

Incident ID	nAB1926639738
District RP	
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?	140 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

<p>Characterization Report Checklist: <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. <input type="checkbox"/> Field data <input checked="" type="checkbox"/> Data table of soil contaminant concentration data <input checked="" type="checkbox"/> Depth to water determination <input checked="" type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release <input type="checkbox"/> Boring or excavation logs <input checked="" type="checkbox"/> Photographs including date and GIS information <input checked="" type="checkbox"/> Topographic/Aerial maps <input checked="" type="checkbox"/> Laboratory data including chain of custody

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

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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: Ike Tavarez Title: Senior HSE Specialist

Signature: _____ Date: _____

email: itavarez@concho.com Telephone: 432-685-2573

OCD Only

Received by: Cristina Eads Date: 03/19/2020

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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.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- 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)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Ike Tavarez Title: HSE Supervisor
 Signature: _____ Date: _____
 email: itavarez@concho.com Telephone: 432-685-2573

OCD Only

Received by: Cristina Eads Date: 03/19/2020

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  Date: 03/19/2020
 Printed Name: Cristina Eads Title: Environmental Specialist

Remediation Summary & Soil Closure Request

COG Operating, LLC

Birdseye 32 #1

Eddy County, New Mexico

Unit Letter B, Section 33, Township 19 South, Range 31 East

Latitude 32.62067 North, Longitude 103.8733 West

NMOCD Reference No. 2RP-Pending

Prepared By:

Etech Environmental & Safety Solutions, Inc.

3100 Plains Highway

Lovington, New Mexico 88260



Lance Crenshaw



Joel W. Lowry



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1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of COG Operating, LLC, has prepared this Remediation Summary and Soil Closure Request for the Release Site known as the Birdseye 32 #1. Details of the release are summarized below:

Location of Release Source				
Latitude: <u>32.62067</u>		Longitude: <u>-103.8733</u>		
Provided GPS are in WGS84 format.				
Site Name: <u>Birdseye 32 #1</u>		Site Type: <u>Flowline</u>		
Date Release Discovered: <u>8/18/2019</u>		API # (if applicable): <u>N/A</u>		
Unit Letter	Section	Township	Range	County
B	33	19S	31E	Eddy
Surface Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Tribal <input type="checkbox"/> Private (Name _____)				
Nature and Volume of Release				
<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)		
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) <u>20</u>	Volume Recovered (bbls) <u>0</u>		
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)		
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)		
<input type="checkbox"/> Other (describe)	Volume/Weight Released	Volume/Weight Recovered		
Cause of Release and Affected Area: The release was attributed to the failure of a flowline. Impacts from the release affected an area within the pasture measuring approximately 4,600 sq. ft.				
Initial Response				
<input checked="" type="checkbox"/> The source of the release has been stopped.				
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.				
<input checked="" type="checkbox"/> Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices				
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.				

Previously submitted portions of the NMOCD Form C-141 are available on the NMOCD Imaging System.

2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half mile radius of the Release Site. Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. Depth to groundwater information is provided as Appendix A.

What is the shallowest depth to groundwater beneath the area affected by the release?	140'	
Did the release impact groundwater or surface water?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
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Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted on Figures 1 & 2.

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

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

Closure Criteria for Soil Impacted by a Release			
Probable Depth to Groundwater	Constituent	Method	Limit
140'	Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 Method 8015M Ext	100 mg/kg
	DRO + GRO	EPA SW-846 Method 8015M	N/A mg/kg
	BTEX	EPA SW-846 Methods 8021b or 8260b	50 mg/kg
	Benzene	EPA SW-846 Methods 8021b or 8260b	10 mg/kg

4.0 REMEDIATION ACTIVITIES SUMMARY

On October 16, 2019, remediation activities commenced at the Site. In accordance with the NMOCD, impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standard was excavated and stockpiled on-site, atop an impermeable plastic liner, pending final disposition at an NMOCD-approved surface waste facility. The floor and sidewalls of the excavation were advanced until field observations and/or test results suggested BTEX, TPH and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standard.

On October 21, 2019, Etech collected 33 excavation confirmation soil samples. The collected soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH and/or chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples with the exception of soil samples AH-2 FL-1, AH-2 FL-3, AH-2 FL-4, AH-2 FL-5 and A-2 FL-7 which exhibited chloride concentrations of 1,330 mg/kg, 7,600 mg/kg, 1,600 mg/kg, 8,130 mg/kg and 1,960 mg/kg, respectively.

On November 20, 2019, excavation activities resumed at the Site. Impacted soil in the areas characterized by soil samples AH-2 FL-1, AH-2 FL-3, AH-2 FL-4, AH-2 FL-5 and A-2 FL-7 were excavated and transported to an NMOCD-approved surface waste facility for disposal. Upon excavating impacted soil remaining in-situ, Etech collected 5 additional excavation confirmation soil samples and submitted them to the laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the applicable NMOCD Closure Criteria in each of the submitted soil samples.

A "Site & Sample Location Map" is provided as Figure 3. A "Soil Chemistry Table" is provided as Table 1. Laboratory Analytical Reports are provided in Appendix C. Field data and soil profile logs, if applicable, are provided as Appendix B.

The final dimensions of the excavated area were 130 Ft. in length, 20 to 55 Ft in width and ranged from 2 to 6 Ft. in depth. During the course of remediation activities approximately 996 cubic yards of impacted soil were transported to an NMOCD-approved surface waste facility for disposal.

5.0 RESTORATION, RECLAMATION AND RE-VEGETATION PLAN

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

6.0 SOIL CLOSURE REQUEST

Remediation activities were conducted in accordance with the NMOCD. Impacted soil affected above the NMOCD Closure Criteria was excavated and transported to an NMOCD-approved disposal facility. Laboratory analytical results from confirmation soil samples indicate concentrations of BTEX, TPH and chloride are below the NMOCD Closure Criteria in each of the submitted soil samples.

Based on laboratory analytical results and field activities conducted to date, Etech recommends COG Operating, LLC provide copies of this Remediation Summary and Soil Closure Request to the appropriate agencies and request closure be granted to the Birdseye 32 #1 Site.

7.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this Site Assessment Report and Proposed Remediation Workplan to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents reference in the report and on oral statements made by certain individuals. Basis has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of COG Operating, LLC. Use of the information contained in this report is prohibited within the consent of Etech and/or COG Operating, LLC.

8.0 DISTRIBUTION

COG Operating, LLC

*600 West Illinois Avenue
Midland, TX 79701*

New Mexico Energy, Minerals and Natural Resources Department

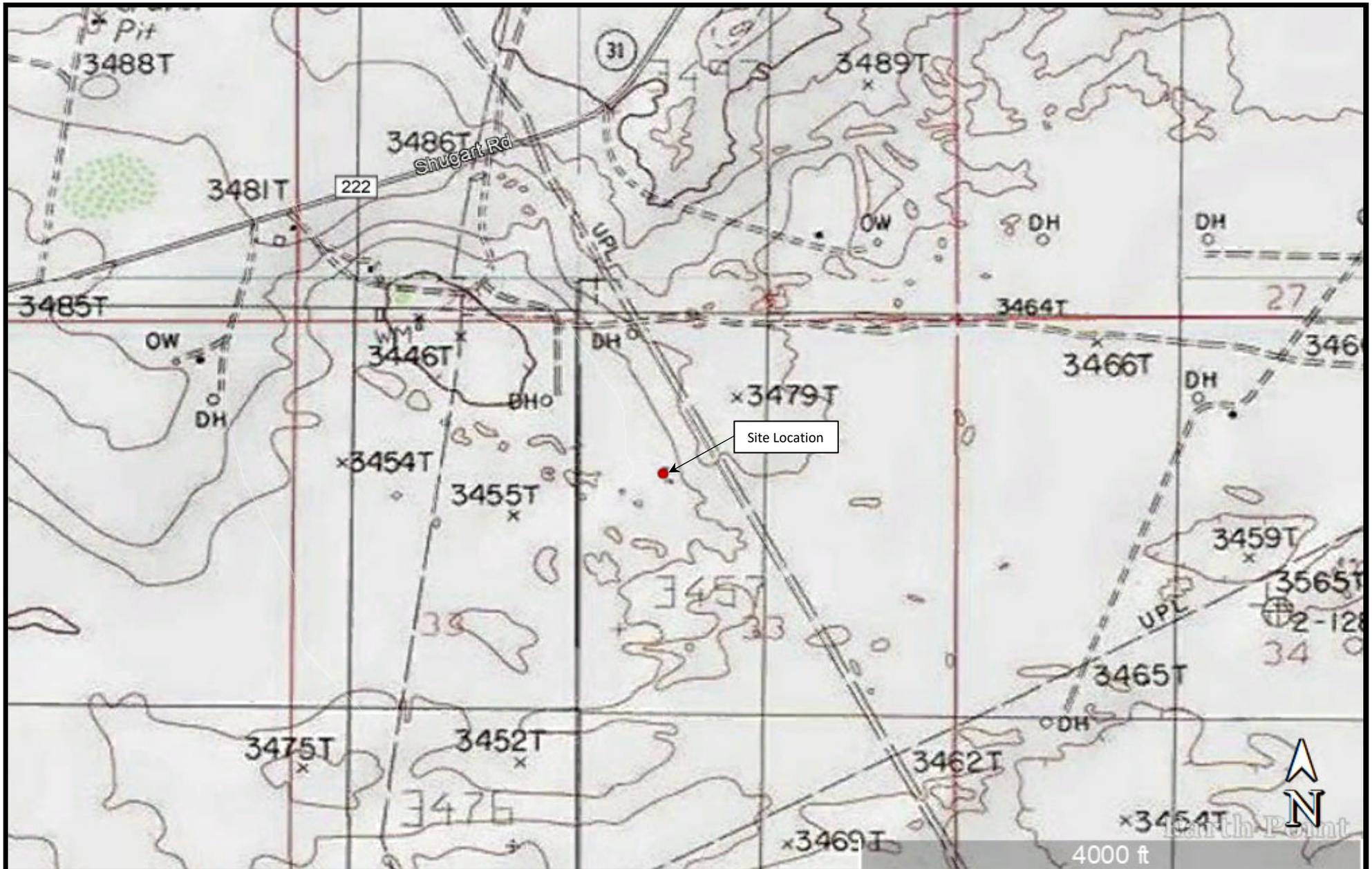
*Oil Conservation Division, District 2
811 S. First Street
Artesia, NM 88210*

United States Department of the Interior

*Bureau of Land Management
620 E. Greene Street
Carlsbad, NM 88220*

(Electronic Submission)

Figure 1
Topographic Map



Legend:

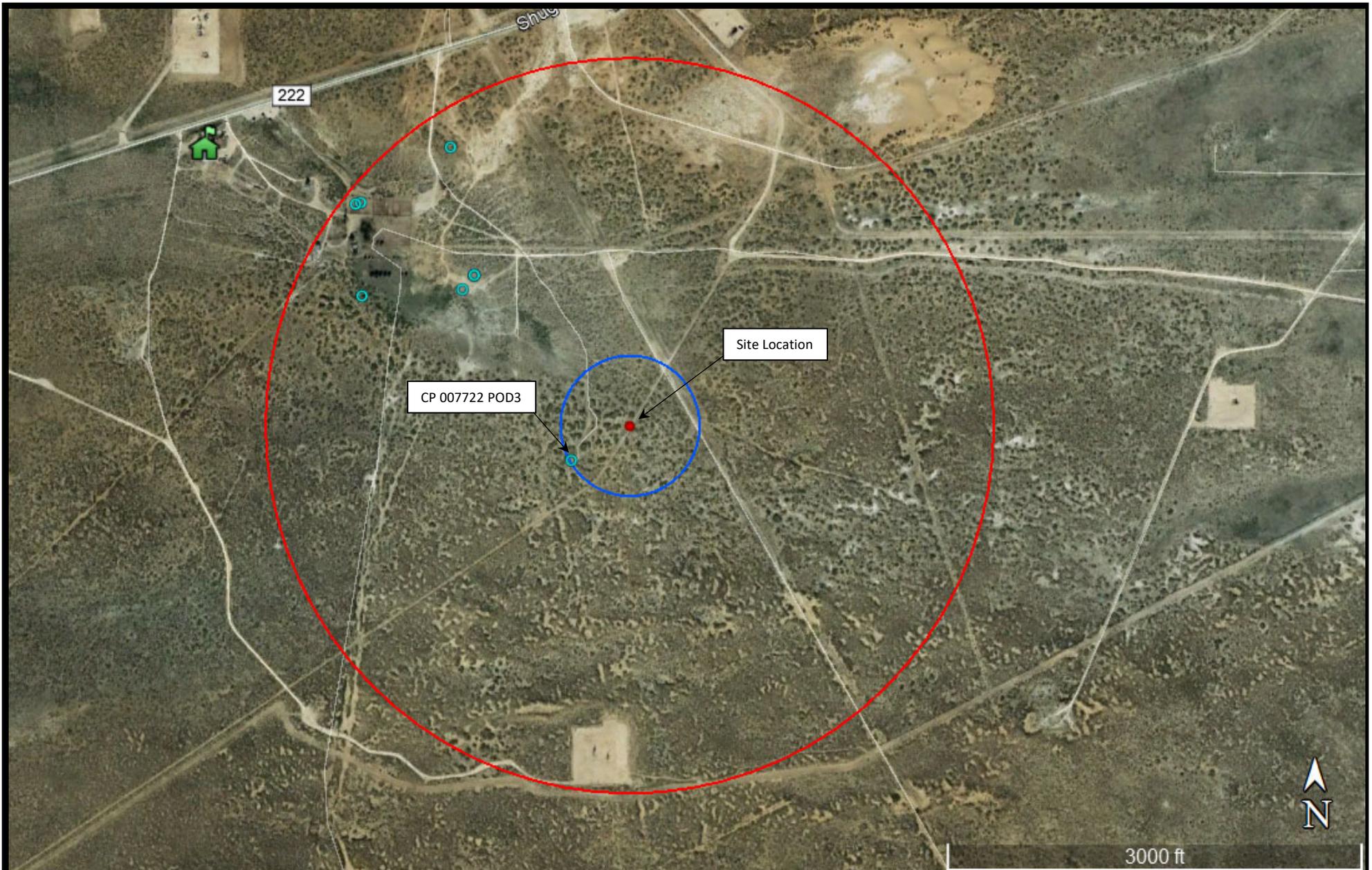
- Site Location

Figure 1
 Topographic Map
 COG Operating, LLC
 Birdseye 32 #1
 GPS: 32.62067, -103.8733
 Eddy County

eTECH 
 Environmental & Safety Solutions, Inc.

Drafted: Checked: jwl Date: 11/26/19

Figure 2
Aerial Proximity Map



Legend:

● Site Location	Non-Industrial Building
○ Fresh Water Well	Subsurface Mine
100-Year Floodplain	○ 1/2 Mi Radius
High/Critical Karst	○ 500 Ft. Radius

Figure 2
 Aerial Map
 COG Operating, LLC
 Birdseye 32 #1
 GPS: 32.62067, -103.8733
 Eddy County

Environmental & Safety Solutions, Inc.

Drafted: _____ Checked: jwl Date: 11/26/19

Figure 3
Site and Sample Location Map



Legend:

	Sample Point
	Affected Area
	Poly Flowline
	Excavated Area

Figure 3
 Site and Sample Location Map
 COG Operating, LLC
 Birdseye 32 #1
 GPS: 32.62067, -103.8733
 Eddy County



 Environmental & Safety Solutions, Inc.

Drafted: _____ Checked: jwl Date: 11/26/19

Table 1
Concentrations of BTEX, TPH, and/or Chloride in Soil

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL
COG Operating, LLC
Birdseye 32 #1
NMOCD Ref. #: 2RP-Pending

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
AH-1 FL-1	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
AH-1 FL-2	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
AH-1 FL-3	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
AH-1 FL-4	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	288
AH-1 FL-5	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
AH-1 FL-6	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
AH-1 WSW-1	10/21/19	1'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
AH-1 SSW-1	10/21/19	1'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
AH-1 NSW-1	10/21/19	1'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
AH-1 NSW-2	10/21/19	1'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
AH-2 FL-1	10/21/19	4'	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,330
AH-2 FL-2	10/21/19	4'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	320
AH-2 FL-3	10/21/19	4'	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	7,600
AH-2 FL-4	10/21/19	4'	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,600
AH-2 FL-5	10/21/19	4'	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	8,130
AH-2 FL-6	10/21/19	4'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	544
AH-2 FL-7	10/21/19	4'	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,960
AH-2 FL-8	10/21/19	4'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	368
AH-2 NSW-1	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	592
AH-2 SSW-1	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
AH-2 SSW-2	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	288
AH-2 ESW-1	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
AH-3 FL-1	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	512
AH-3 FL-2	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
AH-3 FL-3	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	416
AH-3 FL-4	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	416
AH-3 FL-5	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
AH-3 FL-6	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	464
AH-3 FL-7	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	336
AH-3 FL-8	10/21/19	2'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
AH-3 WSW-1	10/21/19	1'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
AH-3 NEW-1	10/21/19	1'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
AH-3 EW-1	10/21/19	1'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	272
AH-2 FL-1B	11/21/19	5'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
AH-2 FL-3B	11/21/19	5'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
AH-2 FL-4B	11/21/19	5'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
AH-2 FL-7B	11/21/19	5'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
AH-2 FL-5B2	11/21/19	6'	In-situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
Closure Criteria				10	50	-	-	N/A	-	100	600

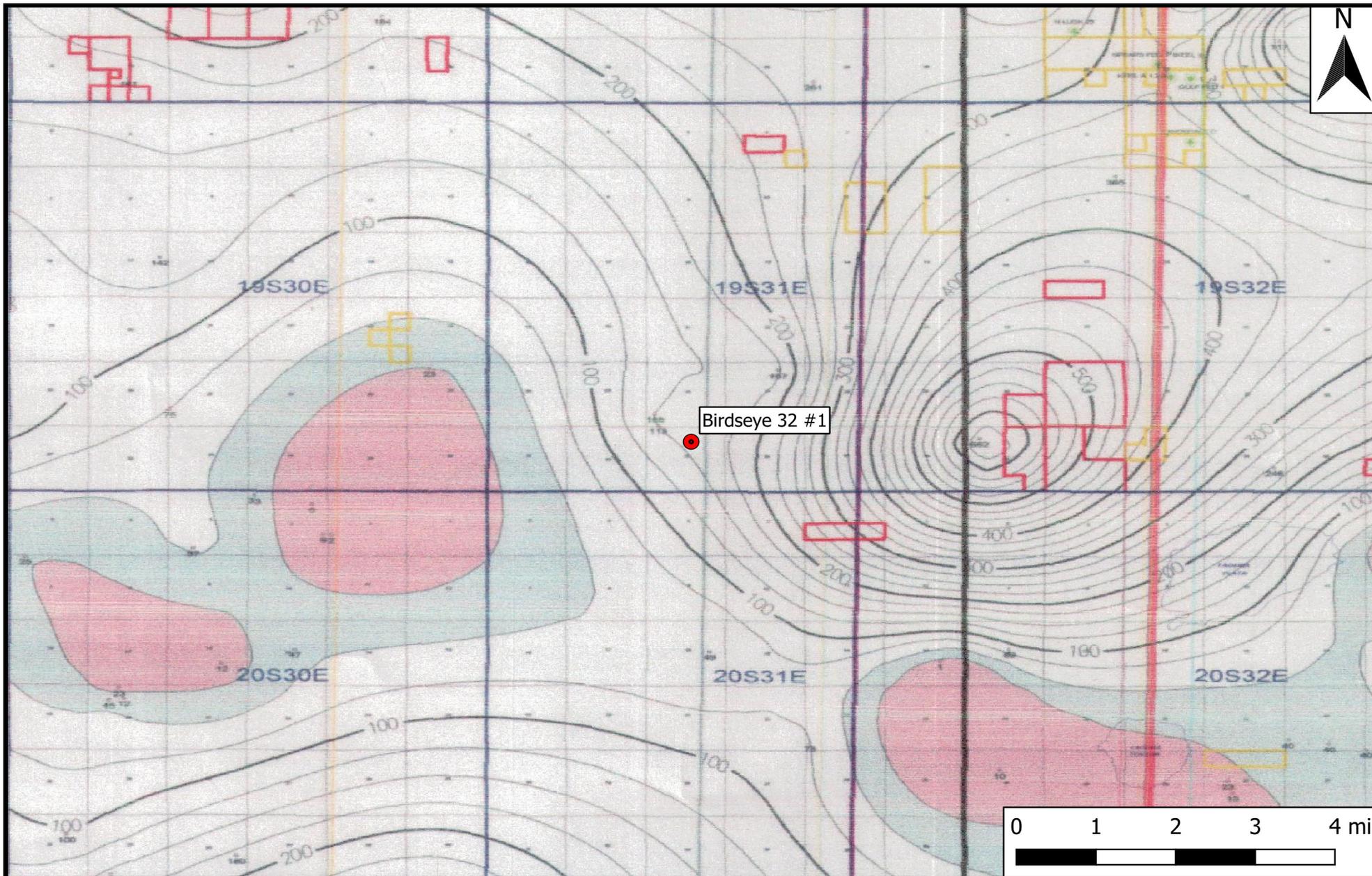
NOTES:

■ = Removed

- =

Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

Appendix A
Depth to Groundwater Information

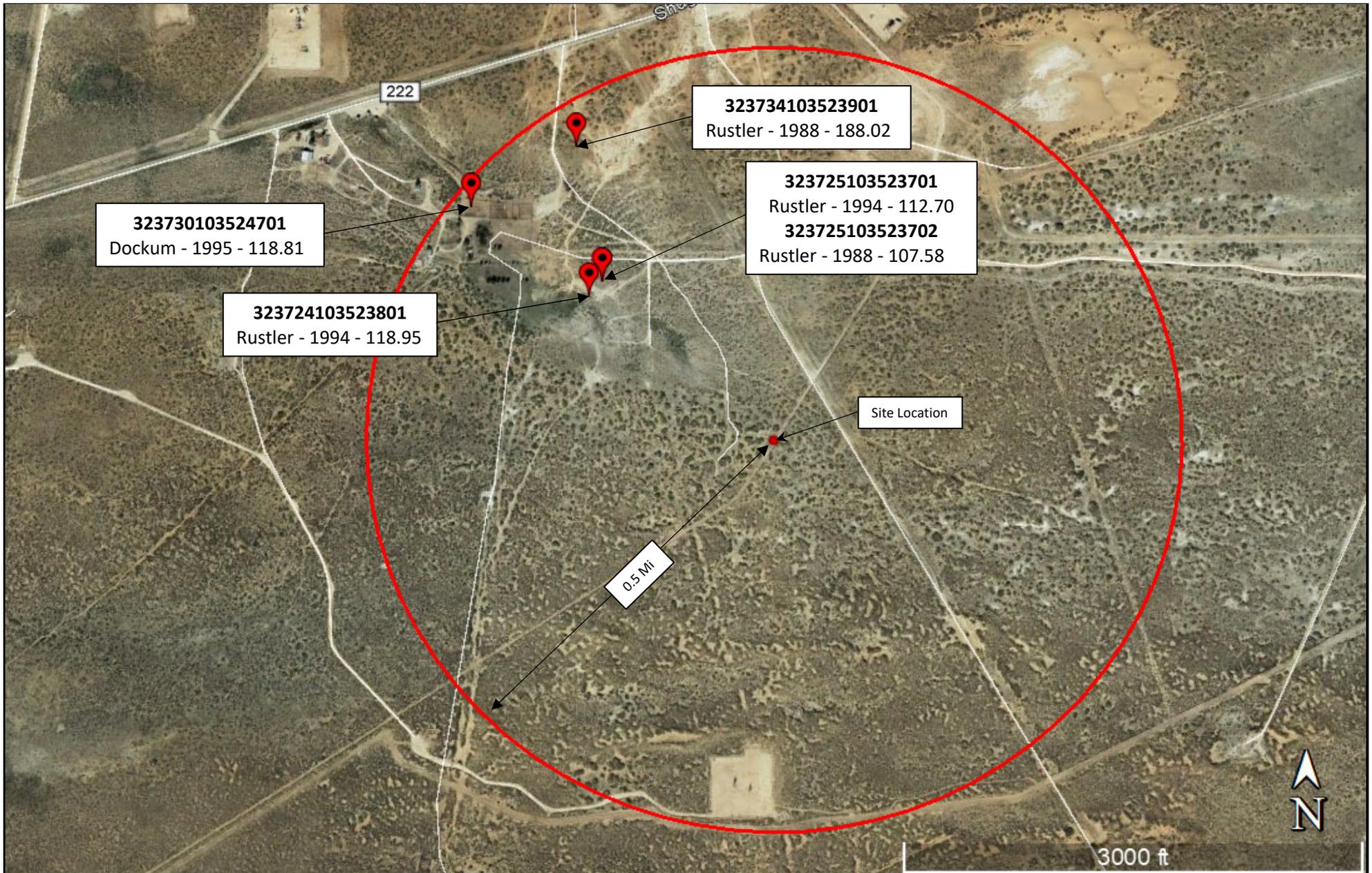


Legend
 ● Site Location

Figure 4
 Inferred Depth to Groundwater Trend Map
 COG Operating, LLC
 Birdseye 32 #1
 GPS: 32.62067, -103.8733
 Eddy County



Drafted: Checked: jwl Date: 11/26/19



Legend:

	Site Location
	USGS Water Well

Figure 5
 USGS Well Proximity Map
 COG Operating, LLC
 Birdseye 32 #1
 GPS: 32.62067, -103.8733
 Eddy County

eTECH 
 Environmental & Safety Solutions, Inc.

Drafted: Checked: jwl Date: 11/26/19



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00722 POD3	CP	LE		2	4	1	33	19S	31E	605519	3609673*	220	220	140	80
CP 00723 POD1	CP	ED		2	1	1	33	19S	31E	605111	3610071*	652	139		
CP 00722 POD1	CP	LE		4	3	3	28	19S	31E	605106	3610273*	763	200		

Average Depth to Water: **140 feet**

Minimum Depth: **140 feet**

Maximum Depth: **140 feet**

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 605702.57

Northing (Y): 3609795.97

Radius: 880

*UTM location was derived from PLSS - see Help

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



New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
		Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00722 POD1	4	3	3	28	19S	31E	605106	3610273* 
Driller License:	208	Driller Company:	VAN NOY, W.L.						
Driller Name:	VAN NOY								
Drill Start Date:		Drill Finish Date:	12/31/1945		Plug Date:				
Log File Date:		PCW Rev Date:	04/26/1991		Source:	Shallow			
Pump Type:	SUBMER	Pipe Discharge Size:					Estimated Yield:	100 GPM	
Casing Size:	9.50	Depth Well:	200 feet		Depth Water:				

*UTM location was derived from PLSS - see Help

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

9/18/19 2:04 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)					(NAD83 UTM in meters)		
		Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00722 POD3	2	4	1	33	19S	31E	605519	3609673* 
Driller License:	1058	Driller Company:	KEY'S DRILLING & PUMP SERVICE						
Driller Name:	KEY, CASEY								
Drill Start Date:	05/02/2011	Drill Finish Date:	05/04/2011		Plug Date:				
Log File Date:	05/17/2011	PCW Rev Date:			Source:	Shallow			
Pump Type:		Pipe Discharge Size:			Estimated Yield:	100 GPM			
Casing Size:	5.00	Depth Well:	220 feet		Depth Water:	140 feet			

Water Bearing Stratifications:	Top	Bottom	Description
	140	150	Sandstone/Gravel/Conglomerate
	170	220	Sandstone/Gravel/Conglomerate

*UTM location was derived from PLSS - see Help

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

9/18/19 2:00 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
		Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00723 POD1	2	1	1	33	19S	31E	605111	3610071* 
Driller License:	122	Driller Company:	UNKNOWN						
Driller Name:	W L VAN NOVS								
Drill Start Date:		Drill Finish Date:		Plug Date:					
Log File Date:		PCW Rev Date:		Source:	Shallow				
Pump Type:		Pipe Discharge Size:		Estimated Yield:	40 GPM				
Casing Size:	6.00	Depth Well:	139 feet		Depth Water:				

*UTM location was derived from PLSS - see Help

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

9/18/19 2:02 PM

POINT OF DIVERSION SUMMARY

Agency	Site Number	Site Name	Period of Record		
			Begin Date	End Date	Levels
USGS	323724103523801	19S.31E.28.33433	1948-11-29	1994-03-18	2
USGS	<u>323725103523701</u>	19S.31E.28.334332	1948-11-29	1994-03-18	4
USGS	323725103523702	19S.31E.28.334332A	1965-11-30	1988-02-02	7
USGS	<u>323730103524701</u>	19S.31E.28.334133	1988-03-08	1994-03-18	2
USGS	323734103523901	19S.31E.28.33124	1977-12-15	1988-02-23	3

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Title: Groundwater levels -- 5 sites found

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



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

Page Last Modified: 2019-09-18 15:29:49 EDT

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Agency code = usgs
site_no list =

- 323724103523801

Minimum number of levels = 1

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USGS 323724103523801 19S.31E.28.33433

Eddy County, New Mexico

Latitude 32°37'24", Longitude 103°52'38" NAD27

Land-surface elevation 3,450 feet above NAVD88

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1948-11-29		D	102.95				2		U	
1994-03-18		D	118.95				2		S	

Explanation

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

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Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 323725103523701

Minimum number of levels = 1

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USGS 323725103523701 19S.31E.28.334332

Eddy County, New Mexico
Latitude 32°37'25", Longitude 103°52'37" NAD27
Land-surface elevation 3,450 feet above NAVD88
The depth of the well is 160 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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

Date	Time	Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Water-level accuracy	Status	Method of measurement	Measuring agency	Source of measurement
1948-11-29		D	100.70				2		U	
1988-02-02		D	110.33				2		S	
1990-10-10		D	112.89				2		S	
1994-03-18		D	112.70				2		S	

Explanation

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

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Agency code = usgs
site_no list =

- 323725103523702

Minimum number of levels = 1

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USGS 323725103523702 19S.31E.28.334332A

Eddy County, New Mexico
Latitude 32°37'25", Longitude 103°52'37" NAD27
Land-surface elevation 3,450 feet above NAVD88
The depth of the well is 190 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1965-11-30		D	111.36				2		U	
1968-04-03		D	107.51				2		U	
1971-02-01		D	108.21				2		U	
1976-12-10		D	110.45				2		U	
1977-12-14		D	110.07				2		U	
1983-01-19		D	107.52				2		U	
1988-02-02		D	107.58				2		U	

Explanation

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

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Agency code = usgs
 site_no list =

- 323730103524701

Minimum number of levels = 1

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USGS 323730103524701 19S.31E.28.334133

Eddy County, New Mexico
 Latitude 32°37'30", Longitude 103°52'47" NAD27
 Land-surface elevation 3,445 feet above NGVD29
 The depth of the well is 204.00 feet below land surface.
 This well is completed in the Dockum Group (231DCKM) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1988-03-08		D	111.38			2	Z	S		
1994-03-18		D	118.81			2	Z	S		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status	Z	Other conditions existed that would affect the measured water level (explain in remarks).
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Agency code = usgs
site_no list =

- 323734103523901

Minimum number of levels = 1

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USGS 323734103523901 19S.31E.28.33124

Eddy County, New Mexico
Latitude 32°37'34", Longitude 103°52'39" NAD27
Land-surface elevation 3,473 feet above NAVD88
The depth of the well is 230 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1977-12-15		D	186.87				2		U	
1983-01-19		D	187.53				2		U	
1988-02-23		D	188.02				2		U	

Explanation

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

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Appendix B
Field Data and Soil Profile Logs

Soil Profile

Date: 10/21/2019

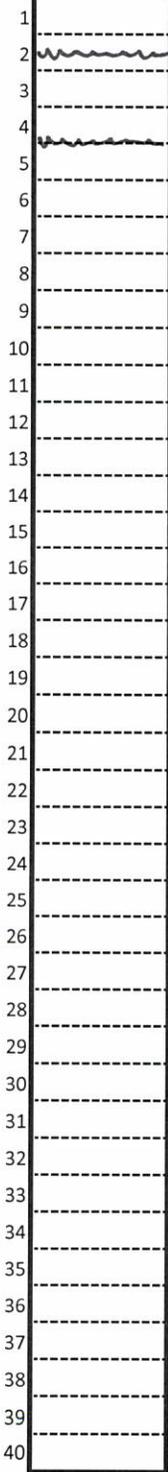
Project: Birdseye 32 #1

Project Number: 11242

Latitude: 32.62067

Longitude: -103.8733

Depth (ft. bgs)



Description

Red Blow Sand

Sandy Caliche

Appendix C
Laboratory Analytical Reports



September 30, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: BIRDSEYE 32 #1

Enclosed are the results of analyses for samples received by the laboratory on 09/25/19 16:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	09/25/2019	Sampling Date:	09/25/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242	Sample Received By:	Tamara Oldaker
Project Location:	CONCHO - LEA CO NM		

Sample ID: AH - 1 @ 2' (H903307-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/26/2019	ND	416	104	400	0.00	

Sample ID: AH - 3 @ 2' (H903307-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/26/2019	ND	416	104	400	0.00	

Sample ID: AH - 2 @ 3' (H903307-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4520	16.0	09/27/2019	ND	400	100	400	3.92	QM-07

Sample ID: AH - 2 @ 4' (H903307-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	09/27/2019	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report



Celey D. Keene, Lab Director/Quality Manager



October 23, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: BIRDSEYE 32 #1

Enclosed are the results of analyses for samples received by the laboratory on 10/22/19 13:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 1 FL -1 (H903602-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/22/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/22/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/22/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/22/2019	ND					

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 89.7 % 37.6-147

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Analytical Results For:

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 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 1 FL -2 (H903602-02)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/22/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/22/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/22/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/22/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 1 FL -3 (H903602-03)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/22/2019	ND	1.80	90.1	2.00	1.68		
Toluene*	<0.050	0.050	10/22/2019	ND	1.89	94.5	2.00	1.20		
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.84	92.0	2.00	3.63		
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.59	93.2	6.00	2.68		
Total BTEX	<0.300	0.300	10/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/22/2019	ND	167	83.7	200	9.51		
DRO >C10-C28*	<10.0	10.0	10/22/2019	ND	165	82.6	200	10.5		
EXT DRO >C28-C36	<10.0	10.0	10/22/2019	ND						

Surrogate: 1-Chlorooctane 113 % 41-142

Surrogate: 1-Chlorooctadecane 116 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 1 FL -4 (H903602-04)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/22/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/22/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/22/2019	ND					

Surrogate: 1-Chlorooctane 111 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 1 FL -5 (H903602-05)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/22/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/22/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/22/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 1 FL -6 (H903602-06)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 90.0 % 41-142

Surrogate: 1-Chlorooctadecane 91.6 % 37.6-147

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 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 1 WSW -1 (H903602-07)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68		
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20		
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63		
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68		
Total BTEX	<0.300	0.300	10/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51		
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5		
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND						

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 1 SSW -1 (H903602-08)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68		
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20		
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63		
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68		
Total BTEX	<0.300	0.300	10/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51		
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5		
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND						

Surrogate: 1-Chlorooctane 110 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 1 NSW -1 (H903602-09)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 91.6 % 41-142

Surrogate: 1-Chlorooctadecane 91.5 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 1 NSW -2 (H903602-10)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 72.9 % 41-142

Surrogate: 1-Chlorooctadecane 74.2 % 37.6-147

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Analytical Results For:

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 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -1 (H903602-11)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1330	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 91.0 % 37.6-147

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 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -2 (H903602-12)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68		
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20		
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63		
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68		
Total BTEX	<0.300	0.300	10/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51		
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5		
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND						

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -3 (H903602-13)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68		
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20		
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63		
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68		
Total BTEX	<0.300	0.300	10/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7600	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51		
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5		
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND						

Surrogate: 1-Chlorooctane 96.8 % 41-142

Surrogate: 1-Chlorooctadecane 97.5 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -4 (H903602-14)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1600	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -5 (H903602-15)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8130	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -6 (H903602-16)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 81.4 % 41-142

Surrogate: 1-Chlorooctadecane 80.8 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -7 (H903602-17)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68		
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20		
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63		
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68		
Total BTEX	<0.300	0.300	10/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1960	16.0	10/23/2019	ND	432	108	400	3.77	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51		
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5		
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND						

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -8 (H903602-18)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 89.9 % 41-142

Surrogate: 1-Chlorooctadecane 88.9 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 NSW -1 (H903602-19)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68	
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68	
Total BTEX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 SSW -1 (H903602-20)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/23/2019	ND	1.80	90.1	2.00	1.68		
Toluene*	<0.050	0.050	10/23/2019	ND	1.89	94.5	2.00	1.20		
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.84	92.0	2.00	3.63		
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.59	93.2	6.00	2.68		
Total BTEX	<0.300	0.300	10/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	167	83.7	200	9.51		
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	165	82.6	200	10.5		
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND						

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 SSW -2 (H903602-21)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562		
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787		
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460		
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499		
Total BTEX	<0.300	0.300	10/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/22/2019	ND	170	85.2	200	7.53		
DRO >C10-C28*	<10.0	10.0	10/22/2019	ND	173	86.6	200	5.81		
EXT DRO >C28-C36	<10.0	10.0	10/22/2019	ND						

Surrogate: 1-Chlorooctane 83.8 % 41-142

Surrogate: 1-Chlorooctadecane 93.8 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 ESW -1 (H903602-22)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562		
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787		
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460		
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499		
Total BTEX	<0.300	0.300	10/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/22/2019	ND	170	85.2	200	7.53		
DRO >C10-C28*	<10.0	10.0	10/22/2019	ND	173	86.6	200	5.81		
EXT DRO >C28-C36	<10.0	10.0	10/22/2019	ND						

Surrogate: 1-Chlorooctane 94.2 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 3 FL -1 (H903602-23)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562	
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787	
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460	
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499	
Total BTEX	<0.300	0.300	10/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	170	85.2	200	7.53	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	173	86.6	200	5.81	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 3 FL -2 (H903602-24)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562		
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787		
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460		
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499		
Total BTEX	<0.300	0.300	10/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	170	85.2	200	7.53		
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	173	86.6	200	5.81		
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND						

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 3 FL -3 (H903602-25)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562	
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787	
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460	
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499	
Total BTEX	<0.300	0.300	10/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	170	85.2	200	7.53	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	173	86.6	200	5.81	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 76.3 % 41-142

Surrogate: 1-Chlorooctadecane 87.1 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 3 FL -4 (H903602-26)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562	
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787	
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460	
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499	
Total BTEX	<0.300	0.300	10/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	170	85.2	200	7.53	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	173	86.6	200	5.81	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 83.7 % 41-142

Surrogate: 1-Chlorooctadecane 93.9 % 37.6-147

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Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 3 FL -5 (H903602-27)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562	
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787	
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460	
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499	
Total BTEX	<0.300	0.300	10/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	170	85.2	200	7.53	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	173	86.6	200	5.81	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 90.3 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 3 FL -6 (H903602-28)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562	
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787	
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460	
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499	
Total BTEX	<0.300	0.300	10/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	170	85.2	200	7.53	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	173	86.6	200	5.81	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 85.6 % 41-142

Surrogate: 1-Chlorooctadecane 97.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 3 FL -7 (H903602-29)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562		
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787		
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460		
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499		
Total BTEX	<0.300	0.300	10/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	170	85.2	200	7.53		
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	173	86.6	200	5.81		
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND						

Surrogate: 1-Chlorooctane 78.8 % 41-142

Surrogate: 1-Chlorooctadecane 92.6 % 37.6-147

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Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 3 FL -8 (H903602-30)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562	
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787	
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460	
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499	
Total BTEX	<0.300	0.300	10/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	170	85.2	200	7.53	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	173	86.6	200	5.81	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 86.3 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 3 WSW -1 (H903602-31)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562		
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787		
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460		
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499		
Total BTEX	<0.300	0.300	10/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	170	85.2	200	7.53		
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	173	86.6	200	5.81		
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND						

Surrogate: 1-Chlorooctane 88.8 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Analytical Results For:

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 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 3 NEW -1 (H903602-32)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562	
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787	
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460	
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499	
Total BTEX	<0.300	0.300	10/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/23/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	170	85.2	200	7.53	
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	173	86.6	200	5.81	
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND					

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/22/2019	Sampling Date:	10/21/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242 (8/18/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 3 EW -1 (H903602-33)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.562		
Toluene*	<0.050	0.050	10/22/2019	ND	1.86	93.2	2.00	0.787		
Ethylbenzene*	<0.050	0.050	10/22/2019	ND	1.87	93.6	2.00	0.460		
Total Xylenes*	<0.150	0.150	10/22/2019	ND	5.60	93.4	6.00	0.499		
Total BTEX	<0.300	0.300	10/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	10/23/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/23/2019	ND	170	85.2	200	7.53		
DRO >C10-C28*	<10.0	10.0	10/23/2019	ND	173	86.6	200	5.81		
EXT DRO >C28-C36	<10.0	10.0	10/23/2019	ND						

Surrogate: 1-Chlorooctane 87.9 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report



Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: COG Operating, LLC Project Manager: Lance Crenshaw Address: 3100 Plains Hwy City: Lovington State: NM Zip: 88260 Phone #: 575-396-2378 Fax #: 575-396-1429 Project #: 11242 Project Owner: COG Operating, LLC Project Name: Birdseye 32 #1 State: NM Zip: 88260 Project Location: UL/B Sec 33 T19S - R31E Sampler Name: Joel Leary		P.O. #: Company: COG Attn: Dakota Neel Address: City: State: NM Zip: Phone #: Fax #:	
BIll TO			
ANALYSIS REQUEST			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMF	
H903602			
		# CONTAINERS	
		MATRIX	
		GROUNDWATER	
		WASTEWATER	
		SOIL	
		OIL	
		SLUDGE	
		OTHER :	
		PRESERV.	
		ACID/BASE:	
		ICE / COOL	
		SAMPLING	
		DATE	
		TIME	
1	AH-1 FL-1	"C" 1	X
2	AH-1 FL-2	"C" 1	X
3	AH-1 FL-3	"C" 1	X
4	AH-1 FL-4	"C" 1	X
5	AH-1 FL-5	"C" 1	X
6	AH-1 FL-6	"C" 1	X
7	AH-1 WSW-1	"C" 1	X
8	AH-1 SSW-1	"C" 1	X
9	AH-1 NSW-1	"C" 1	X
10	AH-1 NSW-2	"C" 1	X

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Relinquished By:	Date: 10-22-19	Received By:	Date: 10-22-19	Time: 13:25	Time:
<i>Joel Leary</i>		<i>Lance Crenshaw</i>			

Delivered By: (Circle One) UPS **1.6c** **#97** **Sample Condition** **CHECKED BY:**
Sampler - UPS - Bus - Other: *Powerful 20c* Yes Intact Yes No No No **79.**
Remarks: Email results to *lance@etechenv.com* *joel@etechenv.com*
Push!!



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: COG Operating, LLC Project Manager: Lance Crenshaw Address: 3100 Plains Hwy City: Lovington State: NM Zip: 88260 Phone #: 575-396-2378 Fax #: 575-396-1429 Project #: 11242 Project Owner: COG Operating, LLC Project Name: Birdseye 32 #1 City: State: Zip: Project Location: U/L B Sec 33 T19S - R31E Sampler Name:		P.O. #: Company: COG Attn: Dakota Neel Address: City: State: Zip: Phone #: Fax #:	
FOR LAB USE ONLY		BILL TO	
Lab I.D. AH03102		Sample I.D.	
11 AH-2-FL-1 12 AH-2-FL-2 13 AH-2-FL-3 14 AH-2-FL-4 15 AH-2-FL-5 14 AH-2-FL-6 17 AH-2-FL-7 18 AH-2-FL-8 19 AH-2-NSW-1 20 AH-2-SSW-1	(G)RAB OR (C)OMF # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :	MATRIX PRESERV. SAMPLING	DATE TIME Chloride TPH BTEX 8021
11 "C" 1 12 "C" 1 13 "C" 1 14 "C" 1 15 "C" 1 14 "C" 1 17 "C" 1 18 "C" 1 19 "C" 1 20 "C" 1	X X X X X X X X X	X X X X X X X X X	10/21/19 10/21/19 10/21/19 10/21/19 10/21/19 10/21/19 10/21/19 10/21/19 10/21/19 10/21/19
Relinquished By: <i>Steve Perry</i> Date: 10-22-19 Time: 13:25		Received By: <i>Lance Crenshaw</i> Date: Time:	
Delivered By: (Circle One) <i>UPS</i> Sampler - UPS - Bus - Other: <i>UPS</i>		Sample Condition: <i>Intact</i> Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Checked By: <i>LC</i> (Initials)	
REMARKS: Email results to <i>lance@etechenv.com</i> <i>Busck!!</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: Add'l Fax #:	



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: COG Operating, LLC
 Project Manager: Lance Crenshaw
 Address: 3100 Plains Hwy
 City: Lovington State: NM Zip: 88260
 Phone #: 575-396-2378 Fax #: 575-396-1429
 Project #: 11242 Project Owner: COG Operating, LLC
 Project Name: Birdseye 32 #1 State: NM City: Zip:
 Project Location: U / B Sec 33 T19S - R31E State: NM City: Zip:
 Sampler Name: Phone #: Fax #:
 P.O. #: **BILL TO** Company: COG
 Attn: Dakota Neel
 Address: City: State: Zip:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMF	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	Chloride	TPH	BTEX 8021
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :							
H963602																
21	AH-2 SSW-2	"C	1	X												
22	AH-2 ESW-1	"C	1	X												
23	AH-3 FL-1	"C	1	X												
24	AH-3 FL-2	"C	1	X												
25	AH-3 FL-3	"C	1	X												
26	AH-3 FL-4	"C	1	X												
27	AH-3 FL-5	"C	1	X												
28	AH-3 FL-6	"C	1	X												
29	AH-3 FL-7	"C	1	X												
30	AH-3 FL-8	"C	1	X												

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Relinquished By: *[Signature]* Date: 10-22-19 Received By: *[Signature]* Date: 10-22-19
 Relinquished By: *[Signature]* Date: 10-23-19 Received By: *[Signature]* Date: 10-23-19
 Delivered By: (Circle One) 1.02 Sample Condition: Intact Cool Yes No
 Sampler - UPS - Bus - Other: *[Signature]* Checked By: *[Signature]* (Initials) *[Signature]*
 Remarks: Email results to lance@etechnv.com
 Phone Result: Yes No Add'l Phone #: *[Signature]*
 Fax Result: Yes No Add'l Fax #: *[Signature]*



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: COG Operating, LLC
 Project Manager: Lance Crenshaw
 Address: 3100 Plains Hwy
 City: Lovington State: NM Zip: 88260
 Phone #: 575-396-2378 Fax #: 575-396-1429
 Project #: 11242 Project Owner: COG Operating, LLC
 Project Name: Birdseye 32 #1 8/18/2019
 Project Location: U/I B Sec 33 T19S - R31E
 Sampler Name:
 P.O. #:
 Company: COG
 Attn: Dakota Neel
 Address:
 City:
 State: Zip:
 Phone #:
 Fax #:
BILL TO
ANALYSIS REQUEST

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMF	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	Chloride	TPH	BTEX 8021
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :							
H903602																
31	AH-3 WSW-1	"C"	1	X						X	10/21/19		X	X	X	
32	AH-3 NEW-1	"C"	1	X						X	10/21/19		X	X	X	
33	AH-3 EW-1	"C"	1	X						X	10/21/19		X	X	X	

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Relinquished By: *Paul Jace* Date: 8-22-19
 Received By: *Lance Crenshaw* Date: 8-22-19
 Relinquished By: *Paul Jace* Date: 8-22-19
 Received By: *Lance Crenshaw* Date: 8-22-19
 Delivered By: (Circle One) *1.6c* Sample Condition: Cool Intact
 Sampler - UPS - Bus - Other: *Conserved 8.0c* Yes No Yes No
 CHECKED BY: *Y.P.* (Initials)
 REMARKS: Email results to lance@etechnv.com
Resu. 11

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



November 22, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: BIRDSEYE 32 #1

Enclosed are the results of analyses for samples received by the laboratory on 11/21/19 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder".

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/22/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -1B (H903962-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.67	83.4	2.00	2.52		
Toluene*	<0.050	0.050	11/22/2019	ND	1.66	82.9	2.00	4.81		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	84.0	2.00	5.19		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	5.20	86.7	6.00	8.07		
Total BTEX	<0.300	0.300	11/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	11/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	221	111	200	0.183		
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	232	116	200	0.392		
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND						

Surrogate: 1-Chlorooctane 68.2 % 41-142
Surrogate: 1-Chlorooctadecane 68.3 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/22/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -3B (H903962-02)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/22/2019	ND	1.67	83.4	2.00	2.52	
Toluene*	<0.050	0.050	11/22/2019	ND	1.66	82.9	2.00	4.81	
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	84.0	2.00	5.19	
Total Xylenes*	<0.150	0.150	11/22/2019	ND	5.20	86.7	6.00	8.07	
Total BTEX	<0.300	0.300	11/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	11/22/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	221	111	200	0.183	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	232	116	200	0.392	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 74.7 % 41-142

Surrogate: 1-Chlorooctadecane 74.8 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/22/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -4B (H903962-03)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/22/2019	ND	1.67	83.4	2.00	2.52	
Toluene*	<0.050	0.050	11/22/2019	ND	1.66	82.9	2.00	4.81	
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	84.0	2.00	5.19	
Total Xylenes*	<0.150	0.150	11/22/2019	ND	5.20	86.7	6.00	8.07	
Total BTEX	<0.300	0.300	11/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	11/22/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	221	111	200	0.183	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	232	116	200	0.392	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 80.0 % 41-142

Surrogate: 1-Chlorooctadecane 80.8 % 37.6-147

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Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/22/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -7B (H903962-04)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/22/2019	ND	1.67	83.4	2.00	2.52	
Toluene*	<0.050	0.050	11/22/2019	ND	1.66	82.9	2.00	4.81	
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	84.0	2.00	5.19	
Total Xylenes*	<0.150	0.150	11/22/2019	ND	5.20	86.7	6.00	8.07	
Total BTEX	<0.300	0.300	11/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	11/22/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	221	111	200	0.183	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	232	116	200	0.392	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 85.1 % 41-142

Surrogate: 1-Chlorooctadecane 87.2 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/22/2019	Sampling Type:	Soil
Project Name:	BIRDSEYE 32 #1	Sampling Condition:	Cool & Intact
Project Number:	11242	Sample Received By:	Tamara Oldaker
Project Location:	COG-UL/B SEC33 T19S R31E		

Sample ID: AH - 2 FL -5B2 (H903962-05)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.67	83.4	2.00	2.52		
Toluene*	<0.050	0.050	11/22/2019	ND	1.66	82.9	2.00	4.81		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	84.0	2.00	5.19		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	5.20	86.7	6.00	8.07		
Total BTEX	<0.300	0.300	11/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/22/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	221	111	200	0.183		
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	232	116	200	0.392		
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND						

Surrogate: 1-Chlorooctane 82.1 % 41-142

Surrogate: 1-Chlorooctadecane 83.5 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report



Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: COG		BILL TO		ANALYSIS REQUEST												
Project Manager: Lance Crenshaw		P.O. #:														
Address:		Company: COG														
City:	State:	Zip:	Attn:													
Phone #:	Fax #:	Project Owner:	Address:													
Project #: 11242			City:	State:	Zip:											
Project Name: Birdseye 32 #1			Phone #:													
Project Location: Rural Lea			Fax #:													
Sampler Name: Hilda Villa																
<small>FOR LAB USE ONLY</small>																
Lab I.D. H903962	Sample I.D.	(G)RAB OR (C)OMP.														
		# CONTAINERS														
		GROUNDWATER														
		WASTEWATER														
		MATRIX	SOIL	OIL	SLUDGE	OTHER :										
		ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME										
1	AH2 FL1B	G	1		11/20/19	08:30	✓	✓	✓							
2	AH2 FL3B	G	1	✓	11/20/19	09:00	✓	✓	✓							
3	AH2FL4B	G	1	✓	11/20/19	09:30	✓	✓	✓							
4	AH2 FL7B	G	1	✓	11/20/19	10:00	✓	✓	✓							
5	AH2 FL5B2	G	1	✓	11/20/19	11:00	✓	✓	✓							

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Relinquished By: <i>[Signature]</i>	Date: 11/21/19	Received By: <i>[Signature]</i>	Date: 11/21/19
Refiniquished By: <i>[Signature]</i>	Time: 10:15	Received By: <i>[Signature]</i>	Time: 10:15
Delivered By: (Circle One) <i>44</i>	Time: <i>direction</i>	Sample Condition	CHECKED BY: <i>[Signature]</i>
Sampler - UPS - Bus - Other: <i>-2.62 / -2.22 #97</i>	Cool Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	(Initials)
Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #: <i>[Blank]</i>	
Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #: <i>[Blank]</i>	
REMARKS: email results		pm@etechnv.com	
		<i>Bush!! added 11/22 @ 0815</i>	

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

Appendix D
Photographic Log

Photographic Log



Photographic Log

Photo Number: 3	
Photo Direction: West	
Photo Description: View of the excavated area prior to backfilling.	

Photo Number: 4	
Photo Direction: Northwest	
Photo Description: View of the excavated area prior to backfilling.	

Photographic Log

Photo Number: 5	
Photo Direction: Southeast	
Photo Description: View of the excavated area prior to backfilling.	

Photo Number: 6	
Photo Direction: West	
Photo Description: View of the excavated area prior to backfilling.	