

SITE INFORMATION

Report Type: Closure Report 1RP-5441

General Site Information:

| | | | | | |
|------------------------------------|--|---------|-------|-----------|--|
| Site: | Tusk Federal #002H | | | | |
| Company: | COG Operating LLC | | | | |
| Section, Township and Range | Unit L | Sec. 25 | T 19S | R 34E | |
| Lease Number: | API No. | | | | |
| County: | Lea County | | | | |
| GPS: | 32.6300 | | | -103.5199 | |
| Surface Owner: | Federal | | | | |
| Directions: | From the in intersection of Hobbs Hwy and CR 27A, head southwest on Hobbs Hwy for 0.32 miles, turn left (southeast) onto unnamed lease road and go 0.21 miles, arrive at location. | | | | |
| | | | | | |
| | | | | | |

Release Data:

| | |
|---------------------------------|-------------------|
| Date Released: | 3/7/2019 |
| Type Release: | Produced Water |
| Source of Contamination: | Damaged Flow Line |
| Fluid Released: | 42 bbls |
| Fluids Recovered: | 0 bbls |

Official Communication:

| | | |
|----------------------|--|--|
| Name: | Ike Tavarez | Clair Gonzales |
| Company: | COG Operating, LLC | Tetra Tech |
| Address: | One Concho Center 600 W. Illinois Ave. | 901 West Wall Street Suite 100 |
| City: | Midland Texas, 79701 | Midland, Texas |
| Phone number: | (432) 686-3023 | (432) 687-8110 |
| Fax: | (432) 684-7137 | |
| Email: | itavarez@concho.com | Clair.Gonzales@tetrattech.com |

Site Characterization

| | |
|------------------------------|---------------------|
| Depth to Groundwater: | < 50' below surface |
| Karst Potential: | Low |

Recommended Remedial Action Levels (RRALs)

| Benzene | Total BTEX | TPH (GRO+DRO+MRO) | Chlorides |
|----------|------------|-------------------|-----------|
| 10 mg/kg | 50 mg/kg | 100 mg/kg | 600 mg/kg |



June 3, 2019

Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

Re: Closure Report for the COG Operating, LLC, Tusk Federal #002H, Unit L, Section 25, Township 19 South, Range 34 East, Lea County, New Mexico. 1RP-5441

Mr. Rose-Coss:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating, LLC (COG) to remediate a release that occurred at the Tusk Federal #002H, Unit L, Section 25, Township 19 South, Range 34 East, Lea County, New Mexico (Site). The spill site coordinates are 32.6300°, -103.5199°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report the release was discovered on March 7, 2019. Approximately 42 barrels of produced water were released due to a damaged flow line. A vacuum truck was dispatched to remove all free-standing fluids; however, none were recovered. The release impacted an area along the ROW measuring approximately 20' X 120'. The initial C-141 Form is included in Appendix A.

Site Characterization

A site characterization was performed for the site and no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. The site is in a low karst potential area. The nearest well is listed in the New Mexico Office of the State Engineers website in Section 25, Township 19 South, Range 34 East, approximately 0.55 miles southeast of the site, and has a reported depth to groundwater of 28 feet below ground surface. The nearest well listed on the USGS National Water Information System is located approximately 2 miles northeast of the site and has a reported depth to groundwater of 64 feet below surface. The groundwater data is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and

Tetra Tech

901 W. Wall Street, Suite 100, Midland, TX 79701

Tel 432.682.4559 www.tetratech.com



Releases, updated August 14, 2018. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the site characterization, the proposed RRAL for TPH is 100 mg/kg (GRO + DRO + MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 600 mg/kg.

Remediation Activities

Tetra Tech personnel were onsite from April 9 - 12, 2019 to supervise the remediation activities. The release area was excavated to total depths between 2.5' to 4.0' below surface. Eleven (11) bottom hole and eight (8) sidewall composite were collected every 200 square feet to ensure proper removal of the impacted soils. The samples were submitted to the laboratory to be analyzed for TPH method 8015 extended, BTEX method 8021B, and Chloride by EPA Method 300.0. The sampling results are summarized in Table 1. The excavation depths and sample locations are shown in Figure 4.

Referring to Table 1, final confirmation samples showed benzene, total BTEX, TPH, and chloride concentrations below the RRAL's.

Approximately 345 cubic yards of material was excavated and transported offsite for proper disposal. The area was then backfilled with clean material to surface grade.

Conclusion

Based on the laboratory results and remediation activities performed COG requests closure of this spill issue. The final C-141 is enclosed in Appendix A. If you have any questions or comments concerning the assessment or remediation activities for this site, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

A handwritten signature in blue ink that reads 'Clair Gonzales'.

Clair Gonzales, P.G.,
Project Manager

cc: Ike Tavaréz - COG
Dakota Neel - COG
Rebecca Haskell - COG
Sheldon Hitchcock - COG
DeAnn Grant - COG

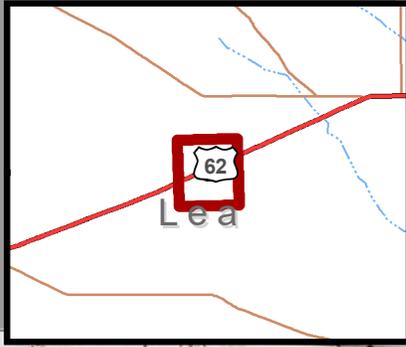
Tables

Table 1
COG
Tusk Federal #2H
Lea County, New Mexico

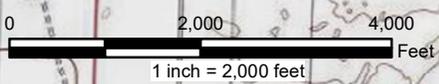
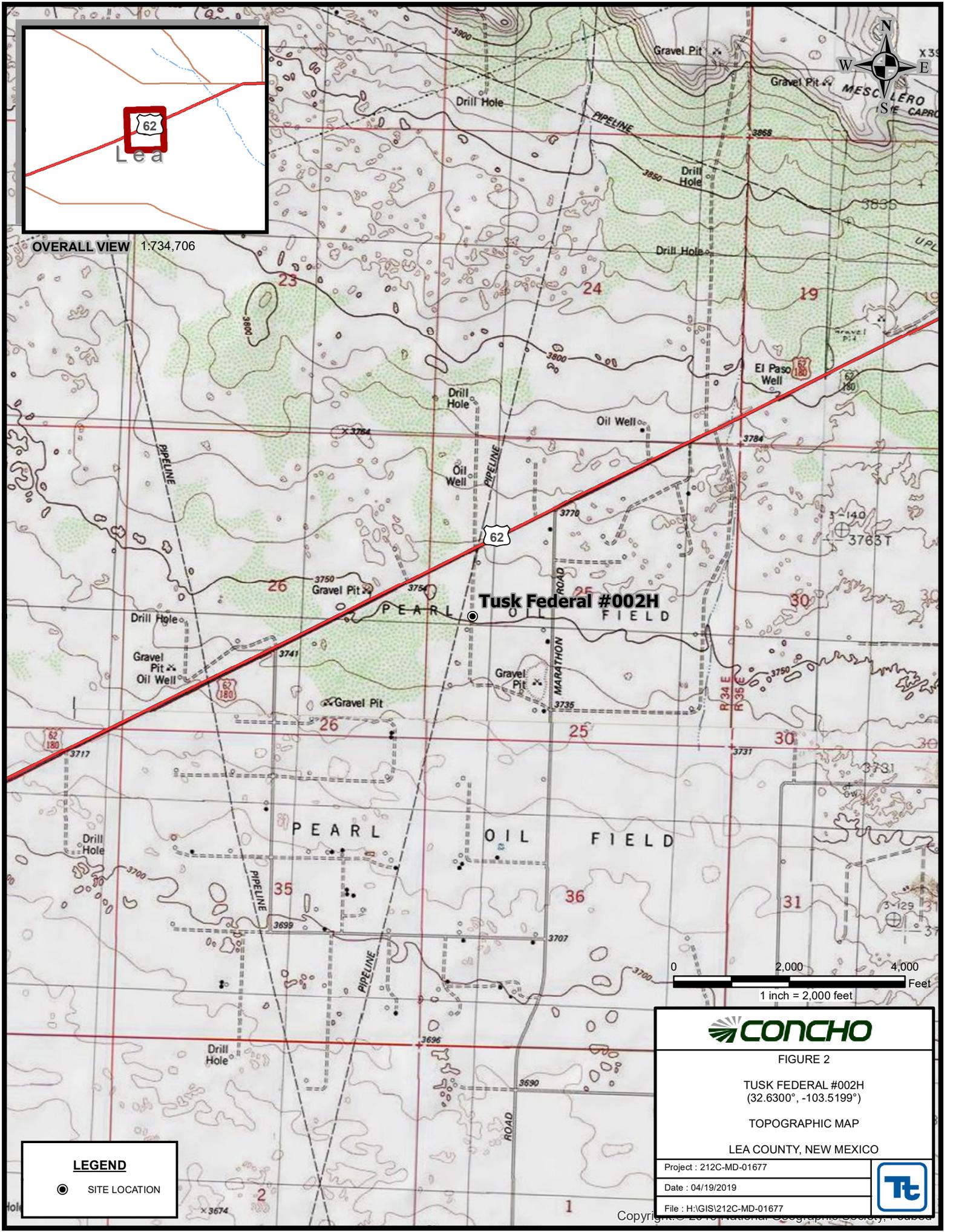
| Sample ID | Sample Date | Sample Depth (ft) | BEB (ft) | Soil Status | | TPH (mg/kg) | | | | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Xylene (mg/kg) | Total BTEX (mg/kg) | Chloride (mg/kg) |
|-------------------|-------------|-------------------|----------|-------------|---------|-------------|-------|-------|--------------|-----------------|-----------------|----------------------|----------------|--------------------|------------------|
| | | | | In-Situ | Removed | GRO | DRO | ORO | Total | | | | | | |
| Bottom Hole #11 | 4/10/2019 | - | 3.0 | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 304 |
| Bottom Hole #2 | 4/9/2019 | - | 3.0 | X | | <10.0 | 56.2 | 22.8 | 79.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 96.0 |
| Bottom Hole #3 | 4/9/2019 | - | 3.0 | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 64.0 |
| Bottom Hole #4 | 4/9/2019 | - | 3.0 | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 32.0 |
| Bottom Hole #5 | 4/9/2019 | - | 3.0 | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 80.0 |
| Bottom Hole #6 | 4/9/2019 | - | 4.0 | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 48.0 |
| Bottom Hole #7 | 4/10/2019 | - | 4.0 | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 16.0 |
| Bottom Hole #8 | 4/10/2019 | - | 4.0 | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 16.0 |
| Bottom Hole #9 | 4/9/2019 | - | 4.0 | X | | <10.0 | 12.1 | <10.0 | 12.1 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 32.0 |
| Bottom Hole #10 | 4/10/2019 | - | 2.5 | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 96.0 |
| Bottom Hole #11 | 4/10/2019 | - | 2.5 | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 16.0 |
| East Sidewall #1 | 4/9/2019 | - | - | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 48.0 |
| East Sidewall #2 | 4/9/2019 | - | - | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 48.0 |
| East Sidewall #3 | 4/10/2019 | - | - | X | | <10.0 | 16.0 | 14.1 | 30.1 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 112 |
| West Sidewall #1 | 4/9/2019 | - | - | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 32.0 |
| West Sidewall #2 | 4/9/2019 | - | - | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 32.0 |
| West Sidewall #3 | 4/10/2019 | - | - | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 64.0 |
| North Sidewall #1 | 4/10/2019 | - | - | X | | <10.0 | <10.0 | 17.2 | 17.2 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 32.0 |
| North Sidewall #2 | 4/10/2019 | - | - | X | | <10.0 | 2,940 | 1,460 | 4,400 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 176 |
| | 4/12/2019 | - | - | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 128 |
| South Sidewall #1 | 4/10/2019 | - | - | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 304 |
| South Sidewall #2 | 4/9/2019 | - | - | X | | <10.0 | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 32.0 |

(-) Not Analyzed
 Excavation Depths

Figures



OVERALL VIEW 1:734,706



LEGEND

● SITE LOCATION

CONCHO

FIGURE 2

TUSK FEDERAL #002H
(32.6300°, -103.5199°)

TOPOGRAPHIC MAP

LEA COUNTY, NEW MEXICO

| | |
|-----------------------------|--|
| Project : 212C-MD-01677 | |
| Date : 04/19/2019 | |
| File : H:\GIS\212C-MD-01677 | |



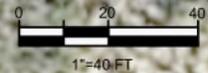
(U.G. DCP H.P. - POISONOUS GAS)

LEASE ROAD

16'

130'

PUMP JACK



LEGEND

-  SPILL AREA
-  ABOVE GROUND POLY PIPE
-  UNDERGROUND/BURIED PIPELINE



FIGURE 3

TUSK FEDERAL #002H
(32.6300°, -103.5199°)

SPILL ASSESSMENT MAP
LEA COUNTY, NEW MEXICO

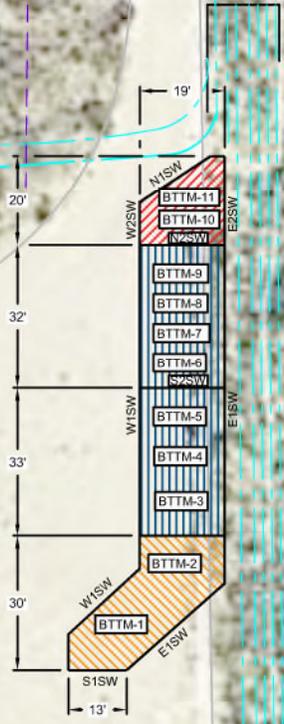
| | |
|----------------------------|---|
| Project: 212C-MD-01677 |  |
| Date: 04/19/2019 | |
| File: H:\GIS\212C-MD-01677 | |



(U.G. DCP H.P. - POISONOUS GAS)

LEASE ROAD

PUMP JACK



| LEGEND | |
|--------|-----------------------------|
| | 2.5' EXCAVATED DEPTH AREA |
| | 3.0' EXCAVATED DEPTH AREA |
| | 4.0' EXCAVATED DEPTH AREA |
| | 4.0' EXCAVATED DEPTH AREA |
| | BTTM BOTTOM HOLE |
| | ABOVE GROUND POLY PIPE |
| | UNDERGROUND/BURIED PIPELINE |



FIGURE 4

TUSK FEDERAL #002H
(32.6300°, -103.5199°)

EXCAVATION AREA & DEPTH MAP
LEA COUNTY, NEW MEXICO

| | |
|----------------------------|--|
| Project: 212C-MD-01677 | |
| Date: 04/19/2019 | |
| File: H:\GIS\212C-MD-01677 | |

Photos

COG
Tusk Federal #002H
Lea County, New Mexico



TETRA TECH



South – View of BH-1 through BH-3



South – View of BH-3 through BH-11

COG
Tusk Federal #002H
Lea County, New Mexico



TETRA TECH



Area of Excavation – View North

Appendix A

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

State of New Mexico
Energy Minerals and Natural
Resources Department

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

| | |
|----------------|--|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

Release Notification

Responsible Party

| | |
|-------------------------|------------------------------|
| Responsible Party | OGRID |
| Contact Name | Contact Telephone |
| Contact email | Incident # (assigned by OCD) |
| Contact mailing address | |

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

| | |
|-------------------------|----------------------|
| Site Name | Site Type |
| Date Release Discovered | API# (if applicable) |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| | | | | |

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

| | | |
|---|--|--|
| <input type="checkbox"/> Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| <input type="checkbox"/> Produced Water | Volume Released (bbls) | Volume Recovered (bbls) |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <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 (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release

| | |
|----------------|--|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

| | |
|--|--|
| Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input type="checkbox"/> No | If YES, for what reason(s) does the responsible party consider this a major release? |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? | |

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

| |
|--|
| <input type="checkbox"/> The source of the release has been stopped. <input type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately. |
| If all the actions described above have <u>not</u> been undertaken, explain why: |
| Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation. |
| 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: _____ Title: _____ Signature: <u>Delynn Ojeant</u> Date: _____ email: _____ Telephone: _____ |
| <u>OCD Only</u> Received by: <u>Amelia Rosamonte</u> Date: _____ |

| | |
|----------------|--|
| Incident ID | |
| 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? | _____ (ft bgs) |
| Did this release impact groundwater or surface water? | <input type="checkbox"/> Yes <input 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 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 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 type="checkbox"/> No |
| Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? | <input type="checkbox"/> Yes <input 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 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 type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Did the release impact areas not on an exploration, development, production, or storage site? | <input type="checkbox"/> Yes <input 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><u>Characterization Report Checklist:</u> <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. <input type="checkbox"/> Field data <input type="checkbox"/> Data table of soil contaminant concentration data <input type="checkbox"/> Depth to water determination <input 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 type="checkbox"/> Photographs including date and GIS information <input type="checkbox"/> Topographic/Aerial maps <input 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.

| | |
|----------------|--|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

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

Printed Name: _____ Title: _____

Signature:  _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

| | |
|----------------|--|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

Closure

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

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

- 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: _____ Title: _____

Signature:  _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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: _____

Printed Name: _____ Title: _____

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG- Tusk Federal #002H
Lea County, New Mexico

18 South 33 East

| | | | | | |
|------|----|-----|----|----|-----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| | | | 60 | | |
| 7 | 8 | 100 | 9 | 10 | 11 |
| | | | 62 | 46 | 140 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| | 85 | | | 36 | 60 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| >140 | | | | | 195 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 35 | | | | | |
| 31 | 32 | 33 | 34 | 35 | 36 |
| | | 177 | | | |

18 South 34 East

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 130 | 105 | | 87 | 102 | 107 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 83 | 148 | | 148 | 110 | 92 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 125 | | 108 | 110 | 103 | 96 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 105 | 125 | | | | |
| 30 | 29 | 28 | 27 | 26 | 25 |
| | | | 112 | | 117 |
| 31 | 32 | 33 | 34 | 35 | 36 |
| | | | | 118 | |

18 South 35 East

| | | | | | | | | | | |
|----|-----|----|----|----|----|-----|----|----|----|---|
| 6 | 89 | 5 | 69 | 4 | 58 | 3 | 62 | 2 | 55 | 1 |
| | | | | | | | | | 51 | |
| 7 | 8 | 9 | 72 | 10 | 11 | 12 | 59 | 12 | | |
| 85 | | | | 49 | 48 | | | | | |
| 18 | 17 | 90 | 16 | 15 | 14 | 13 | | | | |
| 90 | 124 | 75 | | | 90 | 135 | | | | |
| 19 | 74 | 20 | 85 | 21 | 22 | 23 | 24 | | | |
| 70 | 50 | | | 70 | | | | | | |
| 30 | 29 | 28 | 27 | 26 | 25 | | | | | |
| | 95 | | 68 | 60 | | | | | | |
| 31 | 32 | 33 | 34 | 35 | 36 | | | | | |
| | 58 | 80 | | 58 | | | | | | |

19 South 33 East

| | | | | | |
|-----|-----|-----|-----|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| | | | | | |
| 7 | 8 | 9 | 10 | 11 | 12 |
| | | | | | |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 340 | 116 | | | | |
| 19 | 20 | 21 | 22 | 23 | 24 |
| | | | | | |
| 30 | 29 | 28 | 130 | 27 | 26 |
| | | dry | | 92 | 85 |
| 31 | 32 | 33 | 34 | 35 | 36 |
| | 185 | | | | |

19 South 34 East

| | | | | | | |
|-----|----|------|----|-----|-----|----|
| 6 | 5 | 4 | 3 | 2 | 100 | 1 |
| 244 | | | | | | |
| 7 | 8 | 9 | 29 | 10 | 11 | 12 |
| | | 28.6 | | 123 | | 60 |
| 18 | 17 | 16 | 15 | 14 | 13 | |
| 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | | | | |
| 30 | 29 | 28 | 27 | 26 | 25 | |
| | | | | | 28 | |
| 31 | 32 | 33 | 34 | 35 | 36 | |
| 65 | | | | | | |

19 South 35 East

| | | | | | | |
|----|----|----|----|----|----|----|
| 6 | 61 | 5 | 4 | 3 | 2 | 1 |
| 58 | 63 | 70 | | | | 63 |
| 7 | 8 | 9 | 20 | 10 | 11 | 12 |
| 51 | 18 | | | 53 | | |
| 18 | 17 | 26 | 16 | 15 | 14 | 13 |
| | 30 | | | 26 | 27 | 27 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| | | | | 27 | | 20 |
| 30 | 29 | 28 | 27 | 26 | 25 | |
| | | | | | | |
| 31 | 32 | 33 | 34 | 35 | 36 | |
| | | | | | | |

20 South 33 East

| | | | | | | |
|----|-----|-----|----|----|----|------|
| 6 | 5 | 325 | 4 | 3 | 2 | 1 |
| | 278 | | | | | |
| 7 | 8 | 9 | 10 | 11 | 12 | |
| | | | | | | |
| 18 | 17 | 16 | 15 | 14 | 13 | |
| | | | | | | |
| 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | | | | +300 |
| 30 | 29 | 28 | 27 | 26 | 25 | |
| | | | | | | |
| 31 | 32 | 33 | 34 | 35 | 36 | |
| | | | | | | |

20 South 34 East

| | | | | | | |
|----|-----|-----|-----|----|-----|-----|
| 6 | 5 | 4 | 125 | 3 | 2 | 1 |
| | | | | | | |
| 7 | 8 | 9 | 10 | 11 | 12 | |
| | | | | | | |
| 18 | 17 | 128 | 16 | 15 | 14 | 13 |
| | 140 | | | | 150 | |
| 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | | | | 270 |
| 30 | 29 | 28 | 27 | 26 | 25 | |
| | | | | | | |
| 31 | 32 | 33 | 34 | 82 | 35 | 36 |
| | | | | | | |

20 South 35 East

| | | | | | | | |
|----|----|----|----|----|----|----|---|
| 6 | 56 | 5 | 64 | 4 | 3 | 2 | 1 |
| 64 | | | | | | | |
| 7 | 8 | 9 | 10 | 11 | 12 | | |
| | | | | | | 49 | |
| 18 | 17 | 16 | 15 | 14 | 13 | | |
| | | | | | | | |
| 19 | 20 | 21 | 22 | 23 | 24 | | |
| | | | | | | | |
| 30 | 29 | 28 | 27 | 26 | 25 | | |
| | | | | | | | |
| 31 | 65 | 32 | 33 | 34 | 35 | 36 | |
| | | | 89 | | | | |

- 88** New Mexico State Engineers Well Reports
- 105** USGS Well Reports
- 90** Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)
 Geology and Groundwater Resources of Eddy County, NM (Report 3)
- 34** NMOCD - Groundwater Data
- 123** Tetra Tech installed temporary wells and field water level
- 143** NMOCD Groundwater map well location



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 Code | Sub-basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X | Y | DepthWell | DepthWater | Water Column |
|-------------------------------|----------|-----------|--------|------|------|-----|-----|-----|--------|----------|----------|-----------|------------|--------------|
| CP 00683 POD1 | CP | LE | LE | 3 | 3 | 4 | 25 | 19S | 34E | 639530 | 3610685* | 120 | 28 | 92 |
| CP 00806 POD1 | CP | LE | LE | 4 | 4 | 04 | 19S | 34E | 635109 | 3617151* | 50 | | | |
| CP 00811 POD1 | CP | LE | LE | 4 | 4 | 09 | 19S | 34E | 635132 | 3615542* | 50 | | | |
| CP 00875 | CP | LE | LE | 3 | 4 | 3 | 05 | 19S | 34E | 632592 | 3617013* | 200 | | |
| CP 01672 POD1 | CP | LE | LE | 1 | 3 | 1 | 36 | 19S | 34E | 638736 | 3610009 | 100 | | |
| L 04059 | L | LE | LE | 4 | 1 | 12 | 19S | 34E | 639146 | 3616412* | 125 | 60 | 65 | |
| L 04723 | L | LE | LE | 1 | 1 | 1 | 11 | 19S | 34E | 637026 | 3616880* | 145 | 123 | 22 |
| L 06731 | L | LE | LE | 3 | 2 | 2 | 12 | 19S | 34E | 639844 | 3616727* | 120 | 80 | 40 |
| L 07213 | L | LE | LE | 4 | 1 | 4 | 31 | 19S | 34E | 631700 | 3609351* | 160 | 110 | 50 |
| L 10347 | L | LE | LE | 2 | 3 | 03 | 19S | 34E | 635909 | 3617566* | 130 | | | |
| L 10380 | L | LE | LE | 4 | 4 | 4 | 02 | 19S | 34E | 638428 | 3617102* | 153 | 100 | 53 |
| L 12103 POD1 | L | LE | LE | 3 | 3 | 4 | 02 | 19S | 34E | 637920 | 3617173 | 120 | | |

Average Depth to Water: **83 feet**
 Minimum Depth: **28 feet**
 Maximum Depth: **123 feet**

Record Count: 12

Basin/County Search:

County: Lea

PLSS Search:

Township: 19S **Range:** 34E

*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.

5/31/19 12:37 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

COG_Tusk Federal #002H

Karst Potential

82

Legend

-  32.63000, -103.51990
-  High
-  Low
-  Medium

 32.63000, -103.51990

62

Carlsbad
85

Google Earth

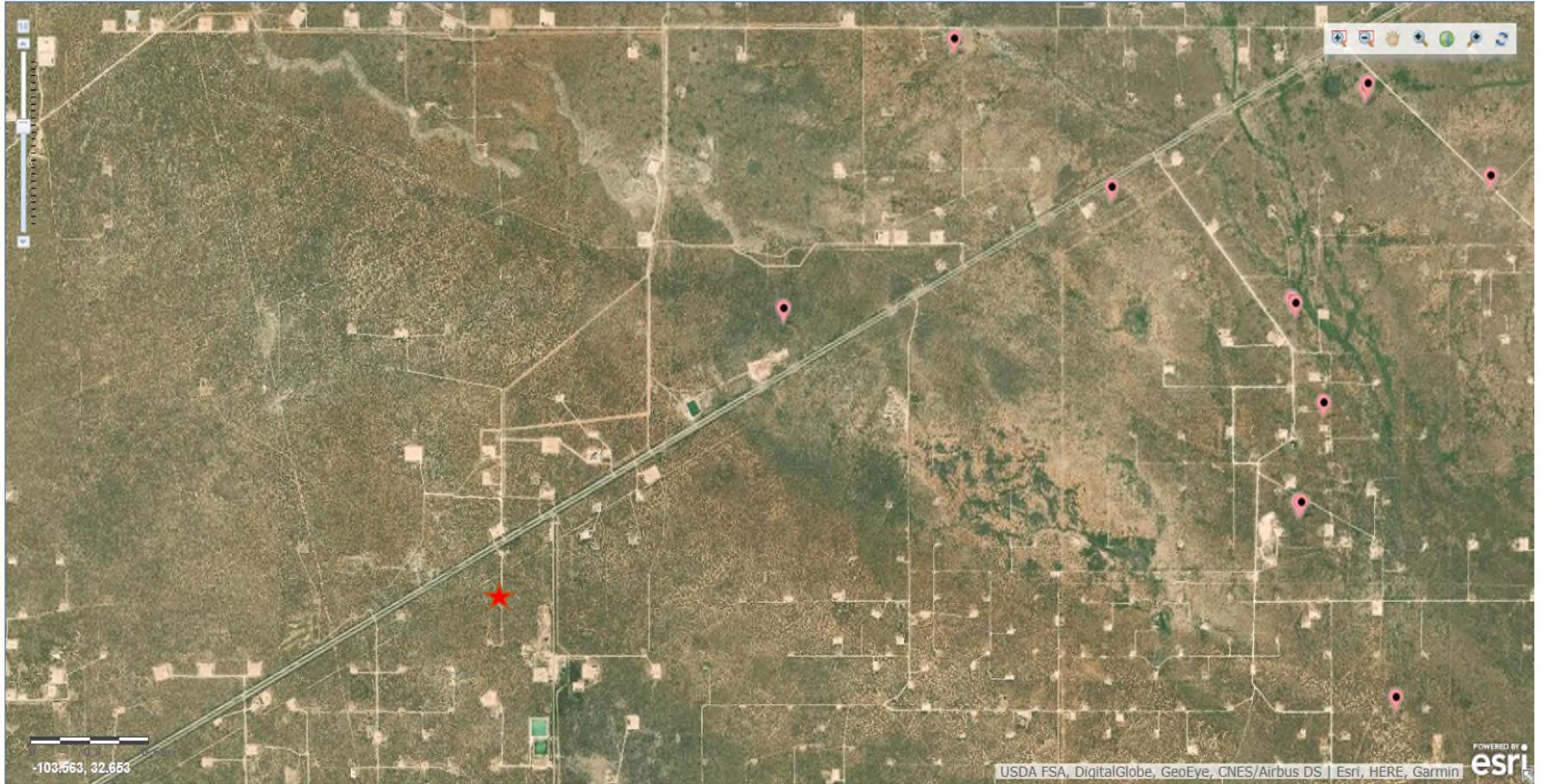
© 2018 Google

Loving



10 mi

USGS National Water Information System: Mapper





USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:

Groundwater

Geographic Area:

United States

GO

Click to hide News Bulletins

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

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 323855103294001

Minimum number of levels = 1

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

USGS 323855103294001 19S.35E.19.21110

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°38'55", Longitude 103°29'40" NAD27

Land-surface elevation 3,841 feet above NAVD88

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

Output formats

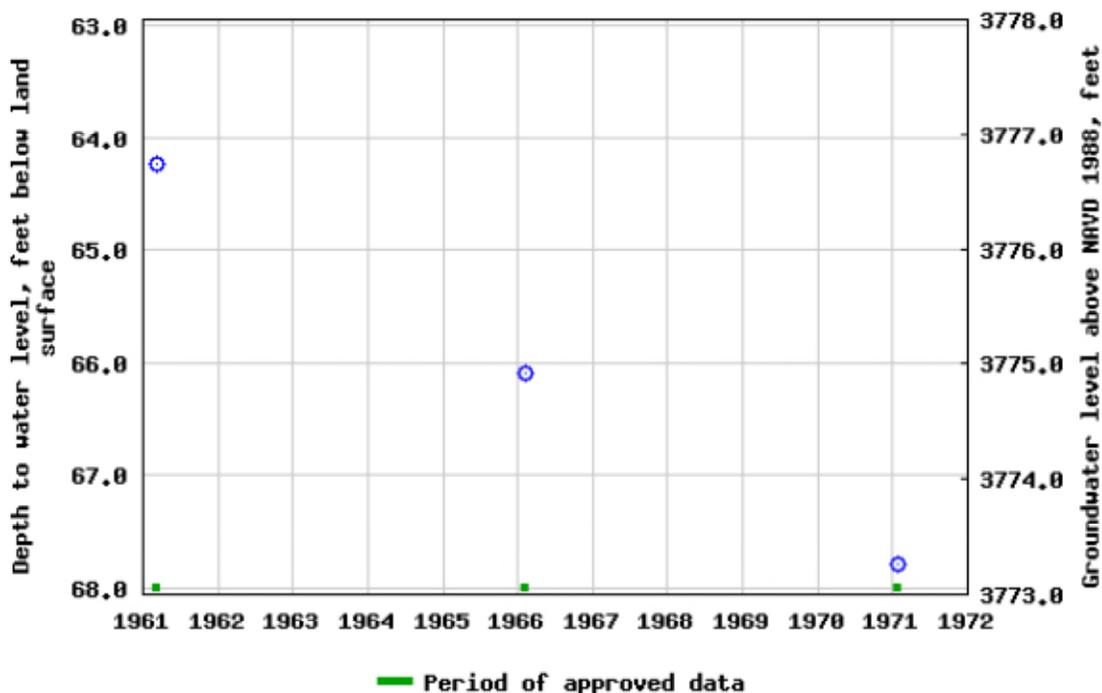
[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)

USGS 323855103294001 19S,35E,19,21110



Breaks in the plot represent a gap of at least one year between field measurements.

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[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: Groundwater for USA: Water Levels

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



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

Page Last Modified: 2019-06-05 09:51:12 EDT

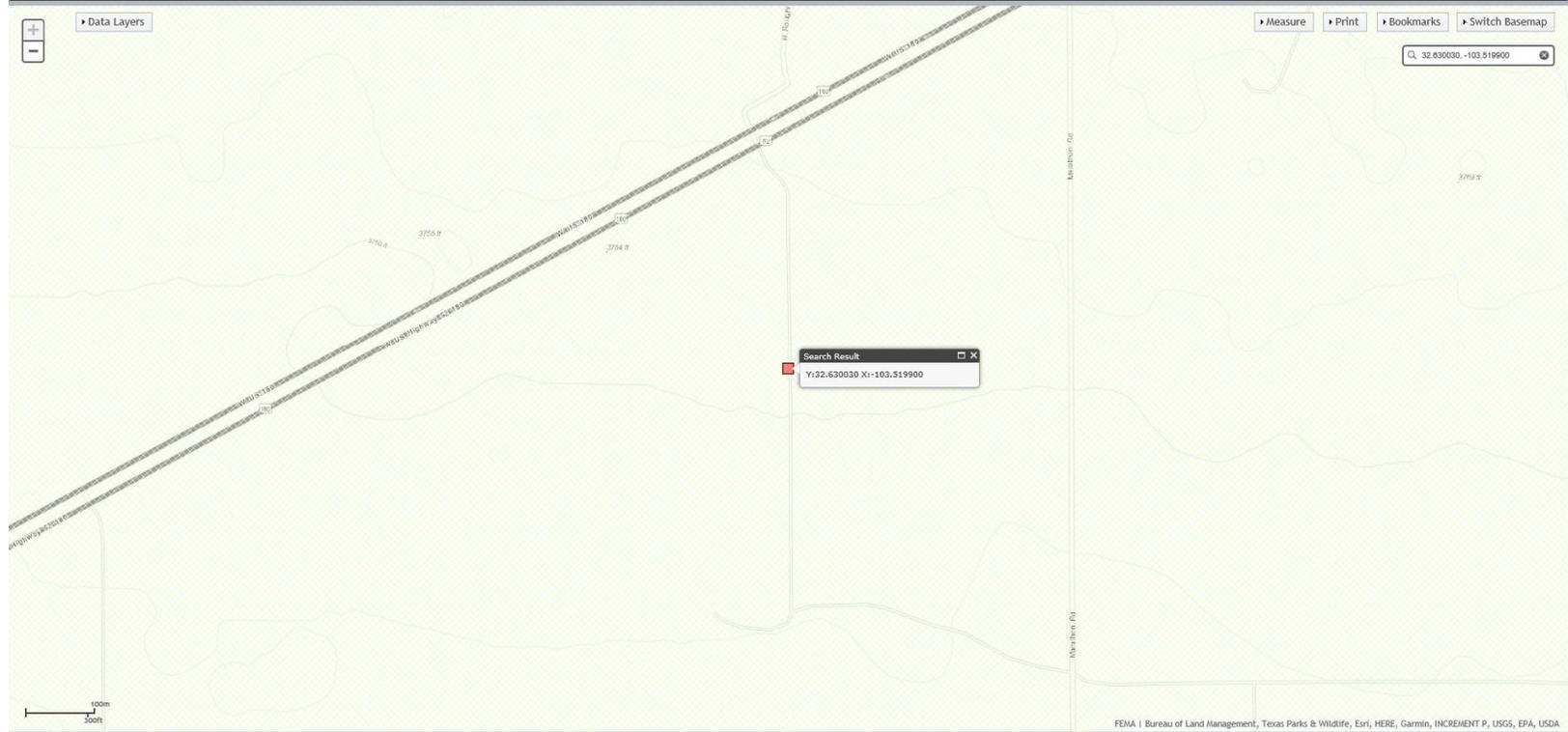
1.01 0.92 nadww01



Data Layers

Measure Print Bookmarks Switch Basemap

32.630030, -103.519900



Appendix C

April 10, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: TUSK FED 2H TB

Enclosed are the results of analyses for samples received by the laboratory on 04/09/19 15:27.

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,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/09/2019 | Sampling Date: | 04/09/2019 |
| Reported: | 04/10/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: BOTTOM HOLE # 2 (3' BEB) (H901293-01)

| BTEX 8021B | | mg/kg | | Analyzed By: ms | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.14 | 107 | 2.00 | 0.470 | |
| Toluene* | <0.050 | 0.050 | 04/09/2019 | ND | 1.98 | 99.0 | 2.00 | 0.443 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.06 | 103 | 2.00 | 1.00 | |
| Total Xylenes* | <0.150 | 0.150 | 04/09/2019 | ND | 6.25 | 104 | 6.00 | 0.633 | |
| Total BTEX | <0.300 | 0.300 | 04/09/2019 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 91.6 % 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 | 96.0 | 16.0 | 04/10/2019 | ND | 400 | 100 | 400 | 0.00 | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|----------------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 04/09/2019 | ND | 203 | 101 | 200 | 2.39 | |
| DRO >C10-C28* | 56.2 | 10.0 | 04/09/2019 | ND | 207 | 104 | 200 | 3.33 | |
| EXT DRO >C28-C36 | 22.8 | 10.0 | 04/09/2019 | ND | | | | | |

Surrogate: 1-Chlorooctane 111 % 41-142
Surrogate: 1-Chlorooctadecane 115 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/09/2019 | Sampling Date: | 04/09/2019 |
| Reported: | 04/10/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: BOTTOM HOLE # 3 (3' BEB) (H901293-02)

| BTEX 8021B | | mg/kg | | Analyzed By: ms | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.14 | 107 | 2.00 | 0.470 | | |
| Toluene* | <0.050 | 0.050 | 04/09/2019 | ND | 1.98 | 99.0 | 2.00 | 0.443 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.06 | 103 | 2.00 | 1.00 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/09/2019 | ND | 6.25 | 104 | 6.00 | 0.633 | | |
| Total BTEX | <0.300 | 0.300 | 04/09/2019 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 90.7 % 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 | 04/10/2019 | ND | 400 | 100 | 400 | 0.00 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/09/2019 | ND | 203 | 101 | 200 | 2.39 | | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/09/2019 | ND | 207 | 104 | 200 | 3.33 | | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/09/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 112 % 41-142

Surrogate: 1-Chlorooctadecane 114 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/09/2019 | Sampling Date: | 04/09/2019 |
| Reported: | 04/10/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: BOTTOM HOLE # 4 (3' BEB) (H901293-03)

| BTEX 8021B | | mg/kg | | Analyzed By: ms | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.14 | 107 | 2.00 | 0.470 | | |
| Toluene* | <0.050 | 0.050 | 04/09/2019 | ND | 1.98 | 99.0 | 2.00 | 0.443 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.06 | 103 | 2.00 | 1.00 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/09/2019 | ND | 6.25 | 104 | 6.00 | 0.633 | | |
| Total BTEX | <0.300 | 0.300 | 04/09/2019 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 90.8 % 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 | 32.0 | 16.0 | 04/10/2019 | ND | 400 | 100 | 400 | 0.00 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/09/2019 | ND | 203 | 101 | 200 | 2.39 | | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/09/2019 | ND | 207 | 104 | 200 | 3.33 | | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/09/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 110 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/09/2019 | Sampling Date: | 04/09/2019 |
| Reported: | 04/10/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: BOTTOM HOLE # 5 (3' BEB) (H901293-04)

| BTEX 8021B | | mg/kg | | Analyzed By: ms | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.14 | 107 | 2.00 | 0.470 | | |
| Toluene* | <0.050 | 0.050 | 04/09/2019 | ND | 1.98 | 99.0 | 2.00 | 0.443 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.06 | 103 | 2.00 | 1.00 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/09/2019 | ND | 6.25 | 104 | 6.00 | 0.633 | | |
| Total BTEX | <0.300 | 0.300 | 04/09/2019 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 91.3 % 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 | 80.0 | 16.0 | 04/10/2019 | ND | 400 | 100 | 400 | 0.00 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/09/2019 | ND | 203 | 101 | 200 | 2.39 | | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/09/2019 | ND | 207 | 104 | 200 | 3.33 | | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/09/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 112 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/09/2019 | Sampling Date: | 04/09/2019 |
| Reported: | 04/10/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: BOTTOM HOLE # 6 (4' BEB) (H901293-05)

| BTEX 8021B | | mg/kg | | Analyzed By: ms | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.14 | 107 | 2.00 | 0.470 | | |
| Toluene* | <0.050 | 0.050 | 04/09/2019 | ND | 1.98 | 99.0 | 2.00 | 0.443 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.06 | 103 | 2.00 | 1.00 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/09/2019 | ND | 6.25 | 104 | 6.00 | 0.633 | | |
| Total BTEX | <0.300 | 0.300 | 04/09/2019 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 92.3 % 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 | 48.0 | 16.0 | 04/10/2019 | ND | 400 | 100 | 400 | 0.00 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 203 | 101 | 200 | 2.39 | | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 207 | 104 | 200 | 3.33 | | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 112 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/09/2019 | Sampling Date: | 04/09/2019 |
| Reported: | 04/10/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: BOTTOM HOLE # 9 (4' BEB) (H901293-06)

| BTEX 8021B | | mg/kg | | Analyzed By: ms | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.14 | 107 | 2.00 | 0.470 | |
| Toluene* | <0.050 | 0.050 | 04/09/2019 | ND | 1.98 | 99.0 | 2.00 | 0.443 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/09/2019 | ND | 2.06 | 103 | 2.00 | 1.00 | |
| Total Xylenes* | <0.150 | 0.150 | 04/09/2019 | ND | 6.25 | 104 | 6.00 | 0.633 | |
| Total BTEX | <0.300 | 0.300 | 04/09/2019 | ND | | | | | |

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

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 32.0 | 16.0 | 04/10/2019 | ND | 400 | 100 | 400 | 0.00 | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 203 | 101 | 200 | 2.39 | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 207 | 104 | 200 | 3.33 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | |

Surrogate: 1-Chlorooctane 111 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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



Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Custody Record



Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG Site Manager: Clair Gonzales

Project Name: Tusk Fed 2H TB

Project Location: Lea Co, NM Project #: 212C-MD-01677

Invoice to: COG - Ike Taveres

Receiving Laboratory: Cardinal Sampler Signature: Conner Moehring

Comments:

LAB # H901293 (LAB USE ONLY)

| Bottom Hole # | Bottom Hole Description | SAMPLING | | MATRIX | | PRESERVATIVE METHOD | | | # CONTAINERS | FILTERED (Y/N) |
|---------------|-------------------------|----------|------|--------|------|---------------------|------------------|-----|--------------|----------------|
| | | DATE | TIME | WATER | SOIL | HCL | HNO ₃ | ICE | | |
| 1 | Bottom Hole #1 (3' BEB) | 4/9/19 | | X | | | | X | | 2 |
| 2 | Bottom Hole #2 (2' BEB) | 4/9/19 | | X | | | | X | | 2 |
| 3 | Bottom Hole #3 (3' BEB) | 4/9/19 | | X | | | | X | | 2 |
| 4 | Bottom Hole #4 (3' BEB) | 4/9/19 | | X | | | | X | | 2 |
| 5 | Bottom Hole #5 (4' BEB) | 4/9/19 | | X | | | | X | | 2 |
| 6 | Bottom Hole #6 (4' BEB) | 4/9/19 | | X | | | | X | | 2 |

Relinquished by: Comm Impelburg Date: 4/1/19 Time: 1527
Received by: [Signature] Date: 4-9-19 Time: 1527

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B BTEX 8260B

TPH TX1005 (Ext to C35)

TPH 8015M (GRO - DRO - ORO - MRO)

PAH 8270C

Total Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8260B / 624

GC/MS Semi. Vol. 8270C/625

PCB's 8082 / 608

NORM

PLM (Asbestos)

Chloride

Chloride Sulfate TDS

General Water Chemistry (see attached list)

Anion/Cation Balance

Hold

LAB USE ONLY

REMARKS:

STANDARD

RUSH: Same Day 24 hr 48 hr 72 hr

Rush Charges Authorized

Special Report Limits or TRRP Report

Sample Temperature: #97

Signature: [Signature]

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY



April 10, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: TUSK FED 2H TB

Enclosed are the results of analyses for samples received by the laboratory on 04/09/19 15:27.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/09/2019 | Sampling Date: | 04/09/2019 |
| Reported: | 04/10/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: EAST #1 SIDEWALL (H901294-01)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.93 | 96.4 | 2.00 | 7.46 | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.97 | 98.4 | 2.00 | 8.17 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.1 | 2.00 | 9.97 | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.86 | 97.6 | 6.00 | 10.1 | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 88.3 % 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 | 48.0 | 16.0 | 04/10/2019 | ND | 400 | 100 | 400 | 0.00 | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 203 | 101 | 200 | 2.39 | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 207 | 104 | 200 | 3.33 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | |

Surrogate: 1-Chlorooctane 111 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/09/2019 | Sampling Date: | 04/09/2019 |
| Reported: | 04/10/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: EAST #2 SIDEWALL (H901294-02)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.93 | 96.4 | 2.00 | 7.46 | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.97 | 98.4 | 2.00 | 8.17 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.1 | 2.00 | 9.97 | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.86 | 97.6 | 6.00 | 10.1 | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 73.3-129

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 48.0 | 16.0 | 04/10/2019 | ND | 400 | 100 | 400 | 0.00 | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 203 | 101 | 200 | 2.39 | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 207 | 104 | 200 | 3.33 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | |

Surrogate: 1-Chlorooctane 111 % 41-142

Surrogate: 1-Chlorooctadecane 114 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/09/2019 | Sampling Date: | 04/09/2019 |
| Reported: | 04/10/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: WEST #1 SIDEWALL (H901294-03)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.93 | 96.4 | 2.00 | 7.46 | | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.97 | 98.4 | 2.00 | 8.17 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.1 | 2.00 | 9.97 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.86 | 97.6 | 6.00 | 10.1 | | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | | |

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

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 32.0 | 16.0 | 04/10/2019 | ND | 400 | 100 | 400 | 0.00 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 203 | 101 | 200 | 2.39 | | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 207 | 104 | 200 | 3.33 | | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 111 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/09/2019 | Sampling Date: | 04/09/2019 |
| Reported: | 04/10/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: WEST #2 SIDEWALL (H901294-04)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.93 | 96.4 | 2.00 | 7.46 | | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.97 | 98.4 | 2.00 | 8.17 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.1 | 2.00 | 9.97 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.86 | 97.6 | 6.00 | 10.1 | | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 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 | 32.0 | 16.0 | 04/10/2019 | ND | 400 | 100 | 400 | 0.00 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 203 | 101 | 200 | 2.39 | | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 207 | 104 | 200 | 3.33 | | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 111 % 41-142

Surrogate: 1-Chlorooctadecane 115 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/09/2019 | Sampling Date: | 04/09/2019 |
| Reported: | 04/10/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: SOUTH #2 SIDEWALL (H901294-05)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.93 | 96.4 | 2.00 | 7.46 | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.97 | 98.4 | 2.00 | 8.17 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.1 | 2.00 | 9.97 | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.86 | 97.6 | 6.00 | 10.1 | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 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 | 32.0 | 16.0 | 04/10/2019 | ND | 400 | 100 | 400 | 0.00 | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 203 | 101 | 200 | 2.39 | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 207 | 104 | 200 | 3.33 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | |

Surrogate: 1-Chlorooctane 113 % 41-142

Surrogate: 1-Chlorooctadecane 114 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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



Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG Site Manager: Clair Gonzales

Project Name: Tusk Fed 2H TB

Project Location: Lea Co, NM Project #: 212C-MD-01677

Invoice to: COG - Ike Taveres

Receiving Laboratory: Cardinal Sampler Signature: Conner Moehring

Comments:

LAB USE ONLY (LAB USE ONLY)

LAB # 17401394

| SAMPLE IDENTIFICATION | SAMPLING | | MATRIX | | PRESERVATIVE METHOD | | | | # CONTAINERS | FILTERED (Y/N) |
|-----------------------|----------|------|--------|------|---------------------|------------------|-----|------|--------------|----------------|
| | DATE | TIME | WATER | SOIL | HCL | HNO ₃ | ICE | None | | |
| South #1 Sidewalk | 4/9/19 | | X | | | | X | | 1 | 2 |
| East #1 Sidewalk | 4/9/19 | | X | | | | X | | 1 | 2 |
| East #2 Sidewalk | 4/9/19 | | X | | | | X | | 1 | 2 |
| West #1 Sidewalk | 4/9/19 | | X | | | | X | | 1 | 2 |
| West #2 Sidewalk | 4/9/19 | | X | | | | X | | 1 | 2 |
| South #2 Sidewalk | 4/9/19 | | X | | | | X | | 1 | 2 |

Relinquished by: Conner Moehring Date: 4/9/19 Time: 1527

Received by: James Clarke Date: 4-9-19 Time: 1527

Relinquished by: Date: Time:

Received by: Date: Time:

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B BTEX 8260B

TPH TX1005 (Ext to C35)

TPH 8015M (GRO - DRO - ORO - MRO)

PAH 8270C

Total Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8260B / 624

GC/MS Semi. Vol. 8270C/625

PCB's 8082 / 608

NORM

PLM (Asbestos)

Chloride

Chloride Sulfate TDS

General Water Chemistry (see attached list)

Anion/Cation Balance

Hold

LAB USE ONLY

REMARKS:

STANDARD

RUSH: Same Day 24 hr 48 hr 72 hr

Rush Charges Authorized

Special Report Limits or TRRP Report

Sample Temperature: #97 3.5e

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY



April 11, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: TUSK FED 2H TB

Enclosed are the results of analyses for samples received by the laboratory on 04/10/19 11:50.

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:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/10/2019 | Sampling Date: | 04/10/2019 |
| Reported: | 04/11/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: NORTH #1 SIDEWALL (H901308-01)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.93 | 96.4 | 2.00 | 7.46 | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.97 | 98.4 | 2.00 | 8.17 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.1 | 2.00 | 9.97 | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.86 | 97.6 | 6.00 | 10.1 | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 93.4 % 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 | 32.0 | 16.0 | 04/11/2019 | ND | 400 | 100 | 400 | 3.92 | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|----------------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 209 | 104 | 200 | 0.845 | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 194 | 97.2 | 200 | 3.96 | |
| EXT DRO >C28-C36 | 17.2 | 10.0 | 04/10/2019 | ND | | | | | |

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 86.3 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/10/2019 | Sampling Date: | 04/10/2019 |
| Reported: | 04/11/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: NORTH #2 SIDEWALL (H901308-02)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.93 | 96.4 | 2.00 | 7.46 | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.97 | 98.4 | 2.00 | 8.17 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.1 | 2.00 | 9.97 | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.86 | 97.6 | 6.00 | 10.1 | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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 | 176 | 16.0 | 04/11/2019 | ND | 400 | 100 | 400 | 3.92 | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | S-04 |
|----------------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/11/2019 | ND | 209 | 104 | 200 | 0.845 | | |
| DRO >C10-C28* | 2940 | 10.0 | 04/11/2019 | ND | 194 | 97.2 | 200 | 3.96 | | |
| EXT DRO >C28-C36 | 1460 | 10.0 | 04/11/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 98.6 % 41-142

Surrogate: 1-Chlorooctadecane 164 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/10/2019 | Sampling Date: | 04/10/2019 |
| Reported: | 04/11/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: EAST #3 SIDEWALL (H901308-03)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.93 | 96.4 | 2.00 | 7.46 | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.97 | 98.4 | 2.00 | 8.17 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.1 | 2.00 | 9.97 | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.86 | 97.6 | 6.00 | 10.1 | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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 | 112 | 16.0 | 04/11/2019 | ND | 400 | 100 | 400 | 3.92 | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|----------------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 209 | 104 | 200 | 0.845 | |
| DRO >C10-C28* | 16.0 | 10.0 | 04/10/2019 | ND | 194 | 97.2 | 200 | 3.96 | |
| EXT DRO >C28-C36 | 14.1 | 10.0 | 04/10/2019 | ND | | | | | |

Surrogate: 1-Chlorooctane 94.4 % 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:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/10/2019 | Sampling Date: | 04/10/2019 |
| Reported: | 04/11/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: WEST #3 SIDEWALL (H901308-04)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.93 | 96.4 | 2.00 | 7.46 | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.97 | 98.4 | 2.00 | 8.17 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.1 | 2.00 | 9.97 | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.86 | 97.6 | 6.00 | 10.1 | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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 | 04/11/2019 | ND | 400 | 100 | 400 | 3.92 | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 209 | 104 | 200 | 0.845 | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 194 | 97.2 | 200 | 3.96 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | |

Surrogate: 1-Chlorooctane 98.5 % 41-142

Surrogate: 1-Chlorooctadecane 95.2 % 37.6-147

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/10/2019 | Sampling Date: | 04/10/2019 |
| Reported: | 04/11/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: SOUTH #1 SIDEWALL (H901308-05)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.93 | 96.4 | 2.00 | 7.46 | | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.97 | 98.4 | 2.00 | 8.17 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.1 | 2.00 | 9.97 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.86 | 97.6 | 6.00 | 10.1 | | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | 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 | 304 | 16.0 | 04/11/2019 | ND | 400 | 100 | 400 | 3.92 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 209 | 104 | 200 | 0.845 | | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 194 | 97.2 | 200 | 3.96 | | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 97.1 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report



Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG Site Manager: Clair Gonzales

Project Name: Tusk Fed 2H TB

Project Location: Lea Co, NM

Project #: 212C-MD-01677

Invoice to: COG - Ike Taveres

Receiving Laboratory: Cardinal

Sampler Signature: Conner Moehring

Comments:

| LAB USE ONLY | SAMPLE IDENTIFICATION | SAMPLING | | MATRIX | | PRESERVATIVE METHOD | | # CONTAINERS | FILTERED (Y/N) | ANALYSIS REQUEST (Circle or Specify Method No.) |
|--------------|-----------------------|----------|------|--------|------|---------------------|------------------|--------------|----------------|---|
| | | DATE | TIME | WATER | SOIL | HCL | HNO ₃ | | | |
| | 1 NORTH #1 Sidewalk | 4/10/14 | | X | | X | | 1 | 2 | BTEX 8021B BTEX 8260B TPH TX1005 (Ext to C35) TPH 8015M (GRO - DRO - ORO - MRO) PAH 8270C Total Metals Ag As Ba Cd Cr Pb Se Hg TCLP Metals Ag As Ba Cd Cr Pb Se Hg TCLP Volatiles TCLP Semi Volatiles RCI GC/MS Vol. 8260B / 624 GC/MS Semi. Vol. 8270C/625 PCB's 8082 / 608 NORM PLM (Asbestos) Chloride Chloride Sulfate TDS General Water Chemistry (see attached list) Anion/Cation Balance |
| | 2 NORTH # 2 Sidewalk | 4/10/14 | | X | | X | | 1 | 2 | |
| | 3 EAST # 3 Sidewalk | 4/10/14 | | X | | X | | 1 | 2 | |
| | 4 WEST # 3 Sidewalk | 4/10/14 | | X | | X | | 1 | 2 | |
| | 5 South #1 Sidewalk | 4/10/14 | | X | | X | | 1 | 2 | |

| Relinquished by: | Date: | Time: | Received by: | Date: | Time: |
|------------------------|---------|-------|--------------------------|---------|-------|
| <i>Terri Mykelberg</i> | 4/10/14 | 11:50 | <i>Jawara Chatterjee</i> | 4/10/14 | 11:50 |
| Relinquished by: | Date: | Time: | Received by: | Date: | Time: |

LAB USE ONLY

REMARKS:

STANDARD

RUSH: Same Day 24 hr 48 hr 72 hr

Rush Charges Authorized

Special Report Limits or TRRP Report

Sample Temperature: *5.4°*

LAB USE ONLY

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:



April 11, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: TUSK FED 2H TB

Enclosed are the results of analyses for samples received by the laboratory on 04/10/19 11:50.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/10/2019 | Sampling Date: | 04/10/2019 |
| Reported: | 04/11/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: BOTTOM HOLE #10 (2.5' BEB) (H901309-01)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.90 | 94.9 | 2.00 | 3.94 | | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.96 | 98.0 | 2.00 | 1.56 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.0 | 2.00 | 7.88 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.82 | 96.9 | 6.00 | 5.67 | | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 85.0 % 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 | 04/11/2019 | ND | 400 | 100 | 400 | 3.92 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 209 | 104 | 200 | 0.845 | | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 194 | 97.2 | 200 | 3.96 | | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/10/2019 | Sampling Date: | 04/10/2019 |
| Reported: | 04/11/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: BOTTOM HOLE #11 (2.5' BEB) (H901309-02)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.90 | 94.9 | 2.00 | 3.94 | | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.96 | 98.0 | 2.00 | 1.56 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.0 | 2.00 | 7.88 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.82 | 96.9 | 6.00 | 5.67 | | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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 | 04/11/2019 | ND | 400 | 100 | 400 | 3.92 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 209 | 104 | 200 | 0.845 | | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 194 | 97.2 | 200 | 3.96 | | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/10/2019 | Sampling Date: | 04/10/2019 |
| Reported: | 04/11/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: BOTTOM HOLE #1 (3' BEB) (H901309-03)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.90 | 94.9 | 2.00 | 3.94 | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.96 | 98.0 | 2.00 | 1.56 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.0 | 2.00 | 7.88 | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.82 | 96.9 | 6.00 | 5.67 | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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 | 304 | 16.0 | 04/11/2019 | ND | 400 | 100 | 400 | 3.92 | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 209 | 104 | 200 | 0.845 | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 194 | 97.2 | 200 | 3.96 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | |

Surrogate: 1-Chlorooctane 97.4 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/10/2019 | Sampling Date: | 04/10/2019 |
| Reported: | 04/11/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: BOTTOM HOLE #7 (4' BEB) (H901309-04)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.90 | 94.9 | 2.00 | 3.94 | | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.96 | 98.0 | 2.00 | 1.56 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.0 | 2.00 | 7.88 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.82 | 96.9 | 6.00 | 5.67 | | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 92.7 % 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 | 16.0 | 16.0 | 04/11/2019 | ND | 400 | 100 | 400 | 3.92 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 209 | 104 | 200 | 0.845 | | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 194 | 97.2 | 200 | 3.96 | | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 99.9 % 41-142

Surrogate: 1-Chlorooctadecane 99.7 % 37.6-147

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/10/2019 | Sampling Date: | 04/10/2019 |
| Reported: | 04/11/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: BOTTOM HOLE #8 (4' BEB) (H901309-05)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.90 | 94.9 | 2.00 | 3.94 | | |
| Toluene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.96 | 98.0 | 2.00 | 1.56 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/10/2019 | ND | 1.98 | 99.0 | 2.00 | 7.88 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/10/2019 | ND | 5.82 | 96.9 | 6.00 | 5.67 | | |
| Total BTEX | <0.300 | 0.300 | 04/10/2019 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 89.4 % 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 | 16.0 | 16.0 | 04/11/2019 | ND | 400 | 100 | 400 | 3.92 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| GRO C6-C10* | <10.0 | 10.0 | 04/10/2019 | ND | 209 | 104 | 200 | 0.845 | | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/10/2019 | ND | 194 | 97.2 | 200 | 3.96 | | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/10/2019 | ND | | | | | | |

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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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



Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG Site Manager: Clair Gonzales

Project Name: Tusk Fed 2H TB

Project Location: Lea Co, NM

Project #: 212C-MD-01677

Invoice to: COG - Ike Taveres

Receiving Laboratory: Cardinal

Sampler Signature: Conner Moehring

Comments:

| LAB # (LAB USE ONLY) | SAMPLE IDENTIFICATION | SAMPLING | | MATRIX | | PRESERVATIVE METHOD | | # CONTAINERS | FILTERED (Y/N) |
|-------------------------|-----------------------|----------|------|--------|------|---------------------|------------------|--------------|----------------|
| | | DATE | TIME | WATER | SOIL | HCL | HNO ₃ | | |

| | | | | | | | | | |
|---|-----------------------------|---------|--|---|--|---|--|---|---|
| 1 | Bottom Hole # 10 (2.5' BEB) | 4/10/14 | | X | | X | | 1 | 2 |
| 2 | Bottom Hole #11 (2.5' BEB) | 4/10/14 | | X | | X | | 1 | 2 |
| 3 | Bottom Hole #1 (3' BEB) | 4/10/14 | | X | | X | | 1 | 2 |
| 4 | Bottom Hole #7 (4' BEB) | 4/10/14 | | X | | X | | 1 | 2 |
| 5 | Bottom Hole #8 (4' BEB) | 4/10/14 | | X | | X | | 1 | 2 |

| LAB USE ONLY | REMARKS: | STANDARD | RUSH: Same Day | Rush Charges Authorized | Special Report Limits or TRRP Report |
|--------------|----------|----------|----------------|-------------------------|--------------------------------------|
| #97 | | | 24 hr | | |
| 5.4e | | | 48 hr | | |
| | | | 72 hr | | |

ANALYSIS REQUEST
(Circle or Specify Method No.)

| | |
|---|------------|
| BTEX 8021B | BTEX 8260B |
| TPH TX1005 (Ext to C35) | |
| TPH 8015M (GRO - DRO - ORO - MRO) | |
| PAH 8270C | |
| Total Metals Ag As Ba Cd Cr Pb Se Hg | |
| TCLP Metals Ag As Ba Cd Cr Pb Se Hg | |
| TCLP Volatiles | |
| TCLP Semi Volatiles | |
| RCI | |
| GC/MS Vol. 8260B / 624 | |
| GC/MS Semi. Vol. 8270C/625 | |
| PCB's 8082 / 608 | |
| NORM | |
| PLM (Asbestos) | |
| Chloride | |
| Chloride Sulfate TDS | |
| General Water Chemistry (see attached list) | |
| Anion/Cation Balance | |
| Hold | |

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

April 15, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: TUSK FED 2H TB

Enclosed are the results of analyses for samples received by the laboratory on 04/12/19 12:35.

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,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

| | | | |
|-------------------|-----------------|---------------------|----------------|
| Received: | 04/12/2019 | Sampling Date: | 04/12/2019 |
| Reported: | 04/15/2019 | Sampling Type: | Soil |
| Project Name: | TUSK FED 2H TB | Sampling Condition: | Cool & Intact |
| Project Number: | 212C- MD 01677 | Sample Received By: | Tamara Oldaker |
| Project Location: | COG - LEA CO NM | | |

Sample ID: NORTH 2 SIDEWALL (H901353-01)

| BTEX 8021B | | mg/kg | | Analyzed By: ms | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/12/2019 | ND | 2.06 | 103 | 2.00 | 0.775 | |
| Toluene* | <0.050 | 0.050 | 04/12/2019 | ND | 1.96 | 97.8 | 2.00 | 0.878 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/12/2019 | ND | 2.04 | 102 | 2.00 | 0.624 | |
| Total Xylenes* | <0.150 | 0.150 | 04/12/2019 | ND | 6.23 | 104 | 6.00 | 0.453 | |
| Total BTEX | <0.300 | 0.300 | 04/12/2019 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 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 | 128 | 16.0 | 04/15/2019 | ND | 400 | 100 | 400 | 0.00 | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 04/13/2019 | ND | 194 | 97.0 | 200 | 4.04 | |
| DRO >C10-C28* | <10.0 | 10.0 | 04/13/2019 | ND | 190 | 95.0 | 200 | 4.16 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 04/13/2019 | ND | | | | | |

Surrogate: 1-Chlorooctane 90.5 % 41-142

Surrogate: 1-Chlorooctadecane 92.4 % 37.6-147

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*=Accredited Analyte

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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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Celey D. Keene, Lab Director/Quality Manager



Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG Site Manager: Clair Gonzales

Project Name: Tusk Fed 2H TB

Project Location: Lea Co, NM

Project #: 212C-MD-01677

Invoice to: COG - Ike Taveres

Receiving Laboratory: Cardinal Sampler Signature: Conner Moehring

Comments:

LAB # 1491353
(LAB USE ONLY)

SAMPLE IDENTIFICATION

North 2 Seccwell

4/12/15

| YEAR: 2019 | SAMPLING | | MATRIX | | PRESERVATIVE METHOD | | | # CONTAINERS | FILTERED (Y/N) |
|------------|----------|------|--------|------|---------------------|------------------|-----|--------------|----------------|
| | DATE | TIME | WATER | SOIL | HCL | HNO ₃ | ICE | | |
| | 4/12/15 | | | X | | | X | | |

Relinquished by: *Conner Moehring* Date: 4/12/15 Time: 12:35
 Received by: *Clair Gonzales* Date: 4-12-15 Time: 12:35
 Relinquished by: _____ Date: _____ Time: _____
 Received by: _____ Date: _____ Time: _____

ANALYSIS REQUEST (Circle or Specify Method No.)

- BTEX 8021B BTEX 8260B
- TPH TX1005 (Ext to C35)
- TPH 8015M (GRO - DRO - ORO - MRO)
- PAH 8270C
- Total Metals Ag As Ba Cd Cr Pb Se Hg
- TCLP Metals Ag As Ba Cd Cr Pb Se Hg
- TCLP Volatiles
- TCLP Semi Volatiles
- RCI
- GC/MS Vol. 8260B / 624
- GC/MS Semi. Vol. 8270C/625
- PCB's 8082 / 608
- NORM
- PLM (Asbestos)
- Chloride
- Chloride Sulfate TDS
- General Water Chemistry (see attached list)
- Anion/Cation Balance

LAB USE ONLY
 Sample Temperature: #97
 3.4°C
 REMARKS:
 STANDARD
 RUSH: Same Day (24 hr) 48 hr 72 hr
 Rush Charges Authorized
 Special Report Limits or TRRP Report

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #: