

May 29, 2018

Ms. Olivia Yu New Mexico Oil Conservation Division Energy, Minerals and Natural Resources Department 1625 N. French Dr. Hobbs, New Mexico 88240

Mr. Ryan Mann New Mexico State Land Office Remediation Specialist Field Operation Division 2827 N. Dal Paso Suite 117 Hobbs, New Mexico 88240 Reference No. 11135250-04

NMOCD approves closure of remediated area for 1RP-4524. Area identified for deferral must be remediated upon pipeline abandonment, retrofit, or inactivity.

Dear Ms. Yu and Mr. Mann:

Re: Closure and Deferral Request Trunk MC-16 (1RP-4524) ETC Field Services LLC Site Location: Unit O, Sec. 33, T 21-S, R 36-E (Lat 32.428160N°, Long -103.269760W°) Lea County, New Mexico

On behalf of ETC Field Services LLC (ETC), GHD Services, Inc. (GHD) is requesting that no further action status be granted for the Trunk MC-16 pipeline (hereafter referred to as the "Site") release with exception to a deferral area at the north end of the excavation. The site is located approximately 6.5 miles west of Eunice, New Mexico (see Figure 1).

In an Assessment Report dated October 12, 2017 (attached) GHD recommended the following scope items be completed following delineation of the soil impacts in order to achieve no further action:

- Request a variance from the New Mexico Oil Conservation Division (NMOCD) and the New Mexico State Land Office to leave the impacted soil in place in the area of the pipelines until these pipelines have been abandoned (see Figure 2).
- The excavation should be backfilled with clean fill material and wheel compacted to grade.
- Fertilizing and reseeding of the disturbed area with an appropriate seed mix. Blue Gramma was used.

The work scope was approved by Ms. Yu with the NMOCD on April 2, 2018 and by Mr. Ryan Mann on April 25, 2018. As of the date of this letter, the above scope items have been completed and are documented in the attached completion photographs and final C-141 for the Site. Therefore, No Further Action is being requested for the site with exception to the deferred area.





Should you have any questions, or require additional information regarding this submittal, please feel free to contact myself or Bernie Bockisch at (505) 884-0672 or Bernard.Bockisch@ghd.com.

Sincerely,

GHD

AIC Brand

Alan Brandon Senior Project Manager

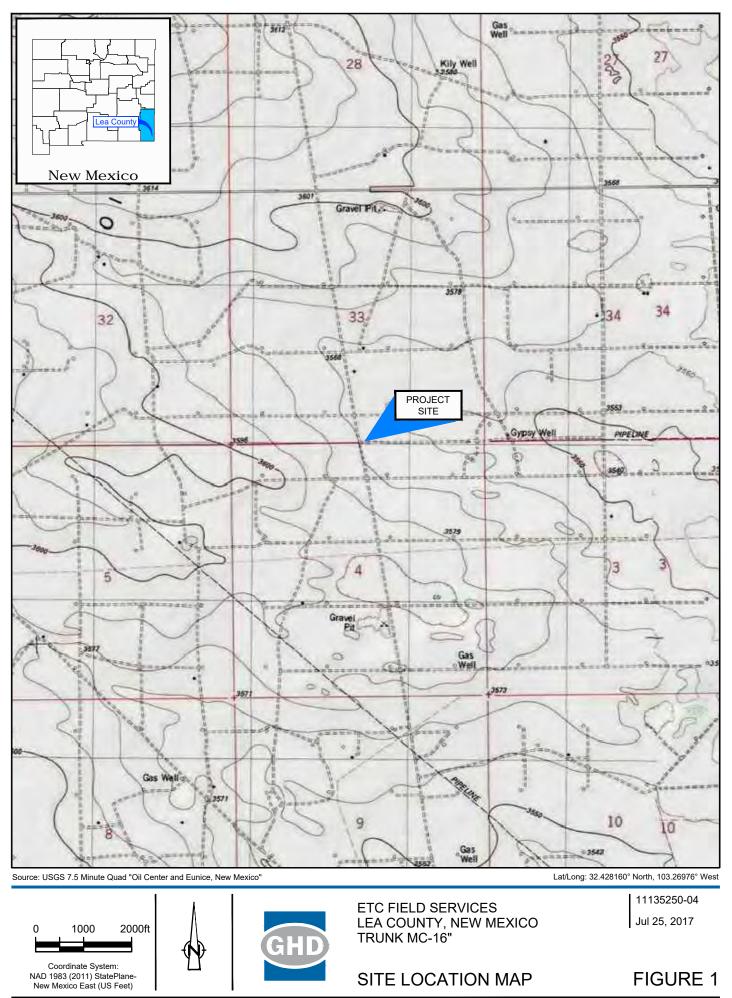
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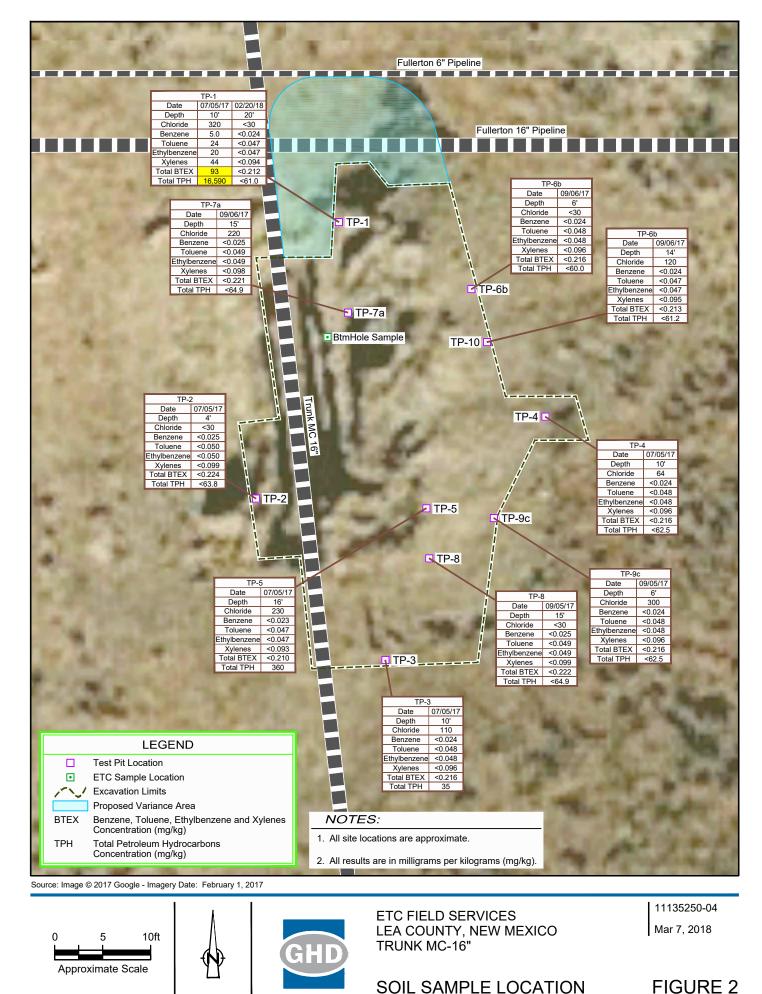
Senarc

Bernard Bockisch Albuquerque Operations Manager

Figures



CAD File: I:\CAD\Files\Eight Digit Job Numbers\1113----\11135250-ETC Field Services\11135250-04(000)GN-DL001.dwg



CAD File: I:\CAD\Files\Eight Digit Job Numbers\1113----\11135250-ETC Field Services\11135250-04(000)GN-DL001.dwg

FIGURE 2



GHD | 11135250-04YuMann1-ATT TP

Attachment A Site Photographs



Photo 1 - Backfilled excavation



Photo 2 - Re-seeding



Site Photographs

GHD | Trunk MC-16 Closure Request | 11135250 (04) | Page 1



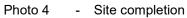
Photo 3 - Irrigating seeds



Site Photographs

GHD | Trunk MC-16 Closure Request | 11135250 (04) | Page 2







Site Photographs

GHD | Trunk MC-16 Closure Request | 11135250 (04) | Page 3

Attachment B Form C-141

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC,

| | | | Dal | ease Notifi | ontio | n and C | Amagating A | ation | | | | | | |
|-----------------|-----------------------------|------------------------------|-------------------------|---|-----------|---|----------------------|--------------|------------|-------------------|--------------------|--------------|--|--|
| | | | Rei | ease notin | catto | | | ction_ | _ | | | | | |
| Nama of Co | | | Court Dourton | | | OPERAT | | | Initi | al Report | | Final Report | | |
| | | nergy Trans enfeld Street | | | | Contact: Dean D. Ericson Telephone No : 432-238-2142 (cell) (817) 302 0812 (cell) | | | | | | | | |
| | | MC-16" (1F | | | | Telephone No.: 432-238-2142 (cell) (817)-302-9812 (off) Facility Type: Pipeline | | | | | | | | |
| | | | u -+52+) | | | | e. Pipenne | | | | | | | |
| Surface Ow | ner: State | of NM | | Mineral C | Owner: | | | | API No |).: | | | | |
| | | | | LOCA | ATIO | N OF REI | LEASE | | | | | | | |
| Unit Letter | Section | Township | Range | Feet from the | | /South Line | Feet from the | East/Wes | st Line | County | | | | |
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| | |] | | 54 | <u> </u> | | l | | | | | | | |
| | | Latitud | le3 | 2.428160N | | _ Longitude | -103.2697 | 60W | | _ | | | | |
| | | | | NAT | URE | OF RELI | EASE | | | | | | | |
| | | d Condensate | | | | | Release: 6 BBL | V | olume R | lecovered: 0 | | | | |
| Source of Re | lease: Natu | ral Gas Pipelii | ne | 12 | | | lour of Occurrenc | e D | ate and | Hour of Disc | | | | |
| Was Immedia | te Notice (| liven? | N | | | 11/4/2016 · | | 1 | 1/4/2016 | 6~15:00 | _ | | | |
| was minedia | ne nonce (| | Yes 🛛 | No 🗌 Not R | equired | | Whom? NA | | | | | | | |
| By Whom? N | A | | | | | Date and Hour NA | | | | | | | | |
| Was a Water | | | | | | If YES, Volume Impacting the Watercourse. | | | | | | | | |
| | | | Yes 🗵 | No | | | | | | | | i | | |
| If a Watercou | rse was Im | pacted, Descr | ibe Fully. ³ | * | | | | | | | | | | |
| NA | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | em and Reme | | | | | | | | | | | | |
| Due to extern | al corrosion | n, a section of | 16" gathe | ring system pipel | ine dev | eloped a hole o | causing a release of | of natural g | gas and o | oil. The pipe | line wa | 15 | | |
| options. | solated and | the leaking s | ection of j | pip dug up to reve | al the h | ole. The conta | aminated soil was | stockpiled | l and san | npled to dete | rmine | disposal | | |
| options. | | | | | | | | | | | | | | |
| Describe Area | Affected a | and Cleanup A | Action Tak | ten.* The area af | fected | was approxima | itely 15'x10'x10' | . The cont | aminate | d soil was st | ockpile | ed and | | |
| sampled for d | isposal opt | ions. The hole | e was furti | her excavated and | confin | nation sample: | s were collected f | or laborato | ry analy | sis. The soi | ls in th | e southern | | |
| pipelines. | excavation | i were remeara | lieu to lev | els below the RR | ALS. E | xeavation coul | d not be perform | ed further t | to the no | rth due to se | veral b | uried | | |
| I hereby certif | ly that the i | nformation gi | ven above | is true and comp | lete to t | he best of my | knowledge and u | nderstand t | hat purs | uant to NMC |)CD n | ales and | | |
| regulations al | l operators | are required to | o report ar | id/or file certain r | elease n | otifications an | d perform correct | tive actions | s for rele | ases which r | nav en | Idanger | | |
| should their o | or the envir perations h | conment. The | acceptant | e of a C-141 repo investigate and re | ort by th | e NMOCD ma | irked as "Final Re | eport" does | not reli | eve the operation | ator of | liability | | |
| or the environ | ment. In a | ddition, NMO | CD accep | tance of a C-141 | report d | e comaminant loes not relieve | the operator of r | at to groun | ity for co | , surface wat | er, nui ith any | man health | | |
| federal, state | or local lav | vs and/or regu | lations. | | -1 | | - me operator of t | *oponsioni | | mpnunce m | ini any | oulei | | |
| (|) | () | λ | | 5 | | OIL CONS | SERVA | TION | DIVISIO | N | | | |
| Signature: | Lean | 1 N | 10. | un- | | | | | | | | | | |
| | | | | | | Approved by 1 | Environmental Sp | acialist. | | | | | | |
| Printed Name | : Dean D. E | Ericson | | | | | | ceranst. | | | | | | |
| Title: Sr. Env | ironmental | Specialist | | | | Approval Date | 3 | Eva | iration E | Jotas | | 6. | | |
| | | | | | | spprovar Dat | | Exp | nation L | | | | | |
| E-mail Addre | ss: dean.eri | cson@energy | transfer.co | om | | Conditions of | Approval: | | | Attached | | | | |
| Date: May 2 | 3.2018 | | Phone | : 432-238-2142 | | | | | | rituoneu | | | | |
| Attach Addit | | ts If Necess | | · +J2=2J0=21+2 | | | | | _ | | | | | |

Attachment C Remediation Summary Report

Reference No. 11135250-4



October 12, 2017

Mr. Dean Ericson ETC Field Services LLC 600 N. Marienfeld Suite 700 Midland, TX 79701

Dear Mr. Ericson:

Re: Remediation Summary Report Trunk MC-16 inch ETC Field Services LLC 1RP-4524 Site Location: Unit O, Sec. 33, T 21-S, R 36-E (Lat 32.428160N°, Long -103.269760W°) Lea County, New Mexico

GHD Services, Inc. (GHD) is pleased to present this report for the above referenced site. The Trunk MC-16 inch (hereafter referred to as the "Site") is located within Unit O, Section 33, Township 21 South, Range 36 East, in Lea County, New Mexico (see Figure 1). The site is owned by the New Mexico State Land Office.

On November 17, 2016, a release of approximately six barrels (bbls) of natural gas/condensate was reported to the State of New Mexico Oil Conservation Division (NMOCD) via Form C-141. A leaking 16-inch gathering system pipeline was the cause of the release. Contaminated soils were excavated and stockpiled on site (see Figure 2). NMOCD release number 1RP 4524 was assigned.

1. Recommended Remediation Action Limits

Based on information available from the New Mexico Office of the State Engineer New Mexico Water Rights Reporting System website, the closest well with a recorded depth to water measurement is approximately 1 mile from the site. The depth to groundwater measured in this well was 212 feet (ft.) below ground surface (bgs).

Based on information available from the United States Geologic Survey National Water Information System, the depth to groundwater at the Site is approximately 200 ft. bgs. This is based on a water well that is located approximately 0.65 mile east, southeast of the Site (see Appendix A, Water Well Reports for depth to water). Additionally, there are no well head protection areas or surface water bodies within 1,000 ft. of the Site. Therefore, the preliminary total ranking score is 0 (see table below).





Based on this score, the applicable NMOCD Site specific Recommended Remediation Action Limits (RRALs) are 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total benzene, toluene, ethylbenzene, and xylenes (BTEX), 5,000 mg/kg for total petroleum hydrocarbons (TPH), and 600 mg/kg for chlorides.

| New Mexico Oil Conservation Division Site Assessment | |
|---|------------|
| Ranking Criteria | Score |
| Depth to Ground Water (>100 ft. bgs) | 0 |
| Wellhead Protection Area (> 1000 ft. from water source, > 200 ft. from domestic source) | 0 |
| Distance to Surface Body Water (>1000 ft.) | 0 |
| Ranking Criteria Total Score | 0* |
| *Personal the renking criteria total approxime 0. NMOCD established DDAL aprox 10 mg/kg | forbonzono |

*Because the ranking criteria total score is 0, NMOCD established RRALs are 10 mg/kg for benzene, 50 mg/kg for total BTEX, 5,000 mg/kg for total TPH and 600 ppm for chlorides¹.

1. NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993 and recent discussions with Mr. Jim Griswold with the NMOCD.

2. Assessment Activities

The impacted area had initially been excavated to a depth of approximately 10 ft. bgs and soil samples were collected by ETC Field Services LLC personnel for laboratory analysis. A sample (BtmHol) was collected from the bottom of the excavation at a depth of approximately 10 ft. bgs on November 7, 2016. The sample was submitted to Xenco Laboratories (Xenco) in Midland, Texas and analyzed for toxicity characteristic leaching procedure (TCLP) BTEX by EPA Method 8260B, TPH by EPA Method 8015B, and chloride by EPA Method 300. The analytical results for this sample were:

- TCLP Benzene: <0.005 milligrams per liter (mg/L)
- Total TCLP BTEX: 0.118 mg/L
- TPH: 15,960 milligrams per kilogram (mg/kg)
- Chloride: 416 mg/kg

Excavation activities to assess the horizontal and vertical extent of impacted soil occurred on July 5, 2017 by GHD. Field screening of soil for petroleum hydrocarbons and chloride was performed to assess the horizontal and vertical extent of contaminated soil in the release area. Field screening of the soil was performed using the PetroFLAG Hydrocarbon Analysis System and a Hach chloride field kit. Test pits (TP-1 through TP-5) were excavated on each side, both ends, and the base of the original excavation (Figure 2). Excavation activities were performed by Diamond Back of Hobbs, New Mexico and observed by GHD. The field screening indicated that impacted soil did not extend to a depth greater than 15 ft. bgs.

Once field screening indicated soil concentrations were near or below the RRALs, soil samples were collected and submitted to Hall Environmental Analysis Laboratory (HEAL) located in Albuquerque, New



Mexico for analysis. The soil samples were analyzed for BTEX by EPA Method 8260B, TPH by EPA Method 8015 full range, and chlorides by EPA Method 300.0 (Table 1).

One sample was collected from the test pit in the base of the excavation (TP-5) at a depth of 16 ft. bgs. Soil samples were also collected for laboratory analysis from four test pits (TP-1 through TP-4) at depths ranging from 4 to 10 ft. bgs.

One sample collected from TP-1 at a depth of 10 ft. bgs contained a benzene concentration of 5 mg/kg and a total BTEX concentration of 93 mg/kg. None of the other submitted samples contained concentrations above the laboratory reporting limits for BTEX. TPH concentrations ranged from below the laboratory reporting limit to 16,590 mg/kg. The highest concentration was found in the sample collected from TP-1 at a depth of 10 ft. bgs. Chloride concentrations ranged from below the laboratory reporting limit to 320 mg/kg, all below the RRAL.

Test pit TP-1 was excavated to the north of the initial release area where there are several buried pipelines. The Fullerton 6-inch and Fullerton 16-inch pipelines both run perpendicular to the Trunk MC-16 inch pipeline. Due to the proximity to these lines, further excavation was not performed in this area.

GHD performed additional soil excavation and assessment sampling on September 5 and 6, 2017. The additional excavation included advancing five additional test pits (TP-6b, TP-7a, TP-8, TP-9c, and TP-10) to the east of the Trunk MC-16 pipeline (Figure 2).

3. Summary and Recommendations

Confirmatory soil samples were collected from the bottom and sidewalls of the release area (see Figure 2) and submitted for laboratory analysis. Based on the laboratory results, the vertical extent of impacted soil has been assessed to below the RRALs. The horizontal extent to the east, south, and west have been assessed to below RRALs. However, BTEX and TPH concentrations on the north end of the excavation, observed in TP-1, are above the RRAL. Additional excavation to the north was prevented due to the presence of several active pipelines.

Based on this and the proximity of the Trunk MC-16 inch pipeline to two other pipelines in this area, GHD recommends the following:

- Request a variance from the NMOCD and the New Mexico State Land Office to leave the impacted soil in place in the area of the pipelines until these pipelines have been abandoned.
- The excavation should be backfilled with clean fill material and wheel compacted to grade.

Following completion of the backfilling, revegetation of the site will be performed. Disturbed areas associated with the remediation efforts will be re-seeded. If after one growing season the vegetation has not taken hold, seeding may need to be repeated until revegetation is successful, as determined by the



State Land Office. The seed will be planted utilizing a drill. The proposed seed mix will consist of Bureau of Land Management mix #2 without love grass.

The site will be visited on a quarterly basis to assess the establishment of vegetative growth. Staff personnel performing the site visit will also look for the presence of noxious weeds at the site as indicated on the New Mexico Noxious Weeds List specified on the United States Department of Agriculture website. If a noxious weed is observed at the site, the New Mexico State Land Office will be contacted to determine the most effective manner to eradicate it.

Following completion of the above activities, a request for no further action will be made for the Site. Should you have any questions, or require additional information regarding this submittal, please feel free to contact myself or Bernie Bockisch at (505) 884-0672 or Bernard.Bockisch@ghd.com.

Sincerely,

GHD

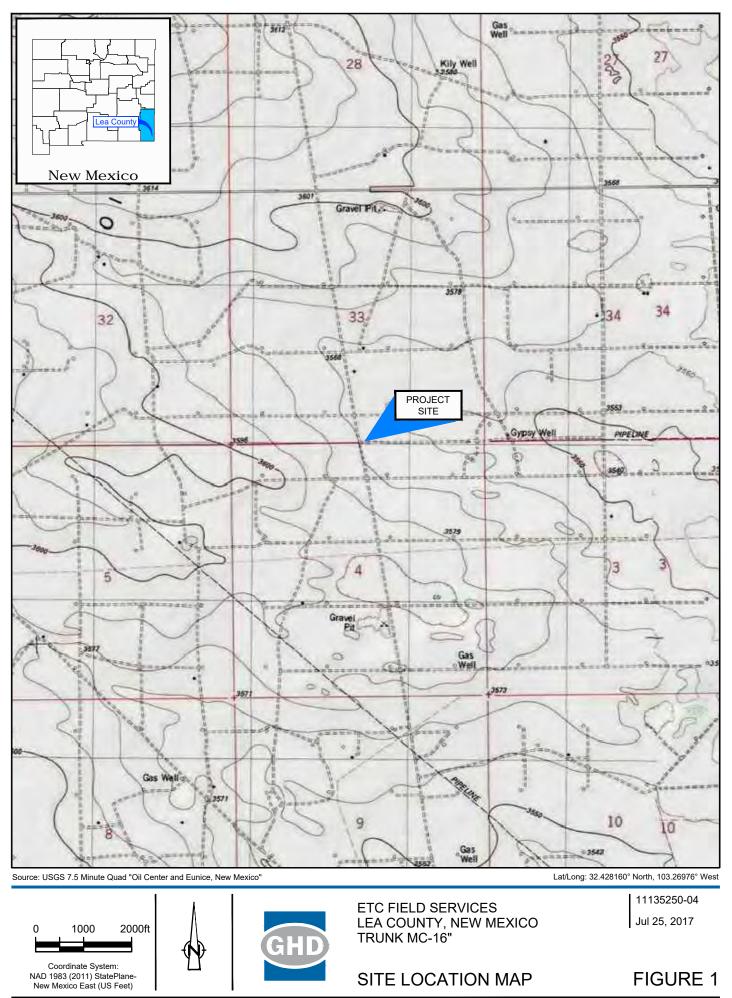
AIC Brand

Alan Brandon Senior Project Manager

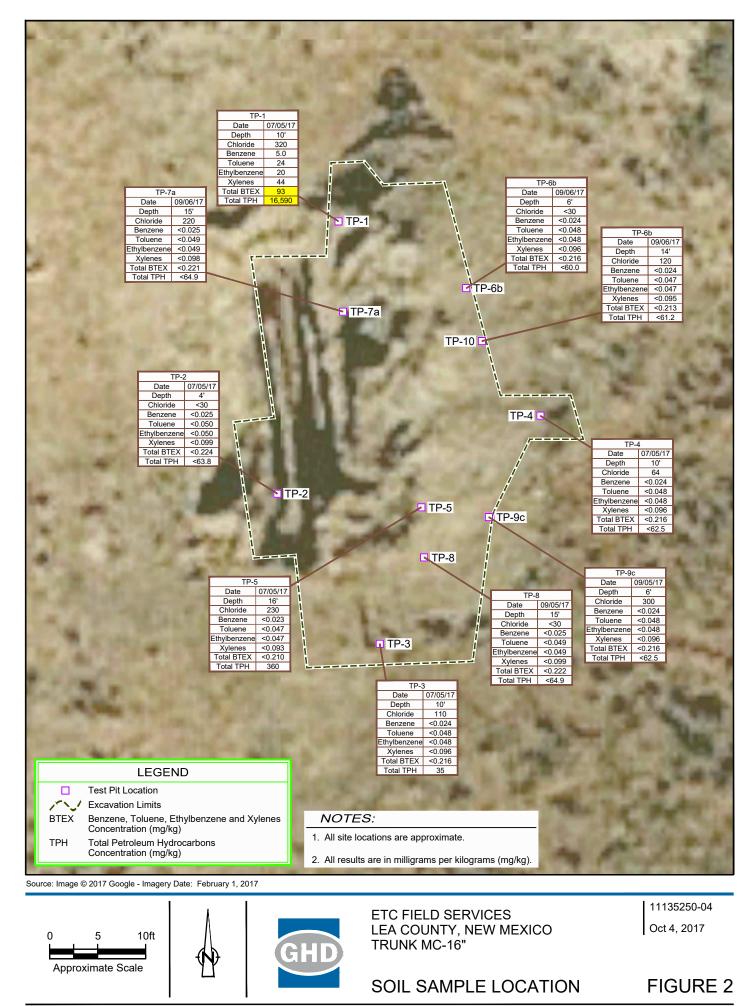
AB/mc/01

Bernard Bockisch New Mexico Operations Manager

Figures



CAD File: I:\CAD\Files\Eight Digit Job Numbers\1113----\11135250-ETC Field Services\11135250-04(000)GN-DL001.dwg



CAD File: I:\CAD\Files\Eight Digit Job Numbers\1113----\11135250-ETC Field Services\11135250-04(000)GN-DL001.dwg

Tables

Table 1

ETC Field Services LLC - Trunk MC-16 Section 33, Township 21 South, Range 36 East Lea County, New Mexico Soil Analytical Results Summary

| Sample ID | Date | Sample Depth | Chlorides | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | ТРН | ТРН | ТРН | Total TPH |
|----------------------------------|--------------------|--------------|-----------|-----------|-----------|--------------|---------|------------|---------------|---------------|-----------------------|-----------|
| | | (ft.) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | GRO (C6-C-10) | DRO (C10-C28) | EXT DRO (C28- C36) | GRO/DRO |
| | | | | | | | | | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) |
| NMOCD Remediatio | n Action Levels | | 600 | 10 | NE | NE | NE | 50 | NE | NE | NE | 5,000 |
| | EXCAVATION SAMPLES | | | | | | | | | | | |
| WstPile* | 11/07/2016 | | 308 | 0.00535* | 0.0539* | 0.101* | 0.843* | 0.902* | 2,230 | 7,630 | NA | 9,860 |
| BtmHol* | 11/07/2016 | 10 | 416 | <0.00500* | <0.00500* | <0.00500* | 0.118* | 0.118* | 4,160 | 11,800 | NA | 15,960 |
| S-wal* | 11/07/2016 | 10 | 324 | <0.00500* | 0.0362* | 0.0239* | 0.341* | 0.401* | 3,710 | 12,700 | NA | 16,410 |
| 11135250-04-070517-MG-TP-1-10' | 07/05/2017 | 10 | 320 | 5.0 | 24 | 20 | 44 | 93 | 790 | 8,900 | 6,900 | 16,590 |
| 11135250-04-070517-MG-TP-2-4' | 07/05/2017 | 4 | <30 | <0.025 | < 0.050 | <0.050 | <0.099 | <0.224 | <5.0 | <9.8 | <49 | <63.8 |
| 11135250-04-070517-MG-TP-3-10' | 07/05/2017 | 10 | 110 | < 0.024 | <0.048 | <0.048 | < 0.096 | <0.216 | <4.8 | 35 | <49 | 35 |
| 11135250-04-070517-MG-TP-4-10' | 07/05/2017 | 10 | 64 | <0.024 | <0.048 | <0.048 | < 0.096 | <0.216 | <4.8 | <9.7 | <48 | <62.5 |
| 11135250-04-070517-MG-TP-5-16' | 07/05/2017 | 16 | 230 | < 0.023 | < 0.047 | < 0.047 | < 0.093 | <0.210 | <4.7 | 200 | 160 | 360 |
| S-11135250-04-090617-MG-TP-6b-6 | 09/06/2017 | 6 | <30 | < 0.024 | <0.048 | <0.048 | < 0.096 | <0.216 | <4.8 | <9.2 | <46 | <60.0 |
| S-11135250-04-090517-MG-TP-8-15 | 09/05/2017 | 15 | <30 | <0.025 | < 0.049 | < 0.049 | < 0.099 | <0.222 | <4.9 | <10 | <50 | <64.9 |
| S-11135250-04-090517-MG-TP-9c-6 | 09/05/2017 | 6 | 300 | <0.024 | <0.048 | <0.048 | < 0.096 | <0.216 | <4.8 | <9.7 | <48 | <62.5 |
| S-11135250-04-090617-MG-TP-7a-15 | 09/06/2017 | 15 | 220 | <0.025 | < 0.049 | < 0.049 | <0.098 | <0.221 | <4.9 | <10 | <50 | <64.9 |
| S-11135250-04-090617-MG-TP-10-14 | 09/06/2017 | 14 | 120 | <0.024 | <0.047 | <0.047 | <0.095 | <0.213 | <4.7 | <9.5 | <47 | <61.2 |

Note: Concentrations that are bold exceed the NMOCD Remediation Action Level

* Samples collected by ETC Field Services (BTEX analyzed by 8260 TCLP and reported in milligrams per liter)

NE = Not Established mg/Kg = milligrams per Kilogram -- = Not Applicable NA = Not Analyzed



Appendix A Water Well Report

| (A CLW##### in the POD suffix indicates the POD has been replaced & no longer | (R=POE been rej O=orpha | blaced, | | | | | | unch | | | | | | |
|--|-------------------------------|---|--------------|-----|--------------------|------|------------|-----------------------|--------------------|---------------|--------------------|--------------------|-------------------------------|----------------------|
| serves a water right file.) | C≃the fil closed) | (quarters are 1=NW 2=N (quarters are smallest to largest) | | | | | | 4=SE) IAD83 UTM in | meters) | (In feet) | | | | |
| POD Number CP 00727 | Code | POD Sub- basin CP | County LE | | Q C 16 4 3 2 | | Tws 22S | Rng 36E | X 661130 | Y 3588673* | DistanceDe 1624 | epthWellDep 267 | 100 C 100 C 100 C 100 C 100 C | Vater olumn 58 |
| CP 00727 CLW475753 | o | CP | LE | 1 | 3 2 | 05 | 225 | 36E | 661130 | 3588673* | 1624 | 228 | | |
| | | | | | | | | | | Ave | rage Depth to | Water: | 212 fé | et |
| | | | | | | | | | Minimum Depth: | | | epth: | 212 feet | |
| | | | | | | | | | | | Maximum D | epth: | 212 fe | et |
| Record Count:2 | | | | | | | | | | | | | | |
| UTMNAD83 Radius | Search | (in mete | rs): | | | | | | | | | | | |
| Easting (X): 662 | 653.19 | | North | ing | (Y): | 3589 | 236.7 | '3 | | Radius: 2000 | | | | |

8/28/17 12:13 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



USGS Home Contact USGS Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater

V

Geographic Area: United States V

GO

Click to hideNews Bulletins

Truck MC-16 0.65 mile E, SE

Please see news on new formats

Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

• 322531103153401

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 322531103153401 21S.36E.34.33341

Available data for this site Groundwater: Field measurements V GO

Lea County, New Mexico Hydrologic Unit Code 13070007 Latitude 32°25'31", Longitude 103°15'34" NAD27 Land-surface elevation 3,562 feet above NAVD88 This well is completed in the Chinle Formation (231CHNL) local aquifer.

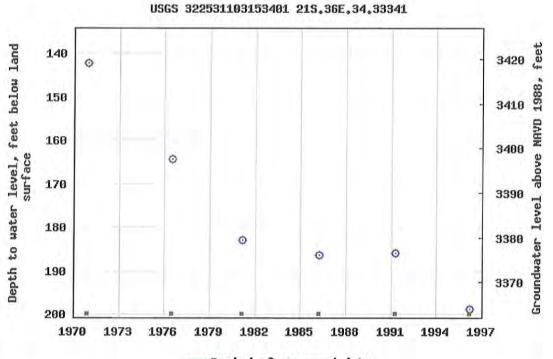
Output formats

Table of data

Tab-separated data

Graph of data

Reselect period



- Period of approved data

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

Download a presentation-quality graph

Questions about sites/data? Feedback on this web site Automated retrievals Help Data Tips Explanation of terms Subscribe for system changes News

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| U.S. Departme | nt of the Interio | or U.S. Ge | ological Surve | v |
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| Page Contact Ir Page Last Modi | | | | eam |

USA.gov

0.57 0.49 nadww01

Appendix B Laboratory Analytical Report



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

July 14, 2017

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

RE: MC 16

OrderNo.: 1707306

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/7/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andis

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

7/12/2017 2:30:22 PM

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32708

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

MC 16

Surr: Toluene-d8

Project:

Client Sample ID: 11135250-04-070517MGTP2-4 Collection Date: 7/5/2017 10:30:00 AM

Lab ID: 1707306-001 Matrix: SOIL Received Date: 7/7/2017 10:25:00 AM Analyses Result **PQL** Qual Units **DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: MRA 20 7/12/2017 2:51:13 PM Chloride ND 30 mg/Kg 32761 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM **Diesel Range Organics (DRO)** ND mg/Kg 7/11/2017 5:07:51 PM 9.8 1 32705 mg/Kg Motor Oil Range Organics (MRO) ND 49 1 7/11/2017 5:07:51 PM 32705 Surr: DNOP 89.0 70-130 %Rec 1 7/11/2017 5:07:51 PM 32705 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 5.0 mg/Kg 1 7/11/2017 7:58:32 PM 32708 Surr: BFB 7/11/2017 7:58:32 PM 94.9 54-150 %Rec 1 32708 EPA METHOD 8260B: VOLATILES SHORT LIST Analyst: **DJF** Benzene ND 0.025 mg/Kg 1 7/12/2017 2:30:22 PM 32708 Toluene ND 0.050 7/12/2017 2:30:22 PM mg/Kg 1 32708 Ethylbenzene ND 0.050 mg/Kg 7/12/2017 2:30:22 PM 32708 1 Xylenes, Total ND 0.099 mg/Kg 1 7/12/2017 2:30:22 PM 32708 Surr: 1,2-Dichloroethane-d4 112 70-130 %Rec 7/12/2017 2:30:22 PM 1 32708 Surr: 4-Bromofluorobenzene 88.6 70-130 %Rec 1 7/12/2017 2:30:22 PM 32708 Surr: Dibromofluoromethane 108 70-130 %Rec 7/12/2017 2:30:22 PM 32708 1

70-130

%Rec

98.8

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

Qualifiers:

*

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

Value exceeds Maximum Contaminant Level.

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

MC 16

Project:

Client Sample ID: 11135250-04-070517MGTP1-10 Collection Date: 7/5/2017 11:00:00 AM Received Date: 7/7/2017 10:25:00 AM

| Lab ID: 1707306-002 | Matrix: S | SOIL | | Received Date: 7/7/2017 10:25:00 AM | | | | | |
|--------------------------------|---------------|--------|------|-------------------------------------|-----|-----------------------|-------|--|--|
| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch | | |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst | MRA | | |
| Chloride | 320 | 30 | | mg/Kg | 20 | 7/12/2017 3:03:37 PM | 32761 | | |
| EPA METHOD 8015M/D: DIESEL RA | ANGE ORGANICS | ; | | | | Analyst | том | | |
| Diesel Range Organics (DRO) | 8900 | 980 | | mg/Kg | 100 | 7/11/2017 6:35:07 PM | 32705 | | |
| Motor Oil Range Organics (MRO) | 6900 | 4900 | | mg/Kg | 100 | 7/11/2017 6:35:07 PM | 32705 | | |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 100 | 7/11/2017 6:35:07 PM | 32705 | | |
| EPA METHOD 8015D: GASOLINE R | ANGE | | | | | Analyst | : NSB | | |
| Gasoline Range Organics (GRO) | 790 | 240 | | mg/Kg | 50 | 7/11/2017 12:42:10 PM | 32708 | | |
| Surr: BFB | 165 | 54-150 | S | %Rec | 50 | 7/11/2017 12:42:10 PM | 32708 | | |
| EPA METHOD 8260B: VOLATILES | SHORT LIST | | | | | Analyst | DJF | | |
| Benzene | 5.0 | 0.47 | | mg/Kg | 20 | 7/12/2017 2:59:36 PM | 32708 | | |
| Toluene | 24 | 0.95 | | mg/Kg | 20 | 7/12/2017 2:59:36 PM | 32708 | | |
| Ethylbenzene | 20 | 0.95 | | mg/Kg | 20 | 7/12/2017 2:59:36 PM | 32708 | | |
| Xylenes, Total | 44 | 1.9 | | mg/Kg | 20 | 7/12/2017 2:59:36 PM | 32708 | | |
| Surr: 1,2-Dichloroethane-d4 | 105 | 70-130 | | %Rec | 20 | 7/12/2017 2:59:36 PM | 32708 | | |
| Surr: 4-Bromofluorobenzene | 94.5 | 70-130 | | %Rec | 20 | 7/12/2017 2:59:36 PM | 32708 | | |
| Surr: Dibromofluoromethane | 102 | 70-130 | | %Rec | 20 | 7/12/2017 2:59:36 PM | 32708 | | |
| Surr: Toluene-d8 | 100 | 70-130 | | %Rec | 20 | 7/12/2017 2:59:36 PM | 32708 | | |

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

MC 16

Project:

Client Sample ID: 11135250-04-070517MGTP4-10 Collection Date: 7/5/2017 11:40:00 AM

Lab ID: 1707306-003 Matrix: SOIL Received Date: 7/7/2017 10:25:00 AM Analyses Result **PQL** Qual Units **DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: MRA Chloride 64 30 mg/Kg 20 7/12/2017 3:16:02 PM 32761 Analyst: TOM EPA METHOD 8015M/D: DIESEL RANGE ORGANICS **Diesel Range Organics (DRO)** ND 9.7 mg/Kg 7/11/2017 7:03:54 PM 1 32705 mg/Kg Motor Oil Range Organics (MRO) ND 48 1 7/11/2017 7:03:54 PM 32705 Surr: DNOP 77.0 70-130 %Rec 1 7/11/2017 7:03:54 PM 32705 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 4.8 mg/Kg 1 7/11/2017 1:54:54 PM 32708 Surr: BFB 7/11/2017 1:54:54 PM 105 54-150 %Rec 1 32708 EPA METHOD 8260B: VOLATILES SHORT LIST Analyst: DJF Benzene ND 0.024 mg/Kg 1 7/12/2017 3:28:56 PM 32708 Toluene ND 0.048 7/12/2017 3:28:56 PM mg/Kg 1 32708 Ethylbenzene ND 0.048 mg/Kg 7/12/2017 3:28:56 PM 32708 1 Xylenes, Total ND 0.096 mg/Kg 1 7/12/2017 3:28:56 PM 32708 Surr: 1,2-Dichloroethane-d4 115 70-130 %Rec 1 7/12/2017 3:28:56 PM 32708 Surr: 4-Bromofluorobenzene 90.1 70-130 %Rec 1 7/12/2017 3:28:56 PM 32708 %Rec Surr: Dibromofluoromethane 112 70-130 7/12/2017 3:28:56 PM 32708 1 Surr: Toluene-d8 96.2 70-130 %Rec 7/12/2017 3:28:56 PM 32708 1

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

Qualifiers:

*

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Value exceeds Maximum Contaminant Level.

- PQL Practical Quanitative Limit
- C 0/ Decovery outside of repas due to dilu
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

7/12/2017 3:58:17 PM 32708

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: GHD | | | Client Sampl | e ID: 11 | 135250-04-070517MC | GTP5-16 | | | |
|--------------------------------|--------------|--------|---------------------|-------------------------------------|-----------------------|---------|--|--|--|
| Project: MC 16 | | | Collection I | Date: 7/5 | 5/2017 12:20:00 PM | | | | |
| Lab ID: 1707306-004 | Matrix: S | SOIL | Received I | Received Date: 7/7/2017 10:25:00 AM | | | | | |
| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch | | | |
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA | | | |
| Chloride | 230 | 30 | mg/Kg | 20 | 7/12/2017 3:28:26 PM | 32761 | | | |
| EPA METHOD 8015M/D: DIESEL RA | NGE ORGANICS | ; | | | Analyst | TOM | | | |
| Diesel Range Organics (DRO) | 200 | 9.2 | mg/Kg | 1 | 7/12/2017 12:35:36 PN | 32705 | | | |
| Motor Oil Range Organics (MRO) | 160 | 46 | mg/Kg | 1 | 7/12/2017 12:35:36 PM | 32705 | | | |
| Surr: DNOP | 96.4 | 70-130 | %Rec | 1 | 7/12/2017 12:35:36 PM | 32705 | | | |
| EPA METHOD 8015D: GASOLINE RA | ANGE | | | | Analyst | II NSB | | | |
| Gasoline Range Organics (GRO) | ND | 4.7 | mg/Kg | 1 | 7/11/2017 8:22:37 PM | 32708 | | | |
| Surr: BFB | 119 | 54-150 | %Rec | 1 | 7/11/2017 8:22:37 PM | 32708 | | | |
| EPA METHOD 8260B: VOLATILES S | HORT LIST | | | | Analyst | : DJF | | | |
| Benzene | ND | 0.023 | mg/Kg | 1 | 7/12/2017 3:58:17 PM | 32708 | | | |
| Toluene | ND | 0.047 | mg/Kg | 1 | 7/12/2017 3:58:17 PM | 32708 | | | |
| Ethylbenzene | ND | 0.047 | mg/Kg | 1 | 7/12/2017 3:58:17 PM | 32708 | | | |
| Xylenes, Total | ND | 0.093 | mg/Kg | 1 | 7/12/2017 3:58:17 PM | 32708 | | | |
| Surr: 1,2-Dichloroethane-d4 | 110 | 70-130 | %Rec | 1 | 7/12/2017 3:58:17 PM | 32708 | | | |
| Surr: 4-Bromofluorobenzene | 87.1 | 70-130 | %Rec | 1 | 7/12/2017 3:58:17 PM | 32708 | | | |
| Surr: Dibromofluoromethane | 109 | 70-130 | %Rec | 1 | 7/12/2017 3:58:17 PM | 32708 | | | |

70-130

%Rec

1

97.1

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

Qualifiers:

Surr: Toluene-d8

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

7/12/2017 4:27:31 PM

1

32708

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: GHD | Client Sample ID: 11135250-04-070517MGTP3-10 Collection Date: 7/5/2017 12:40:00 PM | | | | | | | | | |
|---------------------------------|---|---------|--|----|----------------------|-------|--|--|--|--|
| Project: MC 16 | | | | | | | | | | |
| Lab ID: 1707306-005 | Matrix: | SOIL | Received Date: 7/7/2017 10:25:00 AM | | | | | | | |
| Analyses | Result | PQL Qua | l Units | DF | Date Analyzed | Batch | | | | |
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA | | | | |
| Chloride | 110 | 30 | mg/Kg | 20 | 7/12/2017 3:40:50 PM | 32761 | | | | |
| EPA METHOD 8015M/D: DIESEL RANG | | ; | | | Analyst | том | | | | |
| Diesel Range Organics (DRO) | 35 | 9.8 | mg/Kg | 1 | 7/11/2017 8:01:08 PM | 32705 | | | | |
| Motor Oil Range Organics (MRO) | ND | 49 | mg/Kg | 1 | 7/11/2017 8:01:08 PM | 32705 | | | | |
| Surr: DNOP | 84.3 | 70-130 | %Rec | 1 | 7/11/2017 8:01:08 PM | 32705 | | | | |
| EPA METHOD 8015D: GASOLINE RANG | GE | | | | Analyst | NSB | | | | |
| Gasoline Range Organics (GRO) | ND | 4.8 | mg/Kg | 1 | 7/11/2017 8:46:39 PM | 32708 | | | | |
| Surr: BFB | 102 | 54-150 | %Rec | 1 | 7/11/2017 8:46:39 PM | 32708 | | | | |
| EPA METHOD 8260B: VOLATILES SHO | RT LIST | | | | Analyst | DJF | | | | |
| Benzene | ND | 0.024 | mg/Kg | 1 | 7/12/2017 4:27:31 PM | 32708 | | | | |
| Toluene | ND | 0.048 | mg/Kg | 1 | 7/12/2017 4:27:31 PM | 32708 | | | | |
| Ethylbenzene | ND | 0.048 | mg/Kg | 1 | 7/12/2017 4:27:31 PM | 32708 | | | | |
| Xylenes, Total | ND | 0.096 | mg/Kg | 1 | 7/12/2017 4:27:31 PM | 32708 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 112 | 70-130 | %Rec | 1 | 7/12/2017 4:27:31 PM | 32708 | | | | |
| Surr: 4-Bromofluorobenzene | 92.6 | 70-130 | %Rec | 1 | 7/12/2017 4:27:31 PM | 32708 | | | | |
| Surr: Dibromofluoromethane | 109 | 70-130 | %Rec | 1 | 7/12/2017 4:27:31 PM | 32708 | | | | |

70-130

%Rec

96.9

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

Surr: Toluene-d8

- * Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 8 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Client: | GHD | | | | | | | | | | | |
|----------------|------------------|------------|------------------|-----------|---|-----------|-----------|----------------------------------|--------------|------------|------|--|
| Project: | MC 16 | | | | | | | | | | | |
| Sample ID | 1707306-001AMS | SampT | уре: М | 6 | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | |
| Client ID: | 11135250-04-0705 | 17 Batch | n ID: 32 | 705 | RunNo: 44112 | | | | | | | |
| Prep Date: | 7/10/2017 | Analysis D | ate: 7/ | 11/2017 | S | SeqNo: 1 | 393016 | Units: mg/k | ٢g | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Diesel Range (| Organics (DRO) | 43 | 9.1 | 45.70 | 0 | 94.7 | 55.8 | 122 | | | | |
| Surr: DNOP | | 3.9 | | 4.570 | | 84.5 | 70 | 130 | | | | |
| Sample ID | 1707306-001AMS | D SampT | ype: M \$ | SD | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | | |
| Client ID: | 11135250-04-0705 | 17 Batch | n ID: 32 | 705 | RunNo: 44112 | | | | | | | |
| Prep Date: | 7/10/2017 | Analysis D | ate: 7/ | 11/2017 | 5 | SeqNo: 1 | 393017 | Units: mg/Kg | | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Diesel Range (| Organics (DRO) | 55 | 9.7 | 48.50 | 0 | 113 | 55.8 | 122 | 23.5 | 20 | R | |
| Surr: DNOP | | 4.7 | | 4.850 | | 97.4 | 70 | 130 | 0 | 0 | | |
| Sample ID | LCS-32705 | SampT | ype: LC | S | Tes | tCode: El | PA Method | d 8015M/D: Diesel Range Organics | | | | |
| Client ID: | LCSS | Batch | n ID: 32 | 705 | RunNo: 44112 | | | | | | | |
| Prep Date: | 7/10/2017 | Analysis D | ate: 7/ | 11/2017 | 5 | SeqNo: 1 | 393023 | Units: mg/k | Units: mg/Kg | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Diesel Range (| Organics (DRO) | 51 | 10 | 50.00 | 0 | 102 | 73.2 | 114 | | | | |
| Surr: DNOP | | 4.5 | | 5.000 | | 89.6 | 70 | 130 | | | | |
| Sample ID | MB-32705 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | | |
| Client ID: | PBS | Batch | n ID: 32 | 705 | F | RunNo: 4 | 4112 | | | | | |
| Prep Date: | 7/10/2017 | Analysis D | ate: 7/ | 11/2017 | S | SeqNo: 1 | 393024 | Units: mg/k | ٢g | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Diesel Range (| Organics (DRO) | ND | 10 | | | | | | | | | |
| • | e Organics (MRO) | ND | 50 | | | | | | | | | |
| Surr: DNOP | | 9.9 | | 10.00 | | 98.8 | 70 | 130 | | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 6 of 8

GHD

Project: MC 16 Sample ID MB-32708 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 32708 RunNo: 44123 Prep Date: 7/10/2017 Analysis Date: 7/11/2017 SeqNo: 1392985 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 1000 1000 104 54 150 TestCode: EPA Method 8015D: Gasoline Range Sample ID LCS-32708 SampType: LCS Client ID: LCSS Batch ID: 32708 RunNo: 44123 Prep Date: 7/10/2017 Analysis Date: 7/11/2017 SeqNo: 1392986 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 24 5.0 25.00 0 97.0 76.4 125 1200 1000 54 Surr: BFB 116 150

Qualifiers:

Client:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- POL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- - Page 7 of 8

| QC SUMMARY REPORT |
|--|
| Hall Environmental Analysis Laboratory, Inc. |

WO#: **1707306** *14-Jul-17*

Client: GHD

Project: MC 16

| Sample ID mb-32708 | SampT | уре: МЕ | BLK | Tes | tCode: El | PA Method | 8260B: Volat | tiles Short | List | |
|--|--|--|--|-----------------------|--|---|---|-------------|----------|------|
| Client ID: PBS | Batch | h ID: 327 | 708 | R | RunNo: 4 | 4140 | | | | |
| Prep Date: 7/10/2017 | Analysis D | Date: 7/ | 11/2017 | S | SeqNo: 1 | 393696 | Units: mg/K | ٢g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.52 | | 0.5000 | | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.46 | | 0.5000 | | 91.6 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.54 | | 0.5000 | | 108 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.48 | | 0 5000 | | 96.9 | 70 | 130 | | | |
| | 0.48 | | 0.5000 | | 96.9 | 70 | 130 | | | |
| Sample ID Ics-32708 | | ype: LC | | Tes | | | 8260B: Volat | tiles Short | List | |
| | SampT | ype: LC | s | | | PA Method | | tiles Short | List | |
| Sample ID Ics-32708 | SampT | h ID: 327 | S 708 | R | tCode: El | PA Method 4140 | | | List | |
| Sample ID Ics-32708 Client ID: LCSS | SampT Batch | h ID: 327 | S 708 11/2017 | R | tCode: El RunNo: 4 | PA Method 4140 | 8260B: Volat | | RPDLimit | Qual |
| Sample ID Ics-32708 Client ID: LCSS Prep Date: 7/10/2017 | SampT Batcl Analysis D | h ID: 327 Date: 7/ | S 708 11/2017 | R | tCode: El RunNo: 4 SeqNo: 1 | PA Method 4140 393697 | 8260B: Volat Units: mg/K | ٢g | | Qual |
| Sample ID Ics-32708 Client ID: LCSS Prep Date: 7/10/2017 Analyte | SampT Batch Analysis D Result | h ID: 32 7 Date: 7/ PQL | S 708 11/2017 SPK value | R S SPK Ref Val | tCode: El RunNo: 4 SeqNo: 1: %REC | PA Method 4140 393697 LowLimit | 8260B: Volat Units: mg/K HighLimit | ٢g | | Qual |
| Sample ID Ics-32708 Client ID: LCSS Prep Date: 7/10/2017 Analyte Benzene | SampT Batcl Analysis D Result 1.2 | h ID: 32 7 Date: 7/ PQL 0.025 | S 708 11/2017 SPK value 1.000 | R SPK Ref Val 0 | tCode: El RunNo: 4 BeqNo: 1: %REC 122 | PA Method 4140 393697 LowLimit 70 | 8260B: Volat Units: mg/K HighLimit 130 | ٢g | | Qual |
| Sample ID Ics-32708 Client ID: LCSS Prep Date: 7/10/2017 Analyte Benzene Toluene | SampT Batch Analysis D Result 1.2 1.0 | h ID: 32 7 Date: 7/ PQL 0.025 | S 708 11/2017 SPK value 1.000 1.000 | R SPK Ref Val 0 | tCode: El RunNo: 4 SeqNo: 1: %REC 122 99.7 | PA Method 4140 393697 LowLimit 70 70 | 8260B: Volat Units: mg/k HighLimit 130 130 | ٢g | | Qual |
| Sample ID Ics-32708 Client ID: LCSS Prep Date: 7/10/2017 Analyte Benzene Toluene Surr: 1,2-Dichloroethane-d4 | SampT Batch Analysis D Result 1.2 1.0 0.56 | h ID: 32 7 Date: 7/ PQL 0.025 | S 708 11/2017 SPK value 1.000 1.000 0.5000 | R SPK Ref Val 0 | tCode: EI RunNo: 4 GeqNo: 1 %REC 122 99.7 111 | PA Method 4140 393697 LowLimit 70 70 70 70 | 8260B: Volat Units: mg/k HighLimit 130 130 130 | ٢g | | Qual |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 8 of 8

| HALL |
|---------------|
| ENVIRONMENTAL |
| ANALYSIS |
| LABORATORY |

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

Sample Log-In Check List

| Client Name: GHD | Work Order Numbe | r: 1707306 | | RcptNo: 1 | |
|--|----------------------|---|-------------|--------------------------------------|--------|
| Received By: Erin Melendrez | 7/7/2017 10:25:00 AM | Л | UL MA | | |
| Completed By: Ashley Gallegos | 7/7/2017 3:45:41 PM | | AJ | | |
| Reviewed By: | 7/10/17 | | Q | | |
| Chain of Custody | | | | | |
| 1. Custody seals intact on sample bottles? | | Yes 🗌 | No 🗆 | Not Present 🗹 | |
| 2. Is Chain of Custody complete? | | Yes 🔽 | No 🗌 | Not Present | |
| 3. How was the sample delivered? | | Courier | | | |
| <u>Log In</u> | | | | | |
| 4. Was an attempt made to cool the sample | s? | Yes 🔽 | No 🗌 | | |
| 5. Were all samples received at a temperatu | re of >0° C to 6.0°C | Yes 🗹 | No 🗌 | | |
| 6. Sample(s) in proper container(s)? | | Yes 🗹 | No 🗌 | | |
| 7. Sufficient sample volume for indicated tes | t(s)? | Yes 🔽 | No 🗍 | | |
| 8. Are samples (except VOA and ONG) prop | erly preserved? | Yes 🗹 | No 🗌 | | |
| 9. Was preservative added to bottles? | | Yes 🗌 | No 🗹 | NA 🗔 | |
| 10.VOA vials have zero headspace? | | Yes 🗌 | No 🗌 | No VOA Vials 🗹 | |
| 11. Were any sample containers received bro | oken? | Yes 🗆 | No 🗹 | # of preserved | |
| 12. Does paperwork match bottle labels? | | Yes 🔽 | No 🗌 | bottles checked for pH: | |
| (Note discrepancies on chain of custody) | | | | (<2 or >12 unless) Adjusted? | noted) |
| 13. Are matrices correctly identified on Chain | of Custody? | Yes 🗹 | No 🗌 | | |
| 14. Is it clear what analyses were requested?15. Were all holding times able to be met? | | Yes 🗹 Yes 🗹 | No 🗔 | Checked by: | |
| (If no, notify customer for authorization.) | | res 💌 | | | |
| Special Handling (if applicable) | | | | | |
| 16. Was client notified of all discrepancies wit | h this order? | Yes 🗌 | No 🗌 | | |
| Person Notified: | Date | | | | |
| By Whom: | , Via: | 🗌 eMail 🔲 F | Phone 🗌 Fax | In Person | |
| Regarding: | | | | | |
| Client Instructions: | | nad dini katala kwaka kata na mana kwa n di | | indinaintheannan a daona ao an an an | |
| 17. Additional remarks: | | | | | |

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 5.0 | Good | Yes | · | | |

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| D Scrivices Inc D Standard Rush Peoject Name: Project Name: Project Name: Part Lecrery C, MA 871110 Project Name: M.C. K. M.F. F. Project Ve. MA 871110 Project Name: M.C. K. M.F. Project Ve. MA 871110 Project Name: Project Name: Project Ve. MA 871110 Project Nameger: Project Nameger: Project Ve. MA 871110 Project Nameger: Project Nameger: Project Name Sampler And H Type Project Name Sampler And H Type Project Name Project Name Project Name Project Name Sampler And H Type Project Name Sampler And H Type Project Name Project Name Project Name Project Name Project Name Project Name Project Name Sampler And H Type | Chai | n-of-C | Chain-of-Custody Record | Turn-Around Time | ime: | | 1 | | 1 | | i | | 1 | | | - | |
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| Project Name: Project Name: MC-16_MT-6 MC-16_MT-6 MC-16_MT-6 Project Manager: MC-16_MT-7 Project MI-16 MC-17_MT-7 Project MI-16 MC-16_MT-7 | Client: CH |) Servin | ces. Inc | Standard | | | П | H | | AL | | T UI | 2 4 | | | A P | 14 |
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

September 20, 2017 Bernie Bockisch GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX

OrderNo.: 1709706

RE: Trunk MC 16

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/12/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andis

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Analy | rtical | Rei | nort | |
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Lab Order: 1709706

Date Reported: 9/20/2017

| CLIENT: Project: | GHD Trunk MC 16 | | | | Lab O | rder: | 1709706 | |
|---|---|---|---|---|--|---|--|--|
| Lab ID: | 1709706-001 | | | Collection I | Date: 9/5 | /2017 1:15: | 00 PM | |
| Client Sample II | D: S-11135250-04-09 | 0517-MG-TP-8 | 8-15' | Ma | trix: SO | IL | | |
| Analyses | | Result | PQL | Qual Units | DF | Date Analy | yzed B | atch ID |
| EPA METHOD 3 | 00.0: ANIONS | | | | | | Analys | : MRA |
| Chloride | | ND | 30 | mg/Kg | 20 | 9/15/2017 7 | - | 33876 |
| EPA METHOD 8 | 015M/D: DIESEL RAN | GE ORGANICS | 5 | 0.0 | | | Analys | : TOM |
| Diesel Range Or | | ND | 10 | mg/Kg | 1 | 9/15/2017 5 | - | 33875 |
| - | Organics (MRO) | ND | 50 | mg/Kg | 1 | 9/15/2017 5 | | 33875 |
| Surr: DNOP | - g (| 80.0 | 70-130 | %Rec | 1 | 9/15/2017 5 | | 33875 |
| EPA METHOD 8 | 015D: GASOLINE RAI | NGE | | | | | Analys | : NSB |
| Gasoline Range | Organics (GRO) | ND | 4.9 | mg/Kg | 1 | 9/15/2017 1 | - | |
| Surr: BFB | 9 | 95.2 | 54-150 | %Rec | 1 | 9/15/2017 1 | | |
| EPA METHOD 8 | 021B: VOLATILES | | | | | | Analys | : NSB |
| Benzene | | ND | 0.025 | mg/Kg | 1 | 9/15/2017 1 | - | |
| Toluene | | ND | 0.049 | mg/Kg | 1 | 9/15/2017 1 | | |
| Ethylbenzene | | ND | 0.049 | mg/Kg | 1 | 9/15/2017 1 | | |
| Xylenes, Total | | ND | 0.099 | mg/Kg | 1 | 9/15/2017 1 | | |
| - | fluorobenzene | 105 | 66.6-132 | %Rec | 1 | 9/15/2017 1 | 0:59:48 PN | 1 33871 |
| | | | | | | | | |
| Lab ID: | 1709706-002 | | | Collection I | Date: 9/5 | /2017 2:15: | 00 PM | |
| | 1709706-002 D: S-11135250-04-09 | 0517-MG-TP-9 |)c-6' | Collection I Ma | Date: 9/5 atrix: SO | | 00 PM | |
| Client Sample II | | 0517-MG-TP-9 Result | | | trix: SO | | | atch ID |
| Client Sample II Analyses | D: S-11135250-04-09 | | | Ma | trix: SO | IL | yzed B | |
| Client Sample II Analyses EPA METHOD 3 | D: S-11135250-04-09 | Result | PQL | Ma Qual Units | ntrix: SO DF | IL Date Analy | y zed B Analysi | : MRA |
| Client Sample II Analyses EPA METHOD 3 Chloride | D: S-11135250-04-09 | Result 300 | PQL 30 | Ma | trix: SO | IL | Analysi Analysi | : MRA 33876 |
| Client Sample II Analyses EPA METHOD 3 Chloride EPA METHOD 8 | D: S-11135250-04-09 200.0: ANIONS 2015M/D: DIESEL RAN | Result 300 GE ORGANICS | PQL 30 | Ma Qual Units mg/Kg | ntrix: SO DF 20 | IL Date Analy 9/15/2017 7 | yzed B Analysi :18:41 PM Analysi | :: MRA 33876 :: TOM |
| Client Sample II Analyses EPA METHOD 3 Chloride EPA METHOD 8 Diesel Range Or | D: S-11135250-04-09 800.0: ANIONS 8015M/D: DIESEL RAN rganics (DRO) | Result 300 GE ORGANICS ND | PQL 30 3 0 9 .7 | Ma Qual Units mg/Kg mg/Kg | ntrix: SO DF 20 1 | IL Date Analy 9/15/2017 7 9/15/2017 6 | Analysi Analysi :18:41 PM Analysi :19:23 PM | :: MRA 33876 :: TOM 33875 |
| Client Sample II Analyses EPA METHOD 3 Chloride EPA METHOD 8 Diesel Range Or Motor Oil Range | D: S-11135250-04-09 200.0: ANIONS 2015M/D: DIESEL RAN | Result 300 GE ORGANICS ND ND | PQL 30 5 9.7 48 | Ma Qual Units mg/Kg mg/Kg | 1 1 | IL Date Analy 9/15/2017 7 9/15/2017 6 9/15/2017 6 | yzed B Analysi :18:41 PM Analysi :19:23 PM :19:23 PM | :: MRA 33876 :: TOM 33875 33875 |
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| Client Sample II Analyses EPA METHOD 3 Chloride EPA METHOD 8 Diesel Range Or Motor Oil Range Surr: DNOP EPA METHOD 8 Gasoline Range Surr: BFB EPA METHOD 8 Benzene Toluene | D: S-11135250-04-09 200.0: ANIONS 2015M/D: DIESEL RAN rganics (DRO) Organics (MRO) 2015D: GASOLINE RAN Organics (GRO) | Result 300 GE ORGANICS ND 81.4 NGE ND 103 ND ND ND ND | PQL 30 9.7 48 70-130 4.8 54-150 0.024 0.024 | Qual Units mg/Kg mg/Kg %Rec mg/Kg %Rec mg/Kg %Rec | ttrix: SO DF 20 1 1 1 1 1 1 1 1 1 | IL Date Analy 9/15/2017 7 9/15/2017 6 9/15/2017 6 9/15/2017 1 9/15/2017 1 9/15/2017 1 9/15/2017 1 | yzed B Analysi :18:41 PM Analysi :19:23 PM :19:23 PM Analysi 1:23:08 PM Analysi 1:23:08 PM 1:23:08 PM | MRA 33876 33875 33875 33875 33875 33875 33871 33871 33871 33871 33871 33871 33871 |
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Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers: * Value exceeds Maximum Contaminant Level.
 - D Sample Diluted Due to Matrix
 - H Holding times for preparation or analysis exceeded

Hall Environmental Analysis Laboratory, Inc.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Analy | rtical | Rei | nort | |
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Lab Order: 1709706

Date Reported: 9/20/2017

| CLIENT:GHDProject:Trunk MC 16 | | | | Lab O | rder: 1709 | 9706 | |
|--|------------------------------|--------------------------|------------------------|------------------|--|---|---------------------------------------|
| Lab ID: 1709706-003 | | | Collection | Date: 9/6 | /2017 2:30:00 PI | М | |
| Client Sample ID: S-11135250-04-0906 | 517-MG-TP-7 | 7a-15' | Μ | atrix: SO | IL | | |
| Analyses | Result | PQL | Qual Units | DF | Date Analyzed | Ba | tch ID |
| EPA METHOD 300.0: ANIONS | | | | | Ar | nalyst: | MRA |
| Chloride | 220 | 30 | mg/Kg | 20 | 9/15/2017 7:31:0 | 5 PM | 33876 |
| EPA METHOD 8015M/D: DIESEL RANGI | | 5 | | | Ar | nalyst: | том |
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 9/18/2017 3:31:1: | - | 33875 |
| Motor Oil Range Organics (MRO) | ND | 50 | 0 0 | 1 | 9/18/2017 3:31:1: | | 33875 |
| Surr: DNOP | 76.4 | 70-130 | %Rec | 1 | 9/18/2017 3:31:1: | | 33875 |
| EPA METHOD 8015D: GASOLINE RANG | ε | | | | Ar | nalyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | mg/Kg | 1 | 9/18/2017 9:31:10 | - | 33871 |
| Surr: BFB | 97.6 | 54-150 | %Rec | 1 | 9/18/2017 9:31:10 | | 33871 |
| EPA METHOD 8021B: VOLATILES | | | | | Ar | nalyst: | NSB |
| Benzene | ND | 0.025 | mg/Kg | 1 | 9/18/2017 9:31:10 | - | 33871 |
| Toluene | ND | 0.049 | mg/Kg | 1 | 9/18/2017 9:31:10 | | 33871 |
| Ethylbenzene | ND | 0.049 | mg/Kg | 1 | 9/18/2017 9:31:10 | | 33871 |
| Xylenes, Total | ND | 0.098 | mg/Kg | 1 | 9/18/2017 9:31:10 | | 33871 |
| Surr: 4-Bromofluorobenzene | 112 | 66.6-132 | %Rec | 1 | 9/18/2017 9:31:10 | 5 AM | 33871 |
| Lab ID: 1709706-004 | | | Collection | Date: 9/6 | /2017 4:00:00 PI | М | |
| Client Sample ID: S-11135250-04-0906 | 517-MG-TP-6 | 6b-6' | | atrix: SO | | | |
| Analyses | Result | PQL | Qual Units | DF | Date Analyzed | Ba | tch ID |
| EPA METHOD 300.0: ANIONS | | | | | Ar | nalvst: | MRA |
| Chloride | ND | 30 | mg/Kg | 20 | 9/15/2017 7:43:3 | - | 33876 |
| EPA METHOD 8015M/D: DIESEL RANGI | | | 5 5 | | | nalyst: | |
| Diesel Range Organics (DRO) | ND | 9.2 | mg/Kg | 1 | 9/15/2017 7:16:4 | - | 33875 |
| Motor Oil Range Organics (MRO) | ND | 46 | mg/Kg | 1 | 9/15/2017 7:16:4 | | 33875 |
| | 80.4 | 70-130 | %Rec | 1 | 9/15/2017 7:16:4 | | 33875 |
| Surr: DNOP | 00.4 | | | | ۸. | | NSB |
| | | | | | Ar | nalvst: | |
| EPA METHOD 8015D: GASOLINE RANG | θE | 4 8 | ma/Ka | 1 | | | 33871 |
| EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) | SE ND | 4.8 54-150 | 00 | 1 | 9/16/2017 1:44:3 | 3 AM | 33871 33871 |
| EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB | θE | 4.8 54-150 | | | 9/16/2017 1:44:3 9/16/2017 1:44:3 | 3 AM 3 AM | 33871 |
| EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES | SE ND 94.6 | 54-150 | %Rec | 1 | 9/16/2017 1:44:33 9/16/2017 1:44:33 Ar | 3 AM 3 AM nalyst: | 33871 NSB |
| EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene | SE ND 94.6 ND | 54-150 0.024 | %Rec mg/Kg | 1 | 9/16/2017 1:44:33 9/16/2017 1:44:33 Ar 9/16/2017 1:44:33 | 3 AM 3 AM nalyst: 3 AM | 33871 NSB 33871 |
| EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene Toluene | SE ND 94.6 ND ND | 54-150 0.024 0.048 | %Rec mg/Kg mg/Kg | 1 1 1 | 9/16/2017 1:44:33 9/16/2017 1:44:33 Ar 9/16/2017 1:44:33 9/16/2017 1:44:33 | 3 AM 3 AM nalyst: 3 AM 3 AM | 33871 NSB 33871 33871 |
| EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene | SE ND 94.6 ND | 54-150 0.024 | %Rec mg/Kg | 1 | 9/16/2017 1:44:33 9/16/2017 1:44:33 Ar 9/16/2017 1:44:33 | 3 AM 3 AM nalyst: 3 AM 3 AM 3 AM | 33871 NSB 33871 |

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

- Qualifiers: * Value exceeds Maximum Contaminant Level.
 - D Sample Diluted Due to Matrix
 - H Holding times for preparation or analysis exceeded

Hall Environmental Analysis Laboratory, Inc.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Analytical Report | alytical Report |
|-------------------|-----------------|
|-------------------|-----------------|

Lab Order: 1709706

Date Reported: 9/20/2017

| | GHD Trunk MC 16 | | | | Lab O | rder: 1709 | 706 | |
|--------------------------|--------------------|--------------|----------|--------------|------------------|-------------------|------------------|-----|
| Lab ID: | 1709706-005 | | | Collection D | ate: 9/6 | /2017 4:30:00 PN | Л | |
| Client Sample ID: | S-11135250-04-090 |)617-MG-TP-1 | 10-14' | Ma | t rix: SO | IL | | |
| Analyses | | Result | PQL Qu | al Units | DF | Date Analyzed | Batch | ID |
| EPA METHOD 30 | 0.0: ANIONS | | | | | An | alyst: MR | ۲A |
| Chloride | | 120 | 30 | mg/Kg | 20 | 9/15/2017 7:55:55 | 5 PM 338 | 376 |
| EPA METHOD 80 | 15M/D: DIESEL RAN | GE ORGANICS | S | | | An | alyst: TO | M |
| Diesel Range Orga | anics (DRO) | ND | 9.5 | mg/Kg | 1 | 9/15/2017 7:45:29 | PM 338 | 875 |
| Motor Oil Range C | organics (MRO) | ND | 47 | mg/Kg | 1 | 9/15/2017 7:45:29 | PM 338 | 875 |
| Surr: DNOP | | 85.6 | 70-130 | %Rec | 1 | 9/15/2017 7:45:29 | PM 338 | 875 |
| EPA METHOD 80 | 15D: GASOLINE RAN | IGE | | | | An | alyst: NS | в |
| Gasoline Range O | rganics (GRO) | ND | 4.7 | mg/Kg | 1 | 9/16/2017 2:08:07 | AM 338 | 371 |
| Surr: BFB | | 99.1 | 54-150 | %Rec | 1 | 9/16/2017 2:08:07 | AM 338 | 371 |
| EPA METHOD 80 | 21B: VOLATILES | | | | | An | alyst: NS | в |
| Benzene | | ND | 0.024 | mg/Kg | 1 | 9/16/2017 2:08:07 | AM 338 | 371 |
| Toluene | | ND | 0.047 | mg/Kg | 1 | 9/16/2017 2:08:07 | AM 338 | 371 |
| Ethylbenzene | | ND | 0.047 | mg/Kg | 1 | 9/16/2017 2:08:07 | AM 338 | 371 |
| Xylenes, Total | | ND | 0.095 | mg/Kg | 1 | 9/16/2017 2:08:07 | AM 338 | 371 |
| Surr: 4-Bromoflu | uorobenzene | 110 | 66.6-132 | %Rec | 1 | 9/16/2017 2:08:07 | 'AM 338 | 371 |

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

Qualifiers:

*

- Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded

Hall Environmental Analysis Laboratory, Inc.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 7
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

GHD

Client:

| Project: Trunk | MC 16 | | | |
|----------------------|--------------------------|---------------------------|----------------|---------------|
| Sample ID MB-33876 | SampType: mblk | TestCode: EPA Method | 300.0: Anions | |
| Client ID: PBS | Batch ID: 33876 | RunNo: 45653 | | |
| Prep Date: 9/14/2017 | Analysis Date: 9/15/2017 | SeqNo: 1450182 | Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| Sample ID LCS-33876 | SampType: Ics | TestCode: EPA Method | 300.0: Anions | |
| Client ID: LCSS | Batch ID: 33876 | RunNo: 45653 | | |
| Prep Date: 9/14/2017 | Analysis Date: 9/15/2017 | SeqNo: 1450183 | Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | 14 1.5 15.00 | 0 91.6 90 | 110 | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 4 of 7

ND

ND

9.0

10

50

10.00

GHD

Qual

Qual

Project: Trunk MC 16 Sample ID LCS-33875 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 33875 RunNo: 45643 SeqNo: 1448863 Prep Date: 9/14/2017 Analysis Date: 9/15/2017 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Diesel Range Organics (DRO) 10 51 50.00 0 73.2 101 114 Surr: DNOP 5.000 94.6 4.7 70 130 Sample ID MB-33875 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 33875 RunNo: 45643 Prep Date: 9/14/2017 Analysis Date: 9/15/2017 SeqNo: 1448864 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit

Qualifiers:

Client:

Diesel Range Organics (DRO)

Surr: DNOP

Motor Oil Range Organics (MRO)

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range

90.1

70

130

- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 5 of 7

| QC SUMMARY REPORT |
|--|
| Hall Environmental Analysis Laboratory, Inc. |

WO#: **1709706** 20-Sep-17

| Client: Project: | GHD Trunk M | MC 16 | | | | | | | | | |
|----------------------------|------------------|------------|----------|-----------|-------------|----------|-----------|-------------|----------|----------|------|
| Sample ID | MB-33871 | SampT | ype: MI | BLK | Tes | tCode: E | PA Method | 8015D: Gaso | ine Rang | е | |
| Client ID: | PBS | Batch | n ID: 33 | 871 | F | aunNo: 4 | 5651 | | | | |
| Prep Date: | 9/14/2017 | Analysis D | ate: 9/ | 15/2017 | S | SeqNo: 1 | 449668 | Units: mg/K | g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Rang Surr: BFB | e Organics (GRO) | ND 1100 | 5.0 | 1000 | | 105 | 54 | 150 | | | |
| Sample ID | LCS-33871 | SampT | ype: LC | s | Tes | tCode: E | PA Method | 8015D: Gaso | ine Rang | е | |
| Client ID: | LCSS | Batch | n ID: 33 | 871 | F | RunNo: 4 | 5651 | | | | |
| Prep Date: | 9/14/2017 | Analysis D |)ate: 9/ | 15/2017 | S | SeqNo: 1 | 449669 | Units: mg/K | g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| | e Organics (GRO) | 28 | 5.0 | 25.00 | 0 | 114 | 76.4 | 125 | | | |
| Surr: BFB | | 1100 | | 1000 | | 114 | 54 | 150 | | | |
| Sample ID | MB-33888 | SampT | уре: МІ | BLK | Tes | tCode: E | PA Method | 8015D: Gaso | ine Rang | е | |
| Client ID: | PBS | Batch | n ID: 33 | 888 | F | RunNo: 4 | 5702 | | | | |
| Prep Date: | 9/15/2017 | Analysis D | ate: 9/ | 18/2017 | S | SeqNo: 1 | 450912 | Units: %Rec | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | | 1100 | | 1000 | | 105 | 54 | 150 | | | |
| Sample ID | LCS-33888 | SampT | ype: LC | s | Tes | tCode: E | PA Method | 8015D: Gaso | ine Rang | е | |
| Client ID: | LCSS | Batch | n ID: 33 | 888 | F | RunNo: 4 | 5702 | | | | |
| Prep Date: | 9/15/2017 | Analysis D | ate: 9/ | 18/2017 | S | SeqNo: 1 | 450913 | Units: %Rec | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | | 1200 | | 1000 | | 115 | 54 | 150 | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 6 of 7

| Hall Er | nvironmenta | al Anal | ysis L | Laborat | ory, Inc. | | | | | WO#: | 1709706 20-Sep-17 |
|---------------------|-----------------|------------|-----------------|-----------|-------------|----------|-----------|--------------|------|----------|----------------------|
| Client: Project: | GHD Trunk M | C 16 | | | | | | | | | |
| Sample ID | MB-33871 | SampT | Гуре: МЕ | BLK | Tes | tCode: E | PA Method | 8021B: Volat | iles | | |
| Client ID: | PBS | Batch | h ID: 33 | 871 | F | RunNo: 4 | 5651 | | | | |
| Prep Date: | 9/14/2017 | Analysis D | Date: 9/ | 15/2017 | S | SeqNo: 1 | 449704 | Units: mg/K | g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | ND | 0.025 | | | | | | | | |
| Toluene | | ND | 0.050 | | | | | | | | |
| Ethylbenzene | | ND | 0.050 | | | | | | | | |
| Xylenes, Total | | ND | 0.10 | | | | | | | | |
| Surr: 4-Bron | nofluorobenzene | 1.2 | | 1.000 | | 117 | 66.6 | 132 | | | |
| Sample ID | LCS-33871 | SampT | Type: LC | s | Tes | tCode: E | PA Method | 8021B: Volat | iles | | |
| Client ID: | LCSS | Batch | h ID: 33 | 871 | F | RunNo: 4 | 5651 | | | | |
| Prep Date: | 9/14/2017 | Analysis D | Date: 9/ | 15/2017 | S | SeqNo: 1 | 449705 | Units: mg/K | g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | 1.1 | 0.025 | 1.000 | 0 | 114 | 80 | 120 | | | |
| Toluene | | 1.1 | 0.050 | 1.000 | 0 | 111 | 80 | 120 | | | |
| Ethylbenzene | | 1.1 | 0.050 | 1.000 | 0 | 114 | 80 | 120 | | | |
| Xylenes, Total | | 3.5 | 0.10 | 3.000 | 0 | 116 | 80 | 120 | | | |
| Surr: 4-Bron | nofluorobenzene | 1.2 | | 1.000 | | 118 | 66.6 | 132 | | | |
| Sample ID | MB-33888 | SampT | Гуре: МЕ | BLK | Tes | tCode: E | PA Method | 8021B: Volat | iles | | |
| Client ID: | PBS | Batch | h ID: 33 | 888 | F | RunNo: 4 | 5702 | | | | |
| Prep Date: | 9/15/2017 | Analysis D | Date: 9/ | 18/2017 | S | SeqNo: 1 | 450947 | Units: %Red | • | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bron | nofluorobenzene | 1.2 | | 1.000 | | 120 | 66.6 | 132 | | | |
| Sample ID | LCS-33888 | SampT | Type: LC | s | Tes | tCode: E | PA Method | 8021B: Volat | iles | | |
| Client ID: | LCSS | Batch | h ID: 33 | 888 | F | RunNo: 4 | 5702 | | | | |
| Prep Date: | 9/15/2017 | Analysis D | Date: 9/ | 18/2017 | S | SeqNo: 1 | 450948 | Units: %Red | ; | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bron | nofluorobenzene | 1.2 | | 1.000 | | 122 | 66.6 | 132 | | | |

* Value exceeds Maximum Contaminant Level.

QC SUMMARY REPORT

D Sample Diluted Due to Matrix

- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 7 of 7

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | TEL: 505-345-3975 I | 4901 Hawkins NE querque, NM 87109 | samı | ole Log-In Check List |
|---|-------------------------------|--------------------------------------|----------|-------------------------------------|
| Client Name: GHD | Work Order Number: | 1709706 | | RcptNo: 1 |
| Received By: Erin Melendrez | 9/12/2017 10:15:00 AM | l | LIL A | ÷ |
| Completed By: Ashley Gallegos Reviewed By: STLC 09(14) | 9/13/2017 3:16:13 PM (7 | | AJ | |
| Chain of Custody | | | | |
| 1. Custody seals intact on sample bottles | ? | Yes 🗌 | No 🗀 | Not Present 🗹 |
| 2. Is Chain of Custody complete? | | Yes 🔽 | No 🗌 | Not Present |
| 3. How was the sample delivered? | | Courier | | |
| <u>Log In</u> | | | | |
| 4. Was an attempt made to cool the sam | ples? | Yes 🗹 | No 🗌 | |
| 5. Were all samples received at a temper | rature of >0° C to 6.0°C | Yes 🔽 | No 🗌 | |
| 6. Sample(s) in proper container(s)? | | Yes 🗹 | No 🗆 | |
| 7. Sufficient sample volume for indicated | test(s)? | Yes 🗹 | No 🗌 | |
| 8. Are samples (except VOA and ONG) p | properly preserved? | Yes 🗹 | No 🗆 | |
| 9. Was preservative added to bottles? | | Yes 🗌 | No 🗹 | |
| 10.VOA vials have zero headspace? | | Yes 🗌 | No 🗆 | No VOA Vials 🗹 |
| 11. Were any sample containers received | broken? | Yes 🗆 | No 🗹 | # of preserved bottles checked |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custod | 4y) | Yes 🗹 | No 🗆 | for pH: (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Ch | | Yes 🗹 | No 🗆 | Adjusted? |
| 14. Is it clear what analyses were requested | | Yes 🗹 | No 🗌 | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization | | Yes 🗹 | No 🗌 | Checked by: |
| Special Handling (if applicable) | | | | |
| 40 Mars slight untilitied of all discovery analysis | with this arder? | Vac 🗂 | No 🗔 | |

| 16. Was client notified of all d | iscrepancies with this order? | Yes | No 🗌 | NA 🗹 |
|----------------------------------|--|--|-----------|------|
| Person Notified: | Date | 1 | | |
| By Whom: | Via: | eMail | Phone Fax | |
| Regarding: | | | | |
| Client Instructions: | a na an an an ann an an an ann an ann an a | to foot - are not also also and a graduate and | | |

_

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 5.1 | Good | Yes | | | l |

| HALL ENVIRONMENTAL | ANALYSIS LABORATORY | www.hallenvironmental.com | 4301 Hawkins NE - Albuquerque, NM 87109 | k Fax 505-345-4107 Analysis Benjast | 3,8 (*OS | PCE | 30° (| AON | 15.71 Pesticio 1801 Pesticio 2609 (VOA) 270 (Semi-Y 7 0 / 0 / 0 7 0 | 8 8 7 × | × | X | X | X | | | And Time Kemarks. |
|--------------------|---------------------|---------------------------|---|--|---|---------------------------|---------------|---------------|--|-------------------------------------|---------------------------------|---------------------------------|------------------------|------------------------------|---|--------------|-------------------|
| HALL E | ANALYS | www.hallenv | WKINS NE - AID | Tel. 505-345-3975 F | (| SMI | (1.4 | 01 8 01 8 | PH (Method DF (Method 0158) 2'HA 0158) 2'HA 19M 8 A9OS | 1 | | | | | | | |
| E, | | 100 | SUT HB | Tel. 505 | 1. | 0.00 | ad / o | ้อย | 98108 Hd. | X | X | X | X | λ | | | ŝ |
| | U | | 4 | | | | | | BTEX + MTE | | X | X | X | X | | | Komarks |
| | | runk MC-16 | 21-2-12-22 | | a kish | | Sant Sant | 001 | HEAL No. | 100- | -003 | -003 | -004 | -005 | | - Timo | 912/17 1015 |
| | LI KUSN | F | | 40-05655M | C | - | 10 | emperature: 5 | Preservative Type | TCF | | | | | | | NL |
| Sector of Crosses | Project Name | A | Project # | 11(353) | Project Manager | DEMAN | Sampler: M | 11- | Container Type and # | 455 Jac | - | | | | _ | Rec Card had | |
| CIM Sections Ton | | Indian School Rd Ste 2010 | 111 071 0 | NVN | kische grud e em | Level 4 (Full Validation) | | | Sample Request ID | 1135250 CHIEGOS PANE TANG US SA JUC | S-11155550-04-040512,4167 P-266 | 54135350-04-040817-416-TP-74-15 | SWRSDEDOUTING THET POL | SHIRSON OF TREIT-MG TP-10-14 | | | 1 |
| 11-10 | > | TICH | | SOS XX4 | email or Fax# Ber no no Bec aviac Package: | | C Other | | Matrix | 0 | 2 | \$ | \$ | \$ | | Alinouistie | N Sel |
| | | Mailing Address:// | 1 | + SOS | Fax# B | lard | ation | (Type) | Time | 1315 | IHIS ! | 1430 | 1600 | 1630 | | Time: | 2 8 |
| Client: | | Mailing . | W 71 | Phone # 50 | email or Fax# 0 | Standard | Accreditation | □ EDD (Type) | Date | 9/5 | S/B | 9/6 | 10 | 9/6 | | Date | 1.1 |

Analytical Report 539986

for

Energy Transfer- Midland

Project Manager: Johnnie Bradford

Trunk MC-16

15-NOV-16

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400) Xenco-San Antonio: Texas (T104704534) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



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| Surrogate Recoveries | 9 |
| LCS / LCSD Recoveries | 13 |
| MS / MSD Recoveries | 16 |
| Chain of Custody | 19 |
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15-NOV-16



Project Manager: Johnnie Bradford Energy Transfer- Midland 600 N Marienfield Ste 700 Midland, TX 79701

Reference: XENCO Report No(s): 539986 Trunk MC-16 Project Address: Eunice NM

Johnnie Bradford:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 539986. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 539986 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks Project Manager

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Sample Id WstPile BtmHole S-Wal

Sample Cross Reference 539986



Energy Transfer- Midland, Midland, TX

Trunk MC-16

| Matrix | Date Collected | Sample Depth | Lab Sample Id |
|--------|----------------|--------------|---------------|
| S | 11-07-16 08:57 | | 539986-001 |
| S | 11-07-16 09:00 | - 10 ft | 539986-002 |
| S | 11-07-16 09:03 | - 10 ft | 539986-003 |
| | | | |



CASE NARRATIVE



Client Name: Energy Transfer- Midland Project Name: Trunk MC-16

Project ID: Work Order Number(s): 539986 Report Date: 15-NOV-16 Date Received: 11/08/2016

Sample receipt non conformances and comments:

Level III Std QC+Forms

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 539986 Energy Transfer-Midland, Midland, TX Project Name: Trunk MC-16



Project 10: Contact: Johnnie Bradford Project Location: Eunice NM

Date Received in Lab: Tue Nov-08-16 02:55 pm Report Date: 15-NOV-16 Project Manager: Kelsey Brooks

| | Lab Id: | 539986-001 WeiBile | 539986-002 Biredialo | 539986-003 c 11/c |
|----------------------------|------------|-----------------------|-------------------------|----------------------|
| Analysis Requested | Field Id: | WstPile | BtmHole | S-Wal |
| | Depth: | | -10 ft | -10 ft |
| | Matrix: | TIOS | SOIL | SOIL |
| | Sampled: | Nov-07-16 08:57 | Nov-07-16 09:00 | Nov-07-16 09:03 |
| TCLP BTEX by SW 8260B | Extracted: | Nov-14-16 15:44 | Nov-14-16 15:42 | Nov-14-16 15:43 |
| SUB: TX104704215 | Analyzed: | Nov-14-16 18:06 | Nov-14-16 17:28 | Nov-14-16 17:47 |
| | Units/RL: | mg/L RL | mg/L RL | mg/L RL |
| Benzene | | 0.00535 0.00500 | ND 0.00500 | ND 0.00500 |
| Toluene | | 0.0539 0.00500 | ND 0.00500 | 0.0362 0.00500 |
| Ethylbenzene | | 0.101 0.00500 | ND 0.00500 | 0.0239 0.00500 |
| m,p-Xylenes | | 0.587 0.0100 | ND 0.0100 | 0.183 0.0100 |
| o-Xylene | | 0.256 0.00500 | 0.118 0.00500 | 0.158 0.00500 |
| TCLP Mercury by SW 7470A | Extracted: | Nov-14-16 09:30 | Nov-14-16 09:30 | Nov-14-16 09:30 |
| SUB: TX104704215 | Analyzed: | Nov-14-16 15:55 | Nov-14-16 15:59 | Nov-14-16 16:01 |
| | Units/RL: | mg/L RL | mg/L RL | mg/L RL |
| Mercury | | ND 0.000200 | ND 0.000200 | ND 0.000200 |
| TCLP Metals by SW846 6010B | Extracted: | Nov-14-16 09:30 | Nov-14-16 09:30 | Nov-14-16 09:30 |
| SUB: 1X104704215 | Analyzed: | Nov-14-16 21:13 | Nov-14-16 21:22 | Nov-14-16 21:25 |
| | Units/RL: | mg/L RL | mg/L RL | mg/L RL |
| Arsenic | | ND 0.0500 | 0.0695 0.0500 | ND 0.0500 |
| Barium | | 0.490 0.0500 | 0.527 0.0500 | 1.72 0.0500 |
| Cadmium | F. 40 | ND 0.0250 | ND 0.0250 | ND 0.0250 |
| Chromium | | ND 0.0500 | ND 0.0500 | ND 0.0500 |
| Lead | | ND 0.0500 | ND 0.0500 | ND 0.0500 |
| Selenium | | ND 0.100 | 001.0 ON | ND 0.100 |
| Silver | | ND 0.100 | ND 0.100 | ND 0.100 |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratorics. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invorced for this work order unless otherwise agreed to in writing.

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Version: 1.%

Kelsey Brooks Project Manager

wall hurs Mon



Eunice NM

Project Location:

Certificate of Analysis Summary 539986 Energy Transfer-Midland, Midland, TX Project Name: Trunk MC-16



Date Received in Lab: Tue Nov-08-16 02:55 pm Report Date: 15-NOV-16 Project Manager: Kelsey Brooks

| | Lab Id: | 539986-001 | 539986-002 | 539986-003 | |
|------------------------------------|------------|-----------------|-----------------|-----------------|--|
| Andries Ronnestod | Field Id: | WstPile | BtmHole | S-Wal | |
| noiconhour ciclimits | Depth: | | 10 ft | 10 ft. | |
| | Matrix: | SOIL | SOIL | SOIL | |
| | Sampled: | Nov-07-16 08:57 | Nov-07-16 09:00 | Nov-07-16 09:03 | |
| Inorganic Anions by EPA 300/300.1 | Extracted: | Nov-09-16 11:00 | Nov-09-16 11:00 | Nov-09-16 11:00 | |
| | Analyzed: | Nov-09-16 14:17 | Nov-09-16 14:38 | Nov-09-16 14:45 | |
| | Units/RL: | mg/kg RL | mg/kg RL | mg/kg RL | |
| Chloride | | 308 5.00 | 416 5.00 | 324 5.00 | |
| TPH by SW 8015B | Extracted: | Nov-08-16 17:00 | Nov-08-16 17:00 | Nov-08-16 17:00 | |
| | Analyzed: | Nov-09-16 00:06 | Nov-09-16 00:31 | Nov-09-16 00:55 | |
| | Units/RL: | mg/kg RL | mg/kg RL | mg/kg RL | |
| C6-C10 Gasoline Range Hydrocarbons | | 2230 74.9 | 4160 74.9 | 3710 74.7 | |
| C10-C28 Diesel Range Hydrocarbons | | 7630 74.9 | 11800 74.9 | 12700 74.7 | |
| Total TPH | | 9970 74.9 | 16100 74.9 | 16500 74.7 | |
| | | | | | |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.56

Murs Woah Kelsey Brooks



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit
- MDL Method Detection Limit SDL Sample Detection Limit
- LOD Limit of Detection

LOO Limit of Quantitation

- PQL Practical Quantitation Limit MQL Method Quantitation Limit
- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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| 2525 W. Huntington Dr Suite 102, Tempe AZ 85282 | (602) 437-0330 | |
| | | |



Project Name: Trunk MC-16

| Work Ord Lab Batch # | lers: 53998 | 6, Sample: 539986-001 / SMP | Bate | Project ID h: 1 Matrix | | | |
|-------------------------|-------------|--------------------------------|------------------------|---------------------------|-----------------------|-------------------------|-------|
| Units: | mg/kg | Date Analyzed: 11/09/16 00:06 | SU | RROGATE R | ECOVERY S | STUDY | 1 |
| | TPH | l by SW 8015B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| I-Chloroocta | ne | | 129 | 99.8 | 129 | 70-135 | |
| o-Terphenyl | | | 64.3 | 49.9 | 129 | 70-135 | |
| ab Batch # | : 3003551 | Sample: 539986-002 / SMP | Bate | h: 1 Matrix | : Soil | | |
| Units: | mg/kg | Date Analyzed: 11/09/16 00:31 | SU | RROGATE R | ECOVERY | STUDY | |
| | ТРН | l by SW 8015B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1-Chloroocta | ne | | 112 | 99.8 | 112 | 70-135 | |
| o-Terphenyl | | | 59.2 | 49.9 | 119 | 70-135 | |
| Lab Batch # | : 3003551 | Sample: 539986-003 / SMP | Bate | h: 1 Matrix | ; Soil | | - |
| Units: | mg/kg | Date Analyzed: 11/09/16 00:55 | SU | RROGATE R | ECOVERY | STUDY | |
| | ТРН | l by SW 8015B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1-Chloroocta | ne | | 114 | 99.6 | 114 | 70-135 | |
| o-Terphenyl | | | 60.7 | 49.8 | 122 | 70-135 | |
| .ab Batch # | : 3003850 | Sample: 539986-002 / SMP | Bate | h: 1 Matrix | : Soil | | |
| Units: | mg/L | Date Analyzed: 11/14/16 17:28 | su | RROGATE R | ECOVERY | STUDY | |
| | TCLP B | TEX by SW 8260B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| Dibromofluor | omethane | | 0.0604 | 0.0500 | 121 | 75-131 | |
| 1,2-Dichlorod | thane-D4 | | 0.0452 | 0.0500 | 90 | 63-144 | |
| Toluene-D8 | | | 0.0461 | 0.0500 | 92 | 80-117 | |

* Surrogate outside of Laboratory QC limits

- ** Surrogates outside limits; data and surrogates confirmed by reanalysis
- *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Project Name: Trunk MC-16

| | rders : 53998 #: 3003850 | 6, Sample: 539986-003 / SMP | Bate | Project ID h: Matrix | | | |
|-------------|-----------------------------|--------------------------------|------------------------|---------------------------|-----------------------|-------------------------|-------|
| Units: | mg/L | Date Analyzed: 11/14/16 17:47 | SU | RROGATE R | ECOVERY | STUDY | |
| | TCLP B | TEX by SW 8260B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| Dibromoflu | oromethane | | 0.0592 | 0.0500 | 118 | 75-131 | |
| 1,2-Dichlor | oethane-D4 | | 0.0441 | 0.0500 | 88 | 63-144 | |
| Toluene-D8 | 3 | | 0.0465 | 0.0500 | 93 | 80-117 | |
| ab Batch | #: 3003850 | Sample: 539986-001 / SMP | Bate | h: 1 Matrix | : Soil | | ļc |
| Onits: | mg/L | Date Analyzed: 11/14/16 18:06 | su | RROGATE R | ECOVERY | STUDY | - |
| 1 | TCLP B | TEX by SW 8260B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| Dibromoflu | oromethane | | 0.0490 | 0,0500 | 98 | 75-131 | |
| 1,2-Dichlor | oethane-D4 | | 0.0457 | 0.0500 | 91 | 63-144 | 1 |
| Toluene-D8 | 1 | | 0.0486 | 0.0500 | 97 | 80-117 | |
| Lab Batch | #: 3003551 | Sample: 715881-1-BLK / BLI | C Bate | h: 1 Matrix | : Solid | | |
| Units: | mg/kg | Date Analyzed: 11/08/16 20:52 | SU | RROGATE R | ECOVERY S | STUDY | - |
| | | l by SW 8015B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| I-Chlorooct | ane | | 128 | 100 | 128 | 70-135 | |
| o-Terpheny | | | 64.4 | 50.0 | 129 | 70-135 | |
| ab Batch | #: 3003850 | Sample: 716102-1-BLK / BLF | Batel | h: l Matrix | : Water | | |
| Units: | mg/L | Date Analyzed: 11/14/16 13:36 | SU | RROGATE R | ECOVERY S | STUDY | |
| | | TEX by SW 8260B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| Dibromoflu | oromethane | | 0.0528 | 0.0500 | 106 | 75-131 | |
| 1,2-Dichlor | bethane-D4 | | 0.0455 | 0.0500 | 91 | 63-144 | - |
| Toluene-D8 | | | 0.0455 | 0.0500 | 91 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.



Project Name: Trunk MC-16

| Work Orde Lab Batch #: | | 6, Sample: 715881-1-BKS/B | KS Bate | Project ID h: 1 Matrix | | | |
|---------------------------|---------|-------------------------------|------------------------|---------------------------|-----------------------|-------------------------|-------|
| Units: | mg/kg | Date Analyzed: 11/08/16 21:16 | 7.4.5 | RROGATE R | | STUDY | |
| | ТРН | l by SW 8015B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1-Chlorooctane | 2 | | 129 | 100 | 129 | 70-135 | - |
| o-Terphenyl | | | 64.0 | 50.0 | 128 | 70-135 | |
| ab Batch #: | 3003850 | Sample: 716102-1-BKS / BI | KS Batel | h: 1 Matrix | : Water | | |
| Jnits: | mg/L | Date Analyzed: 11/14/16 11:01 | SU | RROGATE R | ECOVERY S | STUDY | |
| | | TEX by SW 8260B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| Dibromofluoro | methane | | 0.0499 | 0.0500 | 100 | 75-131 | |
| 1,2-Dichloroeth | hane-D4 | | 0.0512 | 0.0500 | 102 | 63-144 | |
| Toluene-D8 | | | 0.0491 | 0.0500 | 98 | 80-117 | |
| ab Batch #: | 3003551 | Sample: 715881-1-BSD / BS | SD Batel | n: 1 Matrix | : Solid | | |
| Units: | mg/kg | Date Analyzed: 11/08/16 21:40 | su | RROGATE R | ECOVERY S | STUDY | |
| | ТРН | by SW 8015B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1-Chlorooctane | | | 124 | 100 | 124 | 70-135 | |
| o-Terphenyl | | | 64.8 | 50.0 | 130 | 70-135 | |
| ab Batch #: | 3003850 | Sample: 716102-1-BSD / BS | SD Batel | n: l Matrix | : Water | | |
| Jnits: | mg/L | Date Analyzed: 11/14/16 11:20 | SU | RROGATE R | ECOVERY S | STUDY | |
| | | TEX by SW 8260B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| Dibromofluoro | methane | | 0.0489 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroeth | nane-D4 | | 0.0506 | 0.0500 | 101 | 63-144 | |
| Toluene-D8 | | | 0.0498 | 0.0500 | 100 | 80-117 | |

Surrogate outside of Laboratory QC limits

- ** Surrogates outside limits; data and surrogates confirmed by reanalysis
- *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Project Name: Trunk MC-16

| Work Ord Lab Batch #: | ers: 53998 | 6, Sample: 539784-001 S / MS | Bate | Project ID h: 1 Matrix | | | |
|--------------------------|------------|---|------------------------|---------------------------|-----------------------|-------------------------|-------|
| Units: | mg/kg | Date Analyzed: 11/08/16 22:53 | | RROGATE R | | STUDY | |
| | ТРН | l by SW 8015B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| I-Chlorooctan | ie | | 128 | 99.9 | 128 | 70-135 | |
| o-Terphenyl | | | 60.8 | 50.0 | 122 | 70-135 | |
| Lab Batch #: | : 3003850 | Sample: 540067-001 S / MS | Bate | h: 1 Matrix | : Soil | | |
| Units: | mg/L | Date Analyzed: 11/14/16 15:32 | SU | RROGATE R | ECOVERY S | STUDY | |
| | TCLP B | TEX by SW 8260B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| Dibromofluor | omethane | | 0.0474 | 0.0500 | 95 | 75-131 | |
| 1.2-Dichloroe | thane-D4 | | 0.0483 | 0.0500 | 97 | 63-144 | |
| Toluene-D8 | | | 0.0498 | 0.0500 | 100 | 80-117 | |
| Lab Batch #: | : 3003551 | Sample: 539784-001 SD / M | ISD Bate | h: 1 Matrix | : Soil | 1 | |
| Units: | mg/kg | Date Analyzed: 11/08/16 23:17 | su | RROGATE R | ECOVERY | STUDY | - |
| | TPH | I by SW 8015B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1-Chlorooctan | ie | | 129 | 99.9 | 129 | 70-135 | |
| o-Terphenyl | | the second se | 60.6 | 50.0 | 121 | 70-135 | |
| Lab Batch #: | : 3003850 | Sample: 540067-001 SD / N | ISD Bate | h: 1 Matrix | : Soil | | |
| Jnits: | mg/L | Date Analyzed: 11/14/16 15:52 | SU | RROGATE R | ECOVERY | STUDY | |
| | TCLP B | TEX by SW 8260B Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| Dibromofluor | omethane | | 0.0470 | 0.0500 | 94 | 75-131 | |
| 1,2-Dichloroe | thane-D4 | | 0.0496 | 0.0500 | 99 | 63-144 | |
| Toluene-D8 | | | 0.0493 | 0.0500 | 99 | 80-117 | |

* Surrogate outside of Laboratory QC limits

- ** Surrogates outside limits; data and surrogates confirmed by reanalysis
- *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

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| | III | 2 | |
| 1 | X | AB | |
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| | | | 1 |

BS / BSD Recoveries





| Analytes | Analytes | Sample Result [A] | Added [B] | Spike Result [C] | Spike %R [D] | Added | Spike Duplicate Result [F] | Dup. %R [G] | RPD % | Limits %R | Limits %RPD | Flag |
|-----------------------|----------------------|----------------------|--------------|---------------------------|--------------------|---------|--|-------------------|---------------|---------------------------|----------------|------|
| Chloride. | | <5.00 | 250 | 242 | 16 | 250 | 242 | 16 | 0 | 90-110 | 20 | |
| Analyst: JTR | | D | ate Prepar | Date Prepared: 11/14/2016 | 16 | | | Date A | nalyzed: | Date Analyzed: 11/14/2016 | | |
| Lab Batch ID: 3003850 | Sample: 716102-1-BKS | BKS | Batch #: 1 | 1 :+ 1 | | | | | Matrix: Water | Water | | |
| Units: mg/L | | | BLAN | K/BLANK | SPIKE / F | SLANK S | BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY | LICATE | RECOVI | ERY STUI | λ | |

| <0.00500 | TCLP BTEX by SW 8260B Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R G | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|--|-----------------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|------------------------------|----------|-------------------------|---------------------------|------|
| <0.00500 0.500 0.523 105 0.500 0.101 3 59-139 zene <0.00500 | Benzene | <0.00500 | 0.500 | 0.525 | 105 | 0.500 | 0.509 | 102 | 3 | 66-142 | 20 | |
| < < < 0.500 0.536 107 0.500 0.522 104 3 75-125 < | Toluene | <0.00500 | 0.500 | 0.523 | 105 | 0.500 | 0.506 | 101 | 3 | 59-139 | 20 | |
| <0.0100 1.00 1.04 104 1.00 1.02 102 2 75-125 <0.00500 | Ethylbenzene | <0.00500 | 0.500 | 0.536 | 107 | 0.500 | 0.522 | 104 | 3 | 75-125 | 20 | |
| <0.00500 0.500 0.547 109 0.500 0.538 108 2 75-125 | m,p-Xylenes | <0.0100 | 1.00 | 1.04 | 104 | 1.00 | 1.02 | 102 | 2 | 75-125 | 20 | |
| | o-Xylene | <0.00500 | 0.500 | 0.547 | 109 | 0.500 | 0.538 | 108 | 2 | 75-125 | 20 | |

Relative Percent Difference RPD = 200*|(C-F)/(C+F)| Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes

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BS / BSD Recoveries





Date Prepared: 11/14/2016 Batch #: 1

Sample: 716061-1-BKS

Lab Batch ID: 3003836

mg/L

Units:

Work Order #: 539986

DEP

Analyst:

Project ID: Date Analyzed:

Date Analyzed: 11/14/2016 Matrix: Water BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

| TCLP Mercury by SW 7470A Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|--|-------------------------------|-----------------------|--|-----------------------------|-----------------------|---|-------------------------------|---------------|---------------------------|---------------------------|------|
| Mercury | <0.000200 | 0.00200 | 0.00196 | 86 | 0.00200 | 0.00200 | 100 | 2 | 80-120 | 20 | |
| Analyst: DEP | P | ate Prepar | Date Prepared: 11/14/2016 | 016 | | | Date A | nalyzed: | Date Analyzed: 11/14/2016 | | |
| Lab Batch ID: 3003887 Sample: 716077-1-BKS | 77-1-BKS | Batch #: | 1#:1 | | | | | Matrix: Water | Water | | |
| Units: mg/L | | BLAN | BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY | SPIKE /] | BLANK S | SPIKE DUP | LICATE | RECOV | ERY STUI | λ | |
| TCI D Metals hy SW246 6010B | Rlank | Snike | Blank | Rlank | Cuilta | Rlant | Rth Sub | | Control | Control Control | |

| | 5 | | | WINDOW | | WINDIG | DEMNN/DEMNN STINE / DEMNN STINE DUT FICATE NECOVENT STUDI | - | NECO | INTO INT | 10 | |
|--|--|-------------------------------|-------|---------------------------------|-----------------------------|-----------------------|---|------------------------------|----------|-------------------------|---------------------------|-----|
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | TCLP Metals by SW846 6010B Analytes | Blank Sample Result [A] | | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | BIK. Spk Dup. %R G | RPD % | Control Limits %R | Control Limits %RPD | Fla |
| $\begin{array}{ c c c c c c c c c c c c c c c c c c c$ | Arsenic | <0.0100 | 1.00 | 1.00 | 100 | 1.00 | 1.02 | 102 | 2 | 80-120 | 20 | |
| $\begin{array}{ c c c c c c c c c c c c c c c c c c c$ | Barium | <0.0100 | 1.00 | 1.00 | 100 | 1.00 | 1.01 | 101 | 1 | 80-120 | 20 | |
| <0.0100 1.00 0.966 97 1.00 0.968 97 0 80-120 <0.0100 | Cadmium | <0.00500 | 1.00 | 0.985 | 66 | 1.00 | 0.984 | 86 | 0 | 80-120 | 20 | |
| -0.0100 1.00 1.02 1.02 1.02 102 0 80-120 un <0.0200 | Chromium | <0.0100 | 1.00 | 0.966 | 16 | 1.00 | 0.968 | 16 | 0 | 80-120 | 20 | |
| um <0.0200 1.00 0.984 98 1.00 0.995 100 1 80-120 <0.0200 | Lead | <0.0100 | 1.00 | 1.02 | 102 | 1.00 | 1.02 | 102 | 0 | 80-120 | 20 | |
| <0.0200 0.500 0.503 101 0.500 0.499 100 1 80-120 | Selenium | <0.0200 | 1.00 | 0.984 | 98 | 1.00 | 0.995 | 100 | T | 80-120 | 20 | |
| | Silver | <0.0200 | 0.500 | 0.503 | 101 | 0.500 | 0.499 | 100 | - | 80-120 | 20 | |

Relative Percent Difference RPD = 200*[(C-F)/(C+F)] Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes

Version: 1.%



BS / BSD Recoveries





| /2016 | | STUDY | |
|-------------------|---------------------|---|--|
| e Analyzed: 11/08 | Matrix: Solid | E RECOVERY | |
| Dat | | LICAT | 0.00 |
| | | PIKE DUP | 1-10 |
| | | LANK S | |
| .91 | | SPIKE / B | |
| ed: 11/08/201 | #: 1 | K/BLANK | 110 |
| ate Prepare | Batch | BLANI | |
| | S | | |
| | Sample: 715881-1-BK | | |
| ARM | 0: 3003551 | mg/kg | and the two trains |
| Analyst: | ab Batch II | Jnits: | |
| | ARM | ARM Date Prepared: 11/08/2016 D: 3003551 Sample: 715881-1-BKS Batch #: 1 | ARM Date Prepared: 11/08/2016 D: 3003551 Sample: 715881-1-BKS Batch #: 1 mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLIC |

| TPH by SW 8015B Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Spike Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | BIK. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|------------------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| C6-C10 Gasoline Range Hydrocarbons | <15.0 | 1000 | 1000 | 100 | 1000 | 1010 | 101 | - | 70-135 | 35 | |
| C10-C28 Diesel Range Hydrocarbons | <15.0 | 1000 | 1090 | 109 | 1000 | 1090 | 109 | 0 | 70-135 | 35 | |

Relative Percent Difference RPD = 200*(C-F)/(C+F)| Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries

Project Name: Trunk MC-16



| Work Order # . | 930086 |
|-------------------------|------------|
| | |
| Lab Batch ID: | 3003608 |
| Date Analyzed: | 11/09/2016 |
| Reporting Units: | mg/kg |

1 Batch #: QC-Sample ID: 539986-001 S Date Prepared: 11/09/2016

Analyst: MNR

Matrix: Soil

Project ID:

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| Inorga | Inorganic Anions by EPA 300/300.1 Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|------------------|---|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------|-------------------------|---------------------------|------|
| Chloride | | 308 | 250 | 548: | 96 | 250 | 559 | 100 | 3 | 00-110 | 20 | |
| Lab Batch ID: | 3003608 | QC-Sample ID: 540004-004 S | 540004- | -004 S | Ba | Batch #: | 1 Matrix: Soil | c: Soil | | | | |
| Date Analyzed: | 11/09/2016 | Date Prepared: 11/09/2016 | 11/09/20 | 016 | An | Analyst: MNR | ANR | | | | | |
| Reporting Units: | mg/kg | | M | ATRIX SPIKI | E/MAT | RIX SPI | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | TE REC | OVERY | STUDY | | |
| Inorga | Inorganic Anions by EPA 300/300.1 Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Chloride | | 1870 | 1250 | 3080 | 16 | 1250 | 3050 | 94 | 4 | 011-06 | 20 | |
| Lab Batch ID: | 3003850 | QC-Sample ID: 540067-001 S | 540067- | -001 S | Ba | Batch #: | 1 Matrix: Soil | c: Soil | | | - | |
| Date Analyzed: | 11/14/2016 | Date Prepared: 11/14/2016 | 11/14/20 | 016 | An | Analyst: JTR | TR | | | | | |

| Reporting Units: mg/L | | N | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | E/MAT | ALX SPII | CE DUPLICA | FE REC | OVERY | STUDY | | |
|-----------------------------------|-----------------------------------|-----------------------|--|-------------------------------|----------------------|--|-----------------------------|----------|-------------------------|---------------------------|------|
| TCLP BTEX by SW 8260B Analytes | Parent Sample Result [A] | Spike Added IBJ | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added E | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | <0:00500 | 0.500 | 0.524 | 105 | 0.500 | 0.524 | 105 | 0 | 66-142 | 20 | |
| Toluene | <0.00500 | 0.500 | 0,521 | 104 | 0.500 | 0.512 | 102 | 2 | 59-139 | 20 | |
| Ethylbenzene | <0.00500 | 0.500 | 0.535 | 107 | 0.500 | 0.532 | 901 | 1 | 75-125 | 20 | |
| m,p-Xylenes | <00100> | 1.00 | 1,05 | 105 | 1.00 | 1.02 | 102 | 3 | 75-125 | 20 | |
| o-Xylene | <0.00500 | 0.500 | 0.524 | 105 | 0.500 | 0.549 | 110 | 5 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*[(C-F)/(C+F)]

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable. N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Final 1.000

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Form 3 - MS / MSD Recoveries





| : 539986 | 3003836 | : 11/14/2016 | ts: mg/L |
|--------------|---------------|----------------|-----------------|
| Work Order # | Lab Batch ID: | Date Analyzed: | Reporting Units |

Project ID: -Batch #: QC-Sample ID: 539905-001 S

Matrix: Soil

Analyst: DEP Date Prepared: 11/14/2016

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| TCLP | TCLP Mercury by SW 7470A Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Spiked Result Sample Spike S [C] %R Added [D] [E] | Spiked Sample %R [D] | Spike Added [E] | Duplicate S Spiked Sample 1 Result [F] | Spiked Dup. %R G | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|--------------------|--------------------------------------|-----------------------------------|-----------------------|--|-------------------------------|-----------------------|--|----------------------------|----------|-------------------------|---------------------------|------|
| Mercury | | <0.000200 | 0.00200 | 0.00215 | 108 | 108 0.00200 | 0.00212 | 106 | 1 | 75-125 | 20 | |
| Lab Batch ID: 3 | 3003836 | QC-Sample ID: 540191-001 S | 540191 | -001 S | Ba | Batch #: | I Matrix | Matrix: Soil | | | | |
| Date Analyzed: 1 | 11/14/2016 | Date Prepared: 11/14/2016 | : 11/14/2 | 910 | An | Analyst: DEP | EP | | | | | |
| Reporting Units: n | mg/L | | 2 | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | TAM/2 | RIX SPIF | KE DUPLICA | TE RECO | OVERY. | STUDY | | |
| aron | TCI B Manual L. CW 7170 A | Parent | | Spiked Sample Spiked | Spiked | | Duplicate Spiked | Spiked | | Control | Control Control | |

| | Sample Spike Result Added [A] [B] | Result Sample | Sample Spike %R Added [D] [E] | Spike Spiked Sample Added Result [F] [E] | Dup. %R [G] | RPD % | Limits L %R % | Limits %RPD | Flag |
|---|---|--|-------------------------------------|--|-------------------|----------|------------------|----------------|------|
| | <0.000200 0.00200 | 0.00213 | 107 0.00200 | 0.00212 | 106 | 0 | 75-125 | 20 | |
| Lab Batch ID: 3003887 QC-Sample ID: 540125-001 S | -Sample ID: 54012 | 5-001 S | Batch #: | I Matrix: Solid | :: Solid | | | | |
| Date Analyzed: 11/14/2016 Date Prepared: 11/14/2016 | te Prepared: 11/14 | 2016 | Analyst: DEP | DEP | | | | | |
| Reporting Units: mg/L MA | | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | // MATRIX SP | IKE DUPLICA | TE RECO | VERY S | YOUTS | | |
| TCI D Motols hv SW846 6010B Parent S | Parent | Spiked Sample Spiked | Spiked | Duplicate Spiked | Spiked | | Control Control | Control | |

| TCLP Metals by SW846 6010B Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|--|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------|-------------------------|---------------------------|------|
| Arsenic | <0.0500 | 5.00 | 5.15 | 103 | 5.00 | 5.09 | 102 | 4 | 80-120 | 20 | |
| Barium | 3.10 | 5.00 | 8.07 | 66 | 5.00 | 8.11 | 100 | 0 | 80-120 | 20 | |
| Cadmium | <0.0250 | 5.00 | 4.97 | 66 | 5.00 | 5.00 | 100 | 1 | 80-120 | 20 | |
| Chromium | <0.0500 | 5.00 | 4.75 | 95 | 5.00 | 4.77 | 95 | 0 | 80-120 | 20 | |
| Lead | <0.0500 | 5.00 | 5.03 | 101 | 5.00 | 5.06 | 101 | 1 | 80-120 | 20 | _ |
| Selenium | <0.100 | 5.00 | 5.14 | 103 | 5.00 | 5.16 | 103 | 0 | 80-120 | 20 | |
| Silver | <0.100 | 2.50 | 2.54 | 102 | 2.50 | 2,55 | 102 | 0 | 80-120 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Final 1.000

Page 17 of 20



Form 3 - MS / MSD Recoveries

Project Name: Trunk MC-16



| 539986 | 3003551 | 11/08/2016 | : mg/kg |
|----------------|---------------|----------------|-----------------|
| Work Order # : | Lab Batch ID: | Date Analyzed: | Reporting Units |

Project ID: Batch #: 1 Matrix: Soil

> QC- Sample ID: 539784-001 S Date Prepared: 11/08/2016

Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| TPH by SW 8015B Analytes | Sample Result [A] | Spike Added [B] | Result [C] | Sample %R [D] | Spike Added E | Spiked Sample Result [F] | Dup. %R [G] | RPD % | Limits %R | Limits %RPD | Flag |
|------------------------------------|-------------------------|-----------------------|---------------|---------------------|----------------------|-----------------------------|-------------------|----------|--------------|----------------|------|
| C6-C10 Gasoline Range Hydrocarbons | <pre><15.0</pre> | 666 | 914 | 16 | 666 | 937 | 94 | 5 | 70-135 | 35 | |
| 210-C28 Diesel Range Hydrocarbons | <15.0 | 666 | 983 | 98 | 666 | 1010 | 101 | e | 70-135 | 35 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*((C-F)/(C+F))

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Final 1.000

Page 18 of 20

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantization Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

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Dallas Texas (214-902-0300)

CHAIN OF CUSTODY

Midland, Texas (432-704-5251) San Antonio, Texas (210-509-3334)

Phoenix, Arizona (480-355-0900)

| | | | | | | | | | 2 | Analisai | | | | | | | |
|---|---|--|---|--|--|--|---|--|---|--|---|---|---|---|---|---|--|
| | | | | | | | ļ | | ŀ | Mildiyu | Analytical Information | nation | | | | 11.11.11.11.11.11.11.11.11.11.11.11.11. | Matrix Codes |
| | Projec | Project Information | Î | | | | | | | | | | | | | | |
| Project Name/Nun Trunk MC-1 | | | | | | | | | | | | <u> </u> | | | | | W ≂ Water S = Soil/Sed/Solid |
| Project Location: | | | | | | | | | | | | | - | · | | | GW =Ground Water |
| Eunice NM | | | | | | | | | | | | | | | | | DW = Drinking Water |
| Invoice To: | | | | | | | | | | | | | | | | | SW = Surface water |
| Same as ab | 6V0 | | | | | | ·, | | ais | | · · · | | | | | | SL = Sludge |
| | | | | | | | | | met | | | | | | | | WI = Wipe |
| PO Number: NO | ne | | | | | | | | 8 | | | | | | | | 0 = 01 |
| | | | and a second second | | () () () () () () () () () () () () () (| | | | | | | | | | | | WW= Waste Water |
| Collection | | | | Number of | preserv | ed bottle | | | | es | | | | | | | A = Air |
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| | TRRP | Checklist | | | | | | | | | | | | | | | |
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XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: Energy Transfer- Midland Acceptable Temperature Range: 0 - 6 degC Date/ Time Received: 11/08/2016 02:55:00 PM Air and Metal samples Acceptable Range: Ambient Temperature Measuring device used : R8 Work Order #: 539986 Sample Receipt Checklist Comments #1 *Temperature of cooler(s)? 4.9 #2 *Shipping container in good condition? N/A #3 *Samples received on ice? Yes #4 *Custody Seal present on shipping container/ cooler? N/A #5 *Custody Seals intact on shipping container/ cooler? N/A #6 Custody Seals intact on sample bottles? N/A #7 *Custody Seals Signed and dated? N/A #8 *Chain of Custody present? Yes #9 Sample instructions complete on Chain of Custody? Yes #10 Any missing/extra samples? No #11 Chain of Custody signed when relinquished/ received? Yes #12 Chain of Custody agrees with sample label(s)? Yes #13 Container label(s) legible and intact? Yes #14 Sample matrix/ properties agree with Chain of Custody? Yes #15 Samples in proper container/ bottle? Yes #16 Samples properly preserved? Yes #17 Sample container(s) intact? Yes #18 Sufficient sample amount for indicated test(s)? Yes #19 All samples received within hold time? Yes #20 Subcontract of sample(s)? Yes Houston #21 VOC samples have zero headspace (less than 1/4 inch bubble)? N/A #22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for N/A samples for the analysis of HEM or HEM-SGT which are verified by the analysts. #23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH? N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:

Jessica Kramer

Date: 11/08/2016

Checklist reviewed by:

proat Kelsey Brooks

Date: 11/09/2016