

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 Tavaréz 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 Tavaréz 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

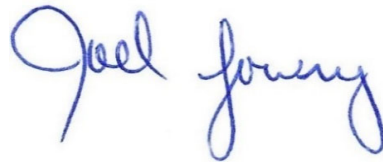
Eddy County, New Mexico
Unit Letter B, Section 33, Township 19 South, Range 31 East
Latitude 32.62067 North, Longitude 103.8733 West
NMOCD Reference No. 2RP-Pending

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: 32.62067 Longitude: -103.8733

Provided GPS are in WGS84 format.

Site Name:	Birdseye 32 #1	Site Type:	Flowline
Date Release Discovered:	8/18/2019	API # (if applicable):	N/A

Unit Letter	Section	Township	Range	County
B	33	19S	31E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ 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) 20	Volume Recovered (bbls) 0
	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

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices
- ☒ 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
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
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Are the lateral extents of the release within 300 feet of a wetland?	<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

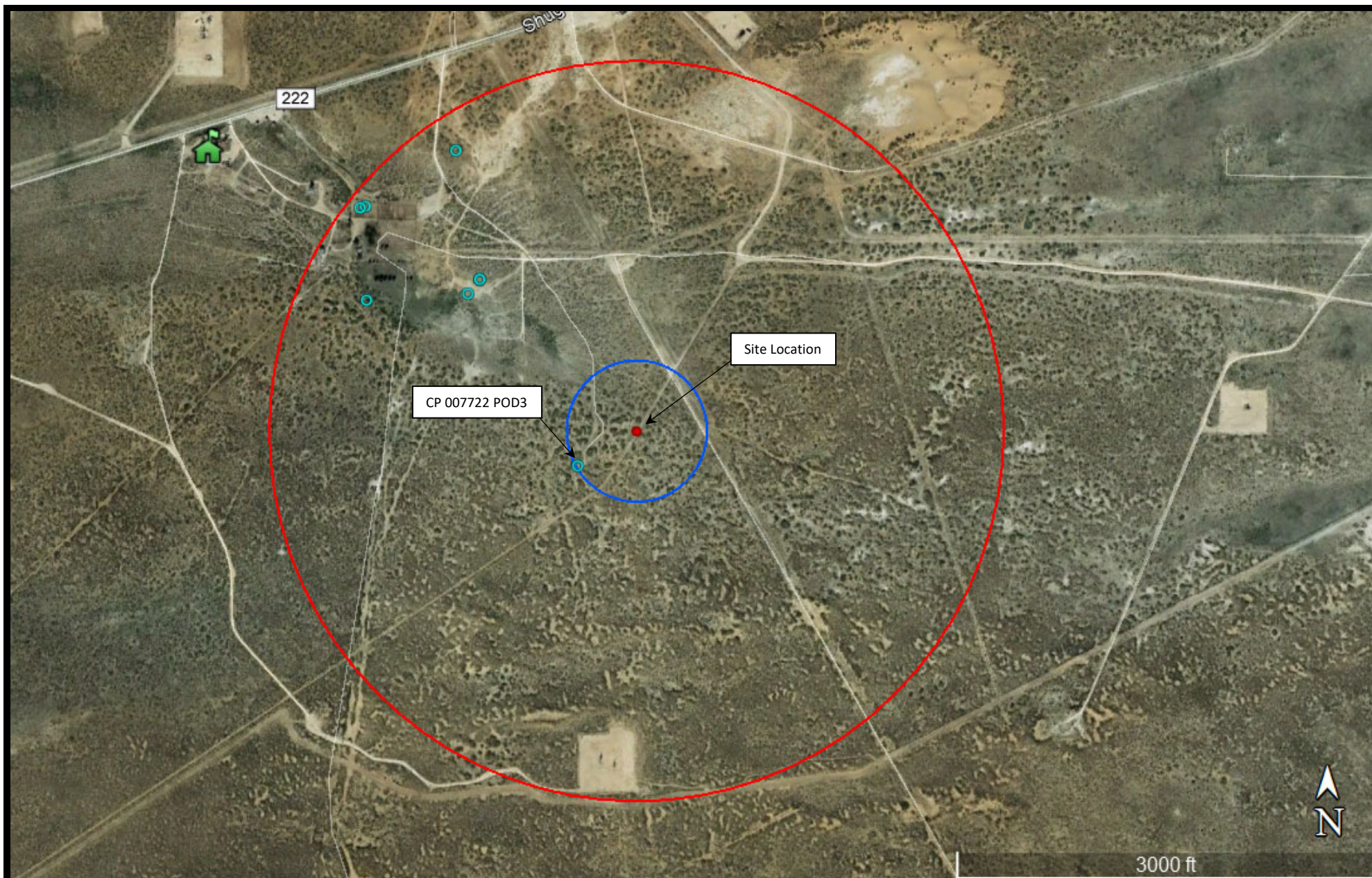
620 E. Greene Street

Carlsbad, NM 88220

(Electronic Submission)

Figure 1
Topographic Map

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



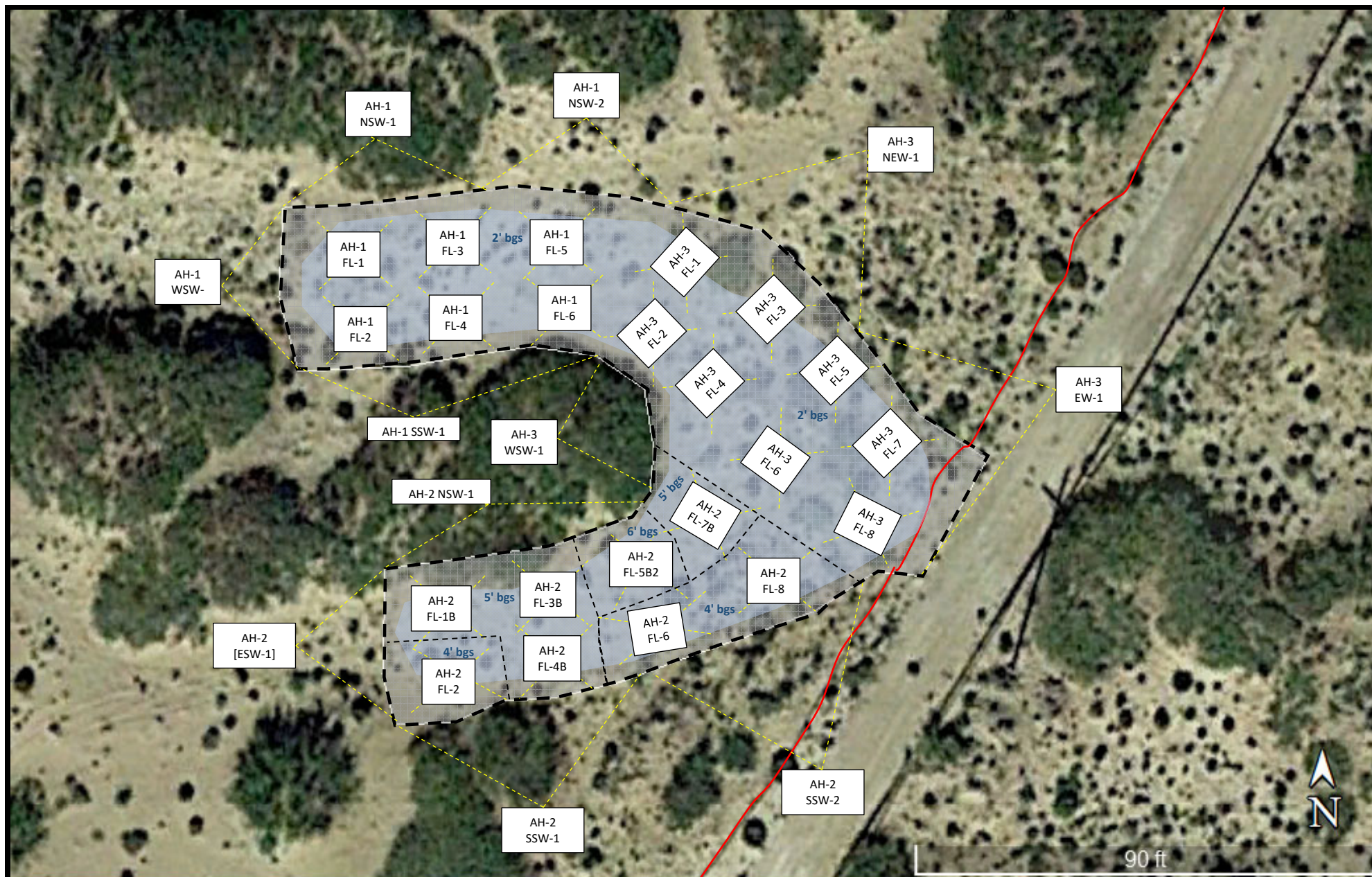
Drafted:

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



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

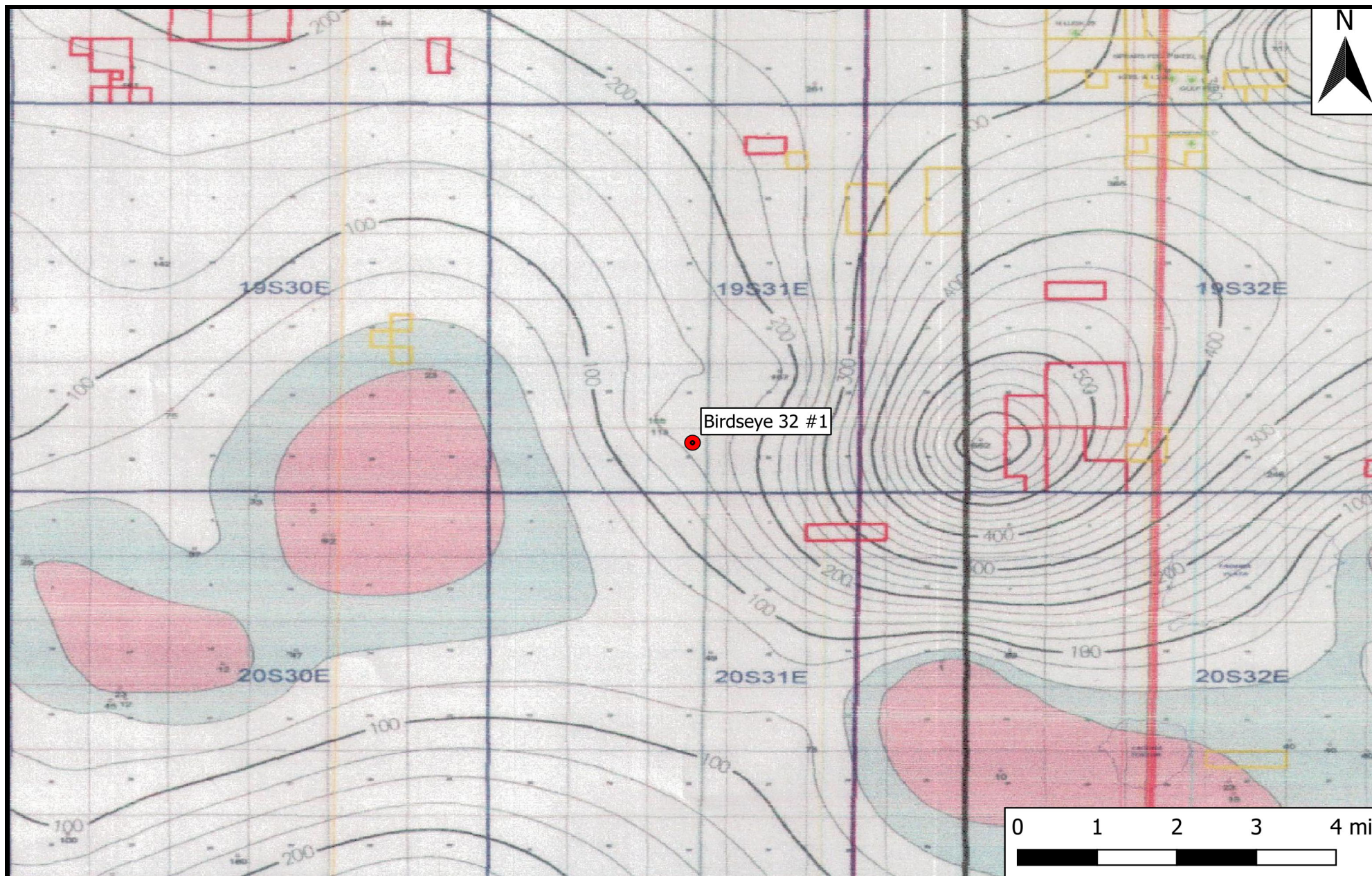
NOTES:

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Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

Appendix A
Depth to Groundwater Information



Legend

● Site Location

Figure 4

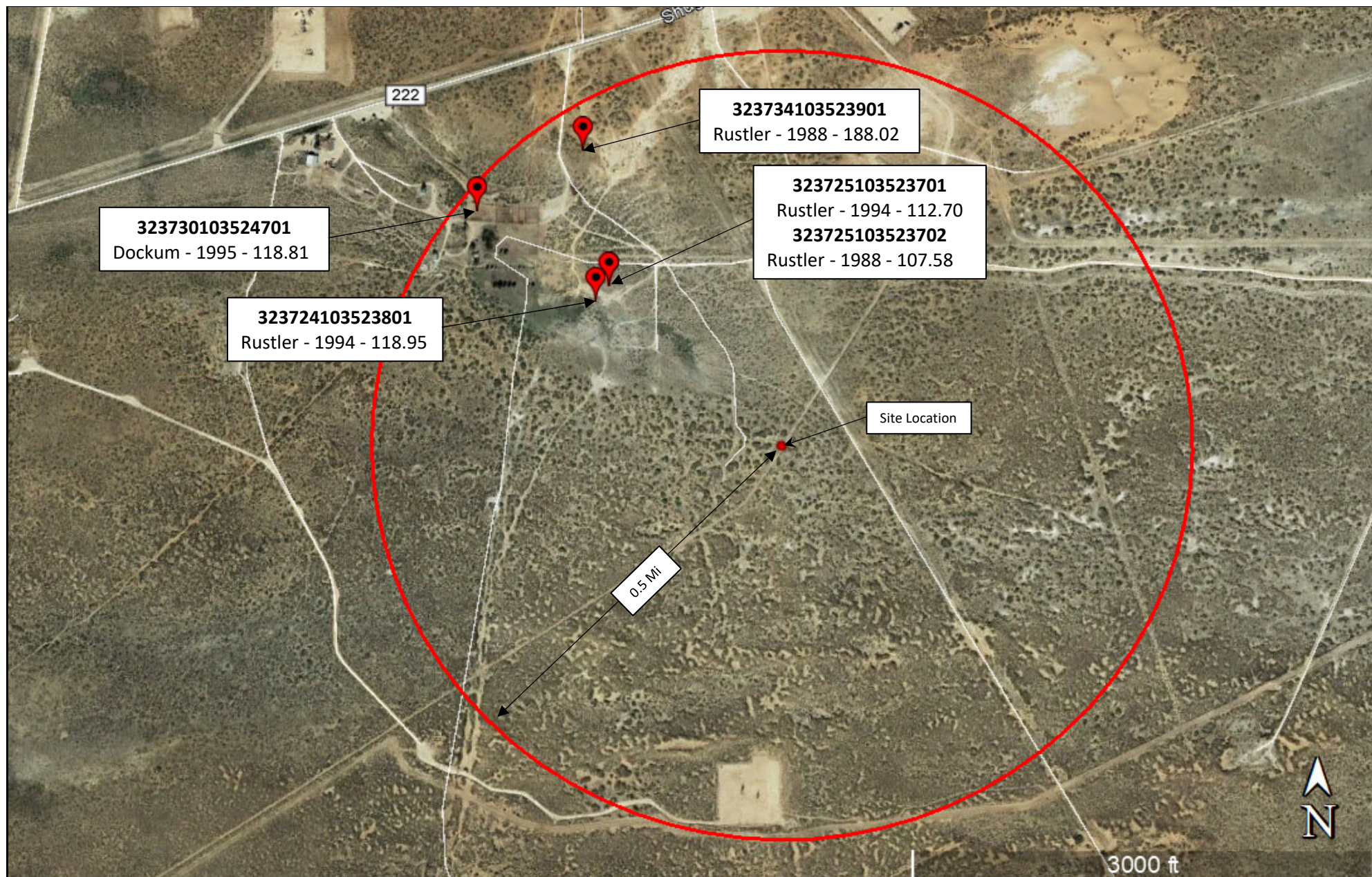
Inferred Depth to Groundwater Trend Map
 COG Operating, LLC
 Birdseye 32 #1
 GPS: 32.62067, -103.8733
 Eddy County



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



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

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

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

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9/18/19 2:00 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00723 POD1	2	1	1	33	19S	31E	605111	3610071* 
<hr/>									
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.

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POINT OF DIVERSION SUMMARY



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USGS Water Resources

Data Category:


Groundwater

Geographic Area:

United States

GO

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Groundwater levels for the Nation

Site Selection Results -- 5 sites found

lat_long_bounding_box

=

Position	Latitude	Longitude
Corner 1	32.628532	103.884297
Corner 2	32.612157	103.863002
Coordinates are entered as Decimal Degrees. DMS values are converted to Decimal degrees using NAD83 as the datum. Make your bounding box bigger if you are using NAD27 Datum for your DMS values		

Minimum number of 1
levels =

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

Data for individual sites can be obtained by selecting the site number below

Agency	Site Number	Site Name	Period of Record		
			Begin Date	End Date	Levels

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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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 measur
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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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

Project: Birdseye 32 #1 Date: 10/21/2019
Project Number: 11242 Latitude: 32.62067 Longitude: -103.8733

Depth (ft. bgs)

Description

1	Red Blow Sand
2	
3	
4	Sandy Caliche
5	
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Appendix C

Laboratory Analytical Reports



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

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, flowing 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: 09/25/2019
 Reported: 09/30/2019
 Project Name: BIRDSEYE 32 #1
 Project Number: 11242
 Project Location: CONCHO - LEA CO NM

 Sampling Date: 09/25/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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

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Celey D. Keene, Lab Director/Quality Manager



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(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etehn		P.O. #:		BILL TO												ANALYSIS REQUEST													
Project Manager: Janice Crenshaw		Company: COG																											
Address:		Attn:																											
City:		Address:																											
State:		City:																											
Zip:		State:																											
Phone #:		Fax #:																											
Project #: 11242		Project Owner:																											
Project Name: Birdseye		City:																											
Project Location:		State:																											
Sample Name: Catarina Villa		Phone #:																											
Fax #:		Zip:																											
FOR LAB USE ONLY																													
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX						PRESERV		SAMPLING		Chlorides TPH 8015 M BTEX Texas TPH Complete Cations/Anions TDS											
								GROUNDWATER						WASTEWATER															
1 AH-1021		X		X		SOIL						X		X		09-25 8:50		X											
2 AH-3021		X		OIL						X		X		09-25 9:15		X													
3 AH-2031		X		SLUDGE						X		X		09-25 9:30		X													
4 AH-2041		X		OTHER :						X		X		09-25 9:33		X													
				ACID/BASE:																									
				ICE / COOL																									
				OTHER :																									

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Relinquished By: <i>[Signature]</i>	Date: 9-25	Time: 4:40	Received By: <i>[Signature]</i>	Date: 9-25	Time: 4:40
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Delivered By: (Circle One)	3.32	#97	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Delivered 3.70		Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Phone Result: ☐ Yes ☒ No Add'l Phone #:
 Fax Result: ☐ Yes ☒ No Add'l Fax #:
 REMARKS: email results pm@etechnv.com



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

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, flowing 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)

BTX 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 BTX	<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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<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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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
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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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Lovington NM, 88260
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Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<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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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<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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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 WSW -1 (H903602-07)

BTX 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 BTX	<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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Celey D. Keene, Lab Director/Quality Manager

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 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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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
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<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	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
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<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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Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<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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Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<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
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<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
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<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	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
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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, SM4500Cl-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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 Fax To: (575) 396-1429

 Received: 10/22/2019
 Reported: 10/23/2019
 Project Name: BIRDSEYE 32 #1
 Project Number: 11242 (8/18/2019)
 Project Location: COG-UL/B SEC33 T19S R31E

 Sampling Date: 10/21/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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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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 -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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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 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, SM4500Cl-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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Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<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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Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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, SM4500CI-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
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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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Fax To: (575) 396-1429

Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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, SM4500CI-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
 Reported: 10/23/2019
 Project Name: BIRDSEYE 32 #1
 Project Number: 11242 (8/18/2019)
 Project Location: COG-UL/B SEC33 T19S R31E

 Sampling Date: 10/21/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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, SM4500CI-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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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
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

 Received: 10/22/2019
 Reported: 10/23/2019
 Project Name: BIRDSEYE 32 #1
 Project Number: 11242 (8/18/2019)
 Project Location: COG-UL/B SEC33 T19S R31E

 Sampling Date: 10/21/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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, SM4500CI-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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LANCE CRENSHAW
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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, SM4500CI-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:

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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 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:

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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:

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

Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<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:

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

Received: 10/22/2019
Reported: 10/23/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242 (8/18/2019)
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 10/21/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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, SM4500CI-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

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Celey D. Keene, Lab Director/Quality Manager

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

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: UL/B Sec 33 T19S - R31E

Sampler Name: Jop Lovin

FOR LAB USE ONLY

Lab I.D.	Sample I.D.
----------	-------------

H-903102

[illegible]

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Relinquished By:

Date:

Received By:

Relinquished By: [Signature]

Date:

Received BY:

Delivered By: (Circle One)

90

Sam #97

Sampler - UPS - Bus - Other:

142

11

Sample Condition	Cool	Intact
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No

CHECKED BY:
(Initials)

REMARKS: Email results to

lance@etechenv.com

Fax Result: ☐ Yes ☐ No

Add'l Fax #:

Phone Result: ☐ Yes ☐ No

Add'l Phone #:

Push!!

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

707 East Mariand, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



701 East Mariand, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

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". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

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)

BTX 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 BTX	<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
Reported: 11/22/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 11/20/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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, SM4500Cl-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
 Reported: 11/22/2019
 Project Name: BIRDSEYE 32 #1
 Project Number: 11242
 Project Location: COG-UL/B SEC33 T19S R31E

 Sampling Date: 11/20/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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, SM4500Cl-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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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
 Reported: 11/22/2019
 Project Name: BIRDSEYE 32 #1
 Project Number: 11242
 Project Location: COG-UL/B SEC33 T19S R31E

 Sampling Date: 11/20/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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, SM4500Cl-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
Reported: 11/22/2019
Project Name: BIRDSEYE 32 #1
Project Number: 11242
Project Location: COG-UL/B SEC33 T19S R31E

Sampling Date: 11/20/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

BTX 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 BTX	<0.300	0.300	11/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 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	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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

COG BIL-7

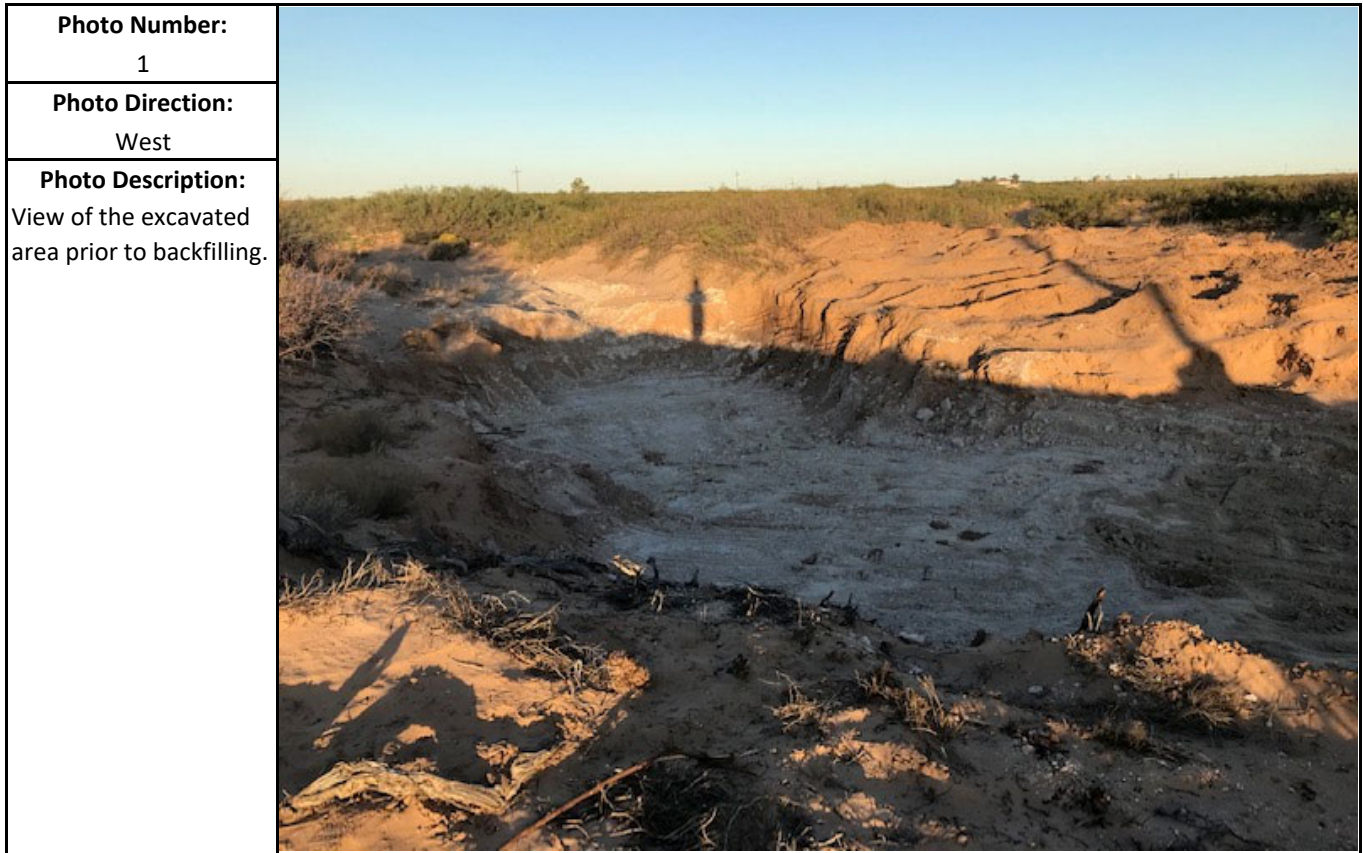
[illegible]

† Cardinal cannot accept verbal changes. Please fax written changes to 505-398-2476

Appendix D

Photographic Log

Photographic Log



Photographic Log



Photographic Log

