03/09/20	03/09/20	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ds							
Chloride	6.22	1.03	mg/kg dry	1	P0C0905	03/09/20	03/09/20	EPA 300.0	
% Moisture	3.0	0.1	%	1	P0C1002	03/10/20	03/10/20	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	015M							
C6-C12	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: 1-Chlorooctane		105 %	70-1	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Surrogate: o-Terphenyl		116 %	70-1	30	P0C0909	03/09/20	03/09/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	03/09/20	03/09/20	calc	

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

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

Blank (P0C0907-BLK1)				Prepared & Anal	vzed: 03/09/20				
Benzene	ND	0.00100	mg/kg wet	1					
Toluene	ND	0.00100	"						
Ethylbenzene	ND	0.00100	"						
Xylene (p/m)	ND	0.00200	"						
Xylene (o)	ND	0.00100	"						
Surrogate: 1,4-Difluorobenzene	0.110		"	0.120	91.4	75-125			
Surrogate: 4-Bromofluorobenzene	0.117		"	0.120	97.1	75-125			
LCS (P0C0907-BS1)				Prepared & Anal	yzed: 03/09/20				
Benzene	0.114	0.00100	mg/kg wet	0.100	114	70-130			
Toluene	0.113	0.00100	"	0.100	113	70-130			
Ethylbenzene	0.118	0.00100	"	0.100	118	70-130			
Xylene (p/m)	0.237	0.00200	"	0.200	119	70-130			
Xylene (o)	0.117	0.00100	"	0.100	117	70-130			
Surrogate: 1,4-Difluorobenzene	0.115		"	0.120	95.8	75-125			
Surrogate: 4-Bromofluorobenzene	0.116		"	0.120	96.7	75-125			
LCS Dup (P0C0907-BSD1)				Prepared & Anal	yzed: 03/09/20				
Benzene	0.110	0.00100	mg/kg wet	0.100	110	70-130	3.17	20	
Toluene	0.109	0.00100	"	0.100	109	70-130	3.79	20	
Ethylbenzene	0.113	0.00100	"	0.100	113	70-130	4.05	20	
Xylene (p/m)	0.229	0.00200	"	0.200	115	70-130	3.29	20	
Xylene (o)	0.116	0.00100	"	0.100	116	70-130	0.858	20	
Surrogate: 1,4-Difluorobenzene	0.114		"	0.120	95.3	75-125			
Surrogate: 4-Bromofluorobenzene	0.121		"	0.120	101	75-125			
Calibration Blank (P0C0907-CCB1)				Prepared & Anal	yzed: 03/09/20				
Benzene	0.00		mg/kg wet						
Toluene	0.00		"						
Ethylbenzene	0.00		"						
Xylene (p/m)	0.00		"						
Xylene (o)	0.00		"						
Surrogate: 1,4-Difluorobenzene	0.110		"	0.120	91.7	75-125			
Surrogate: 4-Bromofluorobenzene	0.115		"	0.120	95.9	75-125			

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

Analyte Result Limit Units	0.120 0.120 0.120 Prepared: (Result %RE & Analyzed: 03/09/2 101 94.3 03/09/20 Analyzed	75-125 75-125 : 03/10/20	RPD	Limit	Notes
Calibration Blank (P0C0907-CCB2) Benzene 0.00 mg/kg was Toluene 0.121 mass Toluene 0.121 mass Toluene 0.113 mass Toluene 0.00 mg/kg was Toluene 0.00 mg/	0.120 0.120 Prepared: (et	101 94.3 03/09/20 Analyzed	75-125 75-125 : 03/10/20			
Senzene 0.00 mg/kg w 1	0.120 0.120 Prepared: (et	101 94.3 03/09/20 Analyzed	75-125 75-125 : 03/10/20			
Toluene 0.00 " Ethylbenzene 0.00 " Xylene (p/m) 0.00 " Xylene (o) 0.00 " Surrogate: 4-Bromofluorobenzene 0.121 " Surrogate: 1,4-Difluorobenzene 0.113 " Calibration Blank (P0C0907-CCB3) Benzene 0.00 mg/kg w Toluene 0.00 " Ethylbenzene 0.00 " Xylene (p/m) 0.00 " Xylene (p/m) 0.00 " Surrogate: 4-Bromofluorobenzene 0.117 " Surrogate: 4-Bromofluorobenzene 0.111 " Calibration Check (P0C0907-CCV1) Benzene 0.107 0.00100 mg/kg w Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "	0.120 0.120 Prepared: (et	94.3 03/09/20 Analyzed	75-125			
Ethylbenzene	0.120 Prepared: (et	94.3 03/09/20 Analyzed	75-125			
Xylene (p/m) 0.00 "	0.120 Prepared: (et	94.3 03/09/20 Analyzed	75-125			
Xylene (o) 0.00 " Surrogate: 4-Bromofluorobenzene 0.121 " Surrogate: 1,4-Difluorobenzene 0.113 " Calibration Blank (P0C0907-CCB3) Benzene 0.00 mg/kg w Toluene 0.00 " " Ethylbenzene 0.00 " " Xylene (p/m) 0.00 " " Xylene (o) 0.00 " " Surrogate: 4-Bromofluorobenzene 0.117 " " Surrogate: 1,4-Difluorobenzene 0.111 " " Calibration Check (P0C0907-CCV1) Benzene 0.107 0.00100 mg/kg w Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 " "	0.120 Prepared: (et	94.3 03/09/20 Analyzed	75-125			
Surrogate: 4-Bromofluorobenzene 0.121 "	0.120 Prepared: (et	94.3 03/09/20 Analyzed	75-125			
Calibration Blank (P0C0907-CCB3)	0.120 Prepared: (et	94.3 03/09/20 Analyzed	75-125			
Calibration Blank (P0C0907-CCB3) Benzene 0.00 mg/kg w Toluene 0.00 " Ethylbenzene 0.00 " Xylene (p/m) 0.00 " Xylene (o) 0.00 " Surrogate: 4-Bromofluorobenzene 0.117 " Surrogate: 1,4-Difluorobenzene 0.111 " Calibration Check (P0C0907-CCV1) Benzene 0.107 0.00100 mg/kg w Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "	Prepared: (03/09/20 Analyzed	: 03/10/20			
Benzene	0.120	·				
Toluene 0.00 " Ethylbenzene 0.00 " Xylene (p/m) 0.00 " Xylene (o) 0.00 " Surrogate: 4-Bromofluorobenzene 0.117 " Surrogate: 1,4-Difluorobenzene 0.111 " Calibration Check (P0C0907-CCV1) Benzene 0.107 0.00100 mg/kg w Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "	0.120	97.3	75_125			
Ethylbenzene 0.00 " Xylene (p/m) 0.00 " Xylene (o) 0.00 " Xylene (o) 0.00 " Surrogate: 4-Bromofluorobenzene 0.117 " Surrogate: 1,4-Difluorobenzene 0.111 " Calibration Check (P0C0907-CCV1) Benzene 0.107 0.00100 mg/kg w Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "		97.3	75-125			
Xylene (p/m) 0.00 " Xylene (o) 0.00 " Surrogate: 4-Bromofluorobenzene 0.117 " Surrogate: 1,4-Difluorobenzene 0.111 " Calibration Check (P0C0907-CCV1) Benzene 0.107 0.00100 mg/kg w Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "		97.3	75-125			
Xylene (o) 0.00 " Surrogate: 4-Bromofluorobenzene 0.117 " Surrogate: 1,4-Difluorobenzene 0.111 " Calibration Check (P0C0907-CCV1) ** ** Benzene 0.107 0.00100 mg/kg w Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "		97.3	75-125			
Surrogate: 4-Bromofluorobenzene 0.117 " Surrogate: 1,4-Difluorobenzene 0.111 " Calibration Check (P0C0907-CCV1) Benzene 0.107 0.00100 mg/kg w Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "		97.3	75_125			
Surrogate: 1,4-Difluorobenzene 0.111 " Calibration Check (P0C0907-CCV1) Benzene 0.107 0.00100 mg/kg w Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "		97.3	75_125			
Calibration Check (P0C0907-CCV1) Benzene 0.107 0.00100 mg/kg w Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "	0.120		75-125			
Benzene 0.107 0.00100 mg/kg w Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "	0.120	92.8	75-125			
Toluene 0.106 0.00100 " Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "	Prepared &	& Analyzed: 03/09/2	20			
Ethylbenzene 0.109 0.00100 " Xylene (p/m) 0.214 0.00200 "	et 0.100	107	80-120			
Xylene (p/m) 0.214 0.00200 "	0.100	106	80-120			
Aylene (p/m) 0.214 0.00200	0.100	109	80-120			
Xylene (o) 0.107 0.00100 "	0.200	107	80-120			
	0.100	107	80-120			
Surrogate: 1,4-Difluorobenzene 0.114 "	0.120	95.3	75-125			
Surrogate: 4-Bromofluorobenzene 0.113 "	0.120	94.5	75-125			
Calibration Check (P0C0907-CCV2)	Prepared &	& Analyzed: 03/09/2	20			
Benzene 0.104 0.00100 mg/kg w	et 0.100	104	80-120			
Toluene 0.103 0.00100 "	0.100	103	80-120			
Ethylbenzene 0.104 0.00100 "	0.100	104	80-120			
Xylene (p/m) 0.205 0.00200 "	0.200	103	80-120			
Xylene (o) 0.108 0.00100 "	0.100	108	80-120			
Surrogate: 1,4-Difluorobenzene 0.118 "		98.0	75-125			

Surrogate: 4-Bromofluorobenzene

104

75-125

0.120

0.125

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0C0907 - General Preparation (GC)										
Calibration Check (P0C0907-CCV3)				Prepared: (03/09/20 A	nalyzed: 03	/10/20			
Benzene	0.102	0.00100	mg/kg wet	0.100		102	80-120			
Toluene	0.101	0.00100	"	0.100		101	80-120			
Ethylbenzene	0.102	0.00100	"	0.100		102	80-120			
Xylene (p/m)	0.198	0.00200	"	0.200		99.1	80-120			
Xylene (o)	0.105	0.00100	"	0.100		105	80-120			
Surrogate: 1,4-Difluorobenzene	0.116		"	0.120		96.8	75-125			
Surrogate: 4-Bromofluorobenzene	0.123		"	0.120		102	75-125			
Matrix Spike (P0C0907-MS1)	Sou	ırce: 0C09002	2-01	Prepared &	ኔ Analyzed:	03/09/20				
Benzene	0.0877	0.00106	mg/kg dry	0.106	ND	82.5	80-120			
Toluene	0.0738	0.00106	"	0.106	ND	69.4	80-120			QM-07
Ethylbenzene	0.0942	0.00106	"	0.106	ND	88.6	80-120			
Xylene (p/m)	0.151	0.00213	"	0.213	ND	70.8	80-120			QM-07
Xylene (o)	0.0858	0.00106	"	0.106	ND	80.6	80-120			
Surrogate: 4-Bromofluorobenzene	0.132		"	0.128		103	75-125			
Surrogate: 1,4-Difluorobenzene	0.124		"	0.128		97.0	75-125			
Matrix Spike Dup (P0C0907-MSD1)	Sou	ırce: 0C09002	2-01	Prepared: (03/09/20 A	nalyzed: 03	/10/20			
Benzene	0.0825	0.00106	mg/kg dry	0.106	ND	77.6	80-120	6.09	20	QM-07
Toluene	0.0599	0.00106	"	0.106	ND	56.3	80-120	20.8	20	QM-07
Ethylbenzene	0.0779	0.00106	"	0.106	ND	73.2	80-120	19.0	20	QM-07
Xylene (p/m)	0.129	0.00213	"	0.213	ND	60.8	80-120	15.2	20	QM-07
Xylene (o)	0.0811	0.00106	"	0.106	ND	76.3	80-120	5.54	20	QM-07
Surrogate: 1,4-Difluorobenzene	0.123		"	0.128		96.6	75-125			
Surrogate: 4-Bromofluorobenzene	0.128		"	0.128		100	75-125			

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P0C0905 - *** DEFAULT PREP ***										
LCS (P0C0905-BS1)				Prepared &	k Analyzed:	: 03/09/20				
Chloride	416	1.00	mg/kg wet	400		104	80-120			
Matrix Spike (P0C0905-MS1)	Sour	rce: 0C06002	-02	Prepared &	k Analyzed:	: 03/09/20				
Chloride	3320	5.68	mg/kg dry	2270	962	104	80-120			
Matrix Spike (P0C0905-MS2)	Sour	rce: 0C09004	-03	Prepared &	k Analyzed:	: 03/09/20				
Chloride	2970	5.49	mg/kg dry	2200	599	108	80-120			
Matrix Spike Dup (P0C0905-MSD1)	Source: 0C06002-02			Prepared &	k Analyzed:	: 03/09/20				
Chloride	3140	5.68	mg/kg dry	2270	962	95.8	80-120	5.71	20	
Batch P0C1002 - *** DEFAULT PREP ***										
Blank (P0C1002-BLK1)				Prepared &	k Analyzed:	: 03/10/20				
% Moisture	ND	0.1	%							
Duplicate (P0C1002-DUP1)	Source: 0C08004-04		Prepared &	k Analyzed:	: 03/10/20					
% Moisture	11.0	0.1	%		15.0			30.8	20	
Duplicate (P0C1002-DUP2)	Source: 0C09003-12		Prepared & Analyzed: 03/10/20							
% Moisture	3.0	0.1	%		3.0			0.00	20	
Duplicate (P0C1002-DUP3)	Sour	rce: 0C09006	5-10	Prepared & Analyzed: 03/10/20						
% Moisture	16.0	0.1	%		15.0			6.45	20	

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P0C0909 - TX 1005										
Blank (P0C0909-BLK1)				Prepared &	Analyzed:	03/09/20				
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	107		"	100		107	70-130			
Surrogate: o-Terphenyl	56.5		"	50.0		113	70-130			
LCS (P0C0909-BS1)				Prepared &	Analyzed:	03/09/20				
C6-C12	974	25.0	mg/kg wet	1000		97.4	75-125			
>C12-C28	1000	25.0	"	1000		100	75-125			
Surrogate: 1-Chlorooctane	113		"	100		113	70-130			
Surrogate: o-Terphenyl	57.9		"	50.0		116	70-130			
LCS Dup (P0C0909-BSD1)				Prepared &	Analyzed:	03/09/20				
C6-C12	955	25.0	mg/kg wet	1000		95.5	75-125	1.95	20	
>C12-C28	982	25.0	"	1000		98.2	75-125	1.82	20	
Surrogate: 1-Chlorooctane	110		"	100		110	70-130			
Surrogate: o-Terphenyl	52.7		"	50.0		105	70-130			
Calibration Blank (P0C0909-CCB1)				Prepared &	Analyzed:	03/09/20				
C6-C12	16.4		mg/kg wet							
>C12-C28	6.41		"							
Surrogate: 1-Chlorooctane	109		"	100		109	70-130			
Surrogate: o-Terphenyl	57.6		"	50.0		115	70-130			
Calibration Blank (P0C0909-CCB2)				Prepared &	Analyzed:	03/09/20				
C6-C12	15.4		mg/kg wet							
>C12-C28	6.40		"							
Surrogate: 1-Chlorooctane	113		"	100		113	70-130			
Surrogate: o-Terphenyl	60.2		"	50.0		120	70-130			

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P0C0909 - TX 1005										
Calibration Check (P0C0909-CCV1)				Prepared &	k Analyzed:	03/09/20				
C6-C12	503	25.0	mg/kg wet	500		101	85-115			
>C12-C28	500	25.0	"	500		100	85-115			
Surrogate: 1-Chlorooctane	106		"	100		106	70-130			
Surrogate: o-Terphenyl	53.6		"	50.0		107	70-130			
Calibration Check (P0C0909-CCV2)				Prepared &	ኔ Analyzed:	03/09/20				
C6-C12	511	25.0	mg/kg wet	500		102	85-115			
>C12-C28	544	25.0	"	500		109	85-115			
Surrogate: 1-Chlorooctane	111		"	100		111	70-130			
Surrogate: o-Terphenyl	54.6		"	50.0		109	70-130			
Matrix Spike (P0C0909-MS1)	Sou	rce: 0C09003	3-11	Prepared: (03/09/20 A	nalyzed: 03	/10/20			
C6-C12	1090	26.0	mg/kg dry	1040	16.5	103	75-125			
>C12-C28	1130	26.0	"	1040	ND	108	75-125			
Surrogate: 1-Chlorooctane	116		"	104		112	70-130			
Surrogate: o-Terphenyl	54.9		"	52.1		105	70-130			
Matrix Spike Dup (P0C0909-MSD1)	Sou	rce: 0C09003	3-11	Prepared: (03/09/20 A	nalyzed: 03	/10/20			
C6-C12	1080	26.0	mg/kg dry	1040	16.5	102	75-125	0.727	20	
>C12-C28	1120	26.0	"	1040	ND	108	75-125	0.411	20	
Surrogate: 1-Chlorooctane	122		"	104		117	70-130			
Surrogate: o-Terphenyl	56.1		"	52.1		108	70-130			

Larson & Associates, Inc. Project: Cowtown South-Select Energy

P.O. Box 50685 Project Number: 19-0179-03 Midland TX, 79710 Project Manager: Mark Larson

Notes and Definitions

S-GC1 Surrogate recovery outside of control limits. A second analysis confirmed the original results..

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

	Bren	Darron			
Report Approved By:			Date:	3/13/2020	

Brent Barron, Laboratory Director/Technical Director

Larson & Associates, Inc. Project: Cowtown South-Select Energy Fax: (432) 687-0456

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

LABORATORY: DO	RELINQUISHED BY:(Signature)	HED BY	RELINQUISHED AN (Si	TOTAL G	020	9:13	27	AM		BF Sand 9	BE SOMB	TE Sond 71	BF sord (a)		AF Smd 4	S puss ag	BF SOND 2	bit sond 1	Field Sample I.D.	Time zone/State:	<u> </u>	Data Reported to:	T SSOCIATES, Inc. Environmental Consultants	Page Orson &	-112 o	of 168
567	gnature)	gnature)	((Signature) う							9	8	7	6	5	4	(S)		3/	Lab# D		S=SOIL W=WATER A=AIR		Consultants			
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	L NO L COED	THERM#:						7,57,000											FIELD NOTES		Called Son	KO		PAGE	9	<u> </u>

PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: Select Energy Cowtown South
Project Number: 19-0179-03
Location:

Lab Order Number: 9J14006



NELAP/TCEQ # T104704516-18-9

Report Date: 10/25/19

Larson & Associates, Inc.

Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03 Midland TX, 79710

Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HA-1 (0.5')	9J14006-01	Soil	10/11/19 09:51	10-13-2019 14:30
HA-1 (1')	9J14006-02	Soil	10/11/19 09:53	10-13-2019 14:30
HA-2 (0.5')	9J14006-03	Soil	10/11/19 09:54	10-13-2019 14:30
HA-2 (1')	9J14006-04	Soil	10/11/19 09:55	10-13-2019 14:30
HA-3 (0.5')	9J14006-05	Soil	10/11/19 09:57	10-13-2019 14:30
HA-3 (1')	9J14006-06	Soil	10/11/19 10:00	10-13-2019 14:30
HA-4 (0.5')	9J14006-07	Soil	10/11/19 10:02	10-13-2019 14:30
HA-4 (1')	9J14006-08	Soil	10/11/19 10:03	10-13-2019 14:30
HA-5 (0.5')	9J14006-09	Soil	10/11/19 10:07	10-13-2019 14:30
HA-5 (1')	9J14006-10	Soil	10/11/19 10:10	10-13-2019 14:30
HA-6 (0.5')	9J14006-11	Soil	10/11/19 10:21	10-13-2019 14:30
HA-6 (1')	9J14006-12	Soil	10/11/19 10:23	10-13-2019 14:30
HA-7 (0.5')	9J14006-13	Soil	10/11/19 10:27	10-13-2019 14:30
HA-7 (1')	9J14006-14	Soil	10/11/19 10:29	10-13-2019 14:30
HA-8 (0.5')	9J14006-15	Soil	10/11/19 10:33	10-13-2019 14:30
HA-8 (1')	9J14006-16	Soil	10/11/19 10:36	10-13-2019 14:30
HA-9 (0.5')	9J14006-17	Soil	10/11/19 10:40	10-13-2019 14:30
HA-9 (1')	9J14006-18	Soil	10/11/19 10:43	10-13-2019 14:30

Larson & Associates, Inc.

Project: Select Energy Cowtown South

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

HA-1 (0.5')

9J14006-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	nian Basin E	Environme	ıtal Lab, I	L.P.				
Organics by GC									
Benzene	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		101 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		103 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Method	ls							
Chloride	4.37	1.05	mg/kg dry	1	P9J1811	10/18/19	10/20/19	EPA 300.0	
% Moisture	5.0	0.1	%	1	P9J1602	10/16/19	10/16/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80)15M							
C6-C12	ND	26.3	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: 1-Chlorooctane		94.3 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: o-Terphenyl		127 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/17/19	10/18/19	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-1 (1') 9J14006-02 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	80.0	1.03 mg/kg dry	1	P9J1811	10/18/19	10/20/19	EPA 300.0
% Moisture	3.0	0.1 %	1	P9J1602	10/16/19	10/16/19	ASTM D2216

Larson & Associates, Inc.

Project: Select Energy Cowtown South

P.O. Box 50685 Project Midland TX, 79710 Project M

Project Number: 19-0179-03 Project Manager: Mark Larson

> HA-2 (0.5') 9J14006-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
	Perr	nian Basin E	Environmen	ıtal Lab, I	L .P.				
Organics by GC									
Benzene	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		96.8 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		94.8 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
General Chemistry Parameters by EPA	Standard Metho	ds							
Chloride	671	1.08	mg/kg dry	1	P9J1811	10/18/19	10/20/19	EPA 300.0	
% Moisture	7.0	0.1	%	1	P9J1602	10/16/19	10/16/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	by EPA Method 8	015M							
C6-C12	ND	26.9	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: 1-Chlorooctane		97.9 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: o-Terphenyl		128 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/17/19	10/18/19	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-2 (1') 9J14006-04 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	240	1.08 mg/kg dry	1	P9J1811	10/18/19	10/20/19	EPA 300.0
% Moisture	7.0	0.1 %	1	P9J1602	10/16/19	10/16/19	ASTM D2216

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

HA-3 (0.5') 9J14006-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	nvironmen	ıtal Lab, I	P.				
Organics by GC									
Benzene	ND	0.00110	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		84.9 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		102 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Method	ls							
Chloride	7210	27.5	mg/kg dry	25	P9J1811	10/18/19	10/20/19	EPA 300.0	
% Moisture	9.0	0.1	%	1	P9J1602	10/16/19	10/16/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80)15M							
C6-C12	ND	27.5	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: 1-Chlorooctane		96.5 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: o-Terphenyl		128 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/17/19	10/18/19	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

Fax: (432) 687-0456

HA-3 (1') 9J14006-06 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	7560	26.9 mg/kg dry	25	P9J1811	10/18/19	10/20/19	EPA 300.0
% Moisture	7.0	0.1 %	1	P9J1602	10/16/19	10/16/19	ASTM D2216

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

HA-4 (0.5') 9J14006-07 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin E	Environmen	tal Lab, I	P.				
Organics by GC									
Benzene	ND	0.00106	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		98.5 %	75-125		P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		111 %	75-12	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	s							
Chloride	7680	26.6	mg/kg dry	25	P9J1811	10/18/19	10/20/19	EPA 300.0	
% Moisture	6.0	0.1	%	1	P9J1602	10/16/19	10/16/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 b	oy EPA Method 80	15M							
C6-C12	ND	26.6	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: 1-Chlorooctane		94.3 %	70-13	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: o-Terphenyl		125 %	70-13	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/17/19	10/18/19	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-4 (1') 9J14006-08 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	8070	26.6 mg/kg dry	25	P9J1811	10/18/19	10/20/19	EPA 300.0
% Moisture	69.0	0.1 %	1	P9J1602	10/16/19	10/16/19	ASTM D2216

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

HA-5 (0.5') 9J14006-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
.,,,,		nian Basin E	nvironmen	ıtal Lab, I			,		
Organics by GC									
Benzene	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		99.3 %	75-125		P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		97.8 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
General Chemistry Parameters by EPA / Sta	ındard Metho	ds							
Chloride	7080	26.9	mg/kg dry	25	P9J1811	10/18/19	10/20/19	EPA 300.0	
% Moisture	7.0	0.1	%	1	P9J1602	10/16/19	10/16/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by F	PA Method 8	015M							
C6-C12	ND	26.9	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: 1-Chlorooctane		100 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: o-Terphenyl		130 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/17/19	10/18/19	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-5 (1') 9J14006-10 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	6650	26.0 mg/kg dry	25	P9J1811	10/18/19	10/20/19	EPA 300.0
% Moisture	4.0	0.1 %	1	P9J1602	10/16/19	10/16/19	ASTM D2216

Larson & Associates, Inc.

Project: Select Energy Cowtown South

Project Number: 19-0179-03

P.O. Box 50685 Midland TX, 79710

Project Manager: Mark Larson

HA-6 (0.5') 9J14006-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	Environmen	tal Lab, I	P.				
Organics by GC									
Benzene	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		95.0 %	75-1.	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		84.2 %	75-1.	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ds							
Chloride	8.45	1.05	mg/kg dry	1	P9J1811	10/18/19	10/20/19	EPA 300.0	
% Moisture	5.0	0.1	%	1	P9J1602	10/16/19	10/16/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	by EPA Method 80	015M							
C6-C12	ND	26.3	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: 1-Chlorooctane		89.2 %	70-1.	30	P9J1717	10/17/19	10/18/19	TPH 8015M	·
Surrogate: o-Terphenyl		119 %	70-1.	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/17/19	10/18/19	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-6 (1') 9J14006-12 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	6.66	1.06 mg/kg dry	1	P9J1811	10/18/19	10/20/19	EPA 300.0
% Moisture	6.0	0.1 %	1	P9J1602	10/16/19	10/16/19	ASTM D2216

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

HA-7 (0.5') 9J14006-13 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin E	Environme	ıtal Lab, I	P.				
Organics by GC									
Benzene	ND	0.00104	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		80.2 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		92.3 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
General Chemistry Parameters by EPA	Standard Metho	ds							
Chloride	33.8	1.04	mg/kg dry	1	P9J1811	10/18/19	10/20/19	EPA 300.0	
% Moisture	4.0	0.1	%	1	P9J1602	10/16/19	10/16/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	by EPA Method 8	015M							
C6-C12	ND	26.0	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: 1-Chlorooctane		113 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: o-Terphenyl		148 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/17/19	10/18/19	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-7 (1') 9J14006-14 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	13.1	1.04 mg/kg dry	1	P9J1811	10/18/19	10/20/19	EPA 300.0
% Moisture	4.0	0.1 %	1	P9J1602	10/16/19	10/16/19	ASTM D2216

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

HA-8 (0.5') 9J14006-15 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin E	Environme	ntal Lab, I	P.				
Organics by GC									
Benzene	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		93.7 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		109 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
General Chemistry Parameters by EPA	Standard Metho	ds							
Chloride	5070	26.3	mg/kg dry	25	P9J1811	10/18/19	10/20/19	EPA 300.0	
% Moisture	5.0	0.1	%	1	P9J1602	10/16/19	10/16/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	oy EPA Method 8	015M							
C6-C12	ND	26.3	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: 1-Chlorooctane		107 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: o-Terphenyl		138 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/17/19	10/18/19	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-8 (1') 9J14006-16 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	25.3	1.03 mg/kg dry	1	P9J1811	10/18/19	10/20/19	EPA 300.0
% Moisture	3.0	0.1 %	1	P9J1602	10/16/19	10/16/19	ASTM D2216

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

HA-9 (0.5') 9J14006-17 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	Environmen	ıtal Lab, I	P.				,
Organics by GC									
Benzene	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		111 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		103 %	75-1	25	P9J1802	10/18/19	10/18/19	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	ds							
Chloride	47.5	1.08	mg/kg dry	1	P9J1811	10/18/19	10/20/19	EPA 300.0	
% Moisture	7.0	0.1	%	1	P9J1602	10/16/19	10/16/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 l	oy EPA Method 80	015M							
C6-C12	ND	26.9	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: 1-Chlorooctane		104 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	
Surrogate: o-Terphenyl		134 %	70-1	30	P9J1717	10/17/19	10/18/19	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/17/19	10/18/19	calc	

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-9 (1') 9J14006-18 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	23.2	1.09 mg/kg dry	1	P9J1811	10/18/19	10/20/19	EPA 300.0
% Moisture	8.0	0.1 %	1	P9J1602	10/16/19	10/16/19	ASTM D2216

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Result	Limit	Units	Level	Kesuit	70KEC	LIMITS	KLD	Limit	notes
Batch P9J1802 - General Preparation (GC)										
Blank (P9J1802-BLK1)				Prepared &	Analyzed:	10/18/19				
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	0.114		"	0.120		94.8	75-125			
Surrogate: 4-Bromofluorobenzene	0.105		"	0.120		87.4	75-125			
LCS (P9J1802-BS1)				Prepared &	Analyzed:	10/18/19				
Benzene	0.0825	0.00100	mg/kg wet	0.100		82.5	70-130			
Toluene	0.0979	0.00100	"	0.100		97.9	70-130			
Ethylbenzene	0.106	0.00100	"	0.100		106	70-130			
Xylene (p/m)	0.214	0.00200	"	0.200		107	70-130			
Xylene (o)	0.111	0.00100	"	0.100		111	70-130			
Surrogate: 4-Bromofluorobenzene	0.132		"	0.120		110	75-125			
Surrogate: 1,4-Difluorobenzene	0.127		"	0.120		106	75-125			
LCS Dup (P9J1802-BSD1)				Prepared &	Analyzed:	10/18/19				
Benzene	0.0809	0.00100	mg/kg wet	0.100		80.9	70-130	1.91	20	
Toluene	0.0946	0.00100	"	0.100		94.6	70-130	3.43	20	
Ethylbenzene	0.0994	0.00100	"	0.100		99.4	70-130	6.02	20	
Xylene (p/m)	0.215	0.00200	"	0.200		108	70-130	0.387	20	
Xylene (o)	0.108	0.00100	"	0.100		108	70-130	2.57	20	
Surrogate: 1,4-Difluorobenzene	0.127		"	0.120		105	75-125			
Surrogate: 4-Bromofluorobenzene	0.130		"	0.120		108	75-125			
Calibration Blank (P9J1802-CCB1)				Prepared &	Analyzed:	10/18/19				
Benzene	0.00	<u> </u>	mg/kg wet					<u> </u>		
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							

0.00

0.100

Xylene (o)

Surrogate: 1,4-Difluorobenzene Surrogate: 4-Bromofluorobenzene 107

83.6

75-125

75-125

0.120

0.120

Larson & Associates, Inc.

Project: Select Energy Cowtown South

Project Number: 19-0179-03

P.O. Box 50685 Midland TX, 79710

Project Number: 19-01/9-03
Project Manager: Mark Larson

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

Analyte	D agult	Reporting	Linita	Spike	Source	0/DEC	%REC	DDD	RPD	Not
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P9J1802 - General Preparation (C	GC)									
Calibration Blank (P9J1802-CCB2)				Prepared &	Analyzed:	10/18/19				
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	0.116		"	0.120		97.0	75-125			
Surrogate: 4-Bromofluorobenzene	0.109		"	0.120		91.1	75-125			
Calibration Blank (P9J1802-CCB3)				Prepared: 1	10/18/19 A	nalyzed: 10	/19/19			
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.110		"	0.120		91.6	75-125			
Surrogate: 1,4-Difluorobenzene	0.114		"	0.120		94.6	75-125			
Calibration Check (P9J1802-CCV1)				Prepared &	Analyzed:	10/18/19				
Benzene	0.0820	0.00100	mg/kg wet	0.100		82.0	80-120			
Toluene	0.0945	0.00100	"	0.100		94.5	80-120			
Ethylbenzene	0.110	0.00100	"	0.100		110	80-120			
Xylene (p/m)	0.205	0.00200	"	0.200		102	80-120			
Xylene (o)	0.0966	0.00100	"	0.100		96.6	80-120			
Surrogate: 4-Bromofluorobenzene	0.123		"	0.120		102	75-125			
Surrogate: 1,4-Difluorobenzene	0.125		"	0.120		104	75-125			
Calibration Check (P9J1802-CCV2)				Prepared &	Analyzed:	10/18/19				
Benzene	0.0878	0.00100	mg/kg wet	0.100		87.8	80-120			
Toluene	0.0985	0.00100	"	0.100		98.5	80-120			
Ethylbenzene	0.118	0.00100	"	0.100		118	80-120			
Xylene (p/m)	0.215	0.00200	"	0.200		108	80-120			
Xylene (o)	0.106	0.00100	"	0.100		106	80-120			
Surrogate: 1,4-Difluorobenzene	0.139		"	0.120		116	75-125			

Surrogate: 4-Bromofluorobenzene

119

75-125

0.120

0.143

Larson & Associates, Inc.

Project: Select Energy Cowtown South

Tioject. Select Energy Cowtown

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P9J1802 - General Preparation (GC)										
Calibration Check (P9J1802-CCV3)				Prepared &	Analyzed:	10/18/19				
Benzene	0.0856	0.00100	mg/kg wet	0.100		85.6	80-120	<u> </u>		
Toluene	0.0956	0.00100	"	0.100		95.6	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.178	0.00200	"	0.200		89.0	80-120			
Xylene (o)	0.101	0.00100	"	0.100		101	80-120			
Surrogate: 4-Bromofluorobenzene	0.137		"	0.120		114	75-125			
Surrogate: 1,4-Difluorobenzene	0.125		"	0.120		104	75-125			
Matrix Spike (P9J1802-MS1)	Sou	rce: 9J14002	-01	Prepared &	Analyzed:	10/18/19				
Benzene	0.106	0.00132	mg/kg dry	0.132	ND	80.4	80-120			
Toluene	0.110	0.00132	"	0.132	ND	83.3	80-120			
Ethylbenzene	0.111	0.00132	"	0.132	ND	84.2	80-120			
Xylene (p/m)	0.246	0.00263	"	0.263	ND	93.6	80-120			
Xylene (o)	0.111	0.00132	"	0.132	ND	84.7	80-120			
Surrogate: 1,4-Difluorobenzene	0.172		"	0.158		109	75-125			
Surrogate: 4-Bromofluorobenzene	0.177		"	0.158		112	75-125			
Matrix Spike Dup (P9J1802-MSD1)	Sou	rce: 9J14002	-01	Prepared &	Analyzed:	10/18/19				
Benzene	0.104	0.00132	mg/kg dry	0.132	ND	78.7	80-120	2.12	20	QM-0
Toluene	0.115	0.00132	"	0.132	ND	87.7	80-120	5.19	20	
Ethylbenzene	0.111	0.00132	"	0.132	ND	84.1	80-120	0.107	20	
Xylene (p/m)	0.247	0.00263	"	0.263	ND	93.9	80-120	0.331	20	
Xylene (o)	0.106	0.00132	"	0.132	ND	80.9	80-120	4.66	20	
Surrogate: 1,4-Difluorobenzene	0.174		"	0.158		110	75-125			
Surrogate: 4-Bromofluorobenzene	0.176		"	0.158		111	75-125			

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P9J1602 - *** DEFAULT PREP ***										
Blank (P9J1602-BLK1)				Prepared &	Analyzed	: 10/16/19				
% Moisture	ND	0.1	%							
Duplicate (P9J1602-DUP1)	Sou	rce: 9J14006-	14	Prepared &	Analyzed	: 10/16/19				
% Moisture	4.0	0.1	%		4.0			0.00	20	
Duplicate (P9J1602-DUP2)	Sou	rce: 9J14008-	01	Prepared &	Analyzed	: 10/16/19				
% Moisture	6.0	0.1	%		6.0			0.00	20	
Duplicate (P9J1602-DUP3)	Sour	rce: 9J15006-	04	Prepared &	Analyzed	: 10/16/19				
% Moisture	26.0	0.1	%		25.0			3.92	20	
Duplicate (P9J1602-DUP4)	Sou	rce: 9J15006-	18	Prepared &	Analyzed	: 10/16/19				
% Moisture	6.0	0.1	%		6.0			0.00	20	
Batch P9J1811 - *** DEFAULT PREP ***										
Blank (P9J1811-BLK1)				Prepared:	10/18/19 A	nalyzed: 10	0/20/19			
Chloride	ND	0.100	mg/kg wet							
LCS (P9J1811-BS1)				Prepared:	10/18/19 A	nalyzed: 10	0/20/19			
Chloride	438	1.00	mg/kg wet	400		109	80-120			
LCS Dup (P9J1811-BSD1)				Prepared:	10/18/19 A	nalyzed: 10	0/20/19			
Chloride	440	1.00	mg/kg wet	400		110	80-120	0.545	20	
Calibration Blank (P9J1811-CCB1)				Prepared:	10/18/19 A	nalyzed: 10	0/20/19			
Chloride	0.00		mg/kg wet							

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source	e	%REC		RPD	
Analyte	Result	Limit	Units	Level	Resul	t %REG	C Limits	RPD	Limit	Notes
Batch P9J1811 - *** DEFAULT PREP ***										
Calibration Blank (P9J1811-CCB2)				Prepared:	10/18/19	Analyzed:	10/20/19			
Chloride	0.00		mg/kg wet							
Calibration Check (P9J1811-CCV1)				Prepared:	10/18/19	Analyzed:	10/20/19			
Chloride	20.1		mg/kg	20.0		100	0-200			
Calibration Check (P9J1811-CCV2)				Prepared:	10/18/19	Analyzed:	10/20/19			
Chloride	20.2		mg/kg	20.0		101	0-200			
Calibration Check (P9J1811-CCV3)				Prepared:	10/18/19	Analyzed:	10/20/19			
Chloride	19.7		mg/kg	20.0		98.5	0-200			
Matrix Spike (P9J1811-MS1)	Sou	rce: 9J12020	-24	Prepared:	10/18/19	Analyzed:	10/20/19			
Chloride	12600	28.4	mg/kg dry	2840	9740	102	80-120			
Matrix Spike (P9J1811-MS2)	Sou	rce: 9J14006	-10	Prepared:	10/18/19	Analyzed:	10/20/19			
Chloride	7270	26.0	mg/kg dry	2600	6650	24.0	80-120			QM-0
Matrix Spike Dup (P9J1811-MSD1)	Sou	rce: 9J12020	-24	Prepared:	10/18/19	Analyzed:	10/20/19			
Chloride	12300	28.4	mg/kg dry	2840	9740	91.8	80-120	2.36	20	
Matrix Spike Dup (P9J1811-MSD2)	Sou	rce: 9J14006	-10	Prepared:	10/18/19	Analyzed:	10/20/19			
Chloride	9970	26.0	mg/kg dry	2600	6650	127	80-120	31.2	20	QM-0

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P9J1717 - TX 1005										
Blank (P9J1717-BLK1)				Prepared:	10/17/19 A	nalyzed: 10	0/18/19			
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	119		"	100		119	70-130			
Surrogate: o-Terphenyl	63.6		"	50.0		127	70-130			
LCS (P9J1717-BS1)				Prepared:	10/17/19 A	nalyzed: 10	0/18/19			
C6-C12	1040	25.0	mg/kg wet	1000		104	75-125			
>C12-C28	1090	25.0	"	1000		109	75-125			
Surrogate: 1-Chlorooctane	118		"	100		118	70-130			
Surrogate: o-Terphenyl	60.5		"	50.0		121	70-130			
LCS Dup (P9J1717-BSD1)				Prepared:	10/17/19 A	nalyzed: 10	0/18/19			
C6-C12	1040	25.0	mg/kg wet	1000		104	75-125	0.467	20	
>C12-C28	1100	25.0	"	1000		110	75-125	0.606	20	
Surrogate: 1-Chlorooctane	120		"	100		120	70-130			
Surrogate: o-Terphenyl	60.2		"	50.0		120	70-130			
Calibration Blank (P9J1717-CCB1)				Prepared:	10/17/19 A	nalyzed: 10	0/18/19			
C6-C12	14.2		mg/kg wet							
>C12-C28	6.08		"							
Surrogate: 1-Chlorooctane	134		"	140		95.7	70-130			
Surrogate: o-Terphenyl	71.7		"	70.0		102	70-130			
Calibration Blank (P9J1717-CCB2)				Prepared:	10/17/19 A	nalyzed: 10	0/18/19			
C6-C12	11.4		mg/kg wet							
>C12-C28	8.07		"							
Surrogate: 1-Chlorooctane	147		"	140		105	70-130			
Surrogate: o-Terphenyl	78.2		"	70.0		112	70-130			

Project: Select Energy Cowtown South

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P9J1717 - TX 1005										
Calibration Check (P9J1717-CCV1)				Prepared:	10/17/19 A	nalyzed: 10	/18/19			
C6-C12	562	25.0	mg/kg wet	500		112	85-115			
>C12-C28	508	25.0	"	500		102	85-115			
Surrogate: 1-Chlorooctane	128		"	100		128	70-130			
Surrogate: o-Terphenyl	66.3		"	50.0		133	70-130			S-GC
Calibration Check (P9J1717-CCV2)				Prepared:	10/17/19 A	nalyzed: 10	/18/19			
C6-C12	522	25.0	mg/kg wet	500		104	85-115			
>C12-C28	567	25.0	"	500		113	85-115			
Surrogate: 1-Chlorooctane	122		"	100		122	70-130			
Surrogate: o-Terphenyl	64.0		"	50.0		128	70-130			

Larson & Associates, Inc. Project: Select Energy Cowtown South

P.O. Box 50685 Project Number: 19-0179-03 Midland TX, 79710 Project Manager: Mark Larson

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

	Bren	Darron			
Report Approved By:			Date:	10/25/2010	

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc. Project: Select Energy Cowtown South Fax: (432) 687-0456

P.O. Box 50685 Project Number: 19-0179-03 Midland TX, 79710 Project Manager: Mark Larson

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PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: Cowtown South-Select Energy
Project Number: 19-0179-03
Location:

Lab Order Number: 9K05018



NELAP/TCEQ # T104704516-17-8

Report Date: 11/15/19

P.O. Box 50685

Midland TX, 79710

Larson & Associates, Inc. Project: Cowtown South-Select Energy

> Project Number: 19-0179-03 Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HA-1 (5')	9K05018-01	Soil	11/04/19 11:33	11-05-2019 10:35
HA-2 (8')	9K05018-02	Soil	11/04/19 11:43	11-05-2019 10:35
HA-3 (5')	9K05018-03	Soil	11/04/19 11:57	11-05-2019 10:35
HA-4 (5')	9K05018-04	Soil	11/04/19 12:33	11-05-2019 10:35
HA-4 (8')	9K05018-05	Soil	11/04/19 12:37	11-05-2019 10:35
HA-5 (5')	9K05018-06	Soil	11/04/19 12:54	11-05-2019 10:35
HA-5 (10')	9K05018-07	Soil	11/04/19 13:04	11-05-2019 10:35
HA-5 (15')	9K05018-08	Soil	11/04/19 13:18	11-05-2019 10:35
HA-8 (5')	9K05018-09	Soil	11/04/19 13:33	11-05-2019 10:35
HA-8 (10')	9K05018-10	Soil	11/04/19 13:37	11-05-2019 10:35
HA-8 (15')	9K05018-11	Soil	11/04/19 13:52	11-05-2019 10:35

Larson & Associates, Inc.

Project: Cowtown South-Select Energy

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson Fax: (432) 687-0456

HA-1 (5') 9K05018-01 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	104	1.10 mg/kg dry	1	P9K1204	11/12/19	11/13/19	EPA 300.0
% Moisture	9.0	0.1 %	1	P9K0601	11/06/19	11/06/19	ASTM D2216

Larson & Associates, Inc. Project: Cowtown South-Select Energy

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-2 (8') 9K05018-02 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	6.07	1.04 mg/kg dry	1	P9K1204	11/12/19	11/13/19	EPA 300.0
% Moisture	4.0	0.1 %	1	P9K0601	11/06/19	11/06/19	ASTM D2216

Larson & Associates, Inc. Project: Cowtown South-Select Energy

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-3 (5') 9K05018-03 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	7080	26.3 mg/kg dry	25	P9K1204	11/12/19	11/13/19	EPA 300.0
% Moisture	5.0	0.1 %	1	P9K0601	11/06/19	11/06/19	ASTM D2216

Larson & Associates, Inc. Project: Cowtown South-Select Energy

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-4 (5') 9K05018-04 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	13800	55.6 mg/kg dry	50	P9K1204	11/12/19	11/13/19	EPA 300.0
% Moisture	10.0	0.1 %	1	P9K0601	11/06/19	11/06/19	ASTM D2216

Larson & Associates, Inc. Project: Cowtown South-Select Energy

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

Fax: (432) 687-0456

HA-4 (8') 9K05018-05 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	7000	26.6 mg/kg dry	25	P9K1204	11/12/19	11/13/19	EPA 300.0
% Moisture	6.0	0.1 %	1	P9K0601	11/06/19	11/06/19	ASTM D2216

Larson & Associates, Inc. Project: Cowtown South-Select Energy

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-5 (5') 9K05018-06 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	7560	26.6 mg/kg dry	25	P9K1204	11/12/19	11/13/19	EPA 300.0
% Moisture	6.0	0.1 %	1	P9K0601	11/06/19	11/06/19	ASTM D2216

Larson & Associates, Inc. Project: Cowtown South-Select Energy

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

Fax: (432) 687-0456

HA-5 (10') 9K05018-07 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	6830	27.2 mg/kg dry	25	P9K1204	11/12/19	11/13/19	EPA 300.0
% Moisture	8.0	0.1 %	1	P9K0601	11/06/19	11/06/19	ASTM D2216

Larson & Associates, Inc. Project: Cowtown South-Select Energy

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

Fax: (432) 687-0456

HA-5 (15') 9K05018-08 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	38.0	1.08 mg/kg dry	1	P9K1204	11/12/19	11/13/19	EPA 300.0
% Moisture	7.0	0.1 %	1	P9K0601	11/06/19	11/06/19	ASTM D2216

Larson & Associates, Inc. Project: Cowtown South-Select Energy

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-8 (5') 9K05018-09 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	15.2	1.04 mg/kg dry	1	P9K1204	11/12/19	11/13/19	EPA 300.0
% Moisture	4.0	0.1 %	1	P9K0601	11/06/19	11/06/19	ASTM D2216

Larson & Associates, Inc. Project: Cowtown South-Select Energy

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

Fax: (432) 687-0456

HA-8 (10') 9K05018-10 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	11.3	1.08 mg/kg dry	1	P9K1204	11/12/19	11/13/19	EPA 300.0
% Moisture	7.0	0.1 %	1	P9K0601	11/06/19	11/06/19	ASTM D2216

Larson & Associates, Inc. Project: Cowtown South-Select Energy

P.O. Box 50685 Project Number: 19-0179-03
Midland TX, 79710 Project Manager: Mark Larson

HA-8 (15') 9K05018-11 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Permian Basin Environmental Lab, L.P.

Chloride	3.97	1.04 mg/kg dry	1	P9K1204	11/12/19	11/13/19	EPA 300.0
% Moisture	4.0	0.1 %	1	P9K0601	11/06/19	11/06/19	ASTM D2216

Larson & Associates, Inc.

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P9K0601 - *** DEFAULT PREP ***										
Blank (P9K0601-BLK1)				Prepared &	Analyzed:	11/06/19				
% Moisture	ND	0.1	%							
Duplicate (P9K0601-DUP1)	Sou	rce: 9K05010	-09	Prepared &	Analyzed:	11/06/19				
% Moisture	8.0	0.1	%		8.0			0.00	20	
Duplicate (P9K0601-DUP2)	Sou	rce: 9K05018	3-02	Prepared &	: Analyzed:	11/06/19				
% Moisture	4.0	0.1	%		4.0			0.00	20	
Duplicate (P9K0601-DUP3)	Sou	rce: 9K05023	-06	Prepared &	: Analyzed:	11/06/19				
% Moisture	4.0	0.1	%		4.0			0.00	20	
Batch P9K1204 - *** DEFAULT PREP ***										
Blank (P9K1204-BLK1)				Prepared: 1	1/12/19 A	nalyzed: 11	1/13/19			
Chloride	ND	0.100	mg/kg wet							
LCS (P9K1204-BS1)				Prepared: 1	1/12/19 A	nalyzed: 11	1/13/19			
Chloride	420	1.00	mg/kg wet	400		105	80-120			
LCS Dup (P9K1204-BSD1)				Prepared: 1	1/12/19 A	nalyzed: 11	1/13/19			
Chloride	422	1.00	mg/kg wet	400		105	80-120	0.504	20	
Calibration Blank (P9K1204-CCB1)				Prepared: 1	1/12/19 A	nalyzed: 11	1/13/19			
Chloride	-0.0430		mg/kg wet	•		-				
Calibration Blank (P9K1204-CCB2)				Prepared: 1	1/12/19 A	nalyzed: 11	1/13/19			
Chloride	0.00		mg/kg wet							

Larson & Associates, Inc.

Project: Cowtown South-Select Energy

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

	·	Reporting	·	Spike	Source	e	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	t %REC	C Limits	RPD	Limit	Notes
Batch P9K1204 - *** DEFAULT PREP ***										
Calibration Check (P9K1204-CCV1)	Prepared: 11/12/19 Analyzed: 11/13/19									
Chloride	20.0		mg/kg	20.0		99.8	0-200			
Calibration Check (P9K1204-CCV2)				Prepared: 1	11/12/19	Analyzed:	11/13/19			
Chloride	19.9		mg/kg	20.0		99.5	0-200			
Calibration Check (P9K1204-CCV3)				Prepared: 1	11/12/19	Analyzed:	11/13/19			
Chloride	20.4		mg/kg	20.0		102	0-200			
Matrix Spike (P9K1204-MS1)	Sour	ce: 9K04002	2-07	Prepared: 1	11/12/19	Analyzed:	11/13/19			
Chloride	5560	10.4	mg/kg dry	1040	4700	82.8	80-120			
Matrix Spike (P9K1204-MS2)	Sour	ce: 9K05018	3-03	Prepared: 1	11/12/19	Analyzed:	11/13/19			
Chloride	9830	26.3	mg/kg dry	2630	7080	105	80-120			
Matrix Spike Dup (P9K1204-MSD1)	Source: 9K04002-07		Prepared: 11/12/19 Analyzed: 11/13/19		11/13/19					
Chloride	5520	10.4	mg/kg dry	1040	4700	79.4	80-120	0.636	20	
Matrix Spike Dup (P9K1204-MSD2)	Sour	ce: 9K05018	3-03	Prepared: 1	11/12/19	Analyzed:	11/13/19			
Chloride	9770	26.3	mg/kg dry	2630	7080	102	80-120	0.631	20	

Larson & Associates, Inc.

Project: Cowtown South-Select Energy

P.O. Box 50685 Midland TX, 79710 Project Number: 19-0179-03 Project Manager: Mark Larson

Notes and Definitions

ROI Received on Ice

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

	Drew	Darror		
Report Approved By:			Date:	11/15/2019

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Brent Barron, Laboratory Director/Technical Director

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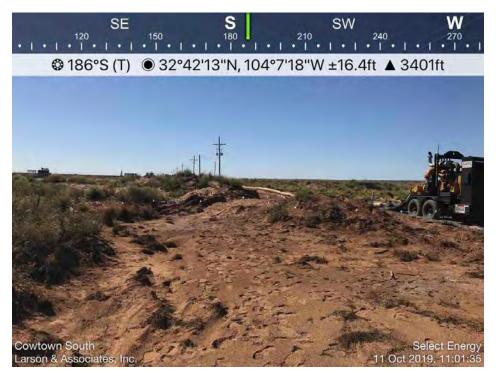
If you have received this material in error, please notify us immediately at 432-686-7235.

Appendix C

Photographs



Spill area viewing northeast



Spill area viewing south



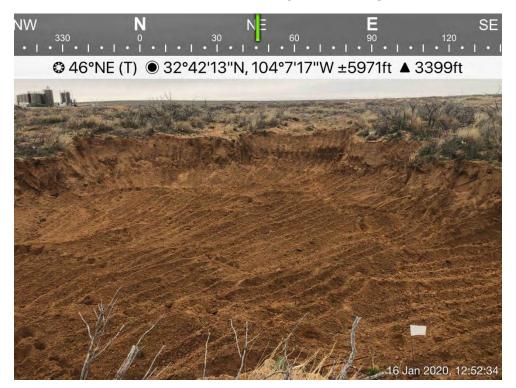
Spill area viewing west



Spill area viewing southwest



Excavated soil from HA-2 through HA-5 viewing west



Excavated soil from HA-2 through HA-5 viewing northeast



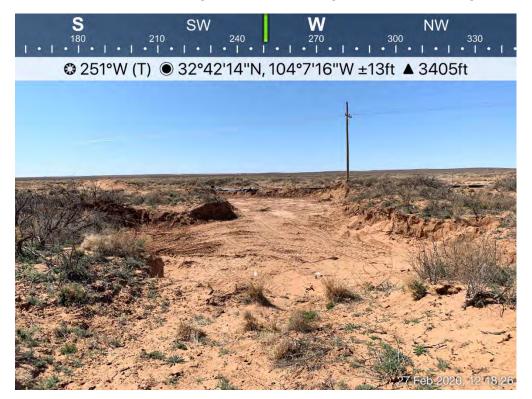
Excavated soil from HA-8 viewing southwest



Excavated soil from 2.3 through 2.7, 2.9, and 2.11 through 2.16 viewing northeast



Excavated soil from 2.3 through 2.7, 2.9, 2.11 through 2.16, and 4.2 viewing west



Excavated soil from 4.2 viewing west – southwest



Backfilled and seeded area viewing north



Backfilled and seeded area viewing south



Backfilled and seeded area viewing west